Dave Yost • Auditor of State

The State of Ohio, Auditor of State

Ohio Department of Natural Resources Performance Audit February 2015

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Dave Yost • Auditor of State

To the Governor's Office, General Assembly, Director and Staff of the Ohio Department of Natural Resources, Ohio Taxpayers, and Interested Citizens:

It is my pleasure to present to you this performance audit of the Ohio Department of Natural Resources (ODNR or the Department). This service to ODNR and to the taxpayers of the state of Ohio is being provided pursuant to Ohio Revised Code § 117.46 and is outlined in the letters of engagement signed September 4, 2013 and April 2, 2014.

This audit includes an objective review and assessment of selected program areas within ODNR in relation to surrounding states, industry standards, and recommended or leading practices. The Ohio Performance Team (OPT) of the Auditor of State's (AOS) office managed the project and conducted the work in accordance with Generally Accepted Government Auditing Standards.

The objectives of this engagement were completed with an eye toward analyzing the Department, its programs, and service delivery processes for efficiency, cost-effectiveness, and customer responsiveness. The scope of the engagement was confined to the areas of Capital Planning and Budgeting, Parks and Recreation Operations, Seasonal Workforce Strategies, Wildlife Licenses and Participation, Fleet Management, Fish Hatchery Operations, and Watercraft Registration Operations.

This report has been provided to ODNR and its contents have been discussed with Department leadership, division leadership, program specialists, and other appropriate personnel. The Department is reminded of its responsibilities for public comment, implementation, and reporting related to this performance audit per the requirements outlined under ORC § 117.461 and § 117.462. The Department is also encouraged to use the results of the performance audit as a resource for improving overall operational efficiency as well as service delivery effectiveness.

Sincerely,

Dave Yost
Auditor of State

February 12, 2015

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I. Engagement Purpose and Scope

Ohio Revised Code (ORC) § 117.46 provides that the Auditor of State (AOS) shall conduct performance audits of at least four state agencies each budget biennium. In consultation with the Governor and the Speaker and Minority Leader of the House of Representatives and the President and Minority Leader of the Senate, the Auditor of State selected the Ohio Department of Natural Resources (ODNR or the Department) for audit during the fiscal year (FY) 2013-15 Biennium, encompassing FY 2013-14 and FY 2014-15.

Prior to the formal start of the audit, the Ohio Performance Team (OPT) and ODNR engaged in a collaborative planning process which included initial meetings, discussion, and assessments. Based on these planning activities AOS and ODNR signed a letter of engagement, marking the official start of the performance audit, effective September 4, 2013.

The letter of engagement established that the objective of the audit was to review and analyze selected areas of ODNR operations to identify opportunities for improvements to economy, efficiency, and/or effectiveness.

The original letter of engagement led to OPT planning and scoping work, in consultation with ODNR, which identified six distinct scope areas including:

- **Capital Planning and Budgeting**
- **Parks and Recreation Operations**
- **Seasonal Workforce Strategies**
- **Wildlife Licenses and Participation**
- **Fleet Management**
- **Fish Hatchery Operations**

Subsequent to the original letter of engagement, ODNR requested the addition of a seventh and final scope area, **Watercraft Registration Operations**. An addendum including this final scope area was signed by AOS and ODNR effective April 2, 2014.

These seven operational areas comprise the scope of the audit as reflected in this report.

Based on the established scope, OPT engaged in supplemental planning activities to develop detailed audit objectives for comprehensive analysis. See **Section VIII: Audit Scope and Objectives Overview** for an overview of scope areas and audit objectives.

II. Performance Audits Overview

The United States Government Accountability Office develops and promulgates Government Auditing Standards that provide a framework for performing high-quality audit work with competence, integrity, objectivity, and independence to provide accountability and to help improve government operations and services. These standards are commonly referred to as generally accepted government auditing standards (GAGAS).

Performance audits are defined as engagements that provide assurance or conclusions based on evaluations of sufficient, appropriate evidence against stated criteria, such as specific requirements, measures, or defined business practices. Performance audits provide objective analysis so that management and those charged with governance and oversight can use the information to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.

OPT conducted this performance audit in accordance with GAGAS. These standards require that OPT plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on the audit objectives. OPT believes that the evidence obtained provides a reasonable basis for our findings and conclusions based on the audit objectives.

III. Methodology

Audit work was conducted between September 2013 and November 2014. To complete this report, AOS staff worked closely with ODNR staff to gather data and conduct interviews to establish current operating conditions. This data and information was reviewed with staff at multiple levels within ODNR to ensure accuracy and reliability. Where identified, weaknesses in the data obtained are noted within the report where germane to specific assessments.

To complete the assessments, as defined by the audit scope and objectives, AOS identified sources of criteria against which current operating conditions were compared. Though each source of criteria is unique to each individual assessment there were common sources of criteria included across the audit as a whole. These common sources of criteria include: statutory requirements such as contained in ORC or Ohio Administrative Code (OAC), ODNR internal policies and procedures, other State agency policies and procedures, industry standards, government and private sector leading practices, and surrounding state comparisons. Although AOS staff reviewed all sources of criteria to ensure that their use would result in reasonable, appropriate assessments, AOS did not conduct the same degree of data reliability assessments as were performed on data and information obtained from ODNR.

The performance audit process involved information sharing with ODNR staff, including preliminary drafts of findings and proposed recommendations related to the identified audit

scope and objectives. Status meetings were held throughout the engagement to inform the Department of key issues, and share proposed recommendations to improve or enhance operations. Input from the Department was solicited and considered when assessing the selected areas and framing recommendations. The Department provided verbal and written comments in response to various recommendations, which were taken into consideration during the reporting process. Where warranted, the report was modified based on agency comments.

This audit report contains recommendations that are intended to provide the Department with options to enhance its operational economy, efficiency, and effectiveness. The reader is encouraged to review the recommendations in their entirety.

IV. ODNR Overview

Responsibilities and Mission

ODNR is a cabinet-level Department and, as such, the Director of Natural Resources (the Director) is appointed by, and serves at the pleasure of, the Governor. As a State agency, ODNR is charged with overseeing the use, preservation, and conservation of the State's natural resources through a wide variety of recreational and regulatory programs.

The Department's mission is "To ensure a balance between wise use and protection of our natural resources for the benefit of all." As an umbrella organization for such diverse interests, ODNR pulls all these activities into four fundamental mission components:

- Resource management by sustained productivity of Ohio's renewable natural resources, promoting the wise use of non-renewable natural resources, and protecting Ohio's invaluable threatened and endangered natural resources.
- Economic development through job creation/expansion/retention, stimulating local economies, developing industry and tourism opportunities, and supporting the present and future economic health of the state.
- Recreation by providing leisure services and recreation opportunities for the public at all levels.
- Health and safety through fair and consistent law enforcement participating in regulatory matters and identifying and responding to environmental hazards.

ODNR owns and manages more than 590,000 acres of land including 75 state parks, 21 state forests, 134 state nature preserves, and 138 wildlife areas. The Department also has jurisdiction over more than 120,000 acres of inland waters; 7,000 miles of streams; 481 miles of Ohio River; and 2-1/4 million acres of Lake Erie.

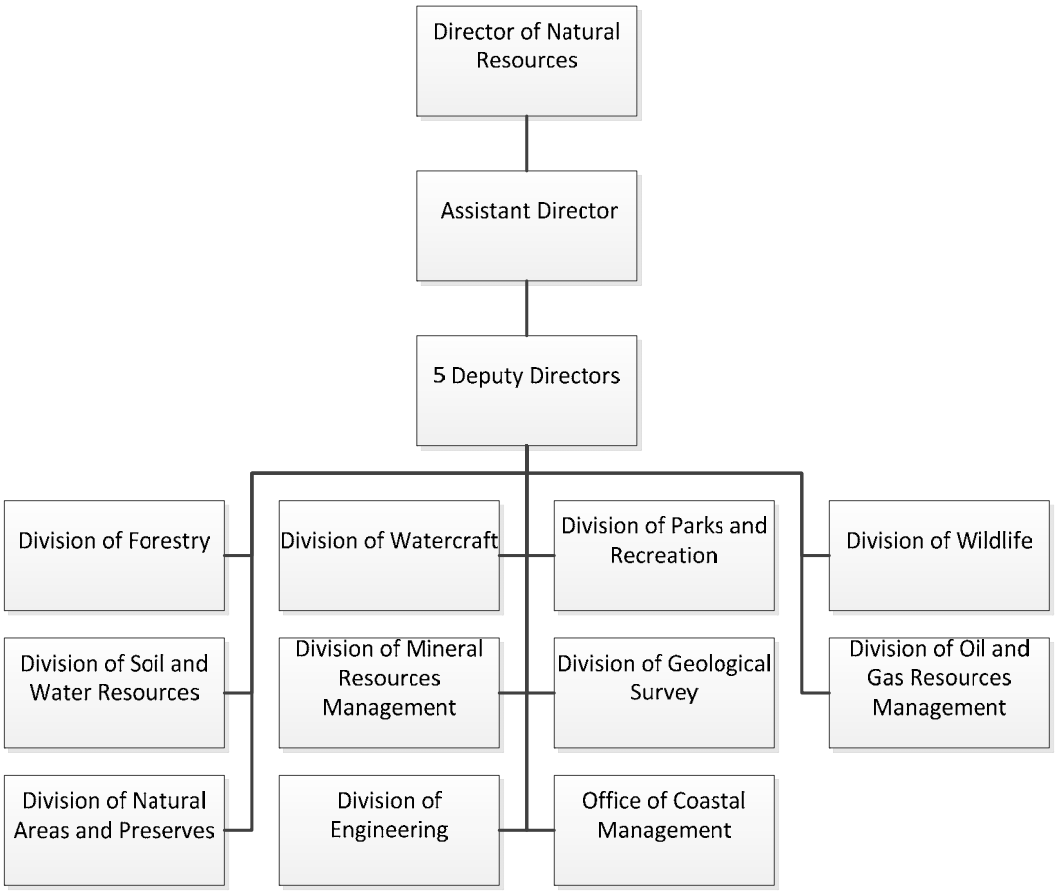
In addition, ODNR licenses all hunting, fishing, and watercraft in the state and is responsible for overseeing and permitting all mineral extraction, monitoring dam safety, managing water resources, coordinating the activity of Ohio's 88 county soil and water conservation districts, mapping the state's major geologic structures and mineral resources, and promoting recycling and litter prevention through grant programs in local communities.

Organizational Structure

Within ORC Title 15: Conservation of Natural Resources, ORC § 1501.01 authorizes that, "Except where otherwise expressly provided, the [Director] shall formulate and institute all the policies and programs of the [Department]." Further, "The chief of any division of the [Department] shall not enter into any contract, agreement, or understanding unless it is approved by the [Director]. No appointee or employee of the [Director], other than the [Assistant Director], may bind the [Director] in a contract except when given general or special authority to do so by the [Director]."

ODNR carries out its statutory responsibilities, mission, and mission components through 11 main operating divisions and offices which include: Division of Forestry (Forestry), Division of Parks and Recreation (Parks), Division of Soil and Water Resources (Soil and Water), Division of Natural Areas and Preserves (DNAP), Division of Watercraft (Watercraft), Division of Wildlife (Wildlife), Division of Geological Survey (Geological Survey), Division of Mineral Resources Management (MRM), Division of Oil and Gas Resource Management (Oil and Gas), Division of Engineering (Engineering), and the Office of Coastal Management.

The following graphic illustrates both the basic organizational structure and the leadership hierarchy of the Department.



Each of the 10 divisions listed are formally established through division-specific chapters of ORC within Title 15.[1] While the Office of Coastal Management is not established as a formal entity by ORC, the "Coastal Management Program" is established under ORC Chapter 1506. In addition to the Director and Assistant Director, ORC Title 15 specifically identifies and establishes the position of "chief" for each of the 10 formal divisions. ORC § 1501.05 notes that, "All chiefs of divisions in the department of natural resources shall be appointed by the [Director]. The chiefs of those divisions may be removed by the [Director]." Though they are not established within Title 15, ODNR has a team of five deputy directors that report directly to the Director and Assistant Director. The operating divisions and offices are arranged in localized oversight groups and are overseen by the deputy directors with the exception of the Oil and Gas, which is directly overseen by the Assistant Director. The Assistant Director also oversees administrative functions including: budget and finance, communications, external audits, special projects, legal, and legislative services. In general, for the main operating divisions and offices, the Director, Assistant Director, and deputy directors are responsible for organizational strategy, division chiefs are responsible for operations, and staff are responsible for tactical execution.

It should be noted that in certain cases deputy directors also serve as division chiefs. For example, the Deputy Director over DNAP, Parks, and Watercraft is also the Chief of Parks while the Deputy Director over Forestry and Wildlife is also the Chief of Forestry.

Organizational History

Since its formal establishment, ODNR has had a long and varied history and today's Department, both in structure and function, is a product of evolving statutory roles and responsibilities.

ODNR was formally created by the Ohio Legislature in 1949. The Department notes that "At that time, [it] was charged with the responsibility of formulating and putting into execution a long term comprehensive plan and program for the development and wise use of the natural resources of the state, to the end that the health, happiness and wholesome enjoyment of life of the people of Ohio may be further encouraged." However, many of the functions and responsibilities that were combined under the first iteration of the Department had been in place long before. For example, the predecessor to today's Geological Survey was created in 1837; Wildlife was created in 1873; Forestry was created in 1916; and Parks was formally created in 1949. Though Parks was established in 1949, it inherited a statewide holding of public parks dating back to the 1890s. Since the creation of the Department, additional responsibilities and divisions have been added. For example, Watercraft was created in 1960 and DNAP was created in 1976. The most recent structural changes to ODNR have involved: Soil and Water, which was created in July 2010 through the merger of the former Division of Soil and Water Conservation and the Division of Water; and Oil and Gas, which was split off as a stand-alone division from MRM in September 2011.

The history and organizational change shown here is just a snapshot of the changes that have occurred over time and will likely continue to occur in the future. However, when examining the

[1] The Division of Real Estate and Land Management had formerly been established under ORC Chapter 1504, but this Chapter was repealed effective July 17, 2009.

organizational structure and alignment of responsibilities and functions within the Department, the historically dynamic nature of both should be taken into account.

Staffing and Budgetary Resources

ODNR has a total of 2,089 employees that carry out day-to-day operations.[2] This includes 1,555 full-time and part-time permanent and fixed-term staff and an additional 534 part-time and full-time temporary, intermittent, seasonal, interim, and project employees.

Total operating expenditures were $270.96 million in FY 2011-12 and $299.91 million in FY 2012-13. ODNR was appropriated $326.10 million for FY 2013-14 and $326.61 for FY 2014-15. The result is a net increase of $55.65 million, or 20.5 percent, over the two biennia. Over the same time period, a combination of the following three funds account for an average 75.2 percent of all Department expenditures and appropriations:

- **General Revenue Fund –** This fund accounts for an average of $94.68 million per FY or 30.9 percent of the total. The largest single division user of the General Revenue Fund is Parks with an average of $30.03 million per FY.
- **State Special Revenue Fund Group –** This fund group accounts for an average of $72.24 million per FY or 23.6 percent of the total. The largest single line item within the State Special Revenue Fund Group is "State Parks Operations" with an average of $28.54 million per FY. According to the Ohio Legislative Service Commission (LSC), "these funds are used to cover most of the Division's maintenance and equipment expenses, as well as payroll…This line item is supported by the State Park Fund, which receives income from various revenue-generating functions of [Parks]…The largest revenue source was camping fees (39.3 percent), followed by cabin rentals (14.6 percent), self-operated retail (13.9 percent), dock permits (9.8 percent), concession agreements (4.4 percent), and golf course greens fees (4.4 percent). Other sources include land leases, getaway rentals, group lodge sales, private donations, and other fees and charges. [The line item] also collects 75 percent of the proceeds of timber sales from state park lands."
- **Wildlife Fund Group –** This fund group accounts for an average of $62.97 million per FY or 20.7 percent of the total. These funds are under the specific purview of Wildlife with "Division of Wildlife Conservation" being the largest single line item in the fund group with an average of $54.74 million per FY. According to the LSC, "this line item is the primary source of operating support for the Division's programs and contains most of the Division's payroll, maintenance, and other operating costs. This line item is funded primarily through revenues from the sale of hunting and fishing licenses that are deposited into the Wildlife Fund, but also receives federal funding from U.S. Fish and Wildlife Service (FWS) under the Pittman-Robertson Wildlife Restoration Act and the Dingell-Johnson Sport Fish Restoration Act, receipts from the sale of wildlife license plates, and other wildlife related fees and fines."

[2] ODNR's employee count is as reported by the Ohio Department of Administrative Services (DAS), effective November 30, 2014. It is important to note that the Department's practice is to hire a large number of seasonal employees so total staff levels can fluctuate significantly over time. As of November 30, 2014 26.4 percent of all ODNR employees are classified as non-permanent.

V. Comment on Organizational and Statutory Alignment

Issues are sometimes identified by AOS that are not related to the objectives of the audit, but could yield economy and efficiency if examined in more detail. During the course of the audit, the Department's organizational and statutory alignment was identified as one such area.

Issue for Further Study – Organizational and Statutory Alignment: ODNR leadership, the Governor's Office, and the General Assembly should further study the statutory and practical organization of the Department with a focus on eliminating organizational barriers, streamlining service delivery, and promoting clear lines of authority and accountability. Throughout the course of the performance audit numerous perceived barriers to more economical, efficient, and effective service delivery were identified. Most commonly these perceived barriers took the form of silos based on historical, organizational, and bureaucratic territories. However, these perceived barriers were outside of the scope of the engagement and the extent to which they actually result in less economical, efficient, and effective service delivery was not specifically evaluated or quantified. While no specific evaluation is included as a part of this performance audit there are several areas that would benefit from further study and evaluation including:

- **Prescribed Divisions –** In addition to statutory authorities and responsibilities, ORC specifically prescribes 10 aforementioned divisions. Prescribing specific divisions could serve to negatively reinforce organizational silos as well as to increase the overall size and cost of the organization due to the presence of multiple, distinctly separate leadership, support, and tactical structures.
- **Prescribed Positions –** ORC also prescribes certain positions such as aforementioned division chiefs and establishes various commissioned officer positions.[3] Again, similar to prescribed divisions, prescribed positions such as division chiefs and separately established positions such as commissioned officers could serve to negatively reinforce organizational silos as well as increase the size and cost of the organization.
- **Ambiguous Wording –** As previously noted, ORC § 1501.01 specially states that, "Except where otherwise expressly provided, the [Director] shall formulate and institute all the policies and programs of the [Department]." Further, "The chief of any division of the [Department] shall not enter into any contract, agreement, or understanding unless it is approved by the [Director]." However, sections of code that separately establish duties and powers for division chiefs, with few exceptions, are often worded in a manner that appears to confer significant authority to division chiefs without oversight from the Director or Assistant Director. Such ambiguous wording could serve to negatively reinforce organizational silos as well as affect the Department's ability to efficiently and effectively carry out its mission.

[3] Commissioned officer positions specifically established within ORC Title 15 include: Forest Officers (ORC § 1503.29, et al.); Preserve Officers (ORC § 1517.10, et al.), Wildlife Officers (ORC § 1531.13, et al.), Park Officers (ORC § 1541.10, et al.), and State Watercraft Officers (ORC § 1547.521, et al.). Though respective sections of ORC establish a distinct operational focus associated with each commissioned officer position, the core law enforcement responsibilities of each are functionally similar. For example, each commissioned officer, regardless of title has authority to enforce laws and regulations on "lands and waters owned, controlled, maintained, or administered by the [Department]" as well as arrest authority pursuant to ORC § 2935.03.

VI. Summary of Recommendations and Impact

The following table shows performance audit recommendations by section and totals financial implications, where applicable.

Table VI-1: Summary of Section Recommendations and Impact

Report Section	Recommendations	Annual Impact	One-Time Impact
Fleet Management	**R1.1, R1.2, R1.3, & R1.4**	**$911,777**	**$109,706**
Seasonal Workforce Strategies	**R2.1, R2.2, & R2.3**	**$393,094**	**N/A**
Parks and Recreation Operations – Overnight Accommodations	**R3.1 & R3.2**	**$1,590,386**	**N/A**
Parks and Recreation Operations – Lodge Properties	**R4.1 & R4.2**	**N/A**	**N/A**
Parks and Recreation Operations – Capital Investment	**R5.1 & R5.2**	**$3,341,901**	**$3,830,900**
Capital Planning and Budgeting	**R6.1**	**N/A**	**N/A**
Wildlife Licenses and Participation	**R7.1, R7.2, R7.3, & R7.4**	**$2,002,175**	**N/A**
Fish Hatchery Operations	**R8.1**	**$54,994**	**N/A**
Watercraft Registration Operations	**R9.1**	**N/A**	**N/A**
Sub-Total Financial Implications		**$8,294,327**	**$3,940,606**
Total Combined Financial Implication			**$12,234,933**

Note: N/A indicates that no financial implication specific to the implementation of the stated recommendation was calculated as part of the analysis.

VII. Audit Results

The performance audit identified recommendations in the areas of:

- Fleet Management;
- Seasonal Workforce Strategies;
- Parks and Recreation Operations – Overnight Accommodations;
- Parks and Recreation Operations – Lodge Properties;
- Parks and Recreation Operations – Capital Investment;
- Capital Planning and Budgeting;
- Wildlife Licenses and Participation;
- Fish Hatchery Operations; and
- Watercraft Registration Operations.

Each scope area and report section includes recommendations that focus on performance measurement and data-driven, performance management. This thematic focus evolved over time as progressively detailed work was performed to assess ODNR operations within each of the scope areas. Commonly, analysis identified that Department leadership did not have ready access to critical management information. However, the data necessary to inform and support management decisions was often already captured, but not at a level of detail to sufficiently inform data-driven decision making. In other instances, data was being captured, but not aggregated in a way that provides internal and external visibility into operations at a meaningful level. Lastly, some data points were not being captured at all due to current system limitations or lack of systems where labor intensive data collection would otherwise be overly costly. In all cases where these deficiencies were identified this report includes practical, implementable recommendations not only to address the identified deficiencies, but also to begin using the resulting data and information to improve management decision-making and Department performance.

See **Section IX: Acronyms** for a list of acronyms used throughout this report.

1. Fleet Management

Section Overview

This section focuses on the Department of Natural Resources' (ODNR or the Department) fleet management practices. Information was gathered from the Ohio Department of Administrative Services (DAS), Office of Fleet Management and ODNR Office of General Services, Fleet Management (Fleet Management). This section is presented as four separate analyses including:

- **Data Collection:** The first analysis focuses on data collection practices and compares ODNR's current practice to practices required by DAS.
- **Data-Driven Efficiency Opportunities:** The second analysis focuses on how ODNR could use improved fleet management data to identify opportunities for greater fleet efficiency.
- **Passenger Pool Fleet Consolidation:** The third analysis focuses on the size and composition of the passenger pool fleet at ODNR's central office in Columbus, Ohio (Fountain Square).
- **Fleet Cycling:** The fourth and final analysis focuses on the Department's current vehicle lifecycle practices compared to those recommended by DAS.

Recommendations Overview

Recommendation 1.1: ODNR should ensure that all vehicle maintenance performed by Department employees is properly recorded in Fleet Ohio in a timely manner. Required cost data should include all direct and indirect costs for maintenance, repairs and fuel for each vehicle.

Financial Implication 1.1: N/A

Recommendation 1.2: ODNR should use fleet data, information, and key performance indicators to identify and implement opportunities for greater efficiency and effectiveness. Opportunities already identified include:

- **Reassigning idle vehicles prior to purchasing additional vehicles;**
- **Disposing of vehicles when repairs are either not cost effective or impractical; and**
- **Sizing the Parks patrol fleet based on industry standards.**

Financial Implication 1.2: Net savings resulting from capturing these data-driven fleet management opportunities would be **$259,121**. Individual savings opportunities include:

- If the Department disposes of the three vehicles identified as impractical for repair it would recoup **$16,601** in residual value.
- If ODNR reassigned idle vehicles prior to purchasing new vehicles for the Divisions of Wildlife, Oil and Gas, and Mineral Resources Management (MRM), it would avoid **$156,222** in new vehicle expense.
- If the Department were to dispose of 34 unneeded patrol vehicles it would recoup **$41,719** in residual value and reduce annual expenditures by **$44,579**.

Recommendation 1.3: ODNR should consolidate the Fountain Square passenger pool fleet into a single pool under exclusive management of General Services. Once consolidated, the passenger pool fleet should be reduced to, at most, 33 total vehicles in order to more efficiently meet actual demand. Once consolidated and reduced, General Services should review fleet utilization at least annually to ensure that sufficient demand exists to support the number and type of vehicles supplied.

Financial Implication 1.3: Eliminating 20 unneeded vehicles will raise **$51,386** in one-time revenue and save **$27,411** in reduced annual maintenance, repair and purchasing.

Recommendation 1.4: ODNR should implement fleet cycling guidelines and practices that recognize a vehicle lifecycle of 6 years and/or 90,000 miles. Vehicles approaching those parameters should be thoroughly reviewed to determine the current cost per mile compared to that of newer vehicles. Finally, vehicles nearing the end of service life should be promptly salvaged to capture as much residual value as possible.

Financial Implication 1.4: Each year the proposed cycling model of 6 years and 90,000 miles is in place, the Department could save **$683,565** in reduced operating costs and increased salvage values.

Section Background

ODNR holds a fleet of 1,600 cars, vans, and trucks that it uses to support various aspects of statewide operations. In addition, ODNR leases seven vehicles from DAS. [4] ODNR's fleet management authority is delegated from DAS in accordance with Ohio Revised Code (ORC) § 125.832(G) because ODNR holds over 100 vehicles and also has a DAS certified fleet manager. The Department assigns fleet management duties to the Motor Fleet Coordinator within Fleet Management. In addition to centralized management responsibility, Fleet Management also maintains a centralized passenger pool fleet for use by any division. Each division also maintains its own separate fleet and has an employee assigned to fleet coordination responsibilities. Historically, the majority of the day-to-day fleet operations and management decisions (e.g., maintenance and cycling practices) have been made at the division level.[5] For example, divisions work with Fleet Management to develop annual fleet plans that include elements such as fleet costs, composition, vehicle assignments, and the acquisition and disposal of vehicles.[6] In turn, Fleet Management works with DAS to facilitate planned vehicle purchase and disposal. However, division-specific fleet operations and management decisions result in disposal practices reflective of varying age and mileage expectations.

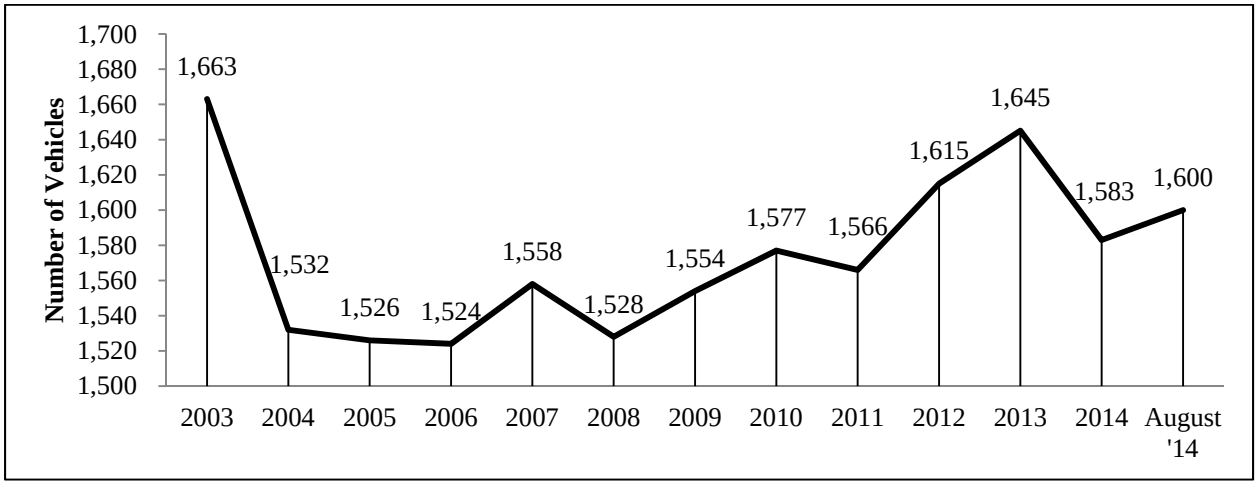
[4] The seven leased vehicles are excluded from further analysis as they are outside the scope of this performance audit.

[5] Fleet Management has a full-time Fleet Coordinator whereas other divisions assign fleet coordination duties to employees with other primary job responsibilities.

[6] DAS requires agencies to turn in one old vehicle for each new vehicle purchased unless the agency seeks and receives DAS approval to increase fleet size.

Chart 1-1 shows the number of active vehicles in ODNR's Fleet between fiscal year (FY) 2002-03 and fiscal year-to-date (FYTD) 2014-15. This type of overview is important to help demonstrate the inflow and outflow of vehicles over time as well as to identify any meaningful trends or fluctuations that could be indicative of changes in management practices or organizational needs.

Chart 1-1: ODNR Total Fleet FY 2002-03 to FYTD 2014-15



Source: DAS and Fleet Management
Note: Excludes seven vehicles leased from DAS.

ODNR has averaged a total fleet size of 1,571.6 vehicles but, as shown in **Chart 1-1**, the total number of vehicles fluctuated between a high of 1,663 in FY 2002-03 and a low of 1,524 during FY 2005-06. Recent increases in total fleet are due to the addition of vehicles for the Division of Oil and Gas which was created as a separate division in FY 2010-11 and between that time and FY 2012-13 added 65 vehicles. The data points in **Chart 1-1** also show fleet sizes as of various points-in-time and are reflective of occasional delays in purchase or salvage which marginally affects total inventory. In total, ODNR salvaged 364 vehicles between FY 2009-10 and FY 2012-13 and purchased 429 over the same timeframe.

Table 1-1 shows the number of vehicles within each separate division and operating unit as of August 2014. This type of overview is important to demonstrate the wide variety of fleet assignments, but also the relative size of each; both influence the complexity of managing the total fleet.

Table 1-1: Vehicles by Division as of August 2014

Division/Operating Unit	Count	Percent of Total
Division of Parks and Recreation (Parks)	563	35.2%
Division of Wildlife (Wildlife)	382	23.9%
Division of Forestry (Forestry)	149	9.3%
Division of Mineral Resources Management (MRM)	136	8.5%
Division of Watercraft (Watercraft)	100	6.3%
Division of Oil and Gas (Oil and Gas)	75	4.7%
All Other Divisions and Operating Units	195	12.1%
Total ODNR Vehicles	**1,600**	**100.0%**

Source: DAS
Note: Excludes seven vehicles leased from DAS.

As shown on **Table 1-1**, Parks (563 vehicles), Wildlife (382 vehicles), Forestry (149 vehicles), MRM (136 vehicles), Watercraft (100 vehicles), and Oil and Gas (75 vehicles) are the six divisions with the largest fleets. In total, these top six divisions hold 1,405 vehicles or 87.9 percent of ODNR's total vehicles. Within these divisions, the most common vehicles are ½ ton pickups, ¾ ton pickups, and SUVs.

Fleet management data for all State of Ohio vehicles is maintained by DAS using an online system known as Fleet Ohio. ORC § 125.832(C) requires that state agencies shall provide "....fleet data and other information, including, but not limited to, mileage and costs. The data and other information shall be submitted in a manner determined by [DAS]". Because DAS has determined to use Fleet Ohio to record data, the responsibility falls to ODNR to make certain that data in Fleet Ohio is up-to-date and accurate.

There are two ways for ODNR to maintain Fleet Ohio information; the first is to manually enter data by logging into Fleet Ohio; the second is to use a Voyager card to purchase maintenance services or fuel. Voyager cards are similar to credit cards and are issued to every vehicle in DAS' inventory; thus every ODNR vehicle has a voyager card. Voyager cards are used to record data for vehicles fueled and maintained through commercial vendors and information from Voyager transactions automatically updates Fleet Ohio. However, some ODNR divisions use internal sources for fuel (e.g., bulk fuel tanks) and maintenance (e.g., in-house mechanics or vendors that do not accept Voyager). Non-Voyager activities are most common for Parks and Forestry vehicles due to their wide and varied dispersion across the State; often in remote areas. As previously noted, because Voyager cards are not used for these transactions, data is not automatically uploaded into Fleet Ohio and must be hand-entered by division staff. However, as a matter of historical practice, entering data into Fleet Ohio had not been an area of focus for regular or complete updates. As a result, Fleet Ohio contains less than fully complete data on a number of Department vehicles. Most significantly, these deficiencies affect Parks and Forestry vehicles' fuel, maintenance, and repair labor cost data.

Prior to the start of this performance audit, ODNR began a number of fleet management improvement initiatives. For example, beginning in calendar year (CY) 2013, the Department requested that each division send a representative to a monthly meeting specifically for the purpose of addressing fleet management issues. Also, Fleet Management created monthly reports to request information from division managers on vehicles that have not received fuel for 60 days and/or maintenance for 180 days. During the course of this performance audit the Department began instituting the following initiatives:

- Reducing the duration of the salvage process;
- Consolidating and reducing the use of bulk fuel tanks; and
- Improving the quality of the data entered in Fleet Ohio.

The **Fleet Management** section is divided into four sub-sections of analysis, each analyzing a distinct element of fleet management.

Data Collection: The first sub-section analyzes data collection practices and compares ODNR's current practice to practices required by DAS.

Data-Driven Efficiency Opportunities: The second sub-section analyzes how ODNR could use improved fleet management data to identify opportunities for greater fleet efficiency.

Passenger Pool Fleet Consolidation: The third sub-section analyzes the size and composition of the passenger pool fleet at ODNR's central office in Columbus, Ohio (Fountain Square).

Fleet Cycling: The fourth and final sub-section analyzes the Department's current vehicle lifecycle practices compared to those recommended by DAS.

Ultimately, the four sub-sections will show several options that the Department can use to improve the efficiency of fleet management practices.

R1.1 Data Collection

Background

Ohio Administrative Code (OAC) 123:6-1-08 requires that all employees using a state vehicle either use the Voyager card to pay for fuel and maintenance or provide information about the time, date, and cost to DAS manually.

Methodology

This sub-section of the performance audit, **Data Collection**, seeks to analyze and describe identified deficiencies in fleet management data. Data for this section was obtained primarily from Fleet Ohio and supplemented by division-specific maintenance records for the time-period encompassing CY 2011 to CY 2013. While Fleet Ohio was the primary source of information, when vehicle-specific data deficiencies were identified (e.g., absence of maintenance expenditures in Fleet Ohio), division management either verified the accuracy of data or provided supplemental maintenance records to address the deficiencies. All other questions concerning Fleet Ohio data were referred to, and addressed by, Department and division management as needed.

Analysis

Table 1-2 shows Parks maintenance expense by vehicle type that was incurred during CY 2011 to CY 2013, but never recorded in Fleet Ohio, and, by extension, never reported to DAS. Counts of vehicles by type are included to illustrate the scope of the weakness (i.e., how many vehicles were impacted).This type of analysis provides an example of the potential magnitude of the data missing from Fleet Ohio for just one division.

Table 1-2: Parks - No Maintenance in Fleet Ohio CY 2011 to CY 2013

Vehicle Type	Total Vehicles [1]	No Maintenance	Percentage	Total Dollars
1/2 Ton Pickup Trucks	114	85	74.6%	$78,451
3/4 Ton Pickup Trucks	70	39	55.7%	$19,002
Parks Law Enforcement Vehicles (LEVs)	123	27	21.9%	$42,390
Passenger Cars	45	6	13.3%	$5,661
SUVs	53	5	9.4%	$4,132
Garbage Trucks	6	1	16.7%	$1,685
Vans	36	1	2.8%	$1,831
Totals	**447**	**163**	**36.5%**	**$153,152**

Source: Fleet Management and Parks

[1] Total count is the total number of this type of vehicle in Parks as of August of 2014.

As shown in **Table 1-2**, there were a total of 163 vehicles in Parks that had no maintenance expenditures recorded in Fleet Ohio for CY 2011 to CY 2013. Within Parks, ½ ton pickup trucks are the most common non-law enforcement (LE) vehicles and also the most likely to have no recorded maintenance expenditures in Fleet Ohio. For example, ½ ton pickups account for 52.1 percent of vehicles with no recorded maintenance from CY 2011 through CY 2013. In addition,

¾ ton pickups, Parks LEVs, passenger cars, and SUVs round out the top five types of vehicles with no maintenance and account for 23.9, 16.5, 3.6, and 3.0 percent of the 163 total vehicles with no maintenance, respectively. The dollar value of unrecorded maintenance activities and relatively high proportion of Parks vehicles with missing data raises concerns about doing a fleet management analysis based solely on data available from Fleet Ohio. These circumstances also highlight potential weaknesses in ODNR's data collection practices.

In order to provide an appropriate level of reporting oversight to DAS as well as necessary internal management information the Ohio Department of Transportation (ODOT) has implemented a policy that requires data collection for in-house maintenance activities. ODOT's policy requires that, at minimum, in-house maintenance data be recorded for any maintenance activity requiring $50 or more in parts or more than one hour of employee labor.

Without an accurate account of the full cost of vehicle maintenance, including labor, it is difficult to measure the exact cost of fleet operations within a division, let alone across the Department. The historical practice of recording fleet maintenance and fuel expenditures, but not ensuring that they were entered into Fleet Ohio has hampered ODNR's ability to manage the entire fleet in a uniform manner that provides for optimal efficiency and effectiveness.

Conclusion

ODNR does not currently have comprehensive fleet data that is easily accessible and visible to Department and division management. As such, the Department is not able to measure uniform performance on fleet-wide key performance indicators (KPIs).

Recommendation 1.1: ODNR should ensure that all vehicle maintenance performed by Department employees is properly recorded in Fleet Ohio in a timely manner. Required cost data should include all direct and indirect costs for maintenance, repairs and fuel for each vehicle.

Financial Implication 1.1: N/A

R1.2 Data-Driven Efficiency Opportunities

Background

ODNR does not fully realize opportunities to use fleet data to make more informed management decisions regarding vehicle purchasing, salvage, and fleet size.

Methodology

This sub-section of the performance audit, **Data-Driven Efficiency Opportunities**, seeks to evaluate the impact of implementing data-driven opportunities for greater fleet efficiency. Data for this section was obtained primarily from Fleet Ohio and supplemented by division-specific maintenance records for the time-period encompassing CY 2011 through CY 2013. While Fleet Ohio was the primary source of information, when vehicle-specific data deficiencies were identified (e.g., absence of maintenance expenditures in Fleet Ohio), division management either verified the accuracy of data or provided supplemental maintenance records to address the deficiencies. All other questions concerning Fleet Ohio data were referred to, and addressed by, Department and division management as needed.

Idle vehicles were identified using the 'no fuel' reports created by Fleet Management. Analysis focused on the root cause of why the vehicles were idle (i.e., vacant positions and awaiting repairs) and quantified the number, type, and residual value of idle vehicles. Complementary analysis was conducted to identify the concurrent acquisition of new vehicles; a portion of which could have been avoided through the reassignment of idle vehicles.

Parks LEVs were analyzed to determine the ratio of patrol vehicles to officers. Parks ratio was then compared to the Ohio Department of Public Safety's (ODPS) standard to assess the overall appropriateness of Parks LEV fleet size.

Analysis

Table 1-3 shows the distribution of idle vehicles assigned to vacant positions or awaiting repair as of July 2014. This type of analysis highlights the number of days that a vehicle might sit while waiting for a vacant position to be filled or a necessary repair to be made; ultimately focusing on the opportunity cost of the idle vehicle.

Table 1-3: Idle Vehicles as of July 2014

Idle Vehicles - Assigned to Vacant Positions				
Division	**Type**	**Count**	**Avg. Idle Days**	**Residual Value [1]**
Wildlife	½ Ton Pickup	4	203	$45,975
Oil and Gas	½ Ton Pickup	2	201	$36,875
MRM	½ Ton Pickup	1	434	$11,825
			Total	**$94,675**
Idle Vehicles - Awaiting Repair				
Division	**Type**	**Count**	**Avg. Idle Days**	**Residual Value [2]**
MRM	½ Ton Pickup	1	877	$10,425
Forestry	½ Ton Pickup	1	557	$5,325
Forestry	Stake Bed Truck [3]	1	366	$851
			Total	**$16,601**

Source: Fleet Management

[1] The residual value reflects the National Auto Dealers Association (NADA) average trade-in value for the same model, year, and mileage as the ODNR vehicle.

[2] The trade-in value reflects the NADA rough trade-in value for the same model, year, and mileage as the ODNR vehicle. Rough trade-in value was selected due to the likely poor condition of the vehicle leading to the idle period.

[3] NADA does not value stake bed trucks. As such, this value reflects a similar truck recently sold at state auction.

As shown in **Table 1-3**, the seven vehicles that are currently assigned to vacant positions have a total trade-in value of **$94,675**. As of July 2014, these vehicles had been sitting from between 201 and 434 days while waiting for new hires. The three vehicles listed in **Table 1-3** that were awaiting maintenance from between 366 and 877 days also represent an opportunity cost. These three vehicles have a total trade-in value of **$16,601** and those dollars could be liquidated and redirected to replacement vehicle purchases or other activities. However, since the respective divisions have been able to continue operations without those three vehicles for at least one year, the Department should consider whether or not the vehicles are needed at all.

Table 1-4 shows the number of vehicles purchased by Wildlife, Oil and Gas, and MRM during CY 2013. This type of analysis reinforces the opportunity costs of the idle vehicles awaiting a new hire shown in **Table 1-3**. For example, if vehicles were reassigned rather than allowed to sit idle the Department could purchase fewer vehicles. **Table 1-4** shows the cumulative financial impact of this decision.

Table 1-4: Vehicles Purchased by Selected Divisions CY 2013

New Vehicles Purchased		
Division	**Total New Vehicles**	**Avg. Cost per Unit**
Wildlife	12	$22,625
Oil and Gas	19	$22,573
MRM	5	$20,576
New Vehicle Cost Avoidance		
Division	**Total New Vehicles Avoided**	**Total Costs Avoided**
Wildlife	4	$90,500
Oil and Gas	2	$45,146
MRM	1	$20,576
Total Cost Avoidance	**7**	**$156,222**

Source: Fleet Management

As shown in **Table 1-4**, if the Department were to reassign idle vehicles rather than purchase new vehicles it could avoid or delay additional expenditures. Using the example vehicles shown in **Table 1-3**, the Department could avoid a new vehicle cost of **$156,222**. Between CY 2003 and CY 2012 Wildlife purchased an average of 4 new vehicles per year and MRM purchased an average of 6 vehicles per year. Oil and Gas, which was established as a separate division in CY 2011, purchased an average of 23 vehicles per year in CY 2011 and CY 2012. In CY 2013 Wildlife, Oil and Gas, and MRM purchased 12, 19, and 5 vehicles, respectively. **Tables 1-3** and **1-4** demonstrate that ODNR had idle vehicles in CY 2013 that could have been assigned before the department purchased new vehicles. While CY 2013 is the first year ODNR collected data on idle vehicles, operating conditions were similar to previous years. Based on purchasing patterns from CY 2003 to CY 2012, there likely were opportunities to avoid or delay new vehicle purchases by identifying and promptly reassigning idle vehicles.

In addition to maintenance and fuel data missing from Fleet Ohio, discrepancies were also identified in the stated vehicle use in Fleet Ohio and the actual day-to-day use. For example, Parks had 64 vehicles that had been transferred or purchased from other divisions or law enforcement organizations that were misidentified as LEVs in Fleet Ohio. Parks identified that all 64 vehicles are now general use rather than patrol.[7] Though the misidentification of these vehicles in Fleet Ohio had no day-to-day impact on Parks operations, their inclusion does inaccurately inflate the reported number of LEVs in the Department's inventory. Furthermore, an accurate count of LEVs makes it possible to assess and strategically right-size the patrol fleet according to recognized practices. For example, ODPS uses the ratio of two patrol vehicles for

[7] The distinction is important because vehicles used for LE tasks such as patrol duties will have special equipment, including emergency lights, a safety cage for prisoner transport, and special radio equipment.

every three patrol officers, or 0.67 cruisers per patrol officer, to determine the correct size of the patrol fleet.[8]

Table 1-5 shows Parks patrol officers, patrol vehicles, calculated patrol vehicle need, and difference in current fleet size to the calculated need for CY 2014 by district and in total.

Table 1-5: Parks LEV Need

District	Patrol Officers [1]	Actual Vehicles	Calculated Vehicle Need [2]	Difference
Central	19	21	13	(8)
North East	27	28	19	(9)
North West	7	12	5	(7)
South East	26	23	18	(5)
South West	15	16	11	(5)
Totals	**94**	**100**	**66**	**(34)**

Source: Fleet Management and Parks
Note: The analysis excludes the aforementioned 64 misidentified general use vehicles.
[1] Includes only officers that are typically assigned to routine patrol tasks and excludes supervisors and managers that are assigned vehicles (these specific assigned vehicles have also been excluded).
[2] Vehicle needs were calculated by multiplying the number of commissioned officers by 0.67. All vehicle needs were rounded up to the next whole number.

Table 1-5 shows that applying the ODPS standard of 0.67 patrol vehicles per officer Parks would need a total of 66 LEVs; 34 fewer vehicles than are in the current inventory.

Table 1-6 shows the savings that could be achieved if Parks disposed of the 34 excess LEVs identified in **Table 1-5**.

Table 1-6: Savings from Parks LEV Reduction

Savings Component	Projected Value
Residual Value [1]	$41,719
One-Time Revenue Enhancement	**$41,719**
Reduced Repair and Maintenance [2]	$16,079
Reduced Purchasing Need [3]	$28,500
Annual Cost Avoidance	**$44,579**
Total Year 1 Savings	**$86,298**
Annual Ongoing Savings	**$44,579**

Source: Fleet Management, Parks, and NADA
[1] Residual value is based on the average trade-in value of the 34 patrol vehicles with the highest mileage.
[2] Repair and maintenance savings are based on CY 2011 through CY 2013 average repair and maintenance costs for the 34 excess vehicles being reduced.
[3] Reducing 34 vehicles will reduce Parks' patrol fleet by 27.6 percent. Over the last 10 years Parks purchased an average of 7.6 patrol vehicles per year, so a 27.6 percent reduction in the total fleet should allow the division to purchase 2 fewer patrol vehicles each year.

[8] ODPS troopers with special assignments (e.g., supervisors or investigators) are typically assigned personal vehicles and are excluded from the calculation of 0.67 cruisers per patrol officer.

As shown in **Table 1-6**, Parks can recoup **$41,719** in residual value by selling the 34 excess LEVs. In addition, the Division will save $16,079 in reduced annual maintenance costs and can avoid $28,500 in annual new vehicle purchases cost. In total, the Division will save or recoup **$86,298** during the first year and **$44,579** each year after by reducing the total patrol fleet from 100 to 66 vehicles.

Conclusion

ODNR does not fully and uniformly collect and enter necessary fleet information into Fleet Ohio. As such, the Department is unable to fully identify and realize data-driven opportunities to reduce unnecessary fleet expenditures. Current opportunities for improved cost efficiency include reassigning or disposing of idle vehicles and sizing specialty vehicle fleets based on industry standards. Upon implementation of **R1.1**, the Department will be better able to actively manage the fleet and to identify additional opportunities for greater efficiency and effectiveness.

Recommendation 1.2: ODNR should use fleet data, information, and key performance indicators to identify and implement opportunities for greater efficiency and effectiveness. Opportunities already identified include:

- **Disposing of vehicles when repairs are either not cost effective or impractical; and**
- **Reassigning idle vehicles prior to purchasing additional vehicles;**
- **Sizing the Parks patrol fleet based on industry standards.**

Financial Implication 1.2: Net savings resulting from capturing these data-driven fleet management opportunities would be **$259,121.** Individual savings opportunities include:

- If the Department disposes of the three vehicles identified as impractical for repair it would recoup **$16,601** in residual value.
- If ODNR reassigned idle vehicles prior to purchasing new vehicles for the Divisions of Wildlife, Oil and Gas, and Mineral Resources Management (MRM), it would avoid **$156,222** in new vehicle expense.
- If the Department were to dispose of 34 unneeded patrol vehicles it would recoup **$41,719** in residual value and reduce annual expenditures by **$44,579**.

R1.3 Passenger Pool Fleet Consolidation

Background

ODNR maintains a large passenger pool fleet at the central office in Columbus, which is commonly referred to as Fountain Square. These vehicles are used by department employees to travel between Fountain Square and ODNR locations throughout the state. Employees generally return pool vehicles to Fountain Square at the end of the day, but may occasionally keep a vehicle overnight or over a weekend when involved in extended travel to remote locations.

Table 1-7 shows the distribution of the passenger pool at Fountain Square by division and vehicle type for calendar year-to-date (CYTD) 2014.

Table 1-7: Passenger Pool Vehicles by Division and Type CYTD 2014

Division/Operating Unit	Passenger Cars [1]	SUVs	Vans [2]	Division Total	% of Total
Fleet Management	11	1	2	14	29.2%
Forestry	1	2	N/A	3	6.3%
Geological Survey	1	1	N/A	2	4.2%
MRM	2	2	N/A	4	8.3%
Parks	7	N/A	N/A	7	14.6%
Office of Real Estate (REALM)	3	N/A	N/A	3	6.2%
Soil and Water	5	N/A	N/A	5	10.4%
Watercraft	1	1	2	4	8.3%
Wildlife	4	N/A	2	6	12.5%
Total Passenger Pool Vehicles	**35**	**7**	**6**	**48**	**100.0%**

Source: DAS and Fleet Management
Note: Vehicles leased from DAS are excluded from this analysis.
[1] Passenger cars include compact, mid-size, and full-size sedans as well as station wagons.
[2] Vans include minivans and large passenger vans.

As shown in **Table 1-7**, there are 48 passenger pool vehicles at Fountain Square. General Services has the largest fleet followed by Parks, Soil and Water, Wildlife, and MRM. The most common passenger pool vehicles at Fountain Square are passenger cars; 35 vehicles or 72.9 percent. Common passenger car makes and models include the Ford Focus, Ford Taurus, and Dodge Avenger. The second most common vehicles are SUVs; 7 vehicles or 14.6 percent. SUV makes and models include the Ford Escape, Chevrolet Blazer, and Chevrolet Suburban. Finally, there are 6 vans that represent 12.5 percent the total pool vehicles. Van makes include Chevrolet and Dodge minivans and two large Ford passenger vans.

Table 1-8 shows the average age and mileage of vehicles in each division's fleet for CY 2011 through CY 2013. This table shows that separate division policies on maintenance and replacement, as well as differences in resource availability, result in different ages and mileages.

Table 1-8: Passenger Pool Vehicles Average Age and Mileage by Division

Division	Average Age	Average Mileage
Fleet Management	4.7	38,548
Forestry	4.4	41,063
Geological Survey	13.1	96,581
MRM	3.7	36,008
Parks	11.3	129,938
REALM	9.7	106,212
Soil and Water	11.0	111,067
Watercraft	4.2	37,790
Wildlife	3.9	44,912

Source: DAS and Fleet Management

As shown in **Table 1-8**, Geological Survey, Soil and Water, and Parks have the oldest average fleets and Parks has the highest average mileage. **Table 1-8** also shows the effect of having separate fleet policies for each division. The age and mileage of a vehicle affects operating expense. For example, an analysis of ODNR's fleet found that passenger cars with 90,000 miles or less have an average cost per mile of $0.05 whereas vehicles with more than 90,000 have an average cost per mile of $0.07.

Methodology

This sub-section of the performance audit, **Passenger Pool Fleet Consolidation**, seeks to analyze the opportunity to more efficiently meet demand through the optimization of a shared pool of passenger vehicles at Fountain Square. Identification of passenger pool vehicles was determined through consultation with, and input from, both Department management and division representation. Data for KPIs was drawn from Fleet Ohio. Unless otherwise noted, data represents averages from CY 2011 to CY 2013. Utilization data was obtained from a variety of sources. For example, Forestry, MRM, Parks, REALM, Soil and Water, Watercraft, and Wildlife all keep hand-written reservation logs; Geological Survey uses a Microsoft Access database; and Fleet Management uses an online reservation system supplied by DAS. Where data gaps or quality issues were identified, further clarifying discussions were held with appropriate management staff and supplemental documentation, if applicable, was obtained. In some cases, reservation logs were supplemented by Voyager card data to show how often vehicles were fueled. This technique was used as a proxy for utilization when other data was unavailable.

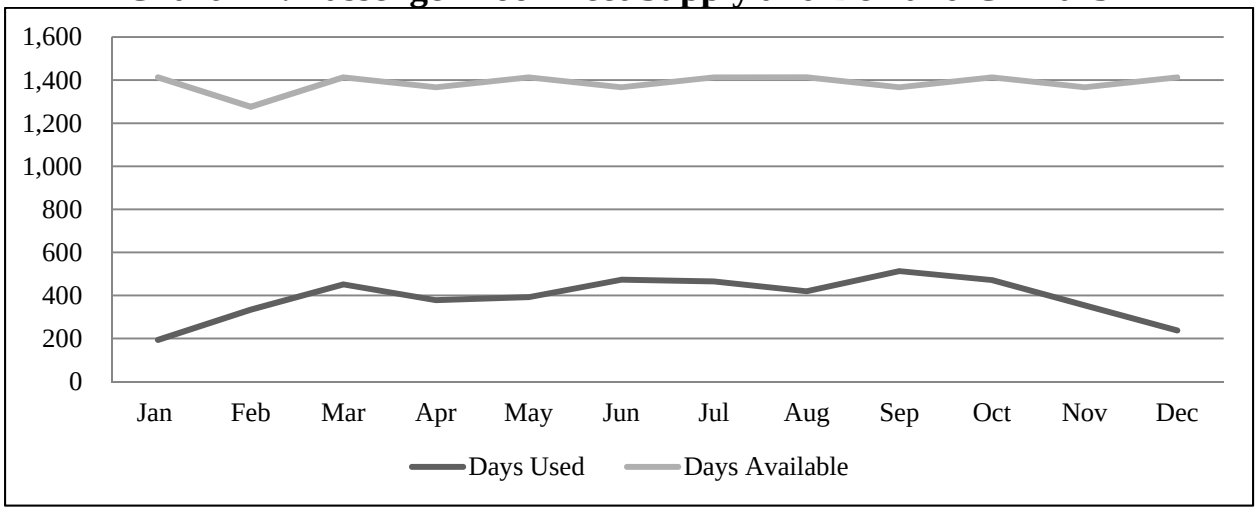
Reservation data was used to compare vehicle demand to vehicle supply. Data from each division for each day was combined to calculate a total daily vehicle demand for the combined passenger pool fleet. Data on the total number of vehicles available from each division was also combined to calculate a total combined passenger pool fleet vehicle supply. The combined passenger pool fleet was analyzed to calculate the total number of vehicles used per day as well as the number of each type (i.e., sedans, SUVs, vans, etc.) used per day. This analysis allowed for calculation of a total peak demand as well as peak demand by vehicle type. Peak demand was

used to estimate the optimal future size and composition of the Department's passenger pool fleet.

Analysis

Chart 1-2 shows the monthly comparative relationship between total vehicle days used (i.e., demand) and total vehicle days available (i.e., supply) for CY 2013. Each day that a vehicle existed in the Department's inventory was considered one day of vehicle supply. Each time that a vehicle was checked out was considered one day of vehicle demand. This chart shows the extent to which vehicle demand approached vehicle supply.[9]

Chart 1-2: Passenger Pool Fleet Supply and Demand CY 2013 [1]



Source: DAS and ODNR

[1] Days available include weekends and holidays for a full 365 day year. Weekends and holidays were included because reservation data shows that vehicles are often kept checked out over weekends or during holidays.

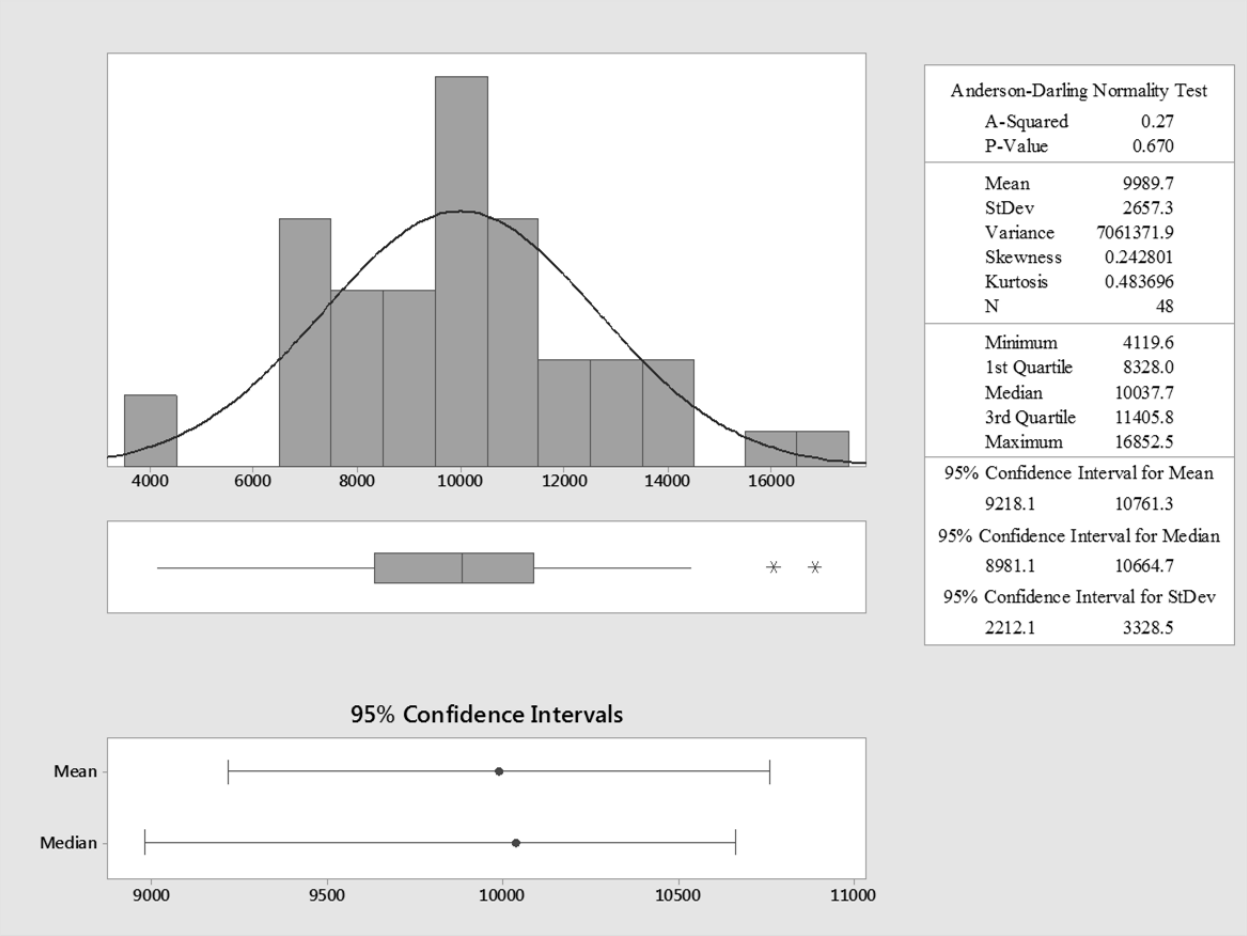
As shown in **Chart 1-2**, vehicle demand fluctuates due to the seasonal nature of much of the Department's operations, but at no point in the year does demand for vehicle days used approach the number of vehicle days available. The average monthly utilization was 28.2 percent and the median monthly utilization was 28.7 percent.[10] The highest demand for vehicle days occurred in September 2013, when 37.5 percent of vehicle supply days were used. The lowest demand occurred in January 2013 when 13.7 percent of vehicle supply days were used. Conversely, the percent of unused vehicle supply days ranged from a high of 86.3 percent in January 2013 to a low of 62.5 percent in September 2013.

[9] Data for Forestry, MRM, Parks, REALM, Soil and Water, Watercraft, and Wildlife obtained from hand-written reservation logs; Geological Survey data from Microsoft Access database; data from Fleet Management from online reservation system supplied by DAS.

[10] The median represents the middle value of the data and is commonly used to assess the relative centering and dispersion about the mean of multiple samples of data.

Chart 1-3 shows the distribution of total annual miles by vehicle for each of the 48 passenger vehicles in the passenger pool fleet. This chart compliments **Chart 1-2,** by showing the average mileage utilization of each vehicle for CY 2013.

Chart 1-3: Passenger Pool Vehicle Annual Mileage CY 2013

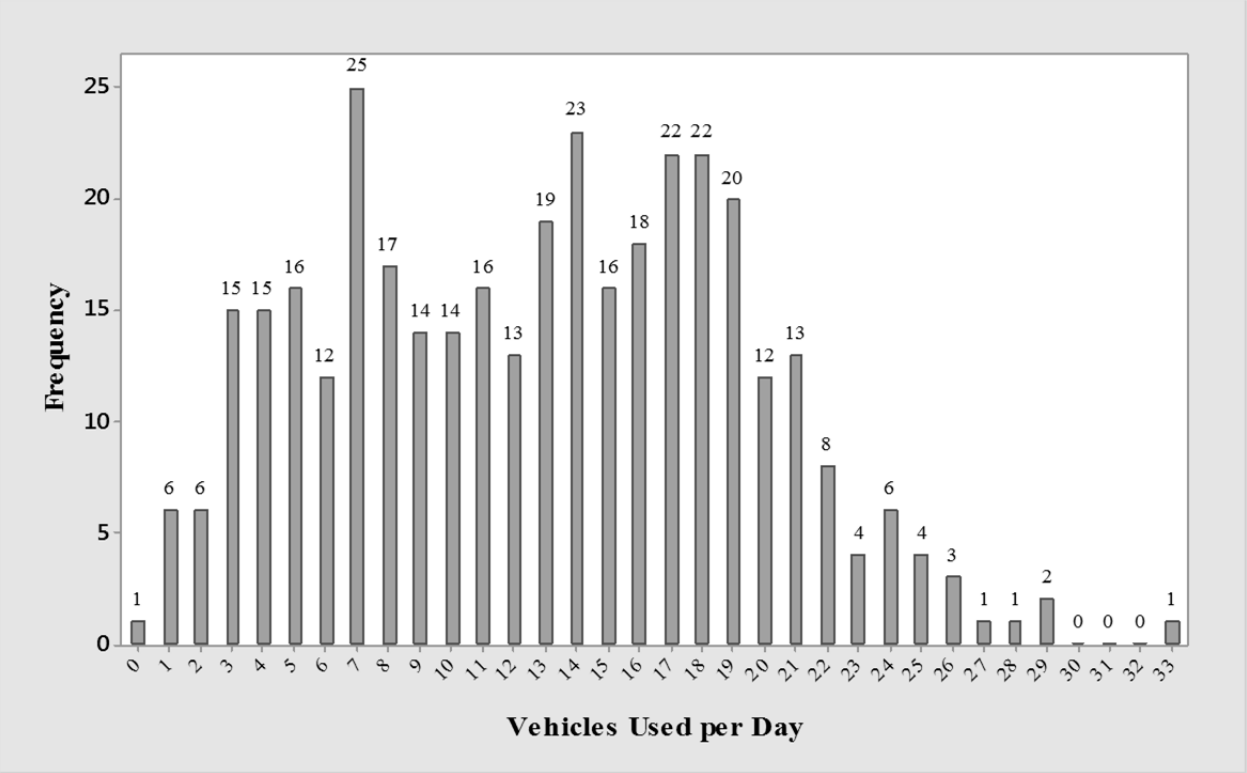


Source: DAS

As shown in **Chart 1-3**, the median utilization was 10,038 miles and the average utilization was 9,990 miles. This means that 50 percent of cars in the fleet were driven less than 10,038 miles per year. ODOT recently developed fleet management guidelines that recommend that a fleet manager should only purchase a passenger vehicle if there is a reasonable expectation that the vehicle will be driven at least 12,000 miles per year. If this criterion were applied to ODNR's passenger car fleet, approximately 75 percent of the vehicles would not meet the annual utilization criteria to satisfy the purchasing threshold recommendation.

Chart 1-4 shows the frequency of the number of vehicles used during CY 2013. For example, the most common number of vehicles used in a single day was 7 and this occurred 25 times. This type of analysis not only emphasizes the practical daily demand for vehicles, but also helps to highlight peak daily demand, and how often the combined passenger pool fleet would actually approach this peak demand.

Chart 1-4: Distribution of Total Daily Demand CY 2013

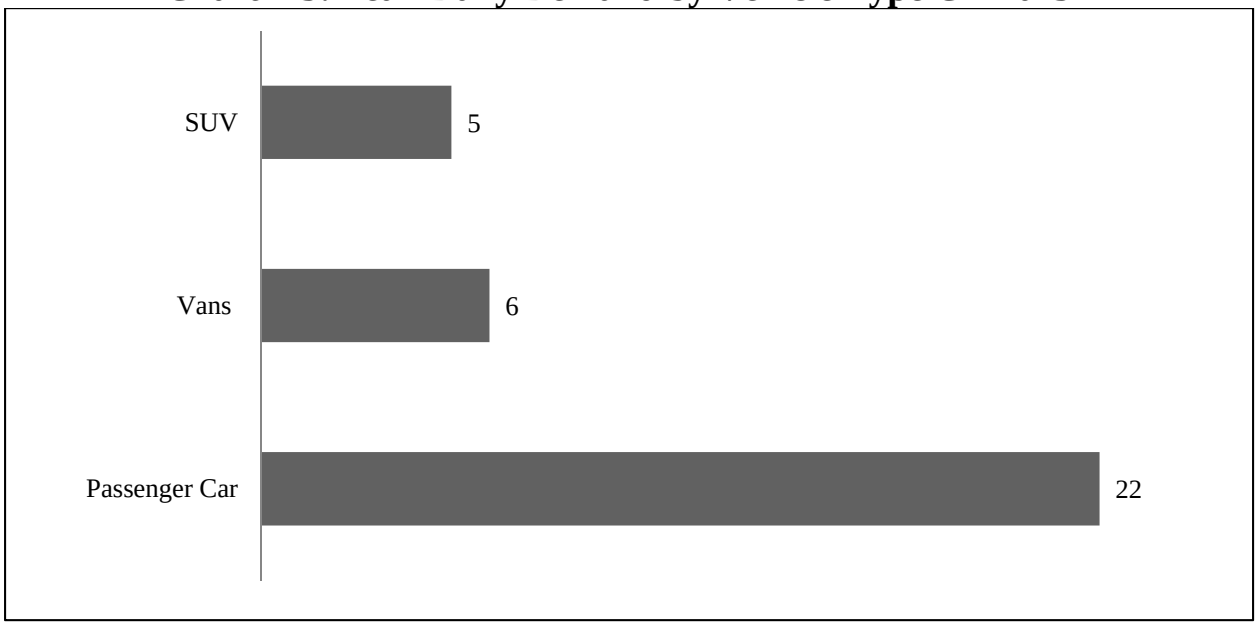


Source: DAS and ODNR

As shown in **Chart 1-4**, of the 48 vehicles available in the Department pool there was not a single day during CY 2013 when all vehicles were being used. The most common number of vehicles used on a single day was 7, or 14.5 percent of the fleet, and that level of utilization occurred 25 times during the course of the year. The second most common number of vehicles used was 14, or 29.1 percent of the fleet, and that level of utilization occurred 23 times. In relation to peak demand, the most vehicles needed on any single day in CY 2013 was 33, or 68.7 percent of the fleet, and that level of demand only occurred once. Even on the highest demand day, 15 vehicles, or 31.3 percent of the total passenger pool fleet, were left unused. The supply and demand discrepancy shown in **Chart 1-4** is partly a product of the siloed, division-based ownership model and partly a product of a historical lack of focus on measuring the true demand for vehicles across the entire Department.

Chart 1-5 shows the peak daily demand by vehicle type experienced during CY 2013. Vehicle-specific, peak-demand analysis is important to help inform not only the proper size, but also the proper composition of a future-state consolidated passenger pool fleet.

Chart 1-5: Peak Daily Demand by Vehicle Type CY 2013 [1]



Source: DAS and ODNR

[1] Passenger cars include compact, mid-sized and full-sized sedans while vans include both minivans and larger passenger vans.

As shown in **Chart 1-5**, the most commonly used vehicles are passenger cars followed by vans and SUVs. Given that **Chart 1-4** identified the single-day total peak demand for passenger pool vehicles as 33, **Chart 1-5** provides the additional context of peak daily demand by vehicle type which also equates to 33 total vehicles. Focusing on peak daily demand by vehicle type reinforces that the majority of the passenger pool fleet would continue to be passenger cars.

Table 1-9 shows a future fleet model with 33 vehicles; optimized to meet the historical peak demand shown in **Charts 1-4** and **1-5**.

Table 1-9: Future Passenger Pool Fleet [1]

Type	Used on Busiest Day	Post-Consolidation Inventory	Difference
Cars	22	20	(2.0)
SUVs [2]	5	7	2.0
Vans	6	6	0.0
Total	**33**	**33**	**0.0**

Source: DAS

[1] The Department recently leased three Ford Focuses, a Dodge minivan, and a 12 passenger van from DAS; these vehicles are included as part of the post-consolidation fleet.

[2] Due to the high age and mileage of the current inventory of passenger cars, the Department would be better able to meet vehicle demand and control cost by retaining two relatively new, low mileage SUVs and instead disposing of two more passenger cars.

As shown in **Table 1-9**, a consolidated passenger pool fleet of 33 total vehicles would provide ample vehicles to meet the Department's needs. The peak demand of 33 vehicles occurred once in CY 2013 and the most common number of vehicles used on a single day was 7, which occurred 25 times. Additionally, 17, 18, and 19 vehicles were used 22, 22, and 20 times, respectively. If this demand pattern were to hold true for future use, the Department would commonly expect to experience demand for 7 to 19 vehicles per day for a utilization rate of between 21.2 and 57.5 percent. This means that between 78.8 and 42.5 percent of the fleet would still be expected to be unused on an average day even after consolidation and right-sizing. This excess capacity will allow operational flexibility for vehicles that may occasionally be unavailable due to routine maintenance or repair.

Table 1-10 shows the number and type of vehicles that the Department could reduce by moving to a 33 vehicle combined fleet.

Table 1-10: Combined Passenger Pool Fleet Financial Implication [1]

Vehicle Reductions	Vehicle Count	Residual Value [2]	Maintenance and Repair
Cars	18	$40,824	$9,289
Vans	2	$10,562	$2,052
Sub-Totals	**20**	**$51,386**	**$11,341**
New Vehicle Purchase Cost Avoided [3]			**$16,070**
Ongoing Annual Cost Avoidance			**$27,411**

Source: DAS, ODNR, and NADA

[1] The future-state fleet will include a total of five vehicles that are currently leased from DAS. This allows ODNR to reduce 20 Department-owned vehicles and still have a total future pool of 33.

[2] Residual values are based on the NADA average trade-in value for the same model vehicle of the same age and mileage. Vehicles were selected first based on mileage and then age given that higher mileage is typically associated with higher operating cost.

[3] Reducing the overall size of the passenger fleet will allow the Department to avoid the purchase of new vehicles. Based on historical purchasing patterns from CY 2003 to CY 2013 an average of 11.7 new cars per year were purchased at Fountain Square. The passenger pool fleet represents 30.2 percent of the total passenger vehicles at Fountain Square which represent an average of 3.5 new vehicles per year. Because the fleet is being reduced by 41.7 percent it is assumed that the Department can avoid purchasing 41.7 percent of the new vehicles it has purchased historically, or 1.5 total vehicles per year. This number was rounded down to 1 to conservatively estimate total cost avoidance.

As shown in **Table 1-10**, the Department could reduce the combined Fountain Square passenger pool fleet by 20 vehicles resulting in a one-time revenue enhancement of **$51,386** in direct asset sales, annual savings of **$11,341** in reduced maintenance and repair expense based on 3 year average costs of CY 2011 through CY 2013, and **$16,070** in annual purchasing cost avoidance.

During the course of this audit the Department began consolidating passenger vehicles located at Fountain Square into a combined fleet. Vehicles from Fleet Management, Forestry, Geological Survey, Parks, REALM, Soil and Water, and Watercraft were consolidated into a combined fleet under the exclusive management of General Services. Vehicles from MRM and Wildlife will be consolidated as grant-purchased vehicles age out.

Conclusion

The Department's practice of allowing for each division to maintain a separate passenger vehicle pool at Fountain Square results in a passenger pool fleet that is larger than necessary to meet actual demand. By combining the vehicles at Fountain Square and by sizing the passenger pool fleet to meet actual demand, the Department will be able to reduce both the number of vehicles currently underutilized and corresponding maintenance and operational expenses.

Recommendation 1.3: ODNR should consolidate the Fountain Square passenger pool fleet into a single pool under exclusive management of General Services at ODNR. Once consolidated, the passenger pool fleet should be reduced to, at most, 33 total vehicles in order to more efficiently meet actual demand. Once consolidated and reduced, General Services should review fleet utilization at least annually to ensure that sufficient demand exists to support the number and type of vehicles supplied.

Financial Implication 1.3: Eliminating 20 unneeded vehicles will raise **$51,386** in one-time revenue and save **$27,411** in reduced annual expenses.

Additional Consideration

Each division uses different types of funding for vehicle purchases. For example, Parks typically purchases vehicles with General Fund money whereas Wildlife uses federal grants to purchase vehicles. The Department will need to consider that grant funding may constrain the sharing of already purchased vehicles across divisions. The Department should work with relevant grantors to see if there is a way to share existing vehicles with other Divisions. In the event that vehicles cannot immediately be consolidated, Department management should work with division managers to develop replacement plans that take the combined pool fleet into account. Divisions that currently own grant-purchased vehicles should plan to join the combined pool fleet as the existing inventory ages out.

R1.4 Fleet Cycling

Background

The term fleet cycle describes the age and/or mileage at which an organization plans to remove a vehicle from inventory. ODNR does not have a consistently applied fleet cycling plan. Instead, decisions about vehicle salvage (e.g., vehicle age and mileage) are made on an ad hoc basis by division management.

Methodology

This sub-section of the performance audit, **Fleet Cycling**, seeks to analyze the cost efficiency of ODNR fleet cycling models. Data for this section was taken from Fleet Ohio and supported by testimonial evidence from key ODNR management staff. KPIs analyzed include the average age, mileage, and both operating and lifecycle cost per mile (CPM)[11] of: passenger cars, ½ ton and compact pickups[12], Parks LEVs, and SUVs. Vehicle types were selected for analysis based on high-level utilization data, salvage data, and ability to impact the overall efficiency of the fleet as well as through input from ODNR management. Passenger cars were selected because ODNR is in the process of reducing the passenger car fleet (**see R1.3**). Pickup trucks are the most common non-LEVs across the Department, so a plan to more effectively fleet cycle pickup trucks could have a large impact. A number of older and higher mileage Parks LEVs have been recommended for reduction (**see R1.2**), so there may also be an opportunity to more effectively fleet cycle a down-sized Parks LEV fleet. Finally, SUVs are a commonly used vehicle for both passenger use and light maintenance duties in divisions such as Parks and Oil and Gas, so they were also selected for analysis.

Lifecycle CPM was calculated based on the entire lifecycle for each individual vehicle for each vehicle type. This resulted in a lifetime average CPM that showed how costs changed as vehicle mileage and age increased. Lifecycle CPM data was used to build two lifecycle models for each vehicle type. Lifecycle models were used to compare the costs of the current lifecycle to a potential future optimized model. The current-state model was based on a lifecycle of 180,000 miles, which equates to 15,000 miles per year for 12 years. The future-state, optimized model was based on a 6 year and/or 90,000 mile lifecycle that is recommended by DAS. Each model takes into account the cost of fuel, maintenance and repair, and annual cost of depreciation. The per vehicle lifecycle cost was then calculated for both the current model and a hypothetical future model that adheres more closely to the DAS recommended guideline.

Recommendations and financial implications included in this sub-section of the analysis assume that ODNR implements vehicle reductions identified in recommendations **R1.2** and **R1.3**.

[11] Operating CPM includes fuel, maintenance and repair cost; lifecycle CPM includes fuel, maintenance, repair, and adds the cost of depreciation.

[12] There are 65 compact pickup trucks such as Ford Rangers and Chevrolet S-10s in the current fleet. Since there are no longer compacts available through state contract this analysis assumes replacement with ½ ton pickups.

Analysis

Table 1-11 shows the average years in service, residual value, and mileage at salvage for three common types of vehicles from CY 2010 to CY 2013. This type of analysis helps to demonstrate actual age, mileage, and residual value at the time of disposal.

Table 1-11: Vehicles Salvaged CY 2010 to CY 2013

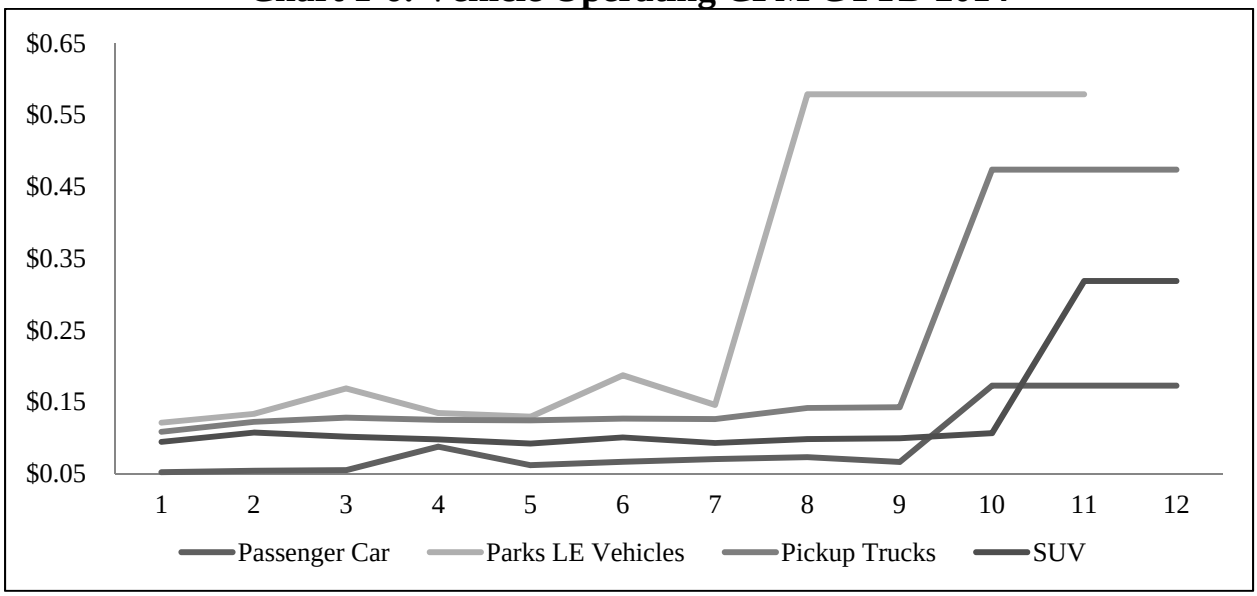
Type	Years in Service	Avg. Residual	Avg. Mileage
Pickup Trucks	12.9	$4,240	139,376
Park LEVs	11.4	$1,227	164,278
SUVs	14.3	$1,908	154,140

Source: Fleet Management

As shown in **Table 1-11**, the length of service and average mileage at salvage vary significantly depending on vehicle type. Each type of vehicle far exceeds the DAS guideline of 6 years and/or 90,000 miles. Pickup trucks exceed the DAS guideline by 53.5 percent or 6.9 years. Parks LEVs exceed the DAS guideline by 47.4 percent or 5.4 years. Finally, SUVs exceed the DAS guideline by 58.0 percent or 8.3 years.

Chart 1-6 shows the operating CPM of each vehicle type based on a 12 year and/or 180,000 mile lifecycle for CYTD 2014 (data is from Fleet Ohio in August of 2014). This type of analysis is important to demonstrate the relationship between the increase in operating costs and the increase in age and mileage of a vehicle.

Chart 1-6: Vehicle Operating CPM CYTD 2014



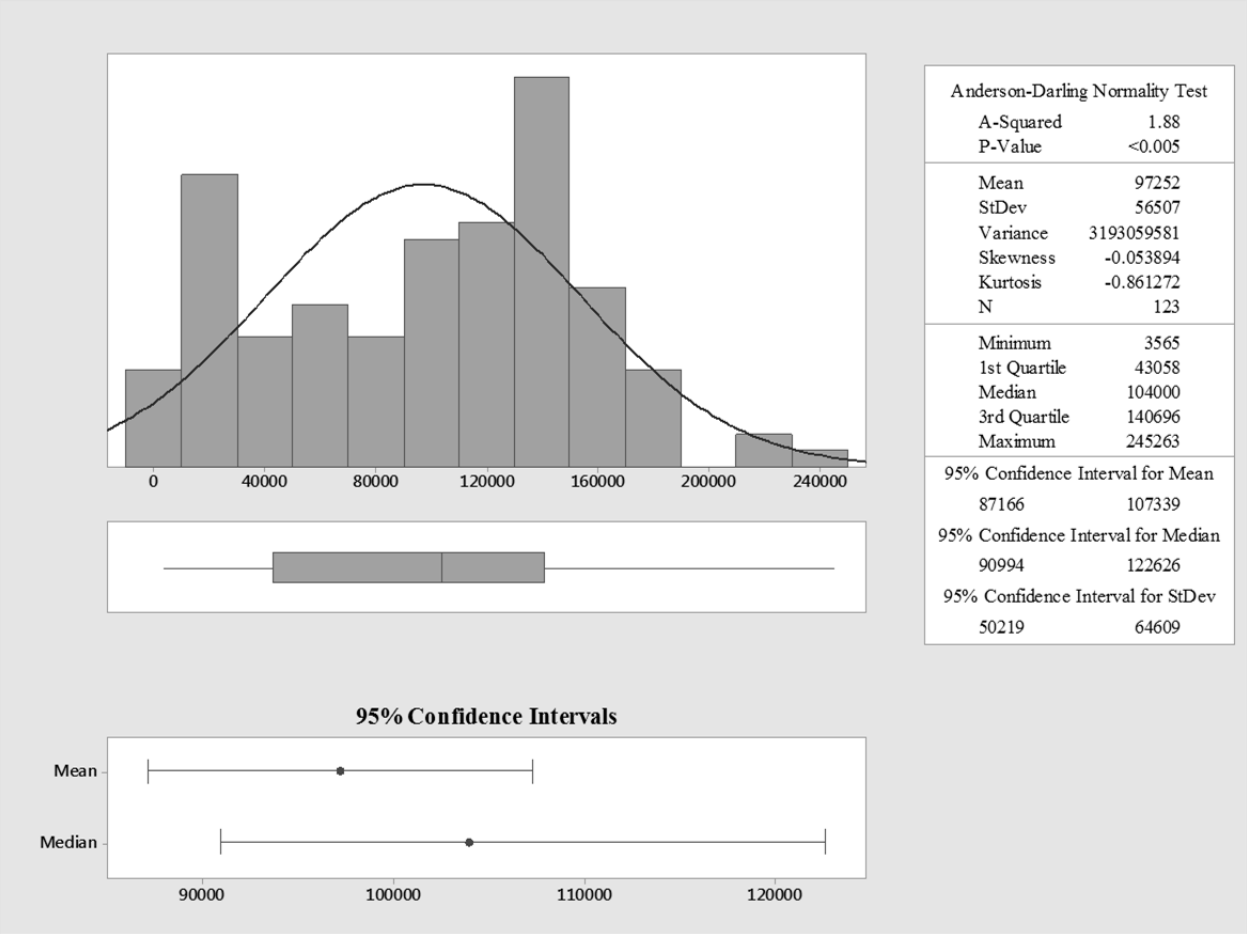
Source: DAS
Note: This chart includes operating costs (fuel, maintenance and repair) but not depreciation.

As shown in **Chart 1-6**, each vehicle type becomes more expensive as it gets older and/or gains mileage. Over 180,000 miles, passenger car CPM increases from $0.05 to $0.12; a 140 percent increase. Parks LEVs increase from $0.12 to $0.58 per mile; a 383.3 percent increase. Pickup

trucks increase from $0.11 to $0.47 per mile; a 327.3 percent increase. Finally, SUVs increase from $0.09 to $0.32 per mile; a 255.6 percent increase.

Chart 1-7 shows the distribution of mileage for the passenger car fleet from CY 2011 to CY 2013. This type of analysis helps to show the potential for operating cost inefficiencies actually experienced through operation of a high-mileage fleet.

Chart 1-7: Passenger Car Mileage CY 2011 to CY 2013

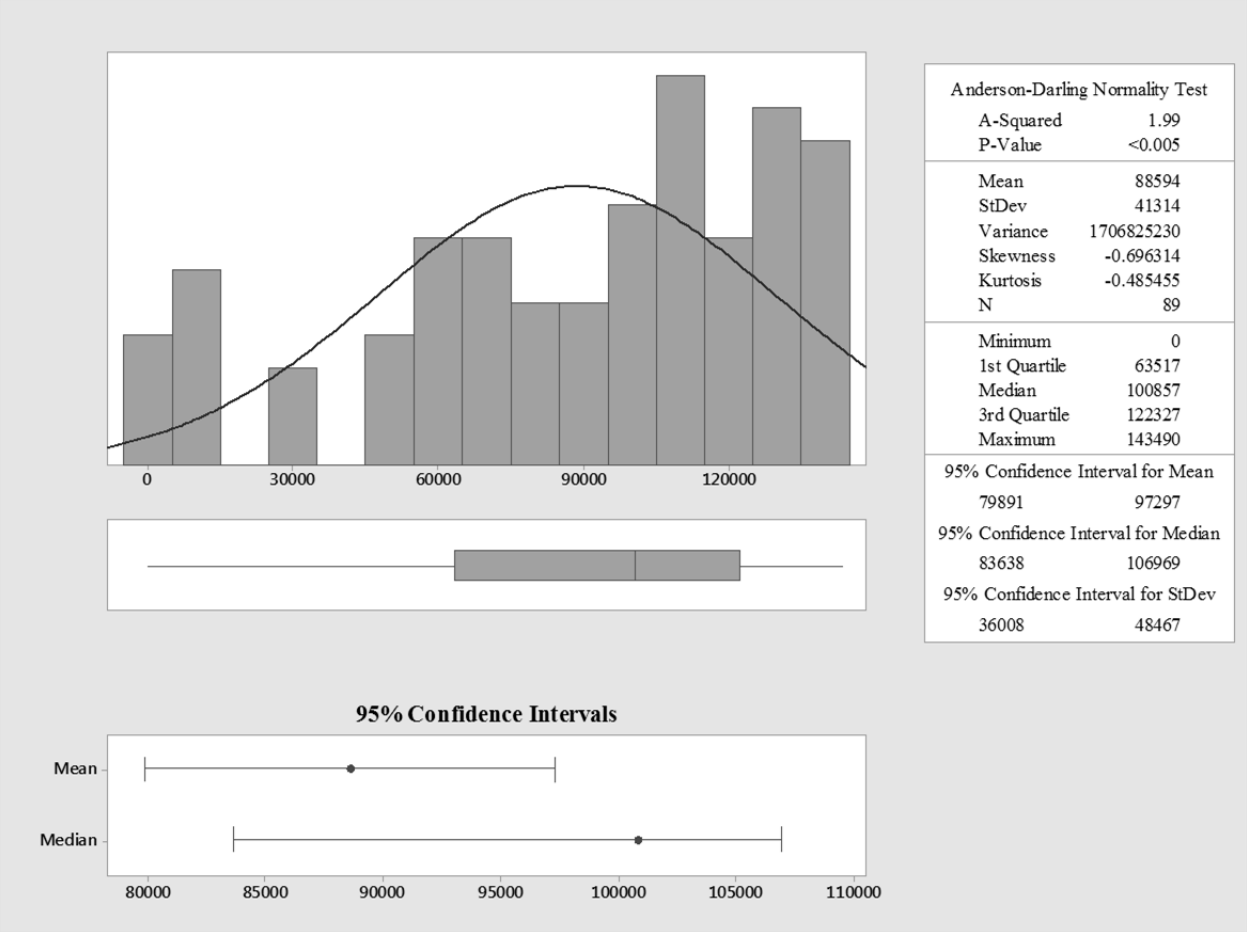


Source: DAS

As shown in **Chart 1-7**, the average mileage for passenger cars is 97,252 while the median is 104,000. As such, more than half of the passenger cars in ODNR's inventory are at or above the DAS guideline for a passenger vehicle. Specifically, 73 passenger cars or 59.3 percent are over the 90,000 mile guideline while 6 passenger cars, or 4.9 percent, are within 15,000 miles of the guideline. When considered in light of the data presented in **Chart 1-6**, it is probable that the Department is incurring more operating expense than would be the case using a more aggressive fleet cycling plan.

Chart 1-8 shows the distribution of mileage for the Parks LEV fleet from CY 2011 to CY 2013.

Chart 1-8: Parks' LEV Fleet Mileage CY 2011 to CY 2013

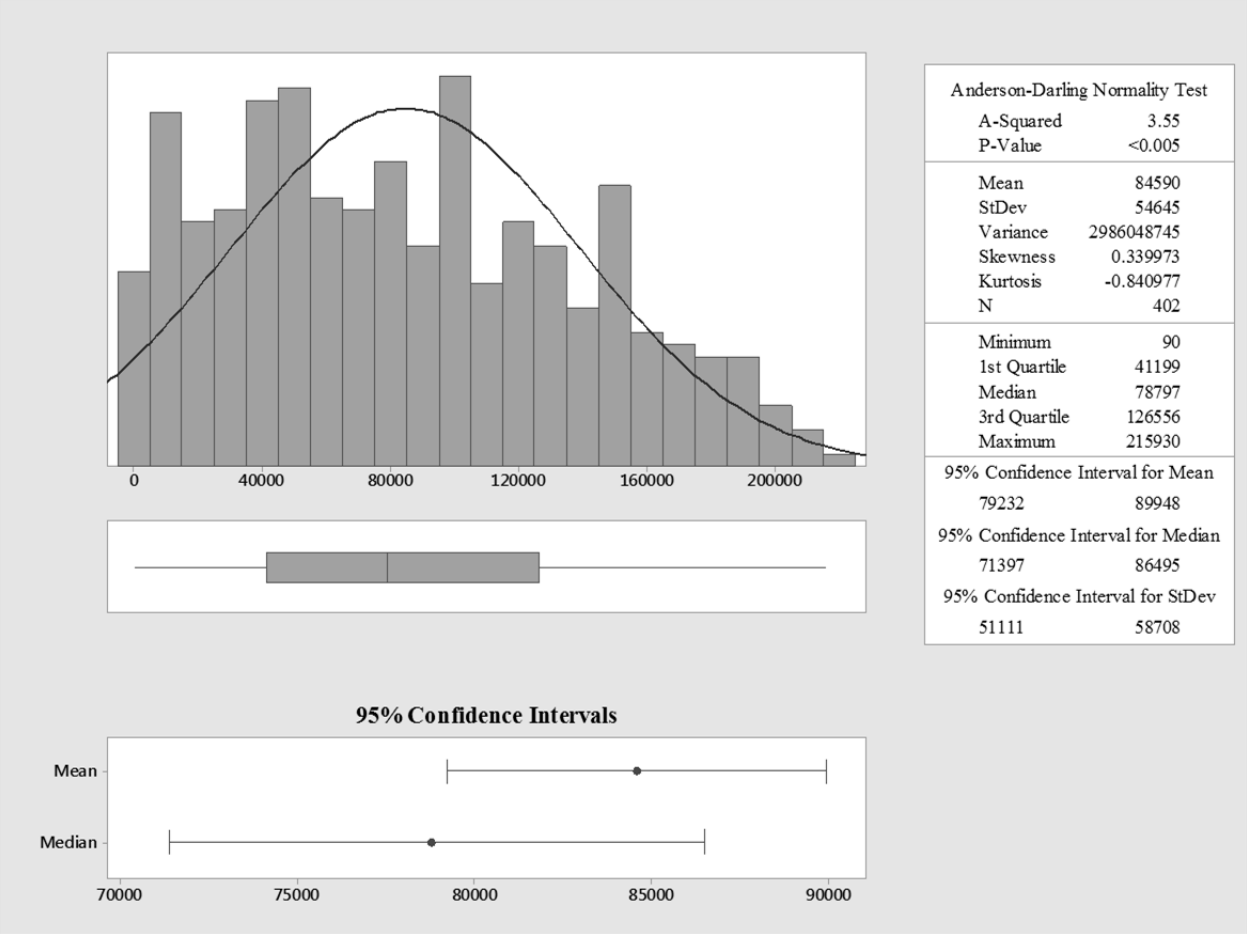


Source: DAS and Parks

As shown in **Chart 1-8**, the average mileage of the Parks LEV fleet is 88,594 while the median is 100,857. Specifically, 49 vehicles or 55.1 percent are over the DAS 90,000 mile guideline. In addition, there are 9 vehicles, or 10.1 percent of the fleet, that are within 15,000 miles of the DAS guideline. Parks occasionally purchases LEVs from other law enforcement organizations which likely inflate average and median mileage; 13.6 percent of Parks LEVs were purchased used. Due to the overall high mileage of the Parks LEV fleet it is probable that the Division is incurring more operating expense than would be the case using more aggressive fleet cycling.

Chart 1-9 shows the distribution of mileage for the pickup truck fleet from CY 2011 to CY 2013.

Chart 1-9: Pickup Truck Mileage CY 2011 to CY 2013

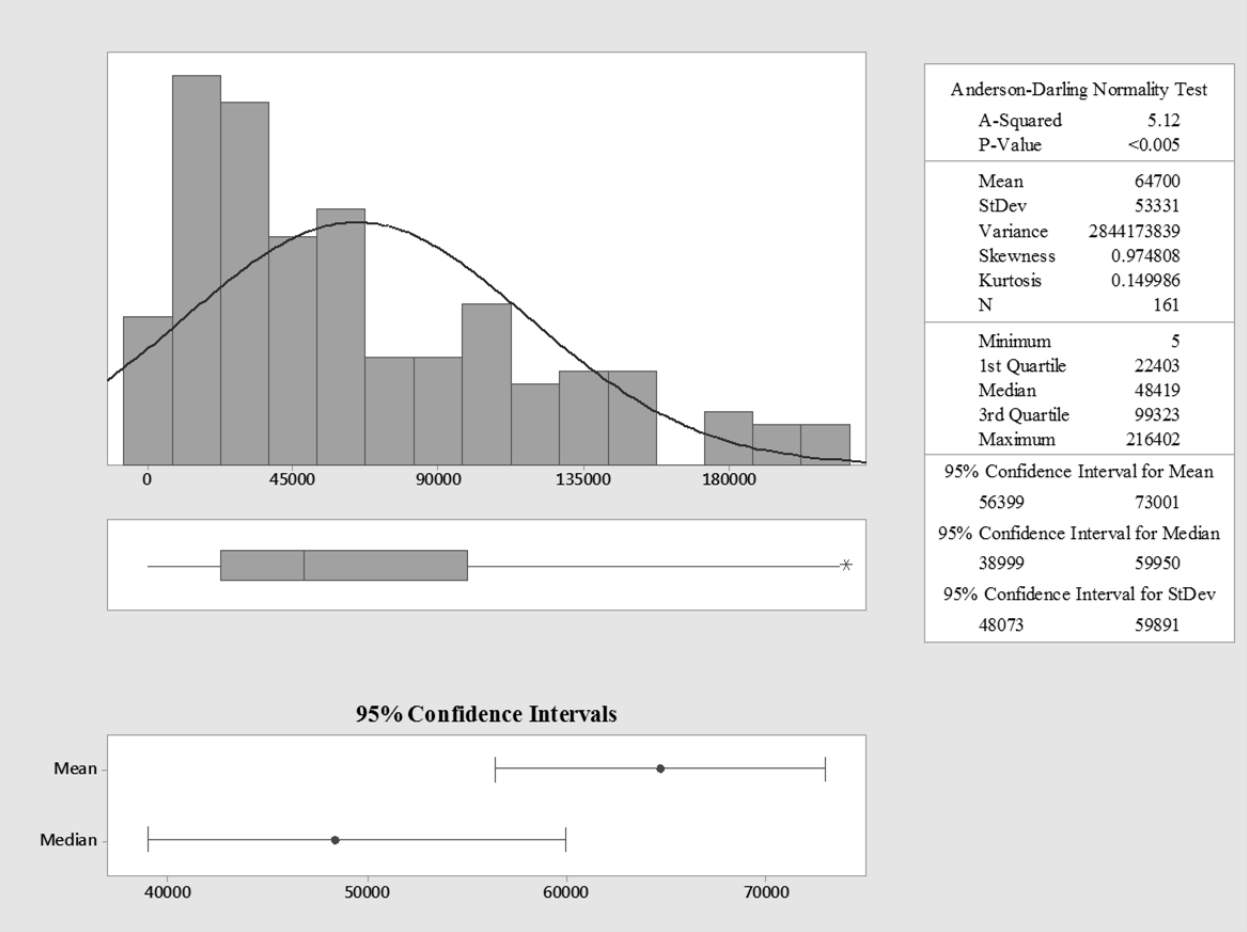


Source: DAS

As shown in **Chart 1-9**, the average mileage for the pickup truck fleet is 84,590 and the median mileage is 78,797. There are a total of 65 compact and 337 ½ ton pickups in the Department fleet. 177 pickup trucks or 44.0 percent of the fleet are over the DAS 90,000 mile guideline. In addition, 35 or 8.7 percent are within 15,000 miles of the DAS guideline. The average is higher than the median partially because of the relatively high mileage for the trucks in the Parks fleet. For example, while both Forestry and Parks use pickup trucks for the bulk of operations, the average mileage for Forestry trucks is 78,971 whereas Parks is 126,508 miles.

Chart 1-10 shows the distribution of mileage for the SUV fleet from CY 2011 to CY 2013.

Chart 1-10: SUV Mileage CY 2011 to CY 2013



Source: DAS

As shown in **Chart 1-10,** the average mileage for SUVs is 64,700 and the median is 48,419. Specifically, 47 SUVs, or 29.2 percent of the fleet, are over the DAS 90,000 miles guideline. In addition, 6 SUVs, or 3.7 percent are within 15,000 miles of the DAS guideline. Large differences between the mean and median values are driven by significant division to division mileage variation. For example, the mean mileage for SUVs in Parks is 146,288 while it is 27,116 in Oil and Gas.

Table 1-12 shows an example of the current pickup truck lifecycle model compared to a 6 year and/or 90,000 mile model. This type of analysis is instrumental in showing not only how cost of ownership increases over time, but also the relative total cost of ownership for different models.

Table 1-12: Pickup Truck Lifecycle Cost Comparison

Lifecycle Model	Total Miles	Lifecycle CPM	Total Cost
Current-State (Per Vehicle)	**180,000**	**$0.317**	**$57,060**
Future-State (Per Vehicle)	90,000	$0.227	$20,430
Total Cost of Future-State (2 Vehicles)			**$40,860**
Difference			**($16,200)**
Percent Difference			**(28.4%)**

Source: DAS and NADA

Note: The future-state will require the purchase of two vehicles over the same 12 year and/or 180,000 miles and will therefore bring the full vehicle cost to $40,860.

As shown in **Table 1-12**, implementing the DAS recommended 6 years and/or 90,000 miles lifecycle can reduce the cumulative lifecycle cost for each vehicle in the fleet. Under the current practice, the cost of the average full lifecycle for a single pickup is $57,060 over 12 years.[13] In contrast, the more aggressive model will result in a per vehicle lifecycle cost of $20,430. Implementing the DAS model will require the purchase of two vehicles over the same 12 years and/or 180,000 miles and, as such, will have a full cost of $40,860. Converting to the DAS model will save $16,200, or 28.4 percent, on each current vehicle.

Table 1-13 shows a comparison of lifecycle cost per mile for the current-state and future models. The CPM represents average CPM over the full lifecycle. This table shows how a new fleet cycling model could reduce the CPM for each vehicle type.

Table 1-13: Lifecycle Cost per Mile Comparison

Current-State (12 Years/180,000 miles – 1 Vehicle)					
Type	**Purchase Price [1]**	**Residual Value [2]**	**Annual Lost Residual Value**	**Lifecycle CPM**	**Lifecycle Cost**
Passenger Cars	$16,070	$825	$1,270	$0.177	$31,860
Pickups	$21,848	$3,250	$1,270	$0.317	$57,060
Park LEVs	$21,046	$1,025	$1,668	$0.389	$70,020
SUVs	$18,649	$1,908	$1,394	$0.247	$44,460
Future-State (6 Years/90,000 Miles – 2 Vehicles)					
Passenger Cars	$16,070	$6,250	$1,637	$0.171	$30,780
Pickups	$21,848	$12,375	$1,579	$0.227	$40,860
Park LEVs	$21,046	$3,825	$2,870	$0.337	$60,660
SUVs	$18,649	$7,500	$1,858	$0.222	$39,960

Source: DAS and NADA

[1] Based on the FY 2014-15 estimated state contract price by vehicle type.

[2] The current-state residual values are based on NADA average trade-in value for the same model vehicle at 12 years of age with 180,000 miles. Future-state salvage values are based on NADA trade-in values for the same type of vehicles, but at 6 years and 90,000 miles.

[13] The full lifecycle cost includes lost residual value as well as fuel, maintenance, and repair costs.

As shown in **Table 1-13**, implementing a DAS recommended fleet cycling plan will increase the residual value for each type of vehicle. Passenger cars will decrease from an average of $0.177 per mile to $0.171 per mile; a reduction of 3.4 percent. Pickup truck will decrease from $0.317 to $0.227; a reduction of 28.4 percent. Parks LEVs will decrease from $0.389 to $0.337; a reduction of 13.4 percent. SUVs will decrease from $0.247 to $0.222; a reduction of 10.1 percent.

Table 1-14 compares the current lifecycle costs to the estimated costs of a future-state cycling model. The table shows that each type of vehicle analyzed would benefit from a shift to more aggressive fleet cycling based on the DAS recommendation of 6 years and/or 90,000 miles.

Table 1-14: Current and Future Cycling Models Comparison

Type	Current-State	Future-State	Difference	Annual Savings [1]
Passenger Cars	$31,860	$30,780	($1,080)	$11,070
Pickups	$57,060	$40,860	($16,200)	$542,700
Parks LEVs	$70,020	$60,660	($9,360)	$69,420
SUVs	$44,460	$39,960	($4,500)	$60,375
Total Savings				**$683,565**

Source: DAS and NADA

[1] The annual savings assume per-vehicle savings multiplied across the fleet for each type; 123 passenger cars; 402 pickup trucks, 89 Parks LEVs, and 161 SUVs and then divided by 12 to calculate the annual savings.

As shown in **Table 1-14**, the lifecycle costs for passenger cars, pickups, Parks LEVs, and SUVs would all be less expensive if the Department instituted a more aggressive fleet cycling plan. The total lifecycle cost of a passenger car would be reduced by $1,080 or 3.4 percent, the pickup lifecycle would be reduced by $16,200 or 28.4 percent, the Parks LEVs lifecycle would be reduced by $9,360 or 13.4 percent and the SUV lifecycle will be reduced by $4,500 or 10.1 percent through the implementation of a more aggressive fleet cycling model. As shown in **Table 1-14**, implementing more aggressive fleet cycling will result in total annual savings of **$683,565**.

Conclusion

The Department lacks consistently applied fleet cycling guidelines which results in a variety of fleet management practices applied in different divisions. A large number of the Department's vehicles are at or near the optimal lifecycle disposal point. The Department could reduce expenditures on fuel and maintenance and potentially improve productivity by implementing a future-state fleet cycling program using DAS guidelines.

Recommendation 1.4: ODNR should implement fleet cycling guidelines and practices that recognize a vehicle lifecycle of 6 years and/or 90,000 miles in line with guidelines from DAS for vehicle cycling. Vehicles approaching those parameters should be thoroughly reviewed to determine the current cost per mile compared to that of newer vehicles. Finally, vehicles nearing the end of service life should be promptly salvaged to capture as much residual value as possible.

Financial Implication 1.4: Each year the proposed cycling model of 6 years and 90,000 miles is in place, the Department could save **$683,565** in reduced operating costs and increased salvage values.

Additional Consideration

The savings in **Table 1-14** assume that ODNR will continue to own the vehicles in its fleet. Alternatively, the Department could exercise the option to lease vehicles from DAS. Leasing vehicles from DAS may not be as cost effective as optimized, in-house cycling, but it could afford additional benefits such as reduced administrative overhead from having DAS take over activities such as paying Voyager bills or purchase orders. In addition, leasing requires a lower up-front cost which could make it an easier option to implement.

2. Seasonal Workforce Strategies

Section Overview

This section focuses on the Ohio Department of Natural Resources' (ODNR or the Department) Division of Parks and Recreation's (Parks or the Division) strategies to staff Natural Resource Specialist (NRS) and Natural Resource Worker (NRW) positions. This section is presented as three separate analyses including:

- **Natural Resources Specialist Staffing:** The first analysis focuses on NRS staffing and compares current practices to an optimized staffing model supported by provisions of the collective bargaining agreement (CBA).
- **Natural Resources Worker Staffing:** The second analysis focuses on NRW staffing compared to the possibility of shifting to part-time-permanent (PTP) positions.
- **Performance Measurement and Management:** The third and final analysis focuses on Parks performance measurement practices and outlines the advantages of developing a system for measuring and sharing performance data across the Division.

As of the publication of this report, select requirements of the 2010 Patient Protection and Affordable Care Act (PPACA) have yet to be fully implemented. ODNR anticipates that the PPACA requirements will lead to, at least, a marginal increase in the cost of insurance benefits for less than full-time workers. ODNR is working with the Ohio Department of Administrative Services to determine how additional insurance requirements might affect operations, including the financial impact of implementing the recommendations in this section of the report.

Recommendations Overview

Recommendation 2.1: ODNR should fully maximize the use of NRS labor within the limitations of the collective bargaining agreement. In addition, the Department should seek to minimize unemployment cost through the widespread implementation of unemployment avoidance and reduction strategies. The combination of both actions will allow Parks to provide a level of service that is at least commensurate with what is being provided now. However, there is also the potential for increased levels of service by redirecting non-productive expenses back to direct labor activities.

Financial Implication 2.1: Replacing NRW positions with NRS positions in accordance with total permitted hours will save a total of **$992,887** over the next three years; an average annual savings of **$330,962**.

Recommendation 2.2: Upon full implementation of R2.1, ODNR should convert all remaining NRW positions to part-time-permanent positions. After the Department implements recommendation R2.1, shifting the remaining NRW positions to PTP will help avoid unemployment expenses.

Financial Implication 2.2: Eliminating unemployment by shifting NRW positions to year-round status will save **$62,132** in unemployment expenses.

Recommendation 2.3: ODNR should develop a process to identify critical management and operational data. Identified data should be collected and aggregated into a management information framework that provides for meaningful performance measures across each business or operational unit. Department management should frame performance measures by establishing goals and targets for acceptable to exceptional levels of service. Key performance measures should be linked to goals and targets and results reported on a consistent basis as part of a performance management framework. Finally, the performance management framework should be updated, at least annually, to ensure that performance measures, goals, and objectives remain up-to-date in focusing on key priorities.

Financial Implication 2.3: N/A

Section Background

Parks operates 74 locations across Ohio which can vary significantly in size and purpose. Large parks attract national and international visitors and offer amenities including lodge and cottage facilities; camping; boating; and access to resources with historical, natural, and/or cultural significance. Small parks attract regional or local visitors and focus on day-use amenities such as picnic areas, hiking, and fishing access. Throughout the course of this performance audit, Division management expressed a desire to provide a consistently high level of customer service in the face of an overall increasing cost of operations and stable to declining revenues and other budgetary support.

Park operations are generally seasonal in nature, coinciding with park use and visitation trends that fluctuate throughout the year. For example, visitation tends to ramp up each spring (generally, March or April) and wind down each fall (generally, October or November). Parks' customer-service intensive operations closely mirror this seasonal trend while support and preparation functions tend to be concentrated during the "off-season".

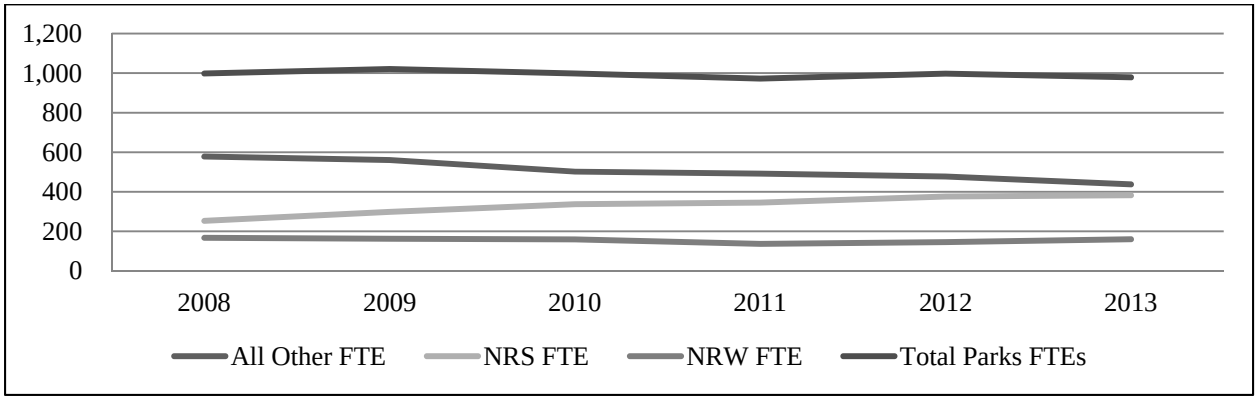
In calendar year (CY) 2013 the Division employed a workforce of 978.6 full-time equivalent (FTE) employees.[14] However, due to the seasonal nature of operations, Parks employ a mix of full-time, year-round employees and part-time, year-round or less, employees. Each position appointment type entails unique hours and length of employment expectations. By far, the two most common less-than-full-time positions are the NRS and the NRW. Employees in NRS positions are 'Intermittent – Exempt' and work up to 39 hours per week for up to 720 hours per fiscal year.[15] The current CBA limits the Division to using a total of 339,000 NRS hours per fiscal year.[16] Employees in NRW positions are 'Established-Term-Irregular' employees and

[14] This total takes into account the unique maximum annual hours limitations for each position appointment type rather than the generally accepted 2,080 hours typically associated with full-time employment (see **Chart 2-1**).
[15] If an NRS exceeds 720 hours in a fiscal year the individual must be offered the opportunity to move into a higher paying position with more hours, such as an NRW position.
[16] The current CBA is effective from CY 2012 until CY 2015. Negotiations for the new contract are expected to begin in November of 2014.

work less than 40 hour per week and at least 720 hours per fiscal year.[17] The NRS and NRW positions are considered functionally interchangeable, with employees in either position assigned to tasks such as light maintenance, cleaning, lawn care, and basic customer service as needed.[18]

Chart 2-1 shows Parks FTEs for CY 2008 through CY 2013. The mix of employment types helps to demonstrate how Division services and service delivery methods have evolved over time and in response to increasing customer demands and budgetary pressures.

Chart 2-1: Parks FTEs CY 2008 to CY 2013



Source: ODNR
Note: For Division staffing purposes, 720 hours is considered an NRS FTE, 1,000 hours is considered an NRW FTE, and 2,080 hours is considered an FTE for all other positions.

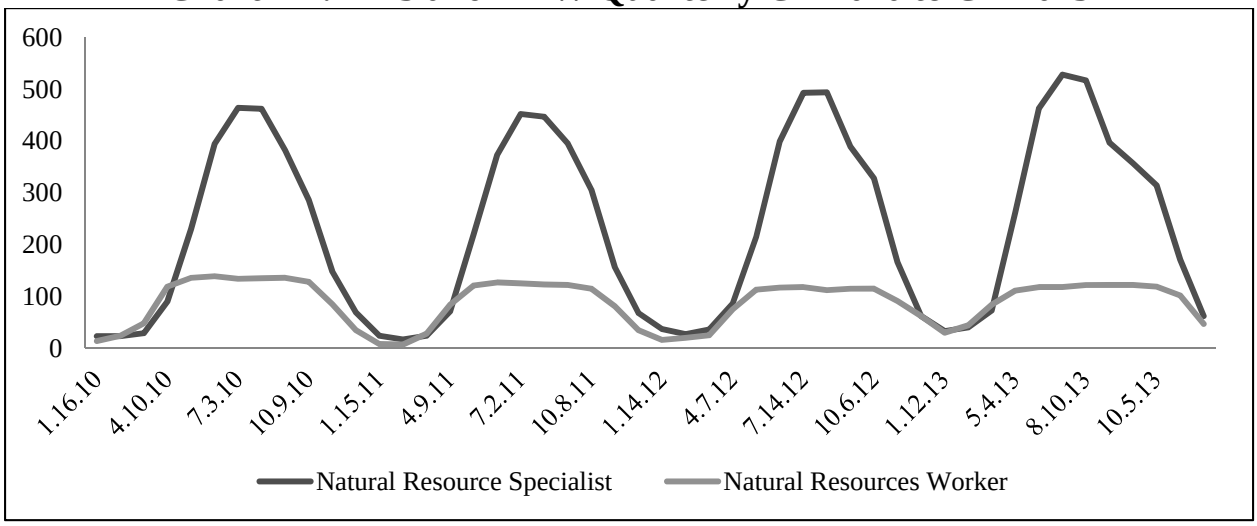
As shown in **Chart 2-1,** NRS positions have become relatively more common over the past 5 years and NRW positions have remained relatively stable as the number of total Parks FTEs has decreased from 997.6 FTEs in CY 2008 to 978.6 FTEs in CY 2013. In total, NRS and NRW positions made up 55.4 percent of the Division's FTEs in CY 2013; a 13.3 percent increase relative to CY 2008.

[17] The CBA states that an NRW employee will work between 720 and 1,000 hours per fiscal year. After discussions with ODNR management, it was decided that an NRW FTE should be calculated using 1,000 hours per FY. However, unlike the NRS, there is no penalty to the Department if an NRW exceeds 1,000 hours.

[18] Though NRS and NRW positions are the most common "seasonal" labor positions, the Department employs seven different less-than-full-time appointment types and the weekly hours and length of season differ for each position. For example, employees in a Seasonal appointment, such as lifeguards, work varying weekly schedules from about Memorial Day until Labor Day each year. PTP workers include, but are not limited to, some park law enforcement officers and custodians and work set schedules of less than 40 hours per week year-round.

Chart 2-2 shows NRS and NRW position "headcounts" from CY 2010 through CY 2013. Significant fluctuation in quarterly headcount demonstrates the seasonal nature of these positions.

Chart 2-2: NRS and NRW Quarterly CY 2010 to CY 2013



Source: Ohio Department of Administrative Services (DAS)

As shown in **Chart 2-2**, total headcount drops each year during the fall and winter months and increases during the spring and summer months due to the seasonal nature of operations. During the off season, many employees are eligible to draw unemployment. In FY 2012-13, employees working in NRS and NRW positions claimed over $252,000 in unemployment benefits; 48.2 percent of the Division's total unemployment cost. Unemployment expense represents a non-value-added, but necessary expense that if avoided could free up resources to support other operational goals.

Seasonal Workforce Strategies will now be analyzed in more detail in the following sub-sections of this report:

- **Natural Resource Specialist Staffing:** The first sub-section analyzes NRS staffing and compares current Division practices to an optimized staffing model supported by provisions of the CBA.
- **Natural Resource Worker Staffing:** The second sub-section analyzes NRW seasonal staffing compared to the possibility of shifting the NRW employees to year-round positions.
- **Performance Measurement and Management:** The third and final sub-section analyzes the Parks' performance measurement practices and outlines the advantages of developing a system for measuring and sharing performance data across the Division.

Ultimately, the three sub-sections will show several options that the Division can use to better allocate resources and to support the development of a continuous improvement process.

R2.1 Natural Resource Specialist Staffing

Background

The NRS position is the most common position in Parks. NRS employees are assigned to a variety of tasks in support of Park's day-to-day operations including light maintenance, grounds keeping and customer service.

Methodology

This sub-section, **Natural Resources Specialist Staffing**, will focus on the strategies ODNR uses to staff NRS positions with a focus on how these strategies could reduce unemployment costs. The NRS position comprises 39.0 percent of total FTEs in CY 2013. Employees in NRS positions also draw unemployment more frequently than any other; accounting for over 16.7 percent of unemployment expenditures in fiscal year (FY) 2013. NRS positions are also among the lowest paid in the Division and among the most flexible in terms of scheduling. Employees in NRS positions can work up to 39 hours per week and can work up to 720 hours in a fiscal year.

Financial implications were developed using FY 2012-13 payroll data because it was the most recent full fiscal year data available. In addition, FY 2011-12 payroll data was analyzed for background and comparison purposes. Unemployment expenditures, which are tracked and maintained separately from regular payroll expenditures, were drawn from FY 2010-11 and FY 2012-13.[19] Analysis was targeted toward recent years because the Division began exploring new methods of limiting unemployment in FY 2010-11 and it is more informative to analyze the condition of the Division after unemployment reduction methods were introduced in order to identify opportunities for continued improvement. Analysis of unemployment expenditures focused on this time period in order to identify opportunities for continued improvement. Additional information was gathered during discussions with Division management at the park, district, and Division levels. Information on ODNR and Parks-specific employment practices was also obtained from the Department's Office of Human Resources. Data and information on the current NRS employment practices was compared to the standards laid out in the CBA.

[19] FY 2010-11 and FY 2012-13 were used exclusively to provide a comparison of unemployment costs before and after the implementation of unemployment cost control practices.

Analysis

Table 2-1 shows the fully-loaded cost per hour for NRS and NRW positions for FY 2012-13. This comparison not only shows the difference in base cost, but also demonstrates how unemployment expenses contribute to the hourly cost of the positions.

Table 2-1: NRS and NRW Fully Loaded Cost per Hour FY 2012-13

Position Type	Base Cost [1]	Full Cost [2]
Natural Resources Specialist	$9.28	$9.44
Natural Resources Worker	$13.32	$14.06

Source: ODNR

[1] Base cost per hour is calculated by taking the respective average hourly salary for each employee, $7.80 for NRS and $10.05 for NRW and adding the appropriate fringe cost of 19.0 percent and 32.5 percent, respectively.

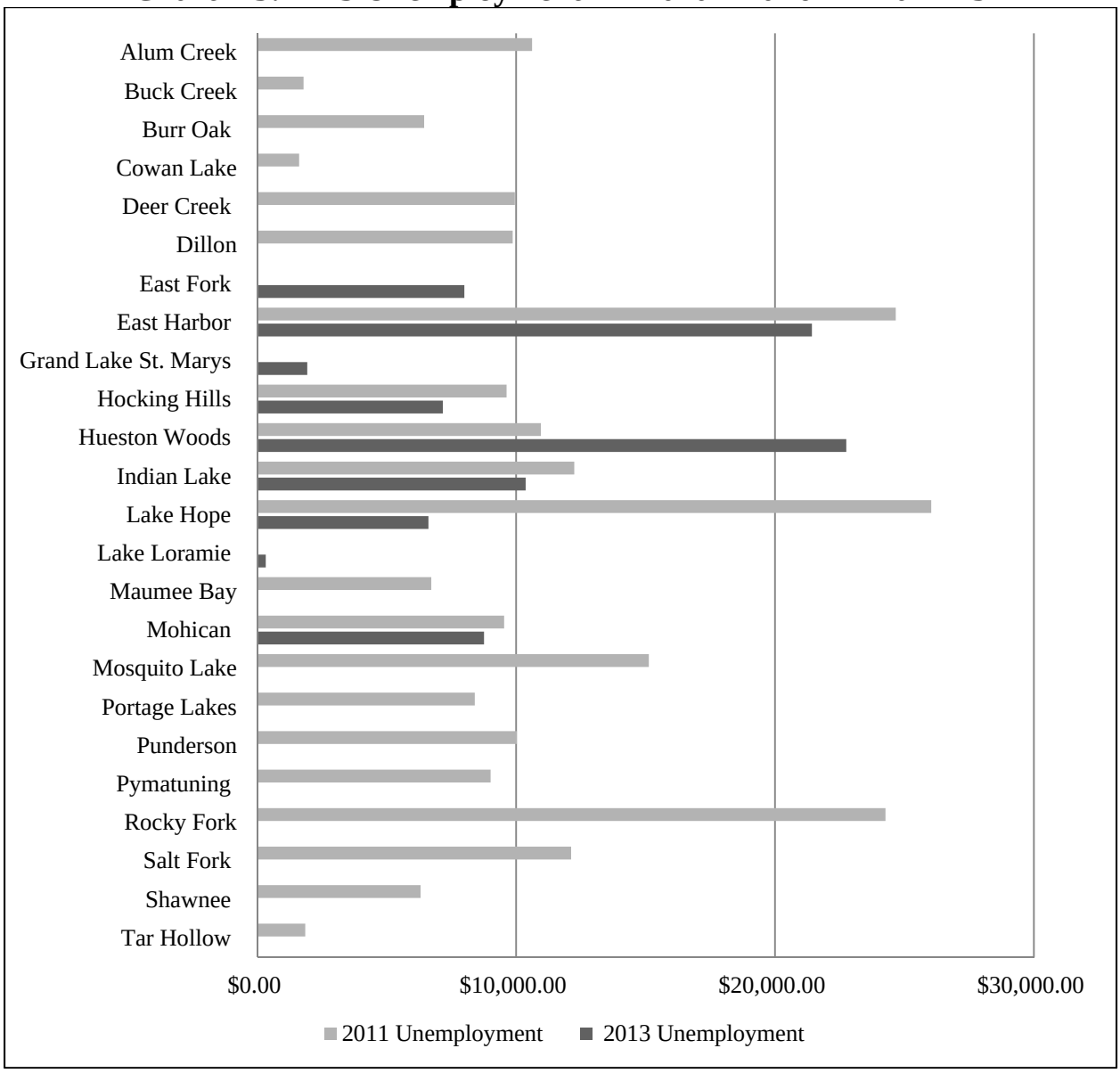
[2] Full costs per hour are calculated by taking the base and adding in the average cost of unemployment, per hour, for each position.

As shown in **Table 2-1**, adding the cost of unemployment expense, $252,000, to the base cost adds $0.16 per hour to the cost of NRS labor and $0.74 per hour to the cost of NRW labor. This type of calculation helps show the opportunity that exists if the Division can reduce unemployment expenses.

Division management has discretion over how employees are hired, assigned, and scheduled. Employees that separate during the fall and winter can be recalled in the spring or summer. The decision to begin recalls is at the discretion of management, but the CBA stipulates that recalls must be offered first to those who were separated during the previous season. If an employee declines to return to duty, management has discretion to meet the demand for labor as it sees fit; including posting for a new hire or hiring a different job classification to fill the role.

Chart 2-3 shows FY 2010-11 NRS unemployment payments compared to FY 2012-13. This chart focuses only on the 24 parks that had NRS unemployment payments in FY 2010-11 and/or FY 2012-13.[20]

Chart 2-3: NRS Unemployment FY 2010-11 and FY 2012-13



Source: ODNR

As shown in **Chart 2-3**, between FY 2010-11 and FY 2012-13, Parks was able to reduce or entirely eliminate some NRS unemployment payments. The Division successfully reduced NRS unemployment expenditures by over $147,000 since FY 2010-11. However, significant expenditures for unemployment remain at Hueston Woods and East Harbor State Parks, among

[20] These 24 state parks are typically characterized as large, relative to the entire system, and the concentration of unemployment expense within this relatively small group provides a targeted opportunity to mitigate its effect.

others. Reasons for the mixed success in unemployment reduction strategies include the number of seasonal staff at the location and a lack of focus on sharing information about unemployment reduction goals with park managers.

Historically, park managers have been involved in discussions about the separation and rehiring of seasonal labor, but they have not always been included in discussions about the cost of unemployment. In FY 2010-11, select park and district managers were included as partners in the process of reducing unemployment expenses. When managers were included in the process, the Division was able to identify leading practices that were useful for reducing the cost of unemployment. Strategies varied by location and management preference, but generally included the following:

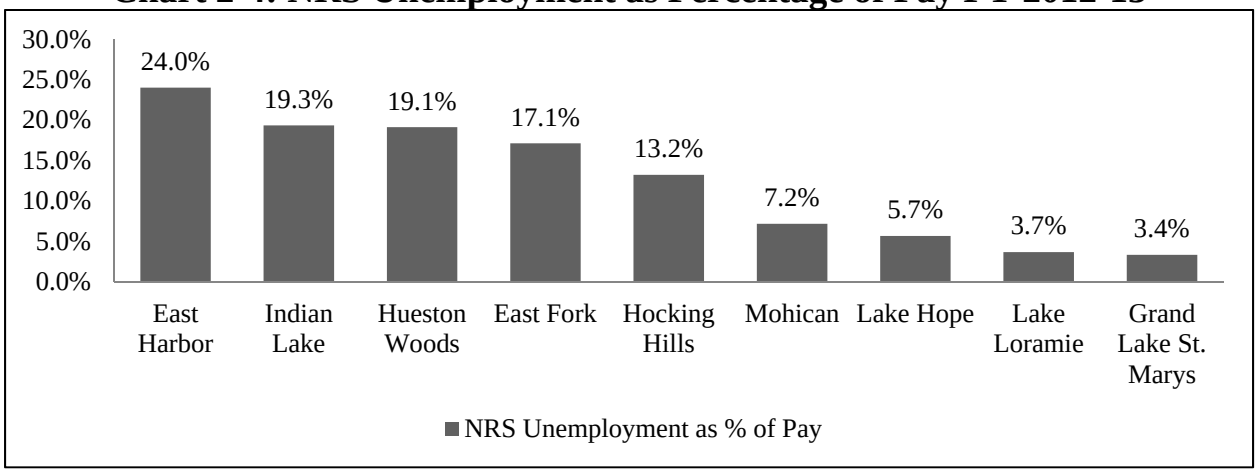
- **Transition to PTP –** Parks management identified targeted positions where it made sense to switch from seasonal to PTP positions. PTP employees work less than 40 hours per week, but typically work a set schedule, year-round. PTP employees allow for a flexible labor force to accomplish both peak and off-season tasks while also avoiding unemployment.
- **Limit time of separation –** Parks management reported that paying careful attention to the start and end dates of seasonal separation could be helpful in reducing the amount of time an employee was eligible to draw unemployment payments. For example, at one park separation periods were limited to only 6 weeks.
- **Recruit college students –** Parks management has had success recruiting college students into entry-level positions with long-term potential. Also, full-time college students are typically not eligible for unemployment during the school year and a traditional college schedule leaves students free to work during the Division's peak season.[21]

Though these strategies have allowed for a reduction in unemployment cost, **Chart 2-3** shows that they have not been applied across all sites within the system. Furthermore, successful implementation of one or more of these strategies is highly dependent on active planning and management at each site.

[21] College students are not technically forbidden from applying for unemployment benefits. However, the Ohio Department of Job and Family Services require an unemployment recipient to be both available for, and actively seeking, full-time work. Since a full-time college student would typically not be available for full-time work, it would be rare to seek and qualify for unemployment.

Chart 2-4 shows NRS unemployment expenses expressed as a percentage of total NRS compensation for parks incurring unemployment expense in FY 2012-13. The chart demonstrates that at some locations, such as East Harbor State Park, unemployment payments equaled up to 24 percent of the cost of salaries and benefits for the positions in question.

Chart 2-4: NRS Unemployment as Percentage of Pay FY 2012-13



Source: ODNR
Note: Unemployment as a percentage of pay is calculated by taking the amount spent on unemployment and dividing by the total salaries and benefits for each location.

As shown in **Chart 2-4**, locations such as Mohican, Grand Lake St. Marys, Lake Hope, and Lake Loramie have had more success in controlling expenditures on NRS unemployment when compared to parks such as East Harbor and Indian Lake. **Chart 2-3** and **Chart 2-4** also show that not every park has had an equal level of success reducing unemployment. The reason that not all parks have achieved success in reducing unemployment can be attributed to a lack of information sharing across the Division about best practices, and a lack of consistent management focus on unemployment expenses. **Chart 2-3** and **Chart 2-4** also support the conclusions that controlling unemployment expenses is possible and that there is still room for improvement at many locations.

Table 2-2 shows the opportunity cost of NRS unemployment in the Division by calculating the number of NRS labor hours that could have been purchased with the dollars spent on unemployment; a total of $87,890 in FY 2012-13.

Table 2-2: Opportunity Cost of NRS Unemployment FY 2012-13

Position	Hours Lost to Unemployment [1]	FTEs Lost to Unemployment [2]
Natural Resources Specialist	9,470.9	13.2

Source: ODNR
[1] This calculation assumes the average hourly cost of $9.28 per hour, including fringe benefits.
[2] This calculation assumes the standard NRS FTE of 720 hours per fiscal year.

As shown in **Table 2-2**, the Division could have paid for 9,470.9 NRS hours or 13.2 FTEs using the dollars expended on unemployment in FY 2012-13. To put these numbers into perspective, the FTEs lost to unemployment would be enough to staff NRS positions at Dillon or Alum Creek State Parks at FY 2012-13 levels.

In addition to the aforementioned active management strategies, a logical first step to optimizing NRS hiring and reducing unemployment cost is to change the fundamental approach to the mix of positions employed at each location.

Table 2-3 shows total NRS and NRW hours used for FY 2011-12 and FY 2012-13 as well as the ratio of each type of hours. Total NRS hours provide an important point of context relative to the limit of 339,000 NRS hours contained in the CBA, while the ratio of each type of hours shows how NRW hours are being used relative to NRS hours.

Table 2-3: NRS and NRW Ratios FY 2011-12 and FY 2012-13

Position	FY 2011-12		FY 2012-13	
	Labor Hours	**% of Total**	**Labor Hours**	**% of Total**
NRS	273,849	65.8%	277,435	64.4%
NRW	142,339	34.2%	153,526	35.6%
Total NRS and NRW	**416,188**	**100.0%**	**430,960**	**100.0%**

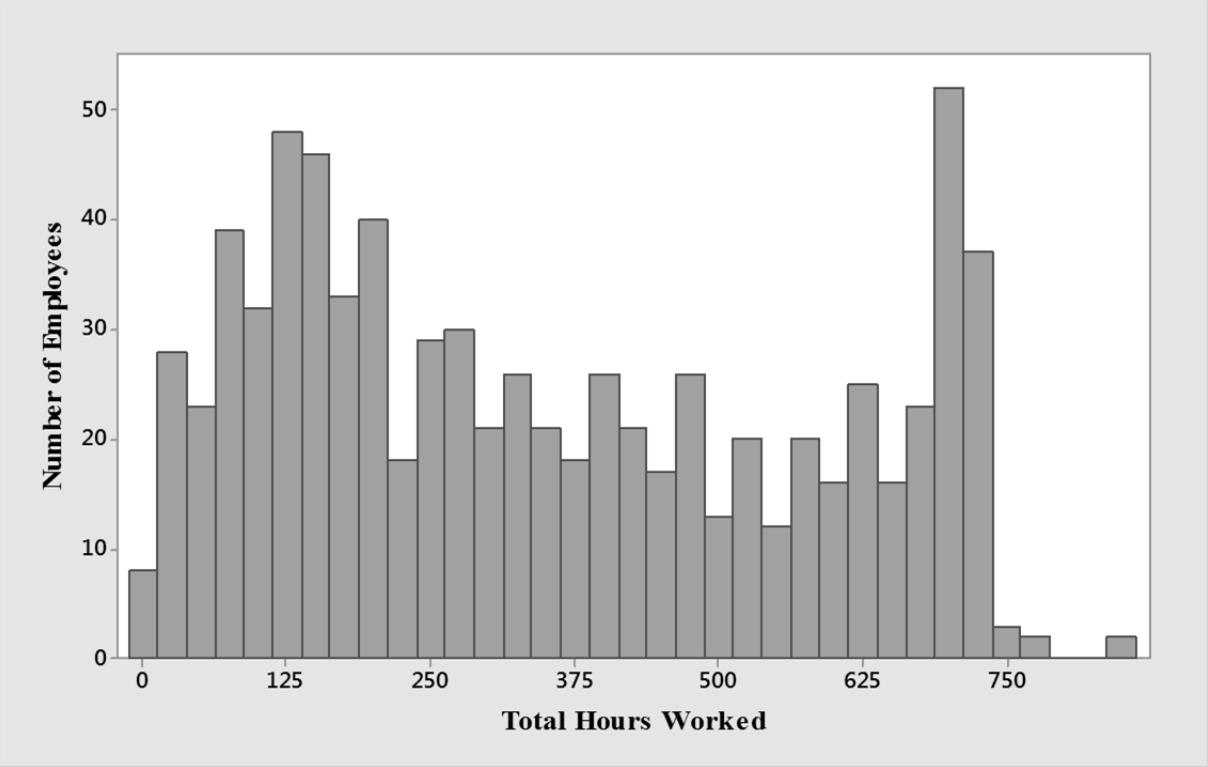
Source: ODNR

As shown in **Table 2-3**, from FY 2011-12 to FY 2012-13, total hours assigned to both NRS positions and NRW positions and the ratio of NRW to NRS hours increased slightly. During this same time the Division utilized an average of 81.8 percent of its 339,000 allowable NRS hours.

Historically, Parks has simply refilled NRS and NRW positions vacated through attrition rather than pursuing strategies to change the mix of these positions as the opportunity arises. This operational inertia is coupled with the trend toward greater reliance on seasonal employees; particularly NRW positions. Parks management noted that the general preference toward NRW positions could be due to the less restrictive hour's limits. For example, employees in NRW positions work up to 1,000 hours in a fiscal year while employees in NRS positions are limited to 720 hours.

Chart 2-5 shows a distribution of hours worked by each NRS employee in FY 2012-13. Given that the CBA limits each NRS employee's hours to 720 this type of graphical display is informative of the extent to which employees are actually being limited by the hours cap.

Chart 2-5: Histogram of Total Hours by NRS Employee FY 2012-13



Source: ODNR

As shown in **Chart 2-5**, the majority of employees in NRS positions did not work the full complement of hours allowed. On average, employees in NRS positions worked a total of 350.6 hours; the median number of hours worked was 312.5. While **Chart 2-5** does show a tightly grouped distribution mode between 625 and 750 hours, only 13.2 percent of employees worked between 700 and 720 hours and only 4.7 percent exceeded 720 hours. The underutilization of the total allowable NRS hours, coupled with the practical consideration that most employees do not approach the 720 hours limit, reinforces the potential to further optimize labor hours without significant concern for exceeding the 720 hours limitation.

Analysis of Parks employees and general workforce trends from CY 2008 through CY 2013 identified that, on average, 19.2 percent of NRW employees do not return to employment with the Division after seasonal separation. Of the 169 individuals employed in NRW positions in CY 2008, only 57 remained in NRW positions by CY 2013, meaning that 66.3 percent of the Division's NRW workforce turned over during that five year period.

Table 2-4 shows the effect of replacing NRW positions that are vacated through natural attrition with NRS positions over the next three years. This type of analysis further demonstrates the feasibility of implementing this type of labor shifting strategy without the need to directly impact any current NRW employees.

Table 2-4: Optimized NRS to NRW Ratio – After the Next 3 Years

Position	Total Labor Hours [1]	Percent of Total Hours
Natural Resources Specialist	339,000	78.7%
Natural Resources Worker	91,960	21.3%
Total	**423,516**	**100.0%**

Source: ODNR

[1]The Division is permitted to use up to 339,000 NRS hours per year per the CBA.

As shown in **Table 2-4**, if the Division fully utilized the 339,000 hours of NRS labor allowed by the CBA, NRS positions would account for 78.7 percent of total hours and NRW positions would account for 21.3 percent of total hours. The CBA sets boundaries on how and when management can switch an NRW position to an NRS position and natural attrition is an allowable opportunity. Replacing an NRW position with an NRS position will save an average of $4.62 per hour for each hour replaced.

In addition to increasing the ratio of NRS positions to NRW positions, other opportunities to control costs include using contract labor for specific tasks (e.g., mowing) or using a staffing agency to provide general labor. In the last quarter of FY 2013-14 the Division of Wildlife signed several contracts with the Community Rehabilitation Program (CRP) to provide mowing and trimming services at select locations. The Division of Wildlife will pay the CRP contractor $9.62 per hour for general labor and $12.76 per hour for supervision. In CY 2014, Parks, through consultation with the Office of Human Resources, developed a similar proposal, but targeted toward the use of a staffing agency. However, an acceptable agreement could not be reached in time for the CY 2014 peak season. The Division intends to employ a similar strategy for CY 2015 and if the result is price comparable to what has been achieved by the Division of Wildlife, this strategy could result in significant cost savings for Parks and time savings for management staff by avoiding time spent on the hiring process for NRS positions.

Table 2-5 summarizes different strategies that the Division could use to reduce both unemployment and overall labor expenses over the next three years.

Table 2-5: Savings Strategies Compared

Baseline Total Cost FY 2012-13	**$4,950,589**			
In-House Strategy	**NRS Hours**	**NRW Hours**	**Total Cost**	**Savings**
Year 1	306,911	124,049	$4,721,147	$239,442
Year 2	330,729	100,231	$4,604,177	$356,412
Year 3	339,000	91,960	$4,563,556	$397,033
Total Three-Year Savings				**$992,887**
Contract Strategy	**Contract Hours**	**NRW Hours**	**Total Cost**	**Savings**
Year 1	306,911	124,049	$4,746,155	$214,434
Year 2	330,729	100,231	$4,631,126	$329,463
Year 3	339,000	91,960	$4,591,179	$369,410
Total Three-Year Savings				**$913,307**

Source: ODNR

Note: Savings assume that future NRS and NRW hours will have the same mix of hours as occurred in FY 2012-13. For NRS employees: 97.9 percent regular hours at an average of $9.44 per hour including unemployment and 2.1 percent overtime at $14.03 per hour. For NRW employees: 89.4 percent regular hours at an average of $14.06 per hour including unemployment, 1.9 percent overtime at an average of $21.05 per hour and 8.7 percent leave at $11.95 per hour. Regular, overtime, and leave add up to 100 percent and there is an additional 4.4 percent allocated for payouts (i.e., for vacation and sick leave when an employee resigns) at $9.62 per hour.

As shown in **Table 2-5**, Parks has multiple options to reduce labor and unemployment cost. The in-house strategy requires the Division to focus on maximizing the use of NRS labor until it reaches the CBA established maximum of 339,000 hours per year. Assuming a historical NRW attrition rate of 19.2 percent, it will take the Division three years to achieve the maximum allowable replacement. Built into this strategy is the assumption that the Division will be unable to completely eliminate unemployment, but there will be a de facto reduction in total cost due to employing lower cost NRS positions.

The contract strategy assumes that the Division will replace NRS hours with contract labor hours at the CRP rate of $9.62 per hour and will fulfill the 339,000 hours allowed by the CBA. Contract labor, centrally sourced and administered to the Division, should relieve park managers of a significant amount of the current administrative burden associated with hiring and managing a seasonal workforce. **Table 2-5** shows contracting to be less cost effective than keeping labor in-house; however, the Division should consider the hidden costs of administration and management of a seasonal labor force. This hidden cost includes employee time spent recruiting, hiring, and separating a large workforce each year. Reducing the administrative burden associated with seasonal workers could free up Division management to focus on high-priority goals and objectives.

Conclusion

Unemployment compensation represents an opportunity cost that can be reduced. Specific parks have instituted leading practices to control unemployment expenses since FY 2010-11, but there is room for continued improvement. The Division can further reduce both unemployment expenses and the hourly cost of labor by fully optimizing the ratio of NRS to NRW positions. Finally, the Division may also have opportunities to reduce expenses through the use of contract labor.

Recommendation 2.1: ODNR should fully maximize the use of NRS labor within the limitations of the collective bargaining agreement. In addition, the Department should seek to minimize unemployment cost through the widespread implementation of unemployment avoidance and reduction strategies. The combination of both actions will allow Parks to provide a level of service that is at least commensurate with what is being provided now. However, there is also the potential for increased levels of service by redirecting non-productive expenses back to direct labor activities.

Financial Implication 2.1: Replacing NRW positions with NRS positions in accordance with total permitted hours will save a total of **$992,887** over the next three years; an average annual savings of **$330,962**.

R2.2 Natural Resource Worker Staffing

Background

NRW positions are less-common than NRS positions and assigned almost exclusively to larger parks. Employees in NRW positions perform tasks similar to NRS employees, such as light maintenance, grounds keeping and customer service.

Methodology

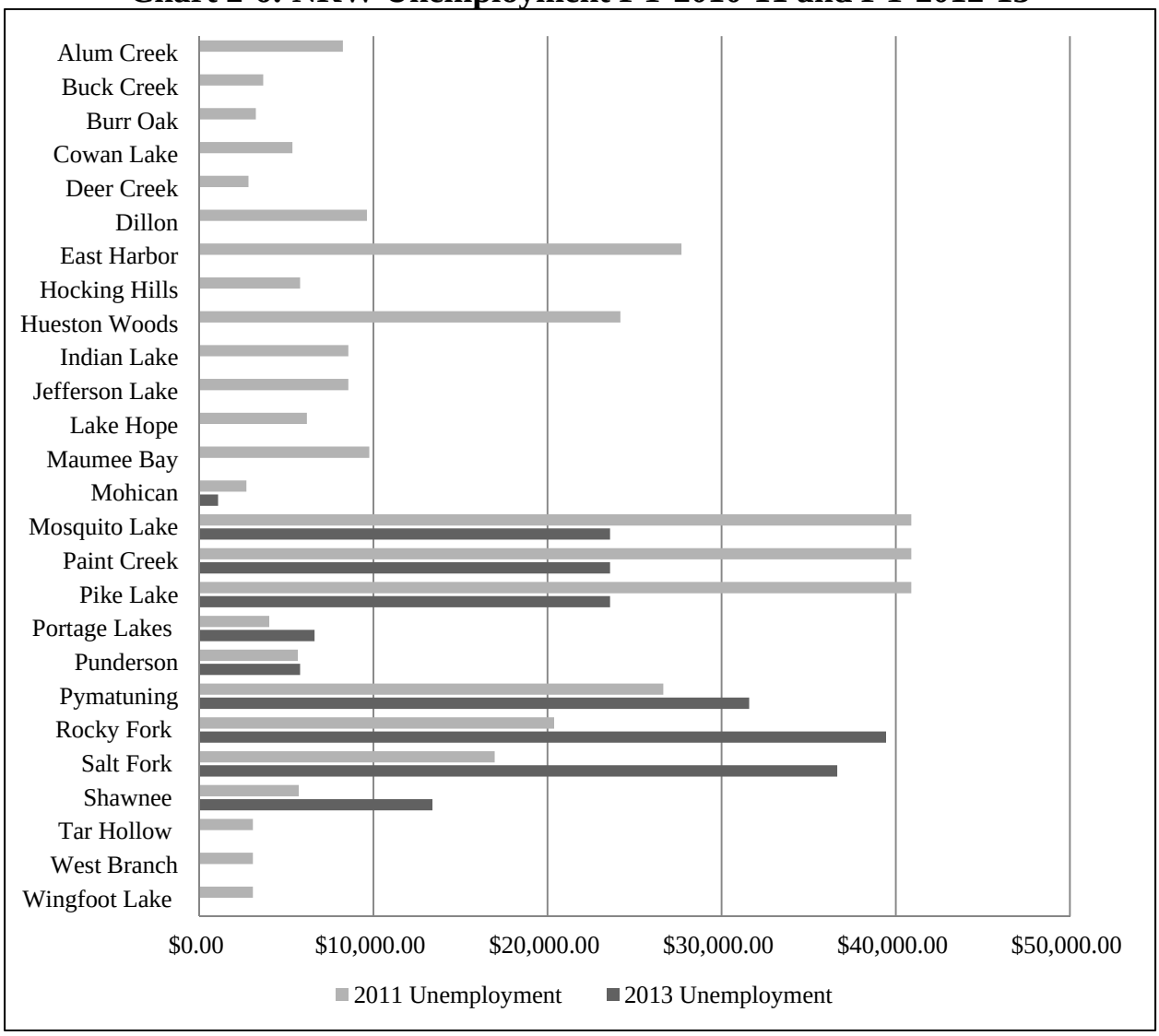
This sub-section, **Natural Resource Worker Staffing**, analyzes Parks use of NRW labor. The NRW position was selected because it is among the most common positions employed by the Division. Although NRS positions are more prevalent, NRW positions are responsible for a larger amount of unemployment expense due to their higher salaries. Employees in NRW positions claimed 31.4 percent of all Division unemployment in FY 2012-13. Finally, unlike NRS positions, which are capped at 720 hours per fiscal year, the CBA guarantees employees in NRW positions a minimum of 720 hours per fiscal year.

Data for this section was drawn from unemployment payments made in FY 2010-11 and FY 2012-13 as well as NRW hour's reports from FY 2011-12 and FY 2012-13 payroll data. Analysis was targeted toward recent years because the Division began exploring new methods of limiting unemployment in FY 2010-11. For that reason it is more informative to analyze the condition of the Division after unemployment reduction methods were introduced so that opportunities for continued improvement can be identified. Information on park operations was gathered through site visits and interviews with key stakeholders at the park, district and Division levels. Additional information on Division employment practices was obtained from the Department's Office of Human Resources.

Analysis

Chart 2-6 shows FY 2010-11 NRW unemployment payments compared to FY 2012-13 NRW unemployment payments. This chart focuses only on the 26 parks that had NRW unemployment payments in FY 2010-11 and/or FY 2012-13.[22]

Chart 2-6: NRW Unemployment FY 2010-11 and FY 2012-13



Source: ODNR

As shown in **Chart 2-6**, between FY 2010-11 and FY 2012-13, Parks was able to reduce or entirely eliminate NRW unemployment payments at certain locations. The Division successfully reduced NRW unemployment expenditures by about $100,000 since FY 2010-11. However, this

[22] Similar to state parks experiencing NRS unemployment (see **Chart 2-3**) these 26 state parks are typically characterized as large, relative to the entire system, and the concentration of unemployment expense within this relatively small group provides a targeted opportunity to mitigate its effect.

success has been unevenly realized and significant expenditures for unemployment remain at Mosquito Lake, Pymatuning, Paint Creek, and other State Parks.

Table 2-6 shows the opportunity cost of NRW unemployment in the Division by calculating the number of NRW labor hours that could have been purchased with the dollars spent on unemployment; a total of $165,085 in FY 2012-13.

Table 2-6: Opportunity Cost of NRW Unemployment FY 2012-13

Position	Hours Lost to Unemployment [1]	FTEs Lost to Unemployment [2]
Natural Resources Worker	12,393.8	12.4

Source: ODNR
[1] This calculation assumes the average hourly cost of $13.32 per hour, including fringe benefits.
[2] This calculation assumes the standard NRW FTE of 1,000 hours per FY.

As shown in **Table 2-6**, the Division could have purchased 12,393.8 NRW hours or 12.4 FTEs using the dollars expended on unemployment in FY 2012-13. To put these numbers into perspective, the FTEs lost to unemployment would be enough to staff NRW positions at Portage Lakes or East Harbor State Parks at FY 2012-13 levels.

One possible solution to NRW unemployment would be to schedule employees year-round as opposed to scheduling employees in NRW positions only during the summer and spring and then separating them for some period of time during the winter. Division management commented that there are typically maintenance and seasonal preparation tasks that are best performed during the off-season to minimize the impact on visitors. Parks has had recent success in reducing costs by shifting positions to year-round. After the Division requested park managers assist with reducing unemployment in FY 2010-11, managers reported success with strategically shifting select seasonal workers into year-round positions to perform additional tasks in the off-season. Building upon this success, the Division plans to move all dredge operators to year-round positions and assign the employees to do equipment repair and maintenance during the off-season starting in FY 2014-15. These recent successes suggest that further implementation of similar strategies may be a viable method of improving resource allocation.

Table 2-7 shows NRW hours in FY 2012-13 compared to NRW hours after the optimization recommended in **R2.1**, and also compared to a hypothetical year-round schedule.

Table 2-7: Current State and Year-Round NRW Hours Compared

Scenario	Hours	FTEs	Cost
NRW Hours (FY 2012-13)	153,525.8	153.5	$2,669,998
NRW (Post Optimization)	91,960	92.0	$1,329,050
Year-Round			
NRW (1,430 hrs. per Year)	91,960	64.3	$1,266,918
Savings			**$62,132**

Source: ODNR
Note: Currently, a NRW FTE is considered to be 1,000 hours.

As shown in **Table 2-7**, a 1,430 hour, year-round schedule for NRW positions would result in no net increase in total NRW hours but will eliminate NRW unemployment because there will be no

seasonal separation. A 1,430 hour schedule was selected because it allows employees to work 27.5 hours per week, year-round.[23] With this schedule the Division will maintain adequate coverage during the peak season and employees will be able to work on maintenance projects in the off season.

In FY 2012-13, employees in NRW positions worked as little as a few hundred hours[24] up to 1,900 hours. This means that there are some employees in NRW positions that are effectively working full-time while others are just as seasonal as employees in NRS positions. About 24.7 percent of employees in NRW positions worked more than 1,400 hours per year in FY 2012-13. The total number of hours assigned to individuals working over 1,400 hours per year in FY 2012-13 was about 75,000 hours, which represents 81.8 percent of the total NRW hours that will be needed after NRS optimization. This suggests that a year-round NRW strategy can be feasible after full NRS optimization has been achieved. If the Division can shift NRW positions to year-round, $62,131 in unemployment costs will be avoided.

Table 2-8 shows the potential impact of NRS and NRW optimization on the complete FTE count for NRW and NRS employees in the Division. The Division routinely assigns employees in NRW and NRS positions to the same tasks and the positions are considered functionally interchangeable.

Table 2-8: Current State and Optimized State FTE Comparisons

Scenario	Hours	FTEs
NRS (FY 2012-13)	277,435	385.3
NRW (FY 2012-13)	153,526	153.5
Combined (FY 2012-13)	**430,960**	**538.9**
NRS (Post Optimization)	339,000	470.8
NRW (Post Optimization)	91,960	64.3
Combined (Post Optimization)	**430,960**	**535.1**

Source: ODNR

As shown in **Table 2-8**, the difference in FTE count for the current state and potential optimized NRW and NRS scenarios is negligible. Completely optimizing the total number of NRS and NRW positions will reduce the combined FTE count from 538.9 to 535.1. This suggests that there will still be sufficient employees to continue to provide current levels of service after a full optimization occurs.

[23] Division management expressed an interest in developing a schedule for less than full-time workers that is between 25 and 30 hours per week. 27.5 hours was selected as the midpoint of this range.

[24] While NRWs are guaranteed 720 hours across a full fiscal year per the CBA, a worker that begins working mid-FY may not get a full 720 which is one reason hours will vary at the low end.

Conclusion

Unemployment payments made to employees in NRW positions constitute over 31.4 percent of the unemployment payments made by the Division in FY 2012-13. Dollars expended on unemployment are a significant opportunity cost and represent resources that could be directed to other productive uses for Parks. If the Division can successfully optimize the ratio of NRS to NRW positions, as recommended in **R2.1**, the Division should continue to reduce unemployment expenditures by converting the remaining NRW employees to year-round positions.

Recommendation 2.2: Upon full implementation of R2.1, ODNR should convert all remaining NRW positions to part-time-permanent positions. After the Department implements recommendation R2.1, shifting the remaining NRW positions to PTP will help avoid unemployment expenses.

Financial Implication 2.2: Eliminating unemployment by shifting NRW positions to year-round status will save **$62,132** in unemployment expenses.

R2.3 Performance Measurement and Management

Background

Throughout the course of this performance audit, OPT identified individual park or district managers that were using innovative and effective practices in relative isolation. Examples include those practices related to reducing the cost of unemployment that are discussed above (see **R2.1** and **R2.2**). However, Parks lacks a system for collecting, measuring and sharing performance data across different parks in a way that allows Division management to compare practices using objective, standardized measures. Throughout the course of this performance audit Division management expressed interest in the development of such a system to assist with park-to-park comparisons as well as the identification of leading practices and top performers.

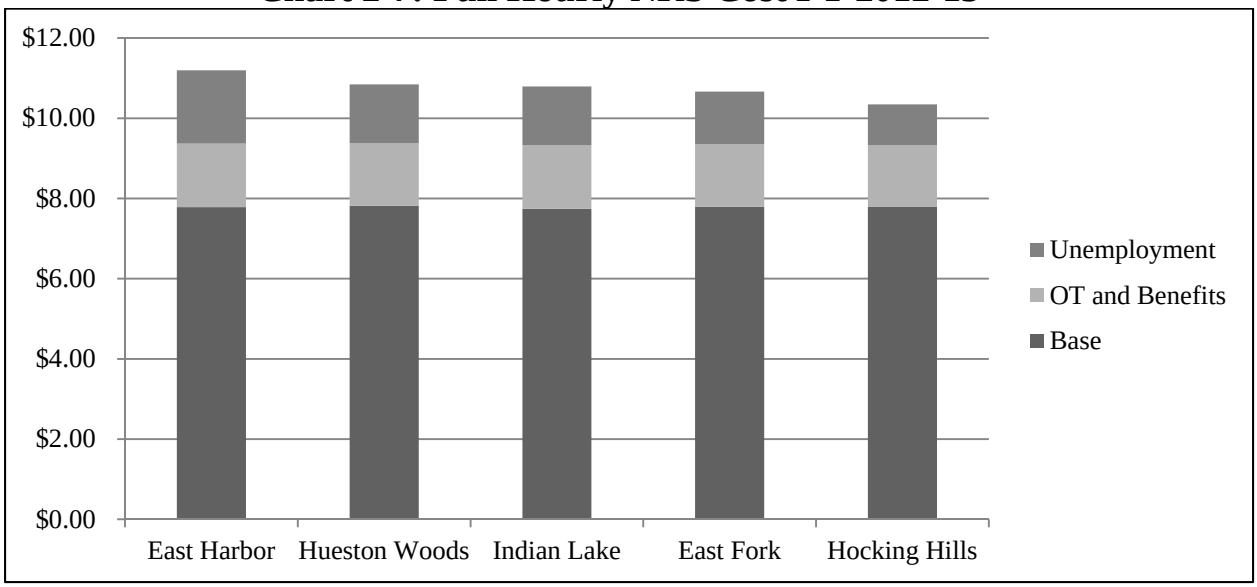
Methodology

This sub-section, **Performance Measurement and Management**, analyzes Parks performance measurement and management efforts. The Division does not currently have a comprehensive system to collect and measure performance information. Data for this section was taken from payroll, hours, and unemployment data from FY 2010-11 and FY 2012-13. Additional information was obtained from park, district, and Division management as well as through reviewing existing literature on recognized government performance management practices. Given the inconsistencies in data and information collection and measurement, not all parks across the Division were able to produce the same quality and detail of information. Where detailed data was not already being collected, key management staff made every reasonable effort to provide best estimates of comparable workload measures.

Analysis

Chart 2-7 shows the composition of hourly cost for NRS employees across the five highest average hourly cost state parks for FY 2012-13. This type of comparative management information is necessary to identify, understand, and control costs across a large, complex operating environment such as Parks.

Chart 2-7: Full Hourly NRS Cost FY 2012-13 [1]



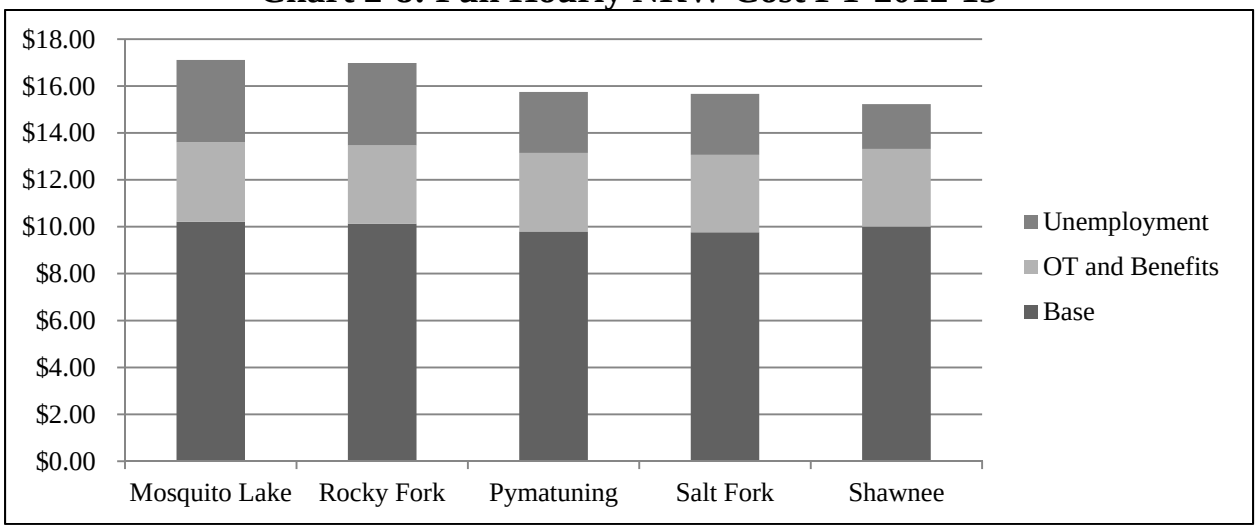
Source: ODNR

[1] These parks were selected because they are the only parks that expend an average of more than $10 per hour on NRS labor. For all other state parks combined, the average full hourly cost was $9.56 while the median full hourly cost was $9.42 in FY 2012-13.

As shown in **Chart 2-7**, though base, overtime, and benefit costs remain relatively constant across the selected parks, unemployment can contribute up to $1.83 to the hourly cost of an NRS position. Unemployment is one of the main reasons why the hourly cost for NRS labor ranges from a low of $9.25 at Shawnee State Park to a high of $11.19 at East Harbor State Park.

Chart 2-8 shows the composition of hourly NRW cost across the five highest average hourly cost state parks for FY 2012-13. Again, this type of comparative management information is necessary to identify, understand, and control costs across a large, complex operating environment such as Parks.

Chart 2-8: Full Hourly NRW Cost FY 2012-13



Source: ODNR

Note: In June of 2013 control of Cleveland Lake Front State Park (Cleveland Lake Front) was turned over to the Cleveland Metropolitan Parks Department. Though Cleveland Lake Front would have been highlighted as the most costly of all Division parks it was excluded from this analysis because it is no longer owned and operated by ODNR.

As shown in **Chart 2-8**, NRW hourly costs vary in a way that is similar to NRS costs. Unemployment can add up to $3.52 per hour. Across the Division, NRW costs vary from $12.42 at Deer Creek State Park to $17.12 per hour at Mosquito Lake State Park.[25]

Charts 2-7 and **2-8** demonstrate the value of comparative information gathered and analyzed across multiple parks. Not only do these charts call out opportunities to reduce costs at specific parks, they also put in context the overall impact of certain expenditure drivers such as unemployment. One factor in the park-to-park variation is that the Division does not have a system to easily aggregate and share performance data across parks. This lack of performance data has been an impediment to realization of system-wide significant progress. For example, despite some success in reducing unemployment from FY 2010-11 to FY 2012-13, there are still park managers that do not receive regular information about unemployment expenses as it relates to their own parks. The Division will benefit from establishing a system to share information about the full cost of operations, including unemployment, and from identifying outstanding performers and highlighting best practices.

Indiana's Department of Natural Resources uses a series of performance measure dashboards that are available on the Internet and indicate when a park has achieved acceptable or superior

[25] Indian Lake had an average cost of $9.06 per hour; however, this extremely low average can be attributed to a unique situation involving an employee receiving workers' compensation benefits. Due to the unusual nature of the situation Indian Lake was excluded from this analysis.

levels of performance on pre-established metrics.[26] Establishing a similar system for the Division to share information about parks' performance with regard to expenses versus revenue, unemployment expenses, overtime, etc., will help highlight strategies that are helping the Division further its goals while maximizing the efficiency and effectiveness of each dollar spent.

The Government Finance Officers Association (GFOA), in its publication *Cost Analysis and Activity-Based Costing for Government* (2004), recommends that governments calculate the full cost of services, including all costs associated with employees and the cost of all support services such as human resources and finance. **Charts 2-7** and **2-8** are examples of data that should be included in a full cost of service calculation.

The State of Washington, Office of Financial Management's *Performance Measure Guide* (2009), defines performance measures as "…a quantifiable expression of the amount, cost, or result of activities that indicate how much, how well, and at what level products or services are provided to customers during a given time period." The guide goes on to state that performance measures should be relevant, understandable, timely, comparable, reliable, and cost effective. Parks does not have a comprehensive system for tracking relevant workload measures in a way that could be easily compared across all locations. As such, it is difficult to establish a timely, reliable, and cost-effective park-by-park basic measure of cost per unit of work output (e.g., acres mowed, cottages cleaned, etc.).

Consistent with GFOA recommended practices, a system to capture workload measures should also be designed to capture the costs associated with managing the seasonal workforce. For example, the Division reported that the hidden costs of seasonal workers can include recruiting and hiring, which can be time consuming both because of the difficulties in finding potential employees and because of pre-employment processes such as a background check. Also, Parks management reported that employees in NRS positions can be difficult to manage due to the limited number of hours available. Time spent recruiting, hiring, conducting background checks and managing limited schedules should be tracked and included in the costs of managing a seasonal workforce.

Making the hidden costs of operations more visible will allow for better informed decision making about potential future operational and labor sourcing strategies. For example, the Division will be better able to weigh the full costs and benefits of contracting for NRS labor **(**see **R2.1**). A system that accounts for the full costs of operations could provide benefits to all parks if properly studied and carefully implemented.

A baseline Parks performance measurement system should focus on comparable workload measures that will be relevant across all locations. For example, measures such as acres mowed, cottages cleaned, or similar workload measures are applicable to multiple parks and can be equalized into meaningful ratios which would help control relative differences in local workload. In FY 2014-15, ODNR will institute a new electronic timecard system known as the Electronic Time and Activity Reporting System (ETARS) that will be capable of capturing time spent on specific tasks. Using ETARS to capture time spent on common tasks such as mowing or cottage cleaning, Parks will be able to establish a baseline workload for each park and/or division.

[26] See Performance Measure Dashboard at http://www.in.gov/itp/

Baseline workload measures can then be used to identify outstanding performers and innovative practices.

Conclusion

Parks lacks a system to measure and share relevant performance data across the Division. As a result, the Division has difficulty identifying and replicating leading management practices. If the Division makes meaningful information, such as that contained in **Charts 2-7** and **2-8**, available to its management staff on a regular basis it will be better able to pursue continuous improvement in controlling various costs and in directing resources towards strategic goals. Furthermore, outstanding performers will be able to share best practices with the whole Division and parks that experience higher than average costs will then know definitively there is an issue to be addressed. Combined with a focus on reducing avoidable costs, such as unemployment, a performance measurement and management system will help the Division deliver services more efficiently and effectively.

Recommendation 2.3: ODNR should develop a process to identify critical management and operational data. Identified data should be collected and aggregated into a management information framework that provides for meaningful performance measures across each business or operational unit. Department management should frame performance measures by establishing goals and targets for acceptable to exceptional levels of service. Key performance measures should be linked to goals and targets and results reported on a consistent basis as part of a performance management framework. Finally, the performance management framework should be updated, at least annually, to ensure that performance measures, goals, and objectives remain up-to-date in focusing on key priorities.

Financial Implication 2.3: N/A

3. Parks and Recreation Operations – Overnight Accommodations

Section Overview

This section focuses on the Ohio Department of Natural Resources (ODNR or the Department) Division of Parks and Recreation's (Parks or the Division) process for setting prices for overnight accommodations as well as the appropriateness of those prices in relation to the market. Information was gathered from Parks' published prices and reservation system as well as from private-sector campgrounds across Ohio.

Flexibility in Price Setting: The first analysis focuses on the market efficacy of specific, rule bound prices and identifies opportunities to maintain control, but allow for necessary market flexibility.

Market Appropriateness of Current Prices: The second analysis focuses on the market competitiveness and appropriateness of the Parks' current overnight accommodation price structure and identifies opportunities to adjust prices to better reflect customer demand and market rates.

Recommendations Overview

Recommendation 3.1: ODNR should seek to establish a flexible position that allows it to competitively engage in a dynamic overnight accommodations market while still allowing the necessary stakeholders to have an appropriate level of oversight. Setting a single, statewide maximum price for each type of accommodation will allow Parks to implement a flexible pricing structure within a controlled price ceiling. In turn, Parks will be able to increase revenue where permitted by market conditions and be better able to serve the needs of its customers over the long-term.

Financial Implication 3.1: N/A

Recommendation 3.2: ODNR should actively manage pricing for overnight accommodations with the goal of maximizing RevPAR.[27] In doing so, it should seek to identify and set prices that are responsive to, and reflective of, customer demands and price sensitivities. To inform pricing choices with quantitative information, the Division should take the following steps:

- **Estimate the price elasticity of demand of consumers by varying the price of accommodation types across a season and measuring market reactions. As a starting point, raise prices on dates that sell out the most frequently.**
- **Ensure that the reservation and reporting systems in use provide the tools and flexibility to appropriately reflect and inform a dynamic pricing model. At minimum Parks should be able to log regrets and denials, report on the velocity**

[27] RevPAR, or revenue per available room, is explained in detail on pages 70 and 71 of this section.

of bookings, and issue reports that allow RevPAR to be tracked by specific accommodation.

Financial Implication 3.2: Increasing prices commensurate with reported inflationary data from CY 2010 through CY 2014 would result in total annual revenue increases of **$1,590,386**.

Section Background

As part of its mission to deliver outdoor recreational experiences, Parks offers a variety of overnight accommodations. The main options are lodges, campgrounds, cabins, and unique "getaways".[28] All of the lodges and 185 of the cabins are managed by third-party concessionaires. The remainder of the overnight accommodations are self-managed by Parks.

Table 3-1 shows Parks self-managed overnight accommodations for calendar year (CY) 2013.

Table 3-1: Self-Managed Overnight Accommodations CY 2013

Type	Accommodation	Inventory Count	% of Total Inventory Count
Campgrounds	Electric Sites	6,625	
	Full Hook-Up Sites	212	
	Non-Electric Sites	2,281	
	Total Campgrounds	**9,118**	**95.5%**
Cabins	Basic Cabins	43	
	Preferred Cabins	183	
	Premium Cabins	27	
	Woodburner Cabins	41	
	Total Cabins	**294**	**3.1%**
Getaways	Cabents	4	
	Camper Cabins	42	
	Cedar Cabins	27	
	Conestoga Cabins	22	
	Rent-A-Camps	16	
	RVs	2	
	Tepees	4	
	Yurts	14	
	Total Getaways	**131**	**1.4%**
Total Inventory Count		**9,543**	

Source: Parks

As shown in **Table 3-1**, Parks operated 9,543 individual overnight accommodations in CY 2013. These accommodations were heavily weighted toward campgrounds; 9,118 or 95.5 percent of total. The remaining accommodations include cabins, 294 or 3.1 percent, and getaways, 131 or 1.4 percent.

[28] Getaways encompass a variety of structures ranging from small cabins to teepees.

In FY 2012-13 Parks generated over $14.82 million in gross revenue from self-managed overnight accommodations, which equates to approximately 54 percent of all self-generated revenue.[29] Of this revenue, campgrounds generated approximately $10.41 million or 70 percent, cabins generated approximately $3.87 million or 26 percent, and getaways generated approximately $540,000 or 4 percent. FY 2012-13 revenue to ODNR from concessionaire-managed lodge and cabin operations was less than $840,000.[30]

Unlike concessionaire-managed properties, which are free to set their pricing at market rates, Parks must abide by the prices that are published in the Ohio Administrative Code (OAC) and subject to the administrative rulemaking process. OAC enumerates prices for every type of overnight accommodation at every park. In CY 2010, the last time overnight accommodation pricing was updated in OAC, there were 162 different price entries.[31] Base prices for peak-season camping range from $17 per night for a non-electrified campsite to $39 per night for a full hook-up campsite,[32] with small pricing adjustments made for weekdays, holidays, and off-season. (See **Table 3.A-1** in **Appendix 3.A** for a schedule of overnight prices for CY 2014.)

The **Parks and Recreation Operations – Overnight Accommodations** Section is presented in more detail in the following two sub-sections of this report.

Flexibility in Price Setting: The first sub-section focuses on Parks formal method for setting prices and the practical implications of the current level of detail included in the published prices.

Market Appropriateness of Current Prices: The second sub-section focuses on the Division's overnight accommodation prices as compared to market competitors to assess overall appropriateness; taking into account historical demand, revenue, and inflationary pressures affecting the overnight lodging industry.

[29] Other major sources of Parks' self-generated revenue include point-of-sale retail operations, dock permits, golf course green fees, and concession agreements.

[30] ODNR's revenue from concessionaire-managed properties is not reflective of gross revenue, but rather is generated from fees which are negotiated within each concessionaire contract. Fees from concessionaire-managed golf courses are not included in the $840,000.

[31] OAC 1501:41-2-11, Effective June 11, 2010

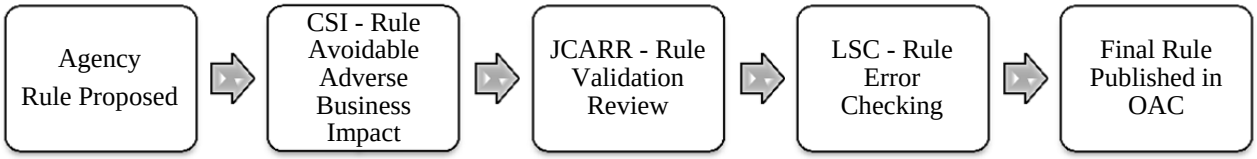
[32] Peak season is weather dependent, but typically runs from the weekend before Memorial Day (i.e., the middle of May) to the Sunday following Labor Day (i.e., the middle of September).

R3.1 Flexibility in Price Setting

Background

The price-setting conducted by Parks for overnight accommodations is governed by Ohio's administrative rulemaking framework. Ohio Revised Code (ORC) § 111.15 permits a state agency to adopt administrative rules that are within the agency's jurisdiction. These rules are defined as being any "rule, regulation, bylaw, or standard having a general and uniform operation." Once written by an agency, these proposed rules are reviewed by the Common Sense Initiative Office (CSI), the Joint Committee on Agency Rule Review (JCARR), and the Legislative Service Commission (LSC) prior to being formally adopted by the agency and published in OAC.

Process for Agency Rule Review



Source: *Rule Drafting Manual* (LSC, 2006) and *JCARR Procedures Manual* (JCARR, 2013)
Note: CSI only reviews rules that have an apparent adverse impact on business.

CSI, which was established on January 10, 2011 under Governor's *Executive Order 2011-01K*, evaluates the economic impact of agency rules and regulations on small businesses in Ohio. If this adverse impact on business condition is met, the filing agency must measure the real or potential impact of the rule and present it for CSI's review. Upon completion, the rule, and any associated recommendation from CSI where applicable, is sent to JCARR for validation.

JCARR is comprised of five state representatives and five state senators and is charged with reviewing proposed, new, amended, and rescinded rules. Its 65 day review process determines if the rule summary is accurate and if the proposed rule exceeds the agency's authority, conflicts with an existing rule, conflicts with legislative intent, or has an avoidable adverse impact on business as determined by the CSI review. If the committee determines that the agency's rule is in violation of one or more of these parameters, the committee may recommend invalidating the rule. If JCARR does not invalidate the agency's rule, the agency "final files" the rule for its inclusion into OAC. When this occurs, LSC reviews the rule for substantive and non-substantive errors and notifies the agency if corrective action is necessary.[33] All rules are to be reviewed and re-submitted at least every five years, although updates can occur more frequently.

[33] According to the *Rule Drafting Manual* (LSC, 2006), LSC can review proposed rules while being reviewed by JCARR, if time permits, in order to allow for the correction of errors prior to final filing.

Methodology

This sub-section, **Flexibility in Price Setting**, seeks to identify the rules, regulations, and processes that impact the pricing of overnight accommodations. Parks-specific data for this section was obtained from prices published in OAC and verified through the Division's publicly available prices for overnight accommodation within Division literature and the online reservation system. The method and frequency for assessing market prices was provided by Division management and supported by documentary evidence of previous market studies. The historical frequency and detail of Parks' OAC pricing updates was assessed through evaluation of historical OAC records. Finally, information from the Indiana Department of Natural Resources (IDNR) on pricing detail was obtained as an alternative point of comparison to ODNR's prices.

During the course of the performance audit Parks re-submitted proposed administrative rules governing the pricing of overnight accommodations. This resubmission was triggered by the required five-year review of the previous iteration of the administrative rules. In general, the proposed administrative rules reflect little to no change from the preceding rules and pricing. However, there were a limited number of changes proposed that would allow Parks to adjust prices on certain campsites after planned upgrades to electrical, water, and sewer services are complete. The proposed changes are still required to be reviewed and approved and, as such, are not yet officially in effect. Therefore, the changes will not be specifically taken into account in this analysis, or the analysis accompanying **R3.2**.

Analysis

ORC § 1541.03 provides Parks with the statutory authority to establish fees and charges for facilities, camps, camping, and cabins, the outcome of which is reflected in OAC 1501:41-2-11. In order to exercise this statutory authority, the Division must engage in the aforementioned agency rulemaking procedure and process. Although Ohio's administrative rulemaking procedure requires rule review and resubmission every five years, Parks' practice has been to review its fee schedules every two years and propose fee changes as deemed necessary.[34] Each submission includes a detailed schedule of fees with pricing for each park and amenity offered, with differentials for seasonal, holiday, or weekend dates.

The level of pricing detail has evolved to be more complex over time. For example, the CY 1977 campgrounds section of the rule included a total of 16 prices while the CY 2010 version included 162. In addition to the historical variation in the level of detail, the historical regularity of updates has also varied. For example, from CY 1980 through CY 2005, the rule regarding campground fees (i.e., OAC 1501:41-2-11) was resubmitted nearly every calendar year; 13 months on average. However, in recent years, the rule has been updated less frequently. The three most recent updates occurred in CY 2006, CY 2008, and CY 2010, with an average active duration of 32 months.

[34] This review involves assessing each overnight accommodation at every park location in relation to the regionally similar offerings of competitors. Historically, the Division completed this type of comparability analysis each year, but recently shifted to a two-year cycle due to limited management resources available to complete such an analysis.

A similar administrative rulemaking process is in place for ODNR-equivalent agencies in other states. A review of surrounding states identified that, while most have a similarly detailed pricing structure, Indiana has implemented policy changes that allow for greater market flexibility. In November 2005, the Indiana Natural Resources Commission approved fee restructuring that allows the IDNR Director to set many of the fees based on an acceptable range model with the stipulation that IDNR send the commission quarterly revenue updates.[35] IDNR proposed this change based on a desire for greater flexibility to match supply pricing to a demand-based model that could be updated when necessary based on market conditions.

As currently applied, the rulemaking process used to set prices for Parks overnight accommodations has introduced several operational inefficiencies. For example, once the rule containing specific prices is published in OAC, those prices, and more importantly the level of detail surrounding them, can only be adjusted by engaging in the full administrative rulemaking process. This inflexibility becomes problematic if the price schedule submitted by Parks does not reflect an optimal pricing structure. It is improbable that any initial price schedule submission could represent an optimal pricing structure, especially over multiple years, primarily due to the following factors:

- **Timing of Prices:** In submitting its price-schedule proposal to JCARR, Parks justifies proposed prices through snapshot market comparisons. For example, to inform a proposed price for an electric campsite at a given park, the Division provides pricing information for other public and private campgrounds in the area at that time. However, to allow time for the pricing schedule to clear the rulemaking process, the Division must introduce its pricing proposal months in advance of any effective date; inherently resulting in a backward-looking justification. While awaiting approval and also during the period when prices are effective and locked in (one to three years on average), market conditions may change. With specific prices locked into OAC, Parks is effectively prohibited from taking advantage of real-time market improvements.
- **Market Dynamics:** Though related to timing, market dynamics extends to the realization of previously unknown market information, and the ability to adjust to that information, over time. An inherent weakness of backward-looking or even real-time, comparable pricing studies is that consumer preferences for a given mix of amenities and prices cannot be projected with exact certainty. However, once detailed prices are set in OAC, it is impossible for Parks to quickly correct miscalculations, as additional information becomes available, or react to fast-changing market dynamics. According to *Revenue Management's Renaissance* (Cross, 2009), the lodging industry and other service providers have increasingly moved toward more dynamic pricing models. Dynamic pricing means that a wide variety of prices may be offered at different times, depending on certain conditions.[36] Ongoing market feedback over the course of a season could provide real-time intelligence to make these adjustments, but ODNR is constrained from doing so by the detailed pricing published in OAC.

[35] Prior to November of 2005, specific prices were approved by the Indiana Natural Resources Commission when updates were deemed necessary.

[36] An example of dynamic pricing is the increase in airline ticket prices as a plane books up.

Conclusion

The practice of developing detailed administrative rules governing overnight accommodation prices hinders the Division from exercising the pricing flexibility necessary to operate efficiently and effectively in a dynamic marketplace. Further, the trend toward longer timeframes between pricing rule resubmissions exacerbates the negative effect of relatively inflexible pricing. In order to price overnight accommodations commensurate to competitive market rates (see **R3.2**), Parks should seek a balance between the need for overarching control and greater operational flexibility such as the IDNR model.

Recommendation 3.1: ODNR should seek to establish a flexible position that allows it to competitively engage in a dynamic overnight accommodations market while still allowing the necessary stakeholders to have an appropriate level of oversight. Setting a single, statewide maximum price for each type of accommodation will allow Parks to implement a flexible pricing structure within a controlled price ceiling. In turn, Parks will be able to increase revenue where permitted by market conditions and be better able to serve the needs of its customers over the long-term.

Financial Implication 3.1: N/A

Additional Consideration: As a policy matter, Parks' pricing fulfills a different objective than it does in other state entities. Unlike many other services whose pricing is controlled, users of Parks' overnight accommodations are completely voluntary consumers who have other options available, both in the private and public sectors. In contrast, customers of the Ohio Bureau of Motor Vehicles do not have other options available to register their automobiles and thus do not engage in a market based transaction, but rather acquire a service from a government monopoly. Further, nothing in Ohio law, or the practical execution of the administrative rulemaking process, suggests that anything other than a market-based price is appropriate for Parks accommodations.

R3.2 Market Appropriateness of Current Prices

Background

The concept of an appropriate market rate is understood to mean the price that maximizes net revenue to ODNR, or an optimal price. As the term is used in this report, optimal price is better understood as a goal as opposed to an exact, static value. Determining the projected optimal price for a future stay at a particular overnight accommodation is challenging due to imperfect knowledge of variables such as consumer preferences, competitive landscape, the macro economy, and even the weather. Even in an analysis of past overnight stays where many more variables are known through the benefit of hindsight; it remains difficult to draw conclusions about optimal pricing due to the fact that there is no way to precisely answer counterfactual questions such as "how much additional occupancy would a price cut of $5 have yielded?"

While an exact, optimal price in a market such as the lodging industry may only exist as an ideal, operators are rewarded by using real-time feedback to adjust prices. Over time the private sector lodging industry has developed certain techniques and language of analysis that this report will utilize to clarify the current state of overnight prices in Parks.

Industry Pricing Techniques and Metrics

The following techniques and metrics reflect an industry body of knowledge centered around hotel operators. As such, terms like "rooms" are used, but for the purposes of analyses in this section, a room will be used as short-hand for any single overnight accommodation (e.g., a single campsite, cabin, cabin, teepee, etc.).

The relationship between pricing and revenue-maximization is captured in the concept of revenue per available room (RevPAR).

$$RevPAR = \frac{Total\ Revenue}{Room\ Nights\ Available}$$

Intuitively, RevPAR answers the question "how much revenue is Parks realizing from the room-inventory it has to maintain?" Industry operators seek to maximize RevPAR through price changes. The formulas for occupancy and average daily rate (ADR) are instructive to understanding the relationship of pricing to RevPAR.

$$Occupancy = \frac{Room\ Nights\ Sold}{Room\ Nights\ Available} \qquad ADR = \frac{Total\ Revenue}{Room\ Nights\ Sold}$$

Occupancy is an intuitive concept that represents the percentage of the available stock of rooms that have sold over a given period of time. ADR is the average price paid for a room over a given period of time and is best represented as an average, given that multiple prices may have been in effect, (e.g., weekdays and weekends).

Multiplying the formulas for occupancy and ADR and cancelling common terms, arrives at the original formula for RevPAR.

$$\frac{\cancel{Room\ Nights\ Sold}}{Room\ Nights\ Available} * \frac{Total\ Revenue}{\cancel{Room\ Nights\ Sold}} = \frac{Total\ Revenue}{Room\ Nights\ Available} = RevPAR$$

RevPAR can now be presented in a useful way that relates to occupancy and ADR (e.g., price).

$$RevPAR = Occupancy * ADR$$

Revenue is a function of a good's price (i.e., ADR) and quantity demanded (i.e., occupancy). Like most goods, overnight lodging has an inverse relationship between price and quantity demanded. As such, increasing prices drives occupancy downward and decreasing prices drives occupancy upward. While the concept that higher prices will reduce demand for lodging is intuitive to the point of being obvious, what remains unclear is the exact magnitude of the offsetting effects and whether they will have a net positive or negative effect on revenue. Again, the industry focus is to modify the variables of price and occupancy in a way that maximizes net revenue. However, a quantification of the relationship between price and demand is necessary to draw conclusions about net revenue effects.

Price elasticity of demand (PED) is a microeconomic concept that describes and quantifies the relationship between price and demand; often referred to as price sensitivity. Formulaically, it is often represented by an elasticity coefficient that equals the percentage change in the quantity (Q) of a good divided by the percentage change in that good's price (P).

$$Elasticity = \frac{\%\Delta Q}{\%\Delta P}$$

A hypothetical example where a 5.0 percent increase in room prices caused overnight stays to drop by 7.5 percent would produce an elasticity coefficient of 1.5.[37] In this case, and in any case where the elasticity coefficient is greater than 1.0, a price increase would produce a net negative effect on revenue because the price increase is more than offset by the decrease in occupancy. An elasticity coefficient of exactly 1.0 would produce no effect on revenue as price and quantity exactly offset. When the elasticity coefficient is less than 1.0, increases in price dominate the effect on quantity and therefore increase net revenue.

[37] Calculated as (7.5%) / 5.0% = (1.5%). It is common practice to omit the negative sign when discussing elasticity coefficients given the established inverse relationship between price and demand.

Methodology

This sub-section, **Market Appropriateness of Current Prices**, seeks to assess the appropriateness of Parks' current overnight accommodation pricing in relation to the market for the purpose of maximizing net revenue. The analysis examines pricing at all of Parks' self-managed cabins, campgrounds, and getaways. Parks-specific pricing and accommodation information was obtained from overnight information published in OAC and marketing materials and from the online reservation system. Type, number, operating, and replacement and renovation costs were also verified through the Division's capital asset information and through documentary and testimonial evidence provided by Parks management staff. Finally, occupancy and revenue data was obtained from the Division's online reservation system. Analysis of the relative performance of each overnight accommodation focused specifically on Parks' self-managed portfolio for CY 2013; the most recent complete year of booking data available at the time of this performance audit.

The first portion of the analysis focuses on establishing an understanding of Parks operations by evaluating historical occupancy trends and then analyzing the potential benefit that various market-based price optimization techniques might offer.

The second portion of the analysis focuses on historical data as a measure of customer demand and revenue potential; first looking at the top 35 overnight accommodations by sell-out nights, then progressing to a similar analysis focusing solely on campground accommodations and finally ranking the top 25 overnight accommodations for total revenue.

The third portion of the analysis focuses on Parks overnight accommodation pricing as compared to regionally similar private-sector campgrounds. Private-sector campground market research identified price points for comparable options within 10 miles of Parks overnight accommodation locations. Comparisons to private-sector campgrounds include accommodation-specific pricing for weekdays, weekends, and holidays. There are limiting factors to the private-sector campground market research; that site specific amenities available to overnight customers and that private-sector campground occupancy were unknown.

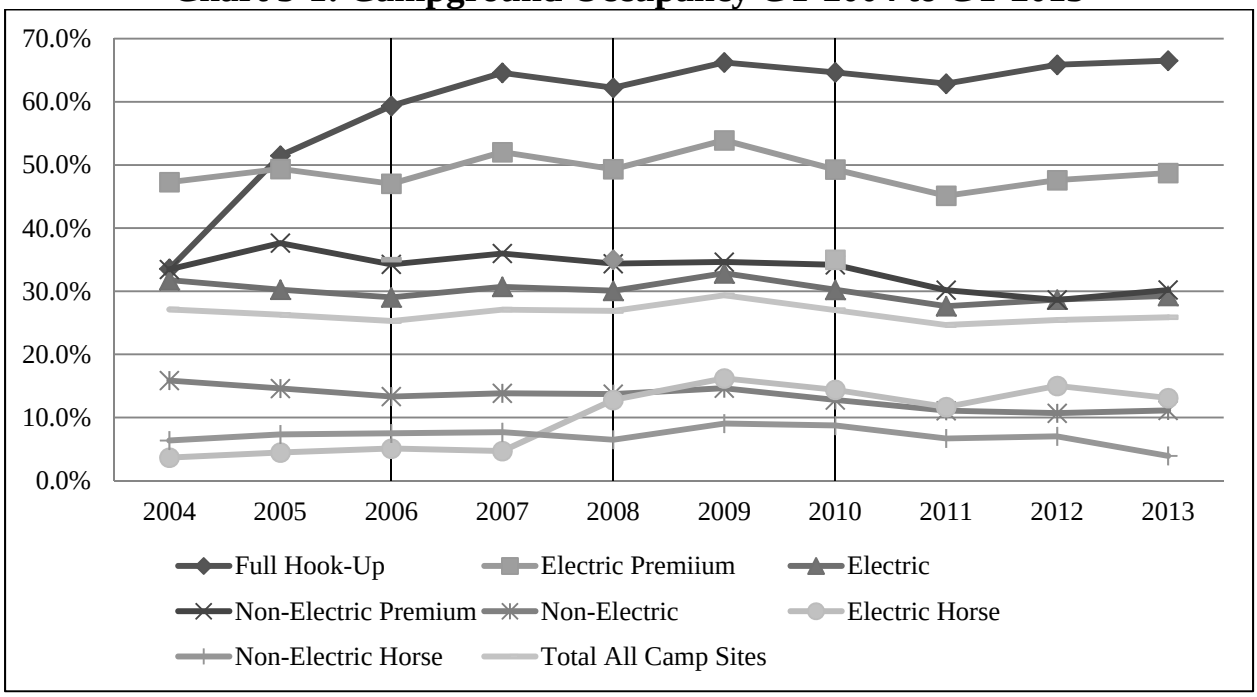
The final portion of the analysis focuses on quantifying the potential magnitude of price increases. In order to calculate the appropriate magnitude of any price increase, the combination of private-sector differences and inflationary pressures affecting the overnight lodging industry was first applied to sell-out accommodations and then extrapolated out to all accommodations.

Analysis

Parks has historically taken a keen interest in occupancy across its overnight accommodations. As a result, there is a large trail of historical occupancy data to analyze.

Chart 3-1 shows the most recent ten-year history of Parks occupancy by all campsite types. As previously noted, occupancy is integral to the industry approach to optimal pricing.

Chart 3-1: Campground Occupancy CY 2004 to CY 2013



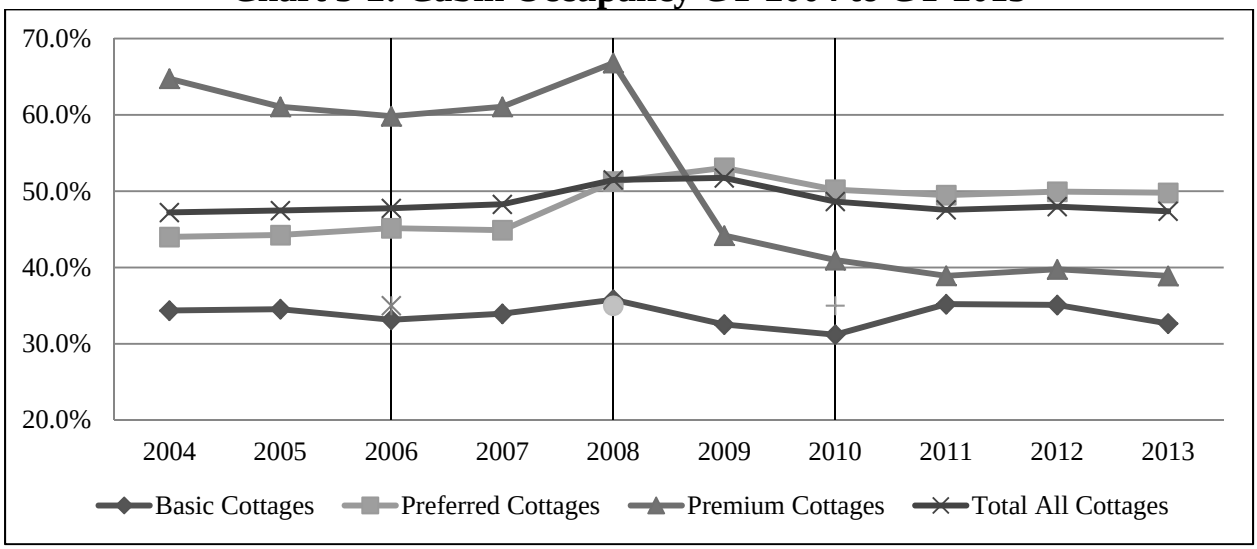
Source: Parks
Note: Vertical lines in CY 2006, CY 2008, and CY 2010 represent years where campsite prices increased at the start of the season.

As shown in **Chart 3-1**, with the exception of full hook-up campsites and the electric horse campsites, occupancies across all types of campsites are within three percentage points of where they were a decade ago.[38] When price changes occur, Parks practice has been to apply price changes to all campsites regardless of location or historical demand. For example, in CY 2010 the price of every campsite increased by $2.00. In all three years in which a price increase was implemented (as noted with vertical lines in CY 2006, CY 2008, and CY 2010) the immediate result was that total occupancy declined for nearly every campsite type.[39] It is difficult to determine, however, whether this occupancy decline was due to the price increases, or whether it was due to outside forces such as the health of the overall economy, competitive landscape, and/or weather. Even certain controllable forces such as promotions and advertising offered at different times by Parks would interfere with isolating the pure effects of these price changes.

[38] Several parks offer "horse" campsites that cater to equestrian activities. These sites are typically located adjacent to a bridal trail and allow overnight visitors to keep their horse and trailer on the campsite.
[39] Pricing changes are typically implemented during the first part of the year for which they go into effect. For example, pricing changes implemented January 2015 would directly impact CY 2015 performance.

Chart 3-2 shows the most recent ten-year history of occupancy by all cabin types.

Chart 3-2: Cabin Occupancy CY 2004 to CY 2013



Source: Parks
Note: Vertical lines in CY 2006, CY 2008, and CY 2010 represent years where cabin prices increased.

As shown in **Chart 3-2**, cabin occupancy was essentially flat over the 10-year period shown, with slight increases in CY 2008 and CY 2009. Premium cabins occupancy decreased significantly from CY 2008 to CY 2009 due to an increase in overall inventory (supply increased from 1 to 18 cabins) rather than a decrease in occupancy of the previously existing inventory. Similar to **Chart 3-1**, but to a lesser degree, in all three years in which a price increase was implemented, (except for CY 2008) the immediate result was that total occupancy declined, or remained relatively flat, for nearly every cabin type. However, as previously noted, it is difficult determine whether this occupancy decline was due to the price increases or outside forces, such as the overall state of the economy, weather or other competing recreational opportunities.

It should be emphasized that **Chart 3-1** and **Chart 3-2** aggregate occupancy across all park locations. While aggregating this information provides insight into each accommodation type's relative popularity, the data is not granular enough to guide actual pricing decisions. Geographic location and the specific amenities offered at a park are both important drivers of demand. For instance, during the CY 2013 peak season, electric campsites at Forked Run were 13 percent occupied while similar electric campsites at Hocking Hills were 65 percent occupied. Hocking Hills achieved this occupancy advantage despite having twice the supply of campsites and charging nightly prices $5.56 higher than Forked Run.[40] This level of detail is lost when talking about statewide aggregates. To accurately evaluate pricing practices, analysis must incorporate sufficient detail regarding product type and geographic location.

[40] Hocking Hills had 152 campsites available in CY 2013 and achieved an ADR of $28.44 while Forked Run had 81 campsites available and achieved an ADR of $22.88.

As noted, occupancy is sensitive to both controllable (e.g., prices and promotions) and uncontrollable, outside forces (e.g., competitors and weather). In order to isolate, where possible, and focus on the effect of controllable variables on customer price sensitivity, the industry has developed three approaches including: econometric analysis, customer surveys, and pricing experimentation.

Econometric Analysis of Historical Data

One obvious method for measuring customer demand in response to price changes is through an analysis of historical operating data. According to *The Price Elasticity of Selective Demand: A Meta-Analysis of Econometric Models of Sales* (Tellis, 1988), the econometric analysis method is commonly seen in academia and industry firms that sell a large volume of a single type of product. In general, a multiple regression analysis is applied to historical time-series data to decompose the effect of a number of outside variables from the actual effect of price movements on customer demand. Results of this type of analysis applied to Parks' accommodations would show the isolated effect of price changes on occupancies.

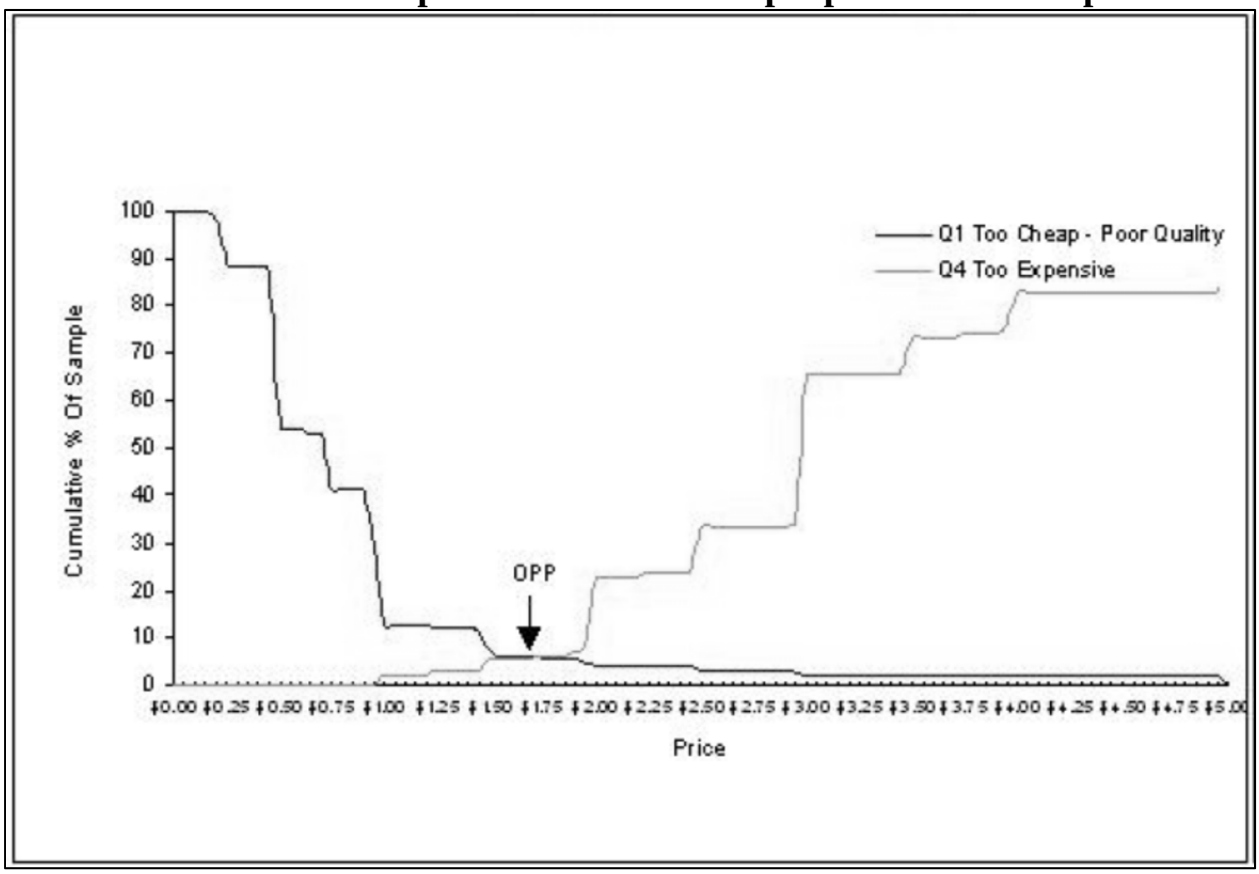
With only three major price changes during the last 10 years, however, Parks does not possess enough raw data to draw statistically valid conclusions about consumers' price sensitivity via a backward-looking regression study. Furthermore, with the most recent update to overnight prices occurring in CY 2010, the data available is likely already too stale to reliably gauge current customer price sensitivities. Because of these factors, the econometric approach is generally not practical for operations the size of Parks.

Customer Surveys

The most direct way to answer questions of consumer price sensitivity is to directly ask the consumers the question, in this case, the price they are willing to pay. Dutch economist Peter van Westendorp developed a survey methodology widely used in market research that asks customers simple questions such as "at what price would you consider the product too expensive" and "at what price would you consider the product so inexpensive that you couldn't trust the quality?"[41] Responses are plotted on a cumulative distribution in the manner shown in **Chart 3-3** with the intersection representing the optimal price point (OPP) identified by the consumers surveyed.

[41] Van Westendorp, P. "NSS-Price Sensitivity Meter (PSM) - A new approach to study consumer perception of price." 1976.

Chart 3-3: Example of Van Westendorp Optimal Price Map



Source: Nufer Marketing Research, Inc.
Note: "OPP" or optimal price point represents theoretical price point where consumer price elasticity of demand is exactly 1.0.

Utilization of this type of survey for Parks overnight accommodations would be difficult due to the diverse array of product offerings and locations. For example, there are seven major types of campsites and three major types of cabins with each subject to the local market dynamics. Conclusions about price sensitivity need to be made in the context of a meaningful segment, such as Mohican Preferred cabins on non-holiday weekends. To provide complete coverage of all overnight offerings would require hundreds of surveys. Though this method may be too unwieldy or costly for total coverage, there is high potential for value in exploring selected offerings. For example, high impact accommodations with a large inventory and large revenue contribution, such as the 390 electric campsites at Indian Lake, could be high potential targets for a customer pricing survey.

Real-Time Market Experience

Industry firms often experiment by inducing a price change and observing the immediate effect on demand. The benefit of making these observations in real-time is that in the short-run, outside forces such as the economy and competitor's offerings can be assumed to be static. Thus, the change in consumer behavior likely resulted from the price change.

A way to place even more control on real-time price experiments is to run what is referred to as A/B testing. In A/B testing, instead of changing a good's price for all consumers, firms will offer one price to one group of consumers and a different price to another group of consumers. Price elasticity can then be inferred from the variation in purchasing behavior between the two groups.

Of the three approaches described here for identifying consumer price sensitivity, real-time experiments offers the most practical promise to Parks. The data and expertise are not available to run historical econometrics, and conducting surveys is cumbersome and may not achieve total coverage, but experiments could be conducted on-demand by manipulating prices in Parks' reservation system. An example experimental design could involve looking at non-electric campsites at a single park on two consecutive nights within the same month on which Parks expects a very similar level of demand (e.g., a design looking at two Wednesday nights in the middle of June). Parks could then lower the price on the second date and observe the impact on occupancy and revenue.

Table 3-2 shows a hypothetical analysis that this type of real-time experimentation could facilitate. In this case data from East Harbor, non-electric campsites is reflected in the "1st Wednesday" row while theoretical data is presented in the "2nd Wednesday" row.

Table 3-2: Hypothetical Price Elasticity Analysis Example

Date	Unit Inventory	Unit Price	Units Sold	Total Revenue	RevPAR
1st Wednesday	187	$22.00	20	$440	$2.35
2nd Wednesday	187	$18.00	23	$414	$2.21
Elasticity Coefficient	**0.83**				

Source: Parks and OPT
Note: This type of experiment did not entail A/B testing; the same price was offered to all customers.

As shown in **Table 3-2**, the hypothetical demand is relatively inelastic, with a price decrease producing an elasticity coefficient of less than 1.0 and resulting in a decline in RevPAR. In this example, the price cut did not induce enough demand to pay for itself.

To attempt to land on the RevPAR-maximizing price, where the elasticity coefficient equals one, further trials could be carried out with either a smaller price decrease or a price increase. After logging enough trials, Parks would be in a position to make inferences on patterns across the state. A few important questions Parks should focus on answering include:

- Are customers more price sensitive for dates during the week or weekend?
- Are non-electric campers more price sensitive than users of full hook-up campsites?
- On weekends that perennially sell out, how much can prices be increased until revenue suffers?

Because prices have been static since CY 2010, the process of uncovering more optimal prices will involve a period of discovery. One recommendation would be to rely on techniques used in the private sector. Parks could add rigor by relying on several industry techniques. A few additional data points that can be collected and analyzed to supplement pricing decisions, including:

- **Booking Velocity:** Parks can analyze the velocity of bookings as a measure of consumer demand for various accommodations. All else held equal, an overnight accommodation that routinely books up faster than comparable accommodations shows a greater consumer demand and likely the ability to support a higher price.
- **Regrets and Denials:** Parks can log regrets and denials in the reservation system to gain insight into measures of price sensitivity and demand outstripping supply. In the lodging industry, a regret refers to an instance where a customer receives a price quote for a stay, but does not book. All else held constant, a large number of regrets indicates that the current price quoted may be too high. A denial refers to an instance where a customer requests a quote for an accommodation that is already sold-out (or otherwise not available). A large number of denials indicates that there is excess customer demand at the current price level that cannot be satisfied due to supply constraints.
- **Asset Grouping:** Parks can group assets with similar characteristics and consumer behavior to limit potentially duplicative analysis for similar accommodations. Counting all the combinations of location and accommodation type (e.g., Hocking Hills electrified campsite, Mohican premium cabin, etc.) yields nearly 200 choices of overnight accommodations. Any grouping that can be done will reduce the workload involved in the price-setting process.

These techniques yield insight into consumer behavior without having to actually change prices as frequently, thereby reducing the potential for confusion and alienation of customers.

Parks Current State

Though further market research, data collection, and analysis will be required to approach precise quantitative estimates of consumer price sensitivity, there are certain accommodations for which data is available to benchmark a next-best estimate of consumer demand; sell-out nights. Focusing on sell-out nights is very likely to capture instances where consumer demand exceeds Parks' supply of inventory. Any instance of an accommodation selling out indicates that prices have the potential to be increased without hurting occupancy.

Table 3-3 shows Parks top 35 overnight accommodations ranked by the number of times they sold out during CY 2013. This analysis specifically includes Saturday occupancy as a comparative measure of peak demand. While total occupancy is inclusive of Saturday occupancy, sell-out nights are more likely to be on a Saturday than any other day. (See **Table 3.A-2** in **Appendix 3.A** for a complete list of all 192 overnight accommodation types.)

Table 3-3: Parks Top-35 Overnight Accommodation by Sell-Outs CY 2013

Rank	Overnight Accommodation	Inventory	Saturday Occupancy	Total Occupancy	Sell-Out Nights
1	Mohican Cabins Preferred Pet (Sat-Sat)	1	90%	57%	**207**
2	Pymatuning Cabins Premium	1	88%	56%	**205**
3	Mohican Cabins Preferred Pet (Fri-Fri)	1	87%	56%	**203**
4	Pymatuning Cabins Preferred Pet (Sat-Sat)	1	60%	41%	**150**
5	Burr Oak Camper Cabin	1	62%	39%	**143**
6	Mohican Cabins Preferred Pet (Sun-Sun)	2	83%	50%	**143**
7	Geneva Full Hook-Up	3	51%	44%	**140**
8	Hueston Woods Yurt	1	60%	38%	**139**
9	Burr Oak Conestoga Cabin	1	56%	35%	**129**
10	Buck Creek Cabins Preferred (ADA)	1	63%	35%	**127**
11	Hocking Hills Cabins Preferred (Fri-Fri)	11	111%	67%	**127**
12	Indian Lake Camper Cabins	2	72%	52%	**126**
13	Wolf Run Conestoga Cabin	1	54%	34%	**125**
14	East Harbor Camper Cabins	2	52%	38%	**124**
15	Alum Creek Full Hook-Up	3	52%	46%	**123**
16	Pymatuning Cabins Preferred Pet (Fri-Fri)	3	73%	45%	**123**
17	Maumee Bay Yurt	1	44%	33%	**121**
18	Mohican Conestoga Cabins	3	54%	42%	**118**
19	Lake Hope Cabins Woodburner Pet	6	104%	60%	**118**
20	Mohican Cabins Preferred (Sat-Sat)	8	91%	51%	**117**
21	Paint Creek Camper Cabins	2	58%	39%	**115**
22	Lake Hope Cabins Preferred Pet	7	89%	55%	**115**
23	Lake Hope Camper Cabins	2	68%	44%	**113**
24	Mosquito Lake Yurts	2	53%	36%	**113**
25	South Bass Island Rustic Cabin	1	31%	31%	**112**
26	Pike Lake Cabins Preferred Pet	2	79%	46%	**112**
27	Grand Lake St Marys Cedar Cabins	2	55%	37%	**111**
28	Hocking Hills Camper Cabins	3	54%	41%	**110**
29	Alum Creek Cedar Cabins	3	53%	39%	**109**
30	Alum Creek Large Camper Cabin	1	42%	30%	**108**
31	Stonelick Camper Cabin	1	46%	29%	**107**
32	East Harbor Full Hook-Up (Pull-Thru)	11	46%	42%	**104**
33	Kelleys Island Yurts	2	35%	34%	**102**
34	Shawnee Conestoga Cabins	2	60%	39%	**102**
35	Salt Fork Camper Cabin	1	31%	27%	**99**

Source: Parks

Note: Occupancies exceeding 100 percent are caused by a mid-season change to total inventory.

As shown in **Table 3-3**, the overnight accommodations selling out most frequently are overwhelmingly low-inventory items like cabins, getaways, and full hook-up campsites. This result is intuitive from a supply and demand paradigm, and also reflects a customer preference to book these accommodations for multiple nights at a time.

Table 3-4 shows Parks top 35 campground accommodations ranked by the number of times they sold out during CY 2013. Looking at campsites in isolation is of interest due to their larger amount of inventory (95.5 percent of all accommodations) and, by extension, total revenue.

Table 3-4: Parks Top-35 Campgrounds by Sell-Outs CY 2013

Rank	Campground Accommodation	Inventory	Saturday Occupancy	Total Occupancy	Sell-Out Nights
1	Geneva Full Hook-Up	3	51%	44%	**140**
2	Alum Creek Full Hook-Up	3	52%	46%	**123**
3	East Harbor Full Hook-Up (Pull Thru)	11	46%	42%	**104**
4	East Harbor Full Hook-Up (Back In)	12	46%	40%	**93**
5	Salt Fork Full Hook-Up	19	57%	48%	**82**
6	West Branch Full Hook-Up	29	55%	44%	**78**
7	Indian Lake Full Hook-Up	13	51%	45%	**68**
8	John Bryan Electric	9	62%	44%	**60**
9	Punderson Full Hook-Up	5	45%	34%	**54**
10	East Fork Full Hook-Up	7	40%	33%	**46**
11	Portage Lakes Electric	6	51%	34%	**43**
12	Lake Loramie Electric Premium	43	50%	36%	**43**
13	Hocking Hills Electric	152	53%	34%	**40**
14	West Branch Electric	150	48%	27%	**39**
15	South Bass Island Full Hook-Up	10	46%	31%	**38**
16	Hocking Hills Non-Electric	13	60%	34%	**37**
17	Buck Creek Electric	86	46%	24%	**34**
18	Alum Creek Electric Premium	31	47%	28%	**34**
19	Harrison Lake Electric North	118	44%	24%	**33**
20	Rocky Fork Full Hook-Up	44	46%	36%	**33**
21	Lake Loramie Electric	110	44%	21%	**32**
22	East Harbor Electric Premium	120	41%	29%	**32**
23	Indian Lake Electric Premium	45	46%	27%	**32**
24	Mohican Full Hook-Up	32	50%	40%	**29**
25	Geneva Electric	89	39%	25%	**28**
26	Deer Creek Electric	224	45%	23%	**26**
27	Kiser Lake Electric	10	39%	20%	**26**
28	Mohican Electric	118	47%	33%	**26**
29	Maumee Bay Electric	246	42%	24%	**25**
30	Stonelick Non-Electric	6	38%	16%	**24**
31	West Branch Non-Electric	14	42%	20%	**24**
32	Beaver Creek Electric	5	38%	20%	**23**
33	East Harbor Electric	211	31%	18%	**22**
34	Alum Creek Electric	244	41%	22%	**21**
35	Salt Fork Electric	192	39%	23%	**21**

Source: Parks

As shown in **Table 3-4**, full hook-up campsites, which provide water and sewer utilities in addition to electric, are some of the most popular accommodations. Specifically, 9 of the top 10 highest demand campground accommodations are full hook-ups. Similar to many of the cabin and getaway rentals shown in **Table 3-3**, full hook-up campsites are popular on weekends as well as weekdays. Moving past the top 10, the spread between weekend occupancy and weekday occupancy begins to increase as weekday occupancy drops off. This is an indicator that weekend stays are responsible for most of the sell-out nights in campgrounds.

Collectively, **Table 3-3** and **Table 3-4** demonstrate that for many types of overnight accommodations, customer demand at the current prices is greater than Parks is able to supply. This data indicates Parks could have charged higher prices on the sell-out dates and still achieved 100 percent occupancy. Thus, looking solely at past sell-out nights, Parks is sub-optimizing potential revenue during peak-demand dates.

Parks' publicly-available price schedule quotes CY 2013 campground prices for Friday and Saturday night stays. All other days of the week are discounted $1 from the quoted price, and stays on holiday nights cost an additional $1 over the quoted prices. The result of this narrow band of prices is that customers pay only $2 more for an accommodation on the Fourth of July than they would on a random Wednesday during the summer. (See **Table 3.A-2** in **Appendix 3.A** for a complete schedule of Parks' campground overnight prices.)

Instances where demand exceeds 100 percent of supply, as is the very likely case in all instances of sell-outs, are a very impactful place to focus attention on pricing, because small price increases are not likely to adversely affect occupancy. For instance, if Parks were to increase prices on a date where a campground was 80 percent occupied, even if the price change increased RevPAR, the Division should expect occupancy to fall. On the other hand for dates on which occupancy is at 100 percent, the excess demand over capacity could be such that, even with a price increase, enough willing customers still exist to fill a campground to capacity. The same number of Parks customers would be served, but Parks could increase total revenue by not underpricing the market demand.

Table 3-5 shows the top-25 overnight accommodations, of all types, by total revenue for CY 2013. Largely due to scale, the effect of underpricing is magnified for these accommodations and significant benefit could be derived from a focus on correcting any underpricing.

Table 3-5: Parks' Top-25 Overnight Accommodation by Revenue CY 2013

Rank	Overnight Accommodation	Inventory	Total Occupancy	ADR	Sell-Out Nights	Total Revenue
1	Maumee Bay Electric	246	24%	$27.31	25	**$589,253**
2	Indian Lake Electric	390	15%	$25.60	9	**$543,725**
3	Hocking Hills Electric	152	34%	$28.16	40	**$535,402**
4	Alum Creek Electric	244	22%	$27.63	21	**$530,696**
5	Deer Creek Electric	224	23%	$27.31	26	**$524,394**
6	Mohican Electric	118	33%	$30.29	26	**$427,915**
7	Salt Fork Electric	192	23%	$26.24	21	**$420,356**
8	East Harbor Electric Premium	120	29%	$31.30	32	**$395,819**
9	West Branch Electric	150	27%	$26.36	39	**$391,500**
10	Cowan Lake Electric	233	17%	$27.45	9	**$387,036**
11	East Harbor Electric	211	18%	$27.53	22	**$385,181**
12	East Fork Electric	372	10%	$26.42	3	**$374,248**
13	Hueston Woods Electric	242	17%	$24.42	0	**$365,691**
14	Caesar Creek Electric	279	13%	$27.53	3	**$364,687**
15	Delaware Electric	203	15%	$26.53	10	**$303,157**
16	Hocking Hills Cabins Preferred (Fri-Fri)	11	67%	$106.75	127	**$287,893**
17	Dillon Electric	178	18%	$24.07	0	**$276,301**
18	Lake Hope Cabins Woodburner (Forest)	20	47%	$78.99	6	**$272,047**
19	Pymatuning Electric	293	10%	$24.47	0	**$271,078**
20	Harrison Lake Electric North	118	24%	$24.44	33	**$249,039**
21	Paint Creek Electric	178	15%	$24.50	5	**$238,342**
22	Geneva Electric	89	25%	$28.44	28	**$228,262**
23	Mosquito Lake Electric	209	12%	$24.52	0	**$227,547**
24	Lake Loramie Electric	110	21%	$24.52	32	**$210,814**
25	Buck Creek Electric	86	24%	$26.42	34	**$202,895**

Source: Parks

As shown in **Table 3-5**, the top three revenue overnight accommodation types (all of which were campgrounds) produced a total of approximately $1.7 million during CY 2013. Incremental changes in pricing that raised RevPAR by just 5 percent would yield an additional $85,000 in these three campgrounds alone.

With total occupancies varying so widely across overnight accommodations that charge identical prices, it is reasonable to assume that optimizing pricing could produce gains in RevPAR. For example, Maumee Bay, Electric (the highest total revenue producer) and Caesar Creek, Electric (14th in total revenue produced) both have a similar number of campsites and charge almost exactly the same ADR. However, Maumee Bay's occupancy is almost double that of Caesar Creek's and it is extremely unlikely that a pricing decision based on RevPAR maximization would result in two occupancies that vary by such a wide amount. Maumee Bay likely has an

opportunity to increase RevPAR by increasing ADR; based on experiencing 25 sell-out nights in CY 2013. Conversely, Caesar Creek may have an opportunity to increase RevPAR by decreasing ADR; based on experiencing only 3 sell-out nights in the same year. Considering this type of pricing analysis to the top revenue-producing accommodations should form a starting point to help Parks identify price-change opportunities.

Private-Sector Competitor Pricing

Private sector campgrounds represent an alternative option to Parks customers and anchor expectations regarding pricing. Localized competition between Parks and private-sector campgrounds is an important market dynamic that could impact consumer decisions.

Table 3-6 shows aggregated private-sector campground prices, focusing on average, high, and low prices as well as the range (i.e., the difference between the highest and lowest identified prices) for CY 2014.

Table 3-6: Private-Sector Campground Prices CY 2014

	Sample Size	Average Price	Highest Price	Lowest Price	Price Range
Weekday Prices					
Non-Electric	35	$23.92	$44.00	$10.00	$34.00
Electric	17	$29.99	$35.80	$25.00	$10.80
Electric Premium	36	$31.58	$48.00	$22.00	$26.00
Full Hook-Up	37	$37.00	$61.00	$25.00	$36.00
Weekend Prices					
Non-Electric	35	$24.37	$48.00	$10.00	$38.00
Electric	16	$30.80	$39.00	$25.00	$14.00
Electric Premium	36	$32.52	$54.00	$22.00	$32.00
Full Hook-Up	36	$37.77	$61.00	$25.00	$36.00
Holiday Prices					
Non-Electric	34	$26.46	$54.00	$10.00	$44.00
Electric	16	$34.18	$66.00	$25.00	$41.00
Electric Premium	35	$35.47	$73.50	$22.00	$51.50
Full Hook-Up	36	$40.11	$79.50	$25.00	$54.50

Source: Private-Sector Campgrounds

As shown in **Table 3-6**, within each accommodation type, private-sector campgrounds charge a wide range of prices. The average private-sector campground price, with weekday prices as a base, also increases for weekends and again for holidays. Both the range of prices and the flexibility of prices suggest that private-sector campgrounds price dynamically in relation to the market.

Table 3-7 shows the average private-sector campground price compared to the average Parks campground price for CY 2014. Included is a calculated private-sector campground premium expressed as both a dollar value and as a percentage. This premium represents the difference between the private-sector campground average price and the Parks average price

Table 3-7: Campground Price Comparison CY 2014

	Private Sector		Parks		Private Sector Premium	
	Sample Size	**Avg. Price**	**Sample Size**	**Avg. Price**	**$**	**%**
Weekday Prices						
Non-Electric	35	$23.92	57	$19.40	$4.52	23.3%
Electric	17	$29.99	48	$24.50	$5.49	22.4%
Electric Premium	36	$31.58	8	$27.63	$3.95	14.3%
Full Hook-Up	37	$37.00	13	$34.31	$2.69	7.8%
Weekend Prices						
Non-Electric	35	$24.37	57	$20.40	$3.97	19.5%
Electric	16	$30.80	48	$25.50	$5.30	20.8%
Electric Premium	36	$32.52	8	$28.63	$3.89	13.6%
Full Hook-Up	36	$37.77	13	$35.31	$2.46	7.0%
Holiday Prices						
Non-Electric	34	$26.46	57	$21.40	$5.06	23.6%
Electric	16	$34.18	48	$26.50	$7.68	29.0%
Electric Premium	35	$35.47	8	$29.63	$5.84	19.7%
Full Hook-Up	36	$40.11	13	$36.31	$3.80	10.5%

Source: Parks and private-sector campgrounds

As shown in **Table 3-7**, on average, private-sector campgrounds are priced higher than Parks campgrounds across every campsite category and date type. The columns labeled "Private Sector Premium" represent the amount by which the average private sector price is greater than the average Parks price. Another consideration that should draw focus in **Table 3-7** is the difference in the high and low rates charged. Within each accommodation type, the private sector charges a much wider band of prices than Parks. For example full hook-up campsites on holidays range from as low as $25.00 to as high as $79.50 in private-sector campgrounds compared to a range of as low as $34.00 to as high as $40.00 at Parks. This is an indication that the private sector may be pricing in a more dynamic manner than Parks during peak-demand events. This pricing comparison indicates that, at a minimum, there currently exist private-sector campgrounds that charge substantially higher rates, and vary their range of rates more widely, than Parks. It should be noted, however, that the analysis in **Table 3-7** does not attempt to control for the types of amenities offered by private sector campgrounds, and as such should be interpreted only in a general manner.

The process by which ODNR sets the prices for overnight accommodations has recently involved making the same incremental adjustment to all accommodations (e.g., a phased $2 across-the-board increase beginning in CY 2010). This approach may be an attempt at keeping pace with overall inflation, but it is not a methodology for optimal pricing. Given the disparities in sell out frequency and occupancy for similarly-priced accommodations, there is opportunity to fine-tune prices at individual locations. Flat, across-the-board price increases preclude Parks from optimizing RevPAR in this manner.

Two constraints currently prevent Parks from reliably estimating its consumers' price elasticity of demand. First, there is not a sufficient amount of historical data to draw inferences regarding customers' reaction to pricing changes. Since CY 2004, Parks' schedule of prices has only undergone three major updates. Secondly, overly-specific prices published in OAC constrain Parks from easily adjusting its pricing throughout the season as it seeks to identify the economically optimal ADR (see **R3.1**).

As previously identified, there is a compelling body of evidence that suggests that Parks could modify prices to more accurately reflect optimal market rates in relation to consumer demand. Parks can employ a two-part methodology to optimize prices:

- **Part A** - Increase Prices Only on Sell-Out Nights
- **Part B** - Increase Prices on Non Sell-Out Nights

Part A: Increase Prices Only on Sell-Out Nights

Counting all accommodation types at all locations, there were 8,260 instances of an accommodation selling out during CY 2013. Because pricing at Parks was last updated in CY 2010, and because private-sector campgrounds are priced higher than Parks accommodations, this exercise quantification assumes that sufficient pent-up customer demand exists so that raising prices on these sell-out dates will have no impact on occupancy.

The methodology used to calculate financial impact of increasing price on sell-out nights utilizes a figure from the U.S. Bureau of Labor Statistics (BLS) to estimate an appropriate price increase. As a component of the overall consumer price index, BLS compiles a price index series called "lodging away from home" (lodging index) which tracks inflation in a broad range of overnight accommodations. In the period since ODNR last raised prices, the BLS lodging index has increased by 14.1 percent. Applying a 14.1 percent increase to ODNR prices results in prices that are still, on average, lower than the current private sector pricing for all campground categories except full hook-ups (see **Table 3-7**). This analysis assumes a conservative lower value for a price increase on full hook-ups, equal to the average private sector premium of 6.97 percent. It is estimated that employing this methodology would result in additional annual revenue of **$579,662** with no impact on occupancy.

Part B: Increase Prices on Non-Sell-Out Nights

The methodology used to calculate financial impact for all the remaining nights where accommodations did not sell out is identical to Part A, but includes the assumption that there is an offset to occupancy. An estimate of price elasticity of demand of (0.35), relevant to "low-priced lodging", is used to model the offset to occupancy caused by the price increases.[42] Employing this methodology would result in additional annual revenue of **$1,010,724**; adjusted for the impact on occupancy.

Table 3-8 summarizes the annual financial impact of both quantification methodologies.

Table 3-8: Financial Impact of Overnight Accommodation Price Adjustments

Part A - Increase Prices Only on Sell-Out Nights	
Price Increase: Full Hook-Up Accommodations	6.97%
Price Increase: All Other Overnight Accommodations	14.10%
Elasticity Coefficient	0.00
Occupancy Offset	0.00%
Part A: Net Revenue Increase	**$579,662**
Part B - Increase Prices on Non-Sell-Out Nights	
Price Increase: Full Hook-Up Accommodations	6.97%
Price Increase: All Other Overnight Accommodations	14.10%
Elasticity Coefficient	(0.35)
Occupancy Offset	4.94%
Part B: Net Revenue Increase	**$1,010,724**
Total Additional Revenue	**$1,590,386**

Sources: Parks, BLS, and Hiemstra and Ismail

As shown in **Table 3-8**, the net result of increasing prices based on these conservative assumptions and methodologies is an increase in total annual revenues of **$1,590,386**.

[42] The calculation for low-priced lodging price-elasticity of demand is from *Incidence of the Impacts of Room Taxes on the Lodging Industry* (Hiemstra and Ismail, 1993).

Conclusion

Parks lacks sufficient customer insight (e.g., price sensitivity and true demand) to ensure that revenue is maximized across all overnight accommodations. Lack of customer insight into these critical inputs hampers the Division from knowing, with certainty, the potential benefits, or harm, which might accrue from pricing changes. Furthermore, overly-detailed prices, published in OAC, only hinder the ability of Parks to address the situation at hand (see **R3.1**). Once addressed, Parks will have the opportunity to seek to maximize revenue while minimizing overall risk to its revenue stream, and disruption to its customer base, by focusing initial efforts on high demand accommodations and peak demand time periods. This initial information will then help to inform the appropriateness of changes to prices for more demand sensitive accommodations and time periods.

Recommendation 3.2: ODNR should actively manage pricing for overnight accommodations with the goal of maximizing RevPAR. In doing so, it should seek to identify and set prices that are responsive to, and reflective of, customer demands and price sensitivities. To inform pricing choices with quantitative information, the Division should take the following steps:

- **Estimate the price elasticity of demand of consumers by varying the price of accommodation types across a season and measuring market reactions. As a starting point, raise prices on dates that sell out the most frequently.**
- **Ensure that the reservation and reporting systems in use provide the tools and flexibility to appropriately reflect and inform a dynamic pricing model. At minimum Parks should be able to log regrets and denials, report on the velocity of bookings, and issue reports that allow RevPAR to be tracked by specific accommodation.**

Financial Implication 3.2: As shown in **Table 3-8**, increasing prices commensurate with reported inflationary data from CY 2010 through CY 2014 would result in total annual revenue increases of **$1,590,386**.

Appendix 3.A: Supplemental Overnight Accommodation Detail

Table 3.A-1 – Parks Campground Pricing Price Schedule CY 2014

Campground	Full-Service Electric	Premium Electric	Basic Electric	Non-Electric Premium	Basic Non-Electric
A.W. Marion	N/A	N/A	$23	N/A	$19
Alum Creek	$38	$31	$29	N/A	$19
Barkcamp	N/A	N/A	$22	N/A	$19
Beaver Creek	N/A	N/A	N/A	N/A	$19
Blue Rock	N/A	N/A	N/A	N/A	$17
Buck Creek	N/A	N/A	$27	N/A	$23
Burr Oak	N/A	N/A	$24	N/A	$20
Caesar Creek	N/A	N/A	$28	N/A	$20
Cowan Lake	N/A	N/A	$28	N/A	$23
Deer Creek	N/A	N/A	$28	N/A	$23
Delaware	N/A	N/A	$27	N/A	$23
Dillon	N/A	N/A	$25	N/A	$19
East Fork	$34	N/A	$27	N/A	$19
East Harbor	$36	$32	$28	$25	$23
Findley	N/A	N/A	$27	N/A	$23
Forked Run	N/A	N/A	$23	N/A	$19
Geneva	$34	N/A	$29	N/A	$21
Grand Lake St. Marys	N/A	N/A	$26	N/A	$22
Great Seal	N/A	N/A	N/A	N/A	$19
Guilford Lake	N/A	N/A	$25	N/A	$19
Harrison Lake	N/A	N/A	$25	N/A	$19
Hocking Hills	N/A	N/A	$29	N/A	$25
Hueston Woods	N/A	N/A	$25	N/A	$20
Indian Lake	$36	$28	$26	N/A	$20
Jackson Lake	N/A	N/A	$22	N/A	$20
John Bryan	N/A	N/A	$23	N/A	$19
Kelleys Island	N/A	N/A	$32	$31	$26
Kiser Lake	N/A	N/A	$23	N/A	$19
Lake Alma	N/A	N/A	$23	N/A	$19
Lake Hope	N/A	N/A	$23	N/A	$19
Lake Loramie	N/A	$27	$25	$23	$21
Malabar Farm	N/A	N/A	N/A	N/A	$19
Mary Jane Thurston	N/A	N/A	N/A	$21	$19
Maumee Bay	N/A	N/A	$28	$21	$19
Middle Bass Island	N/A	N/A	N/A	N/A	$19
Mohican	$39	N/A	$31	$26	$21
Mosquito Lake	N/A	N/A	$25	N/A	$21
Mt. Gilead	N/A	N/A	$22	N/A	$21
Muskingum River	N/A	N/A	N/A	$18	$17
Paint Creek	N/A	$27	$25	$18	$17
Pike Lake	N/A	N/A	$21	$18	$17
Portage Lakes	N/A	N/A	$26	N/A	$22

Campground	Full-Service Electric	Premium Electric	Basic Electric	Non-Electric Premium	Basic Non-Electric
Punderson	$35	N/A	$26	N/A	$22
Pymatuning	$33	$27	$25	N/A	$22
Rocky Fork	$34	N/A	$25	$25	$22
Salt Fork	$36	N/A	$27	$25	$22
Scioto Trail	N/A	N/A	$23	N/A	$19
Shawnee	N/A	N/A	$24	N/A	$19
South Bass Island	$33	N/A	N/A	N/A	$28
Stonelick	N/A	$26	$24	N/A	$20
Strouds Run	N/A	N/A	N/A	N/A	$19
Tar Hollow	N/A	N/A	$25	N/A	$22
Van Buren	N/A	N/A	$22	N/A	$19
West Branch	$33	N/A	$27	N/A	$23
Wolf Run	N/A	N/A	$24	$21	$20

Source: Parks

Note: Prices listed are for Friday and Saturday night. Other nights of the week are $1 less. Holiday prices are an additional $1 and winter fees are $2 less per night than the regular fees.

Table 3.A-2: Parks Accommodations Ranked by Sell-Outs CY 2013

Rank	Overnight Accommodation	Inventory	Saturday Occupancy	Total Occupancy	Sell-Out Nights
1	Mohican Cabins Preferred Pet (Sat-Sat)	1	90%	57%	207
2	Pymatuning Cabins Premium	1	88%	56%	205
3	Mohican Cabins Preferred Pet (Fri-Fri)	1	87%	56%	203
4	Pymatuning Cabins Preferred Pet (Sat-Sat)	1	60%	41%	150
5	Burr Oak Camper Cabin	1	62%	39%	143
6	Mohican Cabins Preferred Pet (Sun-Sun)	2	83%	50%	143
7	Geneva Full Hook-Up	3	51%	44%	140
8	Hueston Woods Yurts	1	60%	38%	139
9	Burr Oak Conestoga Cabins	1	56%	35%	129
10	Buck Creek Cabins Preferred (ADA)	1	63%	35%	127
11	Hocking Hills Cabins Preferred (Fri-Fri)	11	111%	67%	127
12	Indian Lake Camper Cabins	2	72%	52%	126
13	Wolf Run Conestoga Cabins	1	54%	34%	125
14	East Harbor Camper Cabins	2	52%	38%	124
15	Alum Creek Full Hook-Up	3	52%	46%	123
16	Pymatuning Cabins Preferred Pet (Fri-Fri)	3	73%	45%	123
17	Maumee Bay Yurts	1	44%	33%	121
18	Mohican Conestoga Cabins	3	54%	42%	118
19	Lake Hope Cabins Woodburner Pet	6	104%	60%	118
20	Mohican Cabins Preferred (Sat-Sat)	8	91%	51%	117
21	Paint Creek Camper Cabins	2	58%	39%	115
22	Lake Hope Cabins Preferred Pet	7	89%	55%	115
23	Lake Hope Camper Cabins	2	68%	44%	113
24	Mosquito Lake Yurts	2	53%	36%	113
25	South Bass Island Rustic Cabin	1	31%	31%	112
26	Pike Lake Cabins Preferred Pet	2	79%	46%	112
27	Grand Lake St Marys Cedar Cabins	2	55%	37%	111

Rank	Overnight Accommodation	Inventory	Saturday Occupancy	Total Occupancy	Sell-Out Nights
28	Hocking Hills Camper Cabins	3	54%	41%	110
29	Alum Creek Cedar Cabins	3	53%	39%	109
30	Alum Creek Large Camper Cabin	1	42%	30%	108
31	Stonelick Camper Cabins	1	46%	29%	107
32	East Harbor Full Hook-Up (Pull-Thru)	11	46%	42%	104
33	Kelleys Island Yurts	2	35%	34%	102
34	Shawnee Conestoga Cabins	2	60%	39%	102
35	Salt Fork Camper Cabins	1	31%	27%	99
36	Harrison Lake Conestoga Cabins	1	46%	27%	97
37	Hocking Hills Cabins Premium (Sat-Sat)	8	81%	46%	97
38	East Harbor Full Hook-Up (Back-In)	12	46%	40%	93
39	Geneva Cedar Cabins	12	43%	34%	92
40	Barkcamp Camper Cabins	2	62%	38%	90
41	Lake Loramie Cedar Cabins	3	54%	39%	85
42	Lake Alma Camper Cabins	1	48%	23%	84
43	South Bass Island Cabent	4	28%	27%	83
44	Salt Fork Full Hook-Up	19	57%	48%	82
45	Deer Creek Conestoga Cabins	2	55%	32%	81
46	East Harbor Rent-A-RV	2	30%	27%	80
47	West Branch Full Hook-Up	29	55%	44%	78
48	Mohican Cabins Preferred (Sun-Sun)	8	67%	39%	78
49	Pymatuning Yurts	3	39%	27%	74
50	Scioto Trail Conestoga Cabins	2	67%	28%	74
51	Cowan Lake Cabins Premium	2	55%	29%	74
52	Indian Lake Full Hook-Up	13	51%	45%	68
53	Buck Creek Cabins Preferred Pet	2	60%	35%	66
54	Hueston Woods Conestoga Cabins	3	49%	32%	64
55	Blue Rock Camper Cabins	3	53%	29%	63
56	Harrison Lake Yurts	2	44%	23%	63
57	Dillon Cabins Preferred Pet	5	69%	39%	63
58	Paint Creek Yurt	1	37%	17%	62
59	Hocking Hills Cabins Preferred (Sat-Sat)	12	66%	35%	61
60	John Bryan Electric	9	62%	44%	60
61	Forked Run Camper Cabins	3	56%	26%	60
62	Punderson Full Hook-Up	5	45%	34%	54
63	Findley Conestoga Cabins	3	42%	25%	53
64	Mt Gilead Camper Cabins	2	46%	21%	53
65	Delaware Yurts	3	40%	22%	52
66	Pike Lake Cabins Basic Pet	2	47%	18%	49
67	Grand Lake St Marys Conestoga Cabins	3	46%	22%	47
68	Kiser Lake Camper Cabins	2	29%	18%	47
69	East Fork Full Hook-Up	7	40%	33%	46
70	Dillon Cabins Preferred	9	73%	38%	46
71	Alum Creek Camper Cabins	4	42%	23%	45
72	Portage Lakes Electric	6	51%	34%	43
73	Lake Loramie Electric Premium	43	50%	36%	43

Rank	Overnight Accommodation	Inventory	Saturday Occupancy	Total Occupancy	Sell-Out Nights
74	Hocking Hills Electric	152	53%	34%	40
75	West Branch Electric	150	48%	27%	39
76	South Bass Island Full Hook-Up	10	46%	31%	38
77	Pike Lake Cabins Preferred	10	65%	36%	38
78	Hocking Hills Non-Electric	13	60%	34%	37
79	Dillon Cabins Premium	15	55%	28%	37
80	Buck Creek Electric	86	46%	24%	34
81	Alum Creek Electric Premium	31	47%	28%	34
82	Harrison Lake Electric North	118	44%	24%	33
83	Rocky Fork Full Hook-Up	44	46%	36%	33
84	Grand Lake St Marys Camper Cabins	2	36%	15%	33
85	Portage Lakes Tepees	2	34%	15%	33
86	Lake Loramie Electric	110	44%	21%	32
87	East Harbor Electric Premium	120	41%	29%	32
88	Indian Lake Electric Premium	45	46%	27%	32
89	Mohican Full Hook-Up	32	50%	40%	29
90	Geneva Electric	89	39%	25%	28
91	Buck Creek Cabins Preferred	18	60%	31%	28
92	Deer Creek Electric	224	45%	23%	26
93	Kiser Lake Electric	10	39%	20%	26
94	Mohican Electric	118	47%	33%	26
95	Pymatuning Cabins Basic	27	43%	25%	26
96	Maumee Bay Electric	246	42%	24%	25
97	Stonelick Non-Electric	6	38%	16%	24
98	West Branch Non-Electric	14	42%	20%	24
99	Beaver Creek Electric	5	38%	20%	23
100	Buck Creek Cabins Preferred Pet (Sat-Sat)	2	30%	21%	23
101	East Harbor Electric	211	31%	18%	22
102	Alum Creek Electric	244	41%	22%	21
103	Salt Fork Electric	192	39%	23%	21
104	Guilford Lake Electric	40	41%	24%	19
105	Lake Hope Cabins Preferred	18	64%	38%	19
106	Pike Lake Cabins Basic	10	43%	18%	19
107	South Bass Island Non-Electric	119	32%	14%	18
108	Van Buren Camper Cabins	2	30%	12%	18
109	Shawnee Non-Electric	6	41%	21%	17
110	Mohican Non-Electric (Walk-In)	10	35%	18%	16
111	Kelleys Island Electric	79	31%	21%	16
112	Buck Creek Non-Electric	22	32%	14%	15
113	Geneva Non-Electric Primitive	7	24%	12%	13
114	Van Buren Electric	10	38%	16%	13
115	Beaver Creek Tepees	2	29%	10%	13
116	Rocky Fork Electric	96	33%	17%	12
117	Kelleys Island Non-Electric	32	28%	13%	11
118	Delaware Electric	203	31%	15%	10
119	Pymatuning Full Hook-Up	18	45%	29%	10

Rank	Overnight Accommodation	Inventory	Saturday Occupancy	Total Occupancy	Sell-Out Nights
120	Lake Loramie Non-Electric	15	41%	21%	9
121	Cowan Lake Electric	233	32%	17%	9
122	Indian Lake Electric	390	30%	15%	9
123	Wolf Run Electric	71	32%	19%	9
124	Findley Electric	89	44%	23%	7
125	Harrison Lake Electric South	27	26%	12%	7
126	Scioto Trail Electric	39	30%	14%	7
127	Tar Hollow Electric	71	33%	16%	7
128	Great Seal Non-Electric	15	10%	6%	6
129	Hocking Hills Non-Electric Family Hike-In	33	34%	13%	6
130	Lake Hope Cabins Woodburner (Forest)	20	84%	47%	6
131	Grand Lake St Marys Electric	168	27%	13%	5
132	Paint Creek Electric	178	28%	15%	5
133	John Bryan Non-Electric	50	37%	14%	4
134	Burr Oak Electric	17	35%	19%	4
135	Lake Hope Electric	44	34%	17%	4
136	Stonelick Electric	92	41%	22%	4
137	Mohican Non-Electric (Covered Bridge)	25	27%	12%	3
138	Caesar Creek Electric	279	28%	13%	3
139	East Fork Electric	372	21%	10%	3
140	Pike Lake Electric	78	21%	11%	3
141	Cowan Lake Non-Electric	17	13%	5%	2
142	Barkcamp Electric	118	29%	19%	2
143	Forked Run Electric	81	14%	7%	2
144	Lake Alma Electric	64	16%	9%	2
145	Stonelick Electric Premium	10	46%	29%	2
146	Mosquito Lake Non-Electric	16	21%	9%	1
147	Shawnee Electric	100	26%	14%	1
148	Cowan Lake Cabins Preferred Pet	4	48%	26%	1
149	Lake Hope Cabins Woodburner (Iron Furnace)	15	80%	41%	1
150	Aw Marion Non-Electric	28	6%	3%	0
151	Beaver Creek Non-Electric	43	8%	3%	0
152	Blue Rock Non-Electric	95	8%	3%	0
153	Burr Oak Non-Electric	75	9%	4%	0
154	Dillon Non-Electric (Walk-In)	12	6%	2%	0
155	East Harbor Non-Electric	187	17%	8%	0
156	Findley Non-Electric	191	15%	6%	0
157	Forked Run Non-Electric	64	5%	2%	0
158	Grand Lake St Marys Non-Electric	28	5%	2%	0
159	Harrison Lake Non-Electric	33	12%	5%	0
160	Hueston Woods Non-Electric	148	15%	5%	0
161	Jefferson Lake Non-Electric	56	0%	0%	0
162	Kiser Lake Non-Electric	63	14%	6%	0
163	Lake Alma Non-Electric	10	2%	1%	0
164	Lake Hope Non-Electric	139	9%	3%	0
165	Mary Jane Thurston Non-Electric	29	12%	5%	0

Rank	Overnight Accommodation	Inventory	Saturday Occupancy	Total Occupancy	Sell-Out Nights
166	Middle Bass Island Non-Electric	21	10%	4%	0
167	Muskingum Non-Electric	19	2%	1%	0
168	Portage Lakes Non-Electric	63	15%	6%	0
169	Punderson Non-Electric	12	9%	4%	0
170	Pymatuning Non-Electric	21	9%	4%	0
171	Rocky Fork Non-Electric	34	14%	6%	0
172	Salt Fork Non-Electric Primitive	26	15%	6%	0
173	Scioto Trail Non-Electric (Caldwell Lake)	15	9%	3%	0
174	Scioto Trail Non-Electric (Stewart Lake)	18	4%	2%	0
175	Tar Hollow Non-Electric	23	16%	6%	0
176	Van Buren Non-Electric	19	4%	2%	0
177	Wolf Run Non-Electric	58	7%	3%	0
178	Aw Marion Electric	29	24%	12%	0
179	Dillon Electric	178	33%	18%	0
180	Hueston Woods Electric	242	35%	17%	0
181	Jefferson Lake Electric (Walk In Only)	5	1%	1%	0
182	Mary Jane Thurston Electric	N/A	N/A	N/A	N/A
183	Mosquito Lake Electric	209	22%	12%	0
184	Mt Gilead Electric	58	17%	9%	0
185	Punderson Electric	176	26%	12%	0
186	Pymatuning Electric	293	19%	10%	0
187	Paint Creek Electric Premium	15	36%	22%	0
188	Pymatuning Electric Premium	29	41%	29%	0
189	East Fork Cedar Cabins	4	19%	12%	0
190	Hocking Hills Cabins Preferred Pet (Fri-Fri)	8	11%	6%	0
191	Pymatuning Cabins Basic Pet	4	25%	13%	0
192	Pymatuning Cabins Preferred (Fri-Fri)	7	58%	35%	0

Source: Parks

Note: Data encompasses all nights between January 1, 2013 and December 31, 2013 for all Parks-managed properties. Data does not include concessionaire-managed properties. Occupancies exceeding 100 percent are caused by a mid-season change in inventory.

4. Parks and Recreation Operations – Lodge Properties

Section Overview

This section focuses on the Ohio Department of Natural Resources (ODNR or the Department) Division of Parks and Recreation's (Parks or the Division) ownership and operation of lodge properties in Ohio's state parks and is presented as two separate analyses:

- **Lodge Property Operating Performance**: The first analysis focuses on quantifying the underlying performance of the individual lodges, and, in the process, identifies shortcomings in Parks' management information systems and estimates financial performance with the best-available information.
- **Lodge Property Investment Performance**: The second analysis is a portfolio-level assessment that quantifies the taxpayer value generated by Ohio's ownership of the lodge properties and makes several recommendations to increase value generation associated with capital reinvestment, including: soliciting matching funds from concessionaires, extending agreement term lengths, and implementing alternative agreement structures.

Recommendations Overview

Recommendation 4.1: ODNR should develop a process to identify management information that is critical to successful and sustainable operation of lodge properties. At minimum, this should include all current and future capital and operating resource needs for each lodge property. Further, the Department should develop a framework that allows for ongoing (at least annually) evaluation of the true cash flow potential of each lodge property. Finally, Parks management should work with ODNR management to develop a performance management framework to monitor, measure, and evaluate the relative performance of each lodge property on an ongoing basis. At minimum, this should include performance measures associated with the total cost of ownership, operating cash flow, and return on investment associated with each property.

Financial Implication 4.1: N/A

Recommendation 4.2: ODNR should seek to improve lodge property returns by soliciting matching funds from concessionaires, extending agreement term lengths, and/or implementing alternative agreement structures. Implementing one or more of these changes would result in improved financial performance for the lodge properties and would help to maximize financial returns on capital reinvestment. Though changes to agreement term length and contract structures are longer-term changes, the Department's short-term focus should be to maximize the leverage of available capital dollars. This can be achieved by targeting and funding optimal capital reinvestment deals across its lodge property portfolio, taking into account concessionaire effort, ability to improve visitor attractiveness, and ability to optimize operational efficiency.

Financial Implication 4.2: N/A

Issue for Further Study

Issues are sometimes identified by AOS that are not related to the objectives of the audit, but could yield economy and efficiency if examined in more detail. During the course of the audit, the Department's organizational and statutory alignment was identified as one such area.

Lodge Property Alternative Operating Models: If Parks is unable to achieve an acceptable level of ROI across the lodge properties, ODNR leadership should further study alternative operating models. In discussions with park leaders in other states, Indiana Department of Natural Resources' (IDNR) quasi-public entity, Indiana State Park Inns (ISPI) was frequently cited as a successful model. Under this model IDNR performs the lodge property management function, but lodge property staff are employed through ISPI. As a quasi-public entity, ISPI is able to avoid job classification and compensation constraints that otherwise would apply to IDNR. In studying the feasibility of a quasi-public model, ODNR should seek out ISPI's start-up and continuing operating costs (e.g., information technology, accounting, and human resources systems). The full operating cost of the model should then be evaluated in the context of concession and fee-based management models to determine which will provide the optimal financial outcome while balancing other ownership value that Ohio's citizens derive from the lodge properties. If alternative operating models are unable to be implemented, or if when implemented they are unable to achieve an acceptable level of ROI the State should further study divestment from lodge property operations.

Section Background

Parks owns nine lodge facilities that include 798 guest rooms and 222 cabins, all located within state parks.[43] Seven of the nine facilities are leased on long-term concession agreements to two separate concessionaires, Xanterra Parks and Resorts (Xanterra) and U.S. Hotel and Resort Management (U.S. Hotel). The eighth facility, Burr Oak, is currently managed by a subsidiary of U.S. Hotel on a short-term, fee-based contract. The ninth facility, Geneva, is on a long-term lease to the Ashtabula Board of County Commissioners.[44] In addition to the 222 cabins managed by concessionaires, the Division owns and self-manages 294 cabins that are not associated with a lodge facility or operating agreement.

[43] Each property upon which a lodge is located has only one lodge. As such, throughout this report, each lodge will be referred to using its shorthand, location-specific name rather than the full formal name. For example, though Burr Oak Lodge and Conference Center is the formal name, Burr Oak will be used in this report.

[44] Geneva is excluded from the scope of this performance audit due to the long-term lease that is in place with the Ashtabula Board of County Commissioners. Geneva is excluded from all analysis shown in this report section.

Table 4-1 shows an overview of each Parks lodge and cabin operation.

Table 4-1: ODNR Lodge Property Overview

Lodge Property	Operator	Rooms	Cabins	Year Opened	Agreement Expires	Agreement Term
Burr Oak [1]	U.S. Hotel	38	30	1967	6/30/2015	Annual
Deer Creek	Xanterra	110	N/A	1981	2/9/2020	10 Years
Geneva	Ashtabula BCC	113	N/A	2004	1/31/2040	37 ¼ years
Hueston Woods	U.S. Hotel	92	37	1967	2/7/2022	10 Years
Maumee Bay	Xanterra	120	24	1991	1/31/2018	10 years
Mohican	Xanterra	96	26	1974	2/1/2020	10 Years
Punderson	Xanterra	31	26	1966	1/31/2021	10 Years
Salt Fork	Xanterra	148	54	1972	2/28/2019	10 Years
Shawnee	U.S. Hotel	50	25	1973	2/14/2022	10 Years

Source: Parks
[1] Burr Oak's management agreement is an annual renewable term.

As shown in **Table 4-1**, within the next six years (i.e., by CY 2020) five of the nine management agreements will have expired. The remaining three, excluding Geneva, will expire by CY 2022. Taking into account the long-term, strategic nature of lodge operations this is an opportune time to study operations well in advance of contract expirations.

Table 4-2 shows the size of Ohio's lodge operation in comparison to the national top 10 state park systems with lodge properties.

Table 4-2: Ten Largest State Park Lodge Operations CY 2013

State	Lodge Properties	Room Count
Kentucky	17	890
West Virginia	10	904
Ohio	**9**	**798**
Tennessee	6	642
Indiana	7	631
California	4	473
Alabama	5	343
Illinois	8	302
Georgia	5	277
Oklahoma	5	239

Source: Parks and National Association of State Park Directors (NASPD)

As shown in **Table 4-2**, Ohio operates the third largest number of overnight state lodge rooms in the United States, only surpassed by Kentucky and West Virginia.

Table 4-3 shows the size of Ohio's cabin operation in comparison to the national top 10 state park systems with cabins.

Table 4-3: Ten Largest State Park Cabin Operations CY 2013

State	Cabin Properties	Cabin Count
New York	23	824
Ohio	**16**	**516**
Pennsylvania	44	385
Georgia	30	381
South Dakota	37	375
Tennessee	21	366
West Virginia	19	333
Virginia	20	320
Kentucky	16	310
Oklahoma	15	304

Source: Parks and NASPD
Note: Ohio has 516 cabins, but 222 are concessionaire-managed while 294 are self-managed by Parks.

As shown in **Table 4-3**, Ohio operates the second largest cabin system in the United States, surpassed only by New York.

The **Parks and Recreation Operations – Lodge Properties** section is divided into two sub-sections of analysis, each analyzing a distinct element of lodge property operations.

Lodge Property Operating Performance: The first sub-section identifies a current gap in management-level information on true lodge property performance. The sub-section addresses this gap by analyzing lodge property operating performance, equalized by true operating cash flow across each property, and then assessing the distribution of operating cash flow (e.g., operator, Parks, or lodge properties).

Lodge Property Investment Performance: The second sub-section analyzes the potential return on investment (ROI) associated with lodge property reinvestment as well as the market competitiveness of this type of investment. The two sub-sections provide a greater level of insight into the operation and financial performance of the lodge properties. Ultimately, highlighting opportunities to improve financial performance and improve the potential returns associated with reinvestment strategies.

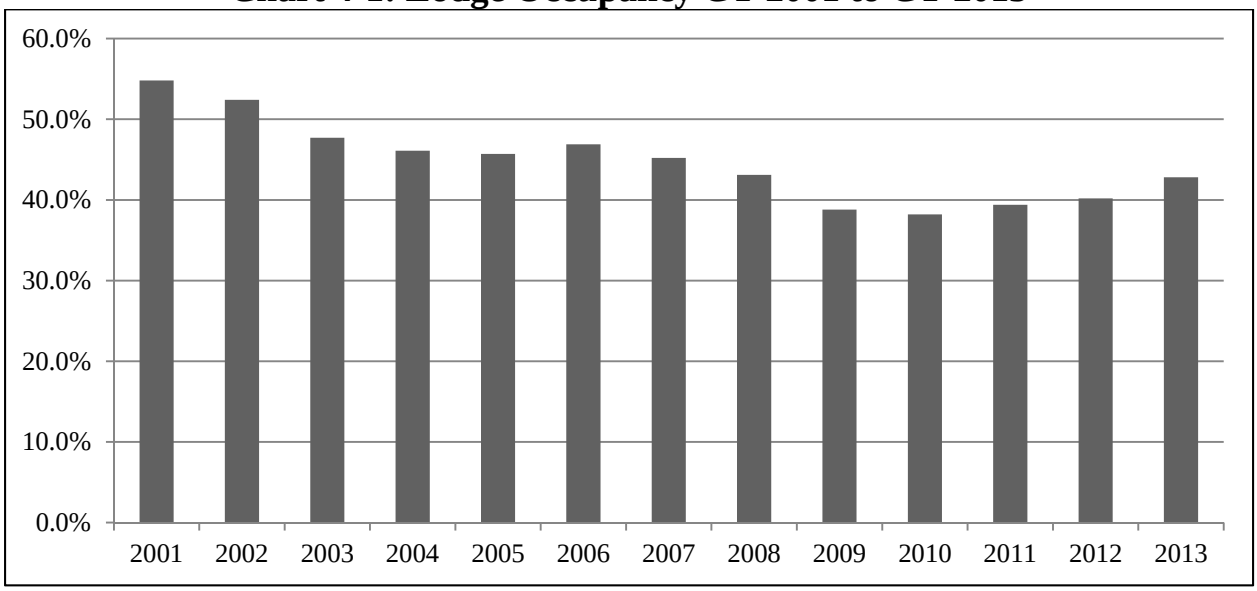
R4.1 Lodge Property Operating Performance

Background

In the lodging industry, occupancy is a quantitative benchmark of a property's popularity and utilization. Occupancy is calculated by dividing the number of room nights sold by the available inventory of rooms.

Chart 4-1 shows the trend in Parks' occupancy across all lodges from CY 2001 to CY 2013.

Chart 4-1: Lodge Occupancy CY 2001 to CY 2013



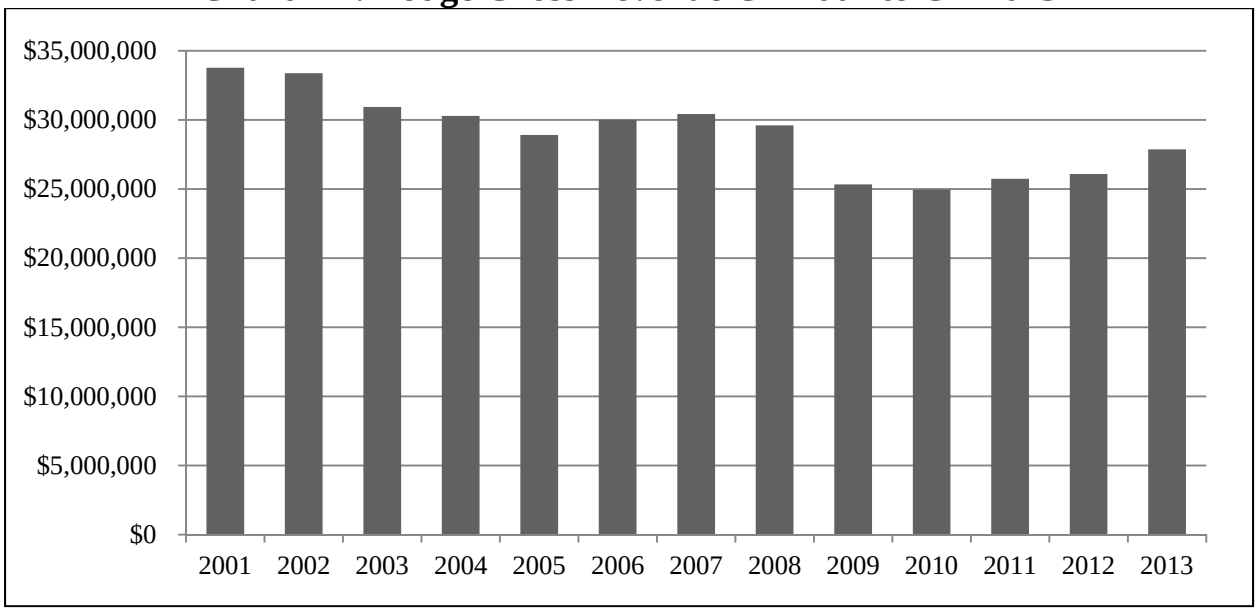
Source: Parks

As shown in **Chart 4-1**, occupancy steadily declined from CY 2001 to CY 2010; a loss of 16.6 percentage points. However, occupancy has begun to rebound for CY 2011 to CY 2013, but CY 2013 occupancy is still 12.0 percentage points lower than CY 2001 occupancy.[45] In general, occupancy rates appear to reflect that Parks lodges are less popular and attractive to potential customers than they once were.

[45] For reference, the overall lodging industry occupancy averaged 62.2 percent for CY 2013 according to the American Hotel and Lodging Association. This industry occupancy figure has remained stable through time, with CY 2000 occupancy at 63.0 percent and CY 1990 occupancy at 64.0 percent.

Chart 4-2 shows total gross revenue for Parks lodge properties from CY 2001 to CY 2013. Though revenue is an output of both occupancy and the specific prices charged, this overview informs the customer behavior shown in **Chart 4-1**.

Chart 4-2: Lodge Gross Revenue CY 2001 to CY 2013



Source: Parks

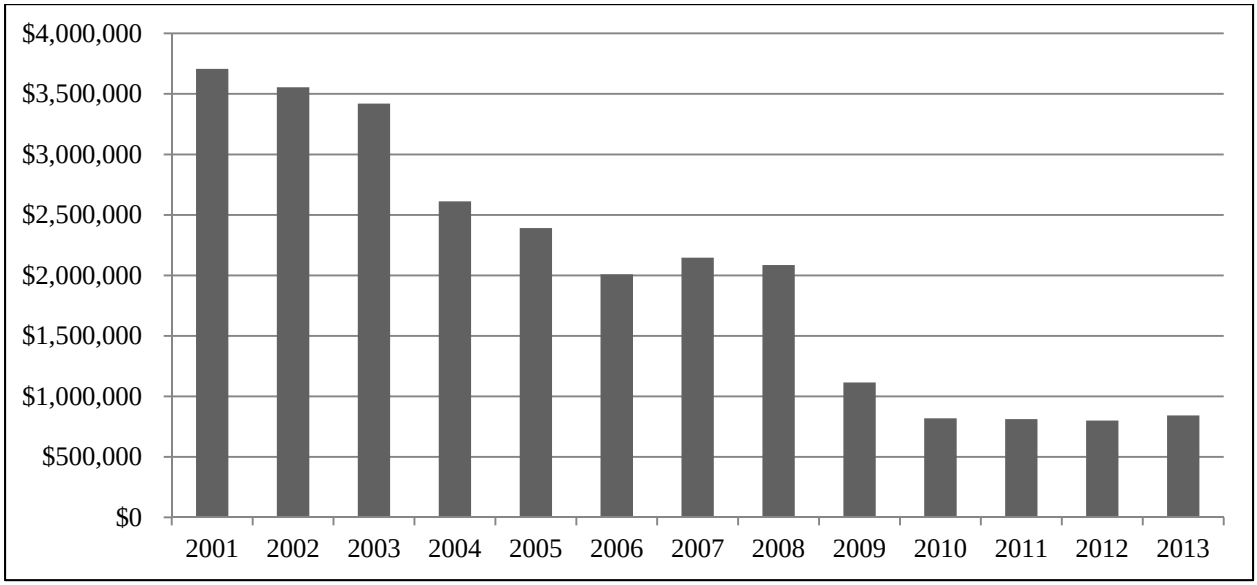
As shown in **Chart 4-2**, the trend in gross revenue closely reflects the lodges' performance in occupancy. Gross revenue also declined from CY 2001 to CY 2010; a loss of $8.8 million or 26.1 percent. However, revenue began to rebound for CY 2011 to CY 2013, but CY 2013 revenue was still $5.9 million or 17.5 percent lower than CY 2001. The revenues shown in **Chart 4-2** are not adjusted for the overall level of economic inflation between CY 2001 and CY 2013, and as such, the decline in revenue over that time period is even more dramatic when considered in real terms.[46] While there has been a slight increase in lodge performance since the low of CY 2010, the decline in revenue appears to further affirm that Parks lodges are less popular and attractive to potential customers than they once were.

As noted, Parks currently leases seven of nine lodge facilities as concession agreements. These agreements grant a concessionaire the exclusive right to manage a lodge facility. Concessionaires are entitled to all property net income after paying any commission fees to Parks stipulated in the contracts. Parks awards concession contracts on a competitive bid basis. Award criteria include a bidder's experience, willingness and ability to invest in property improvements, and size of commission fees to be paid to Parks. Commission fees are typically negotiated as a fixed percentage of property gross revenue.

[46] The Consumer Price Index, tracked by the US Bureau of Labor and Statistics, increased by 32 percent from CY 2001 to CY 2013. This means that the $33.8 million in lodge revenue shown in CY 2001 actually represents $44.6 million in CY 2013 dollars.

Chart 4-3 shows the recent trend in commission fees paid to Parks across all lodges from CY 2001 to CY 2013. This analysis further informs occupancy and gross revenue by focusing in only on what Parks earns from the lodge properties.

Chart 4-3: Parks Commission Fees CY 2001 to CY 2013



Source: Parks

As shown in **Chart 4-3**, commission fees paid to Parks by concessionaires has declined significantly from CY 2001 to CY 2013; a loss of $2.8 million or 77.3 percent. This decline is the result of two factors. The first is that since commission fees are set as a percentage of gross revenue the downward trend in gross revenue has also reduced commission fees. The second reason is that as concession agreements have expired and been renegotiated, Parks has received progressively less favorable commission fee terms. As in **Chart 4-2,** commission fees are reported in nominal dollars, thus underestimating the real impact of the decline from 2001 to 2013.

Parks is not currently operating under a concession agreement for Burr Oak. Due to the lodge's poor financial performance in recent years, it has not attracted bids as a concession. Over the five year period from CY 2009 through CY 2013, Burr Oak sustained a net operating loss in excess of $1.43 million. Burr Oak was closed from January to September 2012 for substantial renovations after a failure in the property's electrical system. Currently, U.S. Hotel is operating Burr Oak under a fee-based management agreement. Per the agreement Parks pays U.S. Hotel a percentage of gross revenue, and any net profit or loss accrues to Parks.[47] During CY 2013, Burr Oak incurred a net operating loss of $354,000.

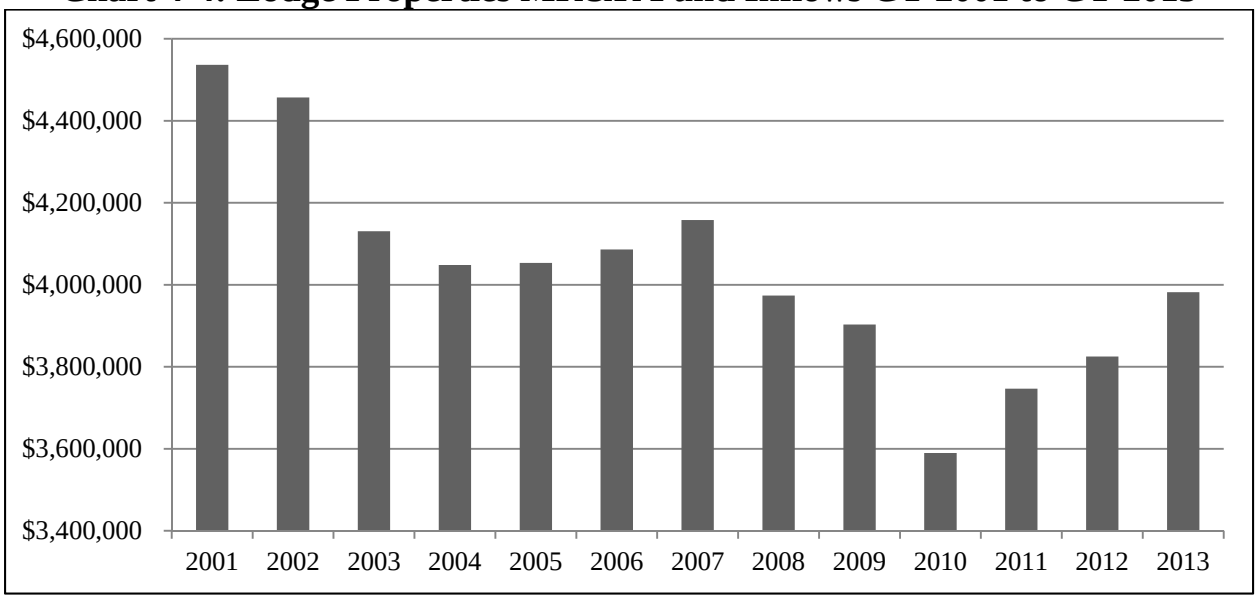
It is a standard practice within the lodging industry to continually invest a portion of revenue back into the property.[48] This reinvestment allows the property to keep current with competition

[47] Burr Oak's current contract stipulates that US Hotel will receive 5.0 percent of gross revenue with a $5,000 monthly minimum, and includes an additional incentive fee based on operational performance.
[48] *Historical Trends in Hotel Management Contracts*. HVS Global Hospitality Services (January 2013)

and fund newer amenities demanded by target customers. Following this practice, Parks' operating agreements require operators to place a fixed percentage of property revenue into a maintenance repair and replacement fund (MR&R Fund).

Chart 4-4 shows total MR&R Fund inflows to lodge properties from CY 2001 to CY 2013. Similar to commission fees, MR&R Fund inflows are directly tied to gross revenue.

Chart 4-4: Lodge Properties MR&R Fund Inflows CY 2001 to CY 2013



Source: Parks

As shown in **Chart 4-4**, since inflows to the MR&R Fund are dependent upon gross revenue, the actual reinvestment has declined significantly from CY 2001 to CY 2010; a loss of $946,834 or 20.9 percent. However, MR&R Fund inflows began to rebound for CY 2011 to CY 2013, but CY 2013 revenue was still $554,599 or 12.2 percent lower than CY 2001.

Though MR&R Fund contributions are the largest source of ongoing funds used for property reinvestment, it is common for the winning concessionaire bid to also include up-front, capital improvement funds for the property. However, this is a product of property-specific negotiations and is heavily influenced by the presence of a competitive market. For example, from CY 2009 until early CY 2012, all concessionaire-managed lodges were operated by the same concessionaire. During this same time, lack of competition led to the renewal of the concession agreement at one property with only $266,000 in additional up-front capital investment. The introduction of a competing concessionaire in CY 2012 resulted in an up-front capital investment of $1.2 million as well as an advance payment of $800,000 to the MR&R Fund.

Taken together, concessionaire commission fees (**Chart 4-3**), MR&R Fund inflows (**Chart 4-4**), and additional capital contributions specified in the winning contract bids represent the three ways Parks derives external cash flow from its concession-operated lodges. All three external cash flow streams are either explicitly (i.e., a fixed percentage fee) or implicitly tied to gross revenues (e.g., a more financially attractive property resulting in more generous terms).

Methodology

This sub-section, **Lodge Property Operating Performance**, seeks to develop a framework for evaluating the lodge properties in order to assess whether or not they are operated in an efficient and effective manner that provides sufficient value for taxpayers and park-users. Capital and operational expenditures data for each lodge property included in the analysis was not readily available in a manner sufficient to directly and completely assess the total cost of ownership associated with each property (see **Capital Planning and Budgeting** section). Given the initial limitations in readily available management information, the analysis focuses on the data and information necessary to assess lodge property performance and return on investment as well as providing an initial framework to evaluate operating cash flow.

The analysis focuses on capital allocations (current and future) assessing the extent to which complete data was not easily available and the extent to which this type of information is not routinely synthesized and evaluated by Parks. Further, the analysis focuses on operating cash flow; differentiating between total operating cash flow and Parks' portion of operating cash flow. Though the Division routinely evaluates the portion of operating cash flow received from each property there is no systemic framework for an ongoing evaluation of total operating cash flow; an assessment which is integral to an overall performance management approach for these properties.

The criteria this analysis uses to evaluate individual lodge performance references a suite of tools commonly employed by institutional hotel owners and investors. This framework involved constructing a complete picture of lodge-related cash flows from the perspective of Parks as an owner. As noted, determination of a complete picture of lodge property cash flows was hindered by limitations in data and management practices. Further, analysis of cash flows from the Division's perspective (i.e., as an owner rather than an operator) required adjustments to profit and loss (P&L) because, though this information is available to the Division, it is reported from the perspective of the operator.

The data and information necessary to complete the cash flow analysis of each lodge property was obtained from various sources. Though multiple years of data were available in all cases, this analysis focuses directly on CY 2013 as the most recent, complete year of lodge operations. Parks provided individual lodge P&L statements that were originally prepared and furnished by the respective concessionaires. Parks was also able to provide lodge-specific operating data such as occupancy, average daily rate, and revenue per available room. Other relevant data was obtained from ODNR's internal payroll and accounting systems. In appropriate sections of the analysis, financial statements were adjusted to exclude non-cash expenses (e.g., depreciation) and non-property-specific costs (e.g., allocated overhead) and to include other real costs that are not captured in the P&L statements (e.g., Parks-staffed golf-course labor).

Analysis

The financial position of each lodge property is a function of two cash flows; one internal (i.e., Parks) and one external. Parks provides its own capital investment to build and periodically refresh lodge properties. External cash flow is generated through a combination of normal lodge business (i.e., gross revenues) and concessionaire up-front capital investments. Having access to the aggregated cash flow streams of capital expenditures and operating cash flow allows for a straightforward calculation of rates of return that can be benchmarked against any relevant asset class in the capital market.

Parks does not devote resources toward measuring and calculating the economic returns of the lodge properties; even in the high-level manner described above. As a result, certain components needed to complete this type of analysis on an ongoing basis are not readily available to Parks. Some of these components, such as capital expenditures by lodge and project, are simply not tracked systematically by ODNR. Other components, such as operating cash flow, are able to be derived from datasets that are accessible to Parks, but are not readily available for the Division to analyze without additional, time-consuming manipulation and calculation. This report addresses the components of capital expenditures and operating cash flow separately below.

Capital Expenditures

Like most types of commercial real estate, lodge properties require varying levels of ongoing capital investment in order to maintain economic viability in a competitive market. In order to easily and accurately assess required and/or desired future capital investment needs, accurate current and historical information on these needs and the extent to which they have been addressed or deferred is necessary. However, Parks does not have ready access to this type of capital asset management and planning information (see **Capital Planning and Budgeting** section). Though the Division has begun to refocus on capital asset management, the extent to which this focus has extended to reconciliation of historical records and data sources is less than fully mature. As such, the Division cannot easily access fundamental information, such as the specific capital investment that has occurred at a particular lodge property over time.[49]

Another complicating factor for determining historical capital expenditures allocated directly to lodge properties is that Ohio's capital budget funds major capital needs across the Parks system which, by definition, would include lodges. For a location-based capital allocation the only way to identify a lodge property improvement versus a non-lodge improvement may be to access original project documents at a highly detailed level. Furthermore, over the last decade the capital budget has been an inconsistent funding source for these types of improvements. For example, in some years the capital budget available to Parks was limited or nonexistent. As such, the Division has occasionally diverted money from its operating budget into lodge expenditures that otherwise could have been funded as capital projects. A historical accounting for these operating funds directed into capital projects in the lodges is a difficult reconstruction after the fact, as there is no easily accessible link between the operating budget and completed projects.

[49] It should be noted that this report does not conclude that these records do not exist. It is likely that a forensic exercise of tracing paper records, purchase-orders, and change-orders would likely yield these records. However, this type of approach was beyond the scope of this performance audit.

Lacking easily accessible records, an alternate approach to determining the capital burden posed by the lodge properties is to estimate, based on individual property condition and characteristics, any future capital project needs as well as overdue maintenance needs that have been accumulated, but left unaddressed (i.e., deferred maintenance). However, this type of intensive assessment of the current state coupled with a forward-looking estimation of capital needs has not been a systematic process completed by Parks, or ODNR in general. In many cases, Parks and concessionaire management are able to speak to specific identified needs at lodge properties, but this knowledge has not been aggregated into an asset-management framework that assesses, estimates, and prioritizes forward-looking costs.

During the course of this performance audit, ODNR, Parks in particular, was allocated a historically significant capital allocation within the capital budget encompassing FY 2014-15 and FY 2015-16.[50] In order to make up for the deficiencies in the overall capital planning and budgeting process as well as to make the best use of these resources, the Division has been forced to redirect attention and resources toward identifying, formalizing, and prioritizing needs. As a part of this initiative, Parks retained an external consultant to help inform the assessment of high-priority capital needs at the lodge properties.[51] To date, the consultant has quantified cost estimates for only a subset of repairs needed, and these estimates totaled $10.25 million. Because the quantified costs only represent a portion of the needs identified, $10.25 million should be interpreted as a lower bound on the amount of deferred capital needs to be addressed. Further, $10.25 million represents only a snapshot of the capital maintenance projects that have accumulated and been deferred over time. Additional study is necessary to understand what the true, ongoing capital expenditure needs of the lodge properties will be once the full extent of the deferred maintenance needs are addressed (see **Capital Planning and Budgeting** section).

Operating Cash Flow

Lodge properties generate cash flow which can be categorized and evaluated within two streams:

- **Operating Cash Flow –** This is a measure of income generated by the lodge properties as "stand-alone" assets.
- **Parks Portion of Operating Cash Flow –** This is the net amount paid back to Parks by the concessionaire after accounting for all property-related revenues and expenses (including MR&R Fund inflows).

Operating cash flow is an apples-to-apples value that can be used to compare financial performance across lodge properties. At the next level of detail, operating cash flow is then divided according to the terms of the concession agreement in place for each lodge property. For example, while each agreement includes concessionaire revenue and expenses, MR&R Fund inflows, and Parks portion of operating cash flow, the exact value of each varies by lodge property agreement. However, knowing the total operating cash flow allows the Division to understand the amount of potential revenue it is giving up in exchange for entering into terms with concessionaires and management companies.

[50] The capital budget encompassing FY 2014-15 and FY 2015-16 allocates $42.0 million for "State Parks, Lodges Campgrounds Cabins."
[51] TYL Facility Solutions LLC.

Parks' portion of operating cash flow (i.e., commission fees) represents the actual amount of cash flowing in to the Division as a result of lodge operations. Because concessionaires have the contractual claim to the lodges' net income, most of the Division's portion of the operating cash flow comes from commission fees paid by concessionaires. It is the number that is used in conjunction with capital expenditure for any return on investment (ROI) calculations.

Lodge Property Financial Performance

As noted, neither capital expenditures nor operating cash flows are directly tracked by Parks in a standard reporting format. Further, the Division is unable to easily derive and analyze either figure without significant, labor-intensive analysis of data.

Each operating agreement contract requires the operator to furnish detailed P&L statements to Parks management. Though the P&L statements list property-specific revenues and expenses at a detailed level, simply reading the bottom line, "Total Net Profit", is of limited usefulness to the Division. The total net profit reported on this P&L statement is from the perspective of the operator, and, in addition to representing the property operating fundamentals, it is also an output of operator-specific characteristics and decisions such as overhead allocations and tax structure. Additionally, the bottom-line total net profit reflects non-cash accounting entries such as depreciation and amortization, and ignores Parks-contributed resources (e.g., golf course labor allocation). As such, Division management, focusing solely on the P&L statements, is unable to accurately assess comparable financial performance across lodge properties.

However, the P&L statements do provide a starting point for such an evaluation if analyzed and modified in a consistent manner. Specifically, adding back the following categories and adjusting total cash flows does allow for an internally comparable assessment of lodge operations:

- **Operator Allocations –** This includes the allocation of overheads and income taxes that are driven by the management companies' corporate structure and allocation choices.
- **Management Fees –** This includes the fee that is paid to U.S. Hotel for operating Burr Oak, the only property not managed as a concession.
- **Interest Expense –** This includes expense that is reflective of each operator's financing choices.
- **MR&R Fund –** This includes MR&R Fund inflows which are negotiated within each operating agreement.
- **Non-Cash Entries –** This includes accounting entries such as depreciation and amortization.
- **Commission Fees –** This includes the fees paid to Parks which are negotiated within each operating agreement.
- **Income Taxes –** This includes income taxes paid by the operator based on income derived from each lodge property.
- **Parks Expenses –** This includes direct and indirect Division expenses which do not appear on the P&L statement and, at this time, are not systematically tracked. The most prominent example is golf course operating expense. In accordance with site-specific concession agreements, a portion of the golf course revenue is often included as a source of revenue to the P&L statement, but the labor expense is often incurred by Parks outside

of the P&L statement.[52] This analysis focuses on golf course direct labor expense as this is readily tracked through Department payroll records. However, there are other sources of expense that are known to Parks management, but are not captured on the P&L statement or in a manner that allows for ready allocation in a manner similar to golf course labor. For example, Parks incurs costs to manage the concessionaire selection process and to supervise and account for lodge-adjacent or related operations.

Table 4-4 shows the CY 2013 statewide totals for operating cash flow after making the necessary cash flow adjustments. This analysis provides both an ordinal ranking and relative order of magnitude of the economic performance of the lodge properties.

Table 4-4: Calculated Operating Cash Flow CY 2013

Total Cash Flow Adjustments Calculation								
Property	**Operator Allocation**	**Mgmt. Fees**	**Interest Expenses**	**MR&R Fund**	**Non-Cash Entries**	**Commission Fees**	**Income Taxes**	**Parks Expenses**
Burr Oak	N/A	$71,366	N/A	N/A	$10,000	N/A	$225	N/A
Deer Creek	$335,874	N/A	N/A	$601,334	$48,728	$21,367	$22,615	($95,461)
Hueston Woods	$153,231	N/A	$62,504	$421,642	$172,121	$55,154	$7,771	N/A
Maumee Bay	$625,647	N/A	N/A	$1,139,342	$132,533	$571,839	$18,109	N/A
Mohican	$270,880	N/A	N/A	$452,878	$39,223	$6,866	$16,918	N/A
Punderson	$220,648	N/A	N/A	$334,477	$102,655	$138,188	$17,042	($133,363)
Salt Fork	$540,491	N/A	N/A	$881,039	$54,123	$423,210	$159,213	N/A
Shawnee	$99,276	N/A	N/A	$248,188	$68,439	$284,020	$5,139	($60,479)

Operating Cash Flow Calculation			
Property	**Original P&L Net Profit**	**Total Cash Flow Adjustments**	**Calculated Operating Cash Flow**
Burr Oak	($363,087)	$81,591	**($281,496)**
Deer Creek	($37,580)	$934,456	**$896,876**
Hueston Woods	($37,197)	$872,423	**$835,226**
Maumee Bay	($30,242)	$2,487,469	**$2,457,227**
Mohican	($28,069)	$786,765	**$758,696**
Punderson	($28,323)	$679,648	**$651,325**
Salt Fork	$263,106	$2,058,076	**$2,321,182**
Shawnee	($183,786)	$644,583	**$460,797**
Total Lodges	**($445,178)**	**$8,545,010**	**$8,099,832**

Source: Concessionaires, Parks, and ODNR

As shown in **Table 4-4**, making the necessary cash flow adjustments to calculate operating cash flow provides Parks management with information that is useful in several ways. First, operating cash flow provides a clean level of comparability among lodges by controlling for the differences in contractual arrangements and concessionaire business practices. For example, Maumee Bay

[52] Calculated for Deer Creek, Punderson, and Shawnee where the concessionaires are entitled to 95 percent, 70 percent, and 48 percent of the greens fees, respectively, while Parks is still responsible for golf course operating costs. The concessionaire at Maumee Bay receives 20 percent of cart revenue, but no greens fee revenue. As such, no golf-related costs at Maumee Bay have been subtracted for this analysis. Where taken into account, golf course expense includes payroll data for Golf Course Manager, Superintendent, Worker 1, and Worker 2 with 32.5 percent benefits.

and Punderson show a similar level of net profit as reported on the concessionaire's P&L statements; ($30,242) and ($28,323) respectively. However, by controlling for comparability it is possible to see that Maumee Bay is generating almost 4 times the cash flow as Punderson. Parks should take the cash flow profile of each lodge into account when making capital budgeting decisions as well as when engaging in the bidding and negotiating process for new agreements.

As previously noted, operating cash flow is used for three purposes:

- Reinvestment into the lodge itself via the MR&R Fund;
- Cash flow to the concessionaire; and
- Cash flow to Parks.

Table 4-5 shows the allocation of cash flow by lodge property for CY 2013. This analysis is instructive not only to the relative cash flow allocation within each property, but also how each property contributes to the total financial profile.

Table 4-5: Distribution of Operating Cash Flow CY 2013

Property	MR&R Fund	Concessionaire Cash Flow	Parks Cash Flow[1]	Total Operating Cash Flow
Burr Oak	N/A	$71,366	($352,862)	**($281,496)**
Deer Creek	$601,334	$369,636	($74,094)	**$896,876**
Hueston Woods	$421,642	$358,430	$55,154	**$835,226**
Maumee Bay	$1,139,342	$746,047	$571,839	**$2,457,227**
Mohican	$452,878	$298,952	$6,866	**$758,696**
Punderson	$334,477	$312,023	$4,826	**$651,325**
Salt Fork	$881,039	$1,016,933	$423,210	**$2,321,182**
Shawnee	$248,188	($10,932)	$223,541	**$460,797**
Total Lodges	**$4,078,898**	**$3,162,456**	**$858,479**	**$8,099,832**

Source: Concessionaires, Parks, and ODNR

[1] Parks cash flow includes commission fees paid to Parks less golf course expenses and Burr Oak operating loss.

As shown in **Table 4-5**, Maumee Bay, Salt Fork, and Shawnee were collectively responsible for $1,218,590 in Parks cash flow. Hueston Woods, Mohican, and Punderson were all positive in cash flow to Parks, but only totaled $66,846. Finally, Burr Oak, and Deer Creek were collectively responsible for losses of ($426,956).[53]

[53] Preliminary data on CY 2014 performance at Burr Oak shows improvement over CY 2013. This improvement is likely attributable as a benefit of the renovations that occurred in CY 2013. Comparing the months of July, August, and September of CY 2014 to the same months during the prior year, which represent the first full months where Burr Oak was operated at the reduced room-count, occupancy increased by an average of 22.0 percent and room revenue increased by an average of 64.7 percent.

Table 4-6 shows the combined allocation, and percent distribution, of cash flow to MR&R Fund and Parks (i.e., Parks and Lodge Cash Flow) or to the concessionaire at each property. Combining MR&R Fund and Parks Cash Flow into one stream allows for the examination of relative cash flow accrued to Parks benefit versus that of the concessionaire.

Table 4-6: Operating Cash Flow to Parks and Lodge Properties CY 2013

Property	Total Operating Cash Flow	Parks & Lodge Cash Flow	% of Operating Cash Flow	Concessionaire Cash Flow	% of Operating Cash Flow
Burr Oak [1]	($281,496)	($352,862)	N/A	$71,366	N/A
Deer Creek	$896,876	$527,240	58.8%	$369,636	41.2%
Hueston Woods	$835,226	$476,796	57.1%	$358,430	42.9%
Maumee Bay	$2,457,227	$1,711,181	69.6%	$746,047	30.4%
Mohican	$758,696	$459,744	60.6%	$298,952	39.4%
Punderson	$651,325	$339,303	52.1%	$312,023	47.9%
Salt Fork	$2,321,182	$1,304,249	56.2%	$1,016,933	43.8%
Shawnee [2]	$460,797	$471,729	102.4%	($10,932)	(2.4%)
Total Lodges	**$8,099,832**	**$4,937,377**	**61.0%**	**$3,162,456**	**39.0%**

Source: Concessionaires, Parks, and ODNR

[1] Burr Oak is operated under a management agreement rather than a concession agreement. As such, Parks incurred 100 percent of the net operating loss at Burr Oak for CY 2013.

[2] At Shawnee, the Parks percentage of operating cash flow in excess of 100.0% reflects the fact that Parks avoided a real operating loss that was borne by the concessionaire.

As shown in **Table 4-6**, Parks is realizing the best deal, as a percentage of operating cash flow returning to Parks, at Shawnee. However, as the concessionaire actually incurred a cash flow loss in CY 2013, this may not be a stable, sustainable operating environment. Leaving aside Shawnee, the highest performing property for cash flow, Maumee Bay, is also the best deal for Parks. Similar to each property's total cash flow performance, Parks should take the distribution of cash flow into account when making capital budgeting decisions as well as when engaging in the bidding and negotiating process for new agreements.

A Performance Management Framework for State and Local Government: From Measurement and Reporting to Management and Improving (National Performance Management Advisory Commission, 2010) notes that "Performance management, while continuing to assure appropriate controls through effective processes, has expanded the meaning of accountability and protecting the public interest to encompass achieving results that benefit the public.[54] While bureaucratic processes focus on preventing bad things from happening, performance management adds a focus on assuring that government actually produces positive results. Performance management is becoming the new standard for public-sector management. Underlying this transition is the recognition that:

- Rationality is the underlying force of performance management. Public managers at all levels are able to make better decisions when the process is informed by relevant data.

[54] The National Performance Management Advisory Commission (NPMAC) includes, but is not limited to, organizations such as the National Association of State Budget Officers, Government Finance Officers Association, National Association of State Auditors, Comptrollers, and Treasurers, and National Conference of State Legislatures. NPMAC has "developed a conceptual performance management framework to help governments move beyond measuring and reporting those measures to managing performance toward improved results."

- A process approach to accountability is not sufficient. Officials, managers, and employees at all levels must be accountable not just for following processes but for producing results the public needs.
- Performance management is not only a professional expectation for public officials and employees but also an ethical expectation.
- While politics will always be an important force in the governmental environment, there must also be a place for accurate, timely, and unbiased information for high-level decision making as well as for day-to-day management."

In keeping with NPMAC's directives, Parks should develop a performance management framework for continual assessment and measurement of lodge property performance. In doing so the Division should strategically assess key points raised by this type of analysis, including:

- Is Parks portion of operating cash flow sufficient to cover the cost of Division commitments to the lodge properties (e.g., capital and operating support)?
    - If so, does the remainder of the cash flow to Parks represent an acceptable risk-adjusted ROI for owning the lodge properties?
- Are the MR&R Fund inflows adequate to cover the actual needs of each property?
- Is Parks receiving adequate value for the cash flow going directly to operators?
    - If not, are there any modifications or alternatives to the current management structure that could return adequate value (e.g., contracting with a fee-based property operator or self-management of lodges)?

Conclusion

Parks should begin to routinely record data and information necessary to know the full cost of owning the portfolio of lodge properties. This will enable the Division to easily monitor, measure, and evaluate the financial performance of each lodge property or the collective financial performance of the lodge properties. Key features of this type of analysis include current and future and capital needs and the extent to which they have been deferred over time (see **Capital Planning and Budgeting**) and operational needs and the extent to which the Division provides direct and indirect support to the lodge properties. Finally, the Division should routinely evaluate the true cash flow potential of each lodge property in a way that truly informs long-term capital and operational planning as well as the negotiation process through which the lodge operating agreements are developed.

Recommendation 4.1: ODNR should develop a process to identify management information that is critical to successful and sustainable operation of lodge properties. At minimum, this should include all current and future capital and operating resource needs for each lodge property. Further, the Department should develop a framework that allows for ongoing (at least annually) evaluation of the true cash flow potential of each lodge property. Finally, Parks management should work with ODNR management to develop a performance management framework to monitor, measure, and evaluate the relative performance of each lodge property on an ongoing basis. At minimum, this should include performance measures associated with the total cost of ownership, operating cash flow, and return on investment associated with each property.

Financial Implication 4.1: N/A

R4.2 Lodge Property Investment Performance

Background

The State of Ohio's capital budget for the biennium encompassing FY 2014-15 and FY 2015-16 includes appropriations of $42.0 million for "state park campgrounds, lodges, and cabins".[55] Parks has discretion over how much of the appropriation it spends among these three categories of assets, but initial estimates suggest that the Division will allocate $10 to $15 million to lodges. Within the private sector lodging industry this type of investment would have been preceded by detailed economic analysis, specifically quantifying the expected return on investment (ROI), prior to committing to the investment. Though the capital budgeting process is designed to identify and fund priority projects across the State, there is no specific requirement to quantify return on investment associated with each funded project.

In order to measure ROI, the lodging industry utilizes two complimentary methods of quantification; internal rate of return (IRR) and net present value (NPV).

- **IRR** is expressed as a percentage, and represents an annualized compound rate of return produced by a stream of cash flows. It is often used interchangeably with the terms "rate of return" and ROI, but IRR has a more precise mathematical definition.[56]

- **NPV** is expressed as a dollar value, and represents the value of all future cash flows discounted back to the present time using a rate that reflects the risk of the asset class being measured. The Capital Asset Pricing Model (CAP-M) is used to determine an appropriate discount rate, called the cost of capital, for lodge investments.

It should be noted that Parks, ODNR, and the State of Ohio may have ownership motivation outside of financial ROI concerns. Two such goals often cited are the lodges' existence as a draw to state parks and as a driver of regional economic development. Even so, there is value in understanding property performance from a purely investment-oriented perspective. After financial returns are calculated, stakeholders can then weigh the costs at which these non-monetary goals are being achieved.[57]

[55] House Bill 497 of the 130th General Assembly

[56] Mathematically IRR is calculated by solving for r when $0 = \sum_{n=0}^{N} \frac{C_n}{(1+r)^n}$ where *C* is the cash flow at period *n*, and *N* is the total number of periods.

[57] This report focuses on financial returns and does not comment on the policy goals associated with lodge property ownership.

Methodology

This sub-section, **Lodge Property Investment Performance**, seeks to develop a framework for evaluating the profitability and competitiveness of lodge property reinvestments in order to assess whether or not they provide sufficient financial return on investment (ROI).

This analysis first utilizes two complementary methods to quantify the investment returns of lodge properties, IRR and NPV. Data for IRR and NPV models and calculations was obtained from Parks, external consultant, or industry benchmarks. In addition, measures of operating cash flow were carried forward from preceding analysis (see **Lodge Property Operating Performance** sub-section). After calculating baseline IRR and NPV on the identified minimum capital reinvestment, the analysis presents two sensitivity models that help to inform the extent to which either ongoing capital expenditures would need to be minimized or operating cash flow growth rates would need to be maximized in order to result in a positive IRR and NPV.

The final portion of the analysis focuses on three identified options which would allow Parks to improve lodge property financial performance as well as IRR and NPV associated with capital reinvestments, including:

- Soliciting matching funds from concessionaires;
- Extending agreement term lengths; and
- Implementing alternative agreement structures.

During the course of this performance audit the views of key stakeholders were obtained to supplement the data analysis with perspectives on short and long-term operational strategies and the nuances of day-to-day lodge operations. Stakeholders include ODNR leadership, Parks leadership and staff, concessionaire executives, and lodge general managers. These inputs were used to develop an understanding of goals and incentives and alignment thereof. Information was also gathered from similar lodge operations in other states and private-sector hospitality professionals to further inform the industry backdrop and range of actionable, available options that exist to own and operate similar properties in a more financially lucrative manner.

Analysis

Table 4-5 (see **Lodge Property Operating Performance** sub-section) shows that Parks' portion of lodge property operating cash flow was $858,479 for CY 2013. As previously noted, this cash flow is the sum of fees paid by the concessionaires, the operating loss sustained at Burr Oak, and direct expenses incurred by providing labor at select golf courses.

Lodge Property Returns

When analyzing lodge property returns from the Division's perspective, Parks' portion of lodge operating cash flow is the relevant operating cash flow to use in NPV and IRR calculations. $858,479 projected forward to the first year of the analysis period represents $910,760, using the analysis' assumed growth rate. In addition to operating cash flow, key inputs include capital (i.e., initial investment and ongoing), growth rate, and the cost of capital.

- **Initial Capital Investment –** During the biennium encompassing FY 2014-15 and FY 2015-16 Parks is expected to allocate $10 to $15 million to address deferred capital needs in lodges. An external consultant retained by the Division has quantified cost estimates for a subset of repairs needed, and these estimates totaled a minimum of $10.25 million. As such, $10.25 million, modeled as $5,125,000 in each of the first two fiscal years, represents the minimum initial capital investment.[58]

- **Ongoing Capital Expenditure (Capex) –** As previously noted, no reliable estimate of historical or projected capex is maintained by the Division (see **Capital Planning and Budgeting** section). However, when left unaddressed such needs result in costly accumulation. For example, the minimum $10.25 million identified by the external consultant is the result of deferred maintenance which Parks estimates as having accumulated over the last 20 years. Furthermore, Burr Oak required a one-time allotment of more than $2.0 million after years of deferred maintenance finally forced its temporary closure. As such, a baseline of $500,000 per fiscal year represents the minimum capex.[59]

- **Growth Rate** – This input represents the expected rate of growth which should be applied to future operating cash flows. Parks cash flow totaled $858,479 in CY 2013 and from CY 2010 to CY 2013 grew by an average of 0.9 percent annually.[60] However, aside from Burr Oak, recent trends in cash flow are reflective of lodge properties with substantial deferred maintenance and capital needs. Significant re-investment over the biennium encompassing FY 2014-15 and FY 2015-16 should drive the annual growth

[58] The lack of operating cash flow and capex alongside the $5,125,000 in the first year of the analysis period is a modelling choice to reflect the fact that the first portion of the initial investment will be disbursed over a very short window of time during FY 2014-15. Operating cash flow and capex over that same time period in FY 2014-15 are assumed to be minimal compared to the full years of cash flows modeled in subsequent columns of the analysis.

[59] Annual capex is estimated by dividing the identified $10.25 million in backlogged capital by the 20 years over which Parks estimates it was incurred. The resulting $512,500 per year has been rounded to $500,000 for use in initial calculations.

[60] Total future cash flows are mainly a function of lodge revenue, but are also subject to Burr Oak's operating income or loss, which flows directly to or from Parks since it is the one lodge currently under a fee-based management contract.

rate of cash flow upward. As such, a baseline of 3.0 percent represents the annual growth rate.

- **Cost of Capital –** This input represents the rate of return that the competitive market requires in return for investing in a particular asset class.[61] A 7.73 percent cost of capital, commensurate with the hotel industry average for a debt-free firm, is used to calculate the NPV of the total cash flow stream as well as to calculate continuing value of cash flow.

Table 4-7 shows a calculation of lodge property returns for the time-period FY 2014-15 to FY 2019-20. This analysis quantifies the returns produced by lodge operating cash flow in relation to Parks' capital investment (through both annual capex and the initial investment to address deferred maintenance.)

Table 4-7: Lodge Property Returns FY 2014-15 to FY 2019-20

Cash Flows	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Operating Cash Flow	N/A	$910,760	$938,083	$966,225	$995,212	$1,025,068
Capex	N/A	($500,000)	($515,000)	($530,450)	($546,364)	($562,754)
Continuing Value	N/A	N/A	N/A	N/A	N/A	$10,067,304
Initial Investment	($5,125,000)	($5,125,000)	N/A	N/A	N/A	N/A
Total Cash Flow	**($5,125,000)**	**($4,714,240)**	**$423,083**	**$435,775**	**$448,849**	**$10,529,618**

Calculated Returns	
IRR	**4.4%**
NPV	**($1,198,118)**
Sum of Cash Flows	**$1,998,085**

Source: Parks, TYL Facility Solutions LLC., and Damodaran
Note: Continuing value represents the cash flow value of the lodge properties as an asset group assumed to remain growing at 3 percent per year in perpetuity.[62]

As shown in **Table 4-7**, capital investment into the lodge properties is projected to yield a 4.4 percent IRR. Therefore lodge properties do represent a positive ROI in terms of nominal cash flows, but only over an extended timeline.[63]

From a purely financial perspective, assessing the appropriateness of the identified IRR requires a comparison to the competitive market cost of capital. As noted, cost of capital is a financial concept used to represent the rate of return investors require to compensate for the risk of an asset. Different types of investments have different associated costs of capital, also called required rates of return. For example, public utilities have a lower cost of capital than debt-financed homebuilders. The riskier the investment, the higher the rate of return investors will

[61] Cost of Capital = Risk Free Rate + β X (Market Risk Premium) where β is a measure of the volatility of an asset's return in relation to the overall market return.
[62] Continuing value (CV) is valued as a growing perpetuity. CV = [(FY 2019-20 Cash Flow) X (1 + Growth Rate)] / [(Cost of Capital) - (Growth Rate)]
[63] Extrapolating this model out beyond the analysis period in **Table 4-7** shows that the initial investment will finally be recouped (in nominal terms) in FY 2033-34; representing a 19-year payback period.

require. Within the hotel industry the cost of capital is 7.73 percent.[64] As such, even though lodge properties are a positive investment, the investment return at 4.4 percent does not achieve the 7.73 percent that the competitive market would require.

The 7.73 percent cost of capital is also the appropriate discount rate to use on the lodge property cash flow stream in determining NPV. As shown in **Table 4-7**, lodge property investment is calculated to achieve an NPV of ($1,198,118). When an investment results in a negative NPV this means that its returns do not exceed the cost after accounting for the risks involved, and the investment is not worth undertaking on its financial merits alone.[65]

As shown, calculated measures of returns are sensitive to capex and cash flow growth rate. Though baseline assumptions are explained and presented in **Table 4-7**, there are additional scenarios (i.e., sensitivity analysis) that help to further inform prospective financial performance of an investment in lodge properties.

Table 4-8 shows the sensitivity of IRR to several capex and cash flow growth rate combinations while **Table 4-9** shows the sensitivity of NPV to these same combinations. To navigate these tables, first identify the appropriate capex on the left and then select the appropriate cash flow growth rate from the top; the calculated IRR or NPV is represented by the intersection of the two selected variables.

Table 4-8: IRR Sensitivity to Capex and Cash Flow Growth Rate

		Cash Flow Growth Rate				
		0.0%	**1.5%**	**3.0%**	**4.5%**	**6.0%**
Capex	**$0**	11.1%	18.2%	27.2%	39.9%	61.6%
	$250,000	1.6%	8.5%	17.3%	29.5%	50.3%
	$500,000	(11.0%)	(4.1%)	**4.4%**	16.1%	35.8%
	$750,000	(33.3%)	(25.6%)	(16.5%)	(4.9%)	13.5%
	$1,000,000	N/A	N/A	N/A	N/A	N/A

Source: Parks, TYL Facility Solutions LLC., and Damodaran
Note 1: The shaded, bolded cell, 4.4 percent, represent the baseline scenario shown in **Table 4-7**.
Note 2: The N/A values associated with $1,000,000 in capex reflect the fact that the cash flow stream under this scenario will never produce a positive IRR.

[64] *US Cost of Capital by Sector* (Damodaran, 2014) calculated a weighted average cost of capital in the hotel sector of 8.38 percent with a sector debt-to-value ratio of 34.35 percent using the following inputs: risk-free rate = 3.40 percent; market risk premium = 5.00 percent; sector effective tax rate =10.48 percent; and sector β = 1.27. However, Parks does not issue debt nor finance capital improvements. Removing the effects of debt financing produces a β of 0.87 through the calculation of 1.27 / [1 + (1 + 10.48%) X (34.35% / (1 - 34.35%)]. Applying the new unlevered β the same assumptions about risk-free rate and market risk premium produces a cost of capital of 7.73 percent through the calculation of 3.4% + (0.87)*(5.0%).

[65] A $0 NPV represents the point where an investment breaks even, and any positive NPV represents an investment that is economically profitable.

Table 4-9: NPV Sensitivity to Capex and Cash Flow Growth Rate

		Cash Flow Growth Rate				
		0.0%	**1.5%**	**3.0%**	**4.5%**	**6.0%**
Capex	**$0**	$1,223,541	$4,313,984	$9,372,706	$19,141,892	$45,874,192
	$250,000	($2,010,611)	$301,143	$4,087,294	$11,401,954	$31,423,325
	$500,000	($5,244,764)	($3,711,698)	**($1,198,118)**	$3,662,016	$16,972,458
	$750,000	($8,478,917)	($7,724,539)	($6,483,531)	($4,077,922)	$2,521,591
	$1,000,000	($11,713,069)	($11,737,380)	($11,768,943)	($11,817,861)	($11,929,276)

Source: Parks, TYL Facility Solutions LLC., and Damodaran
Note: The shaded, bolded cell, ($1,198,118), represent the baseline scenario shown in **Table 4-7**.

As shown in **Table 4-8** and **Table 4-9**, using either measure of return, once lodge property capex needs start exceeding $500,000 per year, it becomes increasingly difficult to achieve a positive return even under the most aggressive cash flow growth rate assumptions. As previously noted, lodge property investments under the baseline scenario offer uncompetitive financial returns. However, if Parks were able to reduce capex or improve cash flow growth rates there are positive, competitive returns which could be realized. Further, there are multiple options which the Division could employ to help achieve a positive return. The most prominent options at hand are soliciting matching funds from concessionaires, extending agreement term lengths, and/or implementing alternative agreement structures. Each option carries its own cost / benefit and risk profile that should be taken into account when assessing the practicality of implementing one or a combination of these options.

Solicit Matching Funds from Concessionaires

As previously noted, Parks plans to allocate $10 to $15 million in capital allocation to lodge properties over the biennium encompassing FY 2014-15 and FY 2015-16. This capital reinvestment should improve cash flow by increasing the attractiveness of the properties as well as improve operating cost efficiency through replacement of outdated systems.

The net effect is to improve lodge profitability at the margin, and the gains from the increased profitability will accrue to both the Division as well as to the concessionaires. However, the concessionaires, per the terms of the existing agreements, are due to receive a disproportionate benefit from this capital investment. For example, the framework for allocating any additional revenue has been previously determined in each property's operating agreement. At the time that these agreements were reached, the current capital allocation could not have been known, nor would it have appeared likely based on historical trends. As such, the concessionaires will benefit from more favorable terms negotiated at a time when capital allocation resulting in increased operating cash flow and decreased operating cost was not able to be foreseen.

Any additional income arising from the capital upgrades represents an unexpected windfall to concessionaires currently under contract. With an average of six years remaining across the current group of concession agreements, concessionaires will be benefitting from the capital injection for some time to come. In this situation it makes sense for Parks to leverage its capital investment by negotiating with concessionaires to match funds in some way. For agreements currently in place Parks cannot legally require concessionaires to contribute funds, but the

Division does possess negotiating leverage to solicit a voluntary contribution of funds, and concessionaires may have financial incentives to agree to terms for matching funds.

The capital allocation is not tied to any budgetary language that constrains its use to any particular lodge or sub-group of lodges. This discretion, along with the current operating environment of two concessionaires competing for lodge business, places Parks in a strong negotiating position. As part of the Division's process for allocating capital funding it should consider prioritizing projects where the concessionaire agrees to partner in the capital spending.

Extend Agreement Term Lengths

In the prior sub-section of analysis, **Table 4-5** and **Table 4-6** presented the split of lodge property operating cash flows between three entities: Parks, the MR&R Fund, and the concessionaires. Total cash flow is driven by property operating performance, and holding that variable fixed, the only way for ODNR to realize more cash flow from the lodges is at the expense of the concessionaires' portion.

However, concessionaires may be enticed to offer better terms if some of the risk inherent in the agreements can be mitigated up front. One option for risk mitigation is to extend the duration of the concession contracts. This option was separately identified by Parks leadership and executives from both concessionaires as an attractive possibility.

From a concessionaire's perspective, there are substantial expenses associated with initiating a new management contract. Crafting the RFP response and bid requires preparation by the concessionaire's executive team and staff, and, if it wins the bid, more resources are required to work through the legal and contract drafting phase. Further, the concessionaire incurs start-up and switch-over costs any time it takes over management of a new lodge. These start-up costs include human resources functions such as hiring, the setup of accounting and information technology systems, and maintenance exercises to ascertain the full condition of the property. From Parks and ODNR's perspective, similar costs are incurred every time a lodge property is re-bid and management changes over. Parks personnel devote a significant amount of time to RFP preparation, bid scoring, and change management.

In addition to savings on actual cash costs, concessionaires favor longer duration contracts from a revenue-generation perspective. A cash flow stream that is guaranteed for 15 years is less risky and more valuable than a cash flow stream guaranteed for 10 years, as in the current state.

A final benefit of extending the duration of lodge contracts is that concessionaire-contributed capital investments become more attractive. In the current state, concessionaires have 10 years to earn a return on any investment they make in the lodge properties. During the last round of RFPs concessionaires did agree to certain up-front capital investments in the lodges.[66] However, beyond the up-front infusion, concessionaires have been reluctant to contribute more toward lodge investments in the later years of the contracts because not enough time remains to earn a return on their investment given that they are not guaranteed to win the contracts when it is re-bid. The lack of incentives to invest in the later years of the 10-year contract periods is

[66] These investments were in the form of up-front, pre-payments to the MR&R Funds at Shawnee and Salt Fork.

particularly troublesome given that years 5 through 10 are a crucial period for fixtures, furniture, and equipment (FF&E) updates in the hotel industry.

Table 4-10 shows an example of what one hotel consultant calls an "exemplary" FF&E renewal schedule. Many of the most visible pieces of FF&E such as carpet, curtains, and television sets come due for replacement in 5 to 10 years. Failure to stay current on these items creates a tired appearance that negatively impacts guest experiences and resulting revenues.

Table 4-10: Example FF&E Renewal Schedule

		0-5 Years	5-7 Years	7-10 Years	10-15 Years
Rooms	Wall Coverings	X			
	Carpets		X		
	Curtains		X		
	Mattresses	X			
	Furniture				X
	Lighting				X
	Television Sets			X	
Bathroom	Tiles				
	Lighting				
	Controls				X
	Sanitary Equipment				X
	Shower Partitions			X	
Wellness	Floor / Wall / Ceiling	X			
	Sauna / Steam Bath			X	
	Pool				
	Technical			X	
	Fitness Equipment		X		
Public Space	Wall Coverings	X			
	Carpet		X		
	Moveable Furniture		X		
	Fixtures			X	
	Lighting		X		
Back-of-House Areas	Large Kitchen				
	Floor / Wall				
Technical Installations	Elevator (Interior)				X
Administrative / Other	Phone Equipment				X
	IT		X		

Source: Hotour Hotel Consulting (2007)
Note: Shaded rows did not have an identified FF&E renewal period.

As shown in **Table 4-10**, the majority of the FF&E items most visible to the customer come due within a 10-year period. As such, moving to a contractual arrangement with a duration in the 15 year range would allow the concessionaire an opportunity to reinvest in the property around year 7 and an opportunity to recoup those capital investments across the entire useful life for the remaining duration of the contract.

In summary, reducing the turnover of lodge operators from the current 10-year contract periods to contracts with a longer duration would provide three main benefits to concessionaires. First,

they would avoid certain real costs associated with bidding and starting-up operations. Additionally, concessionaires reduce risk in their revenue stream by locking in longer contracts. Finally, concessionaires would have a new opportunity to recoup capital investments made around year 7 of the contract. For these reasons, a contract term length of approximately 14 years is the private-sector norm for management contracts for similar hotel assets.[67] As concessionaires unlock the opportunities to accrue these gains from longer contracts, they will become better positioned to offer more generous terms to Parks in the initial bids. This arrangement would increase cash flow to the Division as well as alleviate a portion of the administrative burden of the current process.

Implement Alternative Agreement Structures

The benefits of the concessionaire model most frequently cited are the transfer of risk of an operating loss from the owner to the concessionaire, the close alignment of incentives between the owner and concessionaire, and the limited operational demands placed upon the owner in comparison to other contract types. As they relate to the practical relationship between Parks and the concessionaires, some of these claims are truer than others. For example, historically, there are examples of concessionaires having been allowed to walk away from unprofitable contracts, negating the transfer of risk benefit.[68]

An alternative to the concessionaire model is the fee-based management contract. Under this type of contract a property manager is paid a fixed percentage of gross revenues and often an additional percentage of property net income. The property manager performs the same operational functions as a concessionaire; however, with a property manager, Parks would "own" any residual net income after expenses and fees have been paid. An additional benefit of a property management contract is that the pool of property management firms is much larger than the pool of concessionaires; so the RFP process and resulting terms may be more competitive. Parks could accept fee-based proposals alongside concessionaire proposals during the RFP process, and have the option of choosing whatever contract type offers the best terms.

[67] Given for "Upper Midscale" hotels in *Historical Trends in Hotel Management Contracts*. HVS Global Hospitality Services report (January 2013).

[68] Such as was the case when both Delaware North and Aramark, in separate instances, both mutually terminated their management agreements for Deer Creek.

Conclusion

Parks minimum capital reinvestment into lodge properties, under the current concession-based model, is projected to provide positive nominal cash flows over an extended period of time. However, the capital reinvestment, when adjusting for market risk, is not financially competitive. The Division has multiple options which could be implemented to improve returns and financial performance including; soliciting matching funds from concessionaires, extending agreement term lengths, and implementing alternative agreement structure.

Recommendation 4.2: ODNR should seek to improve lodge property returns by soliciting matching funds from concessionaires, extending agreement term lengths, and/or implementing alternative agreement structures. Implementing one or more of these changes would result in improved financial performance for the lodge properties and would help to maximize financial returns on capital reinvestment. Though changes to agreement term length and contract structures are longer-term changes, the Department's short-term focus should be to maximize the leverage of available capital dollars. This can be achieved by targeting and funding optimal capital reinvestment deals across its lodge property portfolio, taking into account concessionaire effort, ability to improve visitor attractiveness, and ability to optimize operational efficiency.

Financial Implication 4.2: N/A

Issue for Further Study

Issues are sometimes identified by AOS that are not related to the objectives of the audit, but could yield economy and efficiency if examined in more detail. During the course of the audit, the Department's organizational and statutory alignment was identified as one such area.

Lodge Property Alternative Operating Models: If Parks is unable to achieve an acceptable level of ROI across the lodge properties, ODNR leadership should further study alternative operating models. In discussions with park leaders in other states, Indiana Department of Natural Resources' (IDNR) quasi-public entity, Indiana State Park Inns (ISPI) was frequently cited as a successful model. Under this model IDNR performs the lodge property management function, but lodge property staff are employed through ISPI. As a quasi-public entity, ISPI is able to avoid job classification and compensation constraints that otherwise would apply to IDNR. In studying the feasibility of a quasi-public model, ODNR should seek out ISPI's start-up and continuing operating costs (e.g., information technology, accounting, and human resources systems). The full operating cost of the model should then be evaluated in the context of concession and fee-based management models to determine which will provide the optimal financial outcome while balancing other ownership value that Ohio's citizens derive from the lodge properties. If alternative operating models are unable to be implemented, or if when implemented they are unable to achieve an acceptable level of ROI the State should further study divestment from lodge property operations.

5. Parks and Recreation Operations – Capital Investment

Section Overview

This section focuses on the Ohio Department of Natural Resources (ODNR or the Department) Division of Parks and Recreation's (Parks or the Division) cabins and campgrounds capital investment opportunities and is presented as two separate analyses:

- **Cabin Investment Assessment:** The first analysis focuses on quantifying the current operating performance of cabins, and uses the results of that analysis to identify cabin renovation investment opportunities with positive return on investment (ROI).
- **Full Hook-Up Investment Assessment:** The second analysis focuses on quantifying the current operating performance of full hook-up campsites, and uses the results of that analysis to identify new construction investment opportunities with positive ROI.

Recommendations Overview

Recommendation 5.1: Parks should develop an ongoing framework for evaluating cabin operating performance as well as for evaluating cabin investment opportunities. Doing so will require the Division to routinely monitor, measure, and evaluate incremental profitability at both the park location and cabin level. Profitability analysis should be used to not only guide day-to-day operating decisions, but should also be used to maximize the returns of investment decisions and the cost avoidance associated with divestment decisions.

Financial Implication 5.1: Targeting investment dollars toward positive net present value (NPV) cabins could result in an immediate value gain of **$41,244,069**, or an internal rate of return (IRR) of 9.2 percent, realized over 45 years, the expected useful life of this type of asset. In simplified terms, the targeted initial investment of $24,966,900 would result in annual operating profits ranging from $1,912,084 to $4,320,603 with an average annual net impact of **$2,403,367**. Further, disposing of the 29 cabins experiencing an operating loss rather than investing in renovations results in a one-time cost avoidance of **$3,830,900** and also avoids operating losses of $2,001,099 over 45 years, or an average annual cost avoidance of **$44,469**.

Recommendation 5.2: Parks should develop an ongoing framework for evaluating campsite operating performance as well as for evaluating campsite investment opportunities. Doing so will require the Division to routinely monitor, measure, and evaluate incremental profitability at both the park location and campsite level. Profitability analysis should be used not only to guide day-to-day operating decisions, but also to maximize the returns of investment decisions pertaining to the addition of new full hook-up campsites.

Financial Implication 5.2: Targeting investment dollars toward positive NPV campsites could result in a value gain of **$16,483,396**, or an IRR of 78.3 percent, realized over 30 years, the expected useful life of this type of asset. In simplified terms, the targeted initial investment of $912,920 would result in annual operating profits ranging from $697,692 to $1,194,006 with an average annual net impact of **$894,065**.

Section Background

Parks has four categories of overnight accommodations: campgrounds, cabins, "getaways", and lodges. Campgrounds provide paved slabs for recreational vehicles (RVs); picnic areas; options for electric, water, and sewer hookups; and a variety of shared site amenities such as restrooms, shower houses, and retail convenience stores.[69] Most cabins are approximately 900 square feet with two bedrooms, a living room, and kitchen area. Cabins are generally heated and air conditioned and are equipped with furniture, linens, and cookware. Getaways encompass a variety of structures from teepees to primitive cabins, and their inventory comprises a small percentage of the overall accommodation inventory at any given park. The analysis within this section of the performance audit focuses on cabins and excludes getaways. Lodges are hotel operations which are managed by third-party operators (see **Parks and Recreation Operations – Lodge Properties** section).[70]

[69] The Recreational Vehicle Industry Association, an industry trade group, defines an RV as "a vehicle designed as temporary living quarters for recreational, camping, travel or season use. RVs may be motorized (motorhomes) or towable (travel trailers, folding camping trailers and truck campers)."

[70] At certain lodge properties a portion of the cabins are also operator-managed; however, this section of the report only focuses on Parks' self-managed cabins and all operator-managed cabins are excluded from the analysis.

Table 5-1 shows the distribution of overnight accommodation types by category as well as the total revenue associated with each type and category for calendar year (CY) 2013, the most recent year for which complete data was available.

Table 5-1: Self-Managed Overnight Accommodations CY 2013

Type	Accommodation	Inventory Count	Total Revenue
Campgrounds	Electric Sites	6,625	$11,096,465
	Full Hook-Up Sites [1]	207	$1,004,045
	Non-Electric Sites	2,281	$1,021,416
	Total Campsites	**9,113**	**$13,121,926**
Cabins	Basic Cabins	43	$224,615
	Preferred Cabins [2]	183	$2,309,139
	Premium Cabins	27	$380,423
	Woodburner Cabins	41	$537,114
	Total Cabins	**294**	**$3,451,291**
Getaways	Cabents	4	$28,857
	Camper Cabins	42	$162,510
	Cedar Cabins	27	$240,902
	Conestoga Cabins	22	$116,034
	RVs	2	$14,250
	Teepees	4	$5,477
	Yurts	14	$81,844
	Total Getaways	**115**	**$649,874**
Totals for Self-Managed Overnight Accommodations		**9,522**	**$17,223,091**

Source: Parks

[1] Subsequent to CY 2013, 15 full hook-up sites were added at Grand Lake St. Marys. This inventory is not reflected in the table totals or elsewhere in this report as the analysis focuses on CY 2013.

[2] There are 24 preferred cabins at Pymatuning for CY 2014. However, this analysis focuses on CY 2013, as it was the last available full year of reservation and revenue data. For CY 2013 Pymatuning had only 22 cabins available.

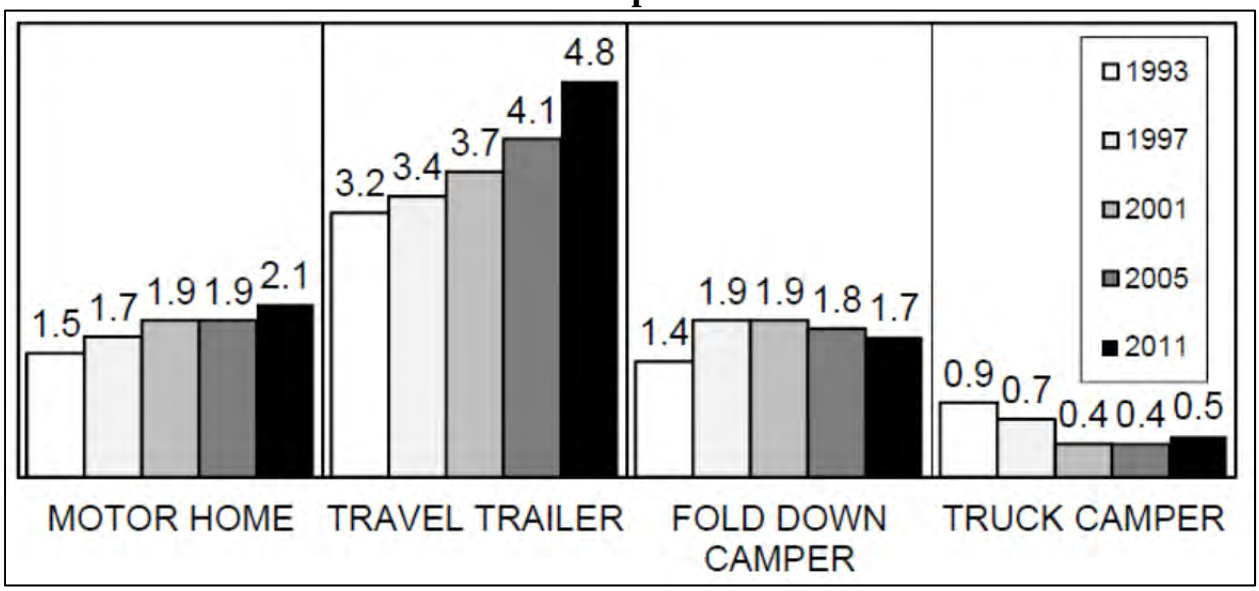
As shown in **Table 5-1**, campgrounds and cabins make up the majority of Parks' self-managed inventory as well as the self-generated revenue; 98.6 percent and 96.2 percent, respectively. However, within these two categories, ODNR and Parks leadership have expressed concerns that current shortcomings are affecting the ability to meet customer needs in a competitive manner. Specific concerns have been raised regarding an insufficient number of full hook-up campsites[71] and an aged cabin inventory that is no longer sufficiently able to attract customers and meet their needs in an efficient and effective manner.

[71] Full hook-up campsites are specifically targeted toward accommodating motor home and travel trailer RVs (though they can accommodate fold down campers and truck campers) and provide a concrete pad, and water, sewer, and electric service connections at each campsite.

Campground Operations

Chart 5-1 shows the national ownership trends in the four main types of RV from CY 1993 to CY 2011. This analysis is informative to the appropriateness of Parks campground accommodation offerings in that as customer trends change the Division must ensure that its offerings cater to these trends.

Chart 5-1: RV Household Ownership Rates Trend CY 1993 to CY 2011



Source: Thomson Reuters/University of Michigan Surveys of Customers
Note: Data points represent ownership as a percent of all United States households.

As shown in **Chart 5-1**, motor homes and travel trailers are the fastest growing segment within RV camping nationally. The high-end vehicles within these RV segments are also Parks' largest users of full hook-up campsites. To put these ownership trends into context for Ohio, the CY 2011 ownership rates for motor homes and travel trailers would equate to 314,344 Ohio households. Parks supplies 207 full hook-up campsites specifically targeted toward high-end RVs in this segment, a relatively small number in comparison to ownership levels.

Table 5-2 shows campground key operating statistics by accommodation type for CY 2013.[72] These key operating statistics are important measures of performance and include:

- **Occupancy –** This is a measure of utilization and is calculated by dividing the number of nights sold by the number of nights available.
- **Average Daily Rate (ADR) –** This is the average price paid by the customer for each campsite.
- **Revenue per Available Room (RevPAR) –** This is a measure that incorporates both utilization and price paid, and is calculated by dividing total revenue by total room nights available. In short, RevPAR measures the amount of revenue generated by a campsite every day it is available for sale.

Table 5-2: Campground Key Operating Statistics CY 2013

Accommodation	Parks Locations	Median Inventory	Median Occupancy	Median ADR	Median RevPAR
Full Hook-Up Sites	12	12	40.3%	$33.30	$14.02
Electric Sites	48	98	17.6%	$24.49	$4.25
Non-Electric Sites	44	26	5.5%	$19.64	$1.03

Source: Parks
Note: Subsequent to CY 2013, Grand Lake St. Marys has added 15 full hook-up campsites bringing the statewide total of campgrounds offering full hook-up options to 13.

As shown in **Table 5-2**, full hook-up sites achieved a higher occupancy, received a higher ADR, and, most critically, achieved a higher RevPAR than other campground accommodations; $9.77 and $12.99 per day more than the median electric and non-electric sites, respectively. Additional analysis on full hook-up site sell-out nights further demonstrated customer demand for these accommodations in excess of what is currently being supplied (see **Parks and Recreation Operations – Overnight Accommodations**). Parks operating data for full hook-up sites corroborates the customer trends reflected in the RV ownership rates shown in **Chart 5-1**.

Despite strong demand and relatively high operating performance, **Table 5-2** also shows that only 12 park locations offered full hook-up sites in CY 2013. Further, the median inventory of full hook-up sites was 12 at those select campgrounds. By comparison electric sites are much more widespread, with 48 park locations offering a median inventory of 98 sites. As such, Parks may have an opportunity to meet customer demand for full hook-up sites by increasing not only the total number of full hook-up sites, but also the park locations offering them.

[72] These operating statistics focus on median values rather than averages due to the wide range of high to low performance experienced in electric and non-electric sites statewide. Conversely, the performance of full hook-up sites is relatively uniform across parks. For example, the statewide average full hook-up occupancy was 39.1 percent, only 1.1 percentage points lower than median occupancy. The close proximity of the average to the median indicates a lack of outliers in full hook-up performance.

Cabin Operations

Table 5-3 shows cabin key operating statistics by accommodation type for CY 2013. Consistent with those presented for campground, these key operating statistics are important measures of performance.

Table 5-3: Cabin Key Operating Statistics CY 2013

Accommodation	Parks Locations	Median Inventory	Median Occupancy	Median ADR	Median RevPAR
Basic Cabins	2	21.5	20.7%	$64.11	$13.34
Preferred Cabins	8	25.0	38.7%	$90.76	$34.73
Premium Cabins	3	8.0	45.7%	$120.65	$55.12
Woodburner Cabins	1	41.0	46.7%	$76.79	$35.89

Source: Parks

As shown in **Table 5-3**, median occupancy rates, even for basic cabins, are generally higher than campsite occupancies (as shown in **Table 5-2**). This is due to the fact that cabins sustain more demand during the colder periods of the year as they are generally heated. Stronger occupancies combined with higher prices (reflected in ADR) result in cabin RevPAR contributions more than double that of full hook-up campsites. On a daily basis, the median preferred cabin, the most common cabin offering, earns over eight times, or $30.48 more revenue per day than the median electric campsite, the most common campsite offering.

Despite strong demand and relatively high operating performance, all cabin types are advanced in age. Cabin age is a factor which could affect their collective ability to attract customers and meet their needs in an efficient and effective manner.

Table 5-4 shows the distribution of cabins by park location as well as the average age and calculated remaining useful life for CY 2014. State of Ohio accounting policies establish useful life estimates for various classifications of assets.[73] These useful life estimates take into account asset type, use, and/or construction (e.g., steel, concrete, masonry, wood, etc.). Cabin useful life estimates of 45 years are based on the structure construction type (e.g., primarily wood).[74]

[73] State accounting policies regarding capital asset useful life estimates are developed and published by the Ohio Department of Administrative Services (DAS) and the Ohio Office of Budget and Management (OBM).

[74] In accordance with *State of Ohio Asset Management Policies and Procedures* (DAS, 2013) and *Financial Reporting and Accounting Policies for Capital Assets* (OBM, 2012), building assets acquired after July 1, 2001 are required to be accounted for using a mix of general construction, other construction, and land improvements (if applicable). General construction estimated useful life for steel, concrete, masonry, wood, and metal are all 45 years while other construction for these same asset types are all 20 years. The result is a building with an estimated useful life of 45 years, but components of the building with an estimated useful life of only 20 years.

Table 5-4: Cabin Age and Useful Life Remaining CY 2014

Park Location	Inventory Count	Average Age	Avg. Remaining Useful Life
Lake Hope State Park	66	64.5	(19.5)
Pike Lake State Park	24	54.8	(9.8)
Pymatuning State Park	56	53.4	(8.4)
Cowan Lake State Park	27	46.0	(1.0)
Dillon State Park	29	46.0	(1.0)
Mohican State Park	25	46.0	(1.0)
Hocking Hills State Park	40	42.0	3.0
Buck Creek State Park	27	32.2	12.8

Source: Parks

As shown in **Table 5-4**, Buck Creek has the newest stock of cabins, built an average 32.2 years ago, while Lake Hope has the oldest stock of cabins, built on average 64.5 years ago.[75] The majority of cabins have already technically exceeded their original useful life estimates and are represented as negative values. Further, a large number of additional cabins at Hocking Hills will cross the end of useful life threshold within the next three years. Though most cabins have exceeded their expected useful life, all are still in service. Over the last 30 to 60 years, Parks has replaced soft goods[76], likely several times, and completed capital renovation activities as needed or when funds were available.[77] However, there have been no statewide efforts to systematically renovate Parks cabin inventory. Cabin age presents several challenges to Parks going forward.

Though cabins have demonstrated a practical ability to outlast the original estimated useful life there are cost and usability tradeoffs that the Division likely has incurred. For example, a building inventory that exceeds its planned useful life is associated with increasing, and sometimes prohibitive, maintenance costs. Parks management identified that age-related cabin maintenance has become an increasing strain on the Division's budget in recent years, resulting in the diversion of operating budget funds to address items that should technically be classified as capital repairs. However, due to limitations in capital asset management systems and performance measurement and management practices, this analysis is unable to verify or quantify the historical level of maintenance costs associated specifically with cabin inventory (see **Capital Planning and Budgeting** section). Commensurately, aging inventory also affects the competitive position of the cabins. As aging inevitably degrades Parks customers' perception of cabin quality relative to private sector offerings, Parks' cabins can expect to experience negative pressure on pricing and occupancies.

[75] For the purposes of this section of the report, parks locations will be referred to by their shorthand names rather than their full, formal names. For example, Buck Creek State Park will be referred to as Buck Creek.
[76] Soft goods refer to items such as linens, window treatments, artwork, light fixtures, and paint.
[77] Targeted capital renovation activities have included upgrading a portion of the existing cabins in accordance with the Americans with Disabilities Act (ADA).

Capital Appropriations

The State of Ohio capital budget for the FY 2014-16 biennium includes appropriations of $42.0 million for Parks lodges, campgrounds, and cabins. During the course of the performance audit the Division began working with architectural and consulting firms to develop a master capital plan with the goal of executing a multi-phase capital program. A portion of the capital allocation will flow to cabin and campground renovations and upgrades. Parks' most recent estimates are that this will involve $15 million for cabins and $10 million for campgrounds. A portion of these funds will be used for the addition of full hook-up sites and the renovation of cabins at several locations.

Evaluating ROI

From a purely financial perspective, evaluating the potential ROI associated with investment in revenue-producing assets involves comparing the up-front capital costs to the ongoing operating returns that will be generated over time. A valid comparison of cash flows arising at different points in time requires accounting for the time value of money. The concepts of present value and net present value are used to incorporate time value of money into financial analyses. In the context of investments in Parks cabins and campsites, the two terms are defined as:

- **Present Value (PV) –** This is the current value of all future operating profits (revenues minus expenses) after accounting for the time value of money. PV is presented as a lump-sum in today's dollars, and calculated by discounting the stream of future operating profits by an appropriate discount rate.
- **Net Present Value (NPV) –** This is the PV of future operating profits minus the initial cost of investment. NPV specifically calculates the total value of an investment project, represented in today's dollars.

Positive NPV investments represent positive financial ROI over time while negative NPV investments represent negative financial ROI over time. In the case of a project calculated as having a negative NPV, Parks would be financially better off not making an investment because operating profits over time will not be sufficient to recoup the original investment.

Prior to calculating PV and NPV, the cash flow position of each asset must be determined. Specifically, assessments are needed to estimate the cost of the initial investment as well as the level of revenue and expenses that comprise operating profit. For overnight accommodations, such as cabins, there are several categories of operating expense that must be evaluated including: furniture, fixtures, and equipment (FF&E); turn expense; and utilities expense.[78] Though other expenses, such as preventive maintenance and repair cost can impact the overall cost effectiveness of an overnight accommodation operation, these represent the specific categories of expense that can be accounted for in an up-front cash flow position evaluation.

[78] Turn expenses are the preparation costs incurred between guest stays, such as cleaning and laundering.

R5.1 Cabin Investment Assessment

Background

As previously noted, Parks' capital budget allocation for the FY 2014-16 biennium includes significant appropriations for cabin renovations. The most recent estimates are that this will involve $15 million for cabins, but the exact investment allocations are still being evaluated. ODNR and Division leadership are seeking to determine which of the 294 self-managed cabins will provide the best value internally (e.g., improved revenue and operating efficiencies) and externally (e.g., meeting customer expectations).

Methodology

This sub-section, **Cabin Investment Assessment**, seeks to identify cabins with the ability to generate positive ROI from capital investment and conversely seeks to identify low performing cabins for divestment. Renovation cost estimate information was obtained from Parks while cabin occupancy, revenue, and dates and length of stay information were obtained from Parks' reservation system. Cost estimates for utilities and turn expense was obtained from U.S. Hotel, a concessionaire partner that operates similar cabins, owned by Parks, at lodge properties. Profitability analysis focuses primarily on CY 2013, the last full year of operational data available.

The analysis first focuses on the current-state profitability of cabin properties by group (e.g., park location and cabin type) and then by average unit by group. The analysis then focuses on the individual profitability contribution of each cabin, using Buck Creek preferred cabins as an example. Introducing the concept of the incremental cabin (e.g., demand is concentrated in the most efficient manner by always selling the first cabin first, and so forth) the analysis then evaluates a financially optimized cabin operation that reduces operating cost and maximizes investment ROI, measured in terms of NPV, across a more efficient cabin portfolio. Conversely, the analysis also identifies cabins which not only would result in a negative investment NPV, but also currently result in operating losses. The analysis quantifies the impact of investing in cabins with positive ROIs as well as divestment from cabins that are operating at a loss.

Analysis

Cabin Renovation Cost

At this time, Parks is not considering adding new cabin inventory, but rather is focused on renovation of a portion of the existing inventory. As of the completion of this analysis, Parks, with input from the Division of Engineering (Engineering) is still in the process of refining the scope of renovation activities and has engaged a criteria architecture firm to do so. The final scope of the cabin renovation will impact cost and expected useful life; both are integral to ROI and NPV calculations. However, during the course of the performance audit, Engineering, with input from Parks, developed an itemized renovation estimate that totaled $132,100 per cabin. As noted, this preliminary estimate will be further refined once a final project scope is agreed upon. Finally, the scope and cost will be evaluated, informed, and refined as Engineering and Parks

work with architecture and design firms and ultimately engage in the request for proposal (RFP) and bidding process. This analysis uses $132,100 as an example project cost as the sole estimate available. However, as noted, this estimate is subject to change and any change would also impact the investment assessment associated with individual cabins.

Cabin Operating Expense

Operating expenses, including: FF&E, turn, and utilities expense, are partly driven by cabin utilization and partly driven by a fixed schedule over time.

- **FF&E Expense –** These expenses are defined as movable furniture, fixtures, and equipment that have no permanent connection to the structure of a building. Similar to limitations in easily accessing historical capital costs and project details, historical FF&E spending has also not been tracked and aggregated in a way that Division management could leverage to inform historical cost or frequency of FF&E refreshment. In addition to limitations in historical experience, the FF&E quality specifications being considered for the current investment opportunities are higher (e.g., "commercial grade") than that which has been used in the past and is observable in the current cabins. The use of commercial grade FF&E is likely to incur a higher up-front cost, but result in an extended useful life relative to non-commercial grade components. A report by HVS Design, a hospitality industry consulting firm, estimates per unit FF&E cost at $21,546, on a 10-year replacement cycle. FF&E cost is represented as an annual expense of $2,155, or one tenth of the initial estimate, to account for the fact spending on FF&E refreshment will occur over different years within the 10-year replacement cycle.

- **Turn and Utilities Expense –** Turn expense represents the labor expense of cleaning and laundering linens between guest stays while utilities expense represents the electricity expense incurred for each guest stay. These expenses are variable, based on the actual customer utilization of each cabin. For example, little to no utilities or turn expense is incurred if a cabin goes unused over a time-period. Parks accounting and timekeeping systems are not designed to capture a per cabin level of detail to easily and directly assess the actual cost incurred for these activities. However, U.S. Hotel, one of the Division's partner operators at lodge properties with cabins, benchmarks utilities expense at $10 per night sold, and turnover costs at $30 per turn.

Cabin Operating Revenue

Operating revenue is the amount of gross receipts Parks receives from overnight customers, and is a function of the number of nights sold and prices paid. Nights sold, date and length of reservation, and revenue are tracked by individual cabin within the reservation system. The availability of these data points at the cabin-level allows for a detailed calculation of occupancy, ADR, RevPAR and total revenue. In addition, by aggregating individual cabin performance the number of sell-out nights can also be calculated as a measure of peak demand for each park location.

Table 5-5 shows cabin key operating statistics by park location and cabin type for CY 2013. Including the park location data allows for a comparative evaluation of the relative popularity of not only each cabin type, but also each cabin location.

Table 5-5: Cabin Property Key Operating Statistics CY 2013

Park Location	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Sell-Out Nights	Total Revenue
Buck Creek	Preferred	27	28%	$83.74	$23.37	2	$230,295
Cowan Lake	Preferred	25	27%	$93.18	$25.44	0	$232,112
Cowan Lake	Premium	2	29%	$113.71	$32.55	74	$23,765
Dillon	Preferred	14	38%	$92.07	$35.15	31	$179,620
Dillon	Premium	15	28%	$109.75	$30.83	37	$168,794
Hocking Hills	Preferred	31	39%	$105.61	$41.34	2	$467,769
Hocking Hills	Premium	9	46%	$120.65	$55.12	73	$160,949
Lake Hope	Preferred	25	43%	$80.18	$34.30	14	$313,028
Lake Hope	Woodburner	41	47%	$76.79	$35.89	5	$537,114
Mohican	Preferred	25	46%	$109.99	$50.05	54	$456,678
Pike Lake	Basic	12	18%	$61.40	$11.14	15	$48,815
Pike Lake	Preferred	12	38%	$77.85	$29.67	34	$129,933
Pymatuning	Basic	31	23%	$66.82	$15.54	0	$175,800
Pymatuning	Preferred	22	40%	$89.46	$35.70	43	$299,704
Pymatuning	Premium	1	56%	$131.29	$73.74	205	$26,915

Source: Parks

As shown in **Table 5-5**, location is an important driver of cabin performance. For example, Cowan Lake and Mohican have the same inventory of preferred cabins, yet Mohican charges an ADR of $16.81 more than Cowan Lake and still achieves almost double the occupancy rate.

Cabin Operating Profit

Though the preceding analysis can be used to draw conclusions about the relative popularity and earning performance of cabins, focusing on cabin profitability is the next level of analysis required to build toward an identification of high potential ROI opportunities.

Table 5-6 shows total revenue, expenses, and operating profit by park location and cabin type for CY 2013.

Table 5-6: Cabin Property Operating Profit CY 2013

Park Location	Cabin Type	Inventory Count	Total Revenue	Utilities Expense	Turn Expense	FF&E Expense	Operating Profit
Mohican	Preferred	25	$456,678	$41,520	$42,118	$53,865	**$319,175**
Hocking Hills	Preferred	31	$467,769	$44,290	$44,928	$66,793	**$311,758**
Lake Hope	Woodburner	41	$537,114	$69,950	$83,940	$88,339	**$294,885**
Pymatuning	Preferred	22	$299,704	$33,500	$33,983	$47,401	**$184,820**
Lake Hope	Preferred	25	$313,028	$39,040	$39,602	$53,865	**$180,520**
Cowan Lake	Preferred	25	$232,112	$24,910	$25,269	$53,865	**$128,068**
Buck Creek	Preferred	27	$230,295	$27,500	$27,896	$58,174	**$116,725**
Hocking Hills	Premium	9	$160,949	$13,340	$14,051	$19,391	**$114,167**
Dillon	Preferred	14	$179,620	$19,510	$19,791	$30,165	**$110,154**
Dillon	Premium	15	$168,794	$15,380	$16,200	$32,319	**$104,894**
Pike Lake	Preferred	12	$129,933	$16,690	$16,930	$25,855	**$70,458**
Pymatuning	Basic	31	$175,800	$26,310	$29,280	$66,793	**$53,418**
Pymatuning	Premium	1	$26,915	$2,050	$2,159	$2,155	**$20,551**
Cowan Lake	Premium	2	$23,765	$2,090	$2,201	$4,309	**$15,164**
Pike Lake	Basic	12	$48,815	$7,950	$8,847	$25,855	**$6,162**

Source: Parks
Note: Turn expense represents the labor expense of cleaning and laundering linens between guest stays.

As shown in **Table 5-6**, at the park level, all cabins are currently profitable. Mohican preferred cabins generate the largest amount of total profit, at $319,175. However, without assessing per unit profitability, it is difficult to conclude whether a park group's ranking in total operating profit is due to performance or simply due to a higher inventory count.

Table 5-7 shows average operating profit per unit by park location and cabin type for CY 2013.

Table 5-7: Average Operating Profit per Cabin CY 2013

Park Location	Cabin Type	Inventory Count	Avg. Revenue	Avg. Utilities Expense	Avg. Turn Expense	Avg. FF&E Expense	Avg. Operating Profit
Pymatuning	Premium	1	$26,915	$2,050	$2,159	$2,155	**$20,551**
Mohican	Preferred	25	$18,267	$1,661	$1,685	$2,155	**$12,767**
Hocking Hills	Premium	9	$17,883	$1,482	$1,561	$2,155	**$12,685**
Hocking Hills	Preferred	31	$15,089	$1,429	$1,449	$2,155	**$10,057**
Pymatuning	Preferred	22	$13,623	$1,523	$1,545	$2,155	**$8,401**
Dillon	Preferred	14	$12,830	$1,394	$1,414	$2,155	**$7,868**
Cowan Lake	Premium	2	$11,883	$1,045	$1,101	$2,155	**$7,582**
Lake Hope	Preferred	25	$12,521	$1,562	$1,584	$2,155	**$7,221**
Lake Hope	Woodburner	41	$13,100	$1,706	$2,047	$2,155	**$7,192**
Dillon	Premium	15	$11,253	$1,025	$1,080	$2,155	**$6,993**
Pike Lake	Preferred	12	$10,828	$1,391	$1,411	$2,155	**$5,871**
Cowan Lake	Preferred	25	$9,284	$996	$1,011	$2,155	**$5,123**
Buck Creek	Preferred	27	$8,529	$1,019	$1,033	$2,155	**$4,323**
Pymatuning	Basic	31	$5,671	$849	$945	$2,155	**$1,723**
Pike Lake	Basic	12	$4,068	$663	$737	$2,155	**$514**

Source: Parks

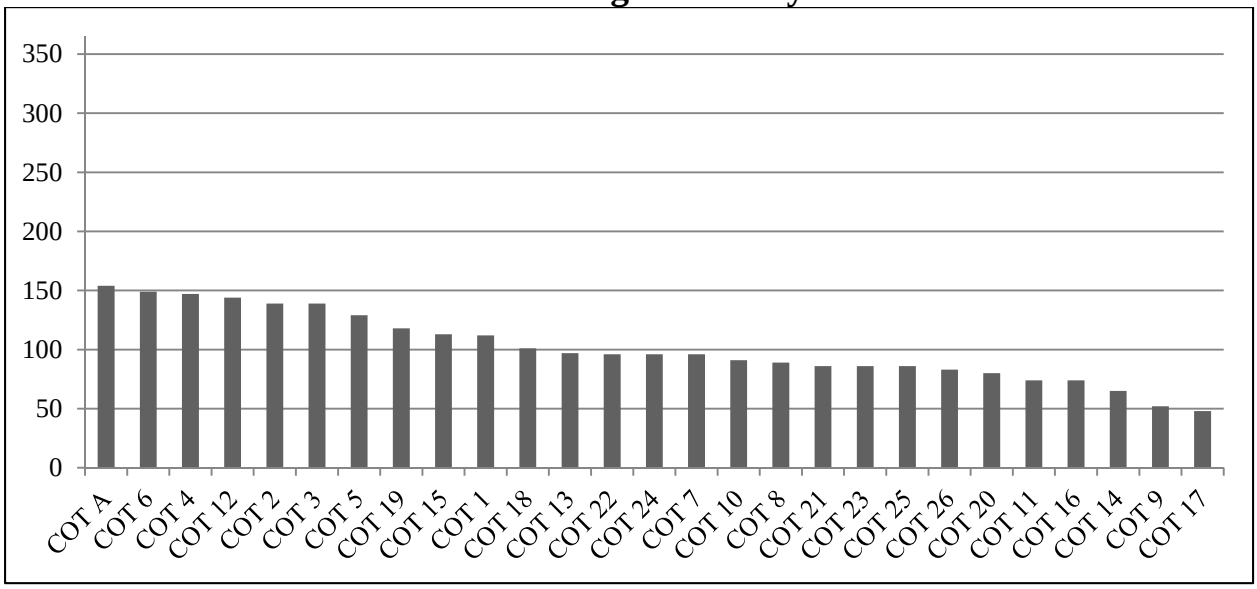
As shown in **Table 5-7**, when park location and cabin type groups are ranked by average operating profit per unit, the Pymatuning premium cabin is the most profitable. Focusing on preferred cabins, the most common type of cabin, the average Mohican cabin is nearly three times as profitable as the average Buck Creek cabin. Though analyzing operating profit in terms of park location and cabin type is informative to overall performance and profitability it remains a step removed from an actual evaluation of ROI by unit. This is due to the fact that not all units are equally profitable nor do all units require renovation to achieve an optimal return.

Buck Creek Cabin Profitability Example [79]

Performing a detailed evaluation of a single site demonstrates not only that performance is naturally uneven across each cabin, but also that a location that otherwise appears profitable consists of cabins of varying profitability.

Chart 5-2 shows the distribution of nights sold for Buck Creek's 27 preferred cabins, ranked from highest to lowest for CY 2013. A cabin's number of nights sold is the fundamental driver of operating profit via the impact of nights sold on both revenue and expense.[80]

Chart 5-2: Buck Creek Nights Sold by Cabin CY 2013



Source: Parks
Note: Cabin naming conventions are from Parks' reservation system.

As shown in **Chart 5-2**, Buck Creek's most popular cabin (COT A) was rented 154 nights of the year while the least popular (COT 17) was rented 48 nights of the year for CY 2013. The distribution of nights sold across Buck Creek's cabins is a product of sales spreading out over available inventory. A large portion of cabins within a given park's inventory can be considered

[79] Buck Creek was selected as an example property given its low average operating profit performance.
[80] Operating Profit = [Nights Sold X ADR] – [Nights Sold X Variable Expense] – FF&E Expense

substitutable for one another.[81] These substitutes show up in **Chart 5-2** as the clusters of cabins with a similar number of nights sold (e.g. Buck Creek's top 6 selling cabins, as well as the large flat band in the middle of the chart with between 80 and 100 nights sold). Because many cabins within these clusters are essentially interchangeable commodities, actual nights sold data for any one cabin cannot be used to make inferences on its contribution to overall park performance. For example, data organized in the manner of **Chart 5-2** cannot be used to assess the impact on overall park nights sold of removing any particular cabin from Buck Creek's inventory. If COT 17 had not been available to rent in CY 2013, it is possible that customers would have simply selected a different cabin in the same area of the park, provided the park was not already sold out. In contrast, the question of whether or not investment will generate a positive ROI inherently takes into account that inventory is flexible. Assessing ROI in light of the optimized, flexible inventory requires an evaluation at the level of the incremental cabin.

To demonstrate the incremental unit concept, consider the impact on nights sold if one additional preferred cabin (i.e., an incremental unit) had been added to Buck Creek's existing inventory at the beginning of CY 2013. This additional unit, assuming a similar condition and thus the same customer demand as the other 27 units, would only be contributing revenue on the nights where all other 27 cabins had already been sold.[82] On nights when half of the cabins sit empty, the new unit is not actually generating a revenue increase, even if it is technically occupied. This is due to the fact that existing stock could have met the customer demand for that night without the addition of a 28th cabin. As such an individual cabin can only be said to produce incremental revenue when every other cabin is sold out.

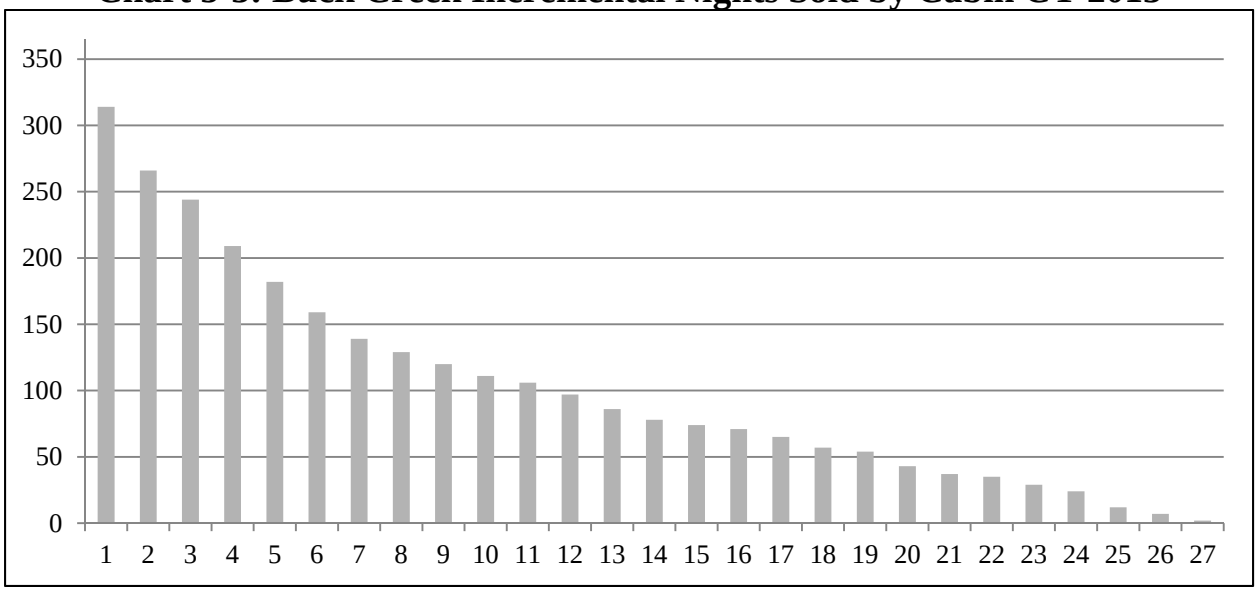
If cabins were filled incrementally (e.g., if Cabin #1 were always assigned to the first customer to reserve an accommodation for the night, and Cabin #2 were assigned to the second customer, and so forth) the distribution of nights sold would look very different.

[81] The user interface in Parks' reservation system allows customers to select an individual cabin by its inventory number. Faced with a group of cabins in a similar park location, and with undifferentiated descriptions, customers consider a portion of a park's cabins to be interchangeable substitutes.

[82] While it is true that certain cabins within a park may have more desirable features than others, such as views or proximity to park amenities, this analysis makes the simplifying assumption that cabins of the same type and in the same park are interchangeable goods. This assumption is justified on the basis that cabins within a single park are similar enough that a customer's decision to reserve or not reserve a cabin stay on a particular date would rarely hinge on the availability of one particular cabin.

Chart 5-3 shows incremental nights sold for Buck Creek's 27 preferred cabins for CY 2013. Again, incremental nights sold treat all cabins as interchangeable and Cabin #1 is always the first cabin filled while Cabin #27 is always the last cabin filled. For example, on a date when Buck Creek sold 12 cabin nights, Cabins #1 through #12 have been filled.

Chart 5-3: Buck Creek Incremental Nights Sold by Cabin CY 2013



Source: Parks
Note: Cabin numbers, shown on the 5-axis, are a generic numbering system corresponding to the incremental nights sold methodology rather than the cabin naming scheme shown in Parks' reservation system.

As shown in **Chart 5-3**, Cabin #1 sold on 314 on nights of the year while Cabin #27 sold on only 2 nights of the year. This is reflective of the fact that for CY 2013, Buck Creek only experienced two sell-out nights for cabins (see **Table 5-5**) and was relatively low performing compared to other preferred cabin properties. Given the relatively low preferred cabin performance at Buck Creek, the distribution of nights sold is more extreme than it would be for a property such as Mohican where preferred cabins experienced 54 sell-out nights in CY 2013.

Table 5-8 shows the impact of the incremental nights sold methodology on the incremental net profit by cabin for CY 2013. Ranking cabins within a property by incremental nights sold and incremental operating profits allows for analyzing individual cabin performance in a way that leads to identification of high-potential investments. (See **Appendix 5.A** for an incremental net profit analysis for all other self-managed cabin properties.)

Table: 5-8: Buck Creek Incremental Net Profit by Cabin CY 2013

Cabin Number	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	FF&E Expense	Net Profit
1	314	$26,296	$3,140	$3,185	$2,155	**$17,816**
2	266	$22,276	$2,660	$2,698	$2,155	**$14,763**
3	244	$20,433	$2,440	$2,475	$2,155	**$13,364**
4	209	$17,502	$2,090	$2,120	$2,155	**$11,138**
5	182	$15,241	$1,820	$1,846	$2,155	**$9,421**
6	159	$13,315	$1,590	$1,613	$2,155	**$7,958**
7	139	$11,640	$1,390	$1,410	$2,155	**$6,686**
8	129	$10,803	$1,290	$1,309	$2,155	**$6,050**
9	120	$10,049	$1,200	$1,217	$2,155	**$5,477**
10	111	$9,296	$1,110	$1,126	$2,155	**$4,905**
11	106	$8,877	$1,060	$1,075	$2,155	**$4,587**
12	97	$8,123	$970	$984	$2,155	**$4,015**
13	86	$7,202	$860	$872	$2,155	**$3,315**
14	78	$6,532	$780	$791	$2,155	**$2,806**
15	74	$6,197	$740	$751	$2,155	**$2,552**
16	71	$5,946	$710	$720	$2,155	**$2,361**
17	65	$5,443	$650	$659	$2,155	**$1,979**
18	57	$4,773	$570	$578	$2,155	**$1,471**
19	54	$4,522	$540	$548	$2,155	**$1,280**
20	43	$3,601	$430	$436	$2,155	**$580**
21	37	$3,099	$370	$375	$2,155	**$199**
22	35	$2,931	$350	$355	$2,155	**$71**
23	29	$2,429	$290	$294	$2,155	**($310)**
24	24	$2,010	$240	$243	$2,155	**($628)**
25	12	$1,005	$120	$122	$2,155	**($1,391)**
26	7	$586	$70	$71	$2,155	**($1,709)**
27	2	$167	$20	$20	$2,155	**($2,027)**
Property Total	**2,750**	**$230,295**	**$27,500**	**$27,896**	**$58,174**	**$116,725**

Source: Parks

As shown in **Table 5-8**, property total performance is the same as previously shown (e.g., total revenue, expenses, and net profit shown in **Table 5-6**), but focusing on incremental net profit highlights significant differences in cabin-level profitability. For example, more than half of Buck Creek's cabins are producing less than the park average profit per cabin (see **Table 5-7**), and five cabins actually experienced a net operating loss for CY 2013. Applying the concept of adding an incremental unit (i.e., adding one more cabin) Buck Creek would be expected to further lose operating profit given that Cabin #27 already incurs a net operating loss. Within a park, the least utilized and least profitable incremental cabin is defined as the marginal unit. In

the case of Buck Creek, the marginal unit is Cabin #27. Negative operating profit at the marginal unit is an indicator of cabin oversupply relative to consumer demand.

Table 5-9 shows net profit per marginal unit by park location and cabin type for CY 2013.

Table 5-9: Cabin Properties Net Profit per Marginal Unit CY 2013

Park Location	Cabin Type	Marginal Unit	Nights Sold	Total Revenue	Utility Expense	Turn Expense	FF&E Expense	Net Profit
Pymatuning	Premium	1	205	$26,915	$2,050	$2,159	$2,155	**$20,551**
Hocking Hills	Premium	9	73	$8,808	$730	$769	$2,155	**$5,154**
Cowan Lake	Premium	2	74	$8,414	$740	$779	$2,155	**$4,740**
Mohican	Preferred	25	54	$5,939	$540	$548	$2,155	**$2,697**
Dillon	Premium	15	37	$4,061	$370	$390	$2,155	**$1,146**
Pymatuning	Preferred	22	43	$3,847	$430	$436	$2,155	**$826**
Dillon	Preferred	14	31	$2,854	$310	$314	$2,155	**$75**
Pike Lake	Preferred	12	34	$2,647	$340	$345	$2,155	**($193)**
Lake Hope	Preferred	25	14	$1,123	$140	$142	$2,155	**($1,314)**
Pike Lake	Basic	12	15	$921	$150	$167	$2,155	**($1,551)**
Lake Hope	Woodburner	41	5	$384	$50	$60	$2,155	**($1,881)**
Hocking Hills	Preferred	31	2	$211	$20	$20	$2,155	**($1,984)**
Buck Creek	Preferred	27	2	$167	$20	$20	$2,155	**($2,027)**
Cowan Lake	Preferred	25	0	$0	$0	$0	$2,155	**($2,155)**
Pymatuning	Basic	31	0	$0	$0	$0	$2,155	**($2,155)**

Source: Parks

As shown in **Table 5-9**, there are eight cabin groups with at least one unprofitable cabin. In each case, Parks could have increased profitability by decommissioning at least one cabin. However, it is premature to conclude that investment, in even the profitable marginal units, would result in a positive ROI. Identification of positive ROI investments requires calculating the NPV of the construction costs and the net operating profits over the useful life of each incremental unit.

Cabin Investment NPV Results

As previously noted, to adequately inform investment decisions, the NPV calculations in the analysis must be run at the level of individual cabins. The operational inputs that underlie the NPV calculations, such as incremental net profits and construction costs, have been developed through analyses presented in the preceding tables. However, several financial modeling assumptions still require attention to ensure the NPV analysis is realistically describing Parks' investment opportunity in cabins. These assumptions include:

- **Discount Rate –** This is the opportunity cost of the State of Ohio investing capital funds in Parks cabins rather than buying down State-issued debt. This analysis uses a discount rate of 3.00 percent, which is equal to the average of the high and low prevailing yields on AAA-rated 30-year municipal bonds during October 2014.[83]
- **Useful Life –** Renovations to cabins at the costs modeled in this analysis (i.e., $132,100 per cabin) are assumed to be extensive enough that they will reset the fundamental useful life expectation for each cabin. Therefore, cash flows are also projected over 45 years. Finally, cabins are assumed to have no residual value after 45 years. The assumption of a 45 year useful life and no residual value thereafter should be considered conservative given that the cabins are currently operated beyond their 45-year useful life (i.e., the current portfolio of cabins is, on average, 50.5 years old).
- **Cash Flow Growth Rate –** This is the rate at which cash flow is expected to increase each year due to price increases over time. CY 2015 prices are projected to remain flat; commensurate with prices charged for CY 2013 and CY 2014.[84] This analysis assumes that starting in CY 2016 cabin prices will increase at least at a level commensurate with inflation. Therefore, a 1.87 percent annual growth rate, based on the Federal Reserve Bank of Cleveland's 10-year inflation expectations from October 2014, has been applied. It should be noted that this projected growth rate is conservative in that it does not take into account the reality that newly-renovated cabins could likely command rental price increases.

[83] Bloomberg Valuation Services series BVMB30Y:IND

[84] During the course of the audit administrative rules governing overnight accommodation prices were reviewed and re-submitted in accordance with the regular five-year review. Parks did not propose any price increases for the vast majority of accommodations.

Table 5-10 shows the investment NPV generated by each of Buck Creek's 27 preferred cabins. Cabins that return a positive NPV represent positive investment (i.e., economic gains over time) while those that do not represent negative investments (i.e., economic losses over time).

Table 5-10: Buck Creek Cabin NPV Investment Analysis

Cabin Number	CY 2013 Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	**$17,816**	$132,100	$616,916	**$484,816**
2	**$14,763**	$132,100	$511,205	**$379,105**
3	**$13,364**	$132,100	$462,754	**$330,654**
4	**$11,138**	$132,100	$385,673	**$253,573**
5	**$9,421**	$132,100	$326,211	**$194,111**
6	**$7,958**	$132,100	$275,558	**$143,458**
7	**$6,686**	$132,100	$231,512	**$99,412**
8	**$6,050**	$132,100	$209,489	**$77,389**
9	**$5,477**	$132,100	$189,668	**$57,568**
10	**$4,905**	$132,100	$169,847	**$37,747**
11	**$4,587**	$132,100	$158,836	**$26,736**
12	**$4,015**	$132,100	$139,015	**$6,915**
13	**$3,315**	$132,100	$114,789	**($17,311)**
14	**$2,806**	$132,100	$97,171	**($34,929)**
15	**$2,552**	$132,100	$88,362	**($43,738)**
16	**$2,361**	$132,100	$81,755	**($50,345)**
17	**$1,979**	$132,100	$68,541	**($63,559)**
18	**$1,471**	$132,100	$50,923	**($81,177)**
19	**$1,280**	$132,100	$44,316	**($87,784)**
20	**$580**	$132,100	$20,090	**($112,010)**
21	**$199**	$132,100	$6,876	**($125,224)**
22	**$71**	$132,100	$2,472	**($129,628)**
23	**($310)**	$132,100	($10,742)	**($142,842)**
24	**($628)**	$132,100	($21,754)	**($153,854)**
25	**($1,391)**	$132,100	($48,181)	**($180,281)**
26	**($1,709)**	$132,100	($59,193)	**($191,293)**
27	**($2,027)**	$132,100	($70,204)	**($202,304)**

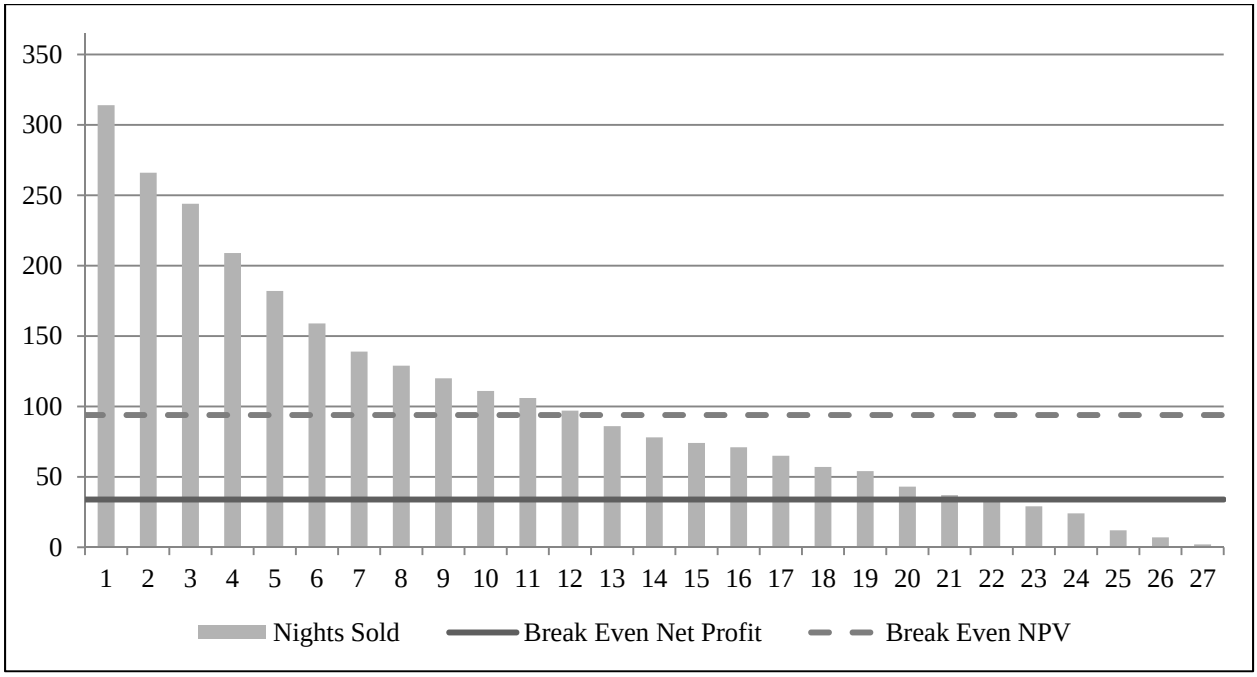
Source: Parks

Note: PV of Net Profits are calculated over a unit's useful life as = $\left(\frac{\pi}{(r-g)}\right) * \left\{1 - \left[\frac{(1+g)}{(1+r)}\right]^t\right\}$ where π = CY 2013 net profit (cabin specific); r = discount rate, at 3.00 percent; g = growth rate, at 1.87 percent; t = useful life, at 45 years. This equation is commonly used in finance to value a "growing annuity".

As shown in **Table 5-10**, Buck Creek has 12 preferred cabins that would generate positive NPV, or economic returns, from a renovation investment. By investing in these 12 cabins, Parks could generate a total NPV of $2,091,484 over the life of these assets. Conversely, there are 5 cabins at Buck Creek that produce a negative operating profit, let alone a negative investment NPV. If Parks were to divest from these 5 cabins rather than renovate them, the Division would achieve savings from avoiding operating losses over their useful life as well as from avoiding the up-front renovation investment cost. The remaining 10 cabins, falling in the middle of the distribution, are projected to result in a net operating profit, but would not garner returns sufficient to achieve a positive NPV (i.e., operating profits would not be sufficient to pay back the initial investment). Parks should carefully consider the operating position of this middle tier of cabins given that profits are not high enough to justify renovation, from a purely financial perspective, but they do earn a profit, and should be kept in operation if possible.

Chart 5-4 shows a graphical display of the investment and disposition thresholds for Buck Creek preferred cabins.

Chart 5-4: Buck Creek Cabin Investment Thresholds



Source: Parks

Chart 5-4 presents the same ranking of Buck Creek cabins by incremental nights sold, but now overlays two thresholds. First, break-even net profit, as represented by the solid horizontal line, is the minimum number of nights sold that a Buck Creek preferred cabin would need to produce an operating profit. Every cabin with a count of nights sold above this line is profitable in the current state. Second, break-even NPV, as represented by the dashed horizontal line, is the minimum number of nights sold that a Buck Creek preferred cabin would need in order to realize a positive economic return on renovation investment cost. Every cabin with a number of nights sold above the second (dashed) line represents a positive NPV investment opportunity. Cabins with a number of nights sold falling between the two thresholds do not have a recommendation associated with them. Because of differences in cabin prices among the various parks, each park and cabin type has its own specific breakeven thresholds.[85]

[85] Break even equations solve for the number of nights sold that produce zero-values for the operating profit and NPV equations, specific to a particular cabin type within an individual park:

Nights Sold for Break-Even Profit = $\frac{(FF\&E)}{\left(ADR - Utility\ Cost\ per\ Night\ Sold - \left\{\frac{Turn\ Cost\ per\ Stay}{Average\ Length\ of\ Stay}\right\}\right)}$

Nights Sold for Break-Even NPV = $\frac{\frac{Renovation\ Construction\ Costs}{\left\{1-\left[\left(\frac{1+g}{1+r}\right)^{t}\right]*[r-g]\right\}}+FF\&E}{\left\{[ADR]-[Utility\ Cost\ per\ Night\ Sold]-\left[\frac{(Cost\ per\ Turn)}{(Average\ Length\ of\ Stay)}\right]\right\}}$ where r = discount rate; g = profit growth rate; t = useful life.

Table 5-11 shows the summarized financial impact of pursuing positive NPV investment opportunities across Parks' portfolio of self-managed cabins. (See **Appendix 5.A** for full detailed operating profiles for each cabin property).

Table 5-11: Financial Impact of Cabin Renovation Investments

Park Location	Cabin Type	Inventory Count	Positive NPV Cabins	Total Investment Costs	PV Net Profit	Investment NPV
Mohican	Preferred	25	24	$3,170,400	$10,958,880	**$7,788,480**
Hocking Hills	Preferred	31	25	$3,302,500	$10,458,786	**$7,156,286**
Lake Hope	Woodburner	41	28	$3,698,800	$9,394,022	**$5,695,222**
Pymatuning	Preferred	22	19	$2,509,900	$6,186,848	**$3,676,948**
Lake Hope	Preferred	25	20	$2,642,000	$5,965,013	**$3,323,013**
Hocking Hills	Premium	9	9	$1,188,900	$3,953,320	**$2,764,420**
Cowan Lake	Preferred	25	14	$1,849,400	$4,124,899	**$2,275,499**
Dillon	Preferred	14	10	$1,321,000	$3,567,398	**$2,246,398**
Buck Creek	Preferred	27	12	$1,585,200	$3,676,684	**$2,091,484**
Dillon	Premium	15	10	$1,321,000	$3,171,175	**$1,850,175**
Pike Lake	Preferred	12	7	$924,700	$2,161,394	**$1,236,694**
Pymatuning	Premium	1	1	$132,100	$711,636	**$579,536**
Pymatuning	Basic	31	7	$924,700	$1,197,522	**$272,822**
Cowan Lake	Premium	2	2	$264,200	$525,106	**$260,906**
Pike Lake	Basic	12	1	$132,100	$158,287	**$26,187**
Total	**N/A**	**292**	**189**	**$24,966,900**	**$66,210,969**	**$41,244,069**

Source: Parks

As shown in **Table 5-11**, Parks has the opportunity to immediately improve the economic position of the majority of its cabins through renovations that extend useful life. Further, 189 of 292 cabins have the opportunity to generate positive investment NPV; an immediate value gain of **$41,244,069**, realized over 45 years, the expected useful life of this type of asset.

In addition to identifying positive NPV projects, the analysis also identified cabins producing negative operating profits. These are cabins whose removal and disposition could improve Parks' total operating profit. (Full cabin-level detail of the analysis can be found in **Appendix 5.A**). A park-level summary of cabins identified as having negative operating profit is found in **Table 5-12**.

Table 5-12: Financial Impact of Cabin Divestment

Park Location	Cabin Type	Current Inventory	Negative Operating Cabins	Renovation Cost Avoided	PV of Avoided Loss	NPV of Avoided Cost & Loss
Pymatuning	Basic	31	9	$1,188,900	$291,768	**$1,480,668**
Pike Lake	Basic	12	7	$924,700	$158,275	**$1,082,975**
Buck Creek	Preferred	27	5	$660,500	$210,074	**$870,574**
Cowan Lake	Preferred	25	3	$396,300	$135,310	**$531,610**
Lake Hope	Woodburner	41	2	$264,200	$79,026	**$343,226**
Hocking Hills	Preferred	31	1	$132,100	$68,690	**$200,790**
Lake Hope	Preferred	25	1	$132,100	$45,504	**$177,604**
Pike Lake	Preferred	12	1	$132,100	$6,668	**$138,768**
Total	**N/A**	**292**	**29**	**$3,830,900**	**$995,315**	**$4,826,215**

Source: Parks; OPT Analysis

As shown in **Table 5-12**, 29 of 292 cabins are currently operated at a loss. Disposing of these 29 cabins rather than investing in renovations produces a positive financial impact from two sources: first, avoiding renovation costs, a one-time total of **$3,830,900**; and second, avoiding operating losses over 45 years with a PV of $**995,315.** The positive NPV from these two factors is **$4,826,215**.

Conclusion:

Parks' cabins are user-paid amenities that currently provide a substantial source of operating revenue for the Division. However, through active management and careful financial evaluation, especially when considering investment opportunities, Parks can further improve the profitability of its cabin operation. Investment in positive NPV cabin renovations coupled with divestment from cabins that operate at a loss will not only provide significant ROI, but will also allow Parks to free up resources that otherwise would have been allocated to poor financial investments.

Recommendation 5.1: Parks should develop an ongoing framework for evaluating cabin operating performance as well as for evaluating cabin investment opportunities. Doing so will require the Division to routinely monitor, measure, and evaluate incremental profitability at both the park location and cabin level. Profitability analysis should be used to not only guide day-to-day operating decisions, but should also be used to maximize the profitability of investment returns and the cost avoidance associated with divestment decisions.

Financial Implication 5.1: As shown in **Table 5-11**, targeting investment dollars toward positive NPV cabins could result in an immediate value gain of **$41,244,069**, or an IRR of 9.2 percent, realized over 45 years, the expected useful life of this type of asset. In simplified terms, the targeted initial investment of $24,966,900 would result in annual operating profits ranging from $1,912,084 to $4,320,603 with an average annual net impact of **$2,403,367**. Further, as shown in **Table 5-12**, disposing of the 29 cabins experiencing an operating loss rather than investing in renovations results in a one-time cost avoidance of **$3,830,900** and also avoids operating losses of $2,001,099 over 45 years, or an average annual cost avoidance of **$44,469**.

R5.2 Full Hook-Up Investment Assessment

Background

As previously noted, Parks' capital budget allocation for the FY 2014-16 biennium includes significant appropriations for campground upgrades and renovations. The most recent estimates are that this will involve $10 million for campgrounds, but the exact investment allocations are still being evaluated. ODNR and Division leadership are determining which of the 9,113 campsites will provide the best value internally (e.g., improved revenue operating efficiencies) and externally (e.g., meeting customer demand for full hook-up campsites where that demand occurs).

Methodology

This sub-section, **Full Hook-Up Investment Assessment**, seeks to identify positive ROI opportunities for upgrading existing electric campsites to full hook-up campsites in "tier 1" parks.[86] Construction cost estimate information was obtained from Parks while campsite occupancy, revenue, and dates and length of stay information was obtained from Parks' reservation system. Cost estimates for utilities expenses were based on data from the U.S. Energy Information Administration (EIA). Profitability analysis focuses primarily on CY 2013, the last full year of operational data available.

The analysis first focuses on the current-state profitability of full hook-up campsites by location and then by average unit by location. The analysis then focuses on the incremental profitability contribution of each campsite using East Harbor full hook-up campsites as an example. Depth of demand for new full hook-up campsites is estimated by extrapolating from sales trends observed in CY 2013. As new full hook-up sites are assumed to be created by upgrading existing electric campsites, the analysis quantifies and incorporates the opportunity costs of taking the electric campsites offline. Using the incremental profitability framework, the analysis then evaluates a financially optimized full hook-up campsite operation that maximizes investment ROI, measured in terms of NPV. The analysis quantifies the impact of investing in full hook-up campsites with positive ROIs.

Analysis

Campsite Upgrade Cost

Parks plans to install new full hook-up campsites as upgrades to its existing stock of electric campsites. By using existing electrical service and concrete pads wherever possible, costs and construction complexity can be reduced. For example, in CY 2014 Grand Lake St. Marys upgraded existing electric campsites to full hook-up sites in this manner. The cost of extending

[86] The Division informally categorizes all parks into 1 of 3 tiers. Tier 1 parks are defined as having a national interest and a broad statewide group of users. There are currently 24 parks categorized as tier 1, and they are generally the most popular parks, with the highest visitation and considerable development in terms of lodges, cabins, and large campgrounds.

lines and adding water and sewer to 13 electric campsites for this project was $55,199.83 or an average of $4,246.14 per unit. Given that this is the most recent available actual cost, and proposed upgrades will be based on a similar condition, an upgrade cost of $4,246.14 per unit is used in this analysis.

It is expected that there will be more variance across the state in the final construction costs Parks incurs to install full hook-up sites than in the final costs of cabin renovations, due mainly to differences in existing utilities infrastructure. As no detailed estimating or formal construction bidding was completed at the time of the performance audit, the actual experience of Grand Lake St. Marys represents the most definitive cost estimate available at the time of the completion of this analysis.

Campsite Operating Expense

As was the case with cabins, historical data on full hook-up operating expenses was not readily available. Operating expenses, including FF&E, turn, and utilities expense, are partly driven by campsite utilization and partly driven by a fixed schedule over time.

- **FF&E Expense –** The **Cabin Investment Analysis** sub-section defined these expenses as movable furniture, fixtures, and equipment that have no permanent connection to the structure of a building. Items relevant to full hook-up campsites that fit the spirit of this definition are fire pits, picnic tables, and paving on the parking pad. Grand Lake St. Marys furnished a work order for 14 concrete pads totaling $2,356.09, or a cost of $157 per unit. Assuming the additional cost of a picnic table and fire pit is $600, for a total of $757 in FF&E costs, and further assuming that these outdoor items are replaced on a 10 year schedule, the analysis will utilize a rough estimate of $75.70 per year for full hook-up FF&E.
- **Turn and Utilities Expense –** Turn expense in the context of campsites represents the labor expense of cleaning and landscaping sites between guest stays. Utilities expense represents the electricity, water, and sewer expense incurred during each guest stay. These expenses are variable, based on the actual customer utilization of each campsite. For example, little to no utilities or turn expense is incurred if a campsite goes unused over a time-period. Parks accounting and timekeeping systems are not designed to capture a per campsite level of detail to easily and directly assess the actual cost incurred for these activities. The turn expenses are assumed to be incurred by Natural Resource Specialist employees who earned an average of $9.44 per hour, including benefits and unemployment costs, in FY 2012-13. Assuming 30 minutes of their labor to turn a site, the analysis assumes turn costs of $4.72 per stay at all campsites. The U.S. Energy Information Administration (EIA) captures several statistics useful for estimating campsite utilities expense. Per the EIA, the average price commercial customers in Ohio paid in August 2014 was $.0986 per kilowatt hour (kWh). EIA also collects data on average household consumption of electricity, which was 29.8 kWh per day in Ohio. Daily utility costs of regular electrified campsites are estimated by multiplying the average consumption by the average price to arrive at $3.94 per night sold. Full hook-up campers are assumed to draw approximately 50 percent more power than electric campers, due to higher energy consumption associated with larger RVs; estimated at

$4.41 per night sold. Further, Parks leadership estimated water and sewer expense to be an additional $1.00 per night sold. The net result is a total full hook-up utility expense of $5.41 per night sold.

Campsite Operating Revenue

Operating revenue is the gross receipts Parks receives from overnight customers, and is a function of the number of nights sold and prices paid. Nights sold, date and length of reservation, and revenue are tracked by individual campsite within the reservation system. The availability of these data points at the campsite-level allows for a detailed calculation of occupancy, ADR, RevPAR and total revenue. In addition, by aggregating individual campsite performance, the number of sell-out nights can also be calculated as a measure of peak demand for each park location.

Table 5-13 shows full hook-up campsite key operating statistics by park location for CY 2013. Including the park location data allows for a comparative evaluation of the relative popularity of full hook-up campsites across parks.

Table 5-13: Full Hook-Up Key Operating Statistics CY 2013

Park Location	Inventory Count	Occupancy Rate	ADR	RevPAR	Sell-Out Nights	Total Revenue
Alum Creek	3	46%	$35.93	$16.38	122	$17,931
East Fork	7	33%	$33.10	$10.87	46	$27,770
East Harbor	23	41%	$33.14	$13.65	76	$114,560
Geneva	3	44%	$33.29	$14.53	140	$15,911
Indian Lake	13	45%	$35.13	$15.66	68	$74,293
Mohican	32	40%	$38.19	$15.37	10	$179,579
Punderson	5	34%	$34.19	$11.65	54	$21,269
Pymatuning	18	29%	$32.27	$9.36	10	$61,465
Rocky Fork	44	36%	$33.30	$11.87	2	$190,622
Salt Fork	20	48%	$34.91	$16.67	38	$115,585
South Bass Island	10	31%	$32.35	$10.04	38	$36,656
West Branch	29	44%	$32.16	$14.02	56	$148,404

Source: Parks

As shown in **Table 5-13**, location is an important driver of campsite performance. For example, Pymatuning has less than half the inventory count of Rocky Fork, yet Rocky Fork is able to charge an ADR of $1.03 more per night and still achieve higher occupancy and RevPAR.

Campsite Operating Profit

Though the preceding analysis can be used to draw conclusions about the relative popularity and earning performance of parks with full hook-up units, focusing on campground profitability is the next level of analysis required to build toward an identification of high potential ROI opportunities.

Table 5-14 shows total revenue, expenses, and operating profit by park location for full hook-up campsites in CY 2013.

Table 5-14: Full Hook-Up Property Operating Profit CY 2013

Park Location	Inventory Count	Total Revenue	Utilities Expense	Turn Expense	FF&E Expense	Operating Profit
Rocky Fork	44	$190,622	$30,972	$6,950	$3,331	**$149,368**
Mohican	32	$179,579	$25,438	$5,708	$2,422	**$146,010**
West Branch	29	$148,404	$24,962	$5,602	$2,195	**$115,645**
Salt Fork	20	$115,585	$17,913	$4,020	$1,514	**$92,139**
East Harbor	23	$114,560	$18,702	$4,197	$1,741	**$89,920**
Indian Lake	13	$74,293	$11,442	$2,568	$984	**$59,299**
Pymatuning	18	$61,465	$10,306	$2,313	$1,363	**$47,484**
South Bass Island	10	$36,656	$6,130	$1,376	$757	**$28,394**
East Fork	7	$27,770	$4,539	$1,019	$530	**$21,683**
Punderson	5	$21,269	$3,365	$755	$379	**$16,770**
Alum Creek	3	$17,931	$2,700	$606	$227	**$14,398**
Geneva	3	$15,911	$2,586	$580	$227	**$12,518**

Source: Parks

As shown in **Table 5-14**, at the park level, all full hook-up campsites are currently profitable. Full hook-up sites at Rocky Fork generate the largest total profit, at $149,368. However, without assessing per-unit profitability, it is difficult to conclude whether a park's ranking in total operating profit is due to performance or simply due to a higher inventory count.

Table 5-15 shows average operating profit per unit by park location for CY 2013.

Table 5-15: Average Operating Profit per Full Hook-Up CY 2013

Park Location	Inventory Count	Avg. Revenue	Avg. Utilities Expense	Avg. Turn Expense	Avg. FF&E Expense	Avg. Operating Profit
Alum Creek	3	$5,977	$900	$202	$76	**$4,799**
Salt Fork	20	$5,779	$896	$201	$76	**$4,607**
Mohican	32	$5,612	$795	$178	$76	**$4,563**
Indian Lake	13	$5,715	$880	$198	$76	**$4,561**
Geneva	3	$5,304	$862	$193	$76	**$4,173**
West Branch	29	$5,117	$861	$193	$76	**$3,988**
East Harbor	23	$4,981	$813	$182	$76	**$3,910**
Rocky Fork	44	$4,332	$704	$158	$76	**$3,395**
Punderson	5	$4,254	$673	$151	$76	**$3,354**
East Fork	7	$3,967	$648	$146	$76	**$3,098**
South Bass Island	10	$3,666	$613	$138	$76	**$2,839**
Pymatuning	18	$3,415	$573	$128	$76	**$2,638**

Source: Parks

As shown in **Table 5-15**, when park locations are ranked by average operating profit per unit, Alum Creek's three units are the most profitable. Though analyzing operating profit in terms of average units is informative to overall performance and profitability, it remains a step removed

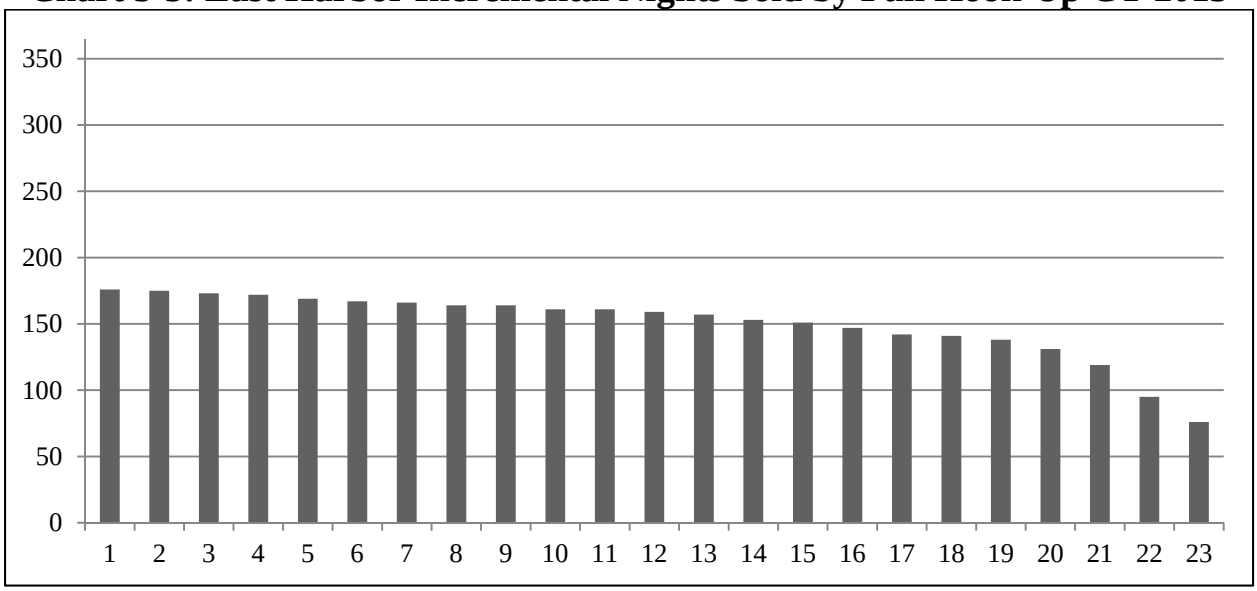
from an actual evaluation of ROI by unit. This is due to the fact that not all units within a park are equally profitable. It is therefore necessary to employ the type of incremental profitability analysis introduced in the **Cabin Investment Analysis** sub-section.

East Harbor Full Hook-Up Profitability Example [87]

Performing a detailed evaluation of a single site demonstrates not only that performance is naturally uneven across park locations, but also that individual campsites within a location can deviate from the park average in terms of profitability.

Chart 5-5 shows East Harbor's incremental nights sold by full hook-up campsite for CY 2013.

Chart 5-5: East Harbor Incremental Nights Sold by Full Hook-Up CY 2013



Source: Parks
Note: Campsite numbers, shown on the 5-axis, are a generic numbering system corresponding to the incremental nights sold methodology rather than the campsite naming scheme shown in Parks' reservation system.

As shown in **Chart 5-5**, the decline in East Harbor's incremental nights sold follows a much flatter trajectory than seen in the similar analysis of Buck Creek cabins (see **Table 5-5)**. However once the decline in nights sold begins, around Campsite #20, the trend in sales drops off sharply.

[87] East Harbor was selected on the basis of its full hook-up operating performance falling in the middle of the range for both average and total operating profit.

Table 5-16 shows the impact of the incremental nights sold methodology on East Harbor's incremental net profit by full hook-up campsite for CY 2013. Ranking campsites within a property by incremental nights sold and incremental operating profits allows for analyzing individual campsite performance in a way that leads to identification of high-potential investments.

Table 5-16: East Harbor Incremental Net Profit by Full Hook-Up CY 2013

Campsite Number	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	FF&E Expense	Net Profit
1	176	$5,832	$952	$214	$76	**$4,591**
2	175	$5,799	$947	$212	$76	**$4,564**
3	173	$5,733	$936	$210	$76	**$4,511**
4	172	$5,700	$931	$209	$76	**$4,485**
5	169	$5,600	$914	$205	$76	**$4,405**
6	167	$5,534	$903	$203	$76	**$4,352**
7	166	$5,501	$898	$202	$76	**$4,326**
8	164	$5,435	$887	$199	$76	**$4,273**
9	164	$5,435	$887	$199	$76	**$4,273**
10	161	$5,335	$871	$195	$76	**$4,193**
11	161	$5,335	$871	$195	$76	**$4,193**
12	159	$5,269	$860	$193	$76	**$4,140**
13	157	$5,203	$849	$191	$76	**$4,087**
14	153	$5,070	$828	$186	$76	**$3,981**
15	151	$5,004	$817	$183	$76	**$3,928**
16	147	$4,871	$795	$178	$76	**$3,822**
17	142	$4,706	$768	$172	$76	**$3,689**
18	141	$4,673	$763	$171	$76	**$3,663**
19	138	$4,573	$747	$168	$76	**$3,583**
20	131	$4,341	$709	$159	$76	**$3,398**
21	119	$3,943	$644	$144	$76	**$3,080**
22	95	$3,148	$514	$115	$76	**$2,443**
23	76	$2,519	$411	$92	$76	**$1,939**
Property Total	**3,457**	**$114,560**	**$18,702**	**$4,197**	**$1,741**	**$89,920**

Source: Parks

As shown in **Table 5-16**, property total performance is the same as previously shown (e.g., total revenue, expenses, and net profit shown in **Table 5-14**), but focusing on incremental net profit highlights significant differences in campsite-level profitability. For example, East Harbor's most profitable full hook-up produces a net profit of $4,591, $2,652 more, or more than twice as much as the park's least profitable full hook-up. The least utilized and least profitable campsite within a park is defined as its marginal unit. The presence of a $1,939 profit in Campsite #23, the marginal unit, indicates that demand at East Harbor may be strong enough to add additional full hook-up inventory and still earn a net profit.

Table 5-17 shows net profit per full hook-up campsite marginal unit by park location and for CY 2013.

Table 5-17: Full Hook-up Properties Net Profit per Marginal Unit CY 2013

Park Location	Marginal Unit	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	FF&E Expense	Net Profit
Geneva	3	140	$4,660	$757	$170	$76	**$3,657**
Alum Creek	3	122	$4,384	$660	$148	$76	**$3,500**
East Harbor	23	76	$2,519	$411	$92	$76	**$1,939**
Indian Lake	13	68	$2,389	$368	$83	$76	**$1,862**
Punderson	5	54	$1,846	$292	$66	$76	**$1,413**
West Branch	29	56	$1,801	$303	$68	$76	**$1,355**
East Fork	7	46	$1,523	$249	$56	$76	**$1,142**
Salt Fork	20	38	$1,327	$206	$46	$76	**$999**
South Bass Island	10	38	$1,229	$206	$46	$76	**$902**
Mohican	32	10	$382	$54	$12	$76	**$240**
Pymatuning	18	10	$323	$54	$12	$76	**$181**
Rocky Fork	44	2	$67	$11	$2	$76	**($22)**

Source: Parks

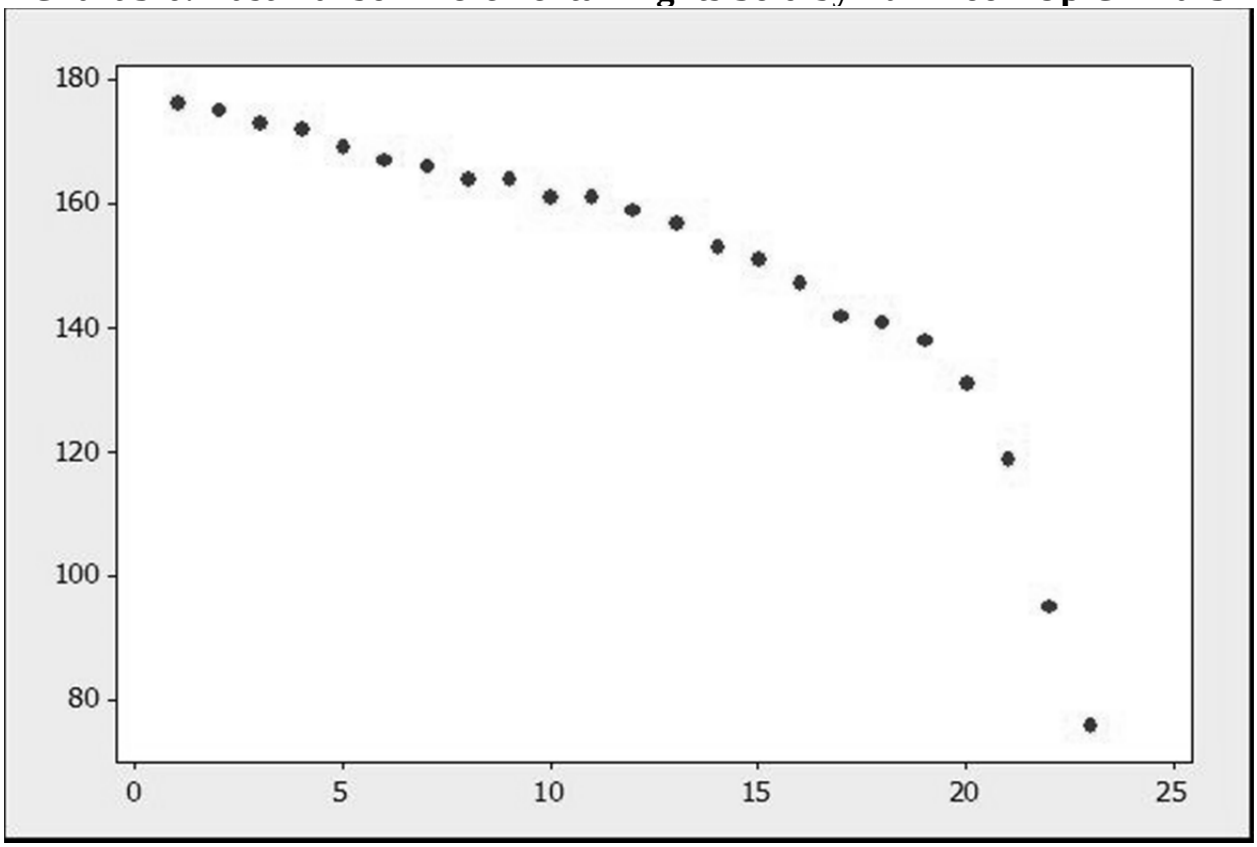
As shown in **Table 5-17**, only one campground, Rocky Fork, has an unprofitable marginal full hook-up campsite. This situation is in contrast to cabin marginal units (shown in **Table 5-9** of **Cabin Investment Analysis**), where there were eight cabin locations with at least one unprofitable cabin. As such, **Table 5-17** only rules out the potential for adding full hook-up campsites at one of the eleven parks with existing inventory, Rocky Fork. However, it is premature to conclude that investment in the eleven parks with profitable marginal units would result in positive ROI without further analysis of both the net profit and the NPV of the investment for each incremental unit within those parks. Additionally, because the full hook-up investment analysis is evaluating the addition of full hook-up sites beyond existing inventory via upgrades to existing electric campsites, two additional factors must inform the ROI calculations: a projection of sales for the new units and an accounting for the opportunity costs of otherwise having continued to operate existing electric sites that will now be replaced.

Campsite Sales Projections

Unlike the **Cabin Investment Analysis** sub-section, the analysis of full hook-up campsites must evaluate the addition of sites in excess of current inventory. To estimate revenues for these additional campsites, sales trends in existing campgrounds are extrapolated based on the trajectory of the last few incremental campsites. The example of East Harbor demonstrates the approach of extrapolating sales.

Chart 5-6 shows East Harbor's incremental nights sold by full hook-up site for CY 2013.

Chart 5-6: East Harbor Incremental Nights Sold by Full Hook-Up CY 2013

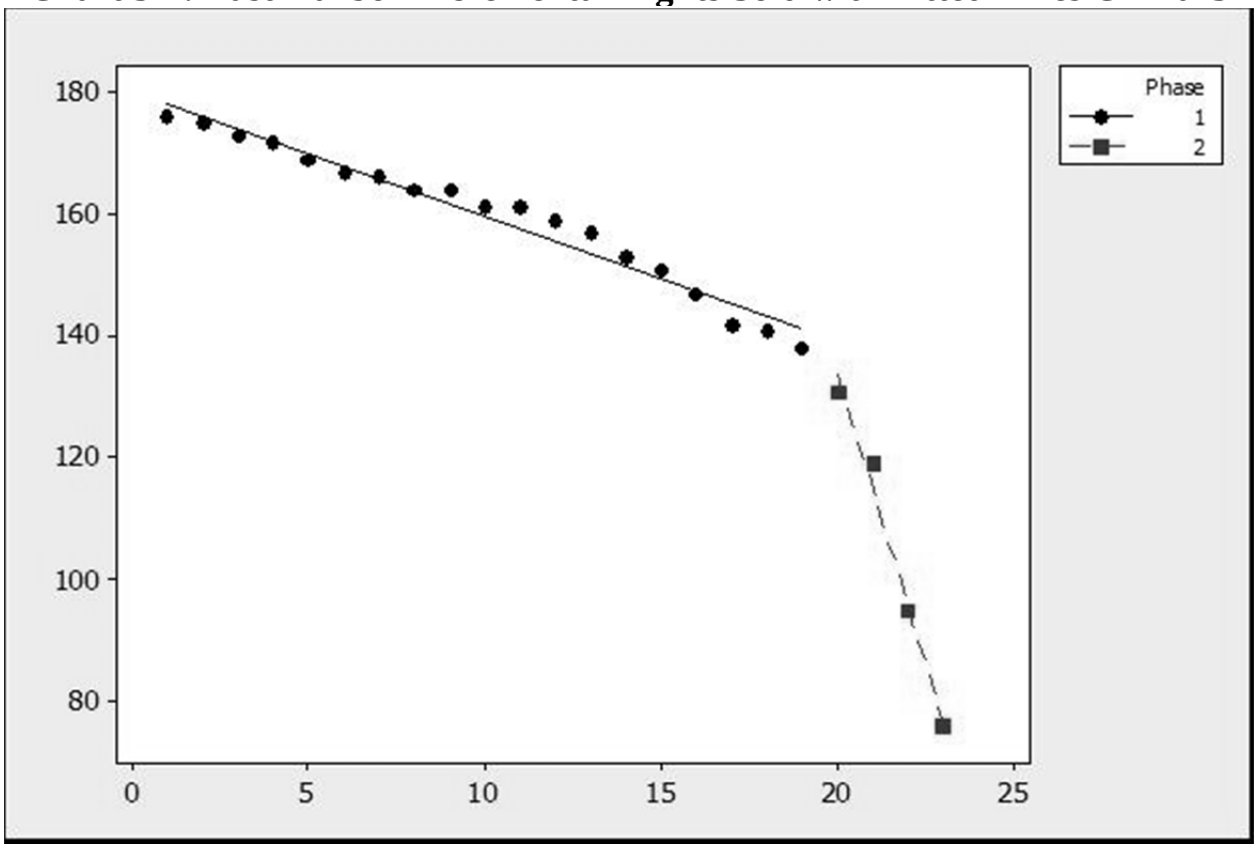


Source: Parks

As shown in **Chart 5-6**, incremental nights sold in East Harbor's full hook-up sites follow a two-part trend: a slow decline in nights sold as campsite numbers increase followed by a much sharper decline starting at the 20th site. The latter part of the trend can be used to project the impact on nights sold of adding additional inventory.

Chart 5-7 shows the same East Harbor incremental nights sold by full hook-up campsite for CY 2013, but isolates the two distinct trends (Phase 1 and Phase 2) in the data by fitting lines using a least-squares regression calculation.

Chart 5-7: East Harbor Incremental Nights Sold with Fitted Lines CY 2013



Source: Parks
Note: Equation for Phase 2 fitted line is Incremental Nights Sold = 512 – 18.9*Campsite #.

As shown in **Chart 5-7**, the two fitted lines approximate the underlying nights sold data in a reasonable manner.[88] The slope of the line fitted to Phase 2, (18.9), is used to project sales beyond East Harbor's existing units. Interpreting a slope of (18.9) simply means that each additional full hook-up site added will have approximately 19 fewer incremental nights sold than the preceding site.

[88] The R-squared, a statistical measure of how well a fitted line approximates the real data points, values of Phase 1 and Phase 2 in East Harbor are 96.7 percent and 98.5 percent respectively. The same analysis carried out across other parks produced no R-squared values less than 93.0 percent.

Table 5-18 shows both phases as they apply to East Harbor full hook-up campsites as well as the extrapolation methodology for the addition of new sites (i.e., sales projection).

Table 5-18: East Harbor Full Hook-Up Sales Projection

Campsite Number	Nights Sold	Trend Description
1	176	Phase 1
2	175	Phase 1
3	173	Phase 1
4	172	Phase 1
5	169	Phase 1
6	167	Phase 1
7	166	Phase 1
8	164	Phase 1
9	164	Phase 1
10	161	Phase 1
11	161	Phase 1
12	159	Phase 1
13	157	Phase 1
14	153	Phase 1
15	151	Phase 1
16	147	Phase 1
17	142	Phase 1
18	141	Phase 1
19	138	Phase 1
20	131	Phase 2
21	119	Phase 2
22	95	Phase 2
23	76	Phase 2
24	**57**	**Sales Projection**
25	**38**	**Sales Projection**
26	**19**	**Sales Projection**
27	**0**	**Sales Projection**

Source: Parks

Note: Shaded rows represent sales projections for additional full hook-up campsites where nights sold is extrapolated at a rate of 19 fewer sales for every additional campsite added.

As shown in **Table 5-18**, extrapolating from the Phase 2 trend, East Harbor can only add four additional full hook-up campsites before incremental nights sold reaches zero.

Similar sales projections were run for the remaining 11 full hook-up campgrounds, and the trends observed were generally very similar to East Harbor. Almost all campgrounds show a two-part trend: first (i.e., Part 1) a slow and steady decline in incremental nights sold as units are added, then a sharper sales decline in the last incremental units (i.e., Part 2). The implication of these calculations is that most parks with existing full hook-up sites have reached a saturation point, after which they have experienced sharply diminishing returns in nights sold. The only exceptions to this trend are Alum Creek and Geneva, both of which have only 3 full hook-up sites in existing inventory, and neither of which is yet showing any sharp decline in nights sold.

In addition to evaluating the impact of adding additional sites to campgrounds with existing full hook-up sites, the analysis also evaluates addition of full hook-up sites to campgrounds with no currently existing inventory. In the latter case, sales cannot be estimated by projecting a current campground's trends, since there are no full hook-up sales from which to extrapolate. Instead, analysis employs a methodology of matching campgrounds with similar characteristics. For parks with no current inventory of full hook-up campsites, the most reasonable way to predict demand is to identify another park that is achieving similar performance in its electric campground, but also has full hook-up sites in its inventory. The performance of full hook-up campsites in the matching park becomes a proxy to predict full hook-up sales in the first park. For example, Hocking Hills currently has no full hook-up campsites, but the profile of its electric campsites closely resembles Mohican's electric campsites, and Mohican does have an inventory of full hook-up campsites, which can inform sales projections for Hocking Hills.

Table 5-19 shows Hocking Hills and Mohican electric campground operating statistics for CY 2013.

Table 5-19: Hocking Hills and Mohican Electric Campground CY 2013

Park Location	Inventory Count	Total Occupancy	ADR	RevPAR	Total Revenue
Hocking Hills	152	34%	$28.16	$9.65	$535,402
Mohican	118	33%	$30.29	$9.94	$427,915

Source: Parks

As shown in **Table 5-19**, Hocking Hills' and Mohican's electric campgrounds are similar across dimensions such as inventory, total occupancy, ADR, and RevPAR. This similarity between electric campgrounds is a strong indication that Hocking Hills should expect any new full hook-up campsites to perform on par with Mohican's existing full hook-up inventory. For the purpose of the full hook-up analysis, sales of any full hook-ups added at Hocking Hills are modeled exactly after Mohican's full hook-up inventory.

This park-matching methodology is carried out for the remaining 23 tier-1 parks that do not currently have any full hook-up inventory (i.e., 11 locations). Additionally, since Alum Creek and Geneva have only 3 full hook-up sites each, the sales of those parks are estimated with the matching methodology rather than attempt to extrapolate trends from 3 units. The full list of best matches is shown in **Table 5-20**. The weighting scheme used to produce the most accurate matches involved first identifying pools of parks with similar RevPAR statistics, then finding the closest match in terms of inventory count from within that pool. The first park listed in each pairing is a park with no full hook-up inventory that requires a sales estimate. The second park listed in each pairing is the closest match to the first park, on the basis of electric campgrounds, among the pool of parks with existing full hook-up inventory.

Table 5-20: Electric Campground Pairings

Park Location	Campsite Category	Inventory Count	Total Occupancy	ADR	RevPAR	Total Revenue
Alum Creek	Electric Premium	31	28%	$30.29	$8.49	$96,053
Pymatuning	Electric Premium	29	29%	$26.28	$7.49	$79,314
Burr Oak	Electric	18	19%	$22.90	$4.28	$26,583
Punderson	Electric	176	12%	$25.35	$2.99	$192,291
Caesar Creek	Electric	279	13%	$27.53	$3.58	$364,687
East Fork	Electric	372	10%	$26.42	$2.76	$374,248
Cowan Lake	Electric	233	17%	$27.45	$4.55	$387,036
East Fork	Electric	372	10%	$26.42	$2.76	$374,248
Deer Creek	Electric	224	23%	$27.31	$6.41	$524,394
Salt Fork	Electric	192	23%	$26.24	$6.00	$420,356
Dillon	Electric	178	18%	$24.07	$4.25	$276,301
Rocky Fork	Electric	96	17%	$24.49	$4.24	$148,695
Geneva	Electric	89	25%	$28.44	$7.03	$228,262
West Branch	Electric	150	27%	$26.36	$7.15	$391,500
Hocking Hills	Electric	152	34%	$28.16	$9.65	$535,402
Mohican	Electric	118	33%	$30.29	$9.94	$427,915
Hueston Woods	Electric	242	17%	$24.42	$4.14	$365,691
East Fork	Electric	372	10%	$26.42	$2.76	$374,248
Lake Hope	Electric	44	17%	$21.78	$3.80	$61,101
Punderson	Electric	176	12%	$25.35	$2.99	$192,291
Lake Loramie	Electric Premium	44	36%	$26.26	$9.33	$146,407
Pymatuning	Electric Premium	29	29%	$26.28	$7.49	$79,314
Maumee Bay	Electric	246	24%	$27.31	$6.56	$589,253
Salt Fork	Electric	192	23%	$26.24	$6.00	$420,356
Shawnee	Electric	100	14%	$22.79	$3.08	$112,481
South Bass Island	Non-Electric	119	14%	$27.75	$3.97	$172,511

Source: Parks

Note: Alum Creek and Geneva currently each have 3 full hook-up sites, but that inventory is too small to adequately project trends forward, and so the matching methodology is used to model their sales.

As shown in **Table 5-20**, most parks under analysis have a reasonable match from which full hook-up sales can be confidently modeled. Burr Oak is the one exception of a park without a satisfactory match, and therefore was paired with the lowest performing full hook-up campground, Punderson.

Campsite Opportunity Cost

Another variable that needs to be accounted for in full hook-up campsite additions is the concept of opportunity costs. Full hook-up campsites evaluated in this analysis are effectively built on top of (i.e., replacing) existing electric campsites. If the full hook-up nights sold are completely incremental to electric campsite sales, no adjustment is needed. There are many instances in the parks, however, of a campgrounds' entire inventory of electric campsites selling out on a given night. If the electric campsites are taken offline and replaced with full hook-ups, the profits of the full hook-ups must be offset by the forgone incremental profit on the electric campsites.

The full hook-up ROI analysis accounts for this factor by calculating the annual incremental profit of every electrical campsite in the parks where the addition of full hook-up sites are being evaluated. Electric campsites are replaced by full hook-up sites in order from least profitable marginal units to more profitable marginal units. As increasing numbers of full hook-up campsites are added at a particular park, they will cut into the sales of progressively more profitable electric campsites. Therefore, the effect of opportunity costs is more pronounced in some locations than others, due to varying demand for electric campsites.

Table 5-21 shows a summary of net operating profits / (losses) for CY 2013 for the marginal unit at each electric campground where full hook-up additions are being evaluated. This analysis helps to show where current opportunity costs are generally highest and lowest.

Table 5-21: Electric Campsite Profitability by Marginal Unit CY 2013

Park Location	Campsite Type	Marginal Unit	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	FF&E Expense	Net Profit
East Harbor	Electric Premium	120	26	$814	$102	$37	$76	**$598**
Alum Creek	Electric Premium	31	23	$697	$91	$33	$76	**$497**
Indian Lake	Electric Premium	45	21	$575	$83	$30	$76	**$387**
West Branch	Electric	150	17	$448	$67	$28	$76	**$278**
Geneva	Electric	89	13	$370	$51	$21	$76	**$222**
Lake Loramie	Electric Premium	44	14	$368	$55	$20	$76	**$217**
Deer Creek	Electric	224	7	$191	$28	$11	$76	**$76**
South Bass Island	Non-Electric	119	5	$139	$0	$12	$76	**$51**
Hocking Hills	Electric	152	4	$113	$16	$7	$76	**$15**
Maumee Bay	Electric	246	4	$109	$16	$7	$76	**$11**
Caesar Creek	Electric	279	3	$83	$12	$5	$76	**($10)**
Rocky Fork	Electric	96	3	$73	$12	$5	$76	**($19)**
Burr Oak	Electric	18	1	$23	$4	$2	$76	**($58)**
Cowan Lake	Electric	233	0	$0	$0	$0	$76	**($76)**
Dillon	Electric	178	0	$0	$0	$0	$76	**($76)**
East Fork	Electric	372	0	$0	$0	$0	$76	**($76)**
Hueston Woods	Electric	242	0	$0	$0	$0	$76	**($76)**
Lake Hope	Electric	44	0	$0	$0	$0	$76	**($76)**
Mohican	Electric	118	0	$0	$0	$0	$76	**($76)**
Punderson	Electric	176	0	$0	$0	$0	$76	**($76)**
Pymatuning	Electric Premium	29	0	$0	$0	$0	$76	**($76)**
Salt Fork	Electric	192	0	$0	$0	$0	$76	**($76)**
Shawnee	Electric	100	0	$0	$0	$0	$76	**($76)**

Source: Parks

As shown in **Table 5-21,** there is wide variation in the profitability of marginal electric campsites across the parks in the analysis. In over half the parks, the marginal electric campsite is not profitable. This means that constructing a full hook-up campsite on top of the marginal electric site would not entail any opportunity costs. East Harbor, conversely, has a very profitable marginal unit that produced 26 incremental nights sold in CY 2013. The first additional full hook-up campsite built at East Harbor would be subject to $598 in opportunity cost, and additional units built would be progressively more expensive in terms of opportunity cost.

Campsite Profitability Projections

With projections of sales established and opportunity costs estimated, the components are available to calculate the profitability of new full hook-up campsites in the same manner that was previously done for existing inventory (as seen in the East Harbor example in **Table 5-16**).

Table 5-22, returning to the East Harbor example, shows projected net profits by incremental full hook-up campsites if inventory were added beyond the current inventory of 23 units.

Table 5-22: East Harbor Incremental Net Profit Projection by Full Hook-Up

Campsite Number	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	FF&E Expense	Opportunity Cost	Net Profit
1	176	$5,832	$952	$214	$76	$0	$4,591
2	175	$5,799	$947	$212	$76	$0	$4,564
3	173	$5,733	$936	$210	$76	$0	$4,511
4	172	$5,700	$931	$209	$76	$0	$4,485
5	169	$5,600	$914	$205	$76	$0	$4,405
6	167	$5,534	$903	$203	$76	$0	$4,352
7	166	$5,501	$898	$202	$76	$0	$4,326
8	164	$5,435	$887	$199	$76	$0	$4,273
9	164	$5,435	$887	$199	$76	$0	$4,273
10	161	$5,335	$871	$195	$76	$0	$4,193
11	161	$5,335	$871	$195	$76	$0	$4,193
12	159	$5,269	$860	$193	$76	$0	$4,140
13	157	$5,203	$849	$191	$76	$0	$4,087
14	153	$5,070	$828	$186	$76	$0	$3,981
15	151	$5,004	$817	$183	$76	$0	$3,928
16	147	$4,871	$795	$178	$76	$0	$3,822
17	142	$4,706	$768	$172	$76	$0	$3,689
18	141	$4,673	$763	$171	$76	$0	$3,663
19	138	$4,573	$747	$168	$76	$0	$3,583
20	131	$4,341	$709	$159	$76	$0	$3,398
21	119	$3,943	$644	$144	$76	$0	$3,080
22	95	$3,148	$514	$115	$76	$0	$2,443
23	76	$2,519	$411	$92	$76	$0	$1,939
24	**57**	**$1,889**	**$308**	**$69**	**$76**	**$598**	**$837**
25	**38**	**$1,259**	**$206**	**$46**	**$76**	**$650**	**$282**
26	**19**	**$630**	**$103**	**$23**	**$76**	**$702**	**($274)**
27	**0**	**$0**	**$0**	**$0**	**$76**	**$702**	**($778)**

Source: Parks
Note: Shaded rows represent projected net profit of additional full hook-up campsites.

As shown in the last four rows of **Table 5-22**, East Harbor can sustain the addition of only two full hook-up campsites before the next incremental unit (Campsite #26) produces a negative net profit. The presence of opportunity costs hurt the new campsites' net profit to a degree, but the real driver of declining profitability in the new units is the sales trend. The negative trend in incremental nights sold that begins with Campsite #20 quickly propels revenue toward unprofitable levels. Note that even if opportunity costs were to disappear, Cabin #27 would still produce a negative net profit of ($76) due to lack of sales.

Other parks with existing inventories of full hook-up sites also display a pattern of net profit quickly declining to negative levels as additional sites are considered, resulting from sharp downward trends in nights sold. Parks with low or non-existent inventories of full hook-up sites, conversely, generally show a large potential for profit arising from the addition of new sites. Maumee Bay is one such example.

Table 5-23 shows Maumee Bay's projected incremental operating profits by full hook-up site. Because there was no established full hook-up sales trend in the park, Maumee Bay's incremental nights sold by campsite is modeled after Salt Fork.

Table 5-23: Maumee Bay Incremental Net Profit Projection by Full Hook-Up

Campsite Number	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	FF&E Expense	Opportunity Cost	Net Profit
1	215	$7,342	$1,163	$261	$76	$11	**$5,831**
2	213	$7,274	$1,152	$259	$76	$120	**$5,667**
3	210	$7,172	$1,136	$255	$76	$142	**$5,563**
4	208	$7,103	$1,125	$253	$76	$185	**$5,464**
5	203	$6,932	$1,098	$246	$76	$229	**$5,283**
6	199	$6,796	$1,077	$242	$76	$272	**$5,130**
7	195	$6,659	$1,055	$237	$76	$316	**$4,976**
8	193	$6,591	$1,044	$234	$76	$359	**$4,878**
9	189	$6,454	$1,022	$229	$76	$359	**$4,768**
10	186	$6,352	$1,006	$226	$76	$381	**$4,663**
11	178	$6,079	$963	$216	$76	$424	**$4,400**
12	173	$5,908	$936	$210	$76	$468	**$4,218**
13	165	$5,635	$893	$200	$76	$468	**$3,998**
14	156	$5,327	$844	$189	$76	$490	**$3,729**
15	146	$4,986	$790	$177	$76	$490	**$3,453**
16	135	$4,610	$730	$164	$76	$490	**$3,151**
17	121	$4,132	$655	$147	$76	$490	**$2,765**
18	106	$3,620	$573	$129	$76	$490	**$2,352**
19	82	$2,800	$444	$100	$76	$490	**$1,692**
20	38	$1,298	$206	$46	$76	$490	**$481**
21	24	$820	$130	$29	$76	$533	**$52**
22	10	$342	$54	$12	$76	$533	**($334)**
23	0	$0	$0	$0	$76	$555	**($631)**

Source: Parks

As shown in **Table 5-23**, the depth of demand at Maumee Bay can sustain 21 full hook-up campsites at profitable levels. Starting at $11.00 and quickly ramping up, opportunity costs are present and hamper profitability across all campsites, but not to the degree seen in East Harbor. The projected incremental profits shown across Maumee Bay's campsites indicate potential for positive ROI, but a final determination requires calculating the NPV of construction costs and net profits over the useful lives of each unit.

Campsite Investment NPV Results

As previously noted, to adequately inform investment decisions, the NPV calculations in the analysis must be run at the level of individual campsites. The operational inputs that underlie the NPV calculations, such as sales projections, incremental net profits and construction costs, have been developed in the prior analysis tables. However, several financial modeling assumptions still require attention to assure the NPV analysis is realistically describing Parks' investment opportunity in full hook-up campsites. With the exception of the useful life estimate, the financing assumptions used in analyzing full hook-up campsites are the same as those used in the **Cabin Investment Analysis**, and include:

- **Discount Rate –** This is the opportunity cost of the State of Ohio investing capital funds in Parks cabins rather than buying down State-issued debt. This analysis uses a discount rate of 3.00 percent, which is equal to the average of the high and low prevailing yields on AAA-rated 30-year municipal bonds during October 2014.[89]
- **Useful Life –** Using the DAS estimate of 30 years, new full hook-up campsites are assumed to last for 30 years, after which they are assumed to have no residual value.
- **Cash Flow Growth Rate –** This is the rate at which cash flow is expected to increase each year due to price increases over time. CY 2015 prices are projected to remain flat; commensurate with prices charged for CY 2013 and CY 2014.[90] This analysis assumes that starting in CY 2016 cabin prices will increase at least at a level commensurate with inflation. Therefore, a 1.87 percent annual growth rate, based on the Federal Reserve Bank of Cleveland's 10-year inflation expectations from October 2014, has been applied.

Table 5-24 shows the investment NPV generated by each full hook-up campsite at Maumee Bay. Campsites that return a positive NPV represent positive investment (i.e., economic gains over time) while those that do not represent negative investments (i.e., economic losses over time).

[89] Bloomberg Valuation Services series BVMB30Y:IND

[90] During the course of the audit administrative rules governing overnight accommodation prices were reviewed and re-submitted in accordance with the regular five-year review. Parks did not propose any price increases for the vast majority of accommodations.

Table 5-24: Maumee Bay Full Hook-Up NPV Investment Analysis

Campsite Number	CY 2013 Net Profit	Construction Costs	PV Net Profits	Investment NPV
1	$5,831	($4,246)	$145,393	**$141,147**
2	$5,667	($4,246)	$141,310	**$137,064**
3	$5,563	($4,246)	$138,709	**$134,463**
4	$5,464	($4,246)	$136,252	**$132,006**
5	$5,283	($4,246)	$131,736	**$127,490**
6	$5,130	($4,246)	$127,906	**$123,660**
7	$4,976	($4,246)	$124,077	**$119,831**
8	$4,878	($4,246)	$121,620	**$117,374**
9	$4,768	($4,246)	$118,875	**$114,628**
10	$4,663	($4,246)	$116,273	**$112,027**
11	$4,400	($4,246)	$109,699	**$105,452**
12	$4,218	($4,246)	$105,183	**$100,936**
13	$3,998	($4,246)	$99,692	**$95,446**
14	$3,729	($4,246)	$92,973	**$88,727**
15	$3,453	($4,246)	$86,109	**$81,863**
16	$3,151	($4,246)	$78,560	**$74,314**
17	$2,765	($4,246)	$68,951	**$64,705**
18	$2,352	($4,246)	$58,656	**$54,410**
19	$1,692	($4,246)	$42,184	**$37,938**
20	$481	($4,246)	$11,985	**$7,739**
21	$52	($4,246)	$1,292	**($2,954)**
22	($334)	($4,246)	($8,316)	**($12,562)**
23	($631)	($4,246)	($15,722)	**($19,968)**

Source: Parks

Note: PV of Net Profits are calculated over a unit's useful life as = $\left(\frac{\pi}{(r-g)}\right) * \left\{1 - \left[\frac{(1+g)}{(1+r)}\right]^t\right\}$ where π = CY 2013 net profit (campsite specific); r = discount rate, at 3.00 percent; g = growth rate, at 1.87 percent; t = useful life, at 30 years. This equation is commonly used in finance to value a "growing annuity".

As shown in **Table 5-24**, up to 20 new full hook-up campsites could be constructed at Maumee Bay and generate positive NPV, or economic returns. By investing in construction of these 20 campsites, Parks could generate a total NPV of $1,971,221 over the life of these assets. Any campsites built in excess of unit #20, conversely, would produce a negative return on investment, evidenced by negative NPV of Campsite #21. Campsite #21 does produce a positive net profit, and if this campsite were already constructed it would be prudent to leave it in service. However, unlike the renovations under consideration in the **Cabin Investment Analysis**, the analysis of full hook-up campsites only evaluates the construction of additional units. As such, positive NPV is the only criteria necessary to evaluate the investment potential of full hook-up campsites.

Further distinguishing the full hook-up analysis from the **Cabin Investment Analysis**, the presence of opportunity costs as an input preclude the type of break-even threshold analysis shown previously for cabins in **Chart 5-4**. Because the net profit of each full hook-up campsite is tied directly to a particular electric campsite, the approach used to calculate break-even nights sold cannot be carried over.

Table 5-25 shows the summarized financial impact of pursuing positive NPV investment opportunities for building full hook-up campsites in tier-1 parks. (See **Appendix 5.B** for full detailed operating profiles for each campground property).

Table 5-25: Financial Impact of Full Hook-Up Sites with Positive NPV Investment Opportunities

Park	Current Inventory	Positive NPV Campsites Added	Cost of Investment	PV Net Operating Profit	NPV
Dillon	0	39	$165,599	$3,862,468	**$3,696,869**
Hocking Hills	0	29	$123,138	$2,406,286	**$2,283,148**
Geneva	3	26	$110,400	$2,134,265	**$2,023,866**
Maumee Bay	0	20	$84,923	$2,056,144	**$1,971,221**
Deer Creek	0	20	$84,923	$2,028,557	**$1,943,634**
Lake Loramie	0	12	$50,954	$810,810	**$759,856**
Shawnee	0	12	$50,954	$786,354	**$735,400**
Hueston Woods	0	8	$33,969	$586,816	**$552,847**
Cowan Lake	0	8	$33,969	$580,268	**$546,299**
Alum Creek	3	11	$46,708	$592,683	**$545,976**
Caesar Creek	0	8	$33,969	$573,675	**$539,706**
Lake Hope	0	6	$25,477	$429,748	**$404,271**
Burr Oak	0	6	$25,477	$406,392	**$380,915**
West Branch	29	2	$8,492	$34,263	**$25,771**
East Harbor	23	2	$8,492	$27,899	**$19,407**
Salt Fork	20	2	$8,492	$23,464	**$14,972**
Indian Lake	13	1	$4,246	$17,608	**$13,362**
Punderson	5	1	$4,246	$15,811	**$11,565**
South Bass Island	10	1	$4,246	$12,241	**$7,995**
East Fork	7	1	$4,246	$10,562	**$6,316**
Total	**207**	**215**	**$912,920**	**$17,396,316**	**$16,483,396**

Source: Parks

As shown in **Table 5-25**, Parks has the opportunity to earn a positive ROI by roughly doubling its current inventory of full hook-up campsites. By adding the 215 positive NPV full hook-up campsites identified in the analysis, Parks has the opportunity to generate positive investment NPV; a value gain of **$16,483,396**, which will be realized over 30 years, the expected useful life of this type of asset.

Conclusion

Parks campgrounds are user-paid amenities that currently provide a substantial source of operating revenue for the Division. However, through active management and careful financial evaluation, especially when considering investment opportunities, Parks can further improve the financial position of its campgrounds. Investment in positive NPV full hook-up campsite additions will provide significant ROI for Parks.

Recommendation 5.2: Parks should develop an ongoing framework for evaluating campsite operating performance as well as for evaluating campsite investment opportunities. Doing so will require the Division to routinely monitor, measure, and evaluate incremental profitability at both the park location and campsite level. Profitability analysis should be used not only to guide day-to-day operating decisions, but also to maximize the returns of investment decisions pertaining to the addition of new full hook-up campsites.

Financial Implication 5.2: As shown in **Table 5-25**, targeting investment dollars toward positive NPV campsites could result in a value gain of **$16,483,396**, or an IRR of 78.3 percent, realized over 30 years, the expected useful life of this type of asset. In simplified terms, the targeted initial investment of $912,920 would result in annual operating profits ranging from $697,692 to $1,194,006 with an average annual net impact of **$894,065**.

Appendix 5.A: Cabin Operating and Investment Profiles

The following pages present operating and investment profiles for each park-specific, cabin operation for calendar year (CY) 2013.

For additional detail or technical definitions of data points shown in the profiles see **Appendix 5.C: Operating and Investment Profiles Description**.

Buck Creek

Preferred Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Buck Creek	Cabin	Preferred	27	27.9%	$83.74	$23.37	2,750	2	$230,295

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	2,750	$230,295	$27,500	$27,896	$174,899	$58,174	**$116,725**
Operating Profit per Average Unit	102	$8,529	$1,019	$1,033	$6,478	$2,155	**$4,323**
Operating Profit per Marginal Unit	2	$167	$20	$20	$127	$2,155	**($2,027)**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**33.88**	**22**			**$0.00**	**93.86**	**12**

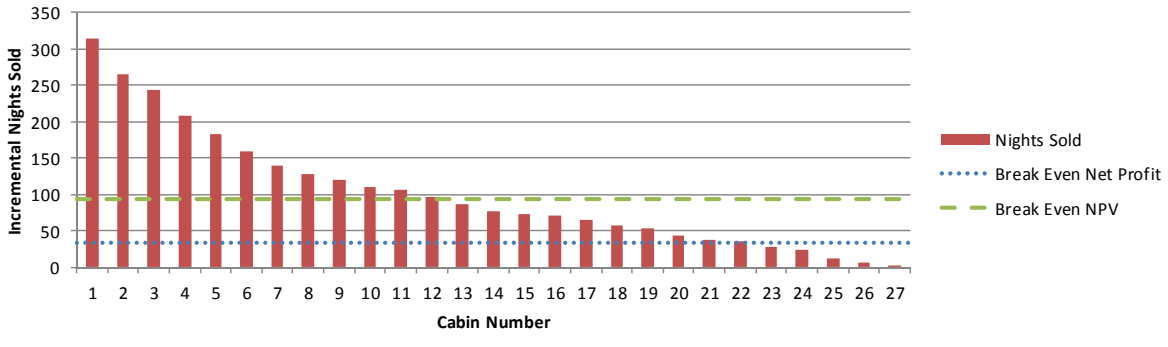
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	314	$26,296	$3,140	$3,185	$19,970	$2,155	**$17,816**	$132,100	$616,916	**$484,816**
2	266	$22,276	$2,660	$2,698	$16,918	$2,155	**$14,763**	$132,100	$511,205	**$379,105**
3	244	$20,433	$2,440	$2,475	$15,518	$2,155	**$13,364**	$132,100	$462,754	**$330,654**
4	209	$17,502	$2,090	$2,120	$13,292	$2,155	**$11,138**	$132,100	$385,673	**$253,573**
5	182	$15,241	$1,820	$1,846	$11,575	$2,155	**$9,421**	$132,100	$326,211	**$194,111**
6	159	$13,315	$1,590	$1,613	$10,112	$2,155	**$7,958**	$132,100	$275,558	**$143,458**
7	139	$11,640	$1,390	$1,410	$8,840	$2,155	**$6,686**	$132,100	$231,512	**$99,412**
8	129	$10,803	$1,290	$1,309	$8,204	$2,155	**$6,050**	$132,100	$209,489	**$77,389**
9	120	$10,049	$1,200	$1,217	$7,632	$2,155	**$5,477**	$132,100	$189,668	**$57,568**
10	111	$9,296	$1,110	$1,126	$7,060	$2,155	**$4,905**	$132,100	$169,847	**$37,747**
11	106	$8,877	$1,060	$1,075	$6,742	$2,155	**$4,587**	$132,100	$158,836	**$26,736**
12	97	$8,123	$970	$984	$6,169	$2,155	**$4,015**	$132,100	$139,015	**$6,915**
13	86	$7,202	$860	$872	$5,470	$2,155	**$3,315**	$132,100	$114,789	**($17,311)**
14	78	$6,532	$780	$791	$4,961	$2,155	**$2,806**	$132,100	$97,171	**($34,929)**
15	74	$6,197	$740	$751	$4,706	$2,155	**$2,552**	$132,100	$88,362	**($43,738)**
16	71	$5,946	$710	$720	$4,516	$2,155	**$2,361**	$132,100	$81,755	**($50,345)**
17	65	$5,443	$650	$659	$4,134	$2,155	**$1,979**	$132,100	$68,541	**($63,559)**
18	57	$4,773	$570	$578	$3,625	$2,155	**$1,471**	$132,100	$50,923	**($81,177)**
19	54	$4,522	$540	$548	$3,434	$2,155	**$1,280**	$132,100	$44,316	**($87,784)**
20	43	$3,601	$430	$436	$2,735	$2,155	**$580**	$132,100	$20,090	**($112,010)**
21	37	$3,099	$370	$375	$2,353	$2,155	**$199**	$132,100	$6,876	**($125,224)**
22	35	$2,931	$350	$355	$2,226	$2,155	**$71**	$132,100	$2,472	**($129,628)**
23	29	$2,429	$290	$294	$1,844	$2,155	**($310)**	$132,100	($10,742)	**($142,842)**
24	24	$2,010	$240	$243	$1,526	$2,155	**($628)**	$132,100	($21,754)	**($153,854)**
25	12	$1,005	$120	$122	$763	$2,155	**($1,391)**	$132,100	($48,181)	**($180,281)**
26	7	$586	$70	$71	$445	$2,155	**($1,709)**	$132,100	($59,193)	**($191,293)**
27	2	$167	$20	$20	$127	$2,155	**($2,027)**	$132,100	($70,204)	**($202,304)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	12	$1,585,200	$3,676,684	$2,091,484	…….. *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	5	N/A	$210,074	$870,574	…….. *Disposal Below Dotted Blue Line*
Total Financial Impact	**17**	**$1,585,200**	**$3,886,758**	**$2,962,058**	

Incremental Nights Sold (CY 2013)



Cowan Lake

Preferred Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Cowan Lake	Cabin	Preferred	25	27.3%	$93.18	$25.44	2,491	0	$232,112

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	2,491	$232,112	$24,910	$25,269	$181,933	$53,865	**$128,068**
Operating Profit per Average Unit	100	$9,284	$996	$1,011	$7,277	$2,155	**$5,123**
Operating Profit per Marginal Unit	-	$0	$0	$0	$0	$2,155	**($2,155)**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**29.50**	**22**			**$0.00**	**81.73**	**14**

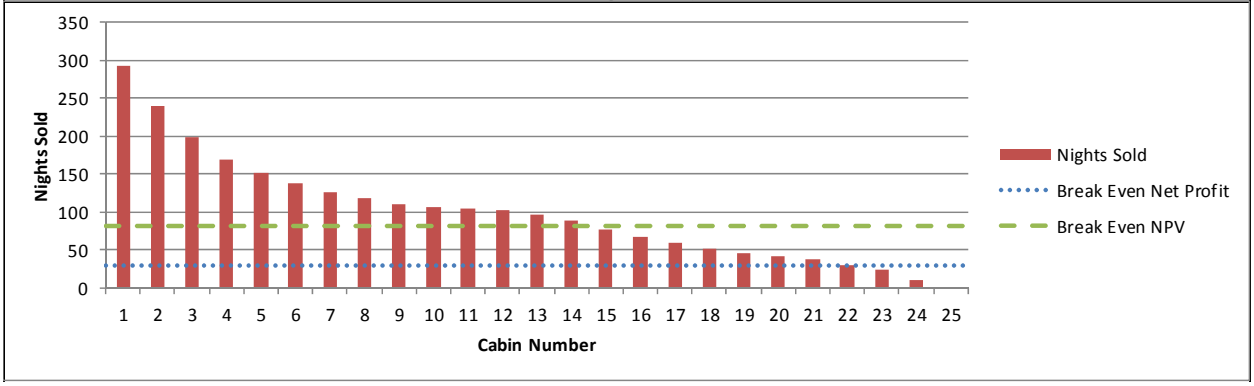
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	293	$27,302	$2,930	$2,972	$21,400	$2,155	**$19,245**	$132,100	$666,409	**$534,309**
2	240	$22,363	$2,400	$2,435	$17,529	$2,155	**$15,374**	$132,100	$532,368	**$400,268**
3	198	$18,450	$1,980	$2,009	$14,461	$2,155	**$12,307**	$132,100	$426,147	**$294,047**
4	169	$15,747	$1,690	$1,714	$12,343	$2,155	**$10,189**	$132,100	$352,804	**$220,704**
5	152	$14,163	$1,520	$1,542	$11,102	$2,155	**$8,947**	$132,100	$309,810	**$177,710**
6	137	$12,766	$1,370	$1,390	$10,006	$2,155	**$7,851**	$132,100	$271,874	**$139,774**
7	127	$11,834	$1,270	$1,288	$9,276	$2,155	**$7,121**	$132,100	$246,583	**$114,483**
8	119	$11,088	$1,190	$1,207	$8,691	$2,155	**$6,537**	$132,100	$226,351	**$94,251**
9	111	$10,343	$1,110	$1,126	$8,107	$2,155	**$5,952**	$132,100	$206,118	**$74,018**
10	107	$9,970	$1,070	$1,085	$7,815	$2,155	**$5,660**	$132,100	$196,002	**$63,902**
11	104	$9,691	$1,040	$1,055	$7,596	$2,155	**$5,441**	$132,100	$188,415	**$56,315**
12	102	$9,504	$1,020	$1,035	$7,450	$2,155	**$5,295**	$132,100	$183,356	**$51,256**
13	96	$8,945	$960	$974	$7,011	$2,155	**$4,857**	$132,100	$168,182	**$36,082**
14	89	$8,293	$890	$903	$6,500	$2,155	**$4,346**	$132,100	$150,478	**$18,378**
15	78	$7,268	$780	$791	$5,697	$2,155	**$3,542**	$132,100	$122,659	**($9,441)**
16	67	$6,243	$670	$680	$4,893	$2,155	**$2,739**	$132,100	$94,839	**($37,261)**
17	60	$5,591	$600	$609	$4,382	$2,155	**$2,228**	$132,100	$77,135	**($54,965)**
18	52	$4,845	$520	$527	$3,798	$2,155	**$1,643**	$132,100	$56,903	**($75,197)**
19	45	$4,193	$450	$456	$3,287	$2,155	**$1,132**	$132,100	$39,199	**($92,901)**
20	41	$3,820	$410	$416	$2,994	$2,155	**$840**	$132,100	$29,083	**($103,017)**
21	38	$3,541	$380	$385	$2,775	$2,155	**$621**	$132,100	$21,496	**($110,604)**
22	31	$2,889	$310	$314	$2,264	$2,155	**$110**	$132,100	$3,792	**($128,308)**
23	24	$2,236	$240	$243	$1,753	$2,155	**($402)**	$132,100	($13,911)	**($146,011)**
24	11	$1,025	$110	$112	$803	$2,155	**($1,351)**	$132,100	($46,789)	**($178,889)**
25	0	$0	$0	$0	$0	$2,155	**($2,155)**	$132,100	($74,609)	**($206,709)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	14	$1,849,400	$4,124,899	$2,275,499	..... *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	3	N/A	$135,310	$531,610	..... *Disposal Below Dotted Blue Line*
Total Financial Impact	**17**	**$1,849,400**	**$4,260,208**	**$2,807,108**	

Incremental Nights Sold (CY 2013)



Cowan Lake

Premium Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Cowan Lake	Cabin	Premium	2	28.6%	$113.71	$32.55	209	74	$23,765

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	209	$23,765	$2,090	$2,201	$19,474	$4,309	**$15,164**
Operating Profit per Average Unit	105	$11,883	$1,045	$1,101	$9,737	$2,155	**$7,582**
Operating Profit per Marginal Unit	74	$8,414	$740	$779	$6,895	$2,155	**$4,740**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**23.12**	**2**			**$0.00**	**64.07**	**2**

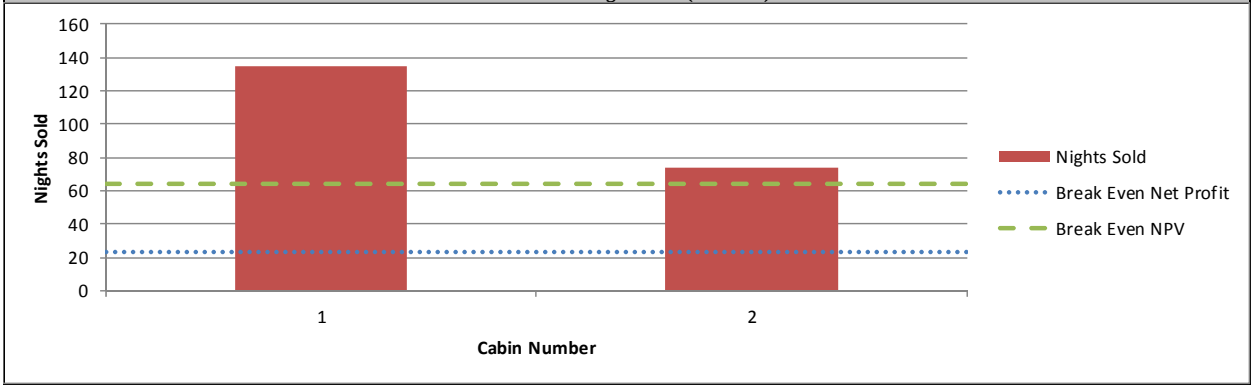
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	135	$15,351	$1,350	$1,422	$12,579	$2,155	**$10,424**	$132,100	$360,959	**$228,859**
2	74	$8,414	$740	$779	$6,895	$2,155	**$4,740**	$132,100	$164,147	**$32,047**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	2	$264,200	$525,106	$260,906	…….. *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	0	N/A	$0	$0	…….. *Disposal Below Dotted Blue Line*
Total Financial Impact	**2**	**$264,200**	**$525,106**	**$260,906**	

Incremental Nights Sold (CY 2013)



Dillon

Preferred Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Dillon	Cabin	Preferred	14	38.2%	$92.07	$35.15	1,951	31	$179,620

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	1,951	$179,620	$19,510	$19,791	$140,319	$30,165	**$110,154**
Operating Profit per Average Unit	139	$12,830	$1,394	$1,414	$10,023	$2,155	**$7,868**
Operating Profit per Marginal Unit	31	$2,854	$310	$314	$2,230	$2,155	**$75**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**29.96**	**14**			**$0.00**	**83.00**	**10**

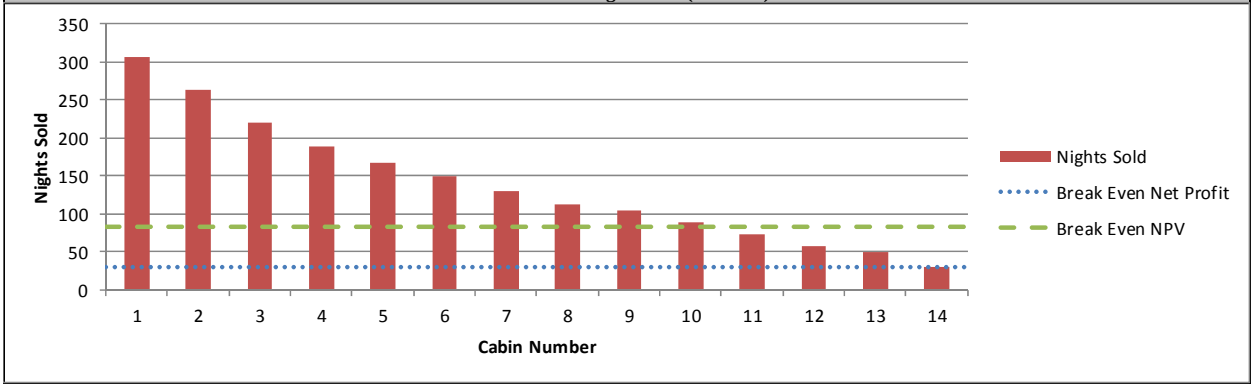
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	307	$28,264	$3,070	$3,114	$22,080	$2,155	**$19,925**	$132,100	$689,964	**$557,864**
2	263	$24,213	$2,630	$2,668	$18,915	$2,155	**$16,761**	$132,100	$580,384	**$448,284**
3	220	$20,254	$2,200	$2,232	$15,823	$2,155	**$13,668**	$132,100	$473,294	**$341,194**
4	189	$17,400	$1,890	$1,917	$13,593	$2,155	**$11,439**	$132,100	$396,089	**$263,989**
5	167	$15,375	$1,670	$1,694	$12,011	$2,155	**$9,856**	$132,100	$341,299	**$209,199**
6	150	$13,810	$1,500	$1,522	$10,788	$2,155	**$8,634**	$132,100	$298,961	**$166,861**
7	131	$12,061	$1,310	$1,329	$9,422	$2,155	**$7,267**	$132,100	$251,642	**$119,542**
8	113	$10,403	$1,130	$1,146	$8,127	$2,155	**$5,973**	$132,100	$206,814	**$74,714**
9	104	$9,575	$1,040	$1,055	$7,480	$2,155	**$5,325**	$132,100	$184,400	**$52,300**
10	88	$8,102	$880	$893	$6,329	$2,155	**$4,174**	$132,100	$144,552	**$12,452**
11	74	$6,813	$740	$751	$5,322	$2,155	**$3,168**	$132,100	$109,686	**($22,414)**
12	58	$5,340	$580	$588	$4,171	$2,155	**$2,017**	$132,100	$69,838	**($62,262)**
13	49	$4,511	$490	$497	$3,524	$2,155	**$1,370**	$132,100	$47,424	**($84,676)**
14	31	$2,854	$310	$314	$2,230	$2,155	**$75**	$132,100	$2,595	**($129,505)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	10	$1,321,000	$3,567,398	$2,246,398	…….. *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	0	N/A	$0	$0	…….. *Disposal Below Dotted Blue Line*
Total Financial Impact	**10**	**$1,321,000**	**$3,567,398**	**$2,246,398**	

Incremental Nights Sold (CY 2013)



Dillon

Premium Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Dillon	Cabin	Premium	15	28.1%	$109.75	$30.83	1,538	37	$168,794

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	1,538	$168,794	$15,380	$16,200	$137,214	$32,319	**$104,894**
Operating Profit per Average Unit	103	$11,253	$1,025	$1,080	$9,148	$2,155	**$6,993**
Operating Profit per Marginal Unit	37	$4,061	$370	$390	$3,301	$2,155	**$1,146**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**24.15**	**15**			**$0.00**	**66.91**	**10**

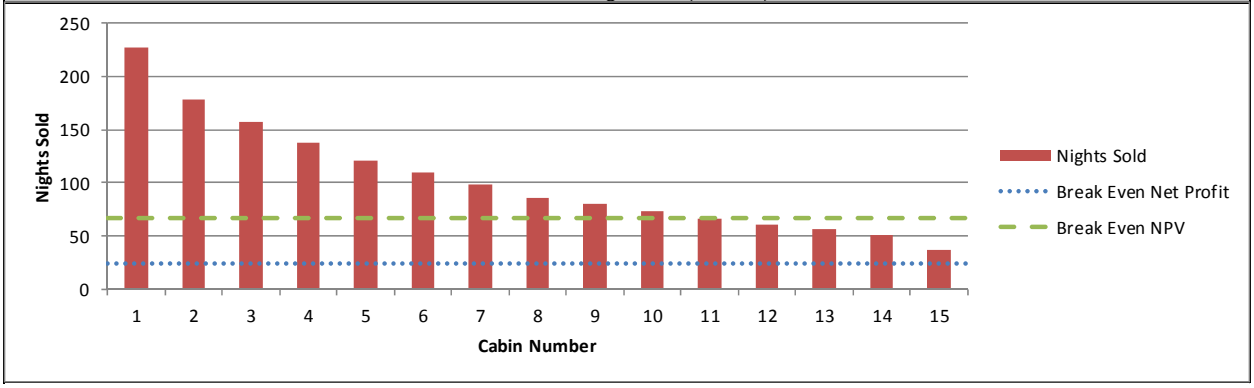
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	227	$24,913	$2,270	$2,391	$20,252	$2,155	**$18,097**	$132,100	$626,668	**$494,568**
2	179	$19,645	$1,790	$1,885	$15,970	$2,155	**$13,815**	$132,100	$478,380	**$346,280**
3	157	$17,231	$1,570	$1,654	$14,007	$2,155	**$11,852**	$132,100	$410,415	**$278,315**
4	138	$15,145	$1,380	$1,454	$12,312	$2,155	**$10,157**	$132,100	$351,718	**$219,618**
5	121	$13,280	$1,210	$1,275	$10,795	$2,155	**$8,640**	$132,100	$299,199	**$167,099**
6	109	$11,963	$1,090	$1,148	$9,724	$2,155	**$7,570**	$132,100	$262,128	**$130,028**
7	98	$10,755	$980	$1,032	$8,743	$2,155	**$6,589**	$132,100	$228,145	**$96,045**
8	86	$9,438	$860	$906	$7,673	$2,155	**$5,518**	$132,100	$191,073	**$58,973**
9	80	$8,780	$800	$843	$7,137	$2,155	**$4,983**	$132,100	$172,537	**$40,437**
10	73	$8,012	$730	$769	$6,513	$2,155	**$4,358**	$132,100	$150,912	**$18,812**
11	66	$7,243	$660	$695	$5,888	$2,155	**$3,734**	$132,100	$129,287	**($2,813)**
12	60	$6,585	$600	$632	$5,353	$2,155	**$3,198**	$132,100	$110,751	**($21,349)**
13	56	$6,146	$560	$590	$4,996	$2,155	**$2,841**	$132,100	$98,393	**($33,707)**
14	51	$5,597	$510	$537	$4,550	$2,155	**$2,395**	$132,100	$82,947	**($49,153)**
15	37	$4,061	$370	$390	$3,301	$2,155	**$1,146**	$132,100	$39,696	**($92,404)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	10	$1,321,000	$3,171,175	$1,850,175	..... *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	0	N/A	$0	$0	..... *Disposal Below Dotted Blue Line*
Total Financial Impact	**10**	**$1,321,000**	**$3,171,175**	**$1,850,175**	

Incremental Nights Sold (CY 2013)



Hocking Hills

Preferred Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Hocking Hills	Cabin	Preferred	31	39.1%	$105.61	$41.34	4,429	2	$467,769

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	4,429	$467,769	$44,290	$44,928	$378,551	$66,793	**$311,758**
Operating Profit per Average Unit	143	$15,089	$1,429	$1,449	$12,211	$2,155	**$10,057**
Operating Profit per Marginal Unit	2	$211	$20	$20	$171	$2,155	**($1,984)**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**25.21**	**30**			**$0.00**	**69.84**	**25**

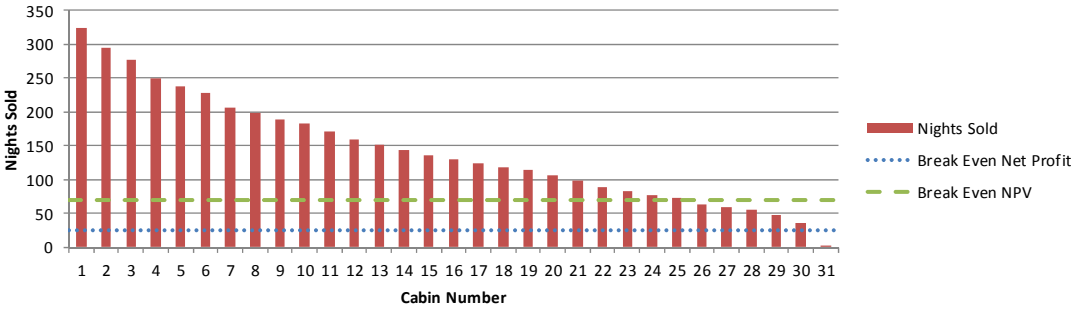
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	325	$34,325	$3,250	$3,297	$27,778	$2,155	**$25,623**	$132,100	$887,279	**$755,179**
2	295	$31,156	$2,950	$2,992	$25,214	$2,155	**$23,059**	$132,100	$798,490	**$666,390**
3	278	$29,361	$2,780	$2,820	$23,761	$2,155	**$21,606**	$132,100	$748,176	**$616,076**
4	250	$26,404	$2,500	$2,536	$21,368	$2,155	**$19,213**	$132,100	$665,305	**$533,205**
5	237	$25,031	$2,370	$2,404	$20,257	$2,155	**$18,102**	$132,100	$626,830	**$494,730**
6	229	$24,186	$2,290	$2,323	$19,573	$2,155	**$17,418**	$132,100	$603,152	**$471,052**
7	206	$21,757	$2,060	$2,090	$17,607	$2,155	**$15,452**	$132,100	$535,080	**$402,980**
8	199	$21,017	$1,990	$2,019	$17,009	$2,155	**$14,854**	$132,100	$514,363	**$382,263**
9	188	$19,856	$1,880	$1,907	$16,069	$2,155	**$13,914**	$132,100	$481,806	**$349,706**
10	183	$19,328	$1,830	$1,856	$15,641	$2,155	**$13,487**	$132,100	$467,008	**$334,908**
11	171	$18,060	$1,710	$1,735	$14,616	$2,155	**$12,461**	$132,100	$431,492	**$299,392**
12	159	$16,793	$1,590	$1,613	$13,590	$2,155	**$11,435**	$132,100	$395,976	**$263,876**
13	152	$16,053	$1,520	$1,542	$12,992	$2,155	**$10,837**	$132,100	$375,259	**$243,159**
14	144	$15,209	$1,440	$1,461	$12,308	$2,155	**$10,153**	$132,100	$351,582	**$219,482**
15	135	$14,258	$1,350	$1,369	$11,539	$2,155	**$9,384**	$132,100	$324,945	**$192,845**
16	130	$13,730	$1,300	$1,319	$11,111	$2,155	**$8,957**	$132,100	$310,146	**$178,046**
17	124	$13,096	$1,240	$1,258	$10,598	$2,155	**$8,444**	$132,100	$292,388	**$160,288**
18	118	$12,463	$1,180	$1,197	$10,086	$2,155	**$7,931**	$132,100	$274,630	**$142,530**
19	115	$12,146	$1,150	$1,167	$9,829	$2,155	**$7,675**	$132,100	$265,752	**$133,652**
20	106	$11,195	$1,060	$1,075	$9,060	$2,155	**$6,905**	$132,100	$239,115	**$107,015**
21	99	$10,456	$990	$1,004	$8,462	$2,155	**$6,307**	$132,100	$218,397	**$86,297**
22	89	$9,400	$890	$903	$7,607	$2,155	**$5,452**	$132,100	$188,800	**$56,700**
23	82	$8,660	$820	$832	$7,009	$2,155	**$4,854**	$132,100	$168,083	**$35,983**
24	77	$8,132	$770	$781	$6,581	$2,155	**$4,427**	$132,100	$153,285	**$21,185**
25	73	$7,710	$730	$741	$6,239	$2,155	**$4,085**	$132,100	$141,446	**$9,346**
26	63	$6,654	$630	$639	$5,385	$2,155	**$3,230**	$132,100	$111,849	**($20,251)**
27	60	$6,337	$600	$609	$5,128	$2,155	**$2,974**	$132,100	$102,970	**($29,130)**
28	56	$5,914	$560	$568	$4,786	$2,155	**$2,632**	$132,100	$91,132	**($40,968)**
29	48	$5,070	$480	$487	$4,103	$2,155	**$1,948**	$132,100	$67,455	**($64,645)**
30	36	$3,802	$360	$365	$3,077	$2,155	**$922**	$132,100	$31,939	**($100,161)**
31	2	$211	$20	$20	$171	$2,155	**($1,984)**	$132,100	($68,690)	**($200,790)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	25	$3,302,500	$10,458,786	$7,156,286	..... *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	1	N/A	$68,690	$200,790	..... *Disposal Below Dotted Blue Line*
Total Financial Impact	**26**	**$3,302,500**	**$10,527,475**	**$7,357,075**	

Incremental Nights Sold (CY 2013)



Hocking Hills

Premium Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Hocking Hills	Cabin	Premium	9	45.7%	$120.65	$55.12	1,334	73	$160,949

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	1,334	$160,949	$13,340	$14,051	$133,558	$19,391	**$114,167**
Operating Profit per Average Unit	148	$17,883	$1,482	$1,561	$14,840	$2,155	**$12,685**
Operating Profit per Marginal Unit	73	$8,808	$730	$769	$7,309	$2,155	**$5,154**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**21.52**	**9**			**$0.00**	**59.62**	**9**

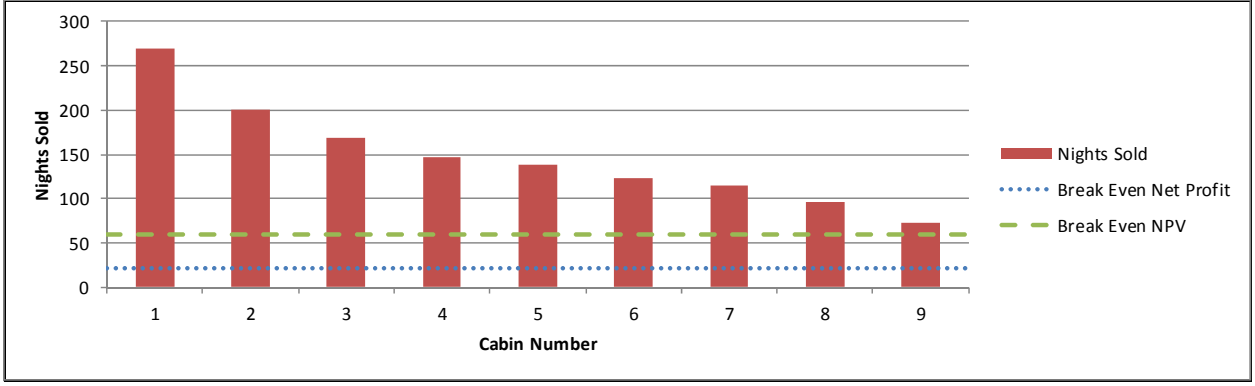
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	270	$32,576	$2,700	$2,844	$27,032	$2,155	**$24,877**	$132,100	$861,445	**$729,345**
2	200	$24,130	$2,000	$2,107	$20,024	$2,155	**$17,869**	$132,100	$618,764	**$486,664**
3	169	$20,390	$1,690	$1,780	$16,920	$2,155	**$14,765**	$132,100	$511,292	**$379,192**
4	147	$17,736	$1,470	$1,548	$14,717	$2,155	**$12,563**	$132,100	$435,020	**$302,920**
5	139	$16,771	$1,390	$1,464	$13,916	$2,155	**$11,762**	$132,100	$407,286	**$275,186**
6	124	$14,961	$1,240	$1,306	$12,415	$2,155	**$10,260**	$132,100	$355,283	**$223,183**
7	115	$13,875	$1,150	$1,211	$11,514	$2,155	**$9,359**	$132,100	$324,081	**$191,981**
8	97	$11,703	$970	$1,022	$9,711	$2,155	**$7,557**	$132,100	$261,677	**$129,577**
9	73	$8,808	$730	$769	$7,309	$2,155	**$5,154**	$132,100	$178,472	**$46,372**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	9	$1,188,900	$3,953,320	$2,764,420	…….. *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	0	N/A	$0	$0	…….. *Disposal Below Dotted Blue Line*
Total Financial Impact	**9**	**$1,188,900**	**$3,953,320**	**$2,764,420**	

Incremental Nights Sold (CY 2013)



Lake Hope

Preferred Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Lake Hope	Cabin	Preferred	25	42.8%	$80.18	$34.30	3,904	14	$313,028

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	3,904	$313,028	$39,040	$39,602	$234,386	$53,865	**$180,520**
Operating Profit per Average Unit	156	$12,521	$1,562	$1,584	$9,375	$2,155	**$7,221**
Operating Profit per Marginal Unit	14	$1,123	$140	$142	$841	$2,155	**($1,314)**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**35.89**	**24**			**$0.00**	**99.43**	**20**

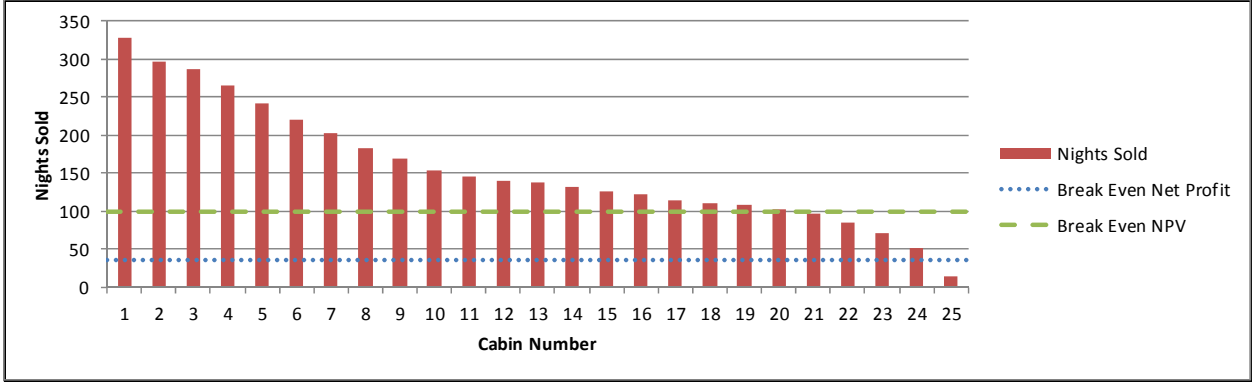
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	328	$26,299	$3,280	$3,327	$19,692	$2,155	**$17,538**	$132,100	$607,287	**$475,187**
2	297	$23,814	$2,970	$3,013	$17,831	$2,155	**$15,676**	$132,100	$542,839	**$410,739**
3	286	$22,932	$2,860	$2,901	$17,171	$2,155	**$15,016**	$132,100	$519,971	**$387,871**
4	266	$21,328	$2,660	$2,698	$15,970	$2,155	**$13,815**	$132,100	$478,392	**$346,292**
5	241	$19,324	$2,410	$2,445	$14,469	$2,155	**$12,314**	$132,100	$426,418	**$294,318**
6	221	$17,720	$2,210	$2,242	$13,268	$2,155	**$11,114**	$132,100	$384,839	**$252,739**
7	203	$16,277	$2,030	$2,059	$12,188	$2,155	**$10,033**	$132,100	$347,418	**$215,318**
8	183	$14,673	$1,830	$1,856	$10,987	$2,155	**$8,832**	$132,100	$305,839	**$173,739**
9	169	$13,551	$1,690	$1,714	$10,146	$2,155	**$7,992**	$132,100	$276,734	**$144,634**
10	154	$12,348	$1,540	$1,562	$9,246	$2,155	**$7,091**	$132,100	$245,549	**$113,449**
11	145	$11,626	$1,450	$1,471	$8,705	$2,155	**$6,551**	$132,100	$226,839	**$94,739**
12	140	$11,225	$1,400	$1,420	$8,405	$2,155	**$6,251**	$132,100	$216,444	**$84,344**
13	138	$11,065	$1,380	$1,400	$8,285	$2,155	**$6,131**	$132,100	$212,286	**$80,186**
14	132	$10,584	$1,320	$1,339	$7,925	$2,155	**$5,770**	$132,100	$199,812	**$67,712**
15	126	$10,103	$1,260	$1,278	$7,565	$2,155	**$5,410**	$132,100	$187,339	**$55,239**
16	122	$9,782	$1,220	$1,238	$7,325	$2,155	**$5,170**	$132,100	$179,023	**$46,923**
17	114	$9,141	$1,140	$1,156	$6,844	$2,155	**$4,690**	$132,100	$162,391	**$30,291**
18	111	$8,900	$1,110	$1,126	$6,664	$2,155	**$4,510**	$132,100	$156,154	**$24,054**
19	108	$8,660	$1,080	$1,096	$6,484	$2,155	**$4,329**	$132,100	$149,918	**$17,818**
20	103	$8,259	$1,030	$1,045	$6,184	$2,155	**$4,029**	$132,100	$139,523	**$7,423**
21	96	$7,697	$960	$974	$5,764	$2,155	**$3,609**	$132,100	$124,970	**($7,130)**
22	84	$6,735	$840	$852	$5,043	$2,155	**$2,889**	$132,100	$100,023	**($32,077)**
23	71	$5,693	$710	$720	$4,263	$2,155	**$2,108**	$132,100	$72,996	**($59,104)**
24	52	$4,169	$520	$527	$3,122	$2,155	**$967**	$132,100	$33,496	**($98,604)**
25	14	$1,123	$140	$142	$841	$2,155	**($1,314)**	$132,100	($45,504)	**($177,604)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	20	$2,642,000	$5,965,013	$3,323,013	..... *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	1	N/A	$45,504	$177,604	..... *Disposal Below Dotted Blue Line*
Total Financial Impact	**21**	**$2,642,000**	**$6,010,517**	**$3,500,617**	

Incremental Nights Sold (CY 2013)



Lake Hope

Woodburner Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Lake Hope	Cabin	Woodburner	41	46.7%	$76.79	$35.89	6,995	5	$537,114

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	6,995	$537,114	$69,950	$83,940	$383,224	$88,339	**$294,885**
Operating Profit per Average Unit	171	$13,100	$1,706	$2,047	$9,347	$2,155	**$7,192**
Operating Profit per Marginal Unit	5	$384	$50	$60	$274	$2,155	**($1,881)**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**39.33**	**39**			**$0.00**	**108.96**	**28**

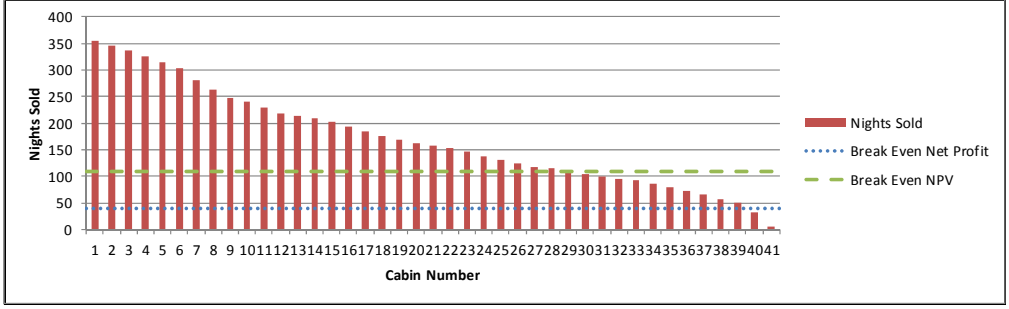
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	355	$27,259	$3,550	$4,260	$19,449	$2,155	**$17,294**	$132,100	$598,857	**$466,757**
2	346	$26,568	$3,460	$4,152	$18,956	$2,155	**$16,801**	$132,100	$581,783	**$449,683**
3	337	$25,877	$3,370	$4,044	$18,463	$2,155	**$16,308**	$132,100	$564,710	**$432,610**
4	326	$25,032	$3,260	$3,912	$17,860	$2,155	**$15,705**	$132,100	$543,842	**$411,742**
5	315	$24,187	$3,150	$3,780	$17,257	$2,155	**$15,103**	$132,100	$522,974	**$390,874**
6	304	$23,343	$3,040	$3,648	$16,655	$2,155	**$14,500**	$132,100	$502,106	**$370,006**
7	281	$21,577	$2,810	$3,372	$15,395	$2,155	**$13,240**	$132,100	$458,473	**$326,373**
8	264	$20,271	$2,640	$3,168	$14,463	$2,155	**$12,309**	$132,100	$426,222	**$294,122**
9	248	$19,043	$2,480	$2,976	$13,587	$2,155	**$11,432**	$132,100	$395,869	**$263,769**
10	240	$18,428	$2,400	$2,880	$13,148	$2,155	**$10,994**	$132,100	$380,692	**$248,592**
11	229	$17,584	$2,290	$2,748	$12,546	$2,155	**$10,391**	$132,100	$359,824	**$227,724**
12	219	$16,816	$2,190	$2,628	$11,998	$2,155	**$9,843**	$132,100	$340,853	**$208,753**
13	214	$16,432	$2,140	$2,568	$11,724	$2,155	**$9,569**	$132,100	$331,368	**$199,268**
14	210	$16,125	$2,100	$2,520	$11,505	$2,155	**$9,350**	$132,100	$323,779	**$191,679**
15	202	$15,511	$2,020	$2,424	$11,067	$2,155	**$8,912**	$132,100	$308,603	**$176,503**
16	193	$14,820	$1,930	$2,316	$10,574	$2,155	**$8,419**	$132,100	$291,529	**$159,429**
17	185	$14,205	$1,850	$2,220	$10,135	$2,155	**$7,981**	$132,100	$276,352	**$144,252**
18	176	$13,514	$1,760	$2,112	$9,642	$2,155	**$7,488**	$132,100	$259,278	**$127,178**
19	168	$12,900	$1,680	$2,016	$9,204	$2,155	**$7,049**	$132,100	$244,102	**$112,002**
20	162	$12,439	$1,620	$1,944	$8,875	$2,155	**$6,721**	$132,100	$232,719	**$100,619**
21	157	$12,055	$1,570	$1,884	$8,601	$2,155	**$6,447**	$132,100	$223,234	**$91,134**
22	152	$11,671	$1,520	$1,824	$8,327	$2,155	**$6,173**	$132,100	$213,748	**$81,648**
23	147	$11,287	$1,470	$1,764	$8,053	$2,155	**$5,899**	$132,100	$204,263	**$72,163**
24	138	$10,596	$1,380	$1,656	$7,560	$2,155	**$5,406**	$132,100	$187,189	**$55,089**
25	130	$9,982	$1,300	$1,560	$7,122	$2,155	**$4,967**	$132,100	$172,012	**$39,912**
26	123	$9,445	$1,230	$1,476	$6,739	$2,155	**$4,584**	$132,100	$158,733	**$26,633**
27	118	$9,061	$1,180	$1,416	$6,465	$2,155	**$4,310**	$132,100	$149,247	**$17,147**
28	114	$8,754	$1,140	$1,368	$6,246	$2,155	**$4,091**	$132,100	$141,659	**$9,559**
29	106	$8,139	$1,060	$1,272	$5,807	$2,155	**$3,653**	$132,100	$126,482	**($5,618)**
30	103	$7,909	$1,030	$1,236	$5,643	$2,155	**$3,488**	$132,100	$120,791	**($11,309)**
31	99	$7,602	$990	$1,188	$5,424	$2,155	**$3,269**	$132,100	$113,203	**($18,897)**
32	94	$7,218	$940	$1,128	$5,150	$2,155	**$2,995**	$132,100	$103,717	**($28,383)**
33	92	$7,064	$920	$1,104	$5,040	$2,155	**$2,886**	$132,100	$99,923	**($32,177)**
34	86	$6,604	$860	$1,032	$4,712	$2,155	**$2,557**	$132,100	$88,541	**($43,559)**
35	79	$6,066	$790	$948	$4,328	$2,155	**$2,173**	$132,100	$75,261	**($56,839)**
36	73	$5,605	$730	$876	$3,999	$2,155	**$1,845**	$132,100	$63,878	**($68,222)**
37	66	$5,068	$660	$792	$3,616	$2,155	**$1,461**	$132,100	$50,599	**($81,501)**
38	57	$4,377	$570	$684	$3,123	$2,155	**$968**	$132,100	$33,525	**($98,575)**
39	50	$3,839	$500	$600	$2,739	$2,155	**$585**	$132,100	$20,245	**($111,855)**
40	32	$2,457	$320	$384	$1,753	$2,155	**($401)**	$132,100	($13,902)	**($146,002)**
41	5	$384	$50	$60	$274	$2,155	**($1,881)**	$132,100	($65,124)	**($197,224)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	28	$3,698,800	$9,394,022	$5,695,222	..... *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	2	N/A	$79,026	$343,226	..... *Disposal Below Dotted Blue Line*
Total Financial Impact	**30**	**$3,698,800**	**$9,473,047**	**$6,038,447**	

Incremental Nights Sold (CY 2013)



Mohican

Preferred Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Mohican	Cabin	Preferred	25	45.5%	$109.99	$50.05	4,152	54	$456,678

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	4,152	$456,678	$41,520	$42,118	$373,040	$53,865	**$319,175**
Operating Profit per Average Unit	166	$18,267	$1,661	$1,685	$14,922	$2,155	**$12,767**
Operating Profit per Marginal Unit	54	$5,939	$540	$548	$4,852	$2,155	**$2,697**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**23.98**	**25**			**$0.00**	**66.44**	**24**

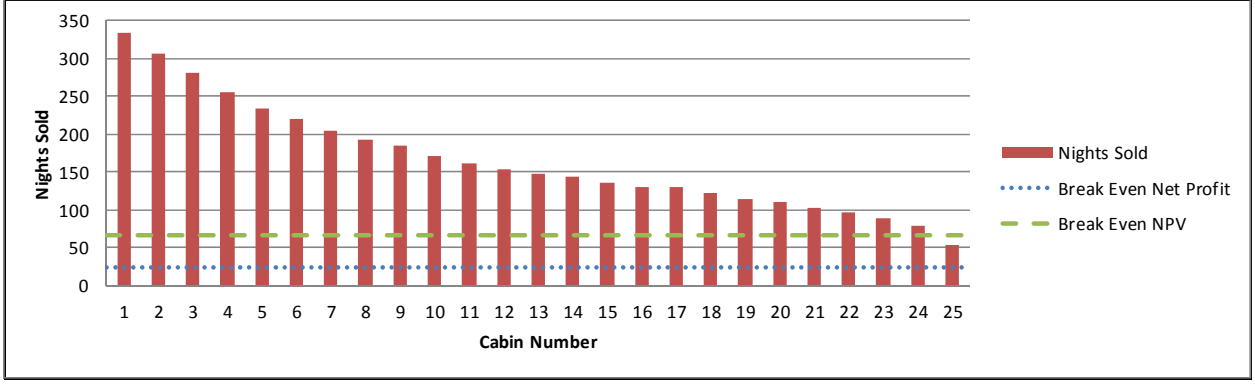
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	333	$36,627	$3,330	$3,378	$29,919	$2,155	**$27,764**	$132,100	$961,404	**$829,304**
2	306	$33,657	$3,060	$3,104	$27,493	$2,155	**$25,338**	$132,100	$877,403	**$745,303**
3	281	$30,907	$2,810	$2,850	$25,247	$2,155	**$23,092**	$132,100	$799,624	**$667,524**
4	255	$28,047	$2,550	$2,587	$22,911	$2,155	**$20,756**	$132,100	$718,734	**$586,634**
5	233	$25,628	$2,330	$2,364	$20,934	$2,155	**$18,779**	$132,100	$650,289	**$518,189**
6	220	$24,198	$2,200	$2,232	$19,766	$2,155	**$17,611**	$132,100	$609,844	**$477,744**
7	204	$22,438	$2,040	$2,069	$18,329	$2,155	**$16,174**	$132,100	$560,066	**$427,966**
8	192	$21,118	$1,920	$1,948	$17,250	$2,155	**$15,096**	$132,100	$522,732	**$390,632**
9	184	$20,238	$1,840	$1,867	$16,532	$2,155	**$14,377**	$132,100	$497,843	**$365,743**
10	172	$18,918	$1,720	$1,745	$15,453	$2,155	**$13,299**	$132,100	$460,509	**$328,409**
11	161	$17,708	$1,610	$1,633	$14,465	$2,155	**$12,311**	$132,100	$426,286	**$294,186**
12	153	$16,828	$1,530	$1,552	$13,746	$2,155	**$11,592**	$132,100	$401,397	**$269,297**
13	148	$16,279	$1,480	$1,501	$13,297	$2,155	**$11,143**	$132,100	$385,841	**$253,741**
14	144	$15,839	$1,440	$1,461	$12,938	$2,155	**$10,783**	$132,100	$373,397	**$241,297**
15	136	$14,959	$1,360	$1,380	$12,219	$2,155	**$10,064**	$132,100	$348,508	**$216,408**
16	131	$14,409	$1,310	$1,329	$11,770	$2,155	**$9,615**	$132,100	$332,952	**$200,852**
17	131	$14,409	$1,310	$1,329	$11,770	$2,155	**$9,615**	$132,100	$332,952	**$200,852**
18	123	$13,529	$1,230	$1,248	$11,051	$2,155	**$8,896**	$132,100	$308,063	**$175,963**
19	114	$12,539	$1,140	$1,156	$10,242	$2,155	**$8,088**	$132,100	$280,062	**$147,962**
20	111	$12,209	$1,110	$1,126	$9,973	$2,155	**$7,818**	$132,100	$270,729	**$138,629**
21	103	$11,329	$1,030	$1,045	$9,254	$2,155	**$7,100**	$132,100	$245,840	**$113,740**
22	96	$10,559	$960	$974	$8,625	$2,155	**$6,471**	$132,100	$224,061	**$91,961**
23	88	$9,679	$880	$893	$7,906	$2,155	**$5,752**	$132,100	$199,172	**$67,072**
24	79	$8,689	$790	$801	$7,098	$2,155	**$4,943**	$132,100	$171,172	**$39,072**
25	54	$5,939	$540	$548	$4,852	$2,155	**$2,697**	$132,100	$93,393	**($38,707)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV		
Impact from Positive NPV Investments	24	$3,170,400	$10,958,880	$7,788,480	……..	*Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	0	N/A	$0	$0	……..	*Disposal Below Dotted Blue Line*
Total Financial Impact	**24**	**$3,170,400**	**$10,958,880**	**$7,788,480**		

Incremental Nights Sold (CY 2013)



Pike Lake

Basic Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Pike Lake	Cabin	Basic	12	18.2%	$61.40	$11.14	795	15	$48,815

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	795	$48,815	$7,950	$8,847	$32,018	$25,855	**$6,162**
Operating Profit per Average Unit	66	$4,068	$663	$737	$2,668	$2,155	**$514**
Operating Profit per Marginal Unit	15	$921	$150	$167	$604	$2,155	**($1,551)**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**53.50**	**5**			**$0.00**	**148.22**	**1**

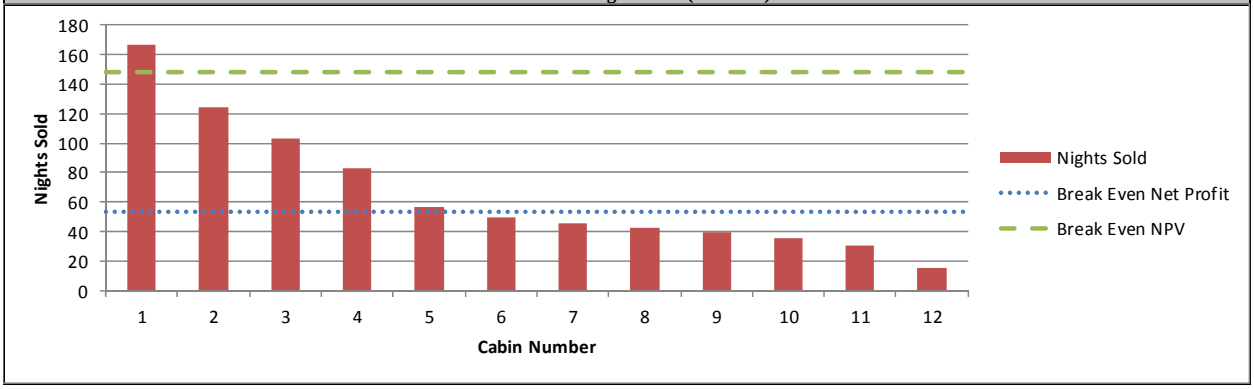
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	167	$10,254	$1,670	$1,858	$6,726	$2,155	**$4,571**	$132,100	$158,287	**$26,187**
2	124	$7,614	$1,240	$1,380	$4,994	$2,155	**$2,839**	$132,100	$98,320	**($33,780)**
3	103	$6,324	$1,030	$1,146	$4,148	$2,155	**$1,994**	$132,100	$69,034	**($63,066)**
4	83	$5,096	$830	$924	$3,343	$2,155	**$1,188**	$132,100	$41,142	**($90,958)**
5	57	$3,500	$570	$634	$2,296	$2,155	**$141**	$132,100	$4,883	**($127,217)**
6	50	$3,070	$500	$556	$2,014	$2,155	**($141)**	$132,100	($4,880)	**($136,980)**
7	46	$2,825	$460	$512	$1,853	$2,155	**($302)**	$132,100	($10,458)	**($142,558)**
8	43	$2,640	$430	$479	$1,732	$2,155	**($423)**	$132,100	($14,642)	**($146,742)**
9	40	$2,456	$400	$445	$1,611	$2,155	**($544)**	$132,100	($18,825)	**($150,925)**
10	36	$2,210	$360	$401	$1,450	$2,155	**($705)**	$132,100	($24,404)	**($156,504)**
11	31	$1,903	$310	$345	$1,248	$2,155	**($906)**	$132,100	($31,377)	**($163,477)**
12	15	$921	$150	$167	$604	$2,155	**($1,551)**	$132,100	($53,690)	**($185,790)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	1	$132,100	$158,287	$26,187	..... *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	7	N/A	$158,275	$1,082,975	..... *Disposal Below Dotted Blue Line*
Total Financial Impact	**8**	**$132,100**	**$316,563**	**$1,109,163**	

Incremental Nights Sold (CY 2013)



Pike Lake

Preferred Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Pike Lake	Cabin	Preferred	12	38.1%	$77.85	$29.67	1,669	34	$129,933

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	1,669	$129,933	$16,690	$16,930	$96,313	$25,855	**$70,458**
Operating Profit per Average Unit	139	$10,828	$1,391	$1,411	$8,026	$2,155	**$5,871**
Operating Profit per Marginal Unit	34	$2,647	$340	$345	$1,962	$2,155	**($193)**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**37.34**	**11**			**$0.00**	**103.44**	**7**

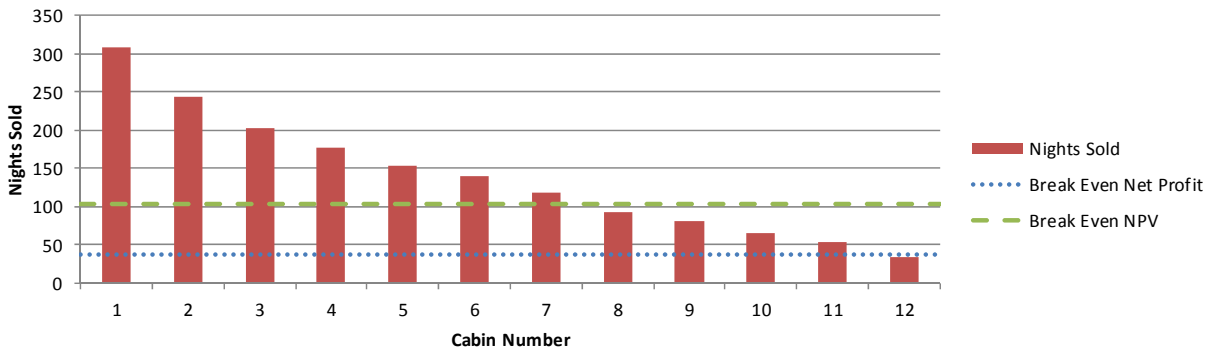
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	308	$23,978	$3,080	$3,124	$17,774	$2,155	**$15,619**	$132,100	$540,854	**$408,754**
2	243	$18,918	$2,430	$2,465	$14,023	$2,155	**$11,868**	$132,100	$410,967	**$278,867**
3	203	$15,804	$2,030	$2,059	$11,715	$2,155	**$9,560**	$132,100	$331,037	**$198,937**
4	177	$13,780	$1,770	$1,795	$10,214	$2,155	**$8,060**	$132,100	$279,082	**$146,982**
5	154	$11,989	$1,540	$1,562	$8,887	$2,155	**$6,732**	$132,100	$233,122	**$101,022**
6	140	$10,899	$1,400	$1,420	$8,079	$2,155	**$5,924**	$132,100	$205,147	**$73,047**
7	118	$9,186	$1,180	$1,197	$6,809	$2,155	**$4,655**	$132,100	$161,185	**$29,085**
8	92	$7,162	$920	$933	$5,309	$2,155	**$3,154**	$132,100	$109,230	**($22,870)**
9	81	$6,306	$810	$822	$4,674	$2,155	**$2,520**	$132,100	$87,250	**($44,850)**
10	65	$5,060	$650	$659	$3,751	$2,155	**$1,596**	$132,100	$55,278	**($76,822)**
11	54	$4,204	$540	$548	$3,116	$2,155	**$962**	$132,100	$33,297	**($98,803)**
12	34	$2,647	$340	$345	$1,962	$2,155	**($193)**	$132,100	($6,668)	**($138,768)**

Financial Impacts

	Cabins Impacted	Investment Costs	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	7	$924,700	$2,161,394	$1,236,694	..... *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	1	N/A	$6,668	$138,768	..... *Disposal Below Dotted Blue Line*
Total Financial Impact	**8**	**$924,700**	**$2,168,062**	**$1,375,462**	

Incremental Nights Sold (CY 2013)



Pymatuning

Basic Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Pymatuning	Cabin	Basic	31	23.3%	$66.82	$15.54	2,631	0	$175,800

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	2,631	$175,800	$26,310	$29,280	$120,210	$66,793	**$53,418**
Operating Profit per Average Unit	85	$5,671	$849	$945	$3,878	$2,155	**$1,723**
Operating Profit per Marginal Unit	-	$0	$0	$0	$0	$2,155	**($2,155)**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**47.16**	**22**			**$0.00**	**130.65**	**7**

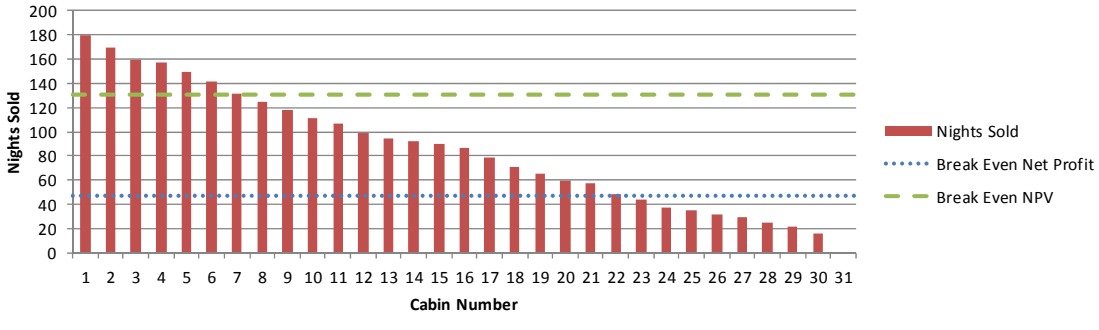
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	180	$12,027	$1,800	$2,003	$8,224	$2,155	**$6,070**	$132,100	$210,176	**$78,076**
2	169	$11,292	$1,690	$1,881	$7,722	$2,155	**$5,567**	$132,100	$192,772	**$60,672**
3	160	$10,691	$1,600	$1,781	$7,310	$2,155	**$5,156**	$132,100	$178,533	**$46,433**
4	157	$10,491	$1,570	$1,747	$7,173	$2,155	**$5,019**	$132,100	$173,787	**$41,687**
5	149	$9,956	$1,490	$1,658	$6,808	$2,155	**$4,653**	$132,100	$161,130	**$29,030**
6	141	$9,421	$1,410	$1,569	$6,442	$2,155	**$4,288**	$132,100	$148,473	**$16,373**
7	131	$8,753	$1,310	$1,458	$5,985	$2,155	**$3,831**	$132,100	$132,651	**$551**
8	125	$8,352	$1,250	$1,391	$5,711	$2,155	**$3,557**	$132,100	$123,158	**($8,942)**
9	118	$7,885	$1,180	$1,313	$5,391	$2,155	**$3,237**	$132,100	$112,083	**($20,017)**
10	111	$7,417	$1,110	$1,235	$5,072	$2,155	**$2,917**	$132,100	$101,008	**($31,092)**
11	107	$7,150	$1,070	$1,191	$4,889	$2,155	**$2,734**	$132,100	$94,680	**($37,420)**
12	99	$6,615	$990	$1,102	$4,523	$2,155	**$2,369**	$132,100	$82,023	**($50,077)**
13	94	$6,281	$940	$1,046	$4,295	$2,155	**$2,140**	$132,100	$74,112	**($57,988)**
14	92	$6,147	$920	$1,024	$4,203	$2,155	**$2,049**	$132,100	$70,948	**($61,152)**
15	90	$6,014	$900	$1,002	$4,112	$2,155	**$1,957**	$132,100	$67,783	**($64,317)**
16	87	$5,813	$870	$968	$3,975	$2,155	**$1,820**	$132,100	$63,037	**($69,063)**
17	79	$5,279	$790	$879	$3,610	$2,155	**$1,455**	$132,100	$50,380	**($81,720)**
18	71	$4,744	$710	$790	$3,244	$2,155	**$1,089**	$132,100	$37,723	**($94,377)**
19	65	$4,343	$650	$723	$2,970	$2,155	**$815**	$132,100	$28,230	**($103,870)**
20	60	$4,009	$600	$668	$2,741	$2,155	**$587**	$132,100	$20,319	**($111,781)**
21	58	$3,875	$580	$645	$2,650	$2,155	**$495**	$132,100	$17,155	**($114,945)**
22	48	$3,207	$480	$534	$2,193	$2,155	**$39**	$132,100	$1,334	**($130,766)**
23	44	$2,940	$440	$490	$2,010	$2,155	**($144)**	$132,100	($4,995)	**($137,095)**
24	37	$2,472	$370	$412	$1,691	$2,155	**($464)**	$132,100	($16,070)	**($148,170)**
25	35	$2,339	$350	$390	$1,599	$2,155	**($555)**	$132,100	($19,234)	**($151,334)**
26	32	$2,138	$320	$356	$1,462	$2,155	**($693)**	$132,100	($23,981)	**($156,081)**
27	29	$1,938	$290	$323	$1,325	$2,155	**($830)**	$132,100	($28,727)	**($160,827)**
28	25	$1,670	$250	$278	$1,142	$2,155	**($1,012)**	$132,100	($35,056)	**($167,156)**
29	22	$1,470	$220	$245	$1,005	$2,155	**($1,149)**	$132,100	($39,802)	**($171,902)**
30	16	$1,069	$160	$178	$731	$2,155	**($1,424)**	$132,100	($49,295)	**($181,395)**
31	0	$0	$0	$0	$0	$2,155	**($2,155)**	$132,100	($74,609)	**($206,709)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	7	$924,700	$1,197,522	$272,822	..... *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	9	N/A	$291,768	$1,480,668	..... *Disposal Below Dotted Blue Line*
Total Financial Impact	**16**	**$924,700**	**$1,489,290**	**$1,753,490**	

Incremental Nights Sold (CY 2013)



Pymatuning

Preferred Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Pymatuning	Cabin	Preferred	22	39.9%	$89.46	$35.70	3,350	43	$299,704

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	3,350	$299,704	$33,500	$33,983	$232,222	$47,401	**$184,820**
Operating Profit per Average Unit	152	$13,623	$1,523	$1,545	$10,556	$2,155	**$8,401**
Operating Profit per Marginal Unit	43	$3,847	$430	$436	$2,981	$2,155	**$826**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**31.08**	**22**			**$0.00**	**86.11**	**19**

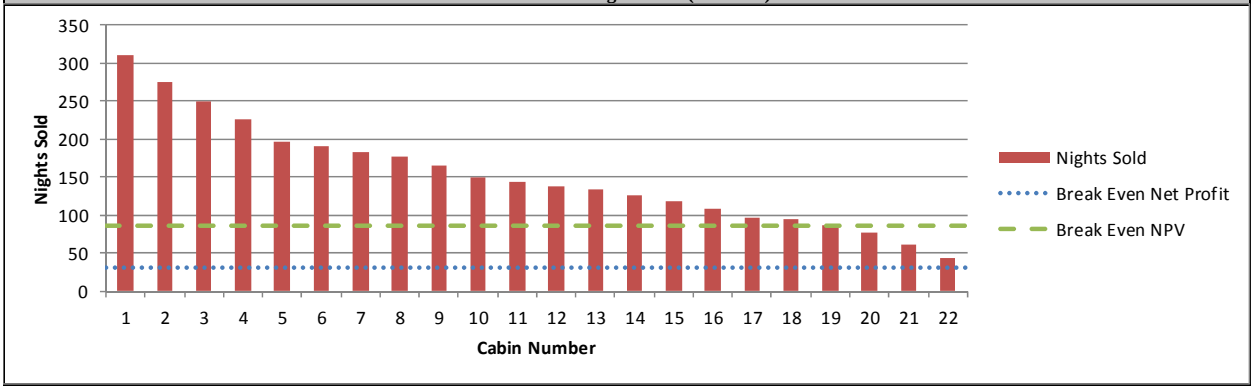
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	310	$27,734	$3,100	$3,145	$21,489	$2,155	**$19,335**	$132,100	$669,510	**$537,410**
2	275	$24,603	$2,750	$2,790	$19,063	$2,155	**$16,908**	$132,100	$585,497	**$453,397**
3	250	$22,366	$2,500	$2,536	$17,330	$2,155	**$15,175**	$132,100	$525,487	**$393,387**
4	226	$20,219	$2,260	$2,293	$15,666	$2,155	**$13,512**	$132,100	$467,878	**$335,778**
5	197	$17,624	$1,970	$1,998	$13,656	$2,155	**$11,501**	$132,100	$398,267	**$266,167**
6	190	$16,998	$1,900	$1,927	$13,171	$2,155	**$11,016**	$132,100	$381,464	**$249,364**
7	182	$16,282	$1,820	$1,846	$12,616	$2,155	**$10,462**	$132,100	$362,261	**$230,161**
8	178	$15,925	$1,780	$1,806	$12,339	$2,155	**$10,184**	$132,100	$352,659	**$220,559**
9	165	$14,762	$1,650	$1,674	$11,438	$2,155	**$9,283**	$132,100	$321,454	**$189,354**
10	150	$13,420	$1,500	$1,522	$10,398	$2,155	**$8,243**	$132,100	$285,449	**$153,349**
11	144	$12,883	$1,440	$1,461	$9,982	$2,155	**$7,827**	$132,100	$271,046	**$138,946**
12	137	$12,257	$1,370	$1,390	$9,497	$2,155	**$7,342**	$132,100	$254,244	**$122,144**
13	133	$11,899	$1,330	$1,349	$9,220	$2,155	**$7,065**	$132,100	$244,642	**$112,542**
14	127	$11,362	$1,270	$1,288	$8,804	$2,155	**$6,649**	$132,100	$230,240	**$98,140**
15	118	$10,557	$1,180	$1,197	$8,180	$2,155	**$6,025**	$132,100	$208,636	**$76,536**
16	108	$9,662	$1,080	$1,096	$7,487	$2,155	**$5,332**	$132,100	$184,633	**$52,533**
17	97	$8,678	$970	$984	$6,724	$2,155	**$4,569**	$132,100	$158,228	**$26,128**
18	94	$8,410	$940	$954	$6,516	$2,155	**$4,361**	$132,100	$151,027	**$18,927**
19	87	$7,783	$870	$883	$6,031	$2,155	**$3,876**	$132,100	$134,224	**$2,124**
20	78	$6,978	$780	$791	$5,407	$2,155	**$3,252**	$132,100	$112,621	**($19,479)**
21	61	$5,457	$610	$619	$4,229	$2,155	**$2,074**	$132,100	$71,814	**($60,286)**
22	43	$3,847	$430	$436	$2,981	$2,155	**$826**	$132,100	$28,608	**($103,492)**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV	
Impact from Positive NPV Investments	19	$2,509,900	$6,186,848	$3,676,948	……. *Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	0	N/A	$0	$0	……. *Disposal Below Dotted Blue Line*
Total Financial Impact	**19**	**$2,509,900**	**$6,186,848**	**$3,676,948**	

Incremental Nights Sold (CY 2013)



Pymatuning

Premium Cabin Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Cabin Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Pymatuning	Cabin	Premium	1	56.2%	$131.29	$73.74	205	205	$26,915

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	205	$26,915	$2,050	$2,159	$22,706	$2,155	**$20,551**
Operating Profit per Average Unit	205	$26,915	$2,050	$2,159	$22,706	$2,155	**$20,551**
Operating Profit per Marginal Unit	205	$26,915	$2,050	$2,159	$22,706	$2,155	**$20,551**

Break Even Analysis

Method #1: Targeting Positive Net Profit	Target Net Profit	Break Even Nights Sold	Break Even Cabin #		*Method #2: Targeting Positive NPV over Useful Life*	Target NPV	Break Even Nights Sold	Break Even Cabin #
	$0.00	**19.45**	**1**			**$0.00**	**53.90**	**1**

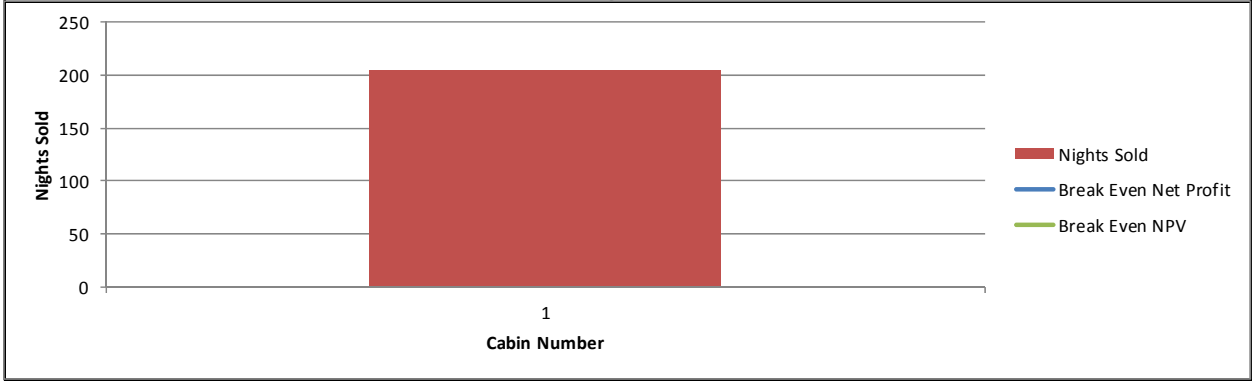
Detailed Sales (CY 2013)

Cabin #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Net Profit	Investment Costs	PV Net Profits	Investment NPV
1	205	$26,915	$2,050	$2,159	$22,706	$2,155	**$20,551**	$132,100	$711,636	**$579,536**

Financial Impacts

	Cabins Impacted	Cost of Investment	PV Net Profits	Investment NPV		
Impact from Positive NPV Investments	1	$132,100	$711,636	$579,536	……..	*Investment Above Dashed Green Line*
Impact from Disposal and Cost Avoidance	0	N/A	$0	$0	……..	*Disposal Below Dotted Blue Line*
Total Financial Impact	**1**	**$132,100**	**$711,636**	**$579,536**		

Incremental Nights Sold (CY 2013)



Appendix 5.B: Campground Operating and Investment Profiles

The following pages present operating and investment profiles for each park-specific, full hook-up campground operation for calendar year (CY) 2013.

For additional detail or technical definitions of data points shown in the profiles see **Appendix 5.C: Operating and Investment Profiles Description**.

Alum Creek

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Alum Creek	Campsite	Full Hook-Up	3	45.6%	$35.93	$16.38	499	122	$17,931

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	499	$17,931	$2,700	$606	$14,626	$227	**$14,398**
Operating Profit per Average Unit	166	$5,977	$900	$202	$4,875	$76	**$4,799**
Operating Profit per Marginal Unit	122	$4,384	$660	$148	$3,576	$76	**$3,500**

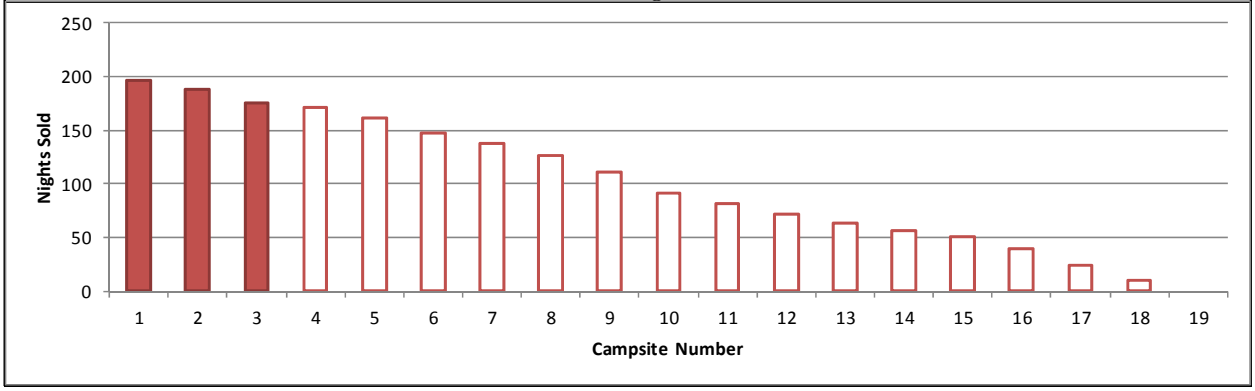
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	197	$7,079	$1,066	$239	$5,774	$76	$0	**$5,698**	$4,246	**$137,837**
2	188	$6,756	$1,017	$228	$5,510	$76	$0	**$5,435**	$4,246	**$131,259**
3	176	$6,324	$952	$214	$5,159	$76	$0	**$5,083**	$4,246	**$122,490**
4	171	$6,145	$925	$208	$5,012	$76	$497	**$4,439**	$4,246	**$106,435**
5	162	$5,821	$876	$197	$4,748	$76	$771	**$3,901**	$4,246	**$93,025**
6	147	$5,282	$795	$178	$4,309	$76	$896	**$3,337**	$4,246	**$78,956**
7	138	$4,959	$747	$168	$4,045	$76	$971	**$2,998**	$4,246	**$70,516**
8	126	$4,528	$682	$153	$3,693	$76	$996	**$2,622**	$4,246	**$61,125**
9	111	$3,989	$601	$135	$3,253	$76	$1,045	**$2,132**	$4,246	**$48,920**
10	91	$3,270	$492	$110	$2,667	$76	$1,070	**$1,521**	$4,246	**$33,682**
11	81	$2,911	$438	$98	$2,374	$76	$1,120	**$1,178**	$4,246	**$25,132**
12	72	$2,587	$390	$87	$2,110	$76	$1,170	**$865**	$4,246	**$17,312**
13	64	$2,300	$346	$78	$1,876	$76	$1,220	**$580**	$4,246	**$10,223**
14	56	$2,012	$303	$68	$1,641	$76	$1,369	**$196**	$4,246	**$649**
15	51	$1,833	$276	$62	$1,495	$76	$1,668	**($249)**	$4,246	**($10,459)**
16	40	$1,437	$216	$49	$1,172	$76	$1,868	**($771)**	$4,246	**($23,468)**
17	24	$862	$130	$29	$703	$76	$1,992	**($1,364)**	$4,246	**($38,267)**
18	10	$359	$54	$12	$293	$76	$2,241	**($2,024)**	$4,246	**($54,710)**
19	0	$0	$0	$0	$0	$76	$2,366	**($2,442)**	$4,246	**($65,124)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**11**	**$46,708**	**$592,683**	**$545,976**

Incremental Nights Sold



Burr Oak

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Burr Oak	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**Punderson**						

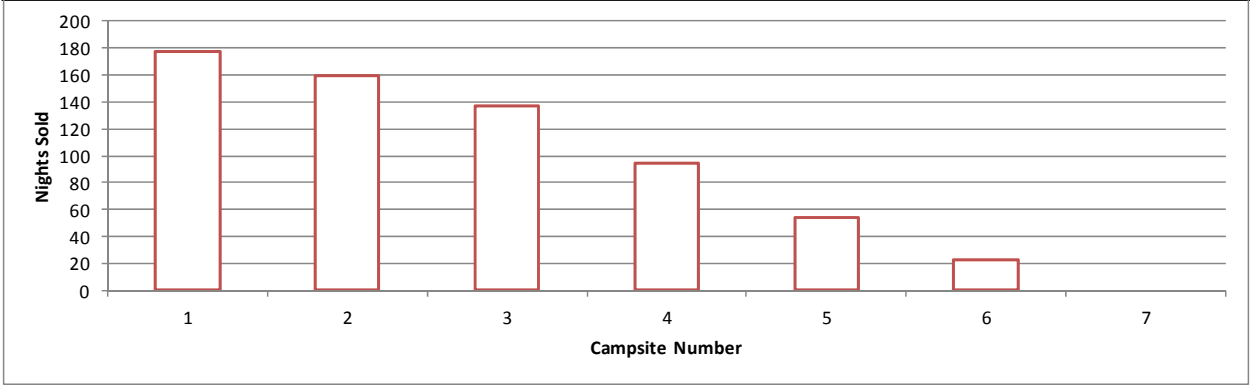
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	177	$6,045	$958	$215	$4,872	$76	($58)	**$4,855**	$4,246	**$116,803**
2	160	$5,464	$866	$194	$4,404	$76	($6)	**$4,335**	$4,246	**$103,839**
3	137	$4,679	$741	$166	$3,771	$76	$150	**$3,546**	$4,246	**$84,165**
4	94	$3,210	$509	$114	$2,587	$76	$219	**$2,293**	$4,246	**$52,924**
5	54	$1,844	$292	$66	$1,486	$76	$323	**$1,088**	$4,246	**$22,878**
6	23	$785	$124	$28	$633	$76	$375	**$183**	$4,246	**$306**
7	0	$0	$0	$0	$0	$76	$444	**($520)**	$4,246	**($17,208)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**6**	**$25,477**	**$406,392**	**$380,915**

Incremental Nights Sold



Caesar Creek

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Caesar Creek	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**East Fork**						

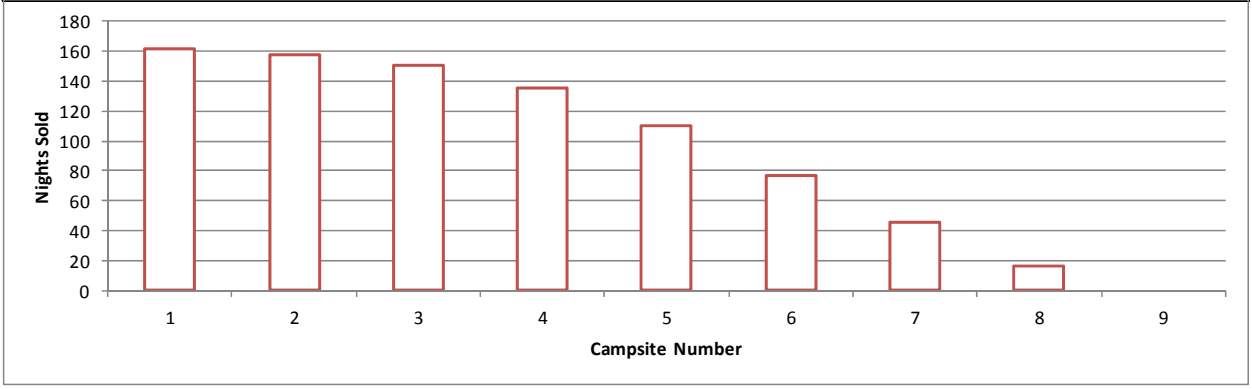
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	162	$5,532	$876	$197	$4,459	$76	($10)	**$4,393**	$4,246	**$105,297**
2	158	$5,396	$855	$192	$4,349	$76	($10)	**$4,283**	$4,246	**$102,552**
3	151	$5,157	$817	$183	$4,156	$76	($10)	**$4,091**	$4,246	**$97,748**
4	135	$4,610	$730	$164	$3,716	$76	($10)	**$3,650**	$4,246	**$86,766**
5	110	$3,757	$595	$134	$3,028	$76	($10)	**$2,962**	$4,246	**$69,608**
6	77	$2,630	$417	$93	$2,119	$76	($10)	**$2,054**	$4,246	**$46,959**
7	46	$1,571	$249	$56	$1,266	$76	($10)	**$1,200**	$4,246	**$25,683**
8	16	$546	$87	$19	$440	$76	($10)	**$375**	$4,246	**$5,093**
9	0	$0	$0	$0	$0	$76	($10)	**($66)**	$4,246	**($5,889)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**8**	**$33,969**	**$573,675**	**$539,706**

Incremental Nights Sold



Cowan Lake

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Cowan Lake	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**East Fork**						

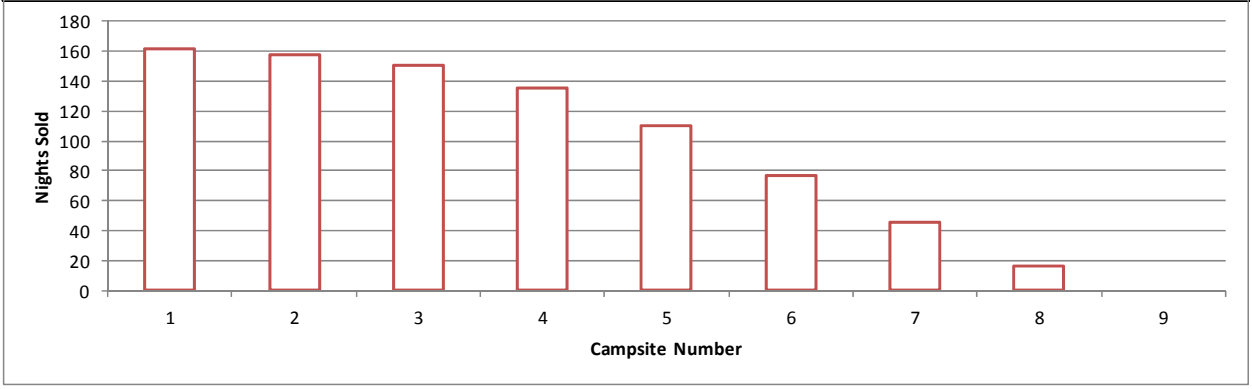
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	162	$5,532	$876	$197	$4,459	$76	($76)	**$4,459**	$4,246	**$106,940**
2	158	$5,396	$855	$192	$4,349	$76	($54)	**$4,327**	$4,246	**$103,649**
3	151	$5,157	$817	$183	$4,156	$76	($54)	**$4,135**	$4,246	**$98,845**
4	135	$4,610	$730	$164	$3,716	$76	($54)	**$3,694**	$4,246	**$87,863**
5	110	$3,757	$595	$134	$3,028	$76	($54)	**$3,006**	$4,246	**$70,705**
6	77	$2,630	$417	$93	$2,119	$76	($32)	**$2,076**	$4,246	**$47,510**
7	46	$1,571	$249	$56	$1,266	$76	($32)	**$1,222**	$4,246	**$26,234**
8	16	$546	$87	$19	$440	$76	$12	**$353**	$4,246	**$4,553**
9	0	$0	$0	$0	$0	$76	$12	**($88)**	$4,246	**($6,429)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**8**	**$33,969**	**$580,268**	**$546,299**

Incremental Nights Sold



Deer Creek

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Deer Creek	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**Salt Fork**						

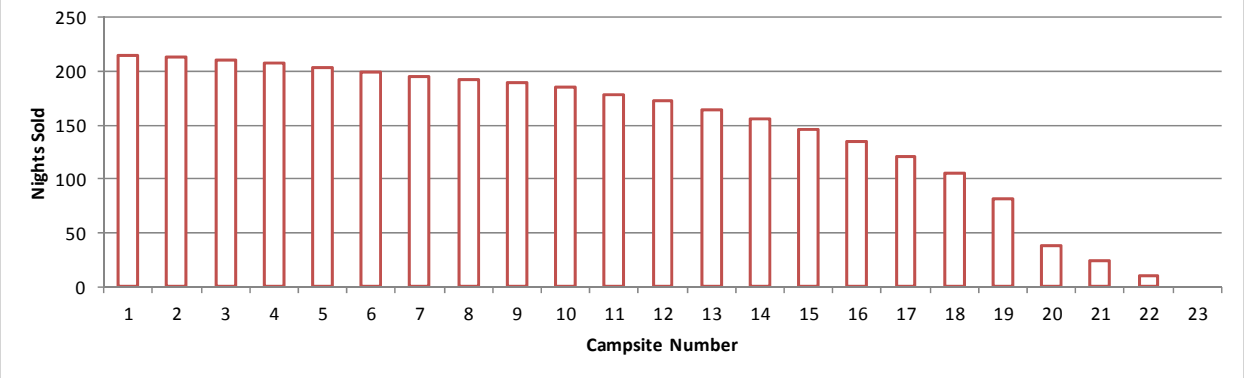
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	215	$7,342	$1,163	$261	$5,918	$76	$76	**$5,766**	$4,246	**$139,522**
2	213	$7,274	$1,152	$259	$5,863	$76	$142	**$5,646**	$4,246	**$136,523**
3	210	$7,172	$1,136	$255	$5,780	$76	$272	**$5,433**	$4,246	**$131,212**
4	208	$7,103	$1,125	$253	$5,725	$76	$272	**$5,378**	$4,246	**$129,840**
5	203	$6,932	$1,098	$246	$5,588	$76	$359	**$5,153**	$4,246	**$124,240**
6	199	$6,796	$1,077	$242	$5,478	$76	$403	**$4,999**	$4,246	**$120,411**
7	195	$6,659	$1,055	$237	$5,368	$76	$424	**$4,868**	$4,246	**$117,123**
8	193	$6,591	$1,044	$234	$5,313	$76	$424	**$4,813**	$4,246	**$115,751**
9	189	$6,454	$1,022	$229	$5,202	$76	$424	**$4,702**	$4,246	**$113,005**
10	186	$6,352	$1,006	$226	$5,120	$76	$446	**$4,598**	$4,246	**$110,404**
11	178	$6,079	$963	$216	$4,900	$76	$468	**$4,356**	$4,246	**$104,372**
12	173	$5,908	$936	$210	$4,762	$76	$489	**$4,197**	$4,246	**$100,398**
13	165	$5,635	$893	$200	$4,542	$76	$489	**$3,977**	$4,246	**$94,907**
14	156	$5,327	$844	$189	$4,294	$76	$489	**$3,729**	$4,246	**$88,730**
15	146	$4,986	$790	$177	$4,019	$76	$511	**$3,432**	$4,246	**$81,325**
16	135	$4,610	$730	$164	$3,716	$76	$511	**$3,129**	$4,246	**$73,775**
17	121	$4,132	$655	$147	$3,331	$76	$511	**$2,744**	$4,246	**$64,167**
18	106	$3,620	$573	$129	$2,918	$76	$511	**$2,331**	$4,246	**$53,872**
19	82	$2,800	$444	$100	$2,257	$76	$511	**$1,670**	$4,246	**$37,399**
20	38	$1,298	$206	$46	$1,046	$76	$533	**$437**	$4,246	**$6,659**
21	24	$820	$130	$29	$661	$76	$576	**$9**	$4,246	**($4,034)**
22	10	$342	$54	$12	$275	$76	$576	**($377)**	$4,246	**($13,643)**
23	0	$0	$0	$0	$0	$76	$620	**($696)**	$4,246	**($21,590)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**20**	**$84,923**	**$2,028,557**	**$1,943,634**

Incremental Nights Sold



Dillon

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Dillon	Camp	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**Rocky Fork**						

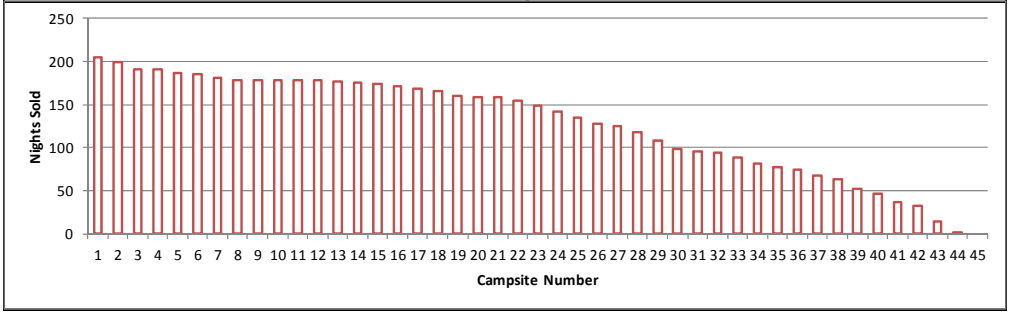
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	205	$7,001	$1,109	$249	$5,643	$76	($76)	**$5,643**	$4,246	**$136,452**
2	199	$6,796	$1,077	$242	$5,478	$76	($76)	**$5,478**	$4,246	**$132,334**
3	191	$6,523	$1,033	$232	$5,257	$76	($76)	**$5,257**	$4,246	**$126,844**
4	191	$6,523	$1,033	$232	$5,257	$76	($76)	**$5,257**	$4,246	**$126,844**
5	187	$6,386	$1,012	$227	$5,147	$76	($76)	**$5,147**	$4,246	**$124,098**
6	185	$6,318	$1,001	$225	$5,092	$76	($76)	**$5,092**	$4,246	**$122,726**
7	181	$6,181	$979	$220	$4,982	$76	($76)	**$4,982**	$4,246	**$119,980**
8	178	$6,079	$963	$216	$4,900	$76	($76)	**$4,900**	$4,246	**$117,921**
9	178	$6,079	$963	$216	$4,900	$76	($76)	**$4,900**	$4,246	**$117,921**
10	178	$6,079	$963	$216	$4,900	$76	($76)	**$4,900**	$4,246	**$117,921**
11	178	$6,079	$963	$216	$4,900	$76	($76)	**$4,900**	$4,246	**$117,921**
12	178	$6,079	$963	$216	$4,900	$76	($76)	**$4,900**	$4,246	**$117,921**
13	177	$6,045	$958	$215	$4,872	$76	($76)	**$4,872**	$4,246	**$117,235**
14	176	$6,010	$952	$214	$4,845	$76	($76)	**$4,845**	$4,246	**$116,549**
15	174	$5,942	$941	$211	$4,790	$76	($76)	**$4,790**	$4,246	**$115,176**
16	171	$5,840	$925	$208	$4,707	$76	($76)	**$4,707**	$4,246	**$113,117**
17	168	$5,737	$909	$204	$4,624	$76	($76)	**$4,624**	$4,246	**$111,058**
18	166	$5,669	$898	$202	$4,569	$76	($76)	**$4,569**	$4,246	**$109,685**
19	160	$5,464	$866	$194	$4,404	$76	($76)	**$4,404**	$4,246	**$105,567**
20	159	$5,430	$860	$193	$4,377	$76	($76)	**$4,377**	$4,246	**$104,881**
21	158	$5,396	$855	$192	$4,349	$76	($76)	**$4,349**	$4,246	**$104,195**
22	154	$5,259	$833	$187	$4,239	$76	($76)	**$4,239**	$4,246	**$101,449**
23	149	$5,088	$806	$181	$4,101	$76	($76)	**$4,101**	$4,246	**$98,018**
24	142	$4,849	$768	$172	$3,909	$76	($76)	**$3,909**	$4,246	**$93,213**
25	135	$4,610	$730	$164	$3,716	$76	($76)	**$3,716**	$4,246	**$88,409**
26	128	$4,371	$692	$155	$3,523	$76	($76)	**$3,523**	$4,246	**$83,605**
27	125	$4,269	$676	$152	$3,441	$76	($76)	**$3,441**	$4,246	**$81,546**
28	118	$4,030	$638	$143	$3,248	$76	($76)	**$3,248**	$4,246	**$76,741**
29	108	$3,688	$584	$131	$2,973	$76	($39)	**$2,936**	$4,246	**$68,955**
30	99	$3,381	$536	$120	$2,725	$76	($2)	**$2,651**	$4,246	**$61,856**
31	95	$3,244	$514	$115	$2,615	$76	($2)	**$2,541**	$4,246	**$59,110**
32	94	$3,210	$509	$114	$2,587	$76	$17	**$2,495**	$4,246	**$57,963**
33	89	$3,039	$481	$108	$2,450	$76	$17	**$2,357**	$4,246	**$54,531**
34	82	$2,800	$444	$100	$2,257	$76	$35	**$2,146**	$4,246	**$49,265**
35	78	$2,664	$422	$95	$2,147	$76	$35	**$2,036**	$4,246	**$46,520**
36	74	$2,527	$400	$90	$2,037	$76	$35	**$1,926**	$4,246	**$43,775**
37	68	$2,322	$368	$83	$1,872	$76	$54	**$1,742**	$4,246	**$39,195**
38	63	$2,151	$341	$76	$1,734	$76	$91	**$1,568**	$4,246	**$34,841**
39	52	$1,776	$281	$63	$1,431	$76	$91	**$1,265**	$4,246	**$27,291**
40	47	$1,605	$254	$57	$1,294	$76	$91	**$1,127**	$4,246	**$23,860**
41	37	$1,264	$200	$45	$1,018	$76	$91	**$852**	$4,246	**$16,996**
42	33	$1,127	$179	$40	$908	$76	$146	**$686**	$4,246	**$12,867**
43	15	$512	$81	$18	$413	$76	$146	**$191**	$4,246	**$513**
44	2	$68	$11	$2	$55	$76	$220	**($241)**	$4,246	**($10,255)**
45	0	$0	$0	$0	$0	$76	$220	**($296)**	$4,246	**($11,627)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**39**	**$165,599**	**$3,862,468**	**$3,696,869**

Incremental Nights Sold



East Fork

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
East Fork	Campsite	Full Hook-Up	7	32.8%	$33.10	$10.87	839	46	$27,770

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	839	$27,770	$4,539	$1,019	$22,213	$530	**$21,683**
Operating Profit per Average Unit	120	$3,967	$648	$146	$3,173	$76	**$3,098**
Operating Profit per Marginal Unit	46	$1,523	$249	$56	$1,218	$76	**$1,142**

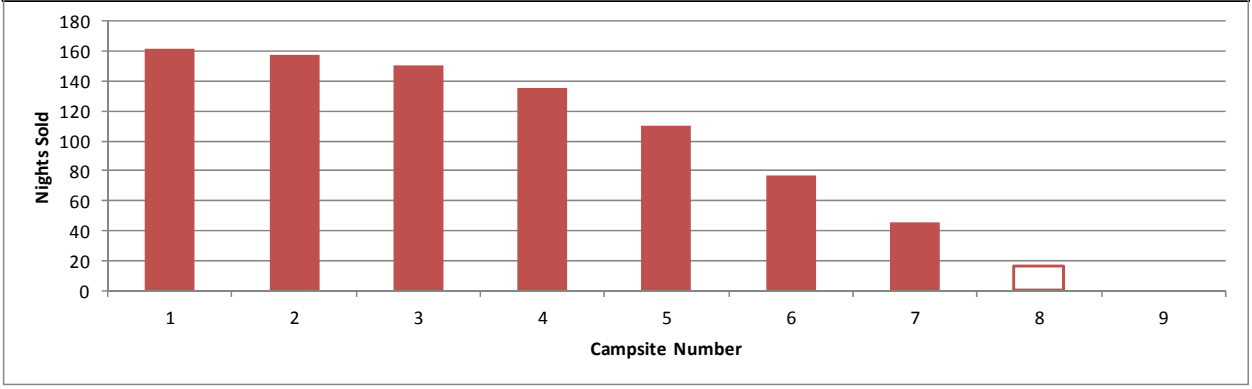
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	162	$5,362	$876	$197	$4,289	$76	$0	**$4,213**	$4,246	**$100,808**
2	158	$5,230	$855	$192	$4,183	$76	$0	**$4,107**	$4,246	**$98,168**
3	151	$4,998	$817	$183	$3,998	$76	$0	**$3,922**	$4,246	**$93,547**
4	135	$4,468	$730	$164	$3,574	$76	$0	**$3,498**	$4,246	**$82,984**
5	110	$3,641	$595	$134	$2,912	$76	$0	**$2,837**	$4,246	**$66,481**
6	77	$2,549	$417	$93	$2,039	$76	$0	**$1,963**	$4,246	**$44,697**
7	46	$1,523	$249	$56	$1,218	$76	$0	**$1,142**	$4,246	**$24,233**
8	16	$530	$87	$19	$424	$76	($76)	**$424**	$4,246	**$6,316**
9	0	$0	$0	$0	$0	$76	($76)	**$0**	$4,246	**($4,246)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**1**	**$4,246**	**$10,562**	**$6,316**

Incremental Nights Sold



East Harbor

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
East Harbor	Campsite	Full Hook-Up	23	41.2%	$33.14	$13.65	3,457	76	$114,560

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	3,457	$114,560	$18,702	$4,197	$91,661	$1,741	**$89,920**
Operating Profit per Average Unit	150	$4,981	$813	$182	$3,985	$76	**$3,910**
Operating Profit per Marginal Unit	76	$2,519	$411	$92	$2,015	$76	**$1,939**

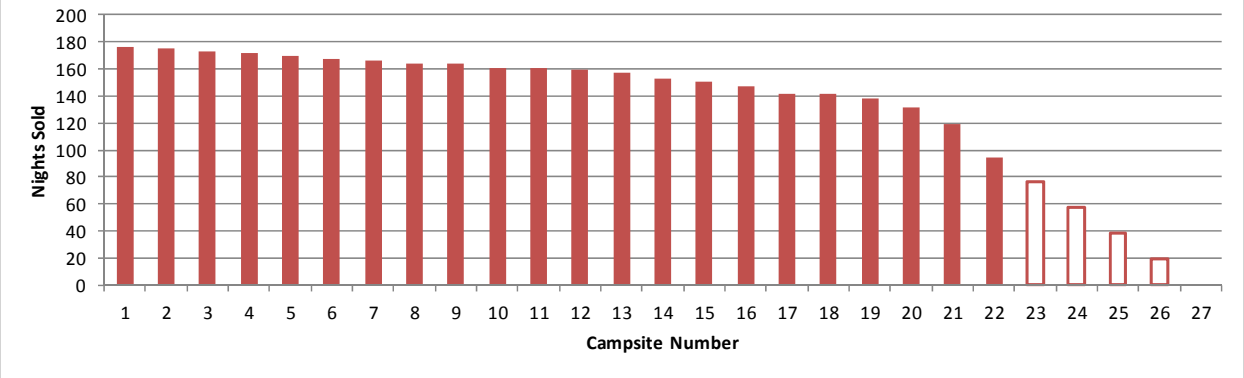
Detailed Sales (CY 2013)

Campsite Number	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	176	$5,832	$952	$214	$4,667	$76	$0	**$4,591**	$4,246	**$110,223**
2	175	$5,799	$947	$212	$4,640	$76	$0	**$4,564**	$4,246	**$109,562**
3	173	$5,733	$936	$210	$4,587	$76	$0	**$4,511**	$4,246	**$108,239**
4	172	$5,700	$931	$209	$4,560	$76	$0	**$4,485**	$4,246	**$107,578**
5	169	$5,600	$914	$205	$4,481	$76	$0	**$4,405**	$4,246	**$105,595**
6	167	$5,534	$903	$203	$4,428	$76	$0	**$4,352**	$4,246	**$104,273**
7	166	$5,501	$898	$202	$4,401	$76	$0	**$4,326**	$4,246	**$103,611**
8	164	$5,435	$887	$199	$4,348	$76	$0	**$4,273**	$4,246	**$102,289**
9	164	$5,435	$887	$199	$4,348	$76	$0	**$4,273**	$4,246	**$102,289**
10	161	$5,335	$871	$195	$4,269	$76	$0	**$4,193**	$4,246	**$100,306**
11	161	$5,335	$871	$195	$4,269	$76	$0	**$4,193**	$4,246	**$100,306**
12	159	$5,269	$860	$193	$4,216	$76	$0	**$4,140**	$4,246	**$98,984**
13	157	$5,203	$849	$191	$4,163	$76	$0	**$4,087**	$4,246	**$97,661**
14	153	$5,070	$828	$186	$4,057	$76	$0	**$3,981**	$4,246	**$95,017**
15	151	$5,004	$817	$183	$4,004	$76	$0	**$3,928**	$4,246	**$93,695**
16	147	$4,871	$795	$178	$3,898	$76	$0	**$3,822**	$4,246	**$91,050**
17	142	$4,706	$768	$172	$3,765	$76	$0	**$3,689**	$4,246	**$87,745**
18	141	$4,673	$763	$171	$3,739	$76	$0	**$3,663**	$4,246	**$87,084**
19	138	$4,573	$747	$168	$3,659	$76	$0	**$3,583**	$4,246	**$85,100**
20	131	$4,341	$709	$159	$3,473	$76	$0	**$3,398**	$4,246	**$80,472**
21	119	$3,943	$644	$144	$3,155	$76	$0	**$3,080**	$4,246	**$72,539**
22	95	$3,148	$514	$115	$2,519	$76	$0	**$2,443**	$4,246	**$56,672**
23	76	$2,519	$411	$92	$2,015	$76	$0	**$1,939**	$4,246	**$44,111**
24	57	$1,889	$308	$69	$1,511	$76	$598	**$837**	$4,246	**$16,630**
25	38	$1,259	$206	$46	$1,008	$76	$650	**$282**	$4,246	**$2,776**
26	19	$630	$103	$23	$504	$76	$702	**($274)**	$4,246	**($11,078)**
27	0	$0	$0	$0	$0	$76	$702	**($778)**	$4,246	**($23,639)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**2**	**$8,492**	**$27,899**	**$19,407**

Incremental Nights Sold



Geneva

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Geneva	Campsite	Full Hook-Up	3	43.7%	$33.29	$14.53	478	140	$15,911

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	478	$15,911	$2,586	$580	$12,745	$227	**$12,518**
Operating Profit per Average Unit	159	$5,304	$862	$193	$4,248	$76	**$4,173**
Operating Profit per Marginal Unit	140	$4,660	$757	$170	$3,733	$76	**$3,657**

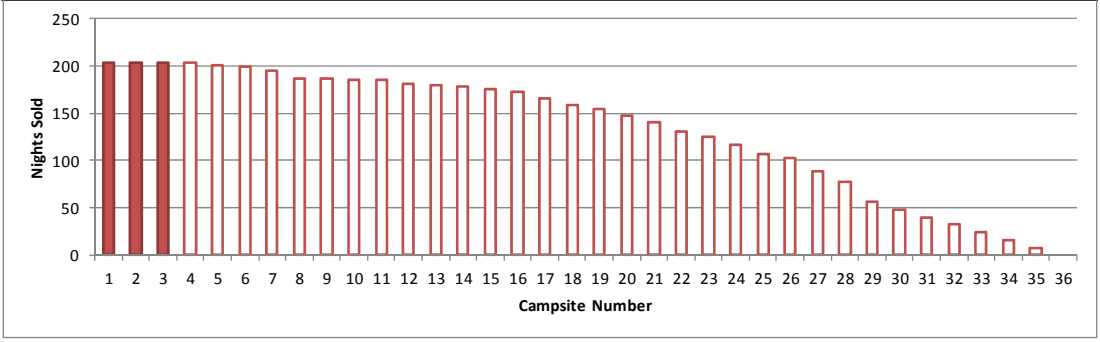
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	204	$6,790	$1,104	$248	$5,439	$76	$0	**$5,363**	$4,246	**$129,487**
2	204	$6,790	$1,104	$248	$5,439	$76	$0	**$5,363**	$4,246	**$129,487**
3	203	$6,757	$1,098	$246	$5,412	$76	$0	**$5,337**	$4,246	**$128,822**
4	203	$6,757	$1,098	$246	$5,412	$76	$222	**$5,115**	$4,246	**$123,296**
5	201	$6,691	$1,087	$244	$5,359	$76	$405	**$4,879**	$4,246	**$117,404**
6	199	$6,624	$1,077	$242	$5,306	$76	$473	**$4,757**	$4,246	**$114,363**
7	195	$6,491	$1,055	$237	$5,199	$76	$519	**$4,605**	$4,246	**$110,563**
8	187	$6,225	$1,012	$227	$4,986	$76	$565	**$4,345**	$4,246	**$104,104**
9	187	$6,225	$1,012	$227	$4,986	$76	$656	**$4,254**	$4,246	**$101,823**
10	186	$6,191	$1,006	$226	$4,959	$76	$702	**$4,182**	$4,246	**$100,018**
11	185	$6,158	$1,001	$225	$4,933	$76	$702	**$4,155**	$4,246	**$99,353**
12	181	$6,025	$979	$220	$4,826	$76	$702	**$4,048**	$4,246	**$96,694**
13	180	$5,992	$974	$219	$4,799	$76	$702	**$4,022**	$4,246	**$96,029**
14	178	$5,925	$963	$216	$4,746	$76	$702	**$3,968**	$4,246	**$94,699**
15	176	$5,858	$952	$214	$4,693	$76	$748	**$3,869**	$4,246	**$92,229**
16	173	$5,759	$936	$210	$4,613	$76	$771	**$3,766**	$4,246	**$89,664**
17	166	$5,526	$898	$202	$4,426	$76	$816	**$3,534**	$4,246	**$83,870**
18	159	$5,293	$860	$193	$4,239	$76	$816	**$3,347**	$4,246	**$79,216**
19	155	$5,159	$839	$188	$4,133	$76	$816	**$3,241**	$4,246	**$76,557**
20	147	$4,893	$795	$178	$3,919	$76	$816	**$3,027**	$4,246	**$71,239**
21	140	$4,660	$757	$170	$3,733	$76	$816	**$2,841**	$4,246	**$66,585**
22	130	$4,327	$703	$158	$3,466	$76	$816	**$2,574**	$4,246	**$59,937**
23	125	$4,161	$676	$152	$3,333	$76	$816	**$2,441**	$4,246	**$56,613**
24	117	$3,895	$633	$142	$3,120	$76	$839	**$2,205**	$4,246	**$50,724**
25	107	$3,562	$579	$130	$2,853	$76	$862	**$1,915**	$4,246	**$43,506**
26	103	$3,429	$557	$125	$2,746	$76	$908	**$1,763**	$4,246	**$39,706**
27	89	$2,963	$481	$108	$2,373	$76	$954	**$1,344**	$4,246	**$29,258**
28	78	$2,596	$422	$95	$2,080	$76	$999	**$1,005**	$4,246	**$20,805**
29	56	$1,864	$303	$68	$1,493	$76	$1,022	**$395**	$4,246	**$5,609**
30	48	$1,598	$260	$58	$1,280	$76	$1,045	**$159**	$4,246	**($280)**
31	40	$1,331	$216	$49	$1,067	$76	$1,091	**($100)**	$4,246	**($6,739)**
32	32	$1,065	$173	$39	$853	$76	$1,159	**($382)**	$4,246	**($13,768)**
33	24	$799	$130	$29	$640	$76	$1,182	**($618)**	$4,246	**($19,657)**
34	16	$533	$87	$19	$427	$76	$1,205	**($854)**	$4,246	**($25,546)**
35	8	$266	$43	$10	$213	$76	$1,297	**($1,159)**	$4,246	**($33,146)**
36	0	$0	$0	$0	$0	$76	$1,297	**($1,372)**	$4,246	**($38,464)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**26**	**$110,400**	**$2,134,265**	**$2,023,866**

Incremental Nights Sold



Hueston Woods

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Hueston Woods	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**East Fork**						

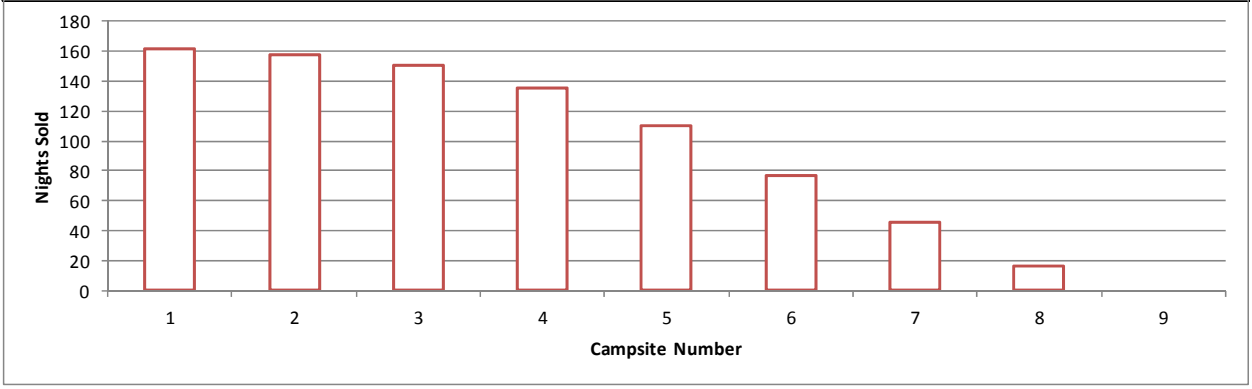
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	162	$5,532	$876	$197	$4,459	$76	($76)	**$4,459**	$4,246	**$106,940**
2	158	$5,396	$855	$192	$4,349	$76	($76)	**$4,349**	$4,246	**$104,195**
3	151	$5,157	$817	$183	$4,156	$76	($76)	**$4,156**	$4,246	**$99,390**
4	135	$4,610	$730	$164	$3,716	$76	($76)	**$3,716**	$4,246	**$88,409**
5	110	$3,757	$595	$134	$3,028	$76	($76)	**$3,028**	$4,246	**$71,251**
6	77	$2,630	$417	$93	$2,119	$76	($76)	**$2,119**	$4,246	**$48,602**
7	46	$1,571	$249	$56	$1,266	$76	($76)	**$1,266**	$4,246	**$27,325**
8	16	$546	$87	$19	$440	$76	($76)	**$440**	$4,246	**$6,735**
9	0	$0	$0	$0	$0	$76	($76)	**$0**	$4,246	**($4,246)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**8**	**$33,969**	**$586,816**	**$552,847**

Incremental Nights Sold



Hocking Hills

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Hocking Hills	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**Mohican**						

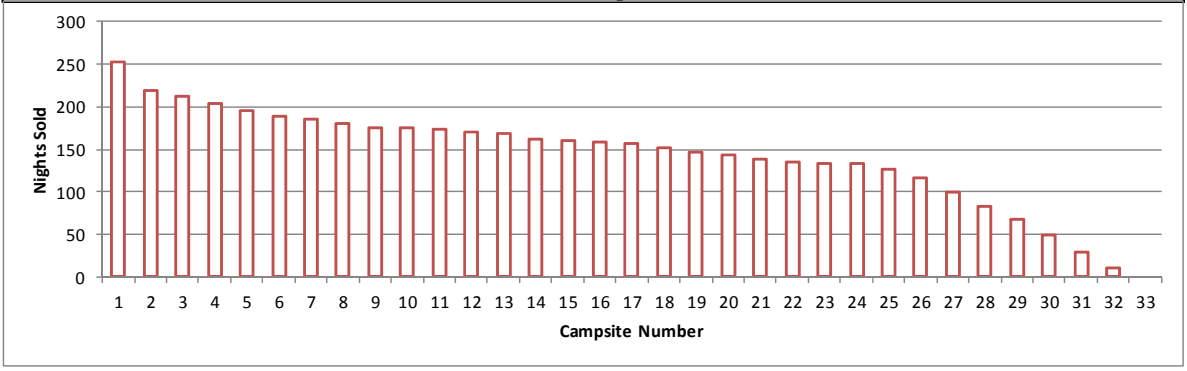
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	253	$8,640	$1,369	$307	$6,964	$76	$15	**$6,874**	$4,246	**$167,143**
2	219	$7,479	$1,185	$266	$6,028	$76	$241	**$5,712**	$4,246	**$138,175**
3	212	$7,240	$1,147	$257	$5,836	$76	$467	**$5,293**	$4,246	**$127,737**
4	204	$6,967	$1,104	$248	$5,615	$76	$602	**$4,938**	$4,246	**$118,867**
5	196	$6,693	$1,060	$238	$5,395	$76	$692	**$4,627**	$4,246	**$111,123**
6	189	$6,454	$1,022	$229	$5,202	$76	$783	**$4,344**	$4,246	**$104,066**
7	185	$6,318	$1,001	$225	$5,092	$76	$828	**$4,189**	$4,246	**$100,194**
8	180	$6,147	$974	$219	$4,955	$76	$828	**$4,051**	$4,246	**$96,762**
9	176	$6,010	$952	$214	$4,845	$76	$828	**$3,941**	$4,246	**$94,017**
10	175	$5,976	$947	$212	$4,817	$76	$873	**$3,868**	$4,246	**$92,204**
11	173	$5,908	$936	$210	$4,762	$76	$896	**$3,791**	$4,246	**$90,268**
12	170	$5,806	$920	$206	$4,679	$76	$918	**$3,685**	$4,246	**$87,645**
13	168	$5,737	$909	$204	$4,624	$76	$918	**$3,630**	$4,246	**$86,273**
14	162	$5,532	$876	$197	$4,459	$76	$986	**$3,397**	$4,246	**$80,465**
15	160	$5,464	$866	$194	$4,404	$76	$1,009	**$3,320**	$4,246	**$78,529**
16	159	$5,430	$860	$193	$4,377	$76	$1,031	**$3,270**	$4,246	**$77,279**
17	156	$5,327	$844	$189	$4,294	$76	$1,076	**$3,142**	$4,246	**$74,094**
18	152	$5,191	$822	$185	$4,184	$76	$1,167	**$2,941**	$4,246	**$69,095**
19	147	$5,020	$795	$178	$4,046	$76	$1,167	**$2,804**	$4,246	**$65,663**
20	144	$4,918	$779	$175	$3,964	$76	$1,189	**$2,699**	$4,246	**$63,041**
21	139	$4,747	$752	$169	$3,826	$76	$1,212	**$2,538**	$4,246	**$59,046**
22	135	$4,610	$730	$164	$3,716	$76	$1,257	**$2,383**	$4,246	**$55,174**
23	133	$4,542	$720	$161	$3,661	$76	$1,257	**$2,328**	$4,246	**$53,801**
24	133	$4,542	$720	$161	$3,661	$76	$1,280	**$2,305**	$4,246	**$53,238**
25	126	$4,303	$682	$153	$3,468	$76	$1,302	**$2,090**	$4,246	**$47,870**
26	117	$3,996	$633	$142	$3,221	$76	$1,302	**$1,842**	$4,246	**$41,693**
27	100	$3,415	$541	$121	$2,753	$76	$1,370	**$1,307**	$4,246	**$28,336**
28	83	$2,834	$449	$101	$2,285	$76	$1,393	**$816**	$4,246	**$16,105**
29	68	$2,322	$368	$83	$1,872	$76	$1,415	**$381**	$4,246	**$5,247**
30	49	$1,673	$265	$59	$1,349	$76	$1,438	**($165)**	$4,246	**($8,357)**
31	29	$990	$157	$35	$798	$76	$1,438	**($715)**	$4,246	**($22,084)**
32	10	$342	$54	$12	$275	$76	$1,483	**($1,284)**	$4,246	**($36,251)**
33	0	$0	$0	$0	$0	$76	$1,483	**($1,559)**	$4,246	**($43,114)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**29**	**$123,138**	**$2,406,286**	**$2,283,148**

Incremental Nights Sold



Indian Lake

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Indian Lake	Campsite	Full Hook-Up	13	44.6%	$35.13	$15.66	2,115	68	$74,293

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	2,115	$74,293	$11,442	$2,568	$60,283	$984	**$59,299**
Operating Profit per Average Unit	163	$5,715	$880	$198	$4,637	$76	**$4,561**
Operating Profit per Marginal Unit	68	$2,389	$368	$83	$1,938	$76	**$1,862**

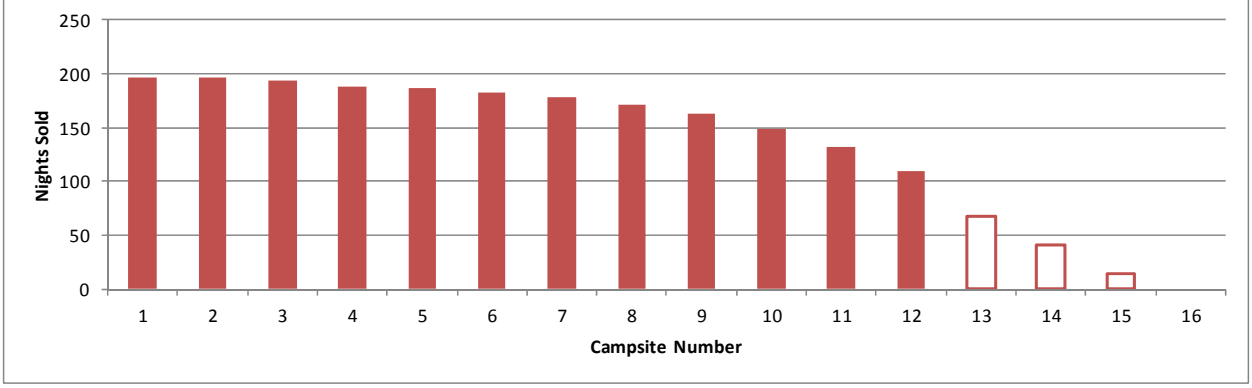
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	196	$6,885	$1,060	$238	$5,587	$76	$0	**$5,511**	$4,246	**$133,161**
2	196	$6,885	$1,060	$238	$5,587	$76	$0	**$5,511**	$4,246	**$133,161**
3	194	$6,815	$1,050	$236	$5,530	$76	$0	**$5,454**	$4,246	**$131,740**
4	188	$6,604	$1,017	$228	$5,358	$76	$0	**$5,283**	$4,246	**$127,476**
5	187	$6,569	$1,012	$227	$5,330	$76	$0	**$5,254**	$4,246	**$126,765**
6	183	$6,428	$990	$222	$5,216	$76	$0	**$5,140**	$4,246	**$123,922**
7	178	$6,253	$963	$216	$5,073	$76	$0	**$4,998**	$4,246	**$120,369**
8	172	$6,042	$931	$209	$4,902	$76	$0	**$4,827**	$4,246	**$116,105**
9	163	$5,726	$882	$198	$4,646	$76	$0	**$4,570**	$4,246	**$109,708**
10	149	$5,234	$806	$181	$4,247	$76	$0	**$4,171**	$4,246	**$99,759**
11	132	$4,637	$714	$160	$3,762	$76	$0	**$3,687**	$4,246	**$87,677**
12	109	$3,829	$590	$132	$3,107	$76	$0	**$3,031**	$4,246	**$71,331**
13	68	$2,389	$368	$83	$1,938	$76	$0	**$1,862**	$4,246	**$42,193**
14	41	$1,440	$222	$50	$1,169	$76	$387	**$706**	$4,246	**$13,362**
15	14	$492	$76	$17	$399	$76	$585	**($262)**	$4,246	**($10,768)**
16	0	$0	$0	$0	$0	$76	$629	**($705)**	$4,246	**($21,815)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**1**	**$4,246**	**$17,608**	**$13,362**

Incremental Nights Sold



Lake Hope

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Lake Hope	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**Punderson**						

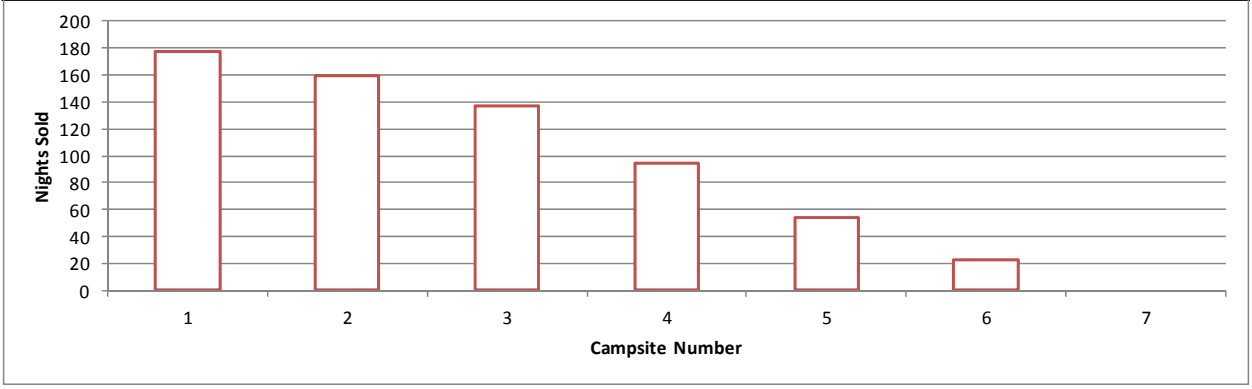
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	177	$6,045	$958	$215	$4,872	$76	($76)	**$4,872**	$4,246	**$117,235**
2	160	$5,464	$866	$194	$4,404	$76	($43)	**$4,372**	$4,246	**$104,759**
3	137	$4,679	$741	$166	$3,771	$76	($11)	**$3,706**	$4,246	**$88,164**
4	94	$3,210	$509	$114	$2,587	$76	$38	**$2,474**	$4,246	**$57,439**
5	54	$1,844	$292	$66	$1,486	$76	$54	**$1,357**	$4,246	**$29,582**
6	23	$785	$124	$28	$633	$76	$103	**$455**	$4,246	**$7,092**
7	0	$0	$0	$0	$0	$76	$119	**($195)**	$4,246	**($9,098)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**6**	**$25,477**	**$429,748**	**$404,271**

Incremental Nights Sold



Lake Loramie

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Lake Loramie	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**Pymatuning**						

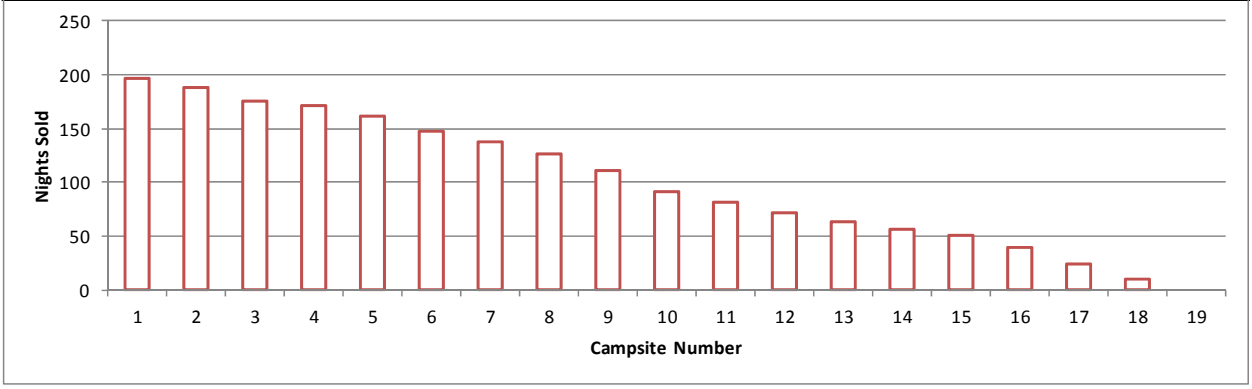
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	197	$6,728	$1,066	$239	$5,423	$76	$217	**$5,130**	$4,246	**$123,673**
2	188	$6,420	$1,017	$228	$5,175	$76	$446	**$4,653**	$4,246	**$111,769**
3	176	$6,010	$952	$214	$4,845	$76	$697	**$4,072**	$4,246	**$97,286**
4	171	$5,840	$925	$208	$4,707	$76	$822	**$3,809**	$4,246	**$90,731**
5	162	$5,532	$876	$197	$4,459	$76	$906	**$3,478**	$4,246	**$82,471**
6	147	$5,020	$795	$178	$4,046	$76	$1,031	**$2,940**	$4,246	**$69,053**
7	138	$4,713	$747	$168	$3,799	$76	$1,177	**$2,546**	$4,246	**$59,231**
8	126	$4,303	$682	$153	$3,468	$76	$1,198	**$2,195**	$4,246	**$50,475**
9	111	$3,791	$601	$135	$3,055	$76	$1,302	**$1,677**	$4,246	**$37,577**
10	91	$3,108	$492	$110	$2,505	$76	$1,386	**$1,043**	$4,246	**$21,768**
11	81	$2,766	$438	$98	$2,230	$76	$1,511	**$643**	$4,246	**$11,781**
12	72	$2,459	$390	$87	$1,982	$76	$1,574	**$332**	$4,246	**$4,042**
13	64	$2,186	$346	$78	$1,762	$76	$1,699	**($13)**	$4,246	**($4,573)**
14	56	$1,912	$303	$68	$1,541	$76	$1,762	**($296)**	$4,246	**($11,625)**
15	51	$1,742	$276	$62	$1,404	$76	$1,824	**($496)**	$4,246	**($16,619)**
16	40	$1,366	$216	$49	$1,101	$76	$2,033	**($1,008)**	$4,246	**($29,374)**
17	24	$820	$130	$29	$661	$76	$2,117	**($1,532)**	$4,246	**($42,438)**
18	10	$342	$54	$12	$275	$76	$2,221	**($2,021)**	$4,246	**($54,650)**
19	0	$0	$0	$0	$0	$76	$2,451	**($2,526)**	$4,246	**($67,240)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**12**	**$50,954**	**$810,810**	**$759,856**

Incremental Nights Sold



Maumee Bay

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Maumee Bay	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**Salt Fork**						

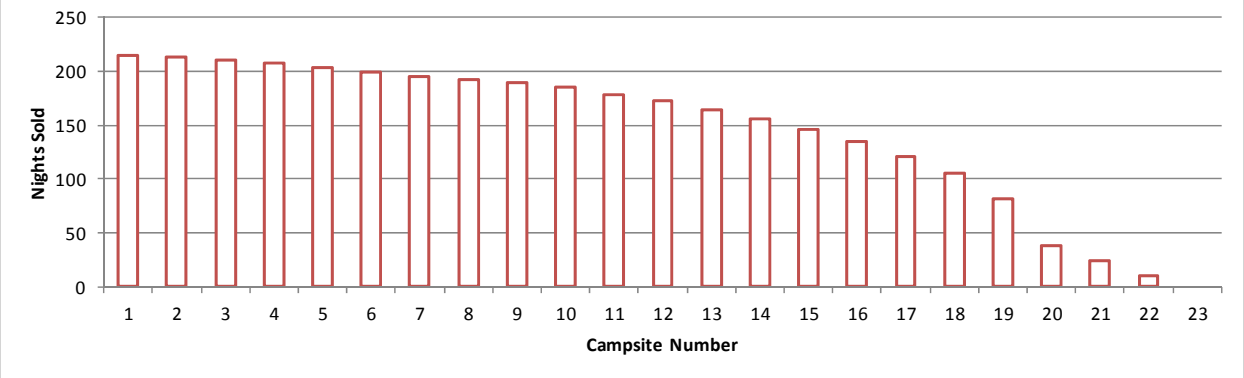
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	215	$7,342	$1,163	$261	$5,918	$76	$11	**$5,831**	$4,246	**$141,147**
2	213	$7,274	$1,152	$259	$5,863	$76	$120	**$5,667**	$4,246	**$137,064**
3	210	$7,172	$1,136	$255	$5,780	$76	$142	**$5,563**	$4,246	**$134,463**
4	208	$7,103	$1,125	$253	$5,725	$76	$185	**$5,464**	$4,246	**$132,006**
5	203	$6,932	$1,098	$246	$5,588	$76	$229	**$5,283**	$4,246	**$127,490**
6	199	$6,796	$1,077	$242	$5,478	$76	$272	**$5,130**	$4,246	**$123,660**
7	195	$6,659	$1,055	$237	$5,368	$76	$316	**$4,976**	$4,246	**$119,831**
8	193	$6,591	$1,044	$234	$5,313	$76	$359	**$4,878**	$4,246	**$117,374**
9	189	$6,454	$1,022	$229	$5,202	$76	$359	**$4,768**	$4,246	**$114,628**
10	186	$6,352	$1,006	$226	$5,120	$76	$381	**$4,663**	$4,246	**$112,027**
11	178	$6,079	$963	$216	$4,900	$76	$424	**$4,400**	$4,246	**$105,452**
12	173	$5,908	$936	$210	$4,762	$76	$468	**$4,218**	$4,246	**$100,936**
13	165	$5,635	$893	$200	$4,542	$76	$468	**$3,998**	$4,246	**$95,446**
14	156	$5,327	$844	$189	$4,294	$76	$490	**$3,729**	$4,246	**$88,727**
15	146	$4,986	$790	$177	$4,019	$76	$490	**$3,453**	$4,246	**$81,863**
16	135	$4,610	$730	$164	$3,716	$76	$490	**$3,151**	$4,246	**$74,314**
17	121	$4,132	$655	$147	$3,331	$76	$490	**$2,765**	$4,246	**$64,705**
18	106	$3,620	$573	$129	$2,918	$76	$490	**$2,352**	$4,246	**$54,410**
19	82	$2,800	$444	$100	$2,257	$76	$490	**$1,692**	$4,246	**$37,938**
20	38	$1,298	$206	$46	$1,046	$76	$490	**$481**	$4,246	**$7,739**
21	24	$820	$130	$29	$661	$76	$533	**$52**	$4,246	**($2,954)**
22	10	$342	$54	$12	$275	$76	$533	**($334)**	$4,246	**($12,562)**
23	0	$0	$0	$0	$0	$76	$555	**($631)**	$4,246	**($19,968)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**20**	**$84,923**	**$2,056,144**	**$1,971,221**

Incremental Nights Sold



Mohican

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Mohican	Campsite	Full Hook-Up	32	40.3%	$38.19	$15.37	4,702	10	$179,579

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	4,702	$179,579	$25,438	$5,708	$148,433	$2,422	**$146,010**
Operating Profit per Average Unit	147	$5,612	$795	$178	$4,639	$76	**$4,563**
Operating Profit per Marginal Unit	10	$382	$54	$12	$316	$76	**$240**

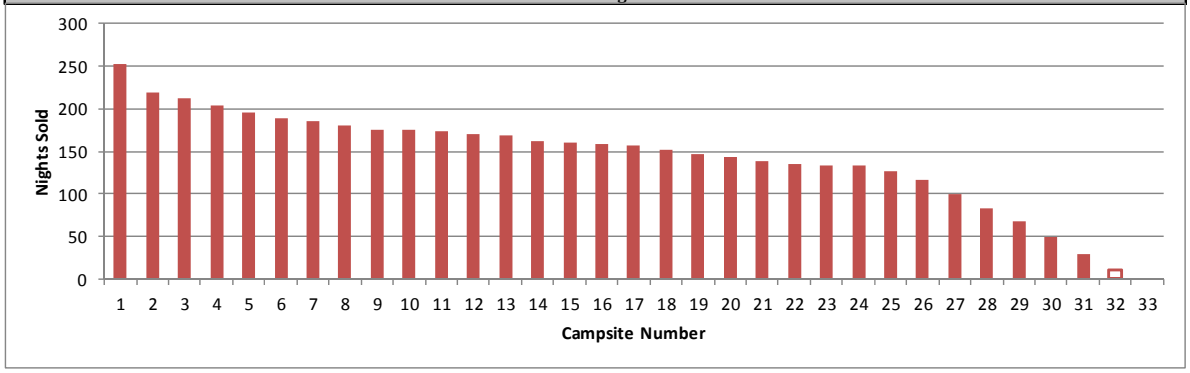
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	253	$9,663	$1,369	$307	$7,987	$76	$0	**$7,911**	$4,246	**$193,008**
2	219	$8,364	$1,185	$266	$6,913	$76	$0	**$6,838**	$4,246	**$166,245**
3	212	$8,097	$1,147	$257	$6,692	$76	$0	**$6,617**	$4,246	**$160,736**
4	204	$7,791	$1,104	$248	$6,440	$76	$0	**$6,364**	$4,246	**$154,439**
5	196	$7,486	$1,060	$238	$6,187	$76	$0	**$6,112**	$4,246	**$148,142**
6	189	$7,218	$1,022	$229	$5,966	$76	$0	**$5,891**	$4,246	**$142,632**
7	185	$7,066	$1,001	$225	$5,840	$76	$0	**$5,764**	$4,246	**$139,483**
8	180	$6,875	$974	$219	$5,682	$76	$0	**$5,607**	$4,246	**$135,548**
9	176	$6,722	$952	$214	$5,556	$76	$0	**$5,480**	$4,246	**$132,399**
10	175	$6,684	$947	$212	$5,524	$76	$0	**$5,449**	$4,246	**$131,612**
11	173	$6,607	$936	$210	$5,461	$76	$0	**$5,386**	$4,246	**$130,038**
12	170	$6,493	$920	$206	$5,367	$76	$0	**$5,291**	$4,246	**$127,677**
13	168	$6,416	$909	$204	$5,303	$76	$0	**$5,228**	$4,246	**$126,102**
14	162	$6,187	$876	$197	$5,114	$76	$0	**$5,038**	$4,246	**$121,380**
15	160	$6,111	$866	$194	$5,051	$76	$0	**$4,975**	$4,246	**$119,805**
16	159	$6,073	$860	$193	$5,019	$76	$0	**$4,944**	$4,246	**$119,018**
17	156	$5,958	$844	$189	$4,925	$76	$0	**$4,849**	$4,246	**$116,657**
18	152	$5,805	$822	$185	$4,798	$76	$0	**$4,723**	$4,246	**$113,508**
19	147	$5,614	$795	$178	$4,640	$76	$0	**$4,565**	$4,246	**$109,573**
20	144	$5,500	$779	$175	$4,546	$76	$0	**$4,470**	$4,246	**$107,212**
21	139	$5,309	$752	$169	$4,388	$76	$0	**$4,312**	$4,246	**$103,276**
22	135	$5,156	$730	$164	$4,262	$76	$0	**$4,186**	$4,246	**$100,127**
23	133	$5,080	$720	$161	$4,199	$76	$0	**$4,123**	$4,246	**$98,553**
24	133	$5,080	$720	$161	$4,199	$76	$0	**$4,123**	$4,246	**$98,553**
25	126	$4,812	$682	$153	$3,978	$76	$0	**$3,902**	$4,246	**$93,043**
26	117	$4,468	$633	$142	$3,693	$76	$0	**$3,618**	$4,246	**$85,959**
27	100	$3,819	$541	$121	$3,157	$76	$0	**$3,081**	$4,246	**$72,578**
28	83	$3,170	$449	$101	$2,620	$76	$0	**$2,544**	$4,246	**$59,197**
29	68	$2,597	$368	$83	$2,147	$76	$0	**$2,071**	$4,246	**$47,390**
30	49	$1,871	$265	$59	$1,547	$76	$0	**$1,471**	$4,246	**$32,435**
31	29	$1,108	$157	$35	$915	$76	$0	**$840**	$4,246	**$16,693**
32	10	$382	$54	$12	$316	$76	$0	**$240**	$4,246	**$1,738**
33	0	$0	$0	$0	$0	$76	$0	**($76)**	$4,246	**($6,134)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**0**	**$0**	**$0**	**$0**

Incremental Nights Sold



Punderson

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Punderson	Campsite	Full Hook-Up	5	34.1%	$34.19	$11.65	622	54	$21,269

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	622	$21,269	$3,365	$755	$17,149	$379	**$16,770**
Operating Profit per Average Unit	124	$4,254	$673	$151	$3,430	$76	**$3,354**
Operating Profit per Marginal Unit	54	$1,846	$292	$66	$1,489	$76	**$1,413**

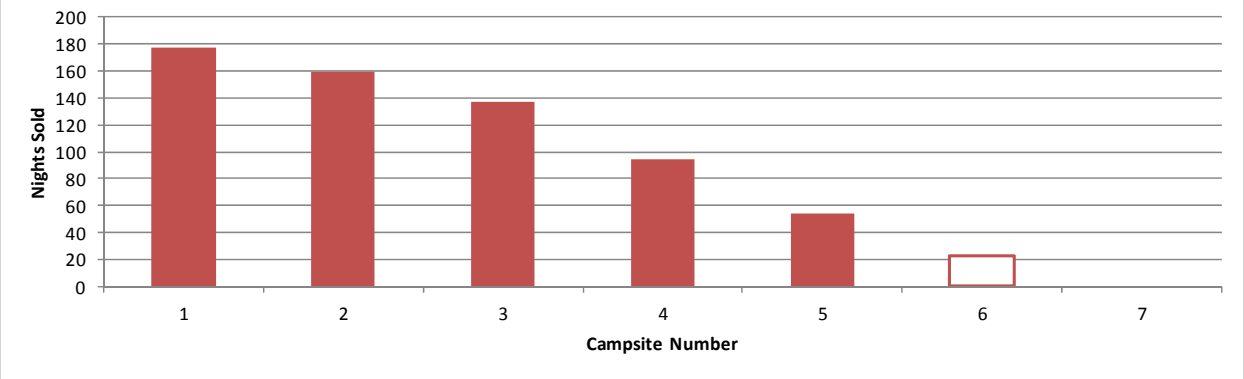
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	177	$6,052	$958	$215	$4,880	$76	$0	**$4,804**	$4,246	**$115,542**
2	160	$5,471	$866	$194	$4,411	$76	$0	**$4,336**	$4,246	**$103,856**
3	137	$4,685	$741	$166	$3,777	$76	$0	**$3,701**	$4,246	**$88,045**
4	94	$3,214	$509	$114	$2,592	$76	$0	**$2,516**	$4,246	**$58,485**
5	54	$1,846	$292	$66	$1,489	$76	$0	**$1,413**	$4,246	**$30,988**
6	23	$786	$124	$28	$634	$76	($76)	**$634**	$4,246	**$11,565**
7	0	$0	$0	$0	$0	$76	($76)	**$0**	$4,246	**($4,246)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**1**	**$4,246**	**$15,811**	**$11,565**

Incremental Nights Sold



Pymatuning

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Pymatuning	Campsite	Full Hook-Up	18	29.0%	$32.27	$9.36	1,905	10	$61,465

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	1,905	$61,465	$10,306	$2,313	$48,846	$1,363	**$47,484**
Operating Profit per Average Unit	106	$3,415	$573	$128	$2,714	$76	**$2,638**
Operating Profit per Marginal Unit	10	$323	$54	$12	$256	$76	**$181**

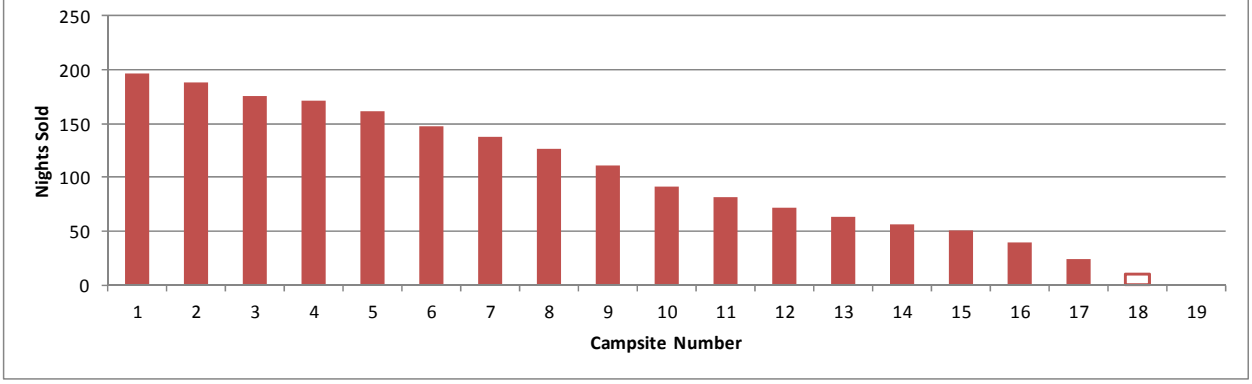
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	197	$6,356	$1,066	$239	$5,051	$76	$0	**$4,976**	$4,246	**$119,816**
2	188	$6,066	$1,017	$228	$4,821	$76	$0	**$4,745**	$4,246	**$114,062**
3	176	$5,679	$952	$214	$4,513	$76	$0	**$4,437**	$4,246	**$106,389**
4	171	$5,517	$925	$208	$4,385	$76	$0	**$4,309**	$4,246	**$103,193**
5	162	$5,227	$876	$197	$4,154	$76	$0	**$4,078**	$4,246	**$97,439**
6	147	$4,743	$795	$178	$3,769	$76	$0	**$3,694**	$4,246	**$87,849**
7	138	$4,453	$747	$168	$3,538	$76	$0	**$3,463**	$4,246	**$82,095**
8	126	$4,065	$682	$153	$3,231	$76	$0	**$3,155**	$4,246	**$74,423**
9	111	$3,581	$601	$135	$2,846	$76	$0	**$2,770**	$4,246	**$64,833**
10	91	$2,936	$492	$110	$2,333	$76	$0	**$2,258**	$4,246	**$52,046**
11	81	$2,613	$438	$98	$2,077	$76	$0	**$2,001**	$4,246	**$45,653**
12	72	$2,323	$390	$87	$1,846	$76	$0	**$1,770**	$4,246	**$39,899**
13	64	$2,065	$346	$78	$1,641	$76	$0	**$1,565**	$4,246	**$34,784**
14	56	$1,807	$303	$68	$1,436	$76	$0	**$1,360**	$4,246	**$29,669**
15	51	$1,646	$276	$62	$1,308	$76	$0	**$1,232**	$4,246	**$26,472**
16	40	$1,291	$216	$49	$1,026	$76	$0	**$950**	$4,246	**$19,440**
17	24	$774	$130	$29	$615	$76	$0	**$540**	$4,246	**$9,210**
18	10	$323	$54	$12	$256	$76	$0	**$181**	$4,246	**$260**
19	0	$0	$0	$0	$0	$76	($76)	**$0**	$4,246	**($4,246)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**0**	**$0**	**$0**	**$0**

Incremental Nights Sold



Rocky Fork

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Rocky Fork	Camp	Full Hook-Up	44	35.6%	$33.30	$11.87	5,725	2	$190,622

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	5,725	$190,622	$30,972	$6,950	$152,699	$3,331	**$149,368**
Operating Profit per Average Unit	130	$4,332	$704	$158	$3,470	$76	**$3,395**
Operating Profit per Marginal Unit	2	$67	$11	$2	$53	$76	**($22)**

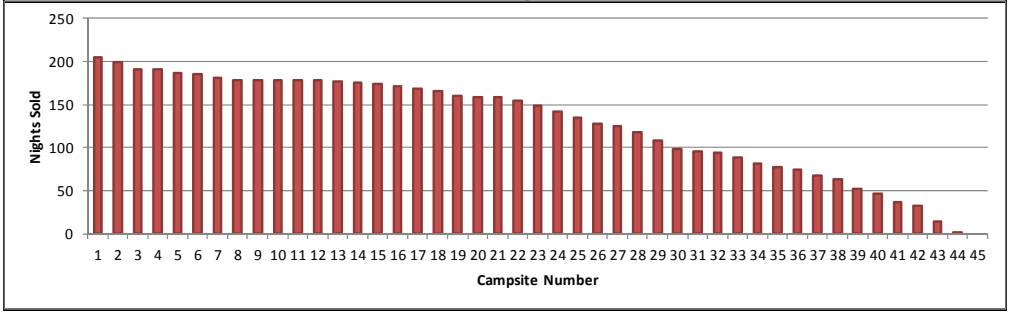
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	205	$6,826	$1,109	$249	$5,468	$76	$0	**$5,392**	$4,246	**$130,202**
2	199	$6,626	$1,077	$242	$5,308	$76	$0	**$5,232**	$4,246	**$126,212**
3	191	$6,360	$1,033	$232	$5,094	$76	$0	**$5,019**	$4,246	**$120,891**
4	191	$6,360	$1,033	$232	$5,094	$76	$0	**$5,019**	$4,246	**$120,891**
5	187	$6,226	$1,012	$227	$4,988	$76	$0	**$4,912**	$4,246	**$118,231**
6	185	$6,160	$1,001	$225	$4,934	$76	$0	**$4,859**	$4,246	**$116,901**
7	181	$6,027	$979	$220	$4,828	$76	$0	**$4,752**	$4,246	**$114,241**
8	178	$5,927	$963	$216	$4,748	$76	$0	**$4,672**	$4,246	**$112,245**
9	178	$5,927	$963	$216	$4,748	$76	$0	**$4,672**	$4,246	**$112,245**
10	178	$5,927	$963	$216	$4,748	$76	$0	**$4,672**	$4,246	**$112,245**
11	178	$5,927	$963	$216	$4,748	$76	$0	**$4,672**	$4,246	**$112,245**
12	178	$5,927	$963	$216	$4,748	$76	$0	**$4,672**	$4,246	**$112,245**
13	177	$5,893	$958	$215	$4,721	$76	$0	**$4,645**	$4,246	**$111,580**
14	176	$5,860	$952	$214	$4,694	$76	$0	**$4,619**	$4,246	**$110,915**
15	174	$5,794	$941	$211	$4,641	$76	$0	**$4,565**	$4,246	**$109,585**
16	171	$5,694	$925	$208	$4,561	$76	$0	**$4,485**	$4,246	**$107,590**
17	168	$5,594	$909	$204	$4,481	$76	$0	**$4,405**	$4,246	**$105,595**
18	166	$5,527	$898	$202	$4,428	$76	$0	**$4,352**	$4,246	**$104,265**
19	160	$5,327	$866	$194	$4,268	$76	$0	**$4,192**	$4,246	**$100,275**
20	159	$5,294	$860	$193	$4,241	$76	$0	**$4,165**	$4,246	**$99,609**
21	158	$5,261	$855	$192	$4,214	$76	$0	**$4,139**	$4,246	**$98,944**
22	154	$5,128	$833	$187	$4,108	$76	$0	**$4,032**	$4,246	**$96,284**
23	149	$4,961	$806	$181	$3,974	$76	$0	**$3,898**	$4,246	**$92,959**
24	142	$4,728	$768	$172	$3,787	$76	$0	**$3,712**	$4,246	**$88,304**
25	135	$4,495	$730	$164	$3,601	$76	$0	**$3,525**	$4,246	**$83,648**
26	128	$4,262	$692	$155	$3,414	$76	$0	**$3,338**	$4,246	**$78,993**
27	125	$4,162	$676	$152	$3,334	$76	$0	**$3,258**	$4,246	**$76,998**
28	118	$3,929	$638	$143	$3,147	$76	$0	**$3,072**	$4,246	**$72,342**
29	108	$3,596	$584	$131	$2,881	$76	$0	**$2,805**	$4,246	**$65,692**
30	99	$3,296	$536	$120	$2,641	$76	$0	**$2,565**	$4,246	**$59,706**
31	95	$3,163	$514	$115	$2,534	$76	$0	**$2,458**	$4,246	**$57,046**
32	94	$3,130	$509	$114	$2,507	$76	$0	**$2,432**	$4,246	**$56,381**
33	89	$2,963	$481	$108	$2,374	$76	$0	**$2,298**	$4,246	**$53,056**
34	82	$2,730	$444	$100	$2,187	$76	$0	**$2,111**	$4,246	**$48,401**
35	78	$2,597	$422	$95	$2,080	$76	$0	**$2,005**	$4,246	**$45,740**
36	74	$2,464	$400	$90	$1,974	$76	$0	**$1,898**	$4,246	**$43,080**
37	68	$2,264	$368	$83	$1,814	$76	$0	**$1,738**	$4,246	**$39,090**
38	63	$2,098	$341	$76	$1,680	$76	$0	**$1,605**	$4,246	**$35,765**
39	52	$1,731	$281	$63	$1,387	$76	$0	**$1,311**	$4,246	**$28,449**
40	47	$1,565	$254	$57	$1,254	$76	$0	**$1,178**	$4,246	**$25,124**
41	37	$1,232	$200	$45	$987	$76	$0	**$911**	$4,246	**$18,473**
42	33	$1,099	$179	$40	$880	$76	$0	**$804**	$4,246	**$15,813**
43	15	$499	$81	$18	$400	$76	$0	**$324**	$4,246	**$3,842**
44	2	$67	$11	$2	$53	$76	$0	**($22)**	$4,246	**($4,804)**
45	0	$0	$0	$0	$0	$76	($19)	**($57)**	$4,246	**($5,662)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**0**	**$0**	**$0**	**$0**

Incremental Nights Sold



Salt Fork

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Salt Fork	Campsite	Full Hook-Up	20	47.7%	$34.91	$16.67	3,311	38	$115,585

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	3,311	$115,585	$17,913	$4,020	$93,653	$1,514	**$92,139**
Operating Profit per Average Unit	166	$5,779	$896	$201	$4,683	$76	**$4,607**
Operating Profit per Marginal Unit	38	$1,327	$206	$46	$1,075	$76	**$999**

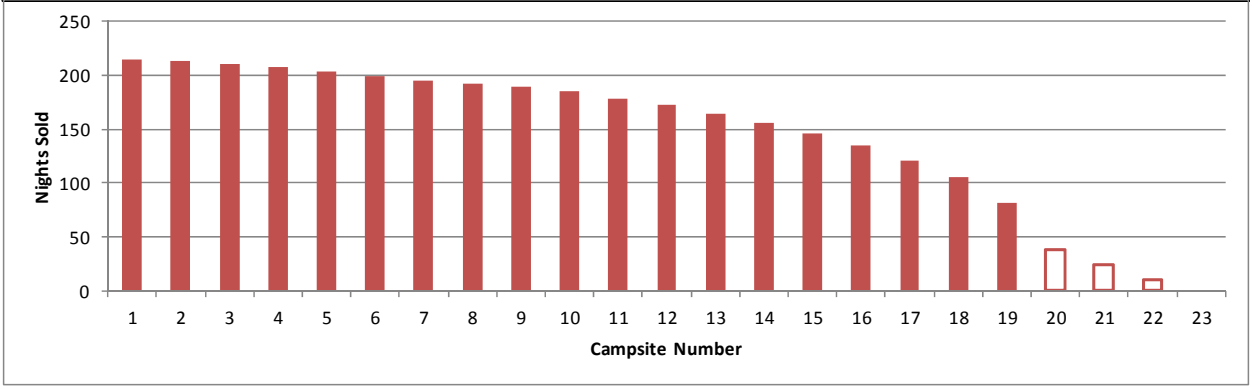
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	215	$7,506	$1,163	$261	$6,081	$76	$0	**$6,006**	$4,246	**$145,499**
2	213	$7,436	$1,152	$259	$6,025	$76	$0	**$5,949**	$4,246	**$144,089**
3	210	$7,331	$1,136	$255	$5,940	$76	$0	**$5,864**	$4,246	**$141,973**
4	208	$7,261	$1,125	$253	$5,883	$76	$0	**$5,808**	$4,246	**$140,563**
5	203	$7,087	$1,098	$246	$5,742	$76	$0	**$5,666**	$4,246	**$137,036**
6	199	$6,947	$1,077	$242	$5,629	$76	$0	**$5,553**	$4,246	**$134,215**
7	195	$6,807	$1,055	$237	$5,516	$76	$0	**$5,440**	$4,246	**$131,394**
8	193	$6,738	$1,044	$234	$5,459	$76	$0	**$5,383**	$4,246	**$129,983**
9	189	$6,598	$1,022	$229	$5,346	$76	$0	**$5,270**	$4,246	**$127,162**
10	186	$6,493	$1,006	$226	$5,261	$76	$0	**$5,185**	$4,246	**$125,047**
11	178	$6,214	$963	$216	$5,035	$76	$0	**$4,959**	$4,246	**$119,404**
12	173	$6,039	$936	$210	$4,893	$76	$0	**$4,818**	$4,246	**$115,878**
13	165	$5,760	$893	$200	$4,667	$76	$0	**$4,591**	$4,246	**$110,236**
14	156	$5,446	$844	$189	$4,413	$76	$0	**$4,337**	$4,246	**$103,888**
15	146	$5,097	$790	$177	$4,130	$76	$0	**$4,054**	$4,246	**$96,836**
16	135	$4,713	$730	$164	$3,819	$76	$0	**$3,743**	$4,246	**$89,078**
17	121	$4,224	$655	$147	$3,423	$76	$0	**$3,347**	$4,246	**$79,204**
18	106	$3,700	$573	$129	$2,998	$76	$0	**$2,923**	$4,246	**$68,625**
19	82	$2,863	$444	$100	$2,319	$76	$0	**$2,244**	$4,246	**$51,698**
20	38	$1,327	$206	$46	$1,075	$76	$0	**$999**	$4,246	**$20,667**
21	24	$838	$130	$29	$679	$76	($76)	**$679**	$4,246	**$12,680**
22	10	$349	$54	$12	$283	$76	($55)	**$262**	$4,246	**$2,291**
23	0	$0	$0	$0	$0	$76	$69	**($145)**	$4,246	**($7,854)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**2**	**$8,492**	**$23,464**	**$14,972**

Incremental Nights Sold



Shawnee

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
Shawnee	Campsite	Full Hook-Up	0	N/A	N/A	N/A	N/A	N/A	N/A

CY 2013 Operating Profits*

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	*Park had no existing full hook-up inventory in CY 2013. Sales are projected based on actual CY 2013 performance of:						
Operating Profit per Average Unit							
Operating Profit per Marginal Unit	**South Bass Island**						

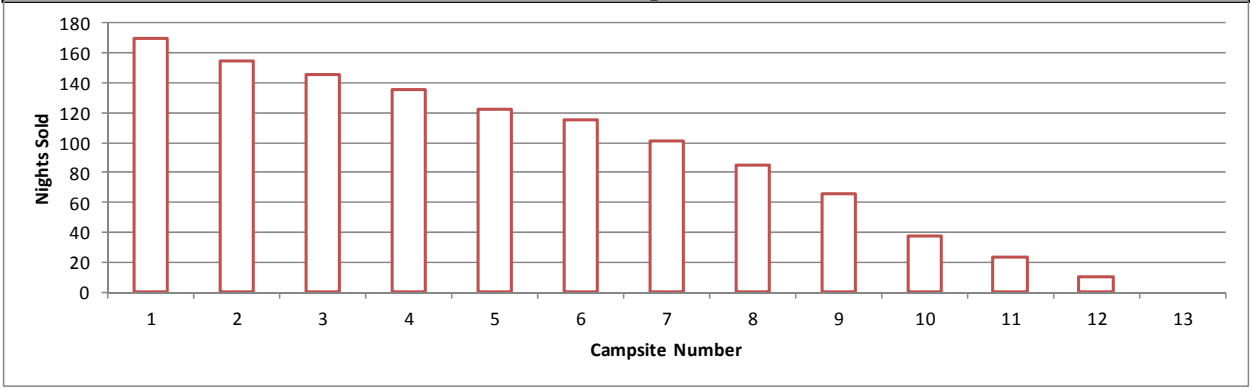
Detailed Sales Projection

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	170	$5,806	$920	$206	$4,679	$76	($76)	**$4,679**	$4,246	**$112,431**
2	155	$5,293	$839	$188	$4,267	$76	($76)	**$4,267**	$4,246	**$102,136**
3	146	$4,986	$790	$177	$4,019	$76	($76)	**$4,019**	$4,246	**$95,959**
4	135	$4,610	$730	$164	$3,716	$76	($76)	**$3,716**	$4,246	**$88,409**
5	122	$4,166	$660	$148	$3,358	$76	($58)	**$3,341**	$4,246	**$79,057**
6	115	$3,927	$622	$140	$3,165	$76	($41)	**$3,131**	$4,246	**$73,824**
7	101	$3,449	$546	$123	$2,780	$76	$10	**$2,694**	$4,246	**$62,927**
8	85	$2,903	$460	$103	$2,340	$76	$10	**$2,254**	$4,246	**$51,945**
9	66	$2,254	$357	$80	$1,817	$76	$10	**$1,731**	$4,246	**$38,905**
10	38	$1,298	$206	$46	$1,046	$76	$10	**$960**	$4,246	**$19,688**
11	24	$820	$130	$29	$661	$76	$10	**$575**	$4,246	**$10,079**
12	10	$342	$54	$12	$275	$76	$28	**$172**	$4,246	**$41**
13	0	$0	$0	$0	$0	$76	$28	**($103)**	$4,246	**($6,822)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**12**	**$50,954**	**$786,354**	**$735,400**

Incremental Nights Sold



South Bass Island

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
South Bass Island	Campsite	Full Hook-Up	10	31.0%	$32.35	$10.04	1,133	38	$36,656

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	1,133	$36,656	$6,130	$1,376	$29,151	$757	**$28,394**
Operating Profit per Average Unit	113	$3,666	$613	$138	$2,915	$76	**$2,839**
Operating Profit per Marginal Unit	38	$1,229	$206	$46	$978	$76	**$902**

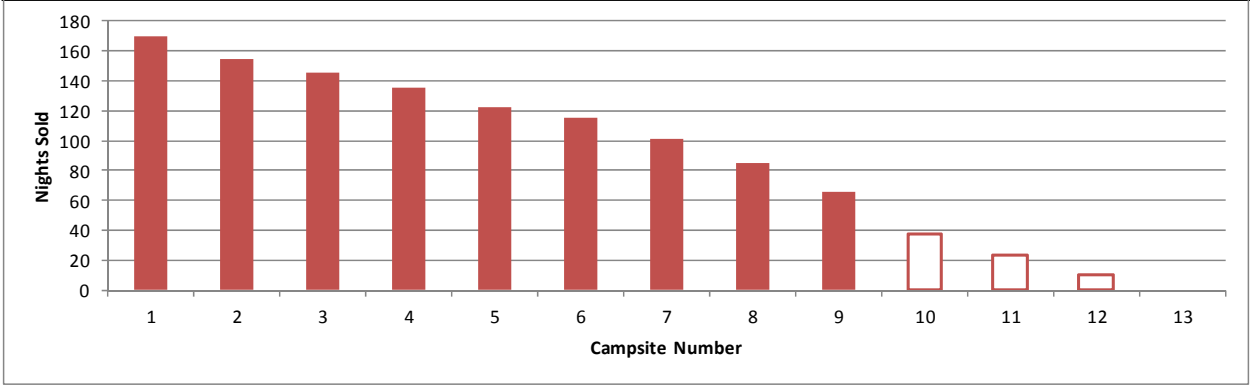
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	170	$5,500	$920	$206	$4,374	$76	$0	**$4,298**	$4,246	**$102,926**
2	155	$5,015	$839	$188	$3,988	$76	$0	**$3,912**	$4,246	**$93,303**
3	146	$4,724	$790	$177	$3,756	$76	$0	**$3,681**	$4,246	**$87,530**
4	135	$4,368	$730	$164	$3,473	$76	$0	**$3,398**	$4,246	**$80,473**
5	122	$3,947	$660	$148	$3,139	$76	$0	**$3,063**	$4,246	**$72,133**
6	115	$3,721	$622	$140	$2,959	$76	$0	**$2,883**	$4,246	**$67,642**
7	101	$3,268	$546	$123	$2,599	$76	$0	**$2,523**	$4,246	**$58,661**
8	85	$2,750	$460	$103	$2,187	$76	$0	**$2,111**	$4,246	**$48,396**
9	66	$2,135	$357	$80	$1,698	$76	$0	**$1,622**	$4,246	**$36,207**
10	38	$1,229	$206	$46	$978	$76	$0	**$902**	$4,246	**$18,244**
11	24	$776	$130	$29	$617	$76	$51	**$491**	$4,246	**$7,995**
12	10	$324	$54	$12	$257	$76	$177	**$4**	$4,246	**($4,142)**
13	0	$0	$0	$0	$0	$76	$177	**($253)**	$4,246	**($10,557)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**1**	**$4,246**	**$12,241**	**$7,995**

Incremental Nights Sold



West Branch

Full Hook-Up Campsite Investment Analysis

CY 2013 Reservation Statistics

Park Location	Accommodation Category	Site Type	Inventory Count	Occupancy Rate	ADR	RevPAR	Nights Sold	Sell-Out Nights	Total Revenue
West Branch	Campsite	Full Hook-Up	29	43.6%	$32.16	$14.02	4,614	56	$148,404

CY 2013 Operating Profits

	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit	FF&E Expense	Net Profit
Total Operating Profit	4,614	$148,404	$24,962	$5,602	$117,840	$2,195	**$115,645**
Operating Profit per Average Unit	159	$5,117	$861	$193	$4,063	$76	**$3,988**
Operating Profit per Marginal Unit	56	$1,801	$303	$68	$1,430	$76	**$1,355**

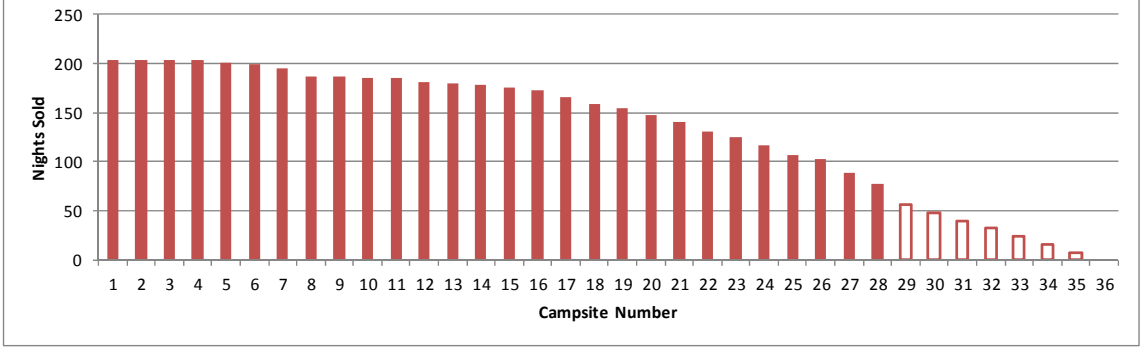
Detailed Sales (CY 2013)

Campsite #	Nights Sold	Total Revenue	Utilities Expense	Turn Expense	Profit before FF&E	FF&E Expense	Electric Site Opportunity Cost	Net Profit	Investment Costs	Investment NPV
1	204	$6,561	$1,104	$248	$5,210	$76	$0	**$5,134**	$4,246	**$123,776**
2	204	$6,561	$1,104	$248	$5,210	$76	$0	**$5,134**	$4,246	**$123,776**
3	203	$6,529	$1,098	$246	$5,185	$76	$0	**$5,109**	$4,246	**$123,139**
4	203	$6,529	$1,098	$246	$5,185	$76	$0	**$5,109**	$4,246	**$123,139**
5	201	$6,465	$1,087	$244	$5,133	$76	$0	**$5,058**	$4,246	**$121,865**
6	199	$6,401	$1,077	$242	$5,082	$76	$0	**$5,007**	$4,246	**$120,592**
7	195	$6,272	$1,055	$237	$4,980	$76	$0	**$4,905**	$4,246	**$118,044**
8	187	$6,015	$1,012	$227	$4,776	$76	$0	**$4,700**	$4,246	**$112,950**
9	187	$6,015	$1,012	$227	$4,776	$76	$0	**$4,700**	$4,246	**$112,950**
10	186	$5,982	$1,006	$226	$4,750	$76	$0	**$4,675**	$4,246	**$112,313**
11	185	$5,950	$1,001	$225	$4,725	$76	$0	**$4,649**	$4,246	**$111,676**
12	181	$5,822	$979	$220	$4,623	$76	$0	**$4,547**	$4,246	**$109,129**
13	180	$5,789	$974	$219	$4,597	$76	$0	**$4,521**	$4,246	**$108,492**
14	178	$5,725	$963	$216	$4,546	$76	$0	**$4,470**	$4,246	**$107,219**
15	176	$5,661	$952	$214	$4,495	$76	$0	**$4,419**	$4,246	**$105,945**
16	173	$5,564	$936	$210	$4,418	$76	$0	**$4,343**	$4,246	**$104,035**
17	166	$5,339	$898	$202	$4,240	$76	$0	**$4,164**	$4,246	**$99,577**
18	159	$5,114	$860	$193	$4,061	$76	$0	**$3,985**	$4,246	**$95,119**
19	155	$4,985	$839	$188	$3,959	$76	$0	**$3,883**	$4,246	**$92,572**
20	147	$4,728	$795	$178	$3,754	$76	$0	**$3,679**	$4,246	**$87,477**
21	140	$4,503	$757	$170	$3,576	$76	$0	**$3,500**	$4,246	**$83,020**
22	130	$4,181	$703	$158	$3,320	$76	$0	**$3,244**	$4,246	**$76,652**
23	125	$4,020	$676	$152	$3,192	$76	$0	**$3,117**	$4,246	**$73,468**
24	117	$3,763	$633	$142	$2,988	$76	$0	**$2,912**	$4,246	**$68,373**
25	107	$3,442	$579	$130	$2,733	$76	$0	**$2,657**	$4,246	**$62,005**
26	103	$3,313	$557	$125	$2,631	$76	$0	**$2,555**	$4,246	**$59,458**
27	89	$2,863	$481	$108	$2,273	$76	$0	**$2,197**	$4,246	**$50,542**
28	78	$2,509	$422	$95	$1,992	$76	$0	**$1,916**	$4,246	**$43,538**
29	56	$1,801	$303	$68	$1,430	$76	$0	**$1,355**	$4,246	**$29,528**
30	48	$1,544	$260	$58	$1,226	$76	$278	**$872**	$4,246	**$17,507**
31	40	$1,287	$216	$49	$1,022	$76	$444	**$502**	$4,246	**$8,264**
32	32	$1,029	$173	$39	$817	$76	$610	**$131**	$4,246	**($978)**
33	24	$772	$130	$29	$613	$76	$652	**($115)**	$4,246	**($7,109)**
34	16	$515	$87	$19	$409	$76	$694	**($361)**	$4,246	**($13,241)**
35	8	$257	$43	$10	$204	$76	$714	**($586)**	$4,246	**($18,854)**
36	0	$0	$0	$0	$0	$76	$735	**($811)**	$4,246	**($24,467)**

Financial Impacts

	Sites Impacted	Cost of Investment	PV Net Profits	Investment NPV
Impact from Positive NPV Investments	**2**	**$8,492**	**$34,263**	**$25,771**

Incremental Nights Sold



Appendix 5.C: Operating and Investment Profiles Description

Park Name
Accommodation and Analysis Type
CY 2013 Reservation Statistics
Reservation Statistics: This section provides a summary of key performance indicators compiled from Parks' overnight accommodation reservation system. Operational definitions include: • Inventory Count - A count of the physical structures of a given accommodation type available to rent in a park. • Occupancy Rate - The number of nights sold divided by the annual number of nights available for the accommodation type in a park. • ADR - Average Daily Rate, calculated as total revenue divided by nights sold. • RevPAR - Revenue per Available Room, calculated as total revenue divided by annual nights available. • Nights Sold - A count of the total annual instances where an accommodated type was rented. • Sell-Out Nights - A count of the annual instances where a park's total inventory of an accommodation type was sold out to capacity. • Total Revenue - A park's total annual revenue produced from the rental of an accommodation type.
CY 2013 Operating Profits
Operating Profits: This section describes the accommodation type's operating profits in terms of park total, the average unit, and the marginal unit. Operational definitions include: • Total Operating Profit - Entries for this category are the annual totals across a park's entire inventory of an accommodation type. • Operating Profit per Average Unit - Entries for this category are calculated as annual park totals for an accommodation type divided by inventory count. • Operating Profit per Marginal Unit - Entries for this category reflect the performance of a park's unit with the fewest incremental nights sold. • Utilities Expense - The cost of electric, water, and sewer utilities. • Turn Expense - The cost of preparing an accommodation type for the next guest stay after a departure, including expenses associated with cleaning and laundering. • Profit - Total Revenue minus Utilities Expense minus Turn Expense. Does not account for FF&E Expense or Opportunity Costs. • FF&E Expense - An annual amount that represents an amortized portion of the reoccurring costs associated with replacing fixtures, furnature, and equipment. • Net Profit - Total Revenue minus Utilities Expense minus Turn Expense minus FF&E Expense.
Break Even Analysis
Break Even Analysis: This section calculates the annual number of nights sold an individual unit of inventory must produce in order to pass 2 profitability hurdles. Applicable to the Cabin Investment Analysis only. • Method #1: Targeting Positive Net Profit - The minimum number of Nights Sold that a single unit of inventory must produce in order to yield a Net Profit greater than $0.00. • Method #2: Targeting Positive NPV over Useful Life - The minimum number of Nights Sold that a single unit of inventory would need to produce in order to yield a NPV greater than $0.00 after Investment Costs have been incurred. • Break Even Cabin # - Represents the last unit of cabin inventory that is able to break even at a particular park. Any cabins existing or built after the Break Even Cabin result in the additional cabins producing a negative Net Profit or negative NPV.
Detailed Sales
Detailed Sales: This section presents detailed profitability and investment return characteristics for every incremental unit in a particular park. Operational definitions include: • Nights Sold - Nights sold in this section are calculated using the incremental methodology described in detail in the report. • Investment Costs - The construction and renovation expenses associated with either extending a cabin's useful life or installing new full hook-up campsite inventory. • PV of Net Profits - The present value of a unit's annual operating profits across its entire useful life. • Investment NPV - PV of Net Profits minus the inititial Investment Costs. • Specific to full hook-up analysis, orange highlighted rows represent entries that are based on projections of sales.
Financial Impacts
Financial Impacts: This section quantifies the impact for an entire park of acting on the implications of the investment analysis. The three actions quantified are the renovation cabins, the disposal of cabins, and the addition of full hook-up campsite inventory. Operational definitions include: • Impact from Positive NPV Investments - These totals sum the relevant fields for all the units in a park that are able to yield a positive Investment NPV. • Impact from Disposal and Cost Avoidance - These totals sum the relevant fields for all the units in a park that are currently producing a negative operating profit.
Incremental Nights Sold
Incremental Nights Sold: This chart visually represents the data and calculations in the Detailed Sales section. Chart elements include: • Red Bars - Represent the count of annual incremental nights sold for each unit of inventory in a park. Within the full hook-up analysis, solid bars represent actual CY 2013 financials, while hollow bars represent projections. • Break Even NPV - The dashed horizontal green line represents the nights sold threshold above which investments in a unit yield a positive NPV. • Break Even Net Profit - The dotted horizontal blue line represents the nights sold threshold above which a unit yields a positive net Net Profit.

6. Capital Planning and Budgeting

Section Overview

This section focuses on the Ohio Department of Natural Resources' (ODNR or the Department) capital planning and budgeting process. Focusing specifically on the Division of Parks and Recreation (Parks or the Division), information was collected and analysis was performed to identify the current backlog of building replacements as well as expected future replacements and the financial value of each. Analysis identified opportunities to leverage a full assessment of facilities and related systems to create a robust asset management system supporting a long-term asset management strategy to efficiently and effectively support the Department and Division's mission.

Recommendation Overview

Recommendation 6.1: ODNR should fully assess its portfolio of assets by gathering and documenting critical information necessary for effective asset management (e.g., age, location, condition, deferred maintenance, component systems, replacement value, etc.). Once this information is gathered, it should be entered into an asset management system to allow for timely, transparent access to necessary management information on a scale ranging from the entire Department to a specific asset. Finally, the Department should develop an asset management strategy, similar to one used by the National Parks Service, that targets and prioritizes scarce capital resources and supplemental operating budgets on critical needs over the long-term. Leveraging ODNR-wide asset management information into a unified, long-term strategy will help to ensure that each capital dollar is spent in a manner that efficiently and effectively supports the Department's mission and each associated operating dollar is targeted toward maximizing the value and realization of the initial investment.

Financial Implication 6.1: N/A

R6.1 Capital Planning and Budgeting

Background

Mission and Footprint

ODNR has a wide and varied physical footprint across the State; holding property[91] in 87 of 88 counties[92] and providing services across all 88 counties.[93] ODNR's mission is "To ensure a balance between wise use and protection of our natural resources for the benefit of all."

To further conservation, accessibility, strategic, and operational goals, the Department maintains a significant infrastructure and building presence; all of which are broadly encapsulated as assets and can be viewed strategically as investments. For example, dams, roadways, and lodges all represent asset investments which the Department has identified as mission critical. In relation to total assets, these critical few tend to dominate the Department's planning and budgeting focus as well as the public discourse. However, the Department also holds far more numerous, but less critical, complimentary assets such as offices, restrooms, and cabins. While the Department has more discretion and faces less public scrutiny in how these assets are managed it also has fewer dedicated resources available to manage them.

The Department is focused on building assets as a part of its capital allocation process. Second only to infrastructure such as dams and roadways, buildings have the greatest citizen visibility and potential for visitor and user impact.

Table 6-1 shows the distribution of ODNR buildings by division and in total for calendar year (CY) 2014.

Table 6-1: ODNR Buildings Overview CY 2014

Division	Buildings Count	Percent of Total Buildings
Parks and Recreation	2,192	83.5%
Wildlife	220	8.4%
Forestry	141	5.4%
Natural Areas and Preserves	41	1.6%
Administration/Ohio Expo Center	17	0.6%
Watercraft	9	0.3%
Oil and Gas	3	0.1%
Geological Survey	1	0.0%
ODNR Total	**2,624**	**100.0%**

Source: ODNR, Ohio Department of Administrative Services (DAS), and Parks

[91] Lands held by the Department include owned lands as well as those which are held through leases, land management agreements, and dedications. The *2013 Land Inventory* (Office of Real Estate Management, 2013), notes that "these lands are not owned in fee by the State or under direct jurisdiction of the Department or State of Ohio. They are managed in a manner that furthers the mission of the Department for recreational or conservation purposes."

[92] Allen County is the only county in which the Department does not hold property.

[93] For example, one wildlife officer from the Division of Wildlife is assigned to each county.

Note: Buildings held by the Division of Parks and Recreation (Parks) were subject to detailed inventory and evaluation (useful life, expected replacement valuation, etc.) as a part of the analysis contained in this report. All other data points are as reported on the Department's catastrophic building insurance (CBI) list as of June 6, 2014.[94]

As shown in **Table 6-1**, the majority of total ODNR buildings are held by only a few of the divisions. For example, 97.3 percent of total buildings are held by Parks (83.5 percent), Wildlife (8.4 percent), and Forestry (5.4 percent). This concentrated building presence logically correlates to these divisions as they also collectively hold the largest overall land footprint; inclusive of 97.0 percent of total Department-owned acreage (520,351 of 536,322 total acres) according to the *2013 Land Inventory* (Office of Real Estate Management, 2013).

As demonstrated, asset ownership and access are integral to ODNR as a whole, but particularly to these divisions. This operational fact is reinforced (explicitly and implicitly) within each division-specific mission statement:

- Parks' mission is "To enhance the quality of life through exceptional outdoor recreational experiences and sound resource management."
- Forestry's mission is "To promote and apply management for the sustainable use and protection of Ohio's private and public forest lands."
- Wildlife's mission is "To conserve and improve fish and wildlife resources and their habitats for sustainable use and appreciation by all."

Though each mission statement touches on use and access, it is important to note that not all buildings are equally important in supporting the mission. As previously noted, some buildings may be seen as integral to fulfilling a division-specific mission while others may be supportive or only loosely associated.[95]

Estimated Useful Life

In accordance with accounting guidelines established by the Ohio Office of Budget and Management (OBM) and the Ohio Department of Administrative Services (DAS), state-owned buildings have an estimated useful life of between 20 and 45 years, dependent on factors such as construction type (e.g., concrete, brick, metal, or frame) and building use (e.g., restrooms, pole barns, and marinas).[96] However, maintenance strategies, or lack thereof, can have an impact on

[94] This report focuses on asset management, planning, and budgeting rather than compliance with State of Ohio accounting policies or administrative procedures. As such, inventories compiled for detailed evaluation may include buildings which do not meet technical criteria to be considered a capital asset or building for accounting or insurance purposes (e.g., structure type, dollar value, etc.). However, these buildings do represent an asset management obligation and are important to consider in an asset management strategy.

[95] Though identified lack of mission-dependency may be attributable to poor strategic planning and resource allocation decisions, it is important to note that the Department, as well as its component divisions, has a long and varied history. Therefore, today's mission may not be consistent with past iterations and there is a high probability that the method for executing decisions has varied over time as administrations and leadership teams have changed.

[96] In accordance with *State of Ohio Asset Management Policies and Procedures* (DAS, 2013) and *Financial Reporting and Accounting Policies for Capital Assets* (OBM, 2012), building assets acquired after July 1, 2001 are required to be accounted for using a mix of general construction, other construction, and land improvements (if applicable). General construction estimated useful life for steel, concrete, masonry, wood, and metal are all 45 years, while other construction for these same asset types are all 20 years. The result is a building with an estimated useful life of 45 years with components of the building having an estimated useful life of only 20 years. The practical

an asset's failure rate over time; the practical result is that without a proper strategy, an asset may deteriorate prior to the expected useful life, resulting in an unsafe or sub-optimal condition. This loss of functionality, coupled with the lost opportunity for savings associated with non-reactive maintenance strategies, illustrates a compelling need for a comprehensive asset management strategy that focuses scarce resources on the sustainability of critical assets to meet long-term needs.

Total Cost of Ownership and Maintenance Practices

The concept of total cost of ownership encompasses more than just highly visible costs, such as building acquisition, disposition, and replacement. It involves the full cost of ongoing ownership which manifests itself in a number of ways. The National Park Service (NPS), as part of its *Approach to Asset Management*, accounts for the total cost of building ownership using a proactive, lifecycle requirements approach. This approach includes "the costs associated with operations, maintenance, code compliance, breakdown repairs, system replacement, and disposition." The most operationally complex, and arguably the least visible, of these requirements is referred to as life-cycle maintenance. This concept represents the totality of five distinct cost centers which include:

- **"Operations –** Activities necessary to complete day-to-day functions, including utilities, grounds maintenance, and snow removal;
- **Preventive Maintenance –** Regularly scheduled periodic maintenance activities (within a year) on selected equipment, which typically includes inspection, lubrication, and minor adjustment;
- **Recurring Maintenance –** Work activities performed on a regular basis and intended to meet routine, daily park operational needs, such as painting and caulking;
- **Component Renewal –** Planned replacement of facility subsystems or components that have reached or will reach the end of useful life based on condition and lifecycle analysis, such as roof replacement; and
- **Deferred Maintenance –** Actions that are required to correct existing deficiencies resulting from unaccomplished past maintenance, repairs and replacements."

NPS has stated that a proactive, life-cycle approach allows its parks to be "better positioned to improve daily performance and ensure the ongoing health and longevity of mission-critical assets and equipment." However, as noted, if these costs are not met over time as they are incurred, they will manifest in deficiencies known as deferred maintenance. The Government Finance Officers Association (GFOA) best practices publication *Capital Asset Assessment, Maintenance and Replacement Policy* (GFOA, 2007 and 2010), notes that "budgetary pressures often impede capital program expenditures or investments for maintenance and replacement, making it increasingly difficult to sustain the asset in a condition necessary to provide expected service levels. Ultimately, deferring essential maintenance or asset replacement could reduce the organization's ability to provide services and could threaten public health, safety and overall quality of life. In addition, as the physical condition of the asset declines, deferring maintenance and/or replacement could increase long-term costs and liabilities."

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implication of this difference in estimated useful life is that an asset management strategy must take both into account to ensure that repair and replacement practices are appropriately timed to meet the anticipated need.

NPS estimates that the planning, design, and construction of a building usually takes 2 to 4 years and constitutes 20 to 30 percent of total costs while operation, maintenance, and recapitalization can last 50 years or more and constitute 70 to 80 percent of total costs. As demonstrated by NPS cost estimates, life-cycle maintenance costs are very real. However, they are also often largely invisible until a more costly failure occurs (e.g., higher cost due to service disruptions and unplanned emergency purchases).

The US Department of Energy (DOE), in its publication *Operations & Maintenance Best Practices: A Guide to Achieving Operational Efficiency* (DOE, 2010), notes that "data obtained in many studies over the past decade indicates that most private and government facilities do not expend the necessary resources to maintain equipment in proper working order. Rather, they wait for equipment failure to occur and then take whatever actions are necessary to repair or replace the equipment."[97] DOE identifies an average facility maintenance program as having the following breakdown:

- **>55 Percent Reactive –** Characterized as the "run it till it breaks" maintenance mode.
- **31 Percent Preventive –** Defined as "Actions performed on a time- or machine-run-based schedule that detect, preclude, or mitigate degradation of a component or system with the aim of sustaining or extending its useful life through controlling degradation to an acceptable level."
- **12 Percent Predictive –** Defined as "Measurements that detect the onset of system degradation (lower functional state), thereby allowing causal stressors to be eliminated or controlled prior to any significant deterioration in the component physical state."[98]
- **2 Percent Other**

A reactive maintenance strategy, employed the majority of the time, may appear to be attractive over the short-term. However, DOE notes that, "Since we do not see any associated maintenance cost, we could view this period as saving money… In reality, during the time we believe we are saving maintenance and capital cost, we are really spending more dollars than we would have under a different maintenance approach. We are spending more dollars associated with capital cost because, while waiting for the equipment to break, we are shortening the life of the equipment resulting in more frequent replacement." Depending on facility-specific practices, general savings expectations are attributed to the following changes in maintenance strategies: moving from reactive maintenance to preventive maintenance results in 12 to 18 percent savings and moving from preventive maintenance to predictive maintenance results in another 8 to 12 percent savings.[99]

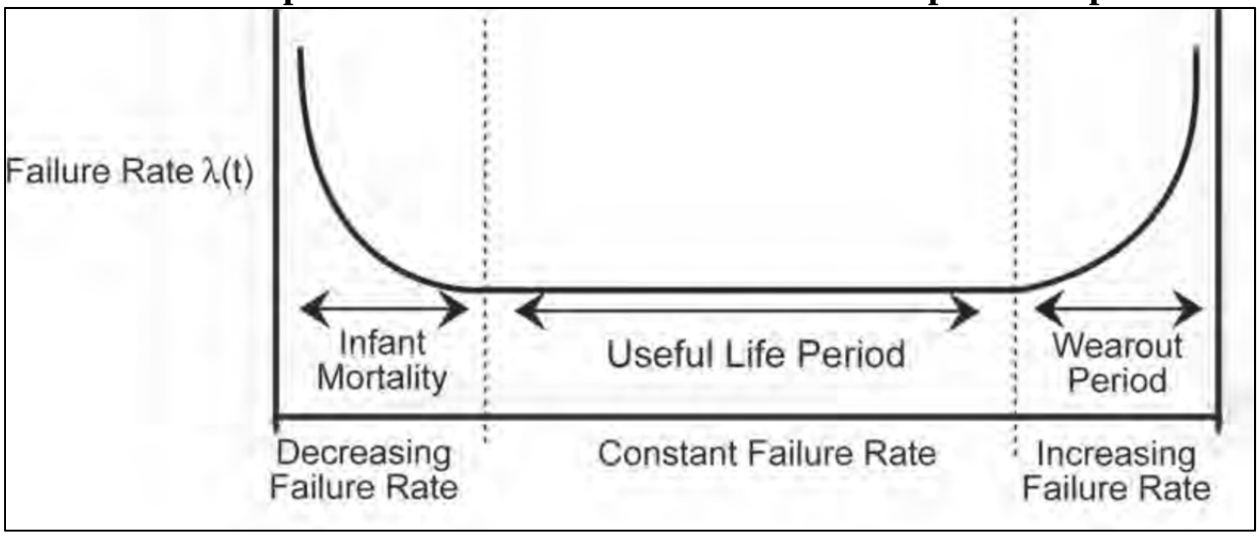
[97] DOE's example focuses on facility equipment and systems rather than the facility itself. However, this example accurately parallels *Capital Asset Assessment, Maintenance and Replacement Policy* (GFOA, 2007 and 2010) and is conceptually accurate to apply to equipment, systems, and buildings. In addition, Facilities Net, an online facility management industry resource series, *Facility Management: Three Metrics Drive Steer Investment Decisions* (Kincaid, 2013), notes that condition assessments are "Guided by the premise that an asset consists of a collection of systems and subsystems."

[98] DOE notes that "predictive maintenance differs from preventive maintenance by basing maintenance need on the actual condition of the machine rather than on some preset schedule."

[99] "Depending on a facility's reliance on reactive maintenance and material condition, it could easily recognize savings opportunities exceeding 30 percent to 40 percent. In fact, independent surveys indicate the following industrial average savings resultant from initiation of a functional predictive maintenance program:

Chart 6-1 shows a DOE illustration of component failure rate over time; where the "Y axis represents the failure rate and the X axis is time. From its shape, the curve can be divided into three distinct phases: infant mortality, useful life, and wear-out periods."

Chart 6-1: Component Failure Rate Over Time for Component Population



Source: DOE

As shown in **Chart 6-1**, there are multiple points of potential failure throughout the estimated useful life of any asset. However, most applicable to building operations and maintenance are the sections labeled, useful life period and wearout period.[100] Failure rates tend to hold constant over the useful life period and, though each circumstance is unique, DOE notes that "most acknowledge that poor operations and maintenance (O&M) often plays a significant role." Conversely, "It is also generally agreed that exceptional maintenance practices encompassing preventive and predictive elements can extend this period." Finally, "The wear-out period is characterized by a rapidly increasing failure rate with time. In most cases this period encompasses the normal distribution of design life failures."

- Return on investment: 10 times;
- Reduction in maintenance costs: 25 percent to 30 percent;
- Elimination of breakdowns: 70 percent to 75 percent;
- Reduction in downtime: 35 percent to 45 percent; and
- Increase in production: 20 percent to 25 percent."

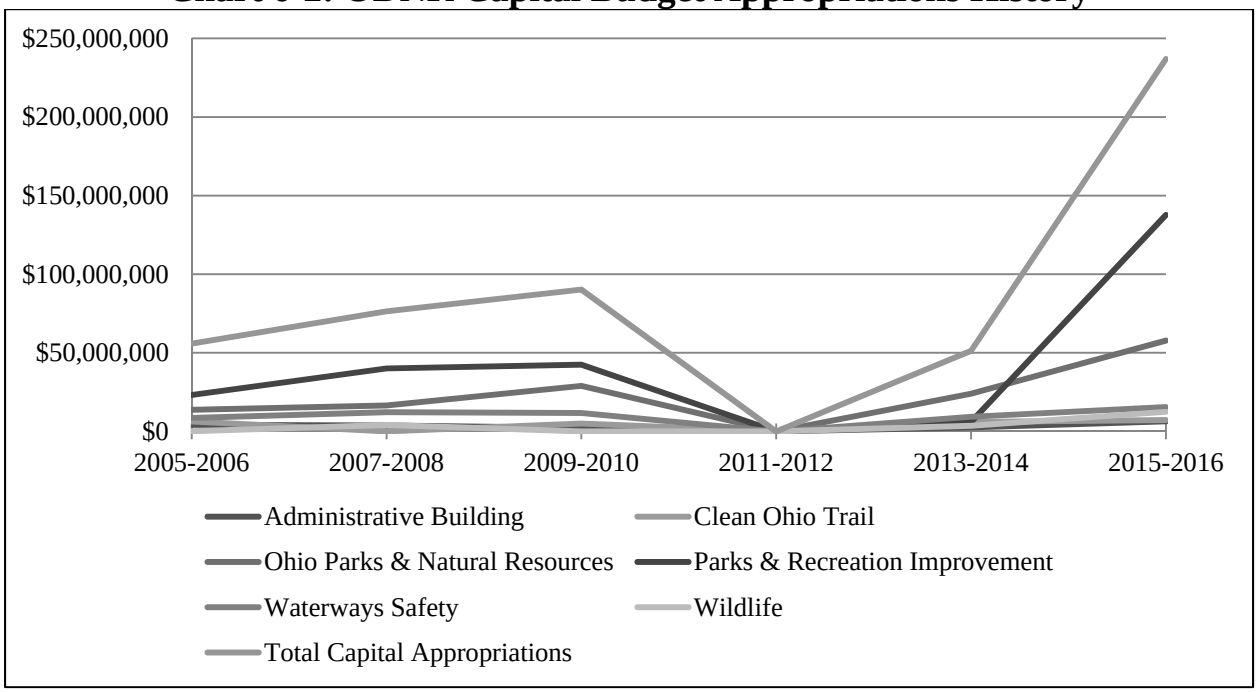
[100] DOE identifies failures associated with the initial infant mortality as linked to "poor design, poor installation, or misapplication."

Capital Budget History

ODNR's primary method of funding building replacements is through the State capital budget, while the primary method of funding O&M activities is through the operating budget. The capital budget is similar to the operating budget in that it allocates funds for use over a biennium (most recently signed in April 2014, funding projects during the fiscal year (FY) 2014-16 biennium). However, the capital budget, as the name implies, can only be used to fund capital expenditures.[101]

Chart 6-2 shows ODNR's capital allocations for each biennium over the past 10 FYs as well as for the FY 2014-16 biennium. This historical view of appropriations provides important context for the Department's capital allocation over time and helps to inform some of the resulting variation in the Department's approach to building replacements and other capital projects.

Chart 6-2: ODNR Capital Budget Appropriations History



Source: Ohio Legislative Service Commission (LSC)
Note 1: No capital budget was approved for the FY 2010-12 biennium.
Note 2: Time intervals shown in **Chart 6-2** are representative of biennium periods. For example, 2005-2006 corresponds to the FY 2004-06 biennium.

Over the period shown in **Chart 6-2**, the Ohio Parks and Natural Resources and Parks and Recreation Improvement Funds constitute the significant majority of all ODNR capital

[101] *A Guidebook for Ohio Legislators* (LSC, 2013) notes that the capital improvements bill (capital budget) "appropriates money for projects for the acquisition, construction, equipment, or renovation of buildings and other facilities". Related to the capital budget is the capital reappropriations bill which, "reappropriates any amounts of the original appropriations for such projects that have not yet been obligated or expended and that are still needed for the projects. This is a common occurrence, since construction projects frequently take longer to complete than the two-year life of an appropriation."

allocations; an average of 76.4 percent. Total capital appropriations for ODNR increased slightly during the period from the FY 2004-06 biennium through the FY 2008-10 biennium. During that period, average total appropriations were $74.2 million per biennium. However, no capital budget was approved for the FY 2010-12 biennium.[102] Funding was restored in the FY 2012-14 biennium, but at a lower level of $51.2 million. Finally, the capital appropriation approved in April 2014 and funding the biennium inclusive of FY 2014-16 at $236.9 million demonstrates a significant reinvestment in ODNR capital assets.

Table 6-2 shows the capital appropriation for the FY 2014-16 biennium in relation to historical average appropriations. These calculations demonstrate the magnitude of this recent reinvestment in relation to the actual 10-year average.

Table 6-2: Current to Historical Capital Appropriations Comparison

ODNR by Capital Fund	FY 2014-16	10-Year Avg.	$ Difference	% Difference
Administrative Building	$6,400,000	$2,505,012	$3,894,988	155.5%
Clean Ohio Trail	$7,225,150	$3,450,000	$3,775,150	109.4%
Ohio Parks & Natural Resources	$57,748,465	$16,618,059	$41,130,406	247.5%
Parks & Recreation Improvement	$137,690,595	$22,339,536	$115,351,059	516.4%
Waterways Safety	$15,383,274	$8,316,000	$7,067,274	85.0%
Wildlife	$12,500,000	$1,522,000	$10,978,000	721.3%
Total Capital Appropriations	**$236,947,484**	**$54,750,607**	**$182,196,877**	**332.8%**

Source: LSC

[1] The 10-year funded average excludes the unfunded FY 2010-12 biennium.

As shown in **Table 6-2**, when comparing the current level of capital appropriations to the historical average, total appropriations have increased by 332.8 percent.

[102] A capital budget is commonly approved by the General Assembly and signed by the Governor in the second year of every operating budget biennium. However, a capital budget is not required and was never developed for the FY 2010-12 biennium as a cost savings measure.

Methodology

This section of the performance audit seeks to develop an up-to-date inventory, assess lifecycle placement, estimate expected replacement value, and project future replacement frequency and value for Parks' building assets.[103] As shown in **Table 6-1**, Parks' 2,192 buildings represent 83.5 percent of ODNR's total inventory of 2,624 buildings. As such, this Division was selected as the focus of the analysis. This section also analyzes the historical capital allocation methods and the potential for implementation of a future-state, data-driven asset management and reinvestment methodology.

ODNR and Parks provided access to baseline building data such as inventory, age, and valuation. Sources of data included Ohio Administrative Knowledge System (OAKS) and DAS' catastrophic building insurance CBI lists. Given that the development of a full and accurate inventory is inherently focused on current holdings, the timeframe for data sources is primarily CY 2014. However, where clarification was required to improve the accuracy of data points in the inventory, historical information sources were also used and these data points focused on CY 2003 through CY 2013.

In order to develop an up-to-date inventory, multiple data sources were reconciled and the results of each reconciliation activity were provided to Parks leadership for review and, if applicable, clarification. In all cases requiring clarification, data points were either addressed through the inclusion of centrally held information or were supplemented by testimonial or documentary evidence from knowledgeable site-level stakeholders (e.g., park managers).

Once an up-to-date inventory was developed, the analysis focused on categorizing buildings using a standard taxonomy. Categorized buildings were then evaluated for applicability of calculated replacement valuation models or for management-identified replacement models. Calculated replacement valuation models were used where sufficient recent (i.e., within the last 10 years) data points were available to derive an appropriate construction value (e.g., cost per square foot or cost per unit) within a building category. Identified replacement models were used where Parks leadership was able to specifically identify a recent past project as a model for future replacement. Identified models were provided to DAS, Office of Risk Management, for assessment of likely replacement values; dependent on building type, use, and layout. Regardless of the valuation model employed, Division leadership provided final review of model values as well as their applicability back to model categories and types. Final model values were applied back to inventoried assets in the form of a conservative replacement value.

[103] This report focuses on buildings rather than all assets. ODNR has significant infrastructure (e.g., dams, bridges, roadways, culverts, etc.), land improvement (e.g., campgrounds, shoreline protection, etc.), equipment, and other types of assets which were outside of the scope of this performance audit and were not evaluated in this report, but do represent current and future capital and maintenance and repair needs. Furthermore, though they were not evaluated in this performance audit, similar conditions such as those identified in this performance audit (e.g., historical lack of a comprehensive management plan, infrastructure exceeding estimated useful life, lack of full condition assessments, etc.) appear to apply to other major asset groups such as dams. The asset management leading practices identified in this report should be applied to all other operational areas within the Department as appropriate.

Projected useful life data was obtained from DAS/OBM and applied to each building in the inventory based on either construction type (e.g., frame, stone, concrete, etc.) or usage (e.g., pole barn, restroom, etc.). Each building's construction year or last major renovation date, where applicable, was then used to calculate expected remaining useful life. The concept of expected remaining useful life was used to assess and estimate a value for backlogged, current, and projected replacements. Further, replacements were projected over the next 50 years to demonstrate how changes in inventory can impact future resource allocation and operations. (See **Appendix 6.A: Characteristics of Data and Distributions** for additional information on understanding and interpreting key statistical measures used in this section of the performance audit.)

An effort was made to inventory, assess, and establish a replacement value for all Parks buildings. However, some buildings could not be fully assessed in this analysis due to missing or unknown data points (e.g., age/major renovation date(s) or square footage) or lack of a model for valuation. For the latter, the following categories of assets were not valued:

- **Lodges –** Parks is working with external consultants and concessionaires to evaluate lodge replacement and upgrade needs (see **Parks and Recreation Operations – Lodge Properties** section).
- **Residences –** Though a small number of residences are used for operational purposes, most are a part of the residences program. The residences program is designed to provide on-site, rental housing for ODNR staff as necessary to support site-specific operations. The use of operating or capital dollars for the maintenance, repair, or replacement of residence program buildings is prohibited.
- **Water and Waste Water Buildings –** Parks is working to utilize surrounding sewer and water infrastructure where possible rather than to continue to produce and/or treat water on-site.
- **Historic Homes and Structures –** Parks is responsible for maintaining historical homes and structures in a manner that preserves usefulness and value to the public. Historical homes and structures cannot be replaced.

Focusing specifically on Parks buildings, the analysis in this performance audit report included the inventory and reconciliation of 2,192 buildings and the evaluation of 1,910 (or 87.1 percent of total Parks buildings). The number of buildings evaluated in this report account for 72.8 percent of the 2,624 ODNR buildings shown in **Table 6-1**.

Finally, ODNR's historical capital budget practices and asset management strategies were evaluated with a focus on how these practices and strategies have specifically affected Parks. Leading practices from NPS were identified as a model for a data-driven asset management strategy that better targets and prioritizes scarce capital resources and supplemental operating budgets on critical needs over the long-term.

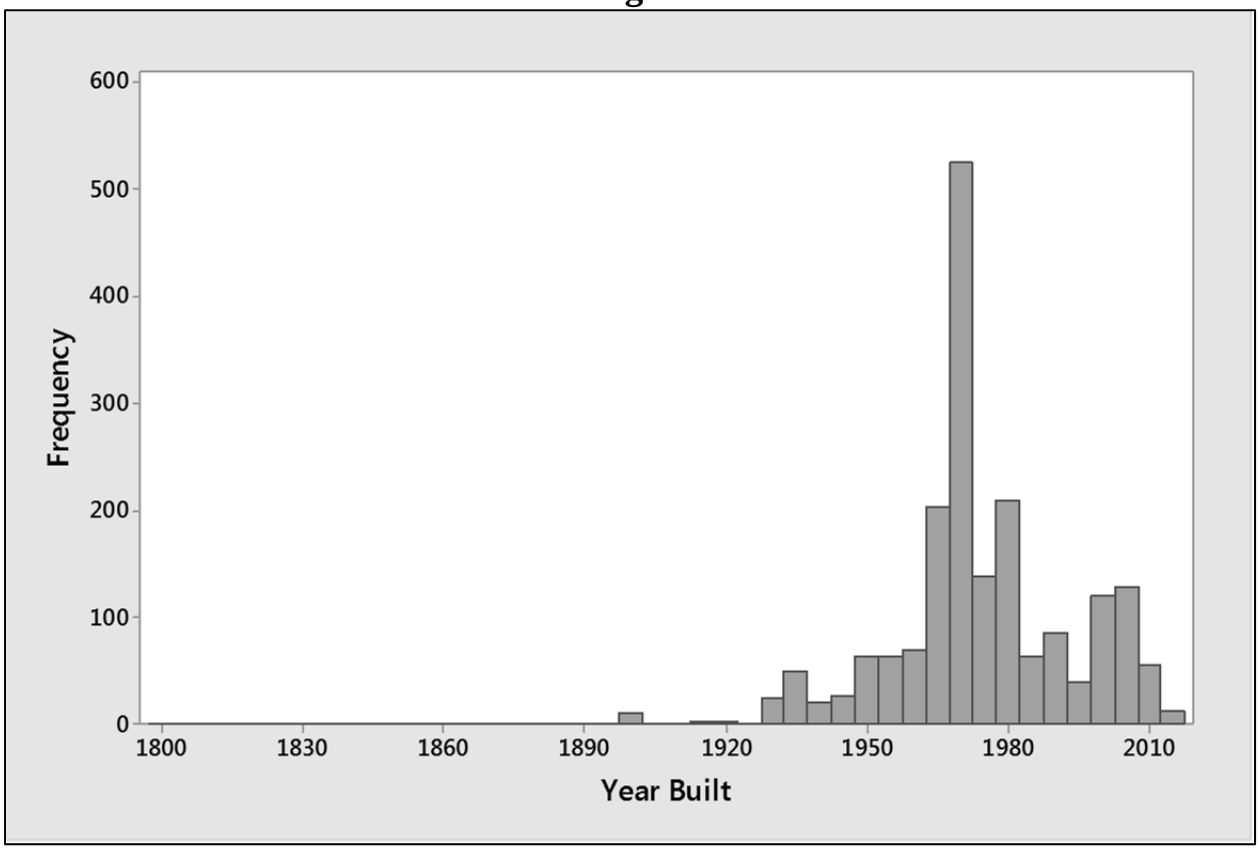
Analysis

Capital Replacements and Estimated Cost

In order to determine a reasonable expectation of capital outlays over time, the current portfolio of buildings must first be identified by age and then matched against the original estimated useful life to identify where each asset is in its expected lifecycle.

Chart 6-3 shows the year built distribution for all Parks buildings.

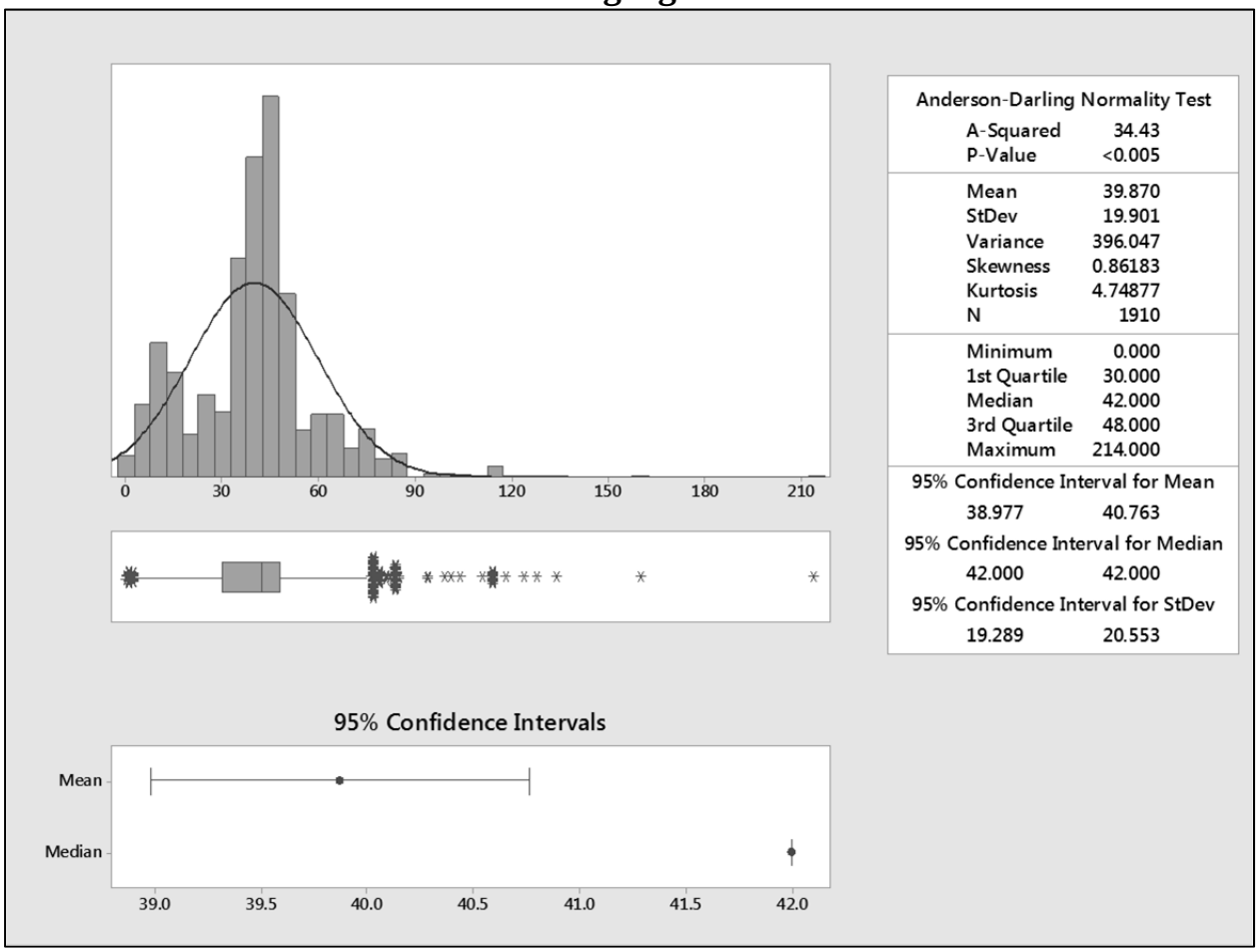
Chart 6-3: Parks Building Year Built Distribution



Source: Parks and DAS

Chart 6-4 shows an age distribution for all Parks buildings for CY 2014.

Chart 6-4: Parks Building Age Distribution CY 2014



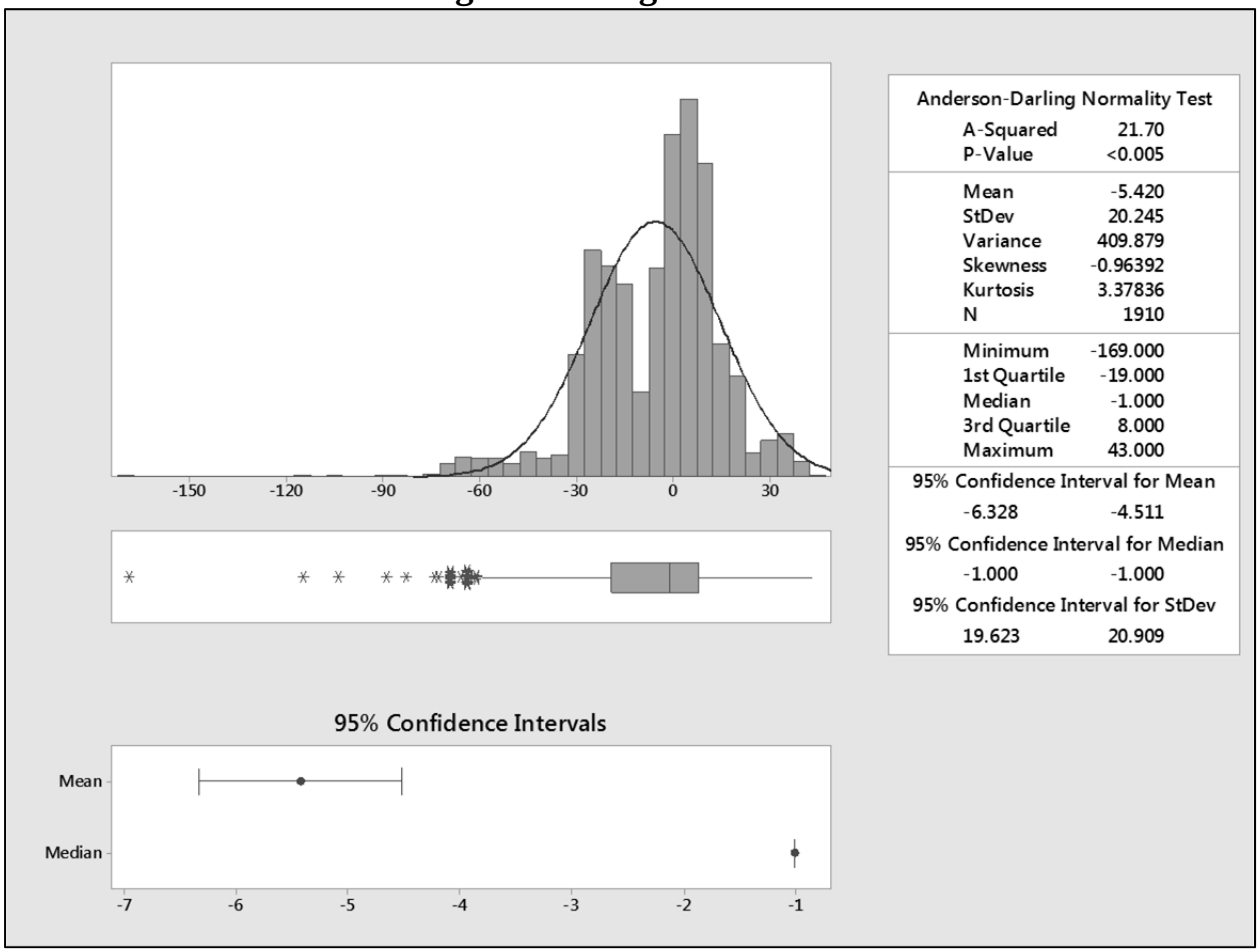
Source: Parks and DAS

As shown in **Chart 6-4**, Parks buildings have an average (or mean) age of 39.9 years and a median age of 42.0 years.[104] Given the presence of outliers in the data set, the median value is more meaningful to a general understanding of the age of the buildings as a group. The center of this distribution, buildings that are 40 to 50 years old, shows that the Division experienced a significant construction boom in the 1960s and 1970s (see **Chart 6-3**) as 1,017 or 48.1 percent of all buildings were constructed in these two decades.

[104] Examples of the oldest buildings in the Parks distribution include: a storage barn on Middle Bass Island; an education center at Barkcamp State Park; and a cabin on South Bass Island. Though it is likely that these assets have undergone major renovations over time, documentation was not readily available to verify that assumption.

Chart 6-5 shows the expected remaining useful life for Parks buildings for CY 2014. For example, the calculation of expected remaining useful life is the current age of the building in relation to the original estimated useful life.

Chart 6-5: Parks Building Remaining Useful Life Distribution CY 2014



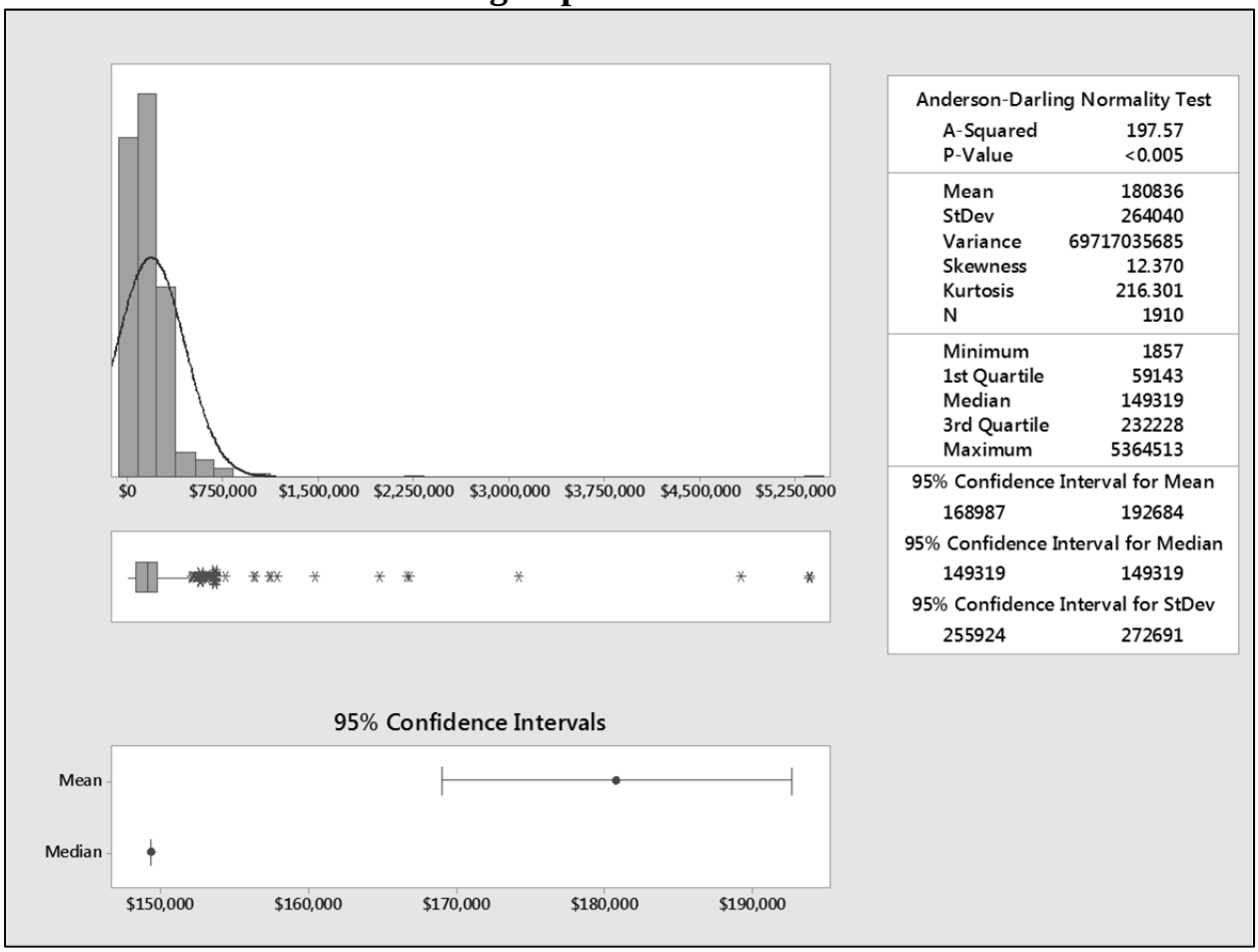
Source: Parks and DAS

As shown in **Chart 6-5**, Parks buildings have an average (or mean) expected remaining useful life of (5.4) years and median expected remaining useful life of (1.0) year. Again, given the presence of outliers in the data set, the median value is more meaningful to the analysis. Focusing on the median of (1.0) year for Parks buildings identifies that the Division, as of CY 2014, now has more buildings that are past their original estimated useful lives than it has buildings with expected remaining useful life.[105]

[105] The first peak of the distribution, centered around (20) to (30) years, is the product of buildings with either a 20 or 45 years estimated useful life. For example, a building with an estimated 20 year useful life would have been constructed in the mid-1960s or 1970s and a building with a 45 year useful life would have been built in the early 1940s or 1950s. The second peak of the distribution, centered around 0 to 10 years, is reflective of the construction boom of the 1960s and 1970s, focusing on assets with a 45 year useful life.

Chart 6-6 shows a distribution of Parks estimated building replacement costs for CY 2014.

Chart 6-6: Parks Building Replacement Cost Distribution CY 2014



Source: Parks and DAS

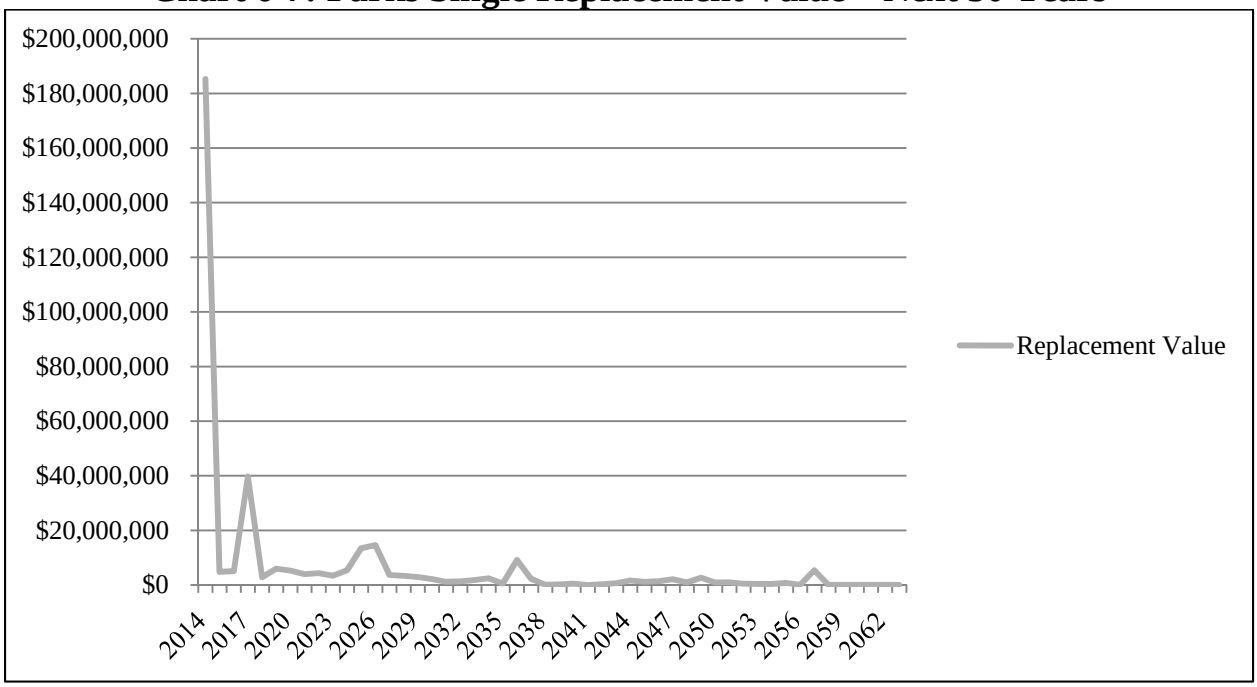
Note: Future replacement costs are in 2014 dollars and have not been adjusted for projected new construction inflation.

As shown in **Chart 6-6**, the vast majority of Parks buildings, 95.2 percent, are valued at less than $400,000 for replacement purposes. Within this group, the highest concentration, 724 buildings or 37.9 percent of total buildings are valued at less than $100,000 for replacement purposes. Though there are higher value buildings present, these are less numerous park or regional offices and group lodges. The current cumulative value of Parks buildings specifically analyzed in this report is conservatively estimated to be at least $345.4 million. Extrapolating this value out to all other Parks buildings, excluding lodges, in a proportionate manner, the Division's total building portfolio is conservatively estimated at $386.2 million.[106]

[106] This report evaluates 1,910 of 2,192 Parks buildings or 89.7 percent of all Division buildings. The median value of the buildings evaluated was calculated as $149,319. Multiplying this median value by the remainder of Parks buildings, where appropriate (282 buildings less 9 lodges for a total of 273 remaining buildings), results in an additional estimated $40.8 million for an estimated total of $386.2 million.

Chart 6-7 shows how replacement values (see **Chart 6-6**) are projected over time based on the remaining expected useful life (see **Chart 6-5**). Projected replacements are instructive to current and future strategic decisions (i.e., what is the mission of ODNR and Parks and how do buildings support these missions) as well as budgeting practices (e.g., assuming a building is identified as mission-critical, how then does ODNR allocate operating or capital funds to finance needed replacement?).

Chart 6-7: Parks Single Replacement Value – Next 50 Years



Source: Parks and DAS

Note 1: A 50 year timeframe was selected as it encompasses at least one replacement for each asset in ODNR's inventory; predicated on a maximum estimated useful life of 45 years.

Note 2: Future replacement costs stated are in CY 2014 dollars and have not been adjusted for projected new construction inflation. Over the last 10 years, CY 2003 to CY 2013, new construction inflation has increased by 53.1 percent, or an average of 5.3 percent per year, according to the Bureau of Labor Statistics (BLS).

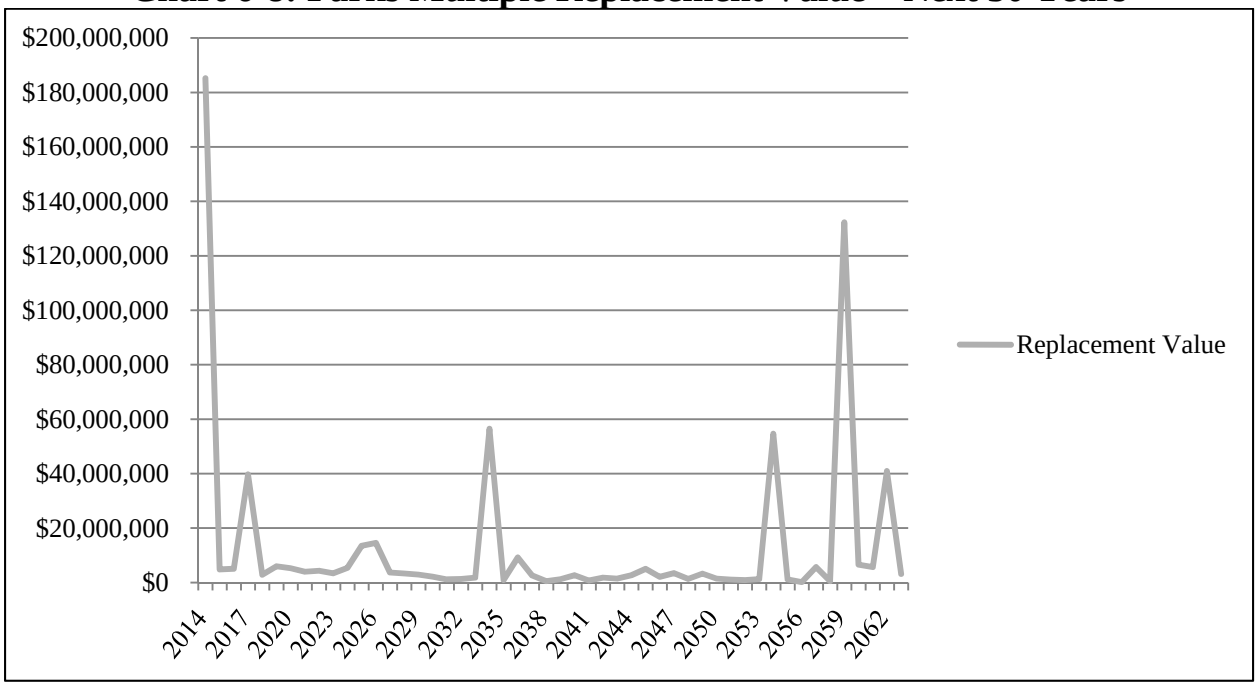
Note 3: Only the scheduled value of a single, first replacement is shown. Over the next 50 years, many assets will reach the end of a second, and even third, estimated useful life which is not shown above (see **Chart 6-8** for detail).

As shown in **Chart 6-7**, if ODNR were to address all Parks backlogged replacements in CY 2014, and all future replacements as scheduled, each as a single occurrence, the Department would need to expend a total of at least $345.4 million over the next 50 years; $185.2 million of which would be expended for backlogged buildings. Though past construction and replacement practices have created bubbles in the inventory and replacement needs, if Parks building replacements could be smoothed evenly over the next 50 years, the average annual need would equate to at least $6.9 million.

Though a one-to-one, on-time replacement represents a significant change from the current operating state (i.e., this schedule would eliminate backlogged replacements), a complicating factor is that this type of view does not take into account the need for multiple replacements over an extended period of time associated with a single building.

Chart 6-8 shows multiple instances of replacement and cumulative values for buildings over the next 50 years. This type of projection helps to fully value the impact of replacement needs over an extended time horizon by accounting for multiple replacements of 20 and 45 year estimated useful life assets.

Chart 6-8: Parks Multiple Replacement Value – Next 50 Years



Source: Parks and DAS

Note 1: A 50 year timeframe was selected as it encompasses at least one replacement for each asset in ODNR's inventory; predicated on a maximum estimated useful life of 45 years.

Note 2: Future replacement costs are stated in CY 2014 dollars and have not been adjusted for projected new construction inflation.

As shown in **Chart 6-8**, if ODNR were to address all Parks backlogged replacements in CY 2014, and all future replacements as scheduled, accounting for each single and multiple replacement occurrence, the Department would need to expend a total of at least $661.4 million over the next 50 years. Though past construction and replacement practices have created bubbles in the inventory and replacement needs, if Parks building replacements could be smoothed evenly over the next 50 years, the average annual need would equate to at least $13.2 million.

Facility Condition Assessment and Identification of Building Maintenance Needs

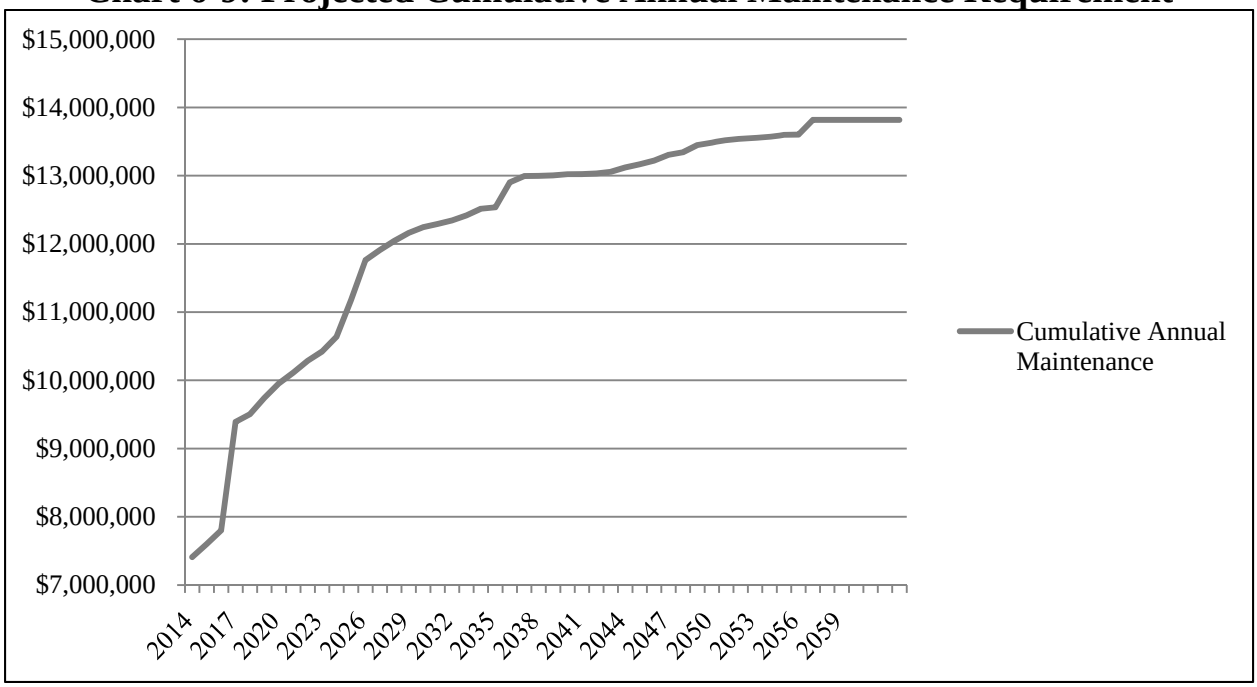
In addition to the projected cost of capital allocation to replace Parks buildings over time is the commensurate need to maintain these investments and reinvestments through effective lifecycle maintenance. The ability to effectively plan to meet long-term needs, however, is predicated on having the necessary information to understand and quantify the current state of buildings and their component systems.

According to the International Facility Management Association (IFMA) publication *Asset Lifecycle Model for Total Cost of Ownership Management: A Framework for Facilities Lifecycle Cost Management* (IFMA, 2012), the concept of a facility condition assessment or audit (FCA) is widely recognized in the capital asset management industry. An FCA is "The structured development [of] a profile of existing facilities conditions, typically placed in an electronic database format, and populated with detailed facility condition inspection information. A detailed [FCA] typically involve[s] an assessment team of three professionals (architect, mechanical engineer, electrical engineer), and depend[s] [on] robust, scalable methodologies to assure accurate and consistent information. It is recommended that FCA's be done on a regular basis, approximately every three years, or conducting a portion of the overall portfolio annually. The FCA identifies existing deficient conditions (requirements) in logical grouping and priorities as well as associated recommended corrections and corrective costs. Costs are generally based upon industry standard cost databases (e.g., Building News, Craftsman Book Company, Richardson General Construction Estimating Standards, RSMeans)." Complimentary to the FCA is the Facility Conditional Assessment Program (FCAP). IFMA defines an FCAP as "A continuous systematic approach of identifying, assessing, prioritizing, and maintaining the specific maintenance, repair, renewal, and replacement requirements for all facility assets to provide valid documentation, reporting mechanisms, and budgetary information in a detailed database of facility issues."

The National Park Service (NPS), in its publication *General Management Planning: Dynamic Sourcebook* (2009), outlines the elements necessary to develop a site-specific general management plan (GMP) for each NPS location. Cost estimates for planned and alternate projects are required to be included in the GMP given that "Decision makers and the public need to have an overall picture of the estimated costs of various alternatives, including the no-action alternative, to make wise decisions and determine feasibility within the planning process." NPS further states that, "The Park Planning Program Standards direct that plans should include estimates of annual recurring costs…and of one-time costs for facility rehabilitation, new construction, or management projects. Costs of alternatives may vary significantly in recurring needs such as staffing, operations, and maintenance, as well as one time projects such as facilities, transportation, research, and resource rehabilitation." The NPS provides estimate guidance to assist in uniform development of planned and alternate project costs and part of this guidance requires estimating four percent of the construction cost in annual maintenance spending.

Chart 6-9 shows cumulative annual maintenance expenditures commensurate with the value of the individual assets projected to be replaced in **Chart 6-7**. This analysis focuses on one-time replacement cost given that future multiple replacements are designed to hold the current asset portfolio constant rather than to add additional buildings to the inventory.

Chart 6-9: Projected Cumulative Annual Maintenance Requirement



Source: Parks, DAS, and NPS
Note: Future maintenance costs are stated in CY 2014 dollars and have not been adjusted for projected new construction inflation.

As shown in **Chart 6-9**, in order to provide a level of maintenance commensurate with the level of projected annual building replacements, Parks would need to put forth a baseline maintenance allocation of at least $7.4 million in CY 2014. This need is projected to grow by 86.5 percent over the next 50 years as buildings are replaced, resulting in the need for an annual building maintenance allocation of at least $13.8 million. Furthermore, this analysis does not take into account the current level of maintenance needs, or accumulated deferred maintenance,[107] for the buildings prior to being replaced in the above model.[108]

According to the Division's operating expense records for FY 2012-13 at least $3,084,468 were spent on activities described as, or associated with, building maintenance and repair. However, this level of expense is far below what would be expected using NPS estimates and is likely heavily subsidized by direct labor from Parks employees.

[107] Parks does not have data on deferred maintenance, but it is reasonable to assume that given the Division's operating constraints and variation in past capital budget allocations, some, and possibly a very significant amount of, deferred maintenance has likely accumulated over time.
[108] Given that projected maintenance needs are based on the projected replacement of only the current inventory of buildings, it is reasonable to assume that the current maintenance need is already equal to the full value of the need shown in **Chart 6-8**.

Table 6-3 shows Parks hours worked and cost incurred for employees who likely have day-to-day responsibilities which could impact building maintenance and repair activities for the last three complete CYs as well as the three-year average. Parks labor is important contextual information to supplement direct building maintenance and repair expenses; an expense which, taken without this context, appears to be much lower than it should be to responsibly maintain buildings over time.

Table 6-3: Maintenance-Related Potential Hours (CY 2011 to CY 2013)

	CY 2011	CY 2012	CY 2013	Three-Year Avg.
Hours Worked	**876,781**	**862,264**	**871,951**	**870,332**
Direct Cost	$12,095,999	$11,733,542	$11,579,874	$11,803,139
Benefits Cost	$3,677,718	$3,532,033	$3,457,271	$3,555,674
Total Cost	**$15,773,718**	**$15,265,575**	**$15,037,145**	**$15,358,813**

Source: ODNR

As shown in **Table 6-3**, when accounting for all Parks employees who are in positions that have a high likelihood to address building maintenance labor needs, it appears that the Division could potentially be adequately addressing the expected annual maintenance need. However, Parks leadership noted that no quantified maintenance plan currently exists and although it is known that deferred maintenance is being accumulated, the full extent of the value of this deferred maintenance is unknown. Furthermore, it is important to note that the employees included in this analysis are also responsible for myriad other operational responsibilities (e.g., vehicle maintenance and repair, dredging, campground operations, etc.) and the likelihood that the full value of these hours worked is being realized in the building maintenance and repair function is highly doubtful. Finally, the likelihood that these hours of effort are being focused on critical assets and critical systems is also in doubt given that Parks has not completed a comprehensive facility condition assessment or developed park-specific management plans. Though not specific to buildings, the *Ohio State Park and Recreational Area Study Committee Report* (2009) estimated a total Parks deferred capital maintenance cost of over $556 million. The report attributed increases in deferred capital maintenance cost to “aging and failing infrastructure”, “increasing general inflationary costs”, “increasing cost of building materials”, and “changes to environmental and public safety regulations”.

Without a more granular level of detail in employee hours records (i.e., type of work performed and location of work performed) it is impossible to identify exactly what tasks are being accomplished by the hours worked as shown in **Table 6-3** and what proportion of these hours are actually being allocated to building maintenance and repair activities. (See the **Seasonal Workforce Strategies** section for additional discussion of Parks data and workload information and the **Parks and Recreation Operations** sections for additional discussion of Parks management and planning needs.) In addition, without adequately detailed Parks management plans to identify, prioritize, quantify, and address resource needs now and into the future for each operating location, (e.g., resource demand data) detailed timekeeping records (e.g., resource supply data) would be less than fully useful in analyzing current and future operational strategies.

Prioritization of Capital Outlay

ODNR and Parks management have worked with various stakeholders, including elected officials, business partners, and park visitors, to identify priority capital replacement and renovation projects as funded by the capital appropriation for the biennium inclusive of FY 2014-15 and FY 2015-16.[109] Though this is not the first time that visitors have been surveyed on desired facilities changes, when coupled with additional changes to ODNR's capital planning and allocation methods, this marks an additional change in a significantly revamped process.

ODNR's historical capital budgeting process was largely controlled by the Office of Engineering (Engineering). In this process, the Chief of Engineering was responsible for working with division representatives (e.g., deputy directors and chiefs) to obtain input on priority capital projects. This information (e.g., projects, cost, timeframe, priority, etc.) was then synthesized into the six-year capital plan document required by OBM as part of the capital budget process. However, when project inputs were synthesized into a larger capital request, there was no clear, consistent methodology for how projects were assessed and prioritized in relation to an overall strategy.

ODNR's administration opted to change the internal capital project identification and prioritization process to address a number of items. First and foremost, the administration determined that the historical process had left the Department with a number of un-funded or under-funded capital needs. Secondly, lack of clarity into the strategic nature of ODNR's capital allocation process, especially in relation to major infrastructure assets such as dams, left some stakeholders less than completely confident that the capital allocation process was fully protecting the public interest. Finally, the combination of lack of funding compounded by a lack of transparency in the capital allocation process resulted in unnecessarily high risk to the Department over the long-run.

In addition to the aforementioned public input process, ODNR's administration and division leadership are now working much more closely to identify capital needs, assess for strategic importance, and fund priority projects appropriately. For example, prior to the start of the performance audit, ODNR began planning and reengineering its internal construction management process in preparation for this significant influx of capital dollars. Specifically, the Department filled a Chief of Projects position which is specifically targeted toward developing and implementing new construction management and project management practices. These practices are being designed to allow the Department to allocate a historical amount of capital funding in a confined period of time, while providing for appropriate oversight and accountability. In addition, Parks, as a major customer of the process, began working more closely with the Chief of Projects and the Division of Engineering as a part of a Capital Improvement Team. However, given the relative newness of this process and the need to conform to the statewide capital budget request process, ODNR has not fully developed the underlying asset management framework and prioritization methodology.

[109] During the course of this performance audit, Parks self-reported that it had received over 3,800 responses to its public survey soliciting input on capital improvement needs (as of June 4, 2014).

Capital Asset Management System

ODNR does not have an enterprise capital asset management system. As required by State accounting policies and procedures, the Department makes use of the OAKS Asset Management module. However, the asset management module is neither used uniformly across all divisions nor is it used in a way that is informative to the actual capital asset management needs of the Department or the divisions. For example, the system does not easily or effectively track: sub-system components; maintenance, repair, and replacement activities or needs; current valuation or replacement cost estimates; and asset prioritization information.

To alleviate some of these deficiencies, Parks uses a modified version of the OAKS asset management report, outside of the system, to maintain the necessary information to manage its buildings for inventory purposes. However, for capital needs identification purposes, Parks relies on site-specific, labor-intensive assessments. For example, in order to prepare for the current capital budget process, Parks leadership completed detailed site visits to each park and campground location. The result of this exercise was a snapshot assessment of selected operating statistics (e.g., overnight sales trends over time by campsite type) accompanied by the top 5 to 15 capital replacement needs for each evaluated site (e.g., replace latrines, upgrade to 50 amp electrical, etc.). Parks staff have actively worked with the Office of Budget and Finance to ensure that the Department's catastrophic building insurance coverage is appropriate to the buildings in the actual inventory, but reconciliation back into OAKS has not been a priority.

During the course of the audit, the Chief of Projects, Engineering, and Parks staff began to work closely to assess the potential value and benefits of a capital asset management system; including addressing the known deficiencies of the current system.

Industry Trend - Backlogged Replacement and Deferred Maintenance

A growing backlog of maintenance and capital repair and replacement needs is not unique to ODNR. This backlog has been identified as a problematic issue for the National Park Service (NPS), the West Virginia Department of Natural Resources (WVDNR), and Parks Canada.

The West Virginia Legislative Auditor (WVLA) published a legislative performance review, *West Virginia Department of Natural Resources: Parks and Recreation Section* (2009), which identified WVDNR as having weaknesses in the Parks System. These weaknesses were "identified as deferred maintenance, aging buildings, risks to historic structures, and old equipment, all of which have led to a deterioration of facilities." Furthermore, WVLA notes that "The financial constraints that exist in the Park System have contributed to the deterioration of facilities and deferred maintenance. Some buildings have already reached the point where they cannot be restored and are no longer viable."

Though the WVLA report did not seek to quantify the full extent of maintenance, repair, and building replacement and renovation, recent information from NPS has focused on this type of quantification. For example, NPS recently estimated that it has a backlog of deferred maintenance of $11.26 billion, capital improvement needs of $4.01 billion, and other

programmatic needs[110] of $0.75 billion.[111] Furthermore, deferred maintenance is forecast to increase to $12.52 billion by CY 2017. Over the last 15 years, NPS has gone through a complete overhaul of its asset management strategy, but still faces a long-term challenge based on its current reports.

Parks Canada's Office of Internal Audit and Evaluation (OIAE) has a publication, *Evaluation of Parks Canada's Asset Management Program* (2009), which quantifies similar problems similar to those identified by NPS. OIAE noted that the replacement value of Parks Canada's assets was estimated at between $7.0 and $11.0 billion.[112] In addition, OIAE estimated Parks Canada's deferred maintenance at between $1.1 and $2.3 billion by 2013 and deferred capital at $1.0 to $1.3 billion by 2013. Addressing these factors is an ongoing priority for Parks Canada and its most recent planning publication, *Report on Plans and Priorities 2014-15* (2014), noted that the value of built assets is now estimated at over $15.0 billion, "of which almost half are in poor to very poor condition. In order to identify those assets that are the highest priority for investment and program delivery, a strategic assessment of its built asset portfolio is underway as part of a more comprehensive Asset Strategy." Further, Parks Canada's current approach to developing this strategy "will help guide the alignment of the Agency's portfolio to ensure affordability and long-term sustainability while optimizing its contribution to the delivery of Parks Canada's programs."

National Park Service Approach to Asset Management

As noted, the same threats and conditions that are present across the industry are also present for ODNR; and particularly for Parks. In many cases what the NPS was facing 10 or even 15 years ago is similar to what ODNR faces today. As such, the NPS' approach to asset management provides a structured model to help address many of the conditions associated with ODNR's historical approach to capital planning and budgeting and current deficiencies.

NPS began focusing on asset management as part of a broader federal movement toward strategic asset management as modeled by the US Coast Guard. Over the last 15 years, NPS has improved markedly in capabilities, but at the outset of this initiative lacked basic asset management information such as an accurate and complete:

- Inventory of Assets
    - Asset Categorization
    - Asset Prioritization
    - Asset Hierarchies
    - Attribute Quantities (e.g., square footage, linear feet, units, etc.)
    - Equipment (e.g., mechanical and electrical systems, structure type, etc.)
- Asset Priority Index
    - Asset Status
    - Asset Criticality

[110] Other needs include: energy, accessibility, code compliance, life safety, environmental, and structural fire.
[111] Based on NPS estimates of the dollar value of programmatic needs, total deferred maintenance needs (i.e., $11.26 billion) equate to 280.8 percent of total capital improvement needs (i.e., $4.01 billion).
[112] Since the release of the OIAE report, Parks Canada published its *Report on Plans and Priorities 2014-15* (2014) which updated the replacement value of its assets to $15.0 billion.

        - Importance to Mission
            - Resource Preservation
            - Visitor Use
        - Importance to Park Operations
    - Asset Substitutability
- Age of Assets
- Location of Assets
- Asset Value (i.e., Current Replacement Value)
- Asset Condition (i.e., Facility Condition Index)

Key to NPS' approach to evaluating the inventory of assets are the concepts of:

- **Asset Priority Index (API) –** The API is an enterprise tool used to identify the "relative importance" of each asset held by NPS. The API is calculated through the aggregation of five "criteria" (i.e., status, criticality, importance to mission, importance to operations, and substitutability) and "is calculated out of 100 possible points."
- **Current Replacement Value (CRV) –** The CRV is a standardized valuation of the cost to replace an asset. This value is calculated for every asset and takes into account building use, square footage, regionally-adjusted cost factors, and other value-impacting variables (e.g., historical or unique features).
- **Facility Condition Index (FCI) –** The FCI is a rating scale that categorizes every asset's condition across a continuum from good to serious condition. FCI scores are calculated for each asset by dividing the projected total cost of repairs (i.e., consisting of deferred maintenance, recurring maintenance deferred, and component renewal deferred) by the asset's CRV. While a score of closer to 0.0 indicates better condition, the formal breakdown is as follows:
    - FCI ≤ 0.100: Good Condition
    - FCI = 0.101–0.150: Fair Condition
    - FCI = 0.151–0.500: Poor Condition
    - FCI > 0.500: Serious Condition

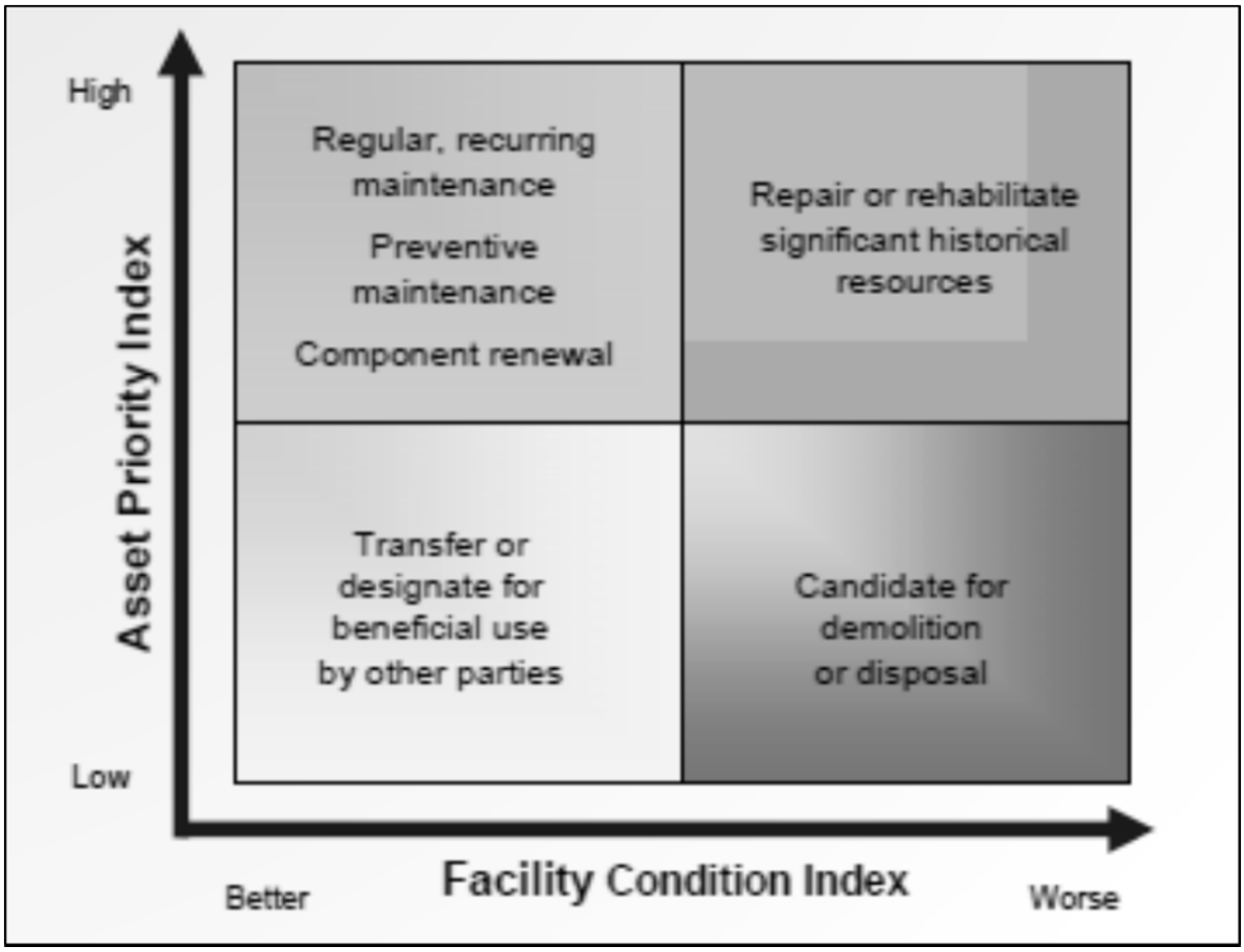
Asset management has been identified as integral to the strategic approach of NPS. *A Call to Action: Preparing for A Second Century of Stewardship and Engagement* (NPS, 2013) identifies "actions that advance the [NPS] toward a shared vision for 2016 and [its] second century." To support this strategic vision, the goal of asset management is to "Focus investments from all maintenance fund sources on high priority national park assets to address critical deferred maintenance and code compliance needs. By doing so, [NPS] will correct the health and safety, accessibility, environmental, and deferred maintenance deficiencies in at least 25 percent of the facilities that are most important to park visitor experience and resource protection." Achieving this goal requires NPS to focus on the interplay of API and FCI to prioritize and address critical needs while making the most of its constrained resources.

According to NPS, "The API and FCI work together to create powerful metrics that assess both the priority and condition of an asset in relation to other assets within a park's portfolio. This relationship provides management staff with information that assists in identifying and prioritizing maintenance work at each park. When the API and FCI graphs combine, the result is

a graph that helps determine the maintenance, repair, and/or rehabilitation needed for each asset. This graph can help parks prioritize where limited resources should be allocated."

Chart 6-10 shows an example of the interplay between API and FCI. This analysis is completed for each asset at each park across the NPS system and is an important structured input to resource allocation decisions.

Chart 6-10: NPS API/FCI Matrix

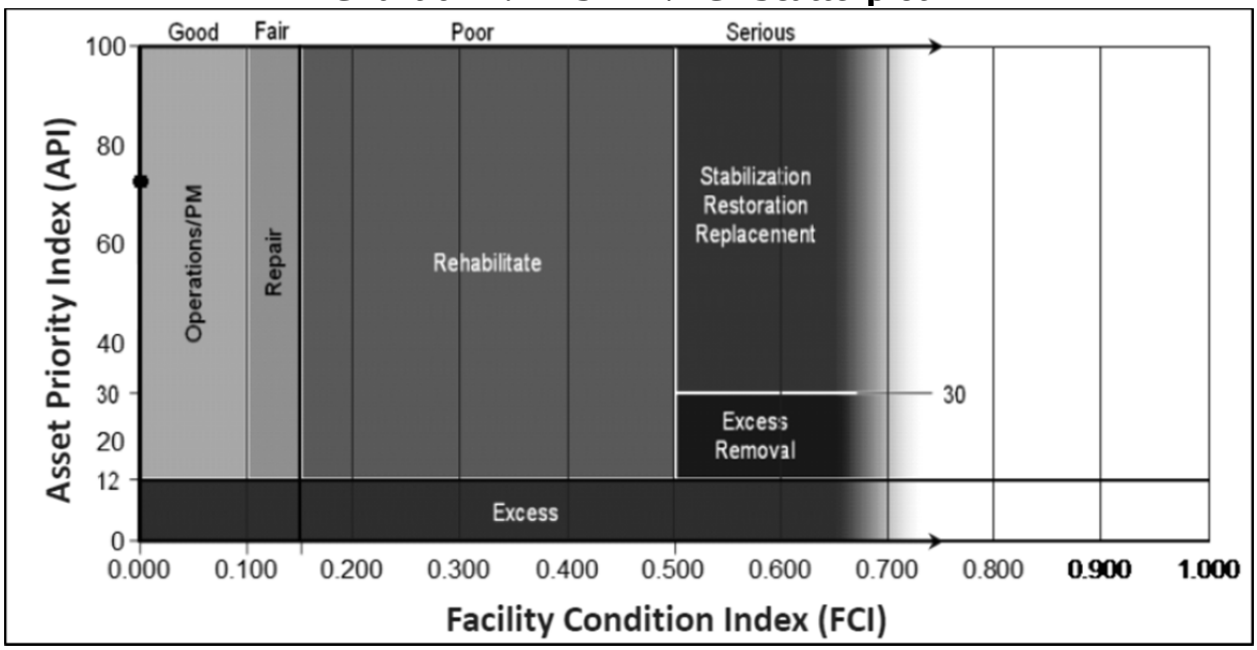


Source: NPS

As shown in **Chart 6-10**, assets are logically plotted into one of four quadrants based on API and FCI. The top left quadrant identifies high priority, good condition assets that will receive highest priority for maintenance and renewal activities and funding. The top right quadrant identifies high priority, poor condition assets (e.g., historical structures that have inevitably degraded in condition over time) that will be targeted for second priority repair or rehabilitation. The bottom left quadrant identifies low priority, good condition assets that, as third priority assets, may be better served through transfer of ownership or alternative funding strategies. Finally the bottom right quadrant identifies low priority, poor condition assets that, being fourth priority, are candidates for demolition or disposal.

Chart 6-11 shows how the interplay between API and FCI is graphically interpreted through a scatterplot and overlaid on a basic decision matrix scaled to the uniform distribution of API/FCI scores. Again, this exercise is completed for each individual asset in the NPS portfolio.

Chart 6-11: NPS API/FCI Scatterplot



Source: NPS

Note 1: "The green band across the bottom represents those assets that are considered inconsequential to the park mission based on parameters in the API scoring; they should be removed. Money spent on these assets represents a drain on the funds that could be used to maintain higher priority assets. Some disposition funds exist to support the removal of excess assets."

Note 2: "The dark brown area in the lower right of the scatterplot represents slightly more important assets than those in the green band, but if their API is low and the condition is poor, as represented by FCI data, they are not appropriate for stabilization, restoration, or replacement."

Note 3: "Assets in the Operations/PM range should be maintained through regular operational and preventive maintenance work."

Note 4: For assets identified in the "Repair" segment, "Routine repairs can be made to maintain assets that fall into this area to move them into the Operations/PM range."

Note 5: For assets identified in the "Rehabilitate" segment, "Those assets whose condition has deteriorated to this range need more significant work to move them to the Operations/PM range, if appropriate."

Note 6: For assets identified in the "Stabilization/Restoration/Replacement" segment, "Assets that are identified in this range are either historic and warrant stabilization or are modern and warrant replacement."

As shown in **Chart 6-11**, the NPS notes the "scatterplot provides a tool to help park managers visualize their asset data in order to make informed decisions about maintenance activities." The NPS approach to asset management provides a logical, data-driven, and consistent approach to asset evaluation and funding decisions across a large, complex organization.

The NPS approach to asset management is continuously improving rather than remaining static. One important example of this improvement is the development of "optimizer bands". There are certain assets within the NPS system that "do not score as high on the API scale as the cultural or natural resource icons at a park, but they have important regulatory requirements or significant visitor use impacts." The NPS recognized "that these assets, along with the iconic assets, require

parks' highest level of preventive, recurring, and component renewal maintenance. An additional tool was needed to identify these assets to assist with allocating the limited park maintenance budgets."[113] In response "Optimizer bands were developed to divide a park's asset portfolio into five bands to represent the level of maintenance that each asset should receive. Standards were developed for the optimizer bands, as noted in **Table 6-4** below. These parameters can be adjusted by the park to accommodate its requirements, priorities, and funding capabilities. Each individual asset is placed into the appropriate optimizer band.

Table 6-4 shows the NPS optimizer bands that would be used to influence the relative priority of assets on the API/FCI Scatterplot.

Table 6-4: NPS Optimizer Bands – Standard Parameters

Optimizer Band	Maintenance Level	API	FCI
1	Highest	88	0.15
2	High	75	0.30
3	Medium	50	0.75
4	Low	21	1.00
5	Lowest	Beyond Band 4	

Source: NPS

As shown in **Table 6-4**, each optimizer band identifies a maintenance level that corresponds to an asset's API and FCI. According to NPS, "Optimizer Band 1 includes those assets with the highest maintenance priorities. These assets are most important to the park—often linked to the park's enabling legislation or have high visitor use—and usually are in the best condition. Band 1 assets receive the highest percentage of base funding for routine operations, preventive maintenance, and recurring maintenance to keep them in good condition with proactive, planned maintenance. These assets are important to park operations, but because fewer park base dollars are available after maintaining Band 1 assets, Band 2 assets receive a lesser percentage of remaining funds. Assets in the lower priority bands may only receive preventive maintenance for the most critical components or may require special projects or partner funding to maintain them."

These asset management efforts have resulted in two key gains for NPS. The first is that from a management perspective, all parks and assets are being measured, evaluated, and largely funded based on a uniform, transparent approach. The second is that the NPS approach to asset management has improved the condition of all assets, especially buildings, which results in savings relative to the status quo operation that was in place 15 years ago. NPS reports that as of the end of the federal fiscal year 2012-13, it held a total of 24,587 buildings with a total current replacement value of $23.6 billion, total deferred maintenance of $1.8 billion, and aggregate FCI of 0.078.

[113] According to NPS, "Prime examples of assets that typically do not receive the highest API scores, but require the application of significant resources to perform preventive, recurring, and renewal maintenance are water and wastewater treatment plants. These assets typically score 50 to 70 API points, which places them into Optimizer Band 3, but they are assets that must be maintained at a low (good condition rating) FCI. For example, regulatory requirements dictate water output quality and wastewater discharge limits. For this reason, these facilities must be well maintained to protect visitor and staff health and the environment."

As previously noted, ODNR, and Parks specifically, has been afforded a historically significant capital allocation for the FY 2014-16 biennium. A portion of this capital allocation will allow Parks to renovate or replace buildings and assets; many of which are revenue-generating assets where reinvestment has potential to generate positive financial returns (see **Parks and Recreation Operations – Capital Investment** section for identification of investment and divestment opportunities). However, the quantified need for capital and operating support, just for the current portfolio of buildings, continues to outpace the financial support provided and will continue to do so for the foreseeable future. As such, Parks, with a focus on assessing the condition of its buildings and critical systems, will undoubtedly identify many assets as in poor to serious condition (i.e., a high FCI). This condition is likely due to low priority manifesting itself in prolonged periods of deferred maintenance and lack of reinvestment. Parks buildings, collectively, have a median remaining useful life of (1) year; an indicator that a significant portion of buildings may have relatively low priority. Due to the nature of the measure, relatively few assets will have an inherently high API; this factor is proportionately exacerbated when examining only the buildings with a poor to serious FCI. The end result is that, upon closer inspection, many buildings could be identified as “excess” or “excess removal”. ODNR and Parks will be better positioned to maximize the value and long-term returns of taxpayer investments by employing a data-driven approach that prioritizes capital and operating resources toward mission critical assets while divesting from non-critical assets.

Conclusion

ODNR's historical capital planning, budgeting, and management process does not transparently align capital resources with key strategic or business needs. This is most evident within Parks where more than half of its buildings are backlogged for replacement. Though ODNR has been afforded the financial means necessary to address a significant portion of this quantified need, its historical method of capital allocation does not maximize the economy, efficiency, and effectiveness of capital investment. ODNR is already instituting a number of capital asset management and construction management improvements, but these efforts will benefit from the addition of a comprehensive asset management system and a capital allocation framework that focuses scarce resources on mission-critical needs. ODNR can benefit from emulating NPS asset management strategies and tools given that they are readily available and their use has resulted in demonstrated success in addressing a similar issue over time.

Recommendation 6.1: ODNR should fully assess its portfolio of assets by gathering and documenting critical information necessary for effective asset management (e.g., age, location, condition, deferred maintenance, component systems, replacement value, etc.). Once this information is gathered, it should be entered into an asset management system to allow for timely, transparent access to necessary management information on a scale ranging from the entire Department to a specific asset. Finally, the Department should develop an asset management strategy, similar to one used by the National Parks Service, that targets and prioritizes scarce capital resources and supplemental operating budgets on critical needs over the long-term. Leveraging ODNR-wide asset management information into a unified, long-term strategy will help to ensure that each capital dollar is spent in a manner that efficiently and effectively supports the Department's mission, and each associated operating dollar is targeted toward maximizing the value and realization of the initial investment.

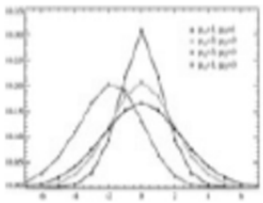
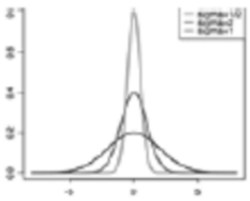
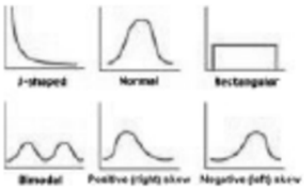
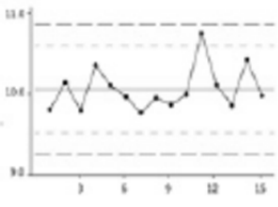
Financial Implication 6.1: N/A

Appendix 6.A: Characteristics of Data and Distributions

The *Toolkit for Quality* (LeanOhio, 2013) notes that, "To turn data into information and use it for decision-making, there are some key concepts or characteristics about the data that must be examined. Any set of data will have values that distribute across the measurement scale. This is called a data distribution, or simply 'distribution.' Except in the rarest of circumstances, data will vary…even when nothing in the process seems to be changing. Knowing the data type and distribution is critical to choosing the right statistical tools to interpret what the data is telling you. These data characteristics are:

- Center: Mean, Median, Mode
- Spread (Variation): Range, Standard Deviation, Variance
- Shape: Normal curve, Skew
- Stability over Time: Control Charts, Run Charts

Here is a table to help distinguish these key characteristics.

The Key Characteristics of Distribution			
Center • Mean • Median • Mode	Where on the measure scale does the data appear to gather or "clump"?	What is the center of the data?	
Spread • Range • Variance • Standard deviation	How does the data distribute around the center?	What is the spread of the data?	
Shape • Normal curve • Skew	What values are more frequent and less frequent?	What is the shape of the data?	
Stability over Time • In control • Out of Control	How do the above characteristics behave over time?	What is the stability of the data?	

Measurements of Center

- **Mean:** The mathematical average of a set of data point values. (Sum of all data points/number of data points).
- **Median:** The middle data point when the data is sorted by value, where 50 [percent] of the observed values are below and 50 [percent] are above. If there is an even number of data points, then average the two points in the middle.
- **Mode:** The most frequently occurring data point value.

Spread examines the variation or wideness of the data distribution. Measures of variation include:

- Range
- Variance
- Standard Deviation

Range is the difference between the largest and the smallest data point values.

- Range = Maximum Value - Minimum Value
- The purpose is to measure the dispersion (range) between the highest and lowest values of a data set.

Variance is the average of the squared differences from the mean. To calculate the variance, follow these steps:

- Work out the Mean (the simple average of the numbers).
- Then for each number: subtract the Mean and square the result (the squared difference).
- Then work out the average of those squared differences.

Standard Deviation: Deviation means the distance from normal. It is the distance between a data point value and the mean. Deviations for each data point will be used to calculate and describe the variation in a set of data. The Standard Deviation is a measure of the average dispersion about the mean or how the data are spread."

7. Wildlife Licenses and Participation

Section Overview

This section focuses on the Ohio Department of Natural Resources (ODNR or the Department) Division of Wildlife's (Wildlife or the Division) fishing and hunting licenses and participation and is presented in four separate analyses:

- **Fishing License Fees**: The first analysis compares Ohio's resident and nonresident fishing license fees to the fees of surrounding states but also considers market pressures in an effort to determine if fees are appropriate from a market-driven perspective.
- **Hunting License and Permit Fees:** The second analysis compares Ohio's cost to hunt to the surrounding states in an effort to determine if fees are appropriate from a market-driven perspective.
- **License Structure**: The third analysis examines Ohio's fishing and hunting license options to determine if they are structured in a way that maximizes participation and revenue.
- **Recruitment and Retention**: The fourth and final analysis examines the effectiveness of Wildlife's recruitment and retention strategies by examining how the Division measures the outcomes and successes of its programs and strategies.

Recommendations Overview

Recommendation 7.1: ODNR should develop and implement an ongoing fishing license fee assessment process to continually inform the appropriateness of fees. This assessment process should take into account, at a minimum, the frequency and amount of fee increases, inflation, surrounding state pricing for similar licenses, customer feedback, and the impact of potential market reactions. Where necessary and appropriate to meet program goals and objectives and balance market forces, the Department should propose modifications to fee structures.

Financial Implication 7.1: Increasing the resident and nonresident annual fishing licenses to $23.00 and $48.00, respectively, could increase revenue by **$1,748,000** annually.

Recommendation 7.2: ODNR should develop and implement an ongoing hunting license and permit fee assessment process to continually inform the appropriateness of fees. This assessment process should take into account, at a minimum, the frequency and amount of fee increases, inflation, surrounding state pricing for similar licenses and permits, customer feedback, and the impact of potential market reactions. Where necessary and appropriate to meet program goals and objectives and balance market forces, the Department should propose modifications to fee structures.

Financial Implication 7.2: Increasing the nonresident deer permit (either sex) from $24.00 to $38.00 could increase revenue by **$254,175** annually.

Recommendation 7.3: ODNR should consider restructuring fishing and hunting licenses to provide additional options to customers such as reduced-cost combination and/or multi-year licenses. Providing such options can help to meet customer preferences while creating opportunities to increase the total number of license holders and in turn increase federal apportionments from Wildlife and Sport Fish Restoration Programs. An effective restructuring should include close examination and analysis of past license holders and the potential impact of proposed changes, feedback from stakeholders, and well planned and executed strategies for communicating changes to the public.

Financial Implication 7.3: N/A

Recommendation 7.4: ODNR should develop and implement a performance management strategy focusing on recruitment and retention efforts. This strategy should encompass the Division's goals, targets, and measurement practices that are already in place, but should incorporate continuous measurement and analysis to assess and evaluate the results of each activity and program. Performance management strategies and feedback should inform not only the way the Division approaches current programs and activities, but also future programs and activities. The focus should be to allocate scarce resources toward the highest impact recruitment and retention activities.

Financial Implication 7.4: N/A

Section Background

Within ODNR, Wildlife is responsible for management of fish and wildlife resources.[114] The Division's mission is "to conserve and improve fish and wildlife resources and their habitats for sustainable use and appreciation by all." Key functions and primary responsibilities include:

- **Licensing:** Managing license operations for resident and nonresident hunters and anglers.
- **Fish Management:** Monitoring fish populations and angler harvest, implementing fishing regulations, operating six fish hatcheries, fish stocking, managing water areas by improving spawning habitat and fishing access, construction and maintenance of facilities such as shoreline fishing areas and boat ramps, and conducting research to develop management practices for future improvements.
- **Wildlife Management:** Managing land for wildlife and wildlife-oriented recreation; land acquisition; maintaining and improving wildlife habitats; assisting landowners with habitat improvements; monitoring and managing wildlife populations and harvest; and conducting research to be used in improving wildlife populations, regulations, and public satisfaction.
- **Law Enforcement:** Protecting wildlife resources and state property; ensuring fair and equitable use; and enforcing fish, wildlife, litter and pollution statutes.
- **Information and Education:** Providing hunter, trapper, and angler education; printing of regulations; providing educational materials to Ohio's educators; maintaining the Division's electronic newsletter, website, Wild Ohio television program and magazine,

[114] The specific powers and duties conferred to Wildlife are found in Ohio Revised Code (ORC), sections 1531 and 1533, as well as corresponding chapters of the Ohio Administrative Code (OAC) within 1501:31.

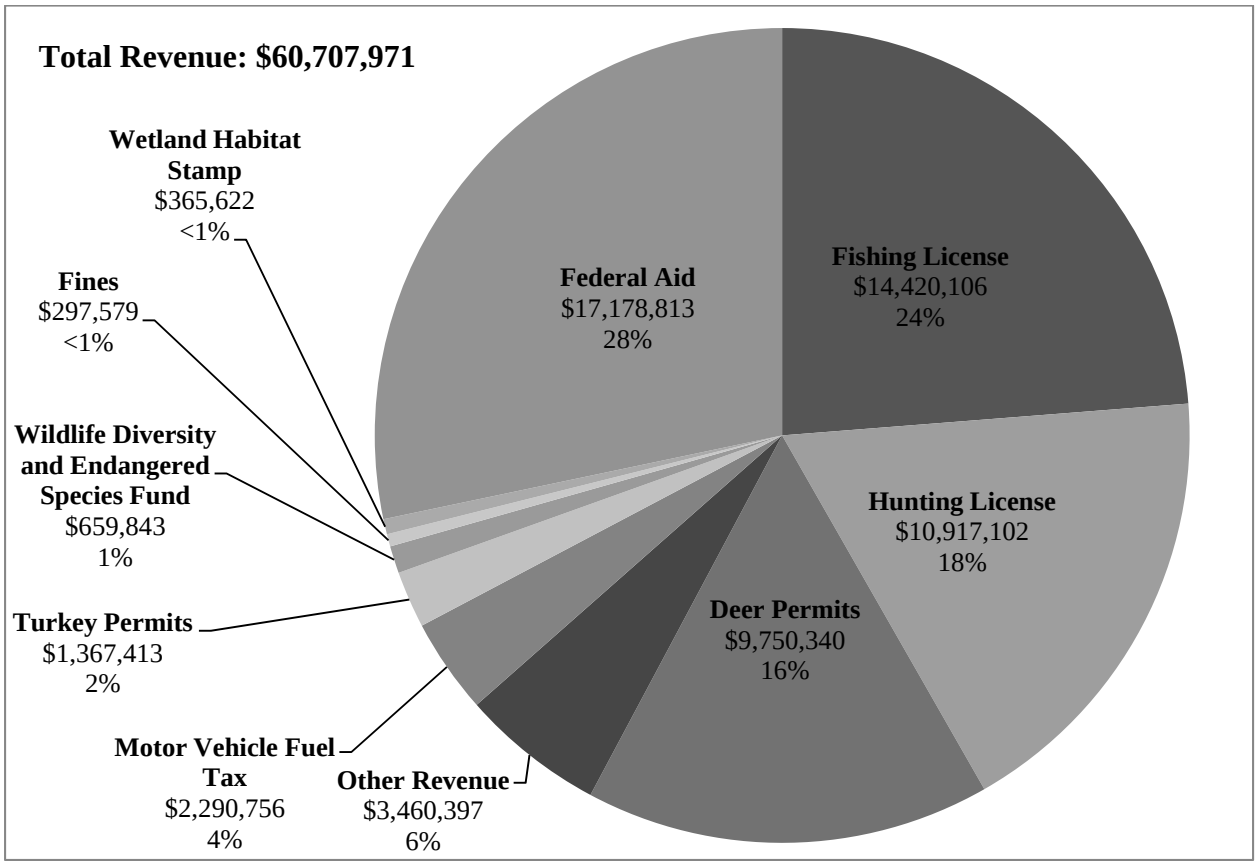
information distribution to the media and public; and the creation and printing of maps and other publications.

Sources of Revenue

Wildlife revenue totaled $60.7 million for fiscal year (FY) 2013-14. Revenue is derived from a combination of sources, including: the sale of fishing and hunting licenses, the sale of permits and stamps, and federal aid.

Chart 7-1 shows the dollar value and percent of total funding represented by each individual source for FY 2013-14.

Chart 7-1: Wildlife Revenue Overview FY 2013-14



Source: Wildlife

As shown in **Chart 7-1**, the largest sources of revenue are the funds generated from the direct sale of fishing and hunting licenses and permits. Together, sales of licenses and permits totaled over $36.5 million in FY 2013-14, or 60.0 percent of total revenue. This revenue is credited to the Wildlife Fund to be used solely for fish and wildlife management. Further, this revenue is protected by State and federal legislation that prevents diversion for purposes other than fish and wildlife management.

The Division's federal aid amounted to over $17.1 million in FY 2013-14, or 28.3 percent of total revenue. Federal aid comes through the U.S. Fish and Wildlife Service (FWS) Wildlife and Sport Fish Restoration (WSFR) Program. FWS notes that "this program addresses the challenges of managing natural resources with effective, targeted grant programs designed to benefit fish and wildlife while capitalizing on recreational opportunities across the country."[115] FWS administers the WSFR Programs and distributes funds to state fish and wildlife resource agencies for qualifying expenses.

Federal Grant Programs

The two core WSFR programs designed to assist states with fish and wildlife conservation are the Wildlife Restoration (WR) Program, authorized by the Pittman-Robertson Wildlife Restoration Act of 1937, and the Sport Fish Restoration (SFR) Program, authorized by the Dingell-Johnson Sport Fish Restoration Act of 1950. These two programs provide funding to states for activities including, but not limited to, land acquisition, research, habitat improvements, program coordination, stocking of fish, wildlife and sport fish population management, and development of facilitates for public use.[116]

The WR Program is funded by excise taxes on firearms, ammunition, archery equipment and arrow components while the SFR Program is funded by excise taxes on fishing equipment and motorboat and small engine fuels. Funds are pooled within each program and then apportioned to states according to program-specific formulas. The formula for apportioning WR funds is based on land area (50 percent) and on the number of certified hunters (50 percent).[117] The formula for SFR funds is based on land area, including inland and coastal water area, (40 percent) and the number of certified anglers (60 percent). Maximum and minimum apportionments are in place for both programs. Specifically, no state receives more than 5.0 percent or less than 1.0 percent of the total available SFR funds. Likewise, no state receives more than 5.0 percent or less than 0.5 percent of the total available WR funds.

To take part in WSFR, fish and wildlife agencies must annually certify the number of paid hunting licenses and paid fishing licenses. Title 50 of the Code of Federal Regulations (CFR), Part 80, Subpart D provides guidance for how to count license holders in the annual certification. In summary, each person who has a paid fishing license for which the agency receives at least $1.00 of net revenue is counted as a certified fishing license. Each person who has a paid hunting license for which the agency receives at least $1.00 of net revenue is counted as a certified hunting license. For states offering combination licenses (i.e., hunting and fishing combination) for which the agency receives at least $2.00 of net revenue, the combination license is counted twice, once as a certified fishing license and once as a certified hunting license. Multi-year licenses are counted once in the certification year, and once for each additional year in which the license is both valid and the net revenue meets program requirements.[118]

[115] *Wildlife and Sport Fish Restoration Program Brochure* (FWS, 2014)
[116] Law enforcement and public relations are not eligible for funding under these specific programs.
[117] One half of the taxes collected on specific equipment, including; pistols, revolvers, and bows, as well as an $8.0 million set-aside are apportioned specifically for hunter education. The funds remaining in the Wildlife Restoration Account after these deductions are apportioned based on the formula.
[118] Multi-year licenses must meet additional certification requirement within Title 50 of the CFR Part 80.35.

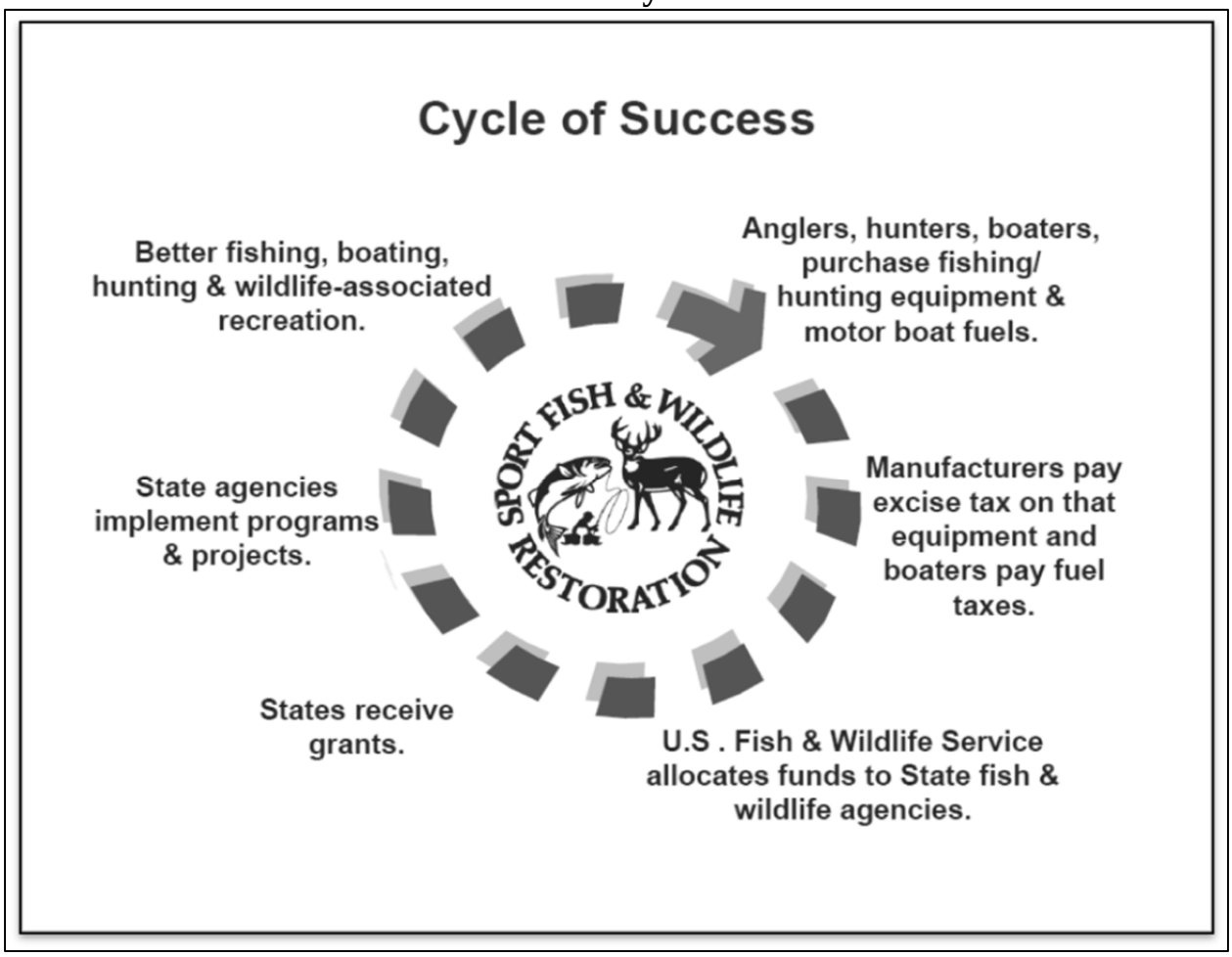
To receive WR and SFR funding, state agencies responsible for fish and wildlife conservation submit grant proposals to FWS. Most states are required to submit project-specific proposals to FWS, each of which includes a narrative statement describing the need, objectives, benefits, approach, and estimated cost for the proposed grant. However, Ohio is one of only five states with a Comprehensive Management System (CMS) in place. As such, Wildlife's grant approval process differs. CMS links programs, financial systems, human resources, goals, products, and services together into one system. This interconnected management system allows the Division's process, including strategic and operational planning, to be pre-approved by FWS and provides flexibility in developing and implementing projects. Regardless of the process used, approved grants are funded at up to 75 percent of the total cost, requiring a 25 percent match from state funds (state funds are generated from the sale of licenses and permits).

Wildlife's projects are planned and carried out to improve wildlife habitats and resources and encourage participation in fish and wildlife opportunities. Programs and projects funded through WSFR cover a wide array of Division areas and serve various purposes such as:

- **Research Projects**: The Division conducts research to monitor and manage wildlife and fish populations as well as angler and hunter participation and behavior characteristics. These research projects are often carried out in cooperation with educational institutions. For example, *Fishing Ohio: A Survey of Ohio Anglers* (Wildlife and The Ohio State University, 2012) was a collaborative research effort to describe the social, attitudinal, and behavioral characteristics of anglers that are relevant to the continued stewardship and management of fisheries. Research provides Wildlife with the basic information needed for setting seasons, recommending regulation, making management decisions, and evaluating the status of fish and wildlife populations. Research projects also pioneer new ways to address problems and improve existing programs.
- **Capital Improvements**: These projects are designed to fund improvements of facilities. Specifically, capital improvement projects include the repair, construction, maintenance, and renovation of fishing access sites, boat ramps, hatcheries, and offices. In addition, the Division purchases land to provide additional public access to wildlife opportunities.
- **Communication**: These projects include publications and media relations used to inform and educate Ohioans about fish and wildlife. The Division's Wild Ohio Magazine, Wild Ohio television show, media relations, radio programs, website and social media sites provide outreach and information to Ohio's anglers and hunters.
- **Programs**: Specific programs are designed to increase wildlife knowledge and encourage participation in fish and wildlife recreation. For example, the Division hosts multiple trout releases each year as a way to introduce youth to the outdoors. Other youth programs, such as "Passport to Fishing" introduce the basics of angling. Programs such as "Becoming an Outdoors Woman" include workshops that emphasize outdoor skills for women. "Project Wild", one of the Division's most popular programs, provides training, tools, and resources for Ohio educators to use in classrooms. Conservation clubs host events to promote fish and wildlife within their communities. These projects and programs are planned, developed, and carried out with the goal of achieving the Division's mission of conserving and improving Ohio's fish and wildlife resources and their habitats for sustainable use and appreciation.

FWS describes the WSFR process as a "cycle of success"; showing how the "user pay, user benefit program" starts with the excise taxes on fishing and hunting equipment and ends with better opportunities for hunters and anglers. **Chart 7-2** provides an overview of the FWS cycle of success concept.

Chart 7-2: FWS Cycle of Success



Source: FWS

Hunting and Fishing Licenses and Permits [119]

Ohio's fishing and hunting licenses and permits are valid for one license year (LY), from March 1 to February 28 (e.g., a license valid from March 1, 2014 to February 28, 2015 would be for LY 2014-15). Licenses and permits are available for purchase from nearly 1,000 license agents across the State.[120] Anglers and hunters can also purchase licenses and permits through the Division's online license system, Wild Ohio Customer Relationship Management System, or through U.S. mail by completing a Mail Order License Application.

Licenses are broadly categorized and sold as either resident or nonresident. Resident licenses are available to each person who has resided in the state of Ohio for the past six consecutive months. All others are considered nonresidents and are required to purchase nonresident licenses. Special licenses, with a reduced fee, are available for youth (hunting license only) and seniors (fishing and hunting license). Youth licenses are for resident and nonresident hunters who are 17 years old or younger at the time of purchase and who have completed the necessary hunter education course. Reduced-cost licenses, at a 50 percent discount, are available to residents age 66 and older born on or after January 1, 1938.[121] Free licenses are available to residents born before that date as well as to residents who meet specific requirements.[122]

All first-time hunting license buyers, except apprentice license buyers, must successfully complete a hunter education course. Ohio's Apprentice License Program allows residents and nonresidents, regardless of age, to purchase an apprentice hunting license without having taken a hunter education course. This program provides the opportunity to sample the experience of hunting and trapping, but only under the mentorship of a licensed adult.[123]

[119] Ohio's fishing license fees are governed by ORC § 1533.32, hunting license fees by ORC § 1533.10, deer and turkey hunting permits by ORC § 1533.11, and fur taker permits by ORC § 1533.111.

[120] Any retail location meeting minimum requirements is eligible to become a license agent. Requirements include completing and signing the Application for Appointment (License and Game Check Agent and EFT Authorization form), the License Issuance & Game Check Contracts and verifying that hardware and software requirements are met (agents provide their own computer equipment). Licensed agents retain a "writing fee" of $1.00 for each license, permit, and stamp sold.

[121] The 50 percent discount is on the annual license fee (not including the $1.00 writing fee). Therefore, the $10.00 resident reduced-cost senior hunting and fishing licenses are calculated by taking 50 percent of the annual license fee of $18.00, or $9.00, plus the $1.00 writing fee.

[122] Specific requirements pertain to: those who are mobility impaired and require the assistance of another person to cast and retrieve; holders of veteran license plates displaying the international wheelchair symbol; certain veterans who are permanently disabled; residents of state and county institutions; and former prisoners of war.

[123] No person may purchase more than three apprentice hunting licenses (adult or youth) in his or her lifetime.

Table 7-1 shows all base hunting and fishing license types and fees for LY 2014-15.

Table 7-1: Ohio Hunting and Fishing Licenses LY 2014-15

Hunting Licenses	
License Type	**Fee**
Resident Annual Hunting License	$19.00
Resident Reduced-Cost Senior Hunting License	$10.00
Resident Free Hunting License	$0.00
Resident Apprentice Annual Hunting License	$19.00
Resident Youth Annual Hunting License	$10.00
Resident Apprentice Youth Annual Hunting License	$10.00
Nonresident Annual Hunting License	$125.00
Nonresident Three-Day Hunting License	$40.00
Nonresident Apprentice Annual Hunting License	$125.00
Nonresident Youth Annual Hunting License	$10.00
Nonresident Apprentice Youth Annual Hunting License	$10.00
Fishing Licenses	
License Type	**Fee**
Resident Annual Fishing License	$19.00
Resident Reduced-Cost Senior Fishing License	$10.00
Resident One-Day Fishing License (including one-day charter licenses)	$11.00
Resident Free Fishing License	$0.00
Nonresident Fishing License	$40.00
Nonresident One-Day Fishing License (including one-day charter licenses)	$11.00
Nonresident Three-Day License	$19.00

Source: Wildlife
Note: All fees shown include a $1.00 writing fee.

Ohio's base fishing license allows anglers to fish for any legal species without the need to purchase any additional stamps or permits. In contrast, the base hunting license is required as are additional hunting permits. Ohio does not offer combination license options (such as combination hunting and fishing license or combination husband and wife license), multi-year licenses, or lifetime licenses.

Table 7-2 shows all Ohio hunting permits and corresponding fees for LY 2014-15.

Table 7-2: Ohio Hunting Permits LY 2014-15

Permit Group	Permit Type	Fee
Deer	Either Sex Deer Permit	$24.00
	Either Sex Deer Permit, Youth	$12.00
	Either Sex Deer Permit, Reduced-Cost Senior (Resident Only)	$12.00
	Antlerless Deer Permit	$15.00
	Antlerless Deer Permit - Youth	$15.00
Turkey	Spring Turkey Permit	$24.00
	Spring Turkey Permit, Youth	$12.00
	Spring Turkey Permit, Reduced-Cost Senior (Resident Only)	$12.00
	Fall Turkey Permit	$24.00
	Fall Turkey Permit, Youth	$12.00
	Fall Turkey Permit, Reduced-Cost Senior (Resident Only)	$12.00
Fur Taker	Fur Taker Permit	$15.00
	Apprentice Fur Taker Permit	$15.00
	Fur Taker Permit, Youth	$8.00
	Fur Taker Permit, Reduced-Cost Senior (Resident Only)	$8.00
	Apprentice Fur Taker Permit, Youth	$8.00
Waterfowl [1]	Ohio Wetlands Habitat Stamp	$15.00
	Ohio Wetlands Habitat Stamp, Reduced-Cost Senior (Resident Only)	$15.00

Source: Wildlife
Note 1: All fees shown include a $1.00 writing fee.
Note 2: Free deer, turkey, and fur taker permits and Ohio Wetlands Habitat Stamps are available to seniors under the same eligibility requirements as base hunting and fishing licenses.
Note 3: All permits and fees are for both residents and nonresidents unless specifically noted.
[1] FWS sets the framework for hunting ducks, geese, and other migratory game birds. Waterfowl hunting is governed by both state and federal regulations. In addition to the Ohio Wetlands Habitat Stamp, a federal Migratory Bird Hunting Stamp, also called a Duck Stamp, is required of all persons age 16 and older when hunting migratory waterfowl in Ohio. Federal regulations relating to migratory game birds are located in Title 50, CFR, Part 20.

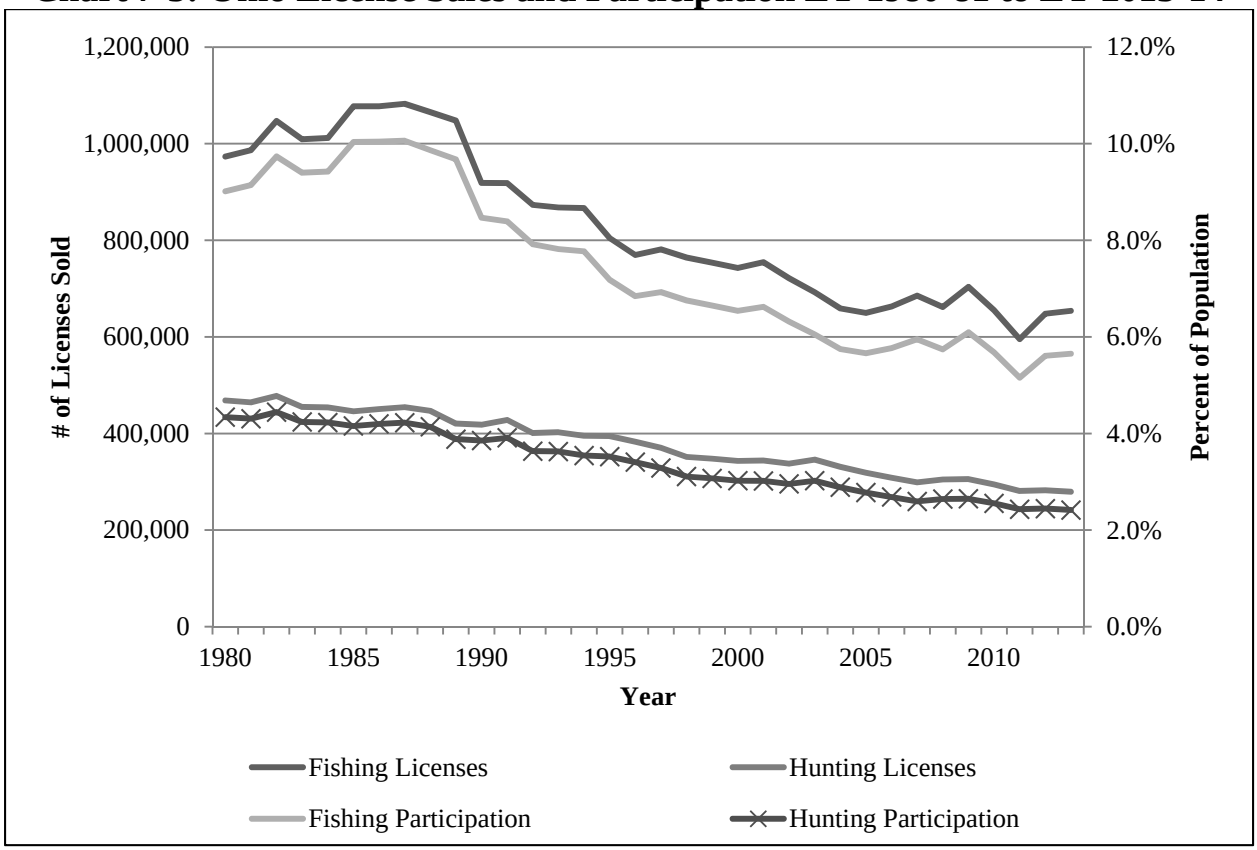
Although hunting permits are not eligible to be counted as certified licenses and have no impact on the WSFR apportionment calculation, they still represent a substantial amount of direct revenue each year. In FY 2013-14, Wildlife collected over $9.7 million in revenue from deer permits and over $1.3 million from turkey permits.

Participation Trends

FWS publishes the *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* (the Survey) every five years, with the most recent edition in 2011.[124] The Survey reports national data on the number of anglers, hunters, and wildlife watchers as well as how often they participate and how much they spend on their activities. Historic survey results have shown a downward trend in the number of anglers and hunters over time. However, results from the 2011 Survey, indicate a recent increase in hunting and fishing participation. Specifically, from 2006 to 2011, hunting participation increased by 9 percent, while fishing participation increased by 11 percent.

Chart 7-3 shows a trend line for Ohio resident hunting and fishing licenses sold as well as a trend line for participation as a percent of total population from LY 1980-81 to LY 2013-14.[125]

Chart 7-3: Ohio License Sales and Participation LY 1980-81 to LY 2013-14



Source: ODNR and U.S. Census Bureau

[124] The Survey is funded by a multistate grant and authorized by the WSFR Program. In general, it has been conducted every five years since 1955. FWS coordinates the Survey, and the U.S. Census Bureau collects the data by computer-assisted interviews. The 2011 Survey, the most recent version available, is the twelfth edition.

[125] 1980 was chosen as a starting year for this analysis in order to provide a sufficient and appropriate amount of time to measure change in participation trends.

As shown in **Chart 7-3**, Ohio participation has been experiencing a decline. For example, in 1985, 10.0 percent of the State's population purchased a fishing license. This percentage declined to a low of only 5.2 percent in 2011, but for LY 2013-14, the last full year of data available, increased to 5.7 percent. Further, the number of resident hunting licenses sold has been on a steady decline. Specifically, total resident hunting licenses have decreased by 40.4 percent from 468,406 in LY 1980-81 to 279,256 in LY 2013-14.

Ohio's decline in participation is similar to the national trend. Industry research points to a number of potential causes for declining participation in fishing and hunting nationwide.[126] For example, demographic changes, including the increasing number of people that migrate from rural to urban areas and aging populations, have played a role in declining participation. Shifts in public attitudes, lack of training programs, more stringent hunter education requirements, travel costs, interests in other activities, and changes in family traditions have also been identified as potential factors. For these reasons, recruitment and retention strategies are becoming more of an emphasis than ever for state fish and wildlife agencies.

The **Wildlife Licenses and Participation** section is divided into four sub-sections, each analyzing a distinct element of revenue generating operations.

Fishing License Fees: The first sub-section analyzes Ohio's resident and nonresident fishing license fees in comparison to market rates. First, the sub-section examines Ohio's historical fishing license fee increases, including: amount, percent increase, and frequency of increase. Next, the Division's current resident annual fishing license fee was examined with respect to inflation over the last ten years (since the last increase occurred). Finally, Ohio's annual fishing license fees for residents and nonresidents were compared to the surrounding states of Indiana, Kentucky, Michigan, Pennsylvania, and West Virginia.

Hunting License and Permit Fees: The second analysis compares the cost to hunt specific wildlife in Ohio to the cost in surrounding states in an effort to determine if Wildlife's pricing scale is efficient and competitive. The cost to hunt was compared by examining Ohio's and each surrounding state's requirement for specified licenses and permits for hunting specific wildlife.

License Structure: The third analysis seeks to determine if Ohio's fishing and hunting license options are structured in a way that maximizes participation and revenue.

Recruitment and Retention: The fourth and final analysis examines Wildlife's recruitment and retention strategies for effectiveness by examining how the Division measures the outcomes and successes of its programs and strategies.

These four sub-sections provide a greater level of insight into the interplay of license structures, fees, and participation highlighting opportunities to better meet customer needs.

[126] There are several well-known consulting firms that specialize in the natural resources and outdoor recreation industry. Two such firms, Southwick and Associates and Responsive Management, have issued specialized reports focusing on other states' wildlife agency operations and on specific industry practices such as recruitment and retention strategies. Industry research is also conducted by state fish and wildlife agencies (either individually or as a partnership, typically with education institutions). For example, *Fishing Ohio, a Survey of Ohio's Anglers* (2012) was a partnership between the Division and The Ohio State University to collect relevant social, attitudinal, and behavioral characteristics of Ohio's anglers to use in fisheries management.

R7.1 Fishing License Fees

Background

In LY 2013-14, Wildlife issued a total of 869,143 fishing licenses to resident and nonresident anglers. These licenses included 654,990 annual resident licenses,[127] 33,642 annual nonresident licenses, 61,279 reduced-cost licenses,[128] 41,223 free licenses,[129] 25,360 nonresident three-day fishing licenses, and 52,649 one-day licenses.[130]

Table 7-3 shows Ohio fishing license type, availability (i.e., resident and/or nonresident) and associated fees for LY 2014-15.

Table 7-3: Ohio Fishing License Fees LY 2014-15

License Type	Resident Fee	Nonresident Fee
Annual Fishing License	$19.00	$40.00
Reduced-Cost Fishing License [1]	$10.00	N/A
One-Day Fishing License (including one-day charter licenses)	$11.00	$11.00
Three-Day Fishing License	N/A	$19.00

Source: Wildlife
Note: All fees shown include a $1.00 writing fee.
[1] The reduced-cost license is available to persons age 66 and older born on or after January 1, 1938 who have resided in Ohio for the past six months. Residents born before that date are eligible for free licenses. The reduced-cost fee reflects a 50 percent discount on the annual license fee ($18.00) plus the $1.00 writing fee.

As shown in **Table 7-3**, Wildlife provides three fishing license options to residents and four fishing license options to nonresidents. A fishing license is required to take fish, frogs, and turtles from Ohio waters. While four of the five surrounding states, with the exception of Michigan, require anglers to purchase an additional stamp to fish for trout, this privilege in Ohio is included within each of the fishing license options listed in **Table 7-3**. Ohio does not require additional stamps, licenses, or permits to fish for specific species.

According to Wildlife's fiscal year (FY) 2013-14 Financial Report,[131] fishing licenses generated approximately $14.4 million in revenue, 23.8 percent of the Division's total revenue. As previously noted, Wildlife collects revenue directly from the sale of each license, but only collects SFR apportionment based on the fishing licenses that are certified to FWS. The Federal Fiscal Year (FFY) 2013-14 SFR apportionment is calculated based on the number of certified

[127] Annual licenses include upgrades (those anglers who purchased a one-day license and later upgraded to an annual license). These anglers are not included in the one-day total.
[128] Ohio residents age 66 and older born on or after January 1, 1938 receive a 50 percent discount on annual fishing licenses. Residents born before that date are eligible for free licenses.
[129] Persons born on or before December 31, 1937, persons who are mobility impaired and require the assistance of another person to cast and retrieve, holders of veteran license plates displaying the international wheelchair symbol, certain veterans who are permanently disabled, residents of state and county institutions, and former prisoners of war are eligible for a free fishing license.
[130] One-day licenses included 10,771 resident one-day licenses, 1,752 resident one-day charter licenses, 28,487 nonresident one-day licenses, and 11,639 nonresident one-day charter licenses.
[131] The Financial Report presents expenditures and revenue data over a given FY from July 1 to June 30. Fishing license data is reported on a LY basis; from March 1 to February 28 (29).

fishing licenses reported in August 2013, but is actually reflective of LY 2011-12 and accounts for 739,616 certified fishing licenses.

Given that the certified fishing licenses are reported to FWS in arrears, the official certified license count for 2015 SFR apportionment is not yet available. However, applying the formulaic elements, the certified license count for 2015 and 2016 SFR apportionments can be estimated using current Wildlife data. Specifically, certified licenses are projected to be 802,490 for 2015 SFR apportionment, based on LY 2012-13 sales, and 819,899 for 2016 SFR apportionment, based on LY 2013-14 sales. As such, Ohio's certified fishing licenses are expected to increase by 10.9 percent from 2014 to 2016 for SFR apportionment.

Methodology

This sub-section of the performance audit, **Fishing License Fees**, seeks to determine if the fees charged to resident and nonresident anglers are appropriate in comparison to market rates. Ohio license fee data was obtained from the fees specified in ORC and was verified using an ODNR publication entitled *Ohio Fishing Regulations 2014-2015* (Wildlife, 2014). Historical fishing license fees and participation rates were obtained from Wildlife and were verified through FWS which maintains an online database reporting historical information. The surrounding states of Indiana, Kentucky, Michigan, Pennsylvania, and West Virginia were selected for comparison as they most closely reflect the regional market in which Ohio fishing licenses are sold. Fishing license fees for surrounding states were obtained from various sources of published, publically available information such as official fishing guides, digests, and license purchase websites.

First, the analysis examines Ohio's historical fishing license fee increases, including: amount, percent increase, and frequency of increase. Participation rates in each year when increases occurred were examined over the last 34 years to determine if trends or expected market reactions could be predicted. Next, the Division's current resident annual fishing license fee, which has been in place since LY 2004-05, was examined with respect to inflation over the last ten years (since the last increase occurred). Finally, Ohio's annual fishing license fees for residents and nonresidents were compared to the surrounding states of Indiana, Kentucky, Michigan, Pennsylvania, and West Virginia. Additional analysis was performed to identify the potential market reaction associated with a fee increase and the net impact that a fee increase would have on direct sales and federal revenue.

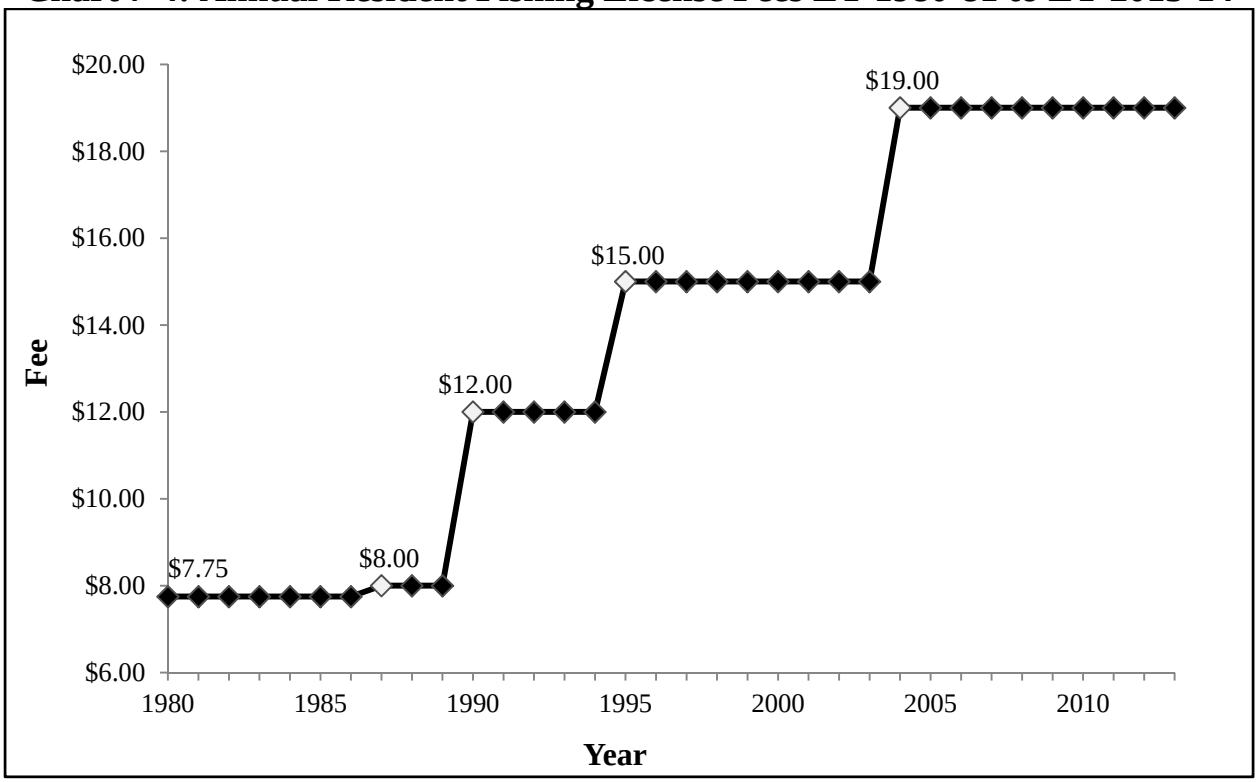
Analysis

Historical Fees and Frequency of Increases

Ohio's current annual resident fishing license fee of $19.00 went into effect in March 2004. This was also the last time that fishing license fees were formally evaluated for appropriateness. The 10+ years that the current fee has been in effect represents the longest time span without a fee increase in over 50 years. Since the implementation of fishing licenses in 1925, there was only one time period in which the span between fee increases exceeded 10 years; from 1952 to 1967. From 1968 to present, there have been seven fee increases with an average six years between each increase.

Chart 7-4 shows Ohio's fishing license fees from LY 1980-81 to LY 2013-14. Analyzing fees over an extended duration provides context not only for the market reactions to fee increases, but also market trends in non-increase years.

Chart 7-4: Annual Resident Fishing License Fees LY 1980-81 to LY 2013-14



Source: Wildlife

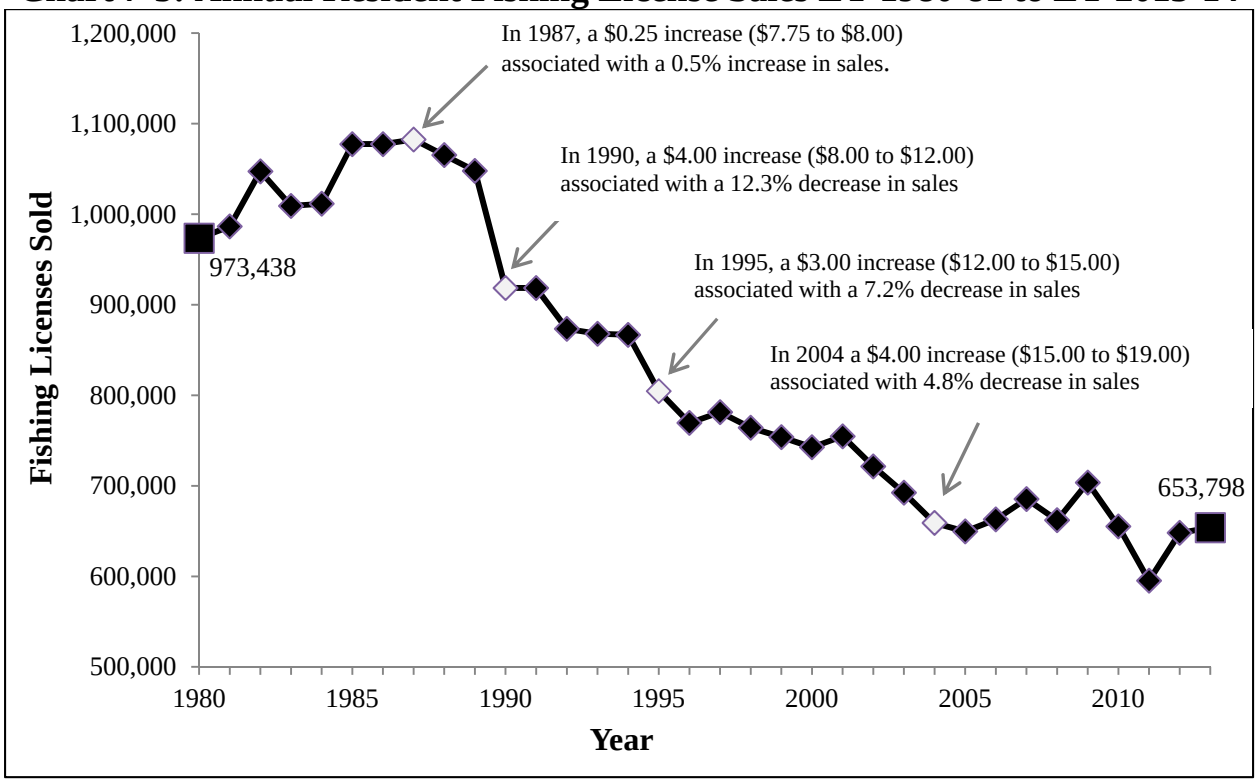
As shown in **Chart 7-4**, Ohio's annual resident fishing license fees have increased four times since 1980. These four increases ranged from $0.25 to $4.00, with a median increase of $3.50.

A fishing license is a commodity in that it is a tangible item that satisfies consumer desires. Like most commodities, increasing the price of a fishing license may have a negative effect on demand and result in a decrease in the number of licenses purchased. License sales in the years

in which an increase occurred were examined in an attempt to determine if a trend in the market reaction was evident.

Chart 7-5 shows annual resident fishing licenses sold and the percent increase/decrease in sales in years where license fees were increased (data points with notation illustrate the years in which an increase went into effect). It is important to note that a fee increase is not the only factor that can affect the sale of fishing licenses in a given year. Other factors impacting participation and sales include socioeconomic variables, economic circumstances, and weather conditions.

Chart 7-5: Annual Resident Fishing License Sales LY 1980-81 to LY 2013-14



Source: Wildlife
Note: Fishing licenses sold reflect annual resident fishing licenses and do not include nonresident licenses, resident reduced-cost licenses, resident one-day licenses, or resident upgrades. These categories were excluded to provide a consistent comparison to the historical data available.

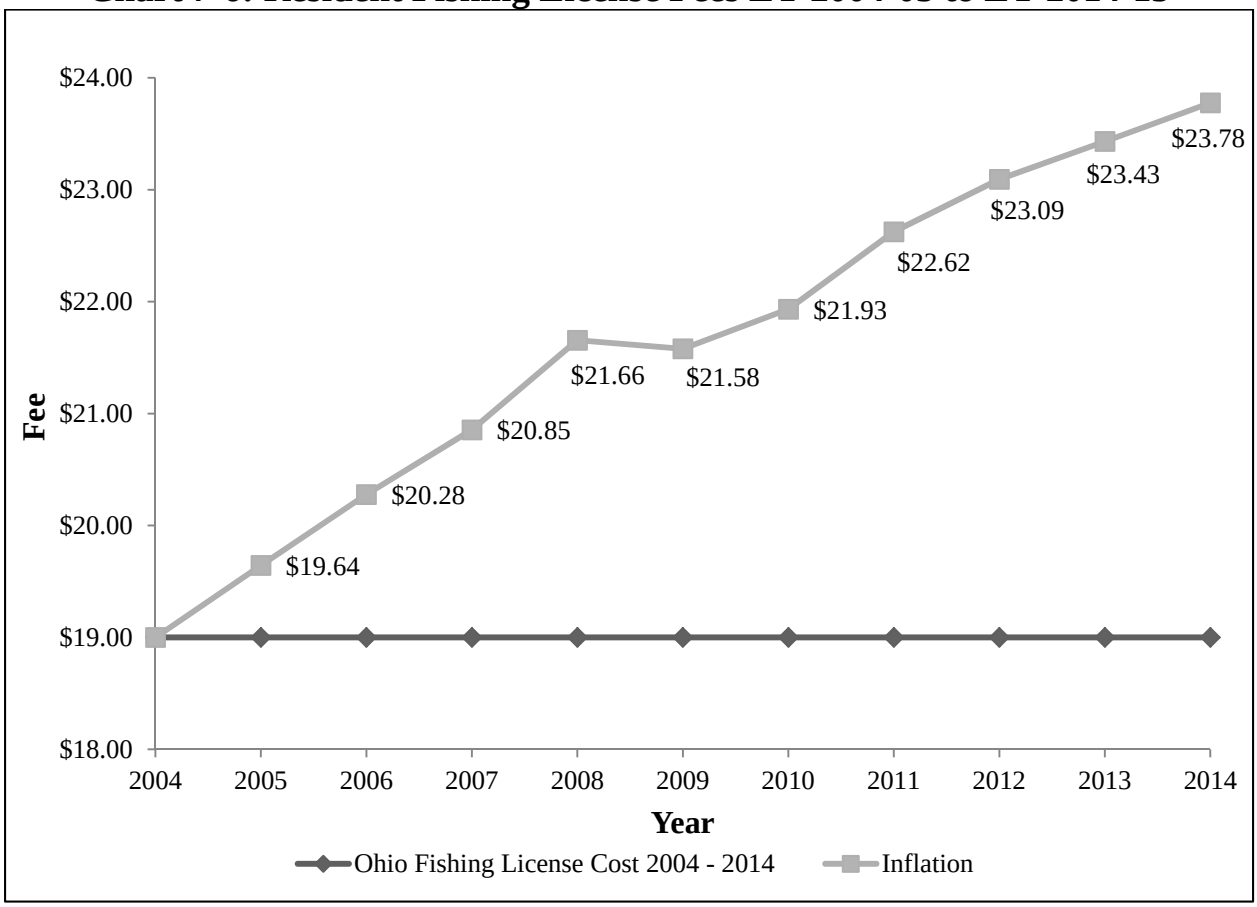
As shown in **Chart 7-5**, over the last 34 years, the number of annual resident fishing licenses issued in Ohio has decreased by 32.8 percent; 973,438 in LY 1980-81 to 653,798 in LY 2013-14. On average, sales have decreased by 0.96 percent per year. Further, for 20 of 34 years, Ohio experienced a decrease in the number of annual resident fishing licenses sold. These years averaged a loss of 3.6 percent per year. Though sales are generally declining, historical fee increases correlate with years that experience above average decreases in license sales. For example, decreases of 12.3 percent in 1990, 7.2 percent in 1995, and 4.8 percent in 2004. The declining trend, coupled with apparent market reactions to fee increases, suggest that sales are declining for reasons other than just fees, but that customers are also sensitive to fee increases.

Industry research supports that socioeconomic variables, economic factors, and weather conditions impact participation and sales. Examples of socioeconomic variables affecting the sale of fishing licenses include: population, per capita income, and unemployment. The price of gasoline can also be examined to account for year-to-year travel costs that may affect sales. Weather conditions play a role in the number of licenses sold each year, with the assumption that poor conditions can have a negative impact on participation and sales. Due to the number of variables impacting participation, it is difficult to predict the exact market reaction to a fee increase. However, it can be assumed that some portion of customers will drop out of the market, at least for a short time, following a fee increase. When considering fee increases, the net effect of the increase in direct revenue from fee increases must be balanced with the potential loss of federal aid due to the lower overall number of certified licenses.

Fishing License Fees and Inflation

Chart 7-6 shows Ohio's current annual resident fishing license fee, in place since March 2004, in relation to an inflation-adjusted fee for LY 2004-05 to LY 2014-15.

Chart 7-6: Resident Fishing License Fees LY 2004-05 to LY 2014-15



Source: ODNR and Bureau of Labor Statistics

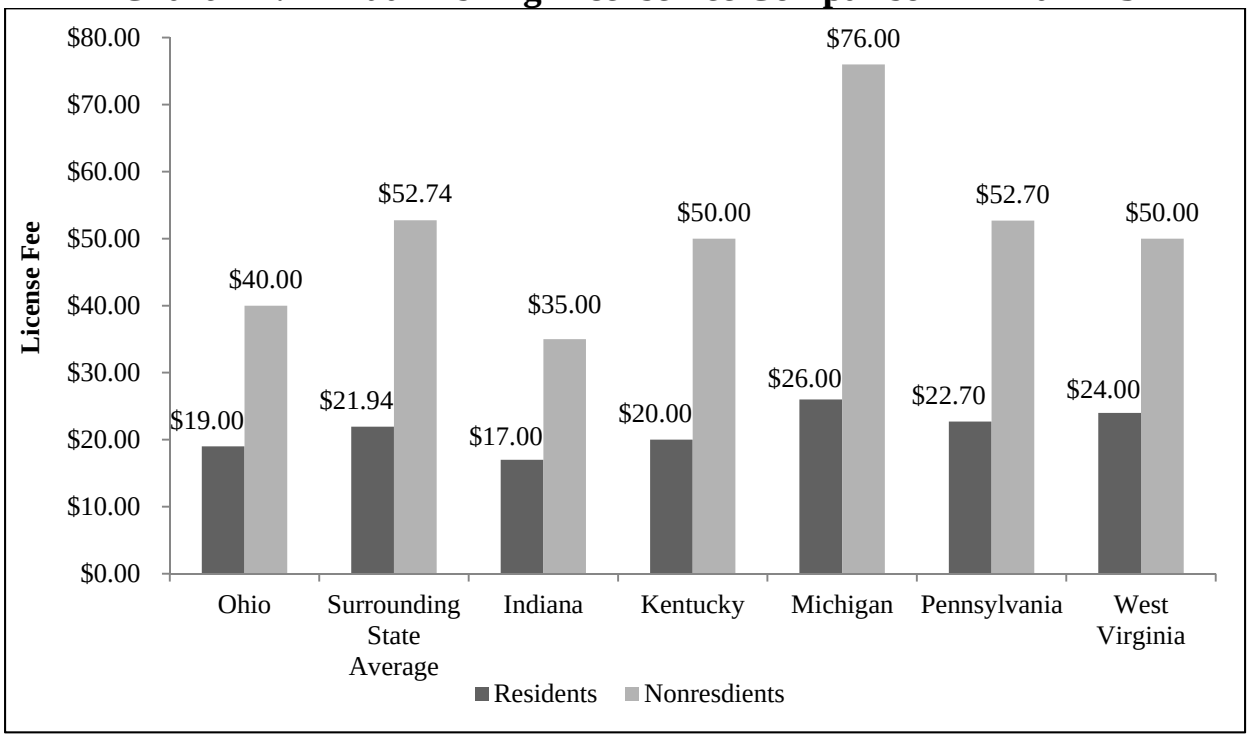
Note: The consumer price index (CPI) used in the analysis is for All Urban Consumers (CPI-U). According to BLS, this index is the broadest and most comprehensive CPI, covering approximately 87 percent of the population.

As shown in **Chart 7-6**, if ODNR had increased fees just at the rate of inflation, the fishing license that was priced at $19.00 for LY 2004-05 would cost $23.78 for LY 2014-15. Though inflation, and its impact on purchasing power, is an important factor in considering the overall appropriateness of a fee, this does not suggest that annual inflationary increases are either common or appropriate. In contrast, larger increases that occur less often appear to be the standard industry practice.

Fishing License Fee Comparison to Surrounding States

Chart 7-7 shows Ohio's annual resident and nonresident fishing license fees as compared to surrounding states individually and on average for LY 2014-15. Comparison to surrounding states is an important measure of the regional market associated with this industry.

Chart 7-7: Annual Fishing License Fee Comparison LY 2014-15



Source: ODNR and surrounding states

As shown in **Chart 7-7**, Ohio's resident and nonresident fishing license fees are 13.4 percent and 24.2 percent below the surrounding state average, respectively. Furthermore, when examining each of the surrounding states, Ohio's annual resident and nonresident fishing licenses fees are below all but one state, Indiana.

Michigan was the most recent of all the surrounding states to implement fishing license fee changes; updated March 1, 2014 for LY 2014-15. However, Michigan's changes also included restructuring of licenses (i.e., elimination of some license options, including the Restricted Fishing License option)[132] and increasing some license fees, including the nonresident annual fishing license. The new structure requires all resident and nonresident anglers who want to fish to purchase the All Species Fishing License ($26.00 for residents and $76.00 for nonresidents). In addition, Michigan increased its nonresident fishing license from $42.00 to $76.00. Michigan based this restructure (fees and license options) on the practices from surrounding Great Lakes states. Finally, Michigan credits the acceptance of its proposed restructure to two areas: first, that the structure change was first shared with user groups to obtain buy-in; and second, that the agency clearly communicated what it planned to do with the additional revenue collected from the fee increase.

Impact of Fee Changes

When determining the appropriate fees for Ohio anglers, Wildlife should consider a combination of factors such as the timing and amount of the last fee increase, fees charged by surrounding states, inflationary pressures, revenue inputs (direct and federal formula), and program goals and objectives toward which increased revenue will be directed. This combination of factors impacts both resident and nonresident licenses and the comparative pricing factors include:

- **Resident Annual Fishing License –** As shown in **Chart 7-6**, when comparing strictly to inflationary pressures since the last fee increase, the resident annual fishing license fee appears to be due to increase by approximately $4.00. **Chart 7-7** shows that in comparison to the surrounding state average, a slightly smaller resident annual fishing license fee increase of approximately $3.00 appears to be more appropriate, but only if timing of surrounding state increases is not considered.
- **Nonresident Annual Fishing License –** Given that Ohio fees for resident and nonresident licenses were last set at the same time, inflationary pressures equally affect both fees. As shown in **Chart 7-7**, Ohio's nonresident annual fishing license fee is significantly underpriced, by approximately $13.00, when compared to the surrounding state average.

Both identified gaps, based on surrounding state averages, are informative to the dynamic market within which Ohio operates. However, it is important to consider the surrounding states' frequency and timing of recent fee changes. Michigan was the most recent state to implement fee increases and, as shown in **Chart 7-7**, reflects the highest rate of the five states for both resident and nonresident annual fishing licenses. Pennsylvania has not increased its fishing license fees since LY 2005-06, Indiana since LY 2006-07, West Virginia since LY 2009-10, and Kentucky since LY 2007-08.[133] If the surrounding states' fishing licenses were updated in relation to an inflation-adjusted fee from the time when each respective surrounding state's current fee went into effect, the LY 2014-15 surrounding state average for resident and nonresident annual fishing

[132] Michigan's Restricted Fishing License option provided a fishing license, but without the privileges to fish for certain species such as trout and salmon; separate licenses were required to fish these species. Under the new structure, all species are included under the annual license.

[133] Kentucky increased select hunting licenses and permits in LY 2013-14. However, Kentucky did not change fishing license fees at that time.

licenses would be $24.53 and $58.58, respectively. As previously noted, a 10-year span between fee increases tends to be the upper bound within the industry. Taking this into account, Ohio should consider that a fee increase strictly based on surrounding states could result in relative underpricing in the very near future.

Further, any proposed increases must be examined in relation to a potential negative market reaction and the associated revenue impact. It can be assumed that some portion of the angling population will not purchase a fishing license after an increase occurs. This "drop out" not only impacts the direct revenue collected from the sale of fishing licenses but also influences the total appropriations from the SFR Program (federal funding). The formula for SFR funds is based on total land and water area by state (40 percent) and on the number of certified fishing licenses sold (60 percent).

The true future impact of fee and participation changes cannot be known exactly because it is impossible to accurately predict the amount of revenue to expect from excise taxes on the sale of fishing equipment and fuels. Likewise, it is impossible to accurately predict changes that other states will make that could increase or decrease participation in Ohio. Both factors can impact the potential funds available to be apportioned to Ohio. However, given that the formulaic elements are known, it is possible to estimate federal funding and project the net impact on total revenue based on historical modeling and market reaction scenarios.

Table 7-4 shows the net revenue associated with annual resident and nonresident fishing license fee increases, $4.00 and $8.00, respectively, based on four customer sensitivity scenarios (i.e., no, minimum, medium, and maximum market reaction).[134]

Table 7-4: Fishing License Fee Increase and Revenue Projections

Annual Resident Fishing License					
Resident Annual Fishing License - $4.00 Fee Increase	**LY 2013-14**	**No Market Reaction**	**Minimum Market Reaction**	**Medium Market Reaction**	**Maximum Market Reaction**
Annual Fishing License Fee	**$19.00**	**$23.00**	**$23.00**	**$23.00**	**$23.00**
Annual Fishing Licenses [1]	654,990	654,990	641,890	622,241	589,491
Estimated Market Reaction	**N/A**	**0.0%**	**(2.0%)**	**(5.0%)**	**(10.0%)**
Revenue from Annual Licenses Sold	$12,444,810	$15,064,770	$14,763,470	$14,311,543	$13,558,293
Estimated Change in Revenue	**N/A**	**$2,619,960**	**$2,318,660**	**$1,866,733**	**$1,113,483**
Annual Nonresident Fishing License					
Nonresident Annual Fishing License - $8.00 Fee Increase	**LY 2013-14**	**No Market Reaction**	**Minimum Market Reaction**	**Medium Market Reaction**	**Maximum Market Reaction**
Annual Fishing License Fee	**$40.00**	**$48.00**	**$48.00**	**$48.00**	**$48.00**
Annual Fishing Licenses [2]	33,642	33,642	32,969	31,960	30,278
Estimated Market Reaction	**N/A**	**0.0%**	**(2.0%)**	**(5.0%)**	**(10.0%)**
Revenue from Annual Licenses Sold	$1,345,680	$1,614,816	$1,582,512	$1,534,080	$1,453,344
Estimated Change in Revenue	**N/A**	**$269,136**	**$236,832**	**$188,400**	**$107,664**
Estimated Impact on Federal Funding					
Estimated Angler Drop Out [3]		**0**	**13,773**	**34,432**	**68,863**
5 Yr. Avg. Federal Funding per Certified Angler [4]		$8.92	$8.92	$8.92	$8.92
Estimated Loss of Federal Funding		**$0**	**($122,855)**	**($307,133)**	**($614,258)**
Net Revenue Impact					
Net Revenue Increase (Decrease)		**$2,889,096**	**$2,432,637**	**$1,748,000**	**$606,889**

Source: Wildlife and FWS

[1] Reflects annual resident fishing licenses sold in LY 2013-14 and includes upgrades (residents who purchased a one-day license and later upgraded to the annual license). This total excludes youth, free, reduced-cost senior and one-day fishing licenses. While the Division may decide to include these license types in a fee restructure, they are not included in this analysis.

[2] Reflects annual nonresident fishing licenses (including upgrades) sold in 2013-2014 and excludes youth, one-day, and three-day nonresident tourist's fishing licenses. While the Division may decide to include these license types in a fee restructure, they are not included in the estimated financial implications.

[3] The estimated angler drop out is calculated by taking the sum of annual licenses (resident and nonresident) and the percentage decrease illustrated in each respective column.

[4] The five-year average federal funding per certified angler was calculated by dividing SFR Apportionments in FFY 2010 through FFY 2014 (SFR apportionments are based on federal fiscal years) by total certified anglers in each respective year. The apportionments per certified angler range from $8.33 to $9.69 over this five-year period.

As shown in **Table 7-4**, increasing the resident and nonresident annual fishing licenses to $23.00 and $48.00, respectively, could increase revenue by **$1,748,000** annually. This is assuming a 5.0

[134] The $8.00 increase for nonresident licenses was determined by increasing the current nonresident annual fishing license fee ($40.00) at the same percentage as the $4.00 annual resident increase. Specifically, increasing the resident annual fishing license from $19.00 to $23.00 reflects a 21.1 percent increase. Increasing the nonresident fee of $40.00 by 21.1 percent reflects a fee of approximately $48.00.

percent negative market reaction (i.e., 5.0 percent of the current angling population would not purchase a license after the increase goes into effect).

Taking into account lessons learned from Michigan's recent fishing license structure changes, Wildlife should consider surveying customers and/or user groups to determine what type of increase is desired (e.g., smaller more frequent increases or larger less frequent increases). Further, *Fishing Ohio, a Survey of Ohio's Anglers* (Wildlife and The Ohio State University, 2012) includes a significant amount of information regarding anglers preferences, values, and perception of, as well as trust in, the Division's management decisions. This type of information will not only provide further insight into customer desires, but will also assist in further assessing any potential negative market reaction.

Conclusion

ODNR does not regularly evaluate the appropriateness of fishing license fees. Ohio's annual fishing license fees, for both resident and nonresident, are lower than the surrounding states and historically low in comparison to measures of inflation. Though a fee increase appears to be appropriate based on quantitative factors, any proposed changes, increases or decreases, should also take into account qualitative factors such as ODNR's mission and goals; Wildlife program goals, objectives, and needs; industry practices; and stakeholder input.

Recommendation 7.1: ODNR should develop and implement an ongoing fishing license fee assessment process to continually inform the appropriateness of fees. This assessment process should take into account, at a minimum, the frequency and amount of fee increases, inflation, surrounding state pricing for similar licenses, customer feedback, and the impact of potential market reactions. Where necessary and appropriate to meet program goals and objectives and balance market forces, the Department should propose modifications to fee structures.

Financial Implication 7.1: As shown in **Table 7-4**, increasing the resident and nonresident annual fishing licenses to $23.00 and $48.00, respectively, could increase revenue by **$1,748,000** annually.

R7.2 Hunting License and Permit Fees

Background

Ohio's hunting license structure consists of a base hunting license and additional permits and stamps for hunting certain species (e.g., deer and turkey).

Table 7-5 shows Ohio's base hunting license costs in comparison to similar licenses in the surrounding states for LY 2014-15. All base licenses include privileges similar to Ohio unless otherwise noted.

Table 7-5: Base Annual Hunting License Price Comparison LY 2014-15

	Ohio	Indiana [1]	Kentucky	Michigan	Pennsylvania [2]	West Virginia [3]
Resident	$19.00	$17.00	$20.00	$11.00	$20.70	$24.00
Nonresident	$125.00	$80.00	$140.00	$151.00	$101.70	$119.00
Youth	$10.00	$7.00	$6.00	$6.00	$6.70	$16.00
Youth Nonresident	$10.00	$17.00	$10.00	$6.00	$41.70	$16.00
Reduced / Senior	$10.00	N/A	N/A	$5.00	$13.70	N/A

Source: Ohio and surrounding states

Note 1: All fees shown for Ohio licenses include a $1.00 writing fee.

Note 2: Multi-day, nonresident hunting licenses are not included in this overview. These nonresident license types range from three to seven days and typically include only small game. Fees for these licenses range from $15.00 to $80.00 depending on the number of hunting days granted.

[1] Indiana's annual hunting license includes small game only and it is not required when hunting deer and turkey. The deer and turkey license is a separate license and is $24.00 for residents and $150.00 for nonresidents.

[2] Pennsylvania's annual hunting license includes a buck tag for the firearms season, a fall turkey tag and a spring turkey tag, and small game privileges.

[3] West Virginia's price reflects the annual hunting license ($19.00 residents and $106 nonresidents) plus the required Law Enforcement/Conservation Stamp ($5.00 residents and $13.00 nonresidents). The annual hunting license includes small game, waterfowl, and one antlered deer during buck season. The license is required in addition to purchasing stamps for other wildlife including antlerless deer and turkey. West Virginia's youth hunting license is a combination hunting/trapping/fishing license and is required for residents ages 15 to 17 and nonresidents ages 8 to 17 (not required for nonresident anglers under the age of 15).

As shown in **Table 7-5**, Wildlife has five base hunting license options, not including the free hunting license for eligible residents. Resident, nonresident, youth, and nonresident youth licenses are offered in all five surrounding states. Only two of the five surrounding states offer a reduced/senior hunting license option, similar to Ohio's structure.

Methodology

This sub-section of the performance audit, **Hunting License and Permit Fees**, seeks to determine if the fees charged to resident and nonresident hunters are appropriate in comparison to market rates. Ohio's hunting license and permit data was obtained from the fees specified in ORC and was verified using an ODNR publication entitled *Ohio Hunting and Trapping Regulations 2014-2015* (Wildlife, 2014). The surrounding states of Indiana, Kentucky, Michigan, Pennsylvania, and West Virginia were selected for comparison as they most closely reflect the regional market in which Ohio hunting licenses and permits are sold. Hunting license

and permit fees, including detail on associated privileges, for surrounding states were obtained from various sources of published, publically available information such as official hunting guides, digests, and license purchase websites. Fees and permits for the surrounding states reflect the fees in place when the analysis was completed.[135]

The analysis compares hunting license and permit fees within four major categories (i.e., deer, turkey, furbearers, and waterfowl) based on each state's requirements for specified licenses and permits.[136] Focusing in on the nonresident hunting license and permit fees, additional analysis was performed to identify the potential market reaction associated with a fee increase and the net impact that a fee increase would have on direct sales and federal revenue.

Analysis

As previously noted, the structure of hunting requirements, including the privileges granted with specific licenses, permits, tags, and stamps, vary from state to state depending on hunting regulations, bag limits, and wildlife management strategies. In order to accurately examine the true cost that a hunter will incur to pursue a particular species (i.e., the cost to hunt), these nuances must be taken into account.

Cost to Hunt Comparison to Surrounding States

Table 7-6 shows Ohio's resident and nonresident cost to hunt as compared to the surrounding state average for LY 2014-15. This analysis focuses on four major wildlife categories and provides a comparison of the specific cost incurred to pursue the category.

Table 7-6: Cost to Hunt Comparison LY 2014-15

Resident Cost to Hunt	Ohio	Surrounding State Average	$ Difference	% Difference
Antlered Deer (or Either Sex Deer)	$43.00	$30.94	$12.06	39.0%
Turkey (Spring or Fall)	$43.00	$32.49	$10.51	32.3%
Furbearers	$34.00	$21.54	$12.46	57.8%
Waterfowl	$34.00	$26.03	$7.97	30.6%
Nonresident Cost to Hunt	**Ohio**	**Surrounding State Average**	**$ Difference**	**% Difference**
Antlered Deer (or Either Sex Deer)	$149.00	$162.94	($13.94)	(8.6%)
Turkey (Spring or Fall)	$149.00	$154.69	($5.69)	(3.7%)
Furbearers	$140.00	$119.94	$20.06	16.7%
Waterfowl	$140.00	$129.03	$10.97	8.5%

Source: Ohio and surrounding states

[135] Fishing/hunting license years may differ from state to state. The fees and permits used in the comparison reflect the most up to date fees and permits costs available at the time the analysis was completed. For comparability and consistency with Ohio, these licenses and permits will be referred to as LY 2014-15.

[136] Due to incomparability of the various state-by-state licensing, permit, and cost structures a total cost of hunting all wildlife options was not completed. Some states offer several options regarding licensing including combination licensing, sportsman packages, and license bundles. This structure variance provides for a lack of a common standard of measurement, restricting a fair total cost comparison. See **R7.3** for an analysis of licensing structures.

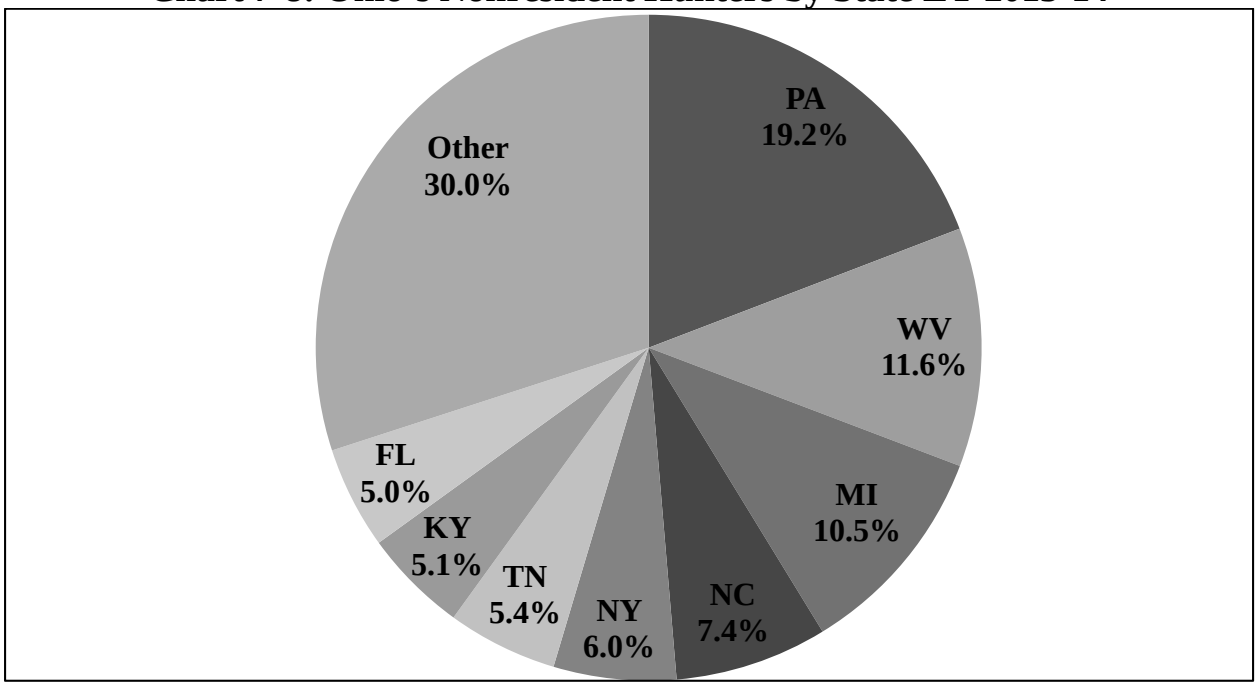
As shown in **Table 7-6**, Ohio's resident cost to hunt is higher than the surrounding state average for each category of comparison. This is partially attributable to the fact that Ohio does not provide package licenses or additional privileges with the purchase of the base hunting license. Instead, each hunter is required to purchase the base license as well as applicable permits for each of the four categories shown. In contrast, some surrounding states include supplementary privileges with the purchase of the base hunting license. For example, Pennsylvania's base hunting license provides small game hunting privileges, but also includes a buck tag for the firearms season, a fall turkey tag, and a spring turkey tag. West Virginia's base hunting license provides small game hunting privileges, but also entitles a hunter to take one antlered deer during the buck season.

As shown in **Table 7-6**, Ohio's nonresident cost to hunt deer and turkey is below the surrounding state average. Similar to the resident cost to hunt these same species, this is partially attributable to structural differences and costs associated with nonresident hunting licenses and/or permits.

Nonresident Cost to Hunt Deer Comparison to Surrounding States

Wildlife sold 37,913 nonresident annual hunting licenses in LY 2013-14. **Chart 7-8** shows the originating state of residence for Ohio's nonresident hunters in LY 2013-14.

Chart 7-8: Ohio's Nonresident Hunters by State LY 2013-14



Source: Wildlife

Note 1: Only states whose hunters make up 5.0 percent or more of Ohio's nonresident hunters are shown individually while all others are grouped together in the "other" category.

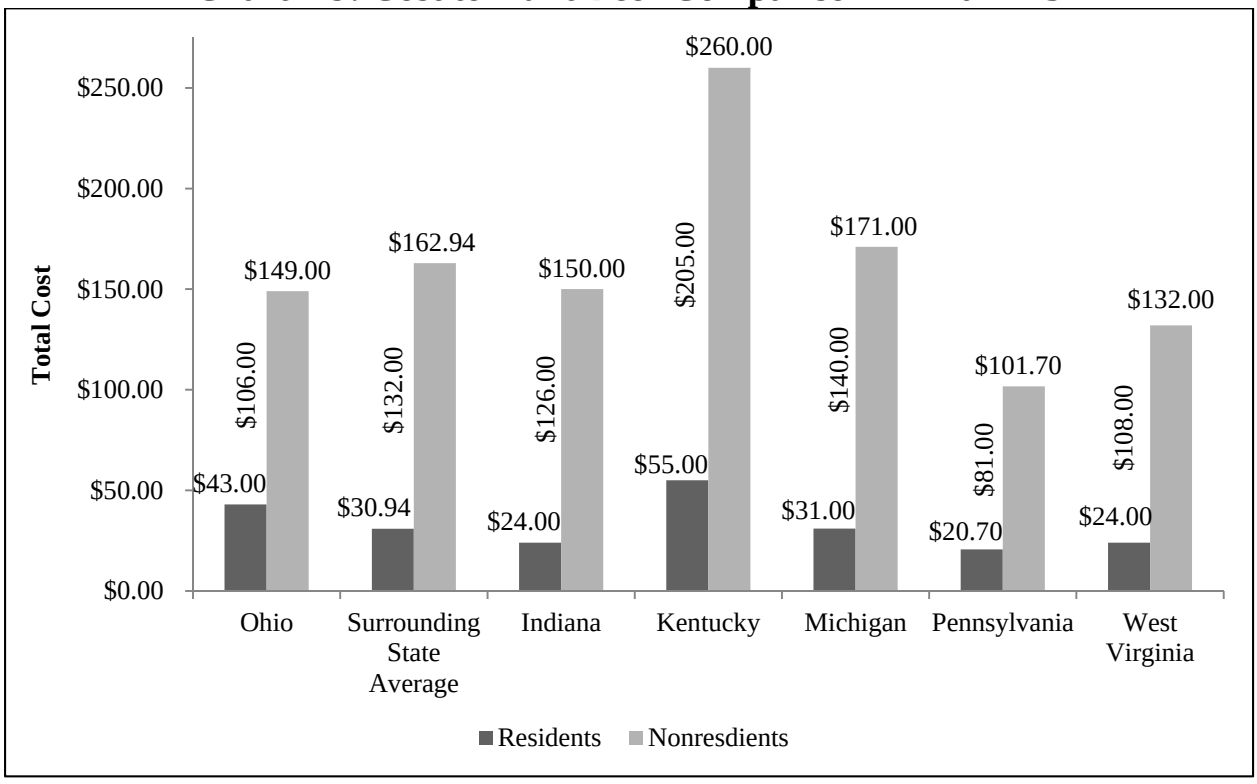
Note 2: This analysis does not include nonresident three-day hunting licenses, of which 1,430 were sold, or nonresident apprentice hunting licenses, of which 111 were sold.

As shown in **Chart 7-8**, a majority of the nonresident hunters purchasing an Ohio license come from surrounding states. This serves to reinforce that Ohio competes directly with and is influenced by the market created by the surrounding states.

A nationwide survey completed as part of *The Future of Hunting and the Shooting Sports: Research-Based Recruitment and Retention Strategies* (Responsive Management/National Shooting Sports Foundation, 2008) identified white-tailed deer as the most commonly hunted species, with 78 percent of survey respondents naming this as a species that they typically hunt. Wildlife sold a total of 535,676 resident and nonresident deer permits in LY 2013-14; 81.1 percent of those consisted of antlered (or either sex) deer permits while the remaining 18.9 percent consisted of antlerless permits. Nonresident deer permits totaled 57,537, or 10.7 percent, of total permits sold in LY 2013-14.

Chart 7-9 shows Ohio's resident and nonresident cost to hunt antlered (or either sex) deer as well as the cost in surrounding states and the surrounding state average. Furthermore, the spread between resident and nonresident costs is also shown to provide context on how heavily the cost is weighted between the two groups.

Chart 7-9: Cost to Hunt Deer Comparison LY 2014-15



Source: Ohio and surrounding states

As shown in **Chart 7-9**, Ohio's nonresident cost to hunt antlered (or either sex) deer of $149.00 is $13.94, or 8.6 percent, below the surrounding state average of $162.94. In addition, Ohio's dollar difference between resident and nonresident cost is $106.00, or 19.7 percent, below the surrounding state average. Finally, Ohio's percentage spread (i.e., the percentage difference

between the nonresident and resident fee) of 246.5 percent is 180.1 percentage points lower than the surrounding state average percentage spread.

A closer examination of permits required to hunt deer identified that Ohio's resident and nonresident deer permit fees are the same cost. Specifically, antlered (or either sex) deer permits are $24.00 for both resident and nonresident hunters and antlerless permits[137] are $15.00 for both resident and nonresident hunters. Ohio's practice of pricing permits at one rate for both residents and nonresidents is relatively unique within the industry, as well as among the surrounding states. This pricing practice accounts not only for the lower than average spread between resident and nonresident cost to hunt deer, but also for the lower than average nonresident cost to hunt deer shown in **Chart 7-9**.

Impact of Nonresident Deer Hunting Fee Changes

As previously noted, Ohio's nonresident cost to hunt deer is approximately $14.00 lower than the surrounding state average. Bringing the nonresident cost to hunt deer in line can be accomplished by increasing the nonresident annual base hunting license fee and/or the nonresident deer (either sex) permit fee. Ultimately it is Wildlife's decision regarding whether or not to propose a fee increase, and, by extension, the method by which a fee increase would be accomplished. However, given that Ohio's nonresident base hunting license fee is already higher than the surrounding state average, the most effective and least disruptive method to accomplish a fee increase might be to increase the fee associated with the nonresident deer permit (either sex).

Further, any proposed increases must be examined in relation to a potential negative market reaction (i.e., a decrease in nonresident licensed hunters) and the associated revenue impact. It can be assumed that some portion of the nonresident hunting population will not purchase a hunting license after an increase occurs. This "drop out" not only impacts the direct revenue collected from the sale of hunting licenses but also influences the total appropriations from the WR Program (federal funding). The formula for WR funds is based on total land area by state (50 percent) and on the number of certified hunting licenses sold (50 percent).

The true future impact of fee and participation changes cannot be known exactly because it is impossible to accurately predict the amount of revenue to expect from excise taxes on the sale of firearms, ammunition, archery equipment, and arrow components. Likewise, it is impossible to accurately predict changes that other states will make that could increase or decrease participation in Ohio. Both factors can impact the potential funds available to be apportioned to Ohio. However, given that the formulaic elements are known, it is possible to estimate federal funding and project the net impact on total revenue based on historical modeling and market reaction scenarios.

[137] Antlerless deer permits are only valid in select Ohio counties and only for specific timeframes each season.

Table 7-7 shows the net revenue associated with a $14.00 increase in nonresident deer permit fees, based on four customer sensitivity scenarios (i.e., no, minimum, medium, and maximum market reaction).

Table 7-7: Nonresident Deer Permit Fee Increase and Revenue Projections

Nonresident Hunting and Permit Fees - $14.00 Permit Increase	LY 2013-14	No Market Reaction	Minimum Market Reaction	Medium Market Reaction	Maximum Market Reaction
Annual Hunting License Fee	**$125.00**	**$125.00**	**$125.00**	**$125.00**	**$125.00**
Annual Hunting Licenses [1]	37,913	37,913	37,155	36,017	34,122
Deer Permit (Either Sex) Fee	**$24.00**	**$38.00**	**$38.00**	**$38.00**	**$38.00**
Deer Permit (Either Sex) Permits [2]	44,583	44,583	43,691	42,354	40,125
Estimated Market Reaction	**N/A**	**0.0%**	**(2.0%)**	**(5.0%)**	**(10.0%)**
Revenue from Licenses & Deer Permits	$5,809,117	$6,433,279	$6,304,633	$6,111,577	$5,790,000
Estimated Change in Revenue	**N/A**	**$624,162**	**$495,516**	**$302,460**	**($19,117)**
Estimated Impact on Federal Funding (WR Program)					
Estimated Hunter Drop Out [3]		**0**	**743**	**1,801**	**3,412**
5 Yr. Avg. Federal Funding per Certified Hunter [4]		$26.81	$26.81	$26.81	$26.81
Estimated Loss of Federal Funding		**$0**	**($19,920)**	**($48,285)**	**($91,476)**
Net Revenue Impact					
Net Revenue Increase (Decrease)		**$624,162**	**$475,596**	**$254,175**	**($110,593)**

Source: Wildlife and FWS

[1] Reflects annual nonresident hunting licenses sold in LY 2013-14 and includes upgrades (residents who purchased a one-day or three-day license and later upgraded to the annual license). This total excludes youth and three-day tourist's hunting licenses. While the Division may decide to include these license types in a fee restructure, they are not included in this analysis.

[2] Reflects nonresident deer permits (either sex) only and excludes nonresident antlerless deer permits and nonresident youth deer permits. While the Division may decide to include these permit types in a fee restructure, they are not included in this analysis.

[3] The potential nonresident hunter drop out is calculated by taking the total of annual nonresident hunting licenses and subtracting the percentage decrease illustrated in each respective column.

[4] The five-year average federal funding per certified hunter was calculated by dividing WR Apportionments in FFY 2010 through FFY 2014 (WR apportionments are based on fiscal years) by total certified hunters in each respective year. The apportionments per certified hunter range from $19.50 to $40.51 over this five-year period.

As shown in **Table 7-7**, increasing the nonresident deer permit (either sex) from $24.00 to $38.00 could increase revenue by **$254,175** annually, assuming a 5.0 percent negative market reaction (i.e., 5.0 percent of the current nonresident hunting population would not purchase a license or deer permit after the increase goes into effect).

Taking into account lessons learned from Michigan's recent license structure changes, Wildlife should consider surveying customers and/or user groups to determine what type of increase is desired (e.g., smaller more frequent increases or larger less frequent increases). This type of information will not only provide further insight into customer desires, but will also assist in further defining any potential negative market reaction.

Conclusion

ODNR does not regularly evaluate the appropriateness of hunting license and permit fees. Ohio's nonresident cost to hunt deer is lower than the surrounding states. Though a fee increase appears to be appropriate based on quantitative factors, any proposed changes, increases or decreases, should also take into account qualitative factors such as ODNR's mission and goals; Wildlife program goals, objectives, and needs; industry practices; and stakeholder input.

Recommendation 7.2: ODNR should develop and implement an ongoing hunting license and permit fee assessment process to continually inform the appropriateness of fees. This assessment process should take into account, at a minimum, the frequency and amount of fee increases, inflation, surrounding state pricing for similar licenses and permits, customer feedback, and the impact of potential market reactions. Where necessary and appropriate to meet program goals and objectives and balance market forces, the Department should propose modifications to fee structures.

Financial Implication 7.2: As shown in **Table 7-7**, increasing the nonresident deer permit (either sex) from $24.00 to $38.00 could increase revenue by **$254,175** annually.

R7.3 License Structure

Background

Ohio's fishing and hunting license structure consists of separate licenses and permits for fishing and hunting. Furthermore, Ohio does not offer combination license options (such as combination hunting and fishing licenses or combination husband and wife licenses) or multi-year licenses.

Methodology

This sub-section of the performance audit, **License Structure**, seeks to determine if Ohio's fishing and hunting license options are structured in a way that maximizes hunter and angler participation and revenue.

Wildlife provided information on the number of fishing and hunting license sales by type. Licensing information was provided from the Division's Wild Ohio Customer Relationship Management System (WOCRMS) and included detailed information on each license sold from LY 2011-12 to LY 2013-14.[138] Detailed information included type of license, such as fishing, hunting, annual, resident, nonresident, senior, apprentice, and youth. Aggregate numbers were calculated using the data provided and verified back to historic certified numbers reported to FWS and published historical data from the Division.

The surrounding states of Indiana, Kentucky, Michigan, Pennsylvania, and West Virginia were selected for comparison as they most closely reflect the regional market in which Ohio licenses and permits are sold. License fees, options, and structures for surrounding states were obtained from various sources of published, publically available information such as official fishing and hunting guides, digests, and license purchase websites. License sale data for the surrounding states was obtained directly from each state.

The analysis focuses on fishing and hunting license options (or lack thereof) provided in Ohio and compares these options to those provided in the surrounding states to determine if structural options allow other states to attract and retain a greater number of license holders.

[138] Wildlife implemented WOCRMS in 2011 with the first year of system use being LY 2011-12.

Analysis

Ohio's fishing/hunting license structure does not include combination or multi-year options for anglers and hunters. These options can be viewed as retention efforts in that they are not only designed to meet desires of customers (typically by offering a discount from purchasing the licenses separately), but also as an attempt to keep otherwise intermittent anglers and hunters consistently participating year after year.

Combination Licenses

Wildlife sold 653,798 resident annual fishing licenses and 279,256 resident annual hunting licenses in LY 2013-14. As previously noted, Ohio does not offer a combination license for customers who wish to purchase both.

Chart 7-10 shows the number of Ohio license holders who purchased both an annual fishing and annual hunting license for LY 2013-14. This is an important cross-section of the participants given that a combination license could directly meet the needs that are currently being demonstrated.

Chart 7-10: Resident Annual Fishing and Hunting Licenses LY 2013-14

Source: Wildlife
Note: The total number of residents purchasing both an annual fishing and an annual hunting license does not include those who purchased a combination of other, non-annual options, such as an annual hunting license and a one-day fishing license.

As shown in **Chart 7-10**, 14.7 percent of Ohio residents with an annual fishing and/or annual hunting license purchased both licenses in LY 2013-14. Though annual potential demand appears to be strong for a combination license, historical data shows that there are irregular purchasing patterns that impact consistency of purchases over time. Specifically, when evaluating the last three complete years (i.e., LY 2011-12 through LY 2013-14) only 5.1 percent of customers who purchased both license types in LY 2013-14 did so in each of the preceding years.

Combination licenses are popular across the nation and four of the five surrounding states, with the exception of Pennsylvania,[139] offer some type of combination or packaged license.

- **Indiana**: A Combination Fishing/Hunting License is available to residents at a cost of $25.00, providing anglers and hunters with a $9.00, or 26.5 percent, discount from purchasing the two licenses separately. Indiana sold 57,947 Combination Fishing / Hunting Licenses in LY 2013-14; this accounted for approximately 12.0 percent of total resident annual licenses.

- **Kentucky:** A Combination Fishing/Hunting License is available to residents at a cost of $30.00, providing anglers and hunters with a $10.00, or 25.0 percent, discount from purchasing the two licenses separately. Kentucky also offers a resident annual Sportsman's License option for $95.00 which includes a combination fishing / hunting license, a statewide deer permit, a spring and fall turkey permit, a state waterfowl permit and a trout permit, providing residents with a $40.00, or 29.6 percent, discount from purchasing licenses and permits separately. Finally, Kentucky offers a resident annual Joint Husband/Wife annual fishing license for $36.00, providing married couples with a $4.00, or 10.0 percent, discount from purchasing the two licenses separately. Kentucky sold 49,927 Combination Fishing/Hunting Licenses, 49,145 Sportsman's Licenses, and 52,748 Joint Husband Wife Fishing Licenses in LY 2012-13. In total, these combination options accounted for 24.6 percent of total resident annual licenses.

- **Michigan:** In March 2014, Michigan implemented a new fishing and hunting license structure in an effort to increase revenue and meet the needs of its participants. Changes were based on comparisons to surrounding states as well as feedback from user groups. Michigan's new structure includes many changes, one of which is a new Combination Hunt and Fish License which includes Base Hunting License, Deer Combo (two kill tags), and All Species Fish License. This combination option is available to residents at a cost of $76.00, to seniors at a cost of $43.00, and to nonresidents at a cost of $266.00. This Combination Hunt and Fish License may be more of a convenience option to residents and seniors as it provides only a $1.00 discount from purchasing the licenses separately. The nonresident discount, however, is $151.00, or 36.2 percent, compared to purchasing the licenses separately. Prior to implementing these changes Michigan engaged heavily in a public communication effort where explanations for fee increases,

[139] Pennsylvania has separate agencies responsible for fishing licenses (Pennsylvania Fish and Boat Commission) and hunting licenses (Pennsylvania Game Commission) and thus does not offer the option of a combination license.

plans for increased revenue, and specific impacts to anglers and hunters were provided through various sources.[140]

- **West Virginia:** A Sportsman Hunting/Trapping/Fishing License is available to West Virginia residents at a cost of $35.00, a savings of $18.00, or 34.0 percent, if purchased separately.[141] West Virginia sold 101,009 Sportsman Hunting/Trapping/Fishing Licenses in LY 2012-13; this accounted for approximately 32.0 percent of total resident annual licenses.

Multi-Year Licenses

In 2009, in partnership with 17 state wildlife agencies (including Ohio), the National Shooting Sports Foundation funded a comprehensive review of hunting license data to better understand who hunts and how participation in hunting can be strengthened. According to *A Portrait of Hunters and Hunting License Trends: National Report* (NSSF and Southwick and Associates, 2009) 78 percent of resident hunters and 49 percent of nonresident hunters who purchased a hunting license one year can be expected to purchase again the following year. On a national scale, only 35 percent of resident hunters and 7 percent of nonresident hunters can be expected to purchase a hunting license in five consecutive years. The review found that "it is likely easier to increase the frequency of activity among people who already have hunting skills and equipment than creating a new hunter from scratch."

Though not offered by Ohio, multi-year licenses are another option available to many anglers and hunters across the nation. Common multi-year options range from two, three, or five years and often are available for fishing, hunting, or combination licenses. Pennsylvania, the one surrounding state with multi-year license options offers this option for fishing licenses.

[140] In addition to communication efforts with user groups, Michigan created an online communication page to provide information on the specifics of license restructuring to the public. This webpage includes videos explaining the restructure, a scorecard with defined metrics and targets, answers to frequently asked questions, and a clearly defined plan for the $20 million projected increase in revenue.

[141] The Sportsman License includes the annual hunting license ($19.00), annual fishing license ($19.00), and big game stamp ($10.00). In addition, West Virginia's licensing structure requires the purchase of a $5.00 Conservation Stamp for licensed hunters and anglers; this is also included in the Sportsman License.

Table 7-8 shows Pennsylvania's annual and multi-year fishing license options and fees as well as the relative discount associated with the multi-year options.

Table 7-8: Pennsylvania Annual and Multi-Year Fishing Licenses

Annual Fishing Licenses and Fees		
Annual Fishing Licenses	**Fee**	
Resident	$22.70	
Senior Resident	$11.70	
Nonresident	$52.70	
Multi-Year Fishing Licenses, Fees, and Discounts		
	Fee	**Discount**
Three-Year Resident	$64.70	$3.40
Three-Year Senior Resident	$31.70	$3.40
Three-Year Nonresident	$154.70	$3.40
Five-Year Resident	$106.70	$6.80
Five-Year Senior Resident	$51.70	$6.80
Five-Year Nonresident	$256.70	$6.80

Source: Pennsylvania Fish and Boat Commission

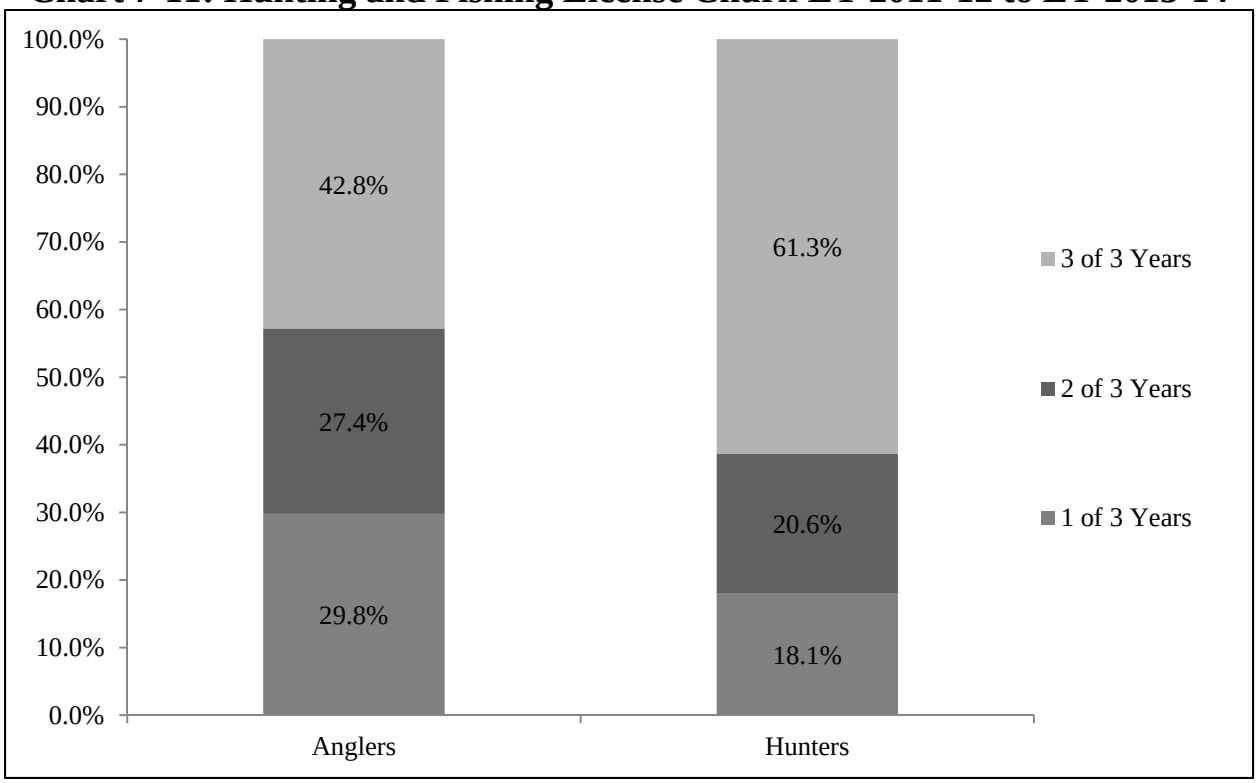
As shown in **Table 7-8**, Pennsylvania offers discounts for purchasing multi-year licenses, but they are not significant in relation to total cost if the license was purchased each year at the annual rate. These options provide more convenience than savings, in that anglers do not have to repurchase licenses year after year. Providing multi-year license options can assist with increasing total angler and hunter license holders by appealing to the "lapsed" customer base, or the customers who are avid anglers and hunters but are not consistent with purchasing a license from one year to the next. However, as previously noted, to be certified and eligible for federal apportionment multi-year licenses must meet additional requirements.[142]

[142] According to Title 50 of the CFR, Part 80, Subpart D, "the following additional requirements apply to multiyear licenses:

- A multiyear license may be valid for either a specific or indeterminate number of years, but it must be valid for at least 2 years.
- The agency must receive net revenue from a multiyear license that is in close approximation to the net revenue received for a single-year license providing similar privileges:
  - Each year during the license period; or
  - At the time of sale as if it were a single-payment annuity, which is an investment of the license fee that results in the agency receiving at least the minimum required net revenue for each year of the license period.
- An agency may spend a multiyear license fee as soon as the agency receives it as long as the fee provides the minimum required net revenue for the license period.
- The agency must count only the licenses that meet the minimum required net revenue for the license period based on:
  - The duration of the license in the case of a multiyear license with a specified ending date; or
  - Whether the license holder remains alive.
- The agency must obtain the Director's approval of its proposed technique to decide how many multiyear-license holders remain alive in the certification period. Some examples of techniques are statistical sampling, life-expectancy tables, and mortality tables."

Chart 7-11 shows the number of anglers and hunters who purchased licenses in one, two or all three of the past three years (LY 2011-12 to LY 2013-14), also referred to as "license churn". License churn is an important factor to consider when determining if multi-year licenses would assist the Division in increasing the continuity of participation of current license holders.

Chart 7-11: Hunting and Fishing License Churn LY 2011-12 to LY 2013-14



Source: Wildlife
Note: Some portion of the license holders in the 1 of 3 Years group are first-time license buyers and may potentially purchase licenses year after year. However, this sub-group is not specifically identified in this analysis.

As illustrated in **Chart 7-11**, 42.8 percent of anglers and 61.3 percent of hunters purchased an annual license in each of the last three license years while 27.4 percent of anglers and 20.6 percent of hunters purchased licenses in two of the last three license years. These percentages indicate a potential opportunity to appeal to this segment of license holders and increase the number of licenses certified for WSFR Programs (federal funding).

After reaching a peak in the early 1980s, hunting license sales have steadily declined on the national level. In response, a study was conducted to identify the specific factors that led to and encouraged three discrete increases in hunting license holders. *Increasing Hunting Participation by Investigating Factors Related to Hunting License Sales Increases in 1992, 1999, and 1994 Against 13 Other Years of Hunting License Sales Decline Between 1990-2005* (Georgia Department of Natural Resources and Responsive Management 2008), notes that changes in license types appeared to be one of the greatest factors with the potential to positively impact license sales. The report's findings suggest that such changes to license types are instrumental in stimulating public interest in hunting. These changes include the introduction of new licenses, repackaged licenses, or licenses featuring new privileges or opportunities. When adequately

advertised, such license changes appear to reintroduce or reinforce hunting opportunities into the public consciousness, most especially among those members of the public who already have an interest in hunting.

Though alternate license structures and multi-year license options are theoretically available for Wildlife to implement, the Division has not pursued implementation of these options due to the potential complications of the federal certification process. However, these options are widely available within the industry and offer the potential to attract and retain customers; providing greater stability to the Division's programs.

Conclusion

Ohio does not offer combination or multi-year license options. However, detailed analysis suggests that Wildlife's customers might have interest in at least a combination license. Further, surrounding states and the industry as a whole largely offer one or more of these options to consumers. As such, combination and/or multi-year license options may be a valuable consideration when restructuring license options and fees.

Recommendation 7.3: ODNR should consider restructuring fishing and hunting licenses to provide additional options to customers such as reduced-cost combination and/or multi-year licenses. Providing such options can help to meet customer preferences while creating opportunities to increase the total number of license holders and in turn increase federal apportionments from Wildlife and Sport Fish Restoration Programs. An effective restructuring should include close examination and analysis of past license holders and the potential impact of proposed changes, feedback from stakeholders, and well planned and executed strategies for communicating changes to the public.

Financial Implication 7.3: N/A

R7.4 Recruitment and Retention

Background

Wildlife recognizes that recruitment and retention of anglers and hunters is essential to ensuring a healthy future for conservation efforts in Ohio and to achieving its mission "to conserve and improve fish and wildlife resources and their habitats for sustainable use and appreciation by all." As a result, the Division has developed specific programs, events, and processes geared toward recruitment and retention.

Wildlife's Information and Education (I&E) Section provides outreach and education through communication, public events, and programs with the goal of increasing knowledge and encouraging participation in outdoor recreation. Communication efforts include the Wild Ohio Magazine, Wild Ohio television show, media relations (including newspapers, television, and radio programs), and website and social media sites. Division employees and trained educational staff attend public events such as fairs, workshops, and sport shows to provide Wildlife outreach and education.

In addition to communication efforts, the I&E Section attempts to recruit and retain anglers and hunters by focusing resources on providing education and outreach through various programs including:

- **Passport to Fishing –** This program provides skills, techniques, and information to allow beginning anglers to start fishing within their own communities. The program consists of four stations focusing on hands-on participation and a strong conservation message.
- **Project WILD –** This supplementary education program emphasizes awareness, appreciation, and understanding of conservation and natural resources. Each year, the Division trains hundreds of educators on how to introduce young people to outdoor activities.
- **Step Outside –** This program consists of grant opportunities for conservation clubs, schools, and other organizations to host an event or outing that creates a learning environment focused on hunting, fishing, trapping, shooting, and/or aquatic education.
- **National Archery in the Schools Program –** This program is a standard curriculum that teaches archery skills to elementary, middle, and high school students during physical education classes.

While the I&E Section focuses on communication and education, the Division's Wildlife and Fish Management Sections plan and implement specific events geared toward outdoor enthusiasts. Recruiting new anglers and hunters is often a goal of these events. For example, rainbow trout are raised at Division fish hatcheries and released in over 60 locations across Ohio during public stocking events. A number of these events involve special youth fishing activities (e.g., restricted youth fishing areas) as Wildlife recognizes that fishing for catchable-sized trout is an effective way to introduce young people to angling.

Another recruitment and retention strategy includes gauging satisfaction through customer surveys. These surveys range from specific program-related feedback, such as a conservation club event, to target-group feedback from specific segments of the hunting/angling population,

such as *Fishing Ohio: A Survey of Ohio Anglers* (Wildlife and The Ohio State University, 2012). Information about angler and hunter successes, attitudes, and preferences is periodically sought through on-line surveys from Wildlife's web site. Other means of outreach target specific customer groups. For example, emails are sent to anglers who purchased a fishing license during the previous year, but have not yet repurchased for the current year; the email includes a reminder and link to purchase the license.

Wildlife has formal plans in place to provide guidance and direction in achieving its mission. For example, Wildlife's *Strategic Plan 2011-2030* was developed by Division employees with input from leaders in Ohio's conservation community, academic experts, and wildlife enthusiasts. The *Strategic Plan* addresses the challenges, issues, and opportunities related to fish and wildlife conservation and is designed around five cornerstones: stewardship, opportunities, connections, traditions, and excellence. These cornerstones include desired objectives and paths of direction, many of which specifically emphasize recruitment and retention.

In the fall of CY 2013, the Division developed the *Customer Engagement Plan* with the purpose of improving awareness and participation and to provide the public with the informational and educational resources necessary to further the Division's mission. This plan identifies customer segments (including current customers, lapsed customers, interested but unaware customers, potential and current partners, and wildlife watchers) and segment-specific targets of focus. The *Customer Engagement Plan* includes four core goals:

- Goal 1: Communicate and guide implementation of the Customer Engagement Plan with internal employees;
- Goal 2: Increase awareness of what the Ohio Division of Wildlife has to offer and appeal to a wider variety of customers;
- Goal 3: Improve and/or expand partnerships with other groups; and
- Goal 4: Increase participation of a wide variety of customers.

Each goal within the *Customer Engagement Plan* includes objectives, strategies, and tactics to guide the Division in implementing short- and long-term initiatives and to forge new partnerships with conservation business and industry operators, as well as sister divisions within ODNR. Outreach for recruitment, retention, and reactivation of hunters, trappers, and anglers is a focus and, according to the I&E Section staff responsible for developing and implementing the Customer Engagement Plan, efforts are ongoing and are continually being updated.

Wildlife's *Fisheries Tactical Plan: 2011-2020* provides direction, founded on the cornerstones identified in the Strategic Plan, for the Fish Management Section. This tactical plan focuses on eight primary areas, including fish stocking and angler participation. Critical issues are identified and related goals are developed for each issue.

Methodology

This sub-section of the performance audit, **Recruitment and Retention**, seeks to determine if Wildlife's recruitment and retention strategies are effective by examining how the Division measures the outcomes and successes of its programs and strategies. Wildlife staff provided information on how programs and events are planned as well as the types of programs and events that are currently in place. Information regarding the collection of customer feedback was also provided (i.e., survey examples). Initiatives, including Wildlife's *Customer Engagement Plan*, were examined and discussed with Division staff.

Information on program goals and objectives was supplemented through site visits conducted during Wildlife sponsored events. Site visit observations included establishing a broad overview of the event (e.g., purpose, location, participation, etc.) as well as observations regarding whether or not recruitment and retention efforts were apparent as a part of the event (e.g., availability of marketing materials, surveys, participation determination, etc.).

Analysis

Although Ohio has historically been experiencing a decline in hunter/angler participation, recent years show an increase in the number of fishing licenses sold. While Wildlife's recruitment and retention efforts may be a factor supporting this increase, it is difficult to determine the success of its recruitment and retention strategies when data regarding specific program participation, and success in regard to attracting new anglers, is not collected or analyzed.

For example, OPT's observations of the Antrim Park rainbow trout release event perceived a potential loss of opportunities regarding recruitment efforts. While the event was structured around attracting new anglers, there did not appear to be additional direct or indirect marketing available at the event (e.g., marketing materials, licensing information, etc.). Furthermore, outreach to participants from Wildlife staff appeared to be present, but not coordinated or specifically targeted toward meeting specific goals or objectives. Finally, there did not appear to be surveying or counting of participants taking place. When speaking with Wildlife staff after the event, it was confirmed that participation numbers (total anglers present, age of participants, number of those who had never had a fishing license etc.) was not collected. Though the event appeared to be well-attended and successful, the Division has no context for judging the success of the event other than anecdotal observations.

Similarly, youth recruitment programs, such as the Passport to Fishing, may be attracting new anglers. However, the Division does not measure the success of these programs by recording how many youth anglers were encouraged to purchase a fishing license and enter the angler population in Ohio.

The National Performance Management Advisory Commission (NPMAC) publication *A Performance Management Framework for State and Local Government: From Measurement and Reporting to Management and Improving* (NPMAC, 2010) defines performance management in the public sector as "an ongoing, systematic approach to improving results through evidence-

based decision making, continuous organizational learning, and a focus on accountability for performance."

NPMAC notes that performance measurement and performance management are often used interchangeably; however, they are distinctly different. For decades, some governmental entities have measured outputs and inputs, and, less commonly, efficiency and effectiveness. While performance measurement is a critical component of performance management, measuring and reporting alone have rarely led to organizational learning and improved outcomes. Performance management, on the other hand, encompasses an array of practices designed to improve performance such as using measurement and data analysis systematically to strengthen a focus on results.

Finally, NPMAC explains that "performance management, while continuing to assure appropriate controls through effective processes, has expanded the meaning of accountability and protecting the public interest to encompass achieving results that benefit the public. While bureaucratic processes focus on preventing bad things from happening, performance management adds a focus on assuring that government actually produces positive results. Performance management is becoming the new standard for public-sector management. Underlying this transition is the recognition that:

- Rationality is the underlying force of performance management. Public managers at all levels are able to make better decisions when the process is informed by relevant data;
- A process approach to accountability is not sufficient. Officials, managers, and employees at all levels must be accountable not just for following processes but for producing results the public needs;
- Performance management is not only a professional expectation for public officials and employees but also an ethical expectation; and
- While politics will always be an important force in the governmental environment, there must also be a place for accurate, timely, and unbiased information for high-level decision making as well as for day-to-day management."

Wildlife has a number of recruitment and retention initiatives in place, often, though not always, accompanied by performance measurement techniques such as survey results or participation information. However, the Division may not be using this information to the fullest capacity in order to refine or prioritize its recruitment and retention efforts. The result is that many programs and events are held year after year, without critically examining the bottom line success of the programs and whether or not intended goals and objectives are being met.

While the Division is required to illustrate how its programs and events are designed to recruit or retain hunters and anglers to receive federal reimbursements through WR and SFR programs, it is not required to show if the programs or events are actually successful in relation to the Division's own goals defined in its strategic, tactical, and operational plans. Collecting valuable information and measuring success in achieving defined goals will enable Wildlife to recognize success, identify problem areas, and respond with appropriate actions.

Conclusion

Wildlife focuses numerous resources on developing and implementing recruitment and retention strategies. However, the Division does not have consistent performance management processes in place to measure the effectiveness of its program efforts. Measuring the success of programs in achieving defined goals will assist the Division in prioritizing resources and refining programs to meet the needs of its customers and further enhance its efforts in recruiting and retaining anglers and hunters.

Recommendation 7.4: ODNR should develop and implement a performance management strategy focusing on recruitment and retention efforts. This strategy should encompass the Division's goals, targets, and measurement practices that are already in place, but should incorporate continuous measurement and analysis to assess and evaluate the results of each activity and program. Performance management strategies and feedback should inform not only the way the Division approaches current programs and activities, but also future programs and activities. The focus should be to allocate scarce resources toward the highest impact recruitment and retention activities.

Financial Implication 7.4: N/A

8. Fish Hatchery Operations

Section Overview

This section focuses on the Ohio Department of Natural Resources' (ODNR or the Department) fish hatchery operations. Information was collected to determine species-specific production costs across the six state-owned fish hatcheries that are operated by ODNR's Division of Wildlife (Wildlife or the Division). Analysis was performed to assess hatchery-to-hatchery cost effectiveness as well as cost effectiveness relative to market prices from privately owned and operated fish hatcheries. Analysis determined that ODNR's fish hatchery operation is generally price competitive with the private market, especially when producing at high volumes. In addition, the analysis found that key operational data and information has not been uniformly collected or analyzed. As a result, Wildlife is unable to easily engage in a more detailed level of comparison that would help to inform operational decision making and identify opportunities for greater efficiency and effectiveness.

Recommendation Overview

Recommendation 8.1: ODNR should ensure that necessary data and information is being gathered, reported, and analyzed to ensure that the fish hatchery operation is efficient and effective and produces fish at a cost commensurate to, or lower than, external suppliers. In doing so, the Department should track detailed cost inputs and allocate them back to production lines in order to capture the true, full cost of the hatchery operations and each species produced. The full cost should then be taken into account when determining the best course of action to cost effectively meet production needs. Finally, hatchery-specific production capabilities and relative efficiencies should be taken into account when assessing the ongoing strategic nature and cost of hatchery operations.

Financial Implication 8.1: By analyzing and implementing identified opportunities for increased efficiency and effectiveness, such as has been done with largemouth bass production, ODNR can ensure that resources are reallocated toward mission-critical functions. Eliminating the internal production of largemouth bass and instead, sourcing this species from external suppliers will result in a net annual efficiency gain of **$54,994**.

R8.1 Fish Hatchery Operations

Background

Wildlife is tasked with managing Ohio's public fisheries which, according to the Division, encompass "124,000 acres of inland water, 7,000 miles of streams, 2¼ million acres of Lake Erie, and Ohio's portion of 481 miles of the Ohio River." Though fish hatchery operations are the focus of this report section, managing Ohio's public fisheries also encompasses other activities such as improving spawning habitat, developing fishing regulations, and monitoring species populations. The *Fisheries Tactical Plan* (Wildlife, 2010) notes that the collective mission of the six fish hatcheries is to, "provide fisheries and human resources to help the [Division] carry out its mission to conserve and improve fish and wildlife resources and their habitats for sustainable use by all."

ODNR's fish hatchery operation produces and stocks over 30 million sportfish of varying species and sizes each year.[143] In FY 2013-14, Wildlife staffed hatchery facilities with 33 employees; 25 were full-time, year-round while the remaining 8 were part-time, seasonal. Though specific day-to-day activities vary by hatchery location and season, fish hatchery personnel are primarily responsible for fish rearing, hatchery maintenance and upkeep, and transport of fish to stocking sites. Secondary responsibilities include: facilitating hatchery tours, facilitating stocking events, and conducting educational activities. Inclusive of labor and other operating expenditures, the hatchery operation functions on an annual budget of $2.0 to $2.5 million. A majority of the revenue used to support the hatchery operation comes from Ohio fishing license proceeds and federal sportfish restoration funds.[144]

[143] Total fish produced and stocked annually by Wildlife includes 10 to 15 million fry-sized walleye and saugeye. Though these fry represent substantial numbers, they were excluded from the analysis contained in this report due to the immaterial resource inputs used in their direct rearing. Specifically, for the time-period that these fry are in hatcheries they subsist wholly on nutrients that are present in the egg sack or that naturally occur in the water.
[144] Federal Aid in Sport Fish Restoration Act of 1950; commonly called the Dingell-Johnson Act.

Table 8-1 shows the six state hatcheries along with high-level information regarding location, age, and infrastructure. This type of information provides insight into the statewide footprint of hatchery operations as well as the site-specific footprint and duration of facility operation.

Table 8-1: ODNR Hatcheries Overview

Hatchery	County	Est. [1]	Acres (Land)	Acres (Water)	Water Source
Kincaid State Fish Hatchery	Pike	1935	214	24	Natural Spring
London State Fish Hatchery	Madison	1896	83	8	Natural Spring / Wells
Hebron State Fish Hatchery	Licking	1982	235	60	Buckeye Lake / Wells
St. Marys State Fish Hatchery	Auglaize	1936	155	43	Grand Lake St. Marys / Well
Castalia State Fish Hatchery [2]	Erie	1997	90	N/A	Blue Hole Aquifer, Cold Creek
Senecaville State Fish Hatchery	Guernsey	1987	121	37	Seneca Lake

Source: Wildlife

[1] Dates indicate establishment as a State of Ohio fish hatchery.

[2] Castalia State Fish Hatchery does not have ponds and therefore has no calculated water acreage.

As shown in **Table 8-1**, ODNR's hatcheries are a long-established operation with locations across the State. For example, London State Fish Hatchery (London) and Kincaid State Fish Hatchery (Kincaid) both commenced operation as State hatcheries under two previous iterations of the Division – the Ohio Fish Commission and the Division of Conservation, respectively.[145] St. Marys State Fish Hatchery (St. Marys) was dedicated as a state entity in 1936 after being founded by the Western Ohio Fish and Game Association in 1913. Having both been built in 1938 as part of the Works Progress Administration initiative, Senecaville State Fish Hatchery (Senecaville) and Hebron State Fish Hatchery (Hebron) were acquired from the U.S. Fish and Wildlife Service in the 1980s. Finally, Castalia State Fish Hatchery (Castalia) was built in 1937 and purchased from private interests in 1997.

Water sources for each hatchery are also shown in **Table 8-1**. Water sources are integral to hatchery operations and often dictate how cost effectively a species may be produced. Certain species can only be cost effectively produced at certain water temperatures and dissolved oxygen content ranges. For example, rainbow trout require cold, clean, high-oxygen content water, so the bulk of production is centered to take advantage of these natural conditions.

[145] According to Wildlife, "The [Division] is a direct descendant of the Ohio Fish Commission, which was created by the General Assembly in 1873 to deal with declining fish populations in Ohio's inland lakes and streams. In 1949 the Division was joined with other state conservation agencies under the mantle of the newly created Department of Natural Resources. By that time, the original Fish Commission's duties had expanded to include law enforcement, fish and wildlife management, propagation, research, stream improvement, and pollution investigation."

Table 8-2 shows the species produced at each hatchery and average production volume from FY 2011-12 to FY 2012-14. This overview illustrates the diversification and volume of production between hatcheries as well as the link to species specialization based on water source.

Table 8-2: Species Production Overview Average FY 2011-12 to FY 2013-14

Cold Water Species							
	Kincaid	**London**	**Hebron**	**St. Marys**	**Castalia**	**Senecaville**	**Total**
Steelhead	N/A	N/A	N/A	N/A	432,333	N/A	**432,333**
Rainbow Trout[1]	25,000	31,684	N/A	N/A	80,667	N/A	**105,667**
Brown Trout	N/A	34,982	N/A	N/A	N/A	N/A	**34,982**
Cool Water Species							
	Kincaid	**London**	**Hebron**	**St. Marys**	**Castalia**	**Senecaville**	**Total**
Muskellunge	14,000	8,884	N/A	N/A	N/A	N/A	**22,884**
Walleye	N/A	N/A	0.9M	1.4M	N/A	4.1M	**6.4M**
Saugeye	N/A	N/A	2.3M	3.0M	N/A	1.4M	**6.7M**
Yellow Perch	N/A	N/A	N/A	1.3M	N/A	N/A	**1.3M**
Warm Water Species							
	Kincaid	**London**	**Hebron**	**St. Marys**	**Castalia**	**Senecaville**	**Total**
Largemouth Bass	N/A	N/A	N/A	3,736	N/A	N/A	**3,736**
Hybrid Striped Bass	N/A	N/A	N/A	N/A	N/A	967,785	**967,785**
Bluegill	N/A	N/A	98,164	N/A	N/A	N/A	**98,164**
Blue Catfish[2]	N/A	N/A	11,242	N/A	N/A	N/A	**11,242**
Channel Catfish	N/A	N/A	54,429	53,394	N/A	57,320	**165,143**

Source: Wildlife

[1] Rainbow trout are initially raised at London and then transferred to Kincaid for feed-out to catchable size. Therefore, the total for rainbow trout represents only the total finished and stocked fish from Castalia and Kincaid.

[2] Blue catfish are in a trial phase of stocking and are being studied by Division biologists. There is a high likelihood of a significant increase in production numbers if trial results are favorable.

As shown in **Table 8-2**, species production and volumes vary by hatchery.[146] However, the overall composition of species produced has remained fairly constant over the last decade and is normally made up of these species common to recreational sportfishing in the Midwest/Great Lakes region. A hatchery's total production volume is partly a function of available water resources, but is also a function of available capacity, target production size, and resources (e.g., personnel and financial). In general, species produced at higher volumes are stocked at smaller sizes than those being produced at lower volumes.

[146] As shown in **Table 8-1** and **Table 8-2**, hatcheries with surface water sources such as Hebron, Senecaville, and St. Marys are sufficient for the rearing of warm water species, while the cooler water of springs and aquifer sources at Castalia, Kincaid, and London are well suited to the rearing of cold and cool water species.

Production Sizes

Within the industry, production sizes are commonly signified by life stages. The Division states that their common production sizes include:

- "**Fry –** Newly hatched fish that have just completed absorbing their nutrient-rich egg sac, and are typically a few days or more old and less than a half-inch. When stocked, fry are ready to start feeding on plankton or other small organisms.
- **Fingerlings** – Depending upon the species, these fish are typically three to six weeks old and about 1.5 [to] 2 inches. When stocked, fingerlings are ready to feed on insects, or, in the case of fish-eating fishes such as walleye or saugeye, small fish such as newly hatched gizzard shad.
- **Advanced Fingerlings** – Muskellunge are the only advanced fingerlings presently stocked by [Wildlife]. At the time of stocking, they are over 4 months old and 8 [to] 12 inches, and ready to feed on fish such as gizzard shad.
- **Yearlings** – These are fish in their second growing season that have been raised in the hatchery to larger sizes to improve their survival when stocked. Channel catfish are often stocked as yearlings at 8 [to] 12 inches when they are large enough to avoid predation by bass and ready to feed on a variety of items.
- **Catchables** – These are larger fish raised for "put-and-take" fishing opportunities, typically rainbow trout, channel catfish, or hybrid sunfish. Sizes may vary, but they are older fish that have been kept in the hatchery more than one year and will be ready for anglers to harvest as soon as they are stocked."

Production and Stocking Strategies

Desired species-specific production size, volume, and timing are driven largely by fisheries management goals and objectives.[147] Common objectives that feed into sportfish production strategies include: population establishment, restoration, enhancement, and/or diversification. Aside from specific sportfishing goals, Wildlife may also produce and stock endangered or threatened species in order to support or reestablish populations. Common production and stocking strategies employed by the Division include:

- **Put-Grow-Take –** This stocking strategy accounts for approximately 97.0 percent of total annual production. Fish are raised and stocked at a length of less than catchable size with the intent that growth up to catchable size will occur in the wild. This practice is employed to help create or maintain a species or fishery where habitat or other factors may be limiting natural reproduction to a point insufficient to support sportfishing. Species typically included in this strategy are walleye, saugeye, yellow perch, hybrid striped bass, steelhead, brown trout, and muskellunge.
- **Put-and-Take –** This stocking strategy accounts for 1.0 to 1.5 percent of total annual production. This strategy is targeted toward Wildlife's programmatic objective centered on "recruitment and retention" of anglers. As such, the Division raises and stocks fish at a size which anglers, typically youth, will catch and keep. These "release" events[148] are open to the public and often include partnerships with local governments or sporting

[147] Fish stocking occurs intermittently between early spring and mid-fall of each year.
[148] Specific to rainbow trout, Wildlife scheduled 63 releases across the State from March through May 2014.

groups as well as special event activities. Most often these fish will be caught immediately or within a few weeks of stocking. Species typically included in this strategy are rainbow trout, channel catfish, bluegill, and hybrid sunfish.

- **Restart –** This stocking strategy accounts for another 1.0 to 1.5 percent of total annual production. In this strategy, target production size is equivalent to put-grow-take, but the goal is to create or restore a naturally reproducing population. This strategy is typically employed when a new impoundment has been created or when an existing impoundment had been drained for repair or renovation. Species typically included in this strategy are largemouth bass, bluegill, and channel catfish.
- **Restoration –** This stocking strategy is the least common, accounting for less than 1.0 percent of total annual production. The strategy involves re-establishing or attempting to bolster a population which has been deemed "threatened" or "endangered". Historically, this strategy has included species such as shiners and darters, paddlefish, and brook trout.

Impact on Production Cost Profile

Species diversity, number, and size are outputs of a production and stocking strategy that is developed by Wildlife fisheries biologists with input from sportfishing and environmental stakeholders. As noted, production is affected by capacity and water supply at each hatchery. However, production is also limited by available resources and each strategy mix (i.e., species, size, and production number) presents a different cost profile. In general:

- **Species –** Some species are more cost intensive than others to produce. For example, muskellunge, as a carnivorous species require live feed (e.g., carp fry and fathead minnows) throughout their duration in the hatchery system. Muskellunge present a much more expensive cost profile relative to species that are primarily or completely reliant on pelleted foods.[149]
- **Size –** Larger target production size correlates to more resource intensive, and therefore higher cost, production. As noted, however, certain production sizes and stocking strategies are required to effectively meet program goals and biological needs. For example, determination of production size takes into account survivability ratios, which tend to increase as production size increases. While smaller fish can be produced at lower cost they must also be produced in greater number to have the same effect as a smaller number of larger fish.[150]
- **Number –** Due to economies of scale, producing larger numbers of fish is typically more cost effective, especially on a per unit basis, than producing in lesser amounts. For example, each species requires a fixed cost or resource baseline (e.g., rainbow trout require a cold water run while largemouth bass require a warm water pond). Once the baseline fixed cost is committed, production can be scaled to gain efficiencies. Up to a

[149] According to Wildlife, the cost of muskellunge is offset through the internal production of feeder fish. However, there have been instances where internal production of feeder fish has not been able to meet demand. To meet this resource demand, the Division is forced to source feeder fish from private suppliers. Often this is done with Division resources, but there have been times when muskellunge sportfishing stakeholders have partnered to raise funds to offset this cost.

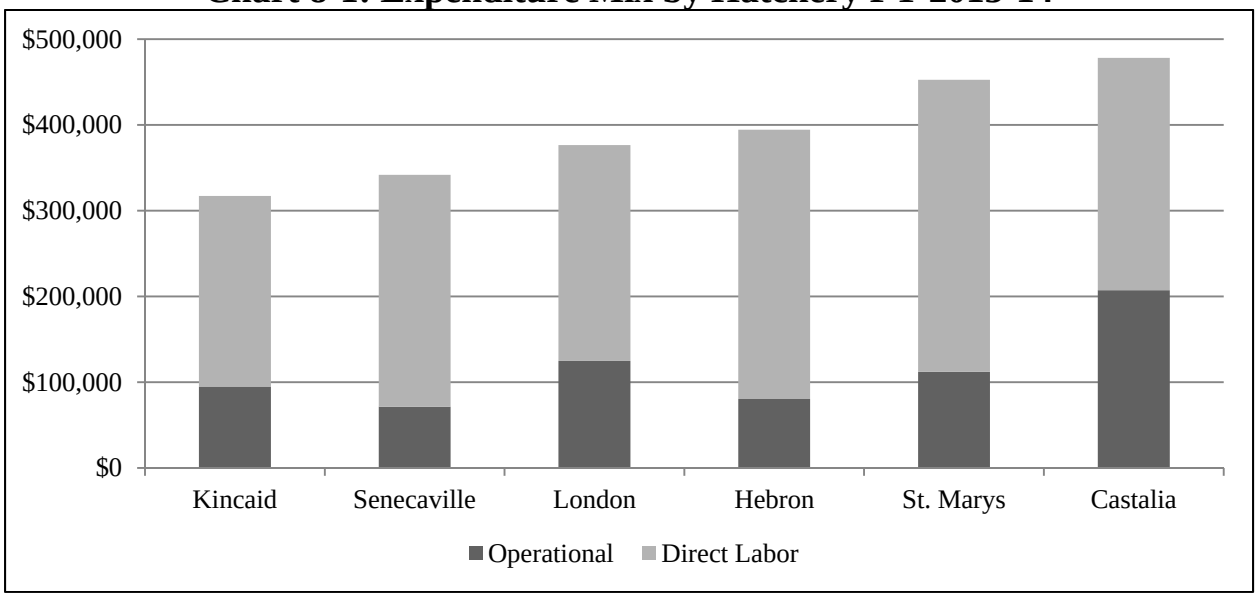
[150] According to the Wildlife publication *Muskellunge Fishing in Ohio*, the initial muskellunge stocking was focused on fry and fingerlings, but "In 1982 the Division redirected its efforts to the production of 8- to 10-inch fish, because ongoing research was demonstrating that they survived better than 3- to 6- inch fish."

certain point, each incremental increase in the number of fish produced represents only a marginal increase in variable cost (e.g., feed), but increases the efficiency of the original fixed cost (e.g., building and maintenance cost to operate the hatchery).

Market prices are reflective of all three aspects of the cost profile. For example, market prices of rainbow trout ranged from $1.29 for each 2-4 inch fingerling to $3.99 for each 8-10 inch juvenile at one private hatchery in Ohio. Furthermore, bulk purchases at another privately operated hatchery in Ohio are rewarded with a 3.0 percent reduction in unit price when increasing rainbow trout purchase volume from between 50 and 100 pounds ($8.50 per pound) to between 101 and 250 pounds ($8.25 per pound).

Chart 8-1 shows expenses for each hatchery organized by direct labor and operational expenditures for FY 2013-14. This overview provides baseline information on total operating expenses and illustrates the cost structure of each hatchery.

Chart 8-1: Expenditure Mix by Hatchery FY 2013-14



Source: Wildlife

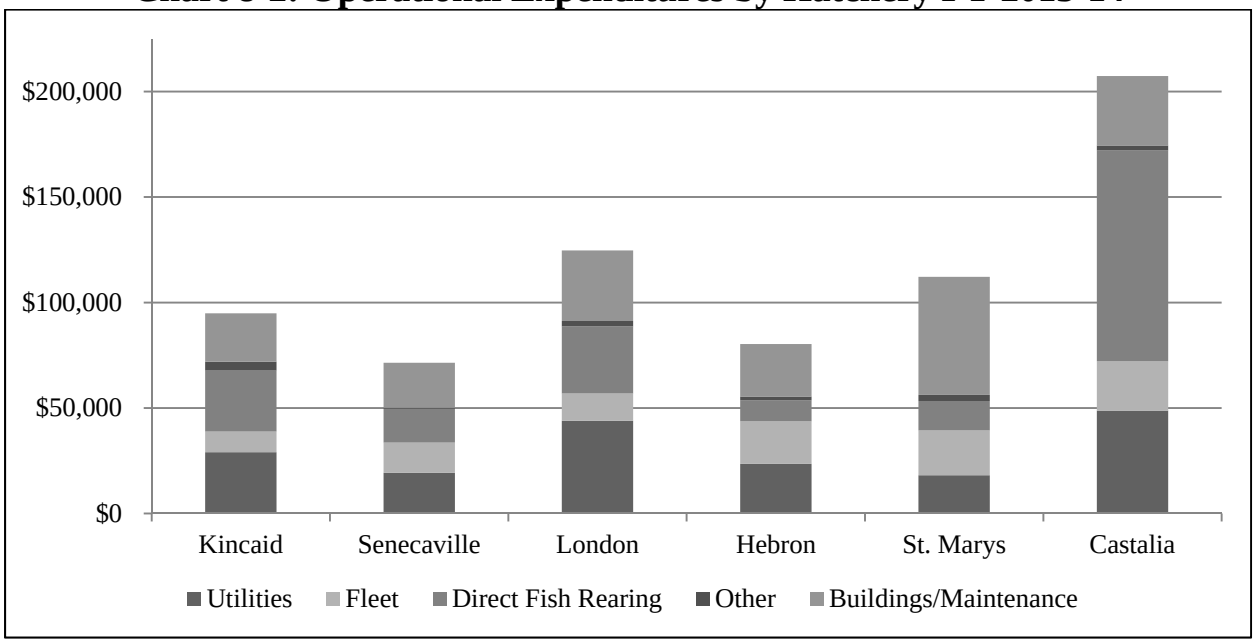
As shown in **Chart 8-1**, total hatchery expenditures vary from a low of $317,219 at Kincaid to a high of $478,141 at Castalia for FY 2013-14. Total expenditures can be divided into two, principal components including direct labor expenses and operational expenses. Direct labor encompasses the cost of employee payroll and benefits, whereas operational expenses include all other costs to run the hatchery, excluding capital investments. Direct labor expense consistently represents the largest proportion of total expenditures for the hatchery operation; 70.7 percent of total costs in FY 2013-14. Direct labor expense is a relatively fixed cost and varies from a low of $222,292 at Kincaid to a high of $340,573 at St. Marys; a difference of $118,281 or 53.2 percent.[151] However, operational expense varies from a low of $71,435 at Senecaville to a high of $207,328 at Castalia; a difference of $135,893 or 190.2 percent. Operational expense is

[151] For FY 2013-14 full-time equivalent (FTE) staffing, based on 2,080 hours per FTE, by hatchery is as follows: Kincaid 3.5, Senecaville 4.3, London 4.4, Hebron 5.4, St. Marys 5.4, and Castalia 4.7.

largely a reflection of the production strategy employed at each hatchery and, as such, warrants further analysis.

Chart 8-2 shows a breakdown of operational expenditures by hatchery for FY 2013-14. This provides additional context to **Chart 8-1**, but also illustrates the aforementioned relative cost intensity of the various production strategies.

Chart 8-2: Operational Expenditures by Hatchery FY 2013-14



Source: Wildlife
Note: Other expenditures include employee apparel, training, and travel only.

As shown in **Chart 8-2** the amount and distribution of operational expenditures varies between hatcheries. Among operational expenses, buildings/maintenance, personnel, and fleet remain fairly uniform from year-to-year and are generally reflective of a fixed operating cost. In contrast, direct fish rearing and utilities are variable in nature and closely correlate to each hatchery's production strategy. The muskellunge, steelhead, rainbow trout, and brown trout collectively raised at Castalia, London, and Kincaid are all relatively feed-intensive varieties of fish. Production at these three hatcheries couples relative feed intensity with species-specific production sizes focused on advanced fingerlings, yearlings, and/or catchables. The result is that the direct fish rearing cost center, largely made up of feed cost, represents the main source of operational cost variation across hatcheries. For example, when including all costs, total operational expenditures range from a low of $71,435 at Senecaville to a high of $207,328 at Castalia; a difference of $135,893 or 190.2 percent. When excluding direct fish rearing cost, total operational expenditures range from a low of $55,341 at Senecaville to a high of $107,352 at Castalia; a difference of $52,011 or 94.0 percent. When specifically examining direct fish rearing costs, Castalia is 213.9 percent higher than the next most cost intensive hatchery (London); 396.3 percent higher than the average of all other hatcheries; and 650.3 percent higher than the average of all other non-trout hatcheries. Castalia, London, and Kincaid are also relatively energy intensive with average utility costs that are 99.7 percent higher than the average utility costs at

Senecaville, Hebron, and St. Marys. Utility cost differences are largely driven by the need to pump and aerate large quantities of water for trout production and the use of propane to heat water for muskellunge forage fish production.

Methodology

This section of the performance audit seeks to enumerate hatchery-to-hatchery and system-wide species-specific production costs, assess internal comparability, and compare Wildlife's hatchery operation cost effectiveness to the private market. Production data and information was provided by the Division and supplemented by the testimonial evidence of Central Office personnel as well as hatchery-specific management staff. Data and analysis focused on hatchery expenses and production for FY 2011-12 through FY 2013-14.[152]

Total expenditures were readily available from Division financial information. However, categorical and sub-categorical expenditures were not readily comparable due to the presence of hatchery-to-hatchery coding and naming convention differences. These differences were able to be fully reconciled through additional detailed information from Central Office as well as hatchery-specific management staff. Where possible and appropriate, categorical and sub-categorical expenditures were immediately allocated at a species-specific level. However, certain categories of expense (e.g., direct labor, fleet, and buildings/maintenance) lacked detailed records which would easily facilitate species-specific cost allocation. To address the lack of readily available detail, site visits and surveys of hatchery-specific management staff were conducted.

Once total expenditures were allocated by hatchery and species, production cost per unit could be calculated. Production cost per unit was then compared internally where multiple hatcheries were engaging in similar production (e.g., rainbow trout and channel catfish). Further, production cost per unit was compared to CY 2014 market prices, by size and species where applicable.[153] Market prices were obtained through research conducted on private-sector hatcheries across Ohio.

[152] Fish are typically counted at release, as such, certain species final production numbers were not yet available for FY 2013-14 given that some fish are due to be released during FY 2014-15. In these cases expenditures are average FY 2011-12 through FY 2013-14 while production numbers are average FY 2011-12 and FY 2012-13.

[153] Not all species produced by Wildlife have a market rate (e.g., walleye, saugeye, and brown trout). As such, analysis focuses on hatchery-to-hatchery cost efficiency.

Analysis

Table 8-3 shows Wildlife's per-species average production cost for FY 2011-12 to FY 2013-14 compared to CY 2014 market prices, controlling for species and production size. In addition, where multiple hatcheries produce the same species, each hatchery's production cost and size is broken out for comparison. This analysis is instructive to not only assessing market cost efficiency, but also hatchery-to-hatchery cost efficiency.

Table 8-3: Production Cost Comparison Average FY 2011-12 to FY 2013-14

Species	Hatchery	Avg. Size (Inches)	Cost per Fish	Market Price	Difference	Percent Difference
Cold Water Species						
Steelhead [1]	**Castalia**	**6 to 8**	**$0.59**	**$3.49**	**($2.90)**	**(83.1%)**
Rainbow Trout [2]	Castalia	10 to 12	$2.68	$4.36	($1.68)	(38.5%)
	London	3 to 6	$4.07	$2.29	$1.78	77.7%
	Kincaid	10 to 12	$5.34	$4.36	$0.98	22.5%
	Wildlife Avg.	**10 to 12**	**$4.27**	**$4.36**	**($0.09)**	**(2.1%)**
Brown Trout	**London**	**6 to 8**	**$3.51**	**N/A**	**N/A**	**N/A**
Cool Water Species						
Muskellunge	London	10 to 12	$21.17	$45.00	($23.83)	(53.0%)
	Kincaid	10 to 12	$18.09	$45.00	($26.91)	(59.8%)
	Wildlife Avg.	**10 to 12**	**$19.29**	**$45.00**	**($25.71)**	**(57.1%)**
Walleye	Hebron	1 to 2	$0.07	N/A	N/A	N/A
	Senecaville	1 to 2	$0.02	N/A	N/A	N/A
	St. Marys	1 to 2	$0.05	N/A	N/A	N/A
	Wildlife Avg.	**1 to 2**	**$0.03**	**N/A**	**N/A**	**N/A**
Saugeye	Hebron	1 to 2	$0.03	N/A	N/A	N/A
	Senecaville	1 to 2	$0.05	N/A	N/A	N/A
	St. Marys	1 to 2	$0.03	N/A	N/A	N/A
	Wildlife Avg.	**1 to 2**	**$0.03**	**N/A**	**N/A**	**N/A**
Yellow Perch	**St. Marys**	**2**	**$0.06**	**$0.89**	**($0.83)**	**(93.3%)**
Warm Water Species						
Largemouth Bass	**St. Marys**	**3 to 5**	**$16.25**	**$1.53**	**$14.72**	**962.1%**
Hybrid Striped Bass	**Senecaville**	**1 to 2**	**$0.06**	**N/A**	**N/A**	**N/A**
Bluegill	**Hebron**	**2 to 3**	**$0.66**	**$0.70**	**($0.04)**	**(5.7%)**
Blue Catfish [3]	**Hebron**	**12**	**$5.83**	**N/A**	**N/A**	**N/A**
Channel Catfish	Hebron	12	$1.41	$2.80	($1.39)	(49.6%)
	Senecaville	12	$2.28	$2.80	($0.52)	(18.6%)
	St. Marys	12	$1.71	$2.80	($1.09)	(38.9%)
	Wildlife Avg.	**12**	**$1.81**	**$2.80**	**($0.99)**	**(35.4%)**

Source: Wildlife and private-sector hatcheries

[1] Steelhead are similar to rainbow trout and the inputs and requirements for commercial production of each are largely the same. Though a true market price does not exist for steelhead, the proxy rainbow trout market price does provide informative context for gauging the efficiency of the Division's steelhead production.

[2] Rainbow trout average cost takes into account the aggregate "cohort" cost of rainbow trout that are initially raised at London, but then finished out to catchable size at Kincaid; $9.41 per fish.

[3] Blue catfish are in a trial phase of stocking and are being studied by Division biologists. There is a high likelihood of a significant increase in production numbers if trial results are favorable.

As shown in **Table 8-3**, Wildlife's hatchery operation is, on average, cost competitive versus market prices. There are, however, production lines which approach or exceed market prices. In instances where a species is produced at multiple hatcheries, the total average expenditure per fish for that species is a weighted average of the entire operation. Both aspects, be it an individual hatchery's production cost per fish, or the total species cost, warrant further evaluation when assessing opportunities for greater efficiency and effectiveness.

Species Produced for Less than Market Prices

- **Rainbow Trout** – A production cost of $4.27 per fish compared to the identified market price of $4.36 per fish yielded a difference of $0.09 or 2.0 percent. However, the Division's hatchery-to-hatchery costs vary significantly due to production sizes and economies of scale. For example, Castalia produces rainbow trout at the lowest internal cost; $2.68 per fish, $1.59 or 37.2 percent lower than the Division average. Castalia's relative efficiency is attributable to high-volume specialization in trout species (i.e., rainbow and steelhead) at a hatchery with a natural water supply that is conducive to efficient production of these species. In contrast, the remainder of the Division's rainbow trout production is a combined effort between London and Kincaid. This arrangement involves a cohort of rainbow trout beginning their life at London and remaining there until they are three to six inches in length. At this time, they are transferred to Kincaid for feed-out to catchable size. Due to current production being structured in this manner, London's average expenditure per fish of $4.07 and Kincaid's of $5.34 result in a total $9.41 average expenditure per fish. This aggregated production cost per fish is higher than the Division average by $5.14 or 120.3 percent. The relative cost inefficiencies of London and Kincaid are attributable to low production volumes and hatchery facilities that are amenable, but not optimized for cold water species production. Though the Division could more cost effectively source all rainbow trout from Castalia, there may be capacity constraints and biological considerations (e.g., production diversification to guard against the spread of disease among a single population) that should be taken into account when making this determination.

- **Bluegill** – A production cost of $0.66 per fish compared to the identified market price of $0.70 per fish yielded a difference of $0.04 or 5.7 percent. Raised only at Hebron, the production volume varied from 130,781 in FY 2011-12 to 65,546 in FY 2012-13. Because of this variation, the cost per fish went from $0.40 in FY 2011-12 to $1.05 in FY 2012-13. This demonstrates the price-sensitivity to shifts in production volume as a result of changing production needs. Given current expenditure levels, remaining competitive with market prices requires a minimum annual production volume of between 90,000 and 100,000 fish. Baseline competitive pricing information such as this will allow the Division to more efficiently and effectively plan and execute on meeting production demands in a constrained resources environment.

- **Channel Catfish** – A production cost of $1.81 per fish compared to the identified market price of $2.80 per fish yielded a difference of $0.99 or 35.3 percent. The warm water and extensive pond capacity available at Hebron, Senecaville, and St. Marys enables the

Division to produce channel catfish in a cost effective manner. Hebron produces channel catfish at the lowest internal cost; $1.41 per fish, $0.40 or 22.0 percent lower than the Division average. Likewise, St. Marys produces at a reduced cost; $1.71 per fish, $0.10 or 5.5 percent lower than the Division average. Senecaville has the highest cost of the three facilities, producing channel catfish at a cost of $2.28 per fish, $0.47 or 25.9 percent above the Division average. Among all species produced at multiple hatcheries, channel catfish production volume has the least variation from hatchery to hatchery; no more than 6.9 percent. This means that any variations in production price among the hatcheries is almost solely due to expenditures, not differences in volume produced. Relative efficiency should be taken into account when planning and executing on production demands.[154]

- **Yellow Perch** – A production cost of $0.06 per fish compared to the identified market price of $0.89 yielded a difference of $0.83 or 93.3 percent. Like the bluegill, yellow perch are only produced at one facility (i.e., St. Marys) and their production volume has fluctuated drastically within the three year window of this analysis. St. Marys produced 371,381 yellow perch fingerlings in FY 2011-12 and 2,158,455 in FY 2013-14. Due largely to the fact that the resource inputs required to raise yellow perch to this size are minimal, vast numbers of these fish can be raised relatively cheaply. Even as the production numbers were at their lowest in FY 2011-12 St. Marys was still able to produce this species for $0.24 per fish, $0.65 or 73.0 percent below the identified market price.

Species Produced for More than Market Prices

- **Largemouth Bass** – A production cost of $16.25 per fish compared to the identified market price of $1.53 yielded a difference of $14.72 or 962.0 percent. During the three years taken into account, largemouth bass were produced only to meet restart production strategy needs and were only produced at St. Marys. As previously noted, restart typically involves relatively small numbers of larger fish. Both of these factors contribute significantly to the high per-fish cost. The Division should use this information to inform future planning decisions in regard to the most cost-efficient production and sourcing methods employed to meet biological needs.

During the course of the audit, Division management decided to discontinue the internal production of largemouth bass as a cost-saving measure. Furthermore, the existing largemouth bass brood stock which had been kept at St. Marys were diverted to population restart needs. As such, future sourcing of largemouth bass will be from external producers. Based on a three-year average production volume and a cost difference of $14.72 per fish, the net efficiency gain from sourcing largemouth bass from external suppliers rather than through internal production is $54,994.

[154] Wildlife noted that the channel catfish brood stock at Senecaville are likely the cause of the production cost imbalance. These larger, more mature fish consume more feed than the 12 inch fish that are raised for stocking.

Species with No True Market Price [155]

- **Muskellunge** – A production cost of $19.29 per fish compared to the identified market price of $45.00 yielded a difference of $25.71 or 57.1 percent. However, only one market price was able to be identified for muskellunge which indicates that this species has a highly specialized demand. As such, market prices are likely not a true measure of production cost, but rather the cost of what amounts to a low volume, luxury item. Internal cost comparisons identify Kincaid as producing muskellunge most cost effectively at $18.09 per fish while London produces them at $21.17 per fish. The difference in price stems mainly from economies of scale created by Kincaid producing a greater volume.[156]

- **Brown Trout** – Wildlife's brown trout production cost is $3.51 per fish. This cold water species is only suitable to being stocked in four Ohio rivers and is only produced at London. Research into various private hatcheries revealed that none produced brown trout in Ohio.

- **Blue Catfish** – Wildlife's blue catfish production cost is $5.83 per fish. As noted in **Table 8-3**, the production of this species of catfish is still relatively new to the Division's hatchery system. Only produced at Hebron, this species is currently in a trial phase of stocking and requires further study to determine its viability as a sportfish in Ohio before production may increase. At such time, further economic evaluation of the Division's ability to cost-effectively produce this species would also be necessary.

- **Steelhead** – Wildlife's steelhead production cost is $0.59 per fish. Produced solely at the Castalia hatchery, the steelhead is essentially a rainbow trout which migrates between riverine systems and larger bodies of water, such as the Great Lakes or their native oceans. These fish, both steelhead and rainbow trout, cannot tolerate water temperatures much above 70 degrees Fahrenheit, thus they are stocked within tributaries of Lake Erie, where they will head to deeper, cooler waters of the lake once temperatures warm. They will remain there for a few years and then return to the rivers to spawn. As they are not native to this part of the United States, the spawning grounds which exist are not optimal for a completely self-sustaining fishery. Thus, the rationale behind stocking them has been to establish and sustain a sportfishery within the tributaries of Lake Erie to generate economic activity. Though no market price currently exists for steelhead, their commercial production requirements parallel those of rainbow trout. Therefore, in analyzing the operational efficiency of production, the rainbow trout market price is useful as a proxy. The Division produces steelhead that are six to eight inches in length for $0.59 per fish compared to the identified market price for similarly sized rainbow trout of $3.49; a difference of $2.90 or 83.0 percent.

[155] Certain species produced by Wildlife have little or no private sector market and are most appropriate when compared internally between similar producing hatcheries.

[156] Hatchery management staff at London noted a history of substantial muskellunge losses to bird predation. Given the significant cost associated with each such fish lost to predation, there may be strategic opportunities to employ netting systems to mitigate these losses and improve overall production efficiency and effectiveness.

- **Hybrid Striped Bass** – Wildlife's hybrid striped bass production cost is $0.06 per fish. Currently produced only at Senecaville, this species is raised to one to two inches in length for stocking. There are private entities which produce / distribute hybrid striped bass commercially in Ohio, but none do so at a size comparable to that produced by the Division.

- **Walleye** – Wildlife's walleye production cost is $0.03 per fish. Production of walleye takes place at Hebron, Senecaville, and St. Marys where the available infrastructure and water sources provide the volume and characteristic make-up of water amenable to raising walleye in large quantities. There are private entities which produce / distribute walleye commercially in Ohio, but none do so at a size comparable to that produced by the Division.

- **Saugeye** – Wildlife's saugeye production cost is $0.03 per fish. Production of saugeye takes place at Hebron, Senecaville, and St. Marys where the available infrastructure and water sources provide the volume and characteristic make-up of water amenable to raising saugeye in large quantities.

Production Cost Detail and Ongoing Measurement

Though production cost comparisons were completed, there are data points which would help to further refine species-specific production cost if Wildlife were able to gather and analyze additional detailed information. Furthermore, expenditures data was not always recorded consistently from hatchery to hatchery, or from year to year. As such, Wildlife is unable to target specific efficiency opportunities through further production cost analysis without incurring a labor-intensive reconciliation. Specific opportunities for improved data collection and management include labor allocation, transportation cost, and hatchery-to-hatchery expenditures continuity. Each opportunity is discussed in further detail below.

- **Labor Allocation** – The Division lacks data to document and confirm an exact number of annual labor hours spent on specific tasks for which hatchery personnel are responsible. In lieu of this, each hatchery superintendent provided estimates for: maintenance, mowing, and upkeep; species-specific direct labor; and all other tasks. These percentage estimates were instructive to the allocation of direct labor costs shown in **Chart 8-1** and ultimately reflected in **Table 8-3**. Direct labor accounted for an average 71.3 percent of total hatchery expenditures in FY 2013-14. Developing a systematic approach to obtaining the most accurate accounting of direct labor consumed by each task is crucial to ongoing measurement of the cost-effectiveness of operations.

- **Transportation Cost** – Each hatchery has assigned vehicles; some of which are used to transport fish while others are used for general hatchery operations. The Division retains total fuel and maintenance cost data for its hatchery fleet, but does not systematically track vehicle use as it relates to meeting operational needs. For example, the Division stocks a variety of species at many and varied sites around the state. To consistently and accurately account for the actual transportation cost associated with each species, greater detail is required. Specifically, the number of stocking trips, miles traveled per trip, fuel

usage, and volume of fish stocked should all be tracked by species. Fleet expenditures accounted for an average 22.3 percent of total hatchery operational expenditures in FY 2013-14. Developing a systemic approach to obtaining the most accurate measure of fleet expense would not only augment the determination of per-species cost effectiveness, but would also shed light on the full logistical cost of stocking strategies.

- **Expenditure Continuity** – In developing detailed cost profiles for each hatchery, it was identified that multiple expenditures of the same nature were categorized under different account codes. For example, certain feed expenditures were coded under, both, the "Agr, Groundskeeping Supplies" and "Livestock, Poultry & Fish Supp" account ID's. For this performance audit, these differences were fully reconciled through additional detailed information from Central Office personnel as well as hatchery-specific management staff. The Division would benefit from increased continuity of accounting for expenditures. Doing so would reduce the amount of administrative time and effort expended in future production analyses.

During the course of the audit, the Division began to take steps toward collecting transportation data in greater detail. For example, the Division now maintains monthly vehicle logs that include daily fuel use, mileage, and service transactions. However, the addition of species-specific trip use would improve the value of the data that is now being collected and would facilitate accurate cost allocation on a per-species basis.

The Government Finance Officers Association (GFOA), in its publication *Measuring the Full Cost of Government Service* (GFOA, 2002), notes that, "the full cost of a service encompasses all direct and indirect costs related to that service. Direct costs include the salaries, wages, and benefits of employees while they are exclusively working on the delivery of the service as well as the materials and supplies, and other associated operating costs such as utilities and rent, training and travel. Likewise they include costs that may not be fully funded in the current period such as compensated absences, interest expense, depreciation or a use allowance, and pensions. Indirect costs include shared administrative expenses within the work unit and in one or more support functions outside the work unit (e.g., legal, finance, human resources, facilities, maintenance, [and] technology)." Further, GFOA notes that, "cost data can be extremely useful in identifying situations where a government should explore alternative service delivery options." This reinforces several points of analysis which suggest that the Division use species-specific production cost in conjunction with their other planning metrics to determine a production mix, or sourcing strategy, that provides for the most efficient and effective means of service delivery. GFOA goes on to note that, "measuring the cost of government services is useful for a variety of purposes, including performance measurement and benchmarking; setting user fees and charges; privatization; competition initiatives or 'managed competition'; and activity-based costing and activity-based management." The ability to undertake these performance-based management approaches is a result of measuring the full cost of government service.

A Systematic Approach to Managing Performance (GFOA, 2011), provides a conceptual framework for the creation of performance-based strategies, processes, and organizational culture. Many of these elements are already being employed by Wildlife as the Division carries

out its mission. However, GFOA furthers this idea by noting that, "performance management emphasizes the importance of continuous learning, improvement, and accountability for results." Consistent with observations contained in this performance audit, Wildlife should not only gather, but also report and analyze data to ensure internal and external efficiency and effectiveness.

Similar observations were made, and recommendations issued, by the Pennsylvania General Assembly's Legislative Budget and Finance Committee (LBFC) as part of two recent performance audits of the Pennsylvania Fish and Boat Commission (PFBC). *Performance Audit of the Pennsylvania Fish and Boat Commission* (LBFC, 2010) highlights a need for the PFBC to, "complete its review of the fish hatchery program to identify possible operational efficiencies that could result in cost savings." Similar to the practices recommended by the GFOA, the PFBC was tasked with creating, "a broad-based working group assigned primary responsibility to identify strategies for promoting cost savings (including hatchery consolidation strategies) in the operation of the state fish hatcheries with the least adverse effects on services to the angling public." Similarly, in the 2013 review of the original 2010 performance audit, the PFBC was instructed to, "conduct a review of its new organizational structure at the end of FY 2013-14 to determine whether the goals identified have been achieved or whether additional changes are needed, particularly as these changes would affect needed revenues." Analogous to the recommendations offered to the Division, these reviews of the PFBC and their resultant findings and recommendations focus on the continued efforts of the respective organizations to further their scope and depth of internal review, keeping in mind the efficiency with which goals and objectives are achieved.

Conclusion

ODNR's fish hatchery operation is competitive with market prices, especially when producing at high volumes. However, key operational data and information has not been uniformly collected or analyzed. As a result, Wildlife is unable to easily engage in a more detailed level of comparison that would help to inform ongoing operational decision making as well as to identify opportunities for greater efficiency and effectiveness.

Recommendation 8.1: ODNR should ensure that necessary data and information is being gathered, reported, and analyzed to ensure that the fish hatchery operation is efficient and effective and produces at a cost commensurate to or lower than external suppliers. In doing so, the Department should track detailed cost inputs and allocate them back to production lines in order to capture the true, full cost of the hatchery operations and each species produced. The full cost should then be taken into account when determining the best course of action to cost effectively meet production needs. Finally, hatchery-specific production capabilities and relative efficiencies should be taken into account when assessing the ongoing strategic nature and cost of hatchery operations.

Financial Implication 8.1: By analyzing and implementing identified opportunities for increased efficiency and effectiveness, such as has been done with largemouth bass production, ODNR can ensure that resources are reallocated toward mission-critical functions. Eliminating the internal production of largemouth bass and instead, sourcing this species from external suppliers will result in a net annual efficiency gain of **$54,994**.

9. Watercraft Registration Operations

Section Overview

This section focuses on the Ohio Department of Natural Resources (ODNR or the Department) Division of Watercraft (Watercraft or the Division) registration operations; specifically, the Registration and Titling Section (RTS). Information was collected and analysis was performed to develop an operating profile of RTS as well as to assess its financial stability. Analysis identified opportunities to leverage a performance measurement and management framework to better inform long-term strategic business transformation and achieve greater operational efficiency and effectiveness.

Recommendation Overview

Recommendation 9.1: ODNR should develop a performance management framework for the Registration and Titling Section. At minimum, the framework should take into account staffing, workload, and financial performance at both the Watercraft Central Office and each of the field offices. The framework should inform long-term strategic decision making with the goal of improving the efficiency and effectiveness of services provided. A specific focus area should be to evaluate the cost/benefit of the current organization and operation of Watercraft field office registration functions in relation to customer needs and service-delivery options.

Financial Implication 9.1: N/A

R9.1 Watercraft Registration Operations

Background

Watercraft was established with the enactment of House Bill 928 in 1959 in response to the Federal Boating Act of 1958. The Division's mission is "to provide the finest boating services, facilities, protection, and education for users of Ohio's waterways through the innovative and wise use of our resources." One such service offered by the Division, and specifically by RTS, is watercraft registrations. Although watercraft registrations were the responsibility of the Bureau of Motor Vehicles when the service began in 1964, the enactment of Senate Bill 350 transferred that responsibility to Watercraft in 1971.

Ohio Revised Code (ORC) § 1547 requires that "every watercraft operated on the waters in this state shall be numbered by this state in accordance with federal law or a federally approved numbering system of another state." This numbering is initially granted by Watercraft upon approval of a registration application and must be renewed by the current owner on a triennial basis (i.e., every three years).

Watercraft is funded through the Waterways Safety Fund which was established by the 101st General Assembly in 1955. The *2013 Annual Report* (Watercraft, 2014) notes that "the Waterways Safety Fund is the sole mechanism used to finance Division operations, payrolls, grant programs and other state boating programs. The fund is comprised of a share of the state motor vehicle fuel tax (0.875 percent), watercraft registration and titling fees, account interest, fines and federal grants."

Table 9-1 shows Waterways Safety Fund revenue by source in total and as a percentage of total funding for fiscal year (FY) 2013.

Table 9-1: Waterways Safety Fund Revenue FY 2013

Fund Source	Total Revenue	Percent of Total
State Motor Fuel Tax	$15,217,072	50.3%
Federal Grants	$9,245,457	30.6%
Registration/Titling Fees	**$5,528,157**	**18.3%**
Miscellaneous	$117,961	0.4%
Fines	$72,800	0.2%
Fund Earnings	$54,013	0.2%
Total Waterways Safety Fund	**$30,235,460**	**N/A**

Source: Watercraft

Note: Revenue is as reported in the *2013 Annual Report* (Watercraft, 2014) on a fiscal year basis rather than a calendar year basis.

As shown in **Table 9-1**, revenue from registration and titling fees accounted for 18.3 percent of total Waterways Safety Fund revenue for FY 2013.

As noted, all operational watercraft must be registered according to rules established by Watercraft. The Division collects fees for each registration processed and these fees are established in ORC § 1547.54.

Table 9-2 shows Ohio registration types and fees for calendar year (CY) 2014.

Table 9-2: Registration Types and Fees CY 2014

Registration Fees for Boats with Motors/Sails		
	Powered by	
	Motor	Sail Only (No Motor)
Boat Length	Fee	Fee
Boats less than 16' long or any motorized canoe	$33	$38
Boats 16' long but less than 26' long	$48	$53
Boats 26' long but less than 40' long	$63	$68
Boats 40' long but less than 65' long	$78	$83
Boats 65' long and longer	$93	$98

Registration Options for Hand-Powered Vessels	
Registration Option	Fee
Traditional Registration [1]	$20
Alternative Registration [2]	$25

Source: Watercraft
Note: All registration fees include a $3 writing fee.
[1] Two decals are provided with the registration while the owner supplies the OH numbers.
[2] One decal is provided with the registration and no OH numbers are required.

As shown in **Table 9-2**, registration fees range from $20 to $98. Aside from changes to the alternative registration (first available in CY 2002) and hand-powered vessel registrations (i.e., the addition of a $5 conservation fee for all non-motorized vessels in CY 2010), fees for boats with motors/sails have gone unchanged since CY 2000.

Table 9-3 shows the number of active registrations by type for CY 2013 as well as the number of processed registrations and percent of total active registrations for CY 2013. Processed registrations were included in the table to provide context on the actual workload that RTS incurs in a given year since the registrations are effective for a three-year period.

Table 9-3: Active Watercraft Registrations CY 2013

Active Registrations - Boats with Motors/Sails		
	Powered by	
	Motor	Sail Only (No Motor)
Boat Length	Count	Count
Boats less than 16' long or any motorized canoe	123,539	249
Boats 16' long but less than 26' long	161,727	1,027
Boats 26' long but less than 40' long	16,690	1,713
Boats 40' long but less than 65' long	1,388	168
Boats 65' long and longer	16	0
Total Active Registrations - By Sub-Category	**303,360**	**3,157**
Total Active Registrations - Boats with Motors/Sails	**306,517**	
Hand-Powered Vessels	**143,024**	
Total Active Registrations - All Watercraft	**449,541**	
Total Processed Registrations - All Watercraft for CY 2013	**169,497**	
Processed Registrations as % of Active Registrations	**37.7%**	

Source: Watercraft

As shown in **Table 9-3**, Ohio had a total of 449,541 active watercraft registrations for CY 2013. However, due to the triennial requirement for registration renewals, only 169,497 or 37.7% of total active registrations were actually processed during CY 2013.

Industry Overview and Trend

Table 9-4 shows the 10 states with the most active registrations for CY 2013.

Table 9-4: Top 10 Watercraft Registrations CY 2013

Including Canoes and Kayaks		
Rank	**State**	**Active Registrations**
1	Florida	870,749
2	California	820,490
3	Minnesota	808,744
4	Michigan	795,875
5	Wisconsin	613,516
6	Texas	575,402
7	South Carolina	466,589
8	New York	456,909
9	**Ohio**	**449,541**
10	North Carolina	386,884
Excluding Canoes and Kayaks		
Rank	**State**	**Active Registrations**
1	Florida	860,543
2	California	819,746
3	Michigan	795,875
4	Minnesota	621,478
5	Wisconsin	603,173
6	Texas	575,402
7	South Carolina	466,404
8	New York	456,907
9	North Carolina	386,884
10	**Ohio**	**323,037**

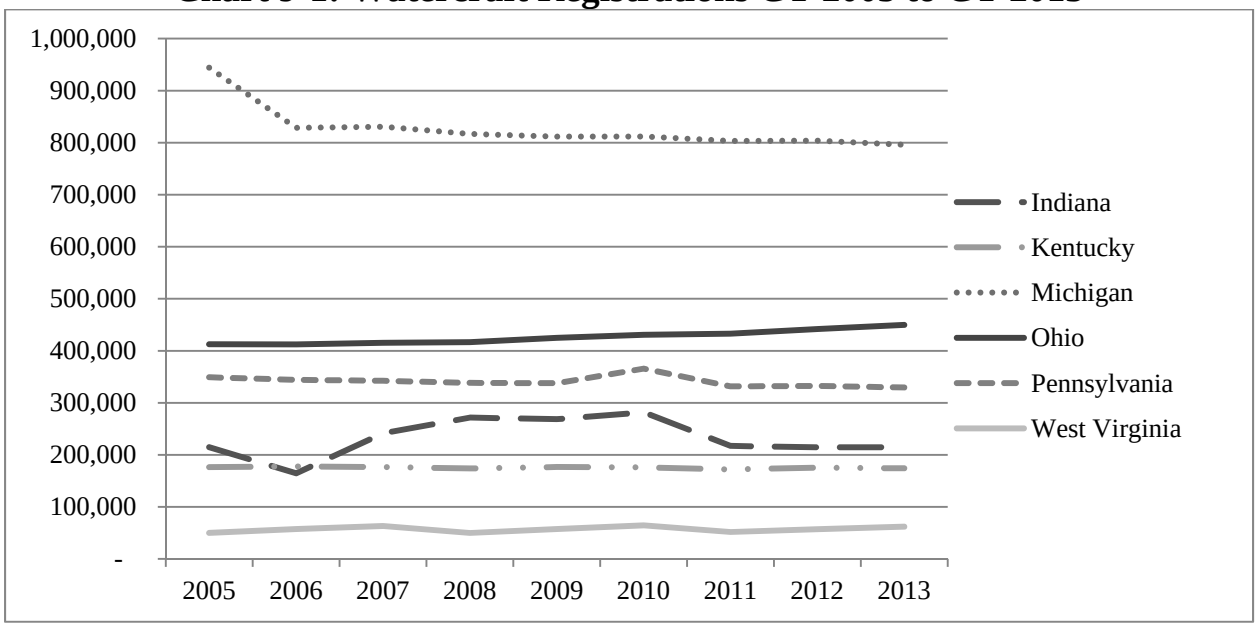
Source: US Coast Guard

Note: Michigan, Texas, and North Carolina do not require canoes and kayaks to be registered; however, as demonstrated by New York (2 registrations), canoes and kayaks may be voluntarily registered.

As shown in **Table 9-4**, Ohio ranks 9th when taking into account all watercraft registration types, but falls to 10th when excluding canoes and kayaks. Furthermore, of Ohio's surrounding states, only Michigan holds more active registrations. Historically, this ranking has remained relatively constant, in part due to Ohio's requirement for canoes and kayaks to be registered, something that is not consistent from state to state.

Chart 9-1 shows Ohio and surrounding state active watercraft registrations for CY 2005 to CY 2013.

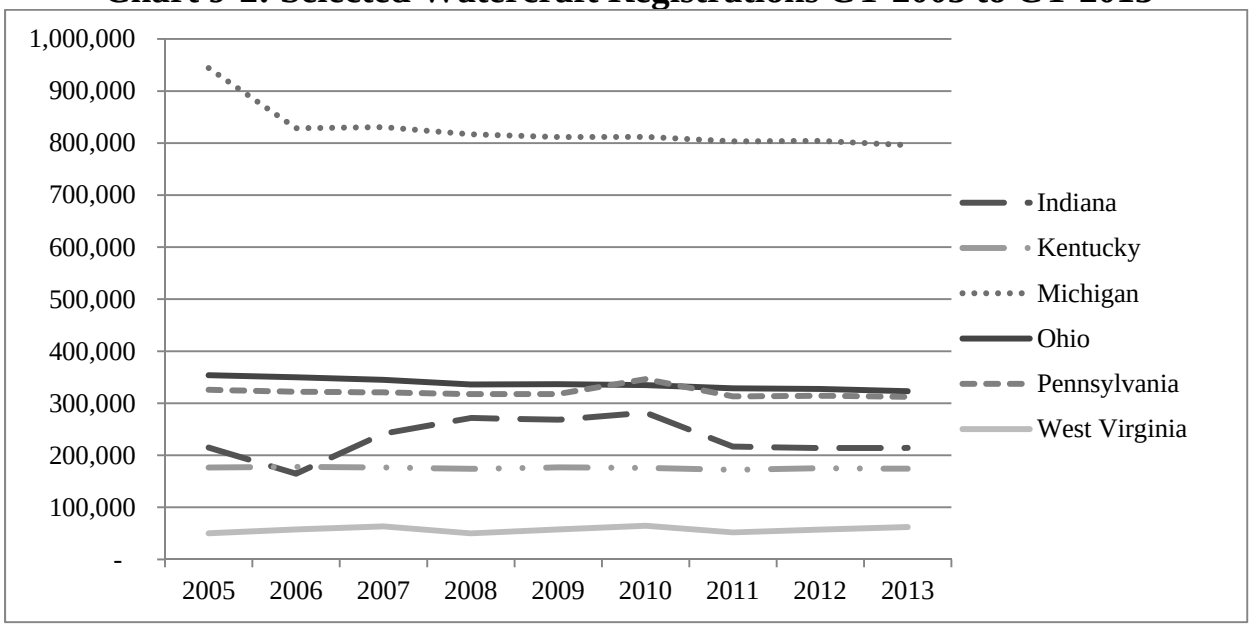
Chart 9-1: Watercraft Registrations CY 2005 to CY 2013



Source: US Coast Guard

Chart 9-2 shows Ohio and surrounding state active watercraft registrations, excluding canoes and kayaks, for CY 2005 to CY 2013. Excluding canoes and kayaks, which are not required to be registered in all states as they are in Ohio, highlights the impact that requiring these registrations has on total Ohio registrations as well as trends over time.

Chart 9-2: Selected Watercraft Registrations CY 2005 to CY 2013



Source: US Coast Guard

As shown in **Chart 9-1,** Ohio is second only to Michigan in total registrations for CY 2013, with total registrations trending upward over time. In contrast, **Chart 9-2** shows that when controlling for canoes and kayaks, Ohio is trending slightly downward in registrations over time and has been roughly equal to Pennsylvania over the last several years. Collectively, **Chart 9-1** and **Chart 9-2** demonstrate the significance that canoe and kayak registrations hold for Ohio's total registration operation.

Watercraft Offices and Independent Agents

ODNR's Central Office is headquartered in Columbus, Ohio. Watercraft not only operates a Central Office location, but also 11 field offices located across the state, including: Akron, Alum Creek, Ashtabula, Cambridge, Cleveland, East Fork, Maumee Bay, Portsmouth, Sandusky, Springfield, and Wapakoneta. In order to make registration and titling services more convenient to Ohio residents, Watercraft allows "independent agents" to provide basic registration services at 186 additional locations across the state.[157] Examples of independent agents include private businesses, titling offices, and some state parks.

Watercraft is responsible for managing Ohio's current and historical watercraft registration and title records. The Division has used the Watercraft Information System (WIS) for this purpose since 1998. WIS is administered at the Central Office and allows registration and titling data to be uniformly reported by field offices as well as independent agents. This aggregated data can then be reported to, or accessed by, entities such as the US Coast Guard and law enforcement agencies.

Due to technological limitations, a first time registration (e.g., a registration for a new boat) must occur at a Watercraft field office or an independent agent. Registrations are active for three years and while renewals can be processed at a field office or by an independent agent, they can also be conducted by mail or electronically through the Division's website. From a customer service standpoint, all services provided by field offices can also be provided by independent agents, except for the issuance of "alternative" registrations.[158] An alternative registration is a specific registration type that does not require boating numbers to be displayed separately from the Watercraft provided placard. Though this service is not available through independent agents for CY 2014, it will be available starting in CY 2015. This change in service delivery could shift customer demand from Watercraft's field offices to independent agents, thereby impacting the cost-effectiveness of field office operations. As such, the impact of this rule change on field office operations will be considered in more detail in the analysis section of this report.

[157] The number of independent agents is as of October 2014.

[158] Watercraft offices have the exclusive ability to provide duplicate registrations to customers that have lost their original registration or decal. For CY 2013, Watercraft processed 2,944 total duplicate requests, with 997, or 33.9 percent, being processed by the Central Office.

Registrations and Revenue

Table 9-5 shows registrations by processing entity for CY 2011 to CY 2013. This analysis specifically highlights alternative registrations because the rule changes previously mentioned could shift customer demand from Watercraft offices to independent agents.

Table 9-5: Registrations by Processing Entity CY 2011 to CY 2013

Registration Location	CY 2011	CY 2012	CY 2013
Watercraft Offices	**80,702**	**83,109**	**87,227**
Central Office	62,272	61,128	66,157
Field Offices	18,430	21,981	21,070
Independent Agents	**76,824**	**85,593**	**82,270**
Total Registrations	**157,526**	**168,702**	**169,497**
Registrations Processed	**CY 2011**	**CY 2012**	**CY 2013**
Alternative Registrations	10,518	13,361	15,494
Alternative % of Total Watercraft Offices Registrations	13.0%	16.1%	17.8%

Source: WIS

As shown in **Table 9-5**, independent agents accounted for 82,270 of 169,497 total registrations in CY 2013. In CY 2015, alternative registrations will be available through independent agents. As a result, using CY 2013 data as a guide, up to 17.8 percent of the registrations that must now be processed at Watercraft offices could shift to independent agents. The exact magnitude of this shift cannot be known at this time, but alternative registrations are a significant and growing portion of registrations and Watercraft will need to closely evaluate the impact on operations.

Table 9-6 shows RTS revenue received for CY 2011 to CY 2013.

Table 9-6: RTS Revenue CY 2011 to CY 2013

Revenue Source	CY 2011	CY 2012	CY 2013
Registration Revenue	$5,132,284	$5,374,463	$5,391,510
All Other Sources of Revenue [1]	$198,136	$219,908	$206,905
Total RTS Revenue	**$5,330,420**	**$5,594,371**	**$5,598,415**
Registration Revenue % of Total RTS Revenue	96.3%	96.1%	96.3%
Watercraft Offices Total Revenue	**$3,021,871**	**$3,063,528**	**$3,184,940**
Watercraft Offices % of Total RTS Revenue	56.7%	54.8%	56.9%
Independent Agents Total Revenue	**$2,308,549**	**$2,530,843**	**$2,413,475**
Independent Agents % of Total RTS Revenue	43.3%	45.2%	43.1%

Source: OAKS and WIS

[1] All Other Sources of Revenue includes revenue from titles and miscellaneous fees collected by Watercraft.

As shown in **Table 9-6**, total RTS revenue increased by $267,995, or 5.0 percent, from $5,330,420 in CY 2011 to $5,598,415 in CY 2013. RTS derives revenue primarily from registrations, a source which accounted for 96.3 percent of total revenue for CY 2013. Similar to registrations processed (see **Table 9-5**), a significant portion of total revenue comes from independent agents. Specifically, 56.9 percent of total revenue was generated by Watercraft offices while the remaining 43.1 percent was from independent agents for CY 2013.

RTS Staffing Overview

Table 9-7 shows the distribution of RTS' full-time equivalent (FTE) employees by office location for CY 2011 to CY 2014 (estimated). The CY 2014 estimate was derived by taking the actual number of RTS hours worked as of July 2014 and extrapolating out to the end of the calendar year. FTEs are calculated by using the total hours allocated to RTS functions and one FTE is equivalent to 2,080 hours of work per year.

Table 9-7: RTS FTEs by Office CY 2011 to CY 2014 (Estimated)

RTS FTEs by Location	CY 2011	CY 2012	CY 2013	3 Yr. Avg.	CY 2014 (Estimated)
Central Office	19.0	17.6	17.0	17.9	16.3
Akron	1.4	1.4	1.1	1.3	1.4
Alum Creek	0.8	0.8	0.8	0.8	0.4
Ashtabula	0.9	0.9	0.9	0.9	1.0
Cambridge	1.0	0.9	1.0	1.0	1.0
Cleveland	1.3	1.2	1.0	1.2	0.9
East Fork	0.9	1.0	1.0	1.0	1.0
Maumee Bay	0.9	0.9	0.9	0.8	0.9
Portsmouth	0.5	0.6	0.7	0.6	1.0
Sandusky	0.9	0.8	0.8	0.9	0.9
Springfield	0.9	0.9	0.8	0.9	0.4
Wapakoneta	0.9	0.9	0.9	0.9	1.0
Total FTEs	**29.4**	**27.8**	**27.0**	**28.1**	**26.1**
Central Office as a % of Total FTEs	**64.6%**	**63.3%**	**63.0%**	**63.7%**	**62.5%**

Source: ODNR

As shown in **Table 9-7**, over the last three years, 63.7 percent of all RTS FTEs have been assigned to Watercraft's Central Office. This is due to the Central Office serving additional roles and duties that are not performed by field offices. For example, in addition to serving customers in person, a primary function of the field offices, the Central Office also processes mail-in and electronic registration renewals, and operates centralized business service functions such as purchasing and distributing registration materials to field offices and independent agents.

Table 9-7 also shows that RTS functions at the field offices, over the last three years on average, are generally staffed with 1.0 FTE; with a high of 1.3 FTEs at Akron and a low of 0.6 FTEs at Portsmouth. As noted, the FTE calculation aggregates hours actually allocated to RTS functions while the actual role may be distributed among multiple individuals, each of whom performs other duties. For example, Cambridge has a total RTS workload equivalent to 1.0 FTE for CY 2013, but actually had three employees associated with the RTS function. The non-RTS portion of these employees' time was allocated to other administrative or secretarial roles, primarily supporting law enforcement and boater education activities.

Finally, as shown in **Table 9-7**, total RTS staffing decreased by 2.4 FTEs or 8.2 percent from CY 2011 to CY 2013. Further, CY 2014 (estimated) staffing shows a further decrease to a total of 3.3 FTEs or 11.2 percent since CY 2011. The majority of the CY 2014 estimated decrease, 2.7 FTEs, comes from reductions occurring at the Central Office.

Methodology

This section of the performance audit, **Watercraft Registration Operations**, seeks to assess and evaluate RTS' current and historical workload measures and financial performance as compared to key performance indicators. ODNR and Watercraft provided current and historical baseline data including revenue, expenditures, staffing, and registrations. Sources of data include the Ohio Administrative Knowledge System (OAKS) and WIS. Data points used were from CY 2011 through CY 2013; however CY 2014 data was used where applicable and when available. This section of the performance audit was specifically designed to evaluate current and historical operations as well as operational stability. Therefore, primary analysis will focus on CY 2013 and CY 2014 where applicable, but data points from CY 2011 and CY 2012 are also presented to provide historical context.

Although a primary role of the Division of Watercraft is the RTS function, Watercraft also provides other services including watercraft law enforcement, boater education, and preserving Ohio's waterways in accordance with the Scenic River Act of 1968. In order to operate the RTS function while carrying out the other goals of the division in an efficient manner, personnel and resources are shared across these various functions at Watercraft's 11 field offices. Where resource allocation was necessary, Division leadership provided additional insight to identify staffing levels and cost categories that are specifically or partially associated with RTS. In all cases requiring clarification, staffing time and material allocations associated with the RTS function were either addressed through the inclusion of centrally held information or were supplemented by testimonial, or documentary, evidence from knowledgeable Watercraft leadership staff.

Revenue and operating expenditures for CY 2011 through CY 2013 were analyzed for RTS as a function to determine overall financial stability. Further analysis was conducted for each Watercraft office, including the Central Office and field offices, to determine how individual offices are contributing to total RTS financial stability.

Where appropriate, independent agent operations and their collective contribution to RTS business is taken into account. For example, independent agents processed 82,270 registrations in CY 2013 (see **Table 9-5**) and generated $2,413,475 in revenue for CY 2013 (see **Table 9-6**). However, detailed independent agent operations are excluded from the scope of this performance audit as Watercraft does not have authority, outside of enforcing rules and procedures for processing registrations, over independent agents.

Appendix 9.A provides RTS dashboards for each Watercraft office, including the Central Office and each of the field offices. Each dashboard presents financial information and key performance indicators that are relevant to this analysis. For example, each dashboard includes information and analysis on the following:

- **Office Overview:** This section provides baseline operating information for each office including the total number of registrations processed and the total FTE employees associated with RTS functions.

- **Financial Overview:** This section provides summarized financial information including revenue, costs, and results of operations.
- **Key Performance Indicators:** This section highlights key operating and cost ratios which serve as key comparative measures across office locations.
- **Financial Key Performance Indicators by Year:** This section provides a graphical display of the "Total Direct Cost per Registration" and "Total Operating Cost per Registration", both of which are key performance indicators.
- **Processed Registrations by Month:** This section provides a graphical display of the number of registrations processed by month, highlighting the cyclical nature of the core registration business conducted by RTS.
- **Cost Detail:** This section provides detailed financial information by expenditure category, summarized by total direct cost, indirect cost, and operating cost.

Analysis

RTS Financial Stability

Table 9-8 shows the overall financial stability (i.e., operating net surplus/(loss)) of the total RTS function (i.e., Watercraft offices and independent agents) for CY 2011 to CY 2013. As previously noted, registration revenue not only provides for watercraft safety and boater education programs, but it also provides direct fee-for-service funding to RTS. As such, generating as much net surplus as possible not only covers the cost of operations, but also means more resources are available to serve the boating public.

Table 9-8: RTS Financial Stability CY 2011 to CY 2013

	Annual Results			CY 2011 to CY 2013 Results	
Total RTS	**CY 2011**	**CY 2012**	**CY 2013**	**$ Difference**	**% Difference**
Total Revenue	$5,330,420	$5,594,371	$5,598,415	$267,995	5.0%
Total Operating Cost	$3,443,459	$3,105,866	$3,040,661	($402,798)	(11.7%)
Operating Net Surplus/(Loss)	**$1,886,961**	**$2,488,505**	**$2,557,754**	**$670,793**	**35.5%**

Source: OAKS, WIS, and RTS
Note: Total revenue includes revenue from both Watercraft offices and independent agents.

As shown in **Table 9-8**, total operating cost has declined over the last three years while registrations have been increasing (see **Table 9-5**). The result is that operating net surplus has increased from $1,886,961 in CY 2011 to $2,557,754 in CY 2013, an increase of $670,793 or 35.5 percent.

Though the RTS function is financially stable, a significant portion of the registrations (see **Table 9-5**), and associated revenues (see **Table 9-6**), are generated by the independent agents. Impending rule changes are expected to shift even more work from the field offices to independent agents. As a result, Watercraft's Central and field office operations will be analyzed in more detail to assess their economy and efficiency in comparison to the RTS function as a whole.

When analyzing detailed expenditures it is important to consider that RTS is a sub-section of Watercraft. As such, expenditures must be analyzed in two ways. The first is the direct cost of RTS and the second is the indirect cost of RTS. Though similar there are key differences including:

- **Direct Cost –** This is only the direct cost associated with RTS and excludes costs that would otherwise be allocated to RTS based on a proportional share. For example, direct cost *does not include* a proportional share of management oversight cost at each field office or a proportional share of support service costs at the Central Office.
- **Indirect Cost –** This is the indirect cost of RTS operations and includes costs that are allocated to RTS based on a proportional share. For example, indirect cost *does include* a proportional share of management oversight cost at each field office or a proportional share of support service costs at the Central Office.

Where shown in this report, total operating cost is inclusive of both direct cost and indirect cost. Implementing staffing or organizational changes within RTS will impact direct cost, but will not necessarily immediately impact indirect cost given that these costs are not necessarily variable in nature and would generally remain at current levels without additional management action.

Table 9-9 shows RTS operating cost by sub-category and in total for CY 2011 to CY 2013.

Table 9-9: RTS Operating Cost CY 2011 to CY 2013

	Annual Results			CY 2011 to CY 2013 Results	
Direct Costs	**CY 2011**	**CY 2012**	**CY 2013**	**$ Difference**	**% Difference**
Personnel	$1,204,822	$1,057,921	$1,027,751	($177,071)	(14.7%)
Benefits	$391,565	$343,828	$334,017	($57,548)	(14.7%)
Supplies and Materials	$261,162	$234,859	$216,239	($44,923)	(17.2%)
Other [1]	$34,680	$32,823	$26,190	($8,490)	(24.5%)
Total Direct Cost	**$1,892,229**	**$1,669,431**	**$1,604,197**	**($288,032)**	**(15.2%)**
% of Total Operating Cost	**55.0%**	**53.8%**	**52.8%**	**N/A**	**N/A**
Indirect Costs	**CY 2011**	**CY 2012**	**CY 2013**	**$ Difference**	**% Difference**
Personnel	$92,072	$90,416	$99,705	$7,633	8.3%
Benefits	$29,927	$29,381	$32,405	$2,478	8.3%
Supplies and Materials	$51,882	$36,011	$32,919	($18,963)	(36.6%)
Internal Service Charges	$131,296	$134,413	$152,645	$21,349	16.3%
Buildings and Land	$77,029	$68,033	$64,440	($12,589)	(16.3%)
Utilities	$29,943	$23,013	$26,583	($3,360)	(11.2%)
Communication Systems	$27,025	$23,887	$25,753	($1,272)	(4.7%)
Division Support and Management Allocation [2]	$1,112,056	$1,031,281	$1,002,014	($110,042)	(9.9%)
Total Indirect Cost	**$1,551,230**	**$1,436,435**	**$1,436,464**	**($114,766)**	**(7.4%)**
% of Total Operating Cost	**45.0%**	**46.2%**	**47.2%**	**N/A**	**N/A**
Total Operating Cost	**$3,443,459**	**$3,105,866**	**$3,040,661**	**($402,798)**	**(11.7%)**

Source: OAKS, Watercraft, and RTS

[1] Other incudes miscellaneous expenditures such as processing charges and advertising.

[2] This cost center includes costs that are shared across the various Watercraft functions. The RTS cost share was allocated based on RTS staff as a proportion of all Watercraft staff (i.e., 27.5 percent for CY 2013).

As shown in **Table 9-9**, total operating cost for RTS was $3,040,661 for CY 2013. Of this CY 2013 total, direct cost accounted for $1,604,197 or 52.8 percent while indirect cost accounted for $1,436,464 or 47.2 percent. From CY 2011 to CY 2013 total direct cost decreased by $288,032 or 15.2 percent; indirect cost decreased by $114,766 or 7.4 percent; and total operating cost decreased by $402,798 or 11.7 percent. These cost decreases contribute to the overall positive financial performance shown in **Table 9-8**.

Table 9-10 shows the overall financial stability of the Watercraft offices portion of RTS for CY 2011 to CY 2013. This analysis shows both the direct and operating net surplus/(loss) associated with the Watercraft offices and further informs the total RTS results shown in **Table 9-8**.

Table 9-10: Watercraft Offices Financial Stability CY 2011 to CY 2013

Watercraft Offices	Annual Results			CY 2011 to CY 2013 Results	
	CY 2011	CY 2012	CY 2013	$ Difference	% Difference
Total Watercraft Offices Revenue	**$3,021,871**	**$3,063,528**	**$3,184,940**	**$163,069**	**5.4%**
Total Direct Cost	$1,892,229	$1,669,431	$1,604,197	($288,032)	(15.2%)
Direct Net Surplus/(Loss)	**$1,129,642**	**$1,394,097**	**$1,580,743**	**$451,101**	**39.9%**
Total Operating Cost	$3,443,459	$3,105,866	$3,040,661	($402,798)	(11.7%)
Operating Net Surplus/(Loss)	**($421,588)**	**($42,338)**	**$144,279**	**$565,867**	**134.2%**

Source: OAKS, WIS, and RTS
Note: Total Watercraft offices revenue does not include any revenue from independent agents.

As shown in **Table 9-10**, when evaluating Watercraft offices financial performance for CY 2013, direct cost shows a net surplus of $1,580,743 and operating cost shows a net surplus of $144,279. Furthermore, both of these measures of financial stability show improvement over time. However, the operating net surplus/(loss) numbers shown here are substantially diminished from those shown in **Table 9-8**, meaning Watercraft offices are not operating as economically as the RTS operation as a whole. As a result, individual Watercraft office locations warrant further evaluation of cost effectiveness.

Table 9-11 shows the overall financial stability of each Watercraft office as well as the resulting cost per registration processed for CY 2013. This analysis focuses on the direct cost and net surplus/(loss) associated with operating the Central Office and field offices given that this is the portion of cost and associated outcome able to be directly controlled by RTS. (See **Appendix 9.A** for individual office dashboards which show both direct and operating cost detail.)

Table 9-11 Watercraft Office Financial Performance CY 2013

Location	Total Registration Revenue [1]	Total Direct Cost	Direct Net Surplus/(Loss)	Registrations Processed	Direct Cost Per Registration
Central Office	$2,377,891	$1,199,097	$1,178,794	66,157	$18
Akron	$105,107	$35,711	$69,396	3,743	$10
East Fork	$90,673	$47,797	$42,876	3,154	$15
Cleveland	$77,913	$38,771	$39,142	2,646	$15
Alum Creek	$72,656	$33,636	$39,020	2,532	$13
Springfield	$59,589	$32,746	$26,843	2,129	$15
Sandusky	$49,988	$33,283	$16,705	1,689	$20
Portsmouth	$38,353	$26,528	$11,825	1,245	$21
Cambridge	$40,843	$42,656	($1,813)	1,454	$29
Ashtabula	$25,760	$33,062	($7,302)	889	$37
Maumee Bay	$23,638	$41,446	($17,808)	863	$48
Wapakoneta	$15,624	$39,464	($23,840)	726	$54
Field Office Avg.	**$54,559**	**$36,827**	**$17,731**	**1,915**	**$25**

Source: OAKS, WIS, and RTS

[1] Excludes other sources of revenue including records search fees. This ranged from $2 to $36 dollars at field offices and is immaterial to the analysis shown.

As shown in **Table 9-11**, the Central Office benefits from a concentrated workforce and high volume of registrations and, as a result of these economies of scale, produced a direct net surplus of $1,178,794 for CY 2013.

Table 9-11 also shows that direct costs at each of the field offices are relatively similar. Portsmouth was lowest at $26,528, East Fork was highest at $47,797, and the average of all field offices was $36,827. However, the quantity of registration sales varied significantly across the field offices. Wapakoneta was lowest at 726, Akron was highest at 3,743, and the average of all field offices was 1,915. Given that revenue is largely tied to registrations processed, this variance directly impacts the overall financial performance of each field office. Specifically, Ashtabula, Cambridge, Maumee Bay, and Wapakoneta did not process enough registrations to cover direct cost for CY 2013. All other field offices experienced a direct net surplus for CY 2013 with the largest at Akron; a total direct net surplus of $69,396. This variance indicates that although the RTS function is financially viable as a whole and is able to provide significant revenue to programs that are core to the Division's missions, operations at individual field offices can detract from RTS' overall financial performance.

Measuring Performance and Managing for Results

A Performance Management Framework for State and Local Government: From Measurement and Reporting to Management and Improving (National Performance Management Advisory Commission, 2010) notes that "performance management has the potential to help governments address the performance challenges they face by focusing organization resources and efforts toward achieving results that will provide the greatest benefit to its stakeholders."[159] This includes making management decisions based upon reliable and relevant data, which means that by continuously monitoring key performance indicators within the organization, management may be able to adjust variable resources while providing services to the public and maximizing potential impact.

By monitoring key performance indicators, including the quantity and cost of registrations for all watercraft offices, ODNR and Division leadership will be able to make better informed management decisions to improve the efficiency and effectiveness of RTS functions. Further, the quantification of the cost to operate field offices in low demand areas resulting in a direct financial loss should inform long-term management decisions about the continued operation of those offices, especially where independent agents could provide substantially the same services.

Conclusion

Watercraft operates registration and titling functions across watercraft offices at a similar scale and cost despite substantial differences in registration demand and revenue potential. The result is that the RTS function itself remains in a strong revenue-positive position, but individual field offices are sometimes incurring losses which diminish the total revenue potential of the collective RTS function. Although field offices currently provide services that are unavailable through independent agents, this will no longer be the case in CY 2015. This could have a significant impact on RTS function profitability, especially at the field offices, and should be a significant focus of performance measurement and management activities. Though short- and long-term critical issues may change, Watercraft will benefit from an ongoing performance measurement and management framework to identify opportunities to maximize the efficiency and effectiveness of the RTS function.

Recommendation 9.1: ODNR should develop a performance management framework for the Registration and Titling Section. At minimum, the framework should take into account staffing, workload, and financial performance at both the Watercraft Central Office and each of the 11 field offices. The framework should inform long-term strategic decision making with the goal of improving the efficiency and effectiveness of services provided. A specific focus area should be to evaluate the cost/benefit of the current organization and operation of Watercraft field office registration functions in relation to customer needs and service-delivery options.

Financial Implication 9.1: N/A

[159] The National Performance Management Advisory Commission (NPMAC) includes, but is not limited to, organizations such as the National Association of State Budget Officers, Government Finance Officers Association, National Association of State Auditors, Comptrollers, and Treasurers, and National Conference of State Legislatures. NPMAC has "developed a conceptual performance management framework to help governments move beyond measuring and reporting those measures to managing performance toward improved results."

Appendix 9.A: Watercraft Office Dashboards

The following pages present operating and financial information as well as key performance indicators for each Watercraft office location, including the Central Office and field offices, for calendar year (CY) 2011 to CY 2013.

For additional detail or technical definitions of data points shown in the dashboards see **Appendix 9.B: Watercraft Office Dashboards Description**.

Central Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	62,272	61,128	66,157	63,186
Total RTS FTEs	19.0	17.6	17.0	17.8

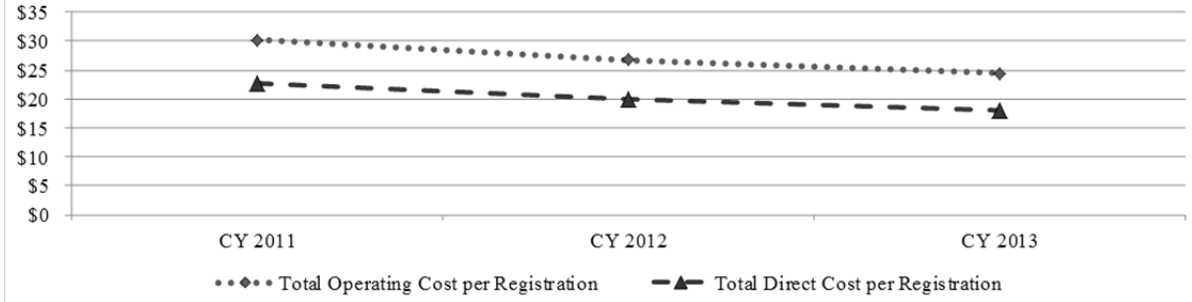
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$2,275,777	$2,209,569	$2,377,891	$2,287,746
Total Direct Cost	$1,420,428	$1,217,358	$1,199,097	$1,278,961
Total Direct Net Surplus/(Loss)	$855,349	$992,211	$1,178,794	$1,008,785
Total Operating Cost	$1,878,505	$1,636,770	$1,609,841	$1,708,372
Total Operating Net Surplus/(Loss)	$397,272	$572,799	$768,050	$579,374

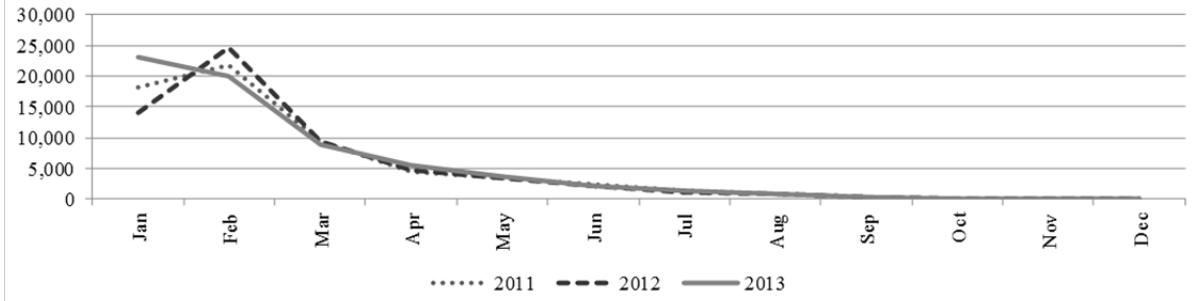
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	3,278	3,481	3,894	3,551
Total Direct Cost per Registration	$23	$20	$18	$20
Total Operating Cost per Registration	$30	$27	$24	$27

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$868,166	$732,568	$732,102	$777,612
Benefits	$282,154	$238,085	$237,933	$252,724
Supplies and Materials	$240,297	$219,186	$207,538	$222,340
Other	$29,811	$27,519	$21,524	$26,285
Total Direct Cost	**$1,420,428**	**$1,217,358**	**$1,199,097**	**$1,278,961**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$0	$0	$0	$0
Benefits	$0	$0	$0	$0
Supplies and Materials	$0	$0	$0	$0
Internal Service Charges	$72,872	$68,709	$70,049	$70,543
Buildings and Land	$0	$0	$0	$0
Utilities	$0	$0	$0	$0
Communication Systems	$262	$68	$11	$114
Division Support and Management Allocation	$384,943	$350,635	$340,684	$358,754
Total Indirect Cost	**$458,077**	**$419,412**	**$410,744**	**$429,411**

Total Operating Cost	**$1,878,505**	**$1,636,770**	**$1,609,841**	**$1,708,372**

Akron Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	3,423	4,020	3,743	3,729
Total RTS FTEs	1.4	1.4	1.1	1.3

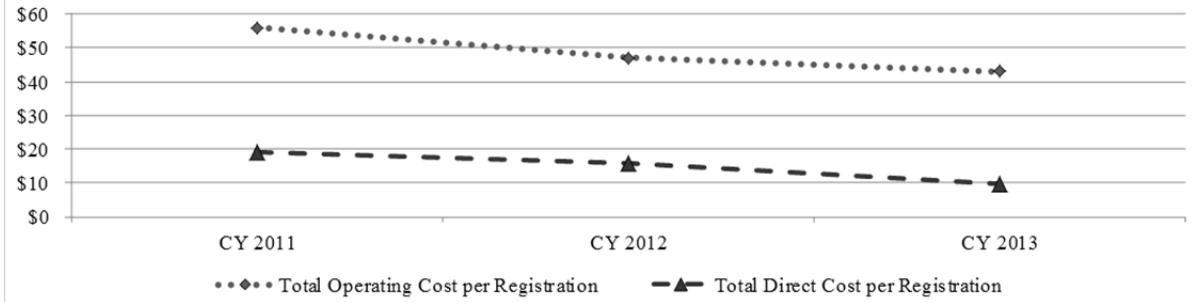
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$101,096	$114,773	$105,107	$106,992
Total Direct Cost	$65,840	$62,644	$35,711	$54,732
Total Direct Net Surplus/(Loss)	$35,256	$52,129	$69,396	$52,260
Total Operating Cost	$191,455	$188,862	$160,804	$180,374
Total Operating Net Surplus/(Loss)	($90,359)	($74,089)	($55,697)	($73,382)

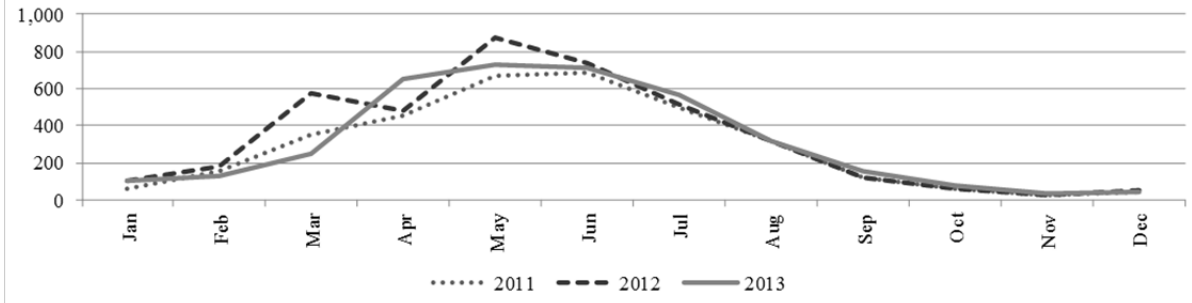
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	2,445	2,871	3,403	2,906
Total Direct Cost per Registration	$19	$16	$10	$15
Total Operating Cost per Registration	$56	$47	$43	$49

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$47,737	$45,840	$25,991	$39,856
Benefits	$15,514	$14,898	$8,447	$12,953
Supplies and Materials	$2,098	$1,887	$1,142	$1,709
Other	$491	$19	$131	$214
Total Direct Cost	**$65,840**	**$62,644**	**$35,711**	**$54,732**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$8,511	$8,689	$9,214	$8,805
Benefits	$2,767	$2,824	$2,995	$2,862
Supplies and Materials	$3,080	$3,663	$2,124	$2,956
Internal Service Charges	$4,345	$5,572	$8,593	$6,170
Buildings and Land	$15,137	$17,026	$15,381	$15,848
Utilities	$3,283	$2,880	$3,347	$3,170
Communication Systems	$2,949	$3,062	$3,278	$3,096
Division Support and Management Allocation	$85,543	$82,502	$80,161	$82,735
Total Indirect Cost	**$125,615**	**$126,218**	**$125,093**	**$125,642**
Total Operating Cost	**$191,455**	**$188,862**	**$160,804**	**$180,374**

Alum Creek Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	2,080	2,825	2,532	2,479
Total RTS FTEs	0.8	0.8	0.8	0.8

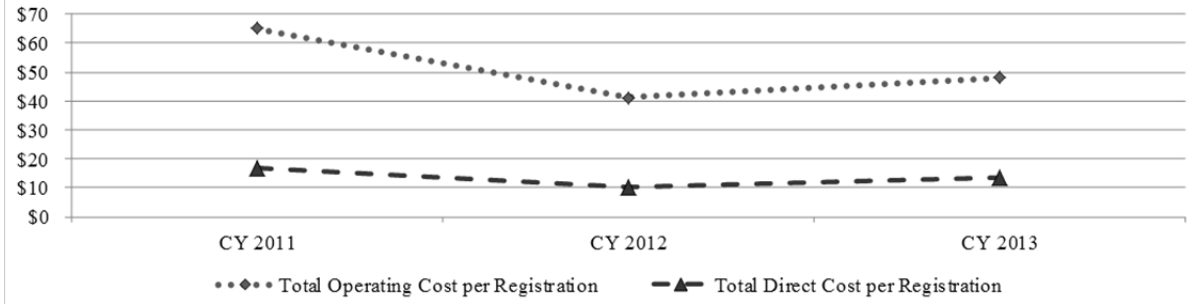
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$59,545	$80,117	$72,656	$70,773
Total Direct Cost	$35,442	$28,310	$33,636	$32,463
Total Direct Net Surplus/(Loss)	$24,103	$51,807	$39,020	$38,310
Total Operating Cost	$135,471	$115,950	$121,376	$124,266
Total Operating Net Surplus/(Loss)	($75,926)	($35,833)	($48,720)	($53,493)

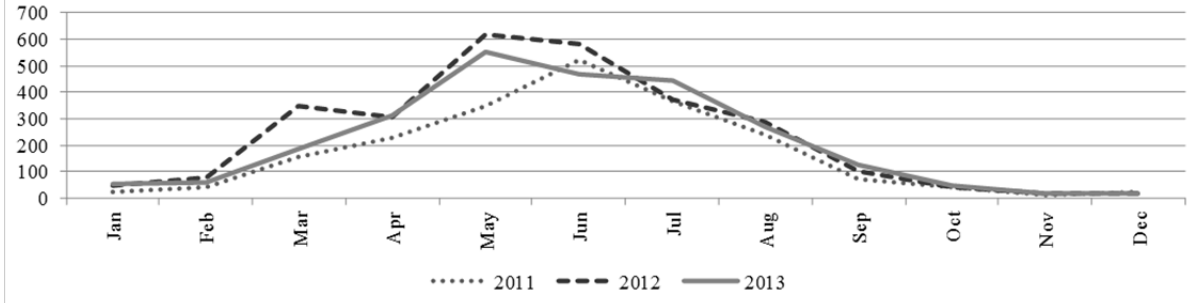
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	2,600	3,531	3,165	3,099
Total Direct Cost per Registration	$17	$10	$13	$13
Total Operating Cost per Registration	$65	$41	$48	$51

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$25,450	$20,086	$24,367	$23,301
Benefits	$8,271	$6,528	$7,919	$7,573
Supplies and Materials	$1,047	$861	$942	$950
Other	$674	$835	$408	$639
Total Direct Cost	**$35,442**	**$28,310**	**$33,636**	**$32,463**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$4,583	$6,967	$5,499	$5,683
Benefits	$1,490	$2,264	$1,787	$1,847
Supplies and Materials	$6,003	$1,860	$1,872	$3,245
Internal Service Charges	$6,565	$6,246	$8,433	$7,081
Buildings and Land	$11,729	$2,789	$2,206	$5,575
Utilities	$2,712	$2,860	$3,581	$3,051
Communication Systems	$2,790	$2,777	$4,241	$3,269
Division Support and Management Allocation	$64,157	$61,877	$60,121	$62,052
Total Indirect Cost	**$100,029**	**$87,640**	**$87,740**	**$91,803**

Total Operating Cost	**$135,471**	**$115,950**	**$121,376**	**$124,266**

Ashtabula Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	988	1,095	889	991
Total RTS FTEs	0.9	0.9	0.9	0.9

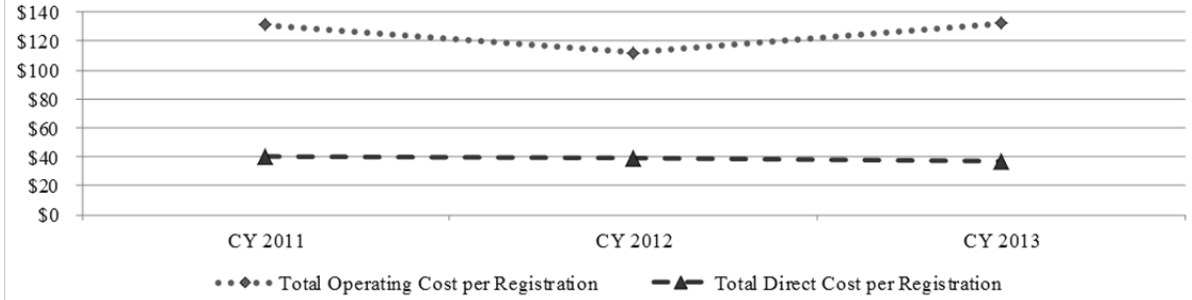
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$30,412	$30,454	$25,760	$28,875
Total Direct Cost	$40,108	$42,218	$33,062	$38,463
Total Direct Net Surplus/(Loss)	($9,696)	($11,764)	($7,302)	($9,587)
Total Operating Cost	$129,311	$122,493	$117,741	$123,182
Total Operating Net Surplus/(Loss)	($98,899)	($92,039)	($91,981)	($94,306)

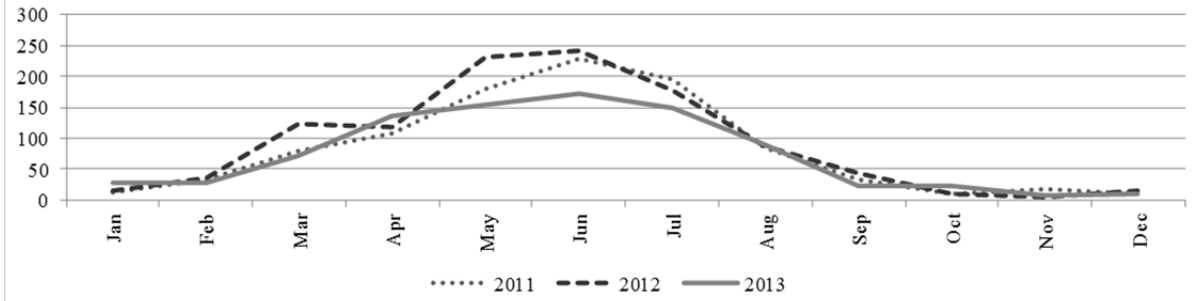
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	1,098	1,217	988	1,101
Total Direct Cost per Registration	$41	$39	$37	$39
Total Operating Cost per Registration	$131	$112	$132	$125

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$28,538	$30,365	$24,127	$27,677
Benefits	$9,275	$9,869	$7,841	$8,995
Supplies and Materials	$1,393	$1,591	$769	$1,251
Other	$902	$393	$325	$540
Total Direct Cost	**$40,108**	**$42,218**	**$33,062**	**$38,463**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$8,337	$5,346	$8,883	$7,522
Benefits	$2,709	$1,737	$2,887	$2,444
Supplies and Materials	$4,083	$2,405	$2,665	$3,051
Internal Service Charges	$4,239	$4,572	$5,907	$4,906
Buildings and Land	$2,052	$944	$850	$1,282
Utilities	$2,415	$2,151	$2,080	$2,215
Communication Systems	$1,211	$1,243	$1,286	$1,247
Division Support and Management Allocation	$64,157	$61,877	$60,121	$62,052
Total Indirect Cost	**$89,203**	**$80,275**	**$84,679**	**$84,719**

Total Operating Cost	**$129,311**	**$122,493**	**$117,741**	**$123,182**

Cambridge Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	1,224	1,508	1,454	1,395
Total RTS FTEs	1.0	0.9	1.0	1.0

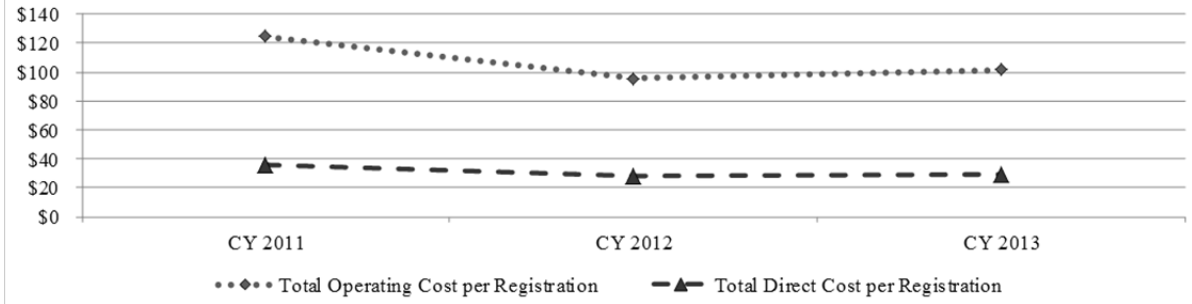
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$35,325	$42,763	$40,843	$39,644
Total Direct Cost	$43,319	$42,349	$42,656	$42,775
Total Direct Net Surplus/(Loss)	($7,994)	$414	($1,813)	($3,131)
Total Operating Cost	$152,457	$144,137	$147,527	$148,040
Total Operating Net Surplus/(Loss)	($117,132)	($101,374)	($106,684)	($108,397)

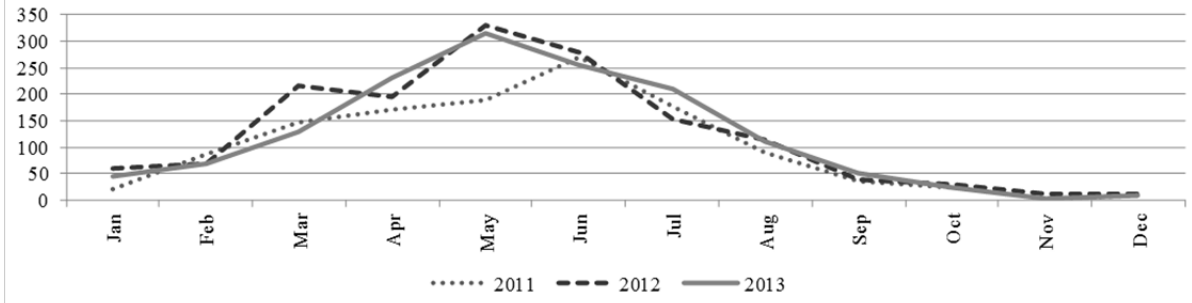
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	1,224	1,676	1,454	1,451
Total Direct Cost per Registration	$35	$28	$29	$31
Total Operating Cost per Registration	$125	$96	$101	$107

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$30,678	$30,699	$31,662	$31,013
Benefits	$9,970	$9,977	$10,290	$10,079
Supplies and Materials	$2,630	$1,071	$628	$1,443
Other	$41	$602	$76	$240
Total Direct Cost	**$43,319**	**$42,349**	**$42,656**	**$42,775**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$9,096	$4,513	$8,279	$7,296
Benefits	$2,957	$1,467	$2,691	$2,372
Supplies and Materials	$1,247	$1,287	$611	$1,048
Internal Service Charges	$9,355	$10,373	$10,872	$10,200
Buildings and Land	$18,783	$18,731	$18,949	$18,821
Utilities	$516	$443	$507	$489
Communication Systems	$3,027	$3,097	$2,841	$2,988
Division Support and Management Allocation	$64,157	$61,877	$60,121	$62,052
Total Indirect Cost	**$109,138**	**$101,788**	**$104,871**	**$105,266**

Total Operating Cost	**$152,457**	**$144,137**	**$147,527**	**$148,040**

Cleveland Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	2,186	2,834	2,646	2,555
Total RTS FTEs	1.3	1.2	1.0	1.2

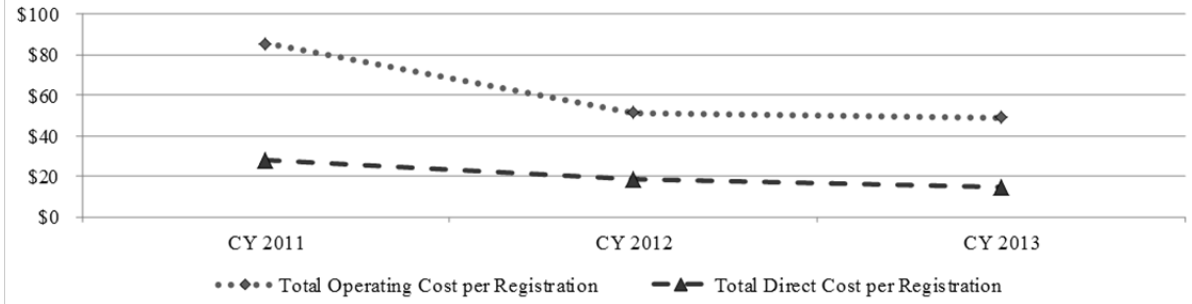
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$68,140	$84,871	$77,913	$76,975
Total Direct Cost	$60,771	$52,820	$38,771	$50,787
Total Direct Net Surplus/(Loss)	$7,369	$32,051	$39,142	$26,187
Total Operating Cost	$187,087	$144,789	$129,771	$153,882
Total Operating Net Surplus/(Loss)	($118,947)	($59,918)	($51,858)	($76,908)

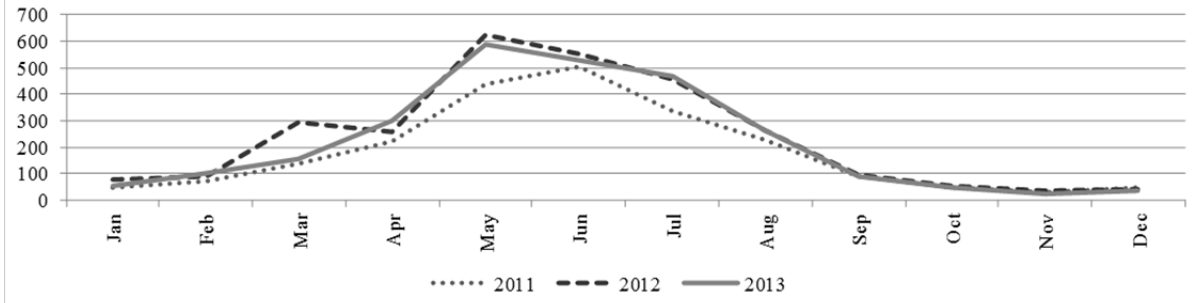
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	1,682	2,362	2,646	2,230
Total Direct Cost per Registration	$28	$19	$15	$20
Total Operating Cost per Registration	$86	$51	$49	$62

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$44,876	$37,540	$27,942	$36,786
Benefits	$14,585	$12,201	$9,081	$11,956
Supplies and Materials	$1,268	$2,536	$889	$1,564
Other	$42	$543	$859	$481
Total Direct Cost	**$60,771**	**$52,820**	**$38,771**	**$50,787**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$8,674	$8,578	$9,003	$8,752
Benefits	$2,819	$2,787	$2,926	$2,844
Supplies and Materials	$13,038	$5,976	$5,348	$8,121
Internal Service Charges	$6,015	$6,153	$6,985	$6,384
Buildings and Land	$956	$112	$432	$500
Utilities	$5,545	$4,770	$4,569	$4,961
Communication Systems	$3,726	$1,716	$1,616	$2,353
Division Support and Management Allocation	$85,543	$61,877	$60,121	$69,180
Total Indirect Cost	**$126,316**	**$91,969**	**$91,000**	**$103,095**

Total Operating Cost	**$187,087**	**$144,789**	**$129,771**	**$153,882**

East Fork Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	2,684	3,083	3,154	2,974
Total RTS FTEs	0.9	1.0	1.0	1.0

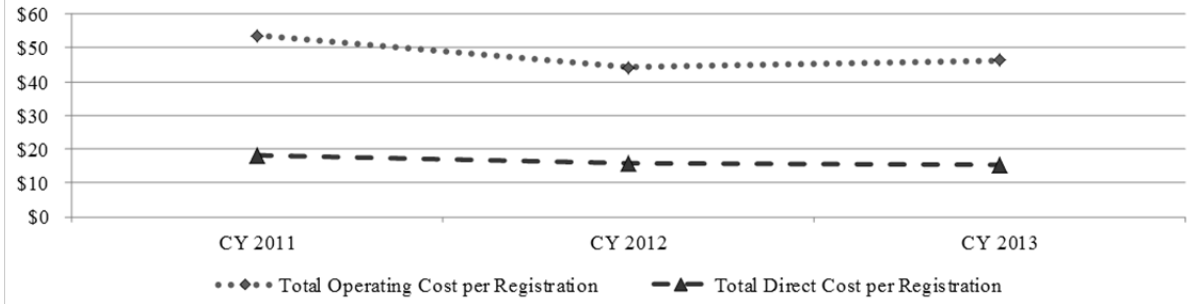
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$80,150	$89,652	$90,673	$86,825
Total Direct Cost	$48,926	$48,288	$47,797	$48,337
Total Direct Net Surplus/(Loss)	$31,224	$41,364	$42,876	$38,488
Total Operating Cost	$143,992	$135,973	$146,353	$142,106
Total Operating Net Surplus/(Loss)	($63,842)	($46,321)	($55,680)	($55,281)

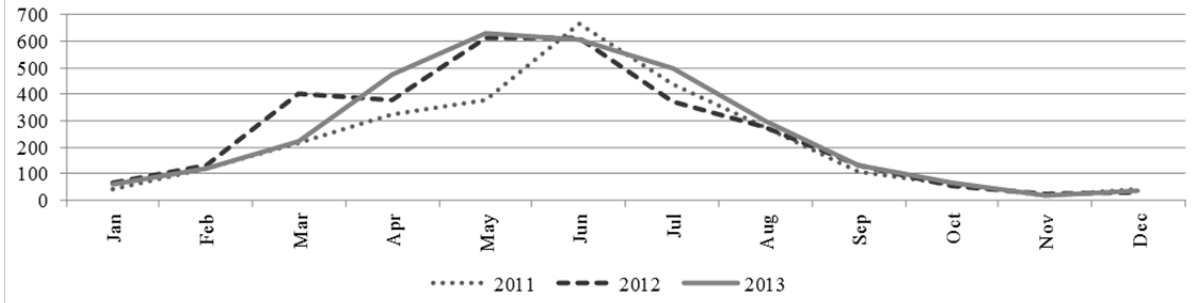
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	2,982	3,083	3,154	3,073
Total Direct Cost per Registration	$18	$16	$15	$16
Total Operating Cost per Registration	$54	$44	$46	$48

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$34,182	$33,614	$34,440	$34,079
Benefits	$11,109	$10,925	$11,193	$11,076
Supplies and Materials	$2,224	$2,404	$1,219	$1,949
Other	$1,411	$1,345	$945	$1,234
Total Direct Cost	**$48,926**	**$48,288**	**$47,797**	**$48,337**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$9,258	$9,488	$10,272	$9,673
Benefits	$3,009	$3,083	$3,338	$3,143
Supplies and Materials	$5,833	$1,758	$10,191	$5,927
Internal Service Charges	$4,922	$5,482	$7,098	$5,834
Buildings and Land	$1,051	$957	$1,141	$1,050
Utilities	$4,120	$2,852	$3,863	$3,612
Communication Systems	$2,716	$2,188	$2,532	$2,479
Division Support and Management Allocation	$64,157	$61,877	$60,121	$62,052
Total Indirect Cost	**$95,066**	**$87,685**	**$98,556**	**$93,769**

Total Operating Cost	**$143,992**	**$135,973**	**$146,353**	**$142,106**

Maumee Bay Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	828	957	863	883
Total RTS FTEs	0.9	0.9	0.9	0.9

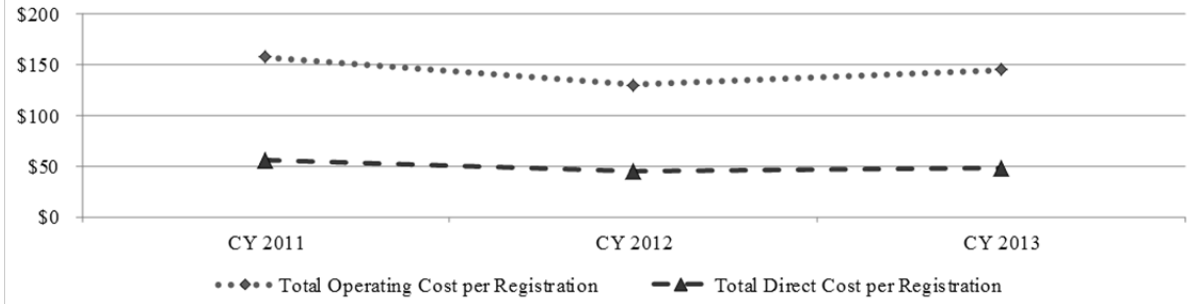
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$23,695	$27,239	$23,638	$24,857
Total Direct Cost	$45,839	$42,357	$41,446	$43,214
Total Direct Net Surplus/(Loss)	($22,144)	($15,118)	($17,808)	($18,357)
Total Operating Cost	$130,210	$124,364	$124,866	$126,480
Total Operating Net Surplus/(Loss)	($106,515)	($97,125)	($101,228)	($101,623)

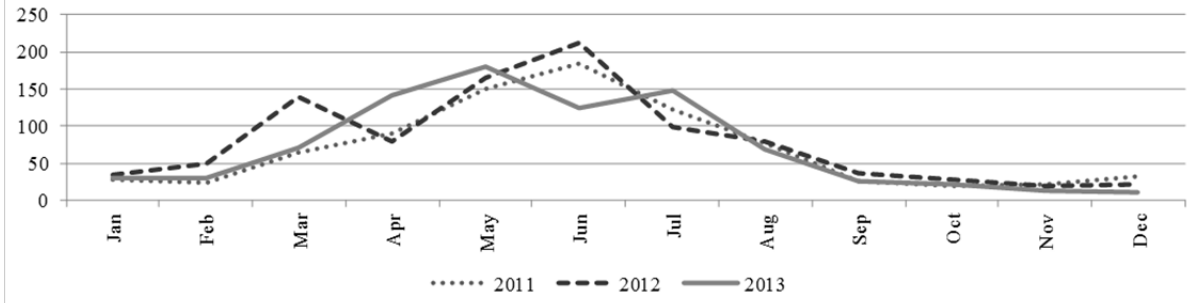
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	920	1,063	959	981
Total Direct Cost per Registration	$55	$44	$48	$49
Total Operating Cost per Registration	$157	$130	$145	$144

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$32,554	$30,648	$30,369	$31,190
Benefits	$10,580	$9,961	$9,870	$10,137
Supplies and Materials	$1,968	$1,692	$992	$1,551
Other	$737	$56	$215	$336
Total Direct Cost	**$45,839**	**$42,357**	**$41,446**	**$43,214**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$8,663	$8,910	$9,204	$8,926
Benefits	$2,816	$2,895	$2,991	$2,901
Supplies and Materials	$2,523	$2,229	$3,081	$2,611
Internal Service Charges	$2,694	$3,439	$5,852	$3,995
Buildings and Land	$65	$97	$427	$196
Utilities	$1,279	$582	($63)	$599
Communication Systems	$2,174	$1,978	$1,807	$1,986
Division Support and Management Allocation	$64,157	$61,877	$60,121	$62,052
Total Indirect Cost	**$84,371**	**$82,007**	**$83,420**	**$83,266**

Total Operating Cost	**$130,210**	**$124,364**	**$124,866**	**$126,480**

Portsmouth Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	1,010	1,191	1,245	1,149
Total RTS FTEs	0.5	0.6	0.7	0.6

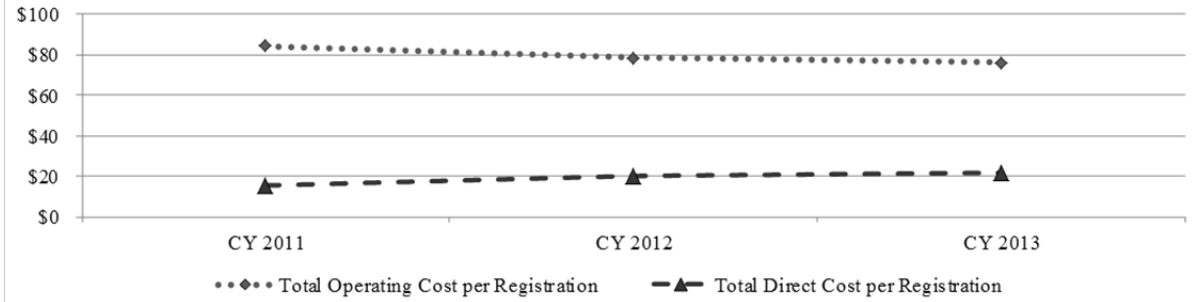
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$32,507	$36,663	$38,353	$35,841
Total Direct Cost	$15,824	$23,508	$26,528	$21,953
Total Direct Net Surplus/(Loss)	$16,683	$13,155	$11,825	$13,888
Total Operating Cost	$85,101	$93,470	$94,654	$91,075
Total Operating Net Surplus/(Loss)	($52,594)	($56,807)	($56,301)	($55,234)

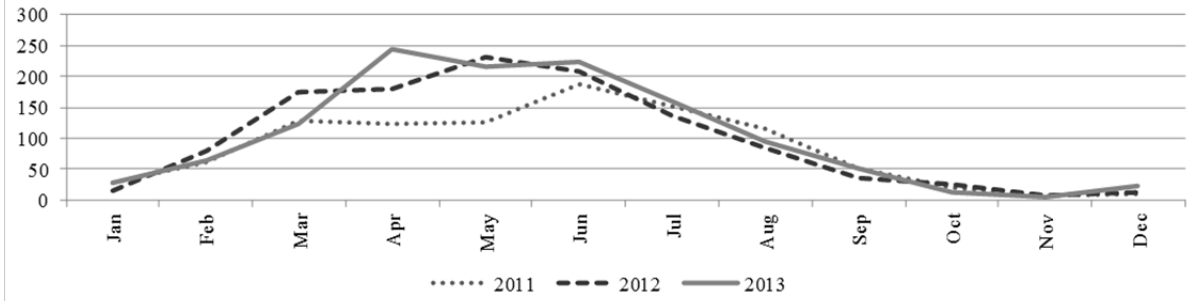
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	2,020	1,985	1,779	1,928
Total Direct Cost per Registration	$16	$20	$21	$19
Total Operating Cost per Registration	$84	$78	$76	$80

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$10,828	$16,654	$18,711	$15,398
Benefits	$3,519	$5,413	$6,081	$5,004
Supplies and Materials	$1,298	$806	$432	$845
Other	$179	$635	$1,304	$706
Total Direct Cost	**$15,824**	**$23,508**	**$26,528**	**$21,953**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$5,235	$9,152	$9,517	$7,968
Benefits	$1,701	$2,974	$3,093	$2,589
Supplies and Materials	$4,110	$2,893	$1,772	$2,925
Internal Service Charges	$5,522	$5,996	$7,129	$6,216
Buildings and Land	$1,734	$3,005	$398	$1,712
Utilities	$5,858	$2,495	$4,075	$4,143
Communication Systems	$2,346	$2,196	$2,062	$2,201
Division Support and Management Allocation	$42,771	$41,251	$40,080	$41,367
Total Indirect Cost	**$69,277**	**$69,962**	**$68,126**	**$69,122**

Total Operating Cost	**$85,101**	**$93,470**	**$94,654**	**$91,075**

Sandusky Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	1,501	1,688	1,689	1,626
Total RTS FTEs	0.9	0.8	0.8	0.8

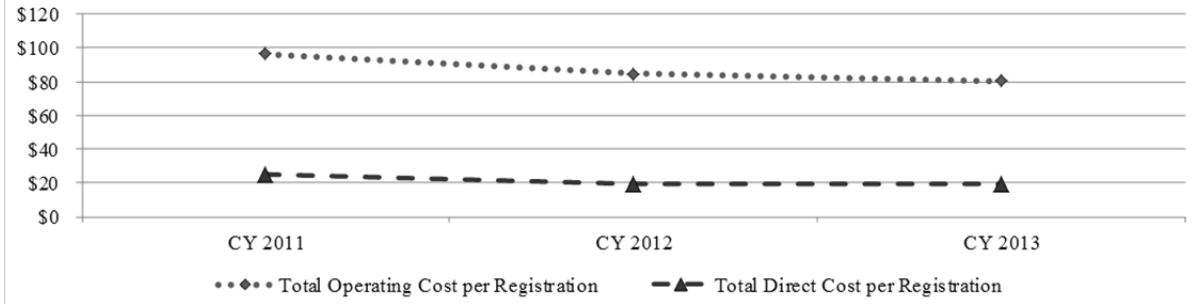
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$48,484	$52,152	$49,988	$50,208
Total Direct Cost	$37,942	$32,799	$33,283	$34,675
Total Direct Net Surplus/(Loss)	$10,542	$19,353	$16,705	$15,533
Total Operating Cost	$144,900	$143,133	$135,805	$141,279
Total Operating Net Surplus/(Loss)	($96,416)	($90,981)	($85,817)	($91,071)

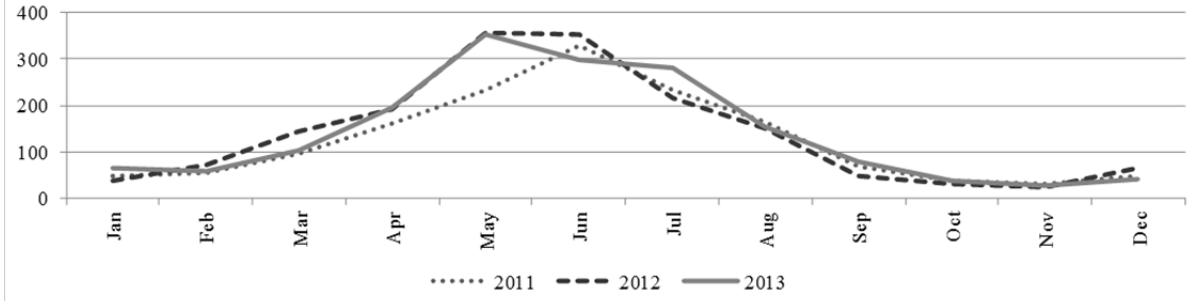
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	1,668	2,110	2,111	1,963
Total Direct Cost per Registration	$25	$19	$20	$21
Total Operating Cost per Registration	$97	$85	$80	$87

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$25,352	$23,968	$24,646	$24,655
Benefits	$8,239	$7,790	$8,010	$8,013
Supplies and Materials	$4,090	$1,017	$627	$1,911
Other	$261	$24	$0	$95
Total Direct Cost	**$37,942**	**$32,799**	**$33,283**	**$34,675**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$11,133	$10,528	$10,628	$10,763
Benefits	$3,619	$3,421	$3,454	$3,498
Supplies and Materials	$4,519	$10,418	$1,630	$5,522
Internal Service Charges	$5,186	$6,003	$7,948	$6,379
Buildings and Land	$15,446	$15,224	$15,651	$15,440
Utilities	$982	$1,021	$1,205	$1,069
Communication Systems	$1,916	$1,842	$1,885	$1,881
Division Support and Management Allocation	$64,157	$61,877	$60,121	$62,052
Total Indirect Cost	**$106,958**	**$110,334**	**$102,522**	**$106,605**

Total Operating Cost	**$144,900**	**$143,133**	**$135,805**	**$141,279**

Springfield Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	2,020	2,190	2,129	2,113
Total RTS FTEs	0.9	0.9	0.8	0.9

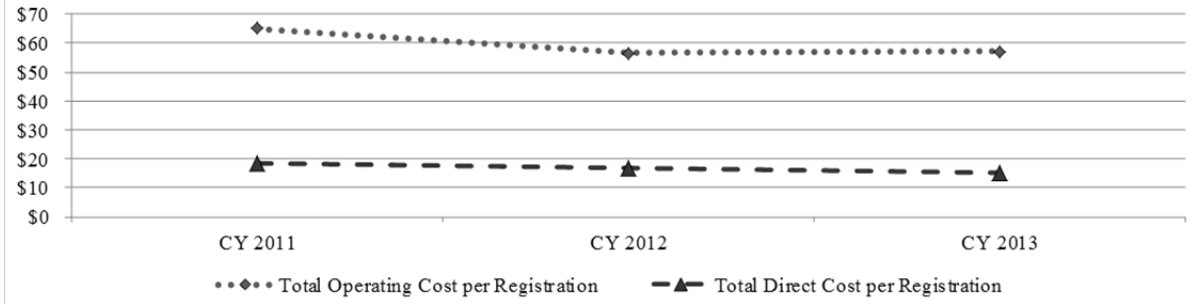
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$57,245	$61,937	$59,589	$59,590
Total Direct Cost	$37,380	$36,335	$32,746	$35,487
Total Direct Net Surplus/(Loss)	$19,865	$25,602	$26,843	$24,103
Total Operating Cost	$131,295	$123,482	$121,400	$125,392
Total Operating Net Surplus/(Loss)	($74,050)	($61,545)	($61,811)	($65,802)

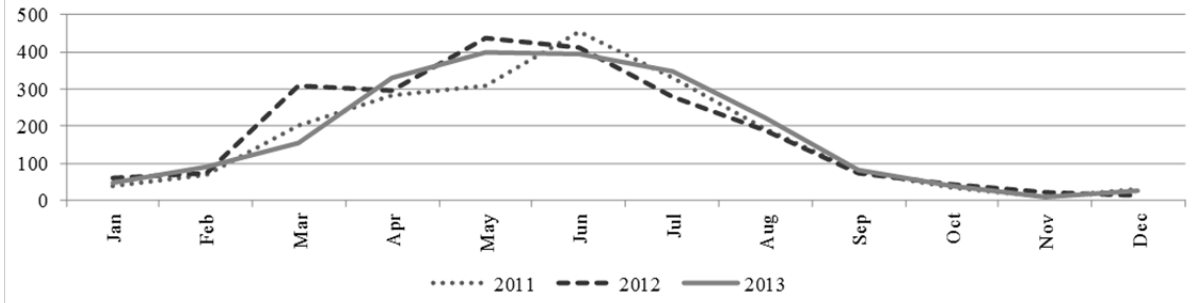
Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	2,244	2,433	2,661	2,446
Total Direct Cost per Registration	$19	$17	$15	$17
Total Operating Cost per Registration	$65	$56	$57	$59

Financial Key Performance Indicators by Year



Processed Registrations by Month



Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$26,931	$26,131	$23,866	$25,643
Benefits	$8,752	$8,493	$7,756	$8,334
Supplies and Materials	$1,670	$1,406	$735	$1,270
Other	$27	$305	$389	$240
Total Direct Cost	**$37,380**	**$36,335**	**$32,746**	**$35,487**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$9,176	$8,923	$9,372	$9,157
Benefits	$2,983	$2,900	$3,046	$2,976
Supplies and Materials	$6,087	$2,710	$3,298	$4,032
Internal Service Charges	$5,052	$5,535	$6,891	$5,826
Buildings and Land	$948	$223	$91	$421
Utilities	$3,233	$2,959	$3,419	$3,204
Communication Systems	$2,279	$2,020	$2,416	$2,238
Division Support and Management Allocation	$64,157	$61,877	$60,121	$62,052
Total Indirect Cost	**$93,915**	**$87,147**	**$88,654**	**$89,905**

Total Operating Cost	**$131,295**	**$123,482**	**$121,400**	**$125,392**

Wapakoneta Field Office

Office Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registrations	486	590	726	601
Total RTS FTEs	0.9	0.9	0.9	0.9

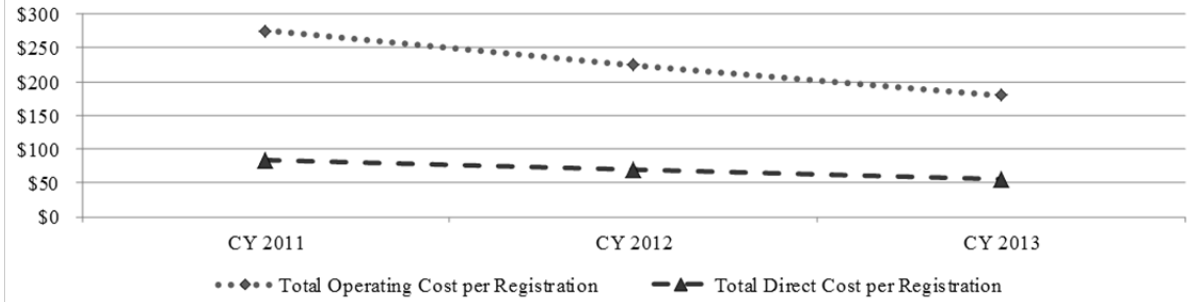
Financial Overview

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Total Registration Revenue	$11,359	$13,430	$15,624	$13,471
Total Direct Cost	$40,410	$40,445	$39,464	$40,106
Total Direct Net Surplus/(Loss)	($29,051)	($27,015)	($23,840)	($26,635)
Total Operating Cost	$133,675	$132,443	$130,523	$132,214
Total Operating Net Surplus/(Loss)	($122,316)	($119,013)	($114,899)	($118,743)

Key Performance Indicators

	CY 2011	CY 2012	CY 2013	3 Year Avg.
Registrations per FTE	540	656	807	667
Total Direct Cost per Registration	$83	$69	$54	$69
Total Operating Cost per Registration	$275	$224	$180	$226

Financial Key Performance Indicators by Year



Processed Registrations by Month

Cost Detail

Direct Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$29,530	$29,808	$29,528	$29,622
Benefits	$9,597	$9,688	$9,596	$9,627
Supplies and Materials	$1,179	$402	$326	$636
Other	$104	$547	$14	$222
Total Direct Cost	**$40,410**	**$40,445**	**$39,464**	**$40,106**

Indirect Cost	CY 2011	CY 2012	CY 2013	3 Year Avg.
Personnel	$9,406	$9,322	$9,834	$9,521
Benefits	$3,057	$3,029	$3,197	$3,094
Supplies and Materials	$1,359	$812	$327	$833
Internal Service Charges	$4,529	$6,333	$6,888	$5,917
Buildings and Land	$9,128	$8,925	$8,914	$8,989
Utilities	$0	$0	$0	$0
Communication Systems	$1,629	$1,700	$1,778	$1,702
Division Support and Management Allocation	$64,157	$61,877	$60,121	$62,052
Total Indirect Cost	**$93,265**	**$91,998**	**$91,059**	**$92,107**
Total Operating Cost	**$133,675**	**$132,443**	**$130,523**	**$132,214**

Appendix 9.B: Watercraft Office Dashboards Description

Office Name
Office Overview
Office Overview: This section provides baseline operating information for each office including the total number of registrations processed and the total full time equivalent (FTE) employees associated with the Registration and Titling Section (RTS) functions.
Financial Overview
Financial Overview: This section provides summarized financial information including revenue, costs, and results of operations. Key operational definitions include: o Total Registrations Revenue – This is the total revenue received for the processing of registrations. Though offices do derive other revenue from titling services this is a nominal amount, between $2.00 and $36.00 at field offices for CY 2013, and has been excluded from this analysis. o Total Direct Cost – This is the total direct cost of RTS operations and excludes costs that would otherwise be allocated to RTS based on a proportional share. For example, a proportional share of management oversight cost at each field office. o Total Direct Net Surplus/(Loss) – This is the result of operations taking into account total registration revenue less total direct cost. o Total Operating Cost – This is the total operating cost of RTS operations and both direct and indirect costs. o Total Operating Net Surplus/(Loss) – This is the result of operations taking into account total registrations revenue less total operating cost.
Key Performance Indicators
Key Performance Indicators: This section highlights key operating and cost ratios which serve as key comparative measures across office locations including: o Registrations per FTE – This is the number of registrations processed divided by the RTS FTEs. o Total Direct Cost per Registration – This is the total direct cost divided by the number of registrations processed. o Total Operating Cost per Registration – This is the total operating cost divided by the number of registrations processed.
Financial Key Performance Indicators by Year
Financial Key Performance Indicators by Year: This section provides a graphical display of the "Total Direct Cost per Registration" and "Total Operating Cost per Registration" key performance indicators from the section above.
Processed Registrations by Month
Processed Registrations by Month: This section provides a graphical display of the number of registrations processed by month, highlighting the cyclical nature of the core registration business conducted by RTS.
Cost Detail
Cost Detail: This section provides detailed financial information by expenditure category, summarized by total direct cost, indirect cost, and operating cost. Detailed categories are shown only where cost was actually incurred over the period shown. Detailed categories include: o Personnel – This is the salary cost associated with RTS personnel (total direct) and oversight personnel (total operating). o Benefits – This is the benefits cost associated with RTS personnel (total direct) and oversight personnel (total operating). o Supplies and Materials – This is the cost associated with supplies and materials necessary to conduct business at each office location. o Internal Service Charges – This is the cost associated with charges for internal services from ODNR and central oversight and communication systems which have been proportionally allocated across Watercraft functions based on the number of employees. The costs shown here are based on the percentage of RTS staff associated with each office location relative to the total staff at each office location. o Buildings and Land – This is the cost associated with the maintenance, repair, and upkeep of the offices. o Utilities – This is the utility cost associated with operation of the offices. o Communication Systems – This is the cost associated with communication systems necessary to operate a statewide network of offices and service functions. o Other – This is the cost for all other expenditures that have not been captured in the above categories. o Division Support and Management Allocation – This is the cost associated with central Watercraft functions, including administration, human resources, and warehouse costs. The costs shown here are allocated based on the percentage of RTS staff in relation to total Watercraft staff.

VIII. Audit Scope and Objectives Overview

Generally accepted government auditing standards require that a performance audit be planned and performed so as to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objectives. Objectives are what the audit is intended to accomplish and can be thought of as questions about the program that the auditors seek to answer based on evidence obtained and assessed against criteria.

AOS and ODNR signed a letter of engagement effective September 4, 2014. The original letter of engagement led to OPT planning and scoping work, in consultation with ODNR, which identified six distinct scope areas including:

- **Capital Planning and Budgeting**
- **Parks and Recreation Operations**
- **Seasonal Workforce Strategies**
- **Wildlife Licenses and Participation**
- **Fleet Management**
- **Fish Hatchery Operations**

Subsequent to the original letter of engagement, ODNR requested the addition of a seventh and final scope area, **Watercraft Registration Operations**. An addendum including this final scope area was signed effective April 2, 2014.

Based on the agreed upon scope, OPT developed objectives designed to identify improvements to economy, efficiency, and/or effectiveness. **Table VIII-1** shows the objectives assessed in this performance audit and references the corresponding recommendation(s) when applicable.

Table VIII-1: Audit Objectives and Recommendations

Objective	Recommendation(s)
Capital Planning and Budgeting	
To what extent does the current capital planning, budgeting, and management process support and align with key Department strategic and business functions? What opportunities for greater economy, efficiency, and effectiveness could be realized through optimization of the process?	**R6.1**
Parks and Recreation Operations	
Is the Division of Parks and Recreation efficiently and effectively meeting the goals of Ohio's State Park System?	**R3.1, R3.2, R4.1, R4.2, R5.1, & R5.2**
Sub-Objective A: Are there opportunities for more efficient use and allocation of operational / capital costs?	**R4.2, R5.1, & R5.2**
Sub-Objective B: Are there exploitable opportunities to increase or optimize revenue-generating activities?	**R3.1, R3.2, R4.2, R5.1, & R5.2**
Sub-Objective C: Is the Division of Parks and Recreation effectively benchmarking and quantifying success in delivering its Mission?	**R3.2 & R4.1**
Seasonal Workforce Strategies	
Does ODNR collect and maintain sufficient and reliable data to develop and analyze key performance indicators for staffing?	**N/A** [1]
How do the key performance indicators of ODNR's workforce compare to leading practices?	**R2.3**
Could ODNR benefit from using alternative staffing methods?	**R2.1 & R2.2**
Wildlife Licenses and Participation	
What opportunities does the Division of Wildlife have to maximize the efficiency, effectiveness, and cohesiveness of marketing strategies, services delivered, and license and fee structures? What opportunities exist to leverage this strategic framework to maximize and stabilize sources of revenue and improve recruitment and retention?	**R7.1, R7.2, R7.3, & R7.4**
Fleet Management	
Does ODNR collect and maintain sufficient and reliable data to develop and analyze key performance indicators for fleet management?	**R1.1**
What types of key performance indictors does ODNR use to manage its fleet? How do ODNR's fleet management indicators compare to leading practices?	**R1.2 & R1.4**
How does ODNR's fleet size compare to leading practices? Is ODNR's fleet sized appropriately to meet operational needs for the foreseeable future?	**R1.2 & R1.3**
What opportunities exist for ODNR to centralize fleet management responsibilities across functional divisions?	**R1.2 & R1.3**
Fish Hatchery Operations	
To what extent does the Division of Wildlife have a strategic production and management system in place, for the fish hatchery production unit, that aligns with Division goals and objectives, as well as internal and external stakeholder demands?	**N/A** [1]
How efficient and cost effective are the fish production and stocking business units compared to leading practices?	**R8.1**
Watercraft Registration Operations (Addendum)	
What are the Registration and Titling Section's historical and current workload measures? How do these workload measures compare to internal key performance indicators and industry standards?	**R9.1**
To what extent is the Registration and Titling Section financially stable and supportive of program goals? What opportunities exist to maximize stability and support over the long term?	**R9.1**

[1] N/A indicates that detailed analysis of the stated objective did not result in a reportable recommendation.

IX. Abbreviated Terms and Acronyms

ADR - Average Daily Rate
AOS - Auditor of State
Assistant Director - Assistant Director of Natural Resources
BLS - U.S. Bureau of Labor Statistics
Capex - Ongoing Capital Expenditure
CAP-M - Capital Asset Pricing Model
Castalia - Castalia State Fish Hatchery
CBA - Collective Bargaining Agreement
CFR - Code of Federal Regulations
Cleveland Lake Front - Cleveland Lake Front State Park
CMS - Comprehensive Management System
CPI - Consumer Price Index
CPM - Cost per Mile
CRP - Community Rehabilitation Program
CSI - Common Sense Initiative Office
CV - Continuing Value
CY - Calendar Year
CYTD - Calendar Year-to-Date
DAS - Ohio Department of Administrative Services
Director - Director of Natural Resources
DNAP - Division of Natural Areas and Preserves
Engineering - Division of Engineering
ETARS - Electronic Time and Activity Reporting System
FF&E - Fixtures, Furniture, and Equipment
FFY - Federal Fiscal Year
Fleet Management - Office of General Services, Fleet Management
Forestry - Division of Forestry
Fountain Square - ODNR Central Office
FTE - Full-Time Equivalent
FWS - U.S. Fish and Wildlife Service
FY - Fiscal Year
FYTD - Fiscal Year-to-Date
GAGAS - Generally Accepted Government Auditing Standards
Geological Survey - Division of Geological Survey
GFOA - Government Finance Officers Association
Hebron - Hebron State Fish Hatchery
I&E - Division of Wildlife's Information and Education Section
IDNR - Indiana Department of Natural Resources
IRR - Internal Rate of Return
ISPI - Indiana State Park Inns
JCARR - Joint Committee on Agency Rule Review
Kincaid - Kincaid State Fish Hatchery
KPI - Key Performance Indicator
LBFC - Pennsylvania General Assembly's Legislative Budget and Finance Committee
LE - Law Enforcement
LEVs - Law Enforcement Vehicles
London - London State Fish Hatchery
LSC - Ohio Legislative Service Commission

LSC - Legislative Service Commission
LY - License Year
MR&R Fund - Maintenance Repair and Replacement Fund
MRM - Division of Mineral Resources Management
NADA - National Auto Dealers Association
NASPD - National Association of State Park Directors
NPMAC - National Performance Management Advisory Commission
NPV - Net Present Value
NRS - Natural Resource Specialist
NRW - Natural Resource Worker
OAC - Ohio Administrative Code
OAKS - Ohio Administrative Knowledge System
ODNR - Ohio Department of Natural Resources
ODOT - Ohio Department of Transportation
ODPS - Ohio Department of Public Safety
Oil and Gas - Division of Oil and Gas Resource Management
OPP - Optimal Price Point
OPT - Ohio Performance Team
ORC - Ohio Revised Code
P&L - Profit and Loss
Parks - Division of Parks and Recreation
PED - Price Elasticity of Demand
PFBC - Pennsylvania Fish and Boat Commission
PPACA - Patient Protection and Affordable Care Act
PSM - Price Sensitivity Meter
PTP - Part-Time-Permanent
REALM - Office of Real Estate
RevPAR - Revenue per Available Room
RFP - Request for Proposal
ROI - Return on Investment
RTS - Registration and Titling Section
Senecaville - Senecaville State Fish Hatchery
SFR - Sport Fish Restoration Program
Soil and Water - Division of Soil and Water Resources
St. Marys - St. Marys State Fish Hatchery
U.S. Hotel - U.S. Hotel and Resort Management
Watercraft - Division of Watercraft
Wildlife - Division of Wildlife
WIS - Watercraft Information System
WOCRMS - Wild Ohio Customer Relationship Management System
WR - Wildlife Restoration Program
WSFR - Wildlife and Sport Fish Restoration Program
Xanterra - Xanterra Parks and Resorts

X. ODNR Response

The letter that follows is ODNR's official response to the performance audit. Throughout the audit process, staff met with Department officials to ensure substantial agreement on the factual information presented in the report. When the Department disagreed with information contained in the report and provided supporting documentation, revisions were made to the audit report.

Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR JAMES ZEHRINGER, DIRECTOR

February 11, 2015

David Yost
Auditor of State
88 East Broad Street, 5th Floor
Columbus, Ohio 43215

Dear Auditor Yost:

The Ohio Department of Natural Resources (ODNR) would like to thank you and your staff for your recommendations regarding efficiency within our internal operations. We appreciate the report recognizing what processes are effective and identify what steps we might take to improve efficiency throughout the department.

ODNR has already initiated some of the recommendations to streamline our fleet management process and improve utilization of our state parks. We will continue to identify how we can be more cost-effective in our efforts across the state, while managing Ohio's vast natural resources and providing exceptional customer service. We welcome all input that can help ODNR become a more efficient organization, as we are always striving for ways to better streamline processes and operate more efficiently for Ohioans.

Again, we appreciate the time and effort you and your staff dedicated to helping us become the best agency we can be.

Respectfully,

James Zehringer
Director

JZ/me

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Dave Yost • Auditor of State

OHIO DEPARTMENT OF NATURAL RESOURCES

FRANKLIN COUNTY

CLERK'S CERTIFICATION
This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.

Susan Babbitt

CLERK OF THE BUREAU

CERTIFIED
FEBRUARY 12, 2015

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