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# Economic and Social Impacts of Fort Worden State Park

## How Fort Worden Shapes the Local Economy and Community

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## Executive Summary

Located on the northeastern tip of Washington's Olympic Peninsula, Fort Worden State Park is a unique feature within the state park system, going far beyond traditional recreational benefits provided by other parks. Originally a military fort, it now serves as a dynamic hub that integrates historical preservation and recreation with a robust business community, fostering community engagement and educational outreach. This transformation allows Fort Worden to provide significant economic and cultural benefits to Jefferson County and the broader region.

**In 2023, Fort Worden State Park generated a total economic output of \$84 million, supported nearly 600 jobs statewide, and provided nonmarket benefits valued at \$90 million, cumulatively contributing \$174 million in value to the region.**

The park is home to a diverse group of organizations and businesses, such as the Centrum Foundation, Madrona MindBody Institute, Fort Worden School of Woodworking, KPTZ Radio, and the Marine Science Center, and more. These groups use the park's historic facilities to host a variety of events, from music festivals to educational workshops, attracting visitors both locally and nationally. These operating and programming partners not only add to the amenities and events available to park visitors, but also drives economic development in the region by creating jobs and supporting local businesses.

Economically, Fort Worden is a major driver of employment in Jefferson County, generating jobs through direct visitor spending, as well as through the operational needs of its resident operating and programming partners. The spending by visitors supports local sectors such as dining, retail, and lodging, thereby contributing to the economic vitality of the region. Additionally, the park's routine operations and capital expenditures inject significant dollars into the local and state economy, boosting regional economic activity. These benefits are collectively referred to as Market Benefits.

The park also delivers substantial nonmarket benefits—enhancements to public welfare not captured by traditional financial metrics but important for community well-being and environmental sustainability. These benefits include generating consumer surplus, enhancing public health, providing educational opportunities, supporting volunteerism, and delivering ecosystem services. Each plays an important role in developing a deeper appreciation for Washington's natural and cultural resources.

Our analysis highlights significant **market benefits** across three key areas of spending—visitor spending, operations and maintenance, and capital improvements—which together create a substantial economic footprint for the park:

- **Visitor Spending:** In 2023, the park attracted over 800,000 visitors, who spend a total of \$35 million in the regional economy, consisting of Jefferson, Clallam, Island,

Kitsap, and Mason counties. This spending supports local businesses and employment, boosting the local tax base.

- **Operations and Maintenance (O&M) Spending:** This analysis documented operational spending by some of Fort Worden's operating and programming partners, which amounted to \$13.8 million in 2023. This spending helped circulate money through the local economy and sustained local jobs, although it should be noted that O&M data was not gathered for all operating and programming partners.
- **Capital Improvements:** The park consistently invests in enhancing its facilities, with an annual average of \$2 million spent on capital projects. These investments, which only represent some of the projects undertaken, improve the visitor experience while injecting dollars into the local economy and supporting additional jobs.
- **Total Economic Impact:** Fort Worden State Park's activities, including visitor spending, operations, and capital investments, contribute over \$50 million annually. This direct spending, along with secondary economic effects, generates a total economic output of \$84 million across Washington State, including \$47 million within Jefferson County alone. This spending supports 576 jobs statewide and 362 jobs locally, demonstrating the park's critical role in driving both regional and local economic activity.

Additionally, Fort Worden State Park provides many **nonmarket benefits** that enrich the community:

- **Consumer Surplus:** The park provides \$80 million in value to visitors beyond what they pay in fees and trip expenses, representing an excess of benefits over costs. This "consumer surplus" highlights the enhanced personal satisfaction and enjoyment visitors gain from park experiences, contributing to their overall well-being.
- **Health Benefits:** The park's recreational offerings promote physical and mental health, providing \$2.7 million in reduced healthcare costs associated with inactivity and increased productivity by reducing both absenteeism and presenteeism.
- **Educational Benefits:** As a lifelong learning center, the park offers a range of programs from woodworking classes to marine biology workshops, enhancing participant knowledge and appreciation, contributing an estimated \$2 million in educational value.
- **Volunteer Contributions:** Volunteer efforts, which support essential park operations and community engagement, provide significant value estimated at \$709,000.
- **Ecosystem Services:** The park's natural areas offer crucial services like carbon sequestration and water quality, important for regional ecological balance, valued at nearly \$4 million per year.

As the future of Fort Worden State Park is considered, the following key insights underscore the strategic importance of strong investment in the park:

- **Strategic Economic Catalyst:** Investing in Fort Worden State Park fuels local economic growth by boosting visitor spending, creating jobs, and supporting local businesses, making it a key component of regional economic health and vitality.
- **Cultural and Historical Preservation:** Funding Fort Worden not only preserves an important piece of Washington’s history but also supports a vibrant arts and education community that attracts tourists and deepens the local culture.
- **Recreational and Environmental Benefits:** Enhanced investment in Fort Worden ensures the maintenance of its extensive historical facilities as well as natural habitats, promoting community health and sustainability, securing the park as a valuable asset for future generations.

The economic and social contributions of Fort Worden State Park establish it as a historic cornerstone not only of Jefferson County but also of the state. It drives direct economic activity and broadly contributes to community wellbeing. This executive summary, along with the full report, underscores the park’s role as a pillar of economic development in Jefferson County.

## INTRODUCTION

This report presents a comprehensive economic analysis of Fort Worden State Park (“Fort Worden”), assessing both its direct and indirect market contributions and its nonmarket benefits that provide social welfare gains. Unique within the Washington State Parks system, Fort Worden distinguishes itself through its collaborations with local businesses and community organizations. Evolving from a military base to a cultural hub, the park combines natural beauty, historical significance, and vibrant cultural and educational programs, making it an indispensable asset to the region.

Originally established in the late 19th century as part of the "Triangle of Fire" to defend the Puget Sound, Fort Worden was transformed into a state park in 1973. It now houses organizations and businesses such as Centrum, the Port Townsend School of Woodworking, and the Marine Science Center, which expand the educational and public offerings typically provided within state parks. With its extensive recreational amenities and over two miles of saltwater shoreline, the park highlights an important historical story, while enhancing the community’s cultural fabric.

The aim of this analysis is to quantify the diverse value of Fort Worden, informing investment decisions that could further enhance its economic, social, and environmental benefits. Further, this report highlights Fort Worden as a textbook example of how parks can stimulate community engagement, education, and economic development. Commissioned by the Fort Worden Public Development Authority and other key stakeholders, this document also provides a framework with which stakeholders can understand how increased investment could augment these benefits and further promote local economic growth.

## SCOPE OF THE ECONOMIC ANALYSIS

This analysis quantifies the wide range of benefits generated or supported by Fort Worden in 2023. The benefits provided by these partners are categorized into **Market Benefits** and **Nonmarket Benefits**, representing the different dimensions of economic benefit related to the park. Together, these analyses offer a comprehensive and holistic view of the economic benefits of Fort Worden, highlighting both the tangible and intangible contributions to the regional economy and community well-being.

The **Market Benefits** analysis focuses on tangible financial transactions—those that effectively "pass through the cash register." This analysis captures direct financial contributions from Fort Worden’s operating and programming partners (located within the state park) and spending by visitors related to their trips to the park, as well as the secondary economic effects triggered by these expenditures. This includes:

- **Operations and Maintenance (O&M) Spending:** Ongoing expenditures necessary to maintain and operate Fort Worden facilities, which support local businesses and sustain jobs.
- **Capital Improvements:** Spending on major projects that upgrade and enhance park facilities, driving additional economic activity through job creation and local procurement.
- **Visitor Spending:** Visitor spending on recreation-related goods and services, like hotels, restaurants, and retail, which boost the local economy by supporting jobs, increasing tax revenues, and contributing to overall GDP growth.

The **Nonmarket Benefits** analysis evaluates the broader economic and social values that are not captured by direct financial transactions. This includes:

- **Consumer Surplus:** Consumer surplus represents the additional value that visitors receive from using parks and recreational facilities, over and above what they actually pay, representing the personal satisfaction, enjoyment, and well-being that visitors gain from park experiences.
- **Health Benefits:** The park's recreational facilities allow for activities like hiking, kayaking, and cycling, which improve physical and mental health by enhancing fitness and reducing stress. These activities contribute to overall community health by reducing healthcare costs and increasing workplace productivity.
- **Educational Value:** Fort Worden acts as an educational hub, offering a variety of programs such as historical tours and marine biology workshops. These offerings enrich participants' knowledge and appreciation of natural and cultural heritage.
- **Volunteer Value:** Volunteers are integral to Fort Worden's operations, from providing staffing support to facilitating events. Their contributions represent significant community engagement and investment in the park's success.
- **Ecosystem Services:** The park's healthy natural lands provide ecosystem services such as carbon sequestration, water filtration, and wildlife habitat, important for ecological balance and resilience.

### Partner Contributions to Fort Worden's Value

Fort Worden collaborates with a diverse array of operating and programming partners, delivering significant economic, social, and environmental benefits. These partners utilize the park's facilities to offer programs that attract hundreds of thousands of visitors – both locals and tourists – who directly influence the economic metrics presented in this report.

The operating and programming partners involved in this study each contribute to the appeal of Fort Worden as a destination. These partners, who voluntarily provided data, shared the information that was readily available to them. The table below lists the partners along with an indication of the quantifiable benefits that they contribute. It is important to note that the

designation 'NA' does not imply that a particular benefit is not provided; rather, it indicates that data for that benefit category could not be obtained.

Partner	Visitor Spending	O&M Impacts	Capital Spending	Consumer Surplus	Health Benefits	Volunteer Value	Educational Benefits
Centrum	X	X	NA	X	NA	X	X
Coastal Artillery Museum	NA	NA	NA	NA	NA	NA	NA
Copper Canyon	NA	NA	NA	NA	NA	NA	NA
Corvidae Press	NA	X	NA	NA	NA	NA	NA
Fort Worden Foundation	NA	NA	NA	NA	NA	NA	NA
Fort Worden Hospitality	X	X	NA	X	NA	NA	NA
Fort Worden Lifelong Learning PDA	NA	X	X	NA	NA	NA	NA
Friends of Fort Worden State Park	NA	X	NA	NA	NA	X	NA
KPTZ 91.9 FM	NA	X	X	NA	NA	X	NA
Madrona MindBody Institute	X	X	X	X	X	NA	NA
Northwind Arts	X	NA	NA	X	NA	X	X
Peninsula College	NA	NA	NA	NA	NA	NA	NA
Port Townsend Marine Science Center	X	NA	NA	X	NA	X	X
Port Townsend School of Woodworking	X	X	NA	X	NA	NA	NA
Rainshadow Recording	NA	NA	NA	NA	NA	NA	NA
United Earth Networks	NA	NA	NA	NA	NA	NA	NA
Washington State Parks	X	X	X	X	X	NA	NA

### Valuation Methods and Data Sources

In the economic analysis of Fort Worden, a combination of visitor use data, visitor spending data collected via surveys, partner financial data, hours of education, volunteer hours, and economic data from the Bureau of Economic Analysis (BEA) and the literature is used to evaluate both market and nonmarket benefits. For the market analysis, an input-output model with regional economic multipliers from the BEA's RIMS II dataset is used. This custom input-output model illustrates how operations and maintenance spending, capital improvements, and visitor spending flow through Jefferson County's economy. It also traces the secondary ripple effects of this spending, both locally and throughout the broader state economy, as dollars circulate and are re-spent. For nonmarket benefits, techniques such

as avoided cost, alternative cost, travel cost, and benefit transfer methods are applied to assess the value of health improvements, volunteer contributions, recreational enjoyment derived from the park, and ecosystem services.

## RESULTS OF THE ANALYSIS

This section provides an overview of the market and nonmarket benefits provided by Fort Worden, as estimated through the aggregation and standardization of data from participating partners, coupled with the application of economic multipliers. Each benefit category highlights a facet of the park's value to both the local and broader state economy and social welfare. These findings demonstrate how Fort Worden serves as an important component of regional economic stability and a model of cultural, historical, and recreational enrichment. These results support the case for ongoing and increased investment in its facilities and programs. Detailed data sources and methods are documented in Appendix A.

This analysis highlights significant market benefits across three key areas of spending—visitor spending, operations and maintenance (O&M), and capital improvements.

- **Visitor Spending:** In 2023, Fort Worden attracted over 800,000 visitors, who spent a total of \$35 million in the regional economy, which includes Jefferson, Clallam, Island, Kitsap, and Mason counties. This spending supported local businesses, generated employment, and boosted the local tax base. Regular visitors to the park alone contributed \$26.2 million, highlighting the significant dollars injected into the regional economy by hikers, campers, and beachgoers, who often include the park in their travel itineraries across the Olympic Peninsula. Additionally, spending linked to events and programs hosted by partners such as Fort Worden Hospitality and Madrona MindBody Institute accounts for the remaining \$8.4 million in visitor spending. These partner-related visits play an important role in attracting and circulating dollars within the region, particularly due to the unique nature of their offerings. The analysis shows that sectors like hospitality and retail directly benefit from both regular and partner-related visitation, emphasizing the park's role in supporting local business and employment in Jefferson County.
- **O&M Spending:** In 2023, O&M spending by a subset of Fort Worden's operating and programming partners amounted to \$13.8 million, as recorded in financial statements. This spending, sourced from 9 of the 17 partners—primarily the largest contributors—circulated a substantial amount of money through the Jefferson County economy and supported local employment. Specifically, these expenditure sustained approximately 168 jobs in Jefferson County, or 204 jobs when considering the broader statewide economic impact. These expenditures spanned a diverse array of services, from architectural and engineering services to maintenance and repair. Additionally, the state and local tax contributions of this spending, estimated at \$1.5 million, included sales tax, taxes on wages, and taxes on business operations.



- **Capital Improvements:** Fort Worden and its operating and programming partners often invest in enhancing their facilities, with annual average spending of \$2 million on capital projects. This figure is based on recorded and planned capital expenses from partners, averaged over several years to provide a representative estimate of annual spending. These investments not only improve the visitor experience but also inject significant funds into the local economy, supporting quality, living-wage jobs. Specifically, these capital projects supported approximately 6 jobs in Jefferson County in 2023, with the number rising to 7 when considering the statewide economic impact. The spending on these projects ranges from air conditioning and heating equipment to advanced electrical systems and engineering services. Furthermore, there's a notable backlog of capital projects which – if funded - would provide immediate economic benefits to the region.
- **Total Economic Impact:** Together, visitor spending, operations, and capital investments contribute over \$50 million annually to the regional economy. This direct spending, combined with secondary economic effects, generates a total economic output of \$84 million across Washington State, with \$47 million concentrated within Jefferson County alone. This economic activity supports 576 jobs statewide and 362 locally. On average, each million dollars in spending supports approximately 11.4 jobs. Notably, local and state tax contributions from these activities total \$5.3 million annually. Overall, this represents a significant return on investment, even before accounting for the extensive nonmarket benefits the park provides.

Beyond these tangible financial impacts, Fort Worden provides many **nonmarket benefits**. Valuing these benefits is useful for policymakers because they represent substantial, yet often unrecognized, contributions to societal welfare. Although these benefits – such as consumer surplus, health improvements, and ecosystem services – are not captured through direct market transactions, they represent measurable value that enhances community well-being and quality of life. By accurately assessing these benefits, policymakers can make more informed decisions that truly reflect the worth of assets like Fort Worden. The key nonmarket benefits identified in this analysis include:

- **Consumer Surplus:** The park provides \$80 million in value to visitors beyond what they pay in fees and trip expenses. This "consumer surplus" highlights the enhanced personal satisfaction and enjoyment visitors gain from park experiences, contributing to their overall well-being. Recognizing the importance of consumer surplus is essential for policymakers, as it reflects the value of recreational areas to the public. Effective policy and investment decisions should aim to maximize this consumer surplus, thereby optimizing the societal benefits derived from public amenities.
- **Health Benefits:** The park's recreational offerings promote physical and mental health, contributing an estimated \$2.7 million in reduced healthcare costs and increased workplace productivity. Fort Worden's facilities encourage activities like hiking, kayaking, and cycling, which are vital for combating obesity, reducing stress,

and improving mental health. In 2023, these activities translated into \$1.4 million in avoided healthcare costs and \$1.3 million in productivity gains.

- **Educational Benefits:** As a lifelong learning center, the park offers a range of programs from woodworking classes to marine biology workshops, enhancing participants' knowledge, skills, and appreciation of natural and cultural history. In 2023, these programs delivered 119,640 hours of youth education, valued at approximately \$2 million. The educational value is calculated based on an hourly rate of \$16.87, adjusted from Washington State's per-pupil expenditure. These educational programs not only support academic learning but also foster personal development through immersive, place-based experiences.
- **Volunteer Contributions:** In 2023, volunteers at Fort Worden State Park contributed 17,600 hours to support park operations and community engagement, providing a value of approximately \$709,000. This valuation is based on the Independent Sector's hourly rate of \$40.28 for Washington State. These contributions enhance the park's service capacity while reducing operational costs, thereby allowing funds to be redirected towards other important needs.
- **Ecosystem Services:** The park's natural areas provide numerous ecosystem services – benefits that nature provides to people – valued at nearly \$4 million annually. These ecosystem services are generated across diverse landcovers such as forests, grasslands, and wetlands. For example, they contribute to water quality improvements, carbon sequestration, and mitigation of natural hazards like flooding and extreme heat. In fact, ecosystem services provide the foundation for a healthy, functioning economy.
- **Total Nonmarket Benefit:** Cumulatively, the nonmarket benefits provided by Fort Worden are estimated at approximately \$90 million for 2023, representing the extensive value contributed by the park beyond traditional economic measures.

### Total Value of Fort Worden

The comprehensive valuation of Fort Worden reveals a total estimated value of \$174 million in 2023. This figure encapsulates both market and nonmarket benefits, reflecting the park's substantial contribution to economic activity and community welfare. By combining these elements, a holistic view of the park's economic and societal impact is presented. This combined value emphasizes the significant role that Fort Worden plays not only as an economic driver but also as a cornerstone of cultural, recreational, and environmental benefits in the region.

## CONCLUSION AND RECOMMENDATIONS

This economic report on Fort Worden not only highlights the park's current value but also identifies significant opportunities for enhancement through strategic investments. The data presented provides a basis for actionable strategies, emphasizing the necessity of continued investment to maximize the park's potential.

Investing in Fort Worden should be viewed as a strategic move to transform existing challenges into opportunities for growth. Proposed enhancements include the restoration of historical structures and upgrades to visitor facilities. Additionally, developing innovative transportation strategies could be useful in facilitating additional visitation (and associated spending) from urban areas. These investments are expected to:

- **Boost Visitor Numbers:** By enhancing accessibility and facilities, the park can attract more visitors, increasing local spending and supporting more jobs.
- **Enhance Visitor Satisfaction:** Investments in quality infrastructure can improve overall visitor experiences, encouraging longer stays and repeat visits.
- **Generate Additional Revenue:** Upgraded services and facilities can open new revenue streams, such as increased event hosting and increased concessions.

Addressing the infrastructure needs of Fort Worden, capitalizing on opportunities for enhancement, and utilizing its full potential as a cultural and recreational hub are essential. The continued engagement and investment by the operating and programming partners are crucial to transforming the park into a community asset that continues to contribute significantly to the region's economic and cultural landscape.

This report serves as a call to action for all stakeholders involved with the park. By focusing on the economic arguments presented, stakeholders can not only use the data to make the business case for proposed investments, but also ensure that these investments translate into tangible improvements in the park's infrastructure and services. Stakeholders are encouraged to utilize this economic analysis, both the topline results and detailed category-specific results, in discussions with policymakers, funders, and the community to highlight how strategic investments in the park can yield significant economic and social returns.

## Appendix A

The purpose of this appendix is to detail the methods and results of the unique benefits provided by FWSP.

### MARKET BENEFITS

This section outlines the tangible economic impacts of parks and recreation, focusing on the direct and multiplier effects on the local economy. The analyses will examine how spending within these facilities not only benefits the immediate area but also stimulates broader economic activity. The analysis divides market benefits into three main categories: Operations and Maintenance, Capital Improvements, and Visitor Spending, each contributing uniquely to economic growth.

By siloing down these areas, we aim to provide a clear understanding of how investments in parks and recreation facilities generate economic value, supporting local businesses, creating jobs, and enhancing the overall economic stability of the community.

#### Economic Impact of Visitor Spending

**Introduction:** Visitor spending at Fort Worden plays a crucial role in stimulating the local and regional economies. This segment of the analysis focuses on expenditures made by visitors in various sectors such as retail, hospitality, and recreation, excluding on-park spending. The spending reflects not only the spending within Jefferson County by visitors, but also accounts for the financial impact visitors have while traveling to the park, crossing through Clallam, Island, Kitsap, and Mason counties.

**Methods Summary:** To assess the economic impact of visitor spending, existing data from a 2020 state park visitor spending survey were utilized, alongside a recent survey conducted among patrons of operating and programming partners. These surveys provided spending profiles that were multiplied by corresponding visitation data to calculate the total spending by park visitors. RIMS II multipliers were then applied to these figures to evaluate the direct, indirect, and induced effects of visitor expenditures on both the local and broader state economy.

**Results:** For calendar year 2023, total visitor spending outside the park amounted to \$34.65 million. This spending generated substantial economic output as follows:

- **Jefferson County:** Direct and multiplier effects from this spending resulted in a total economic output of \$27.14 million, supporting 188 jobs and contributing \$6.04 million in labor income. The value added by these expenditures was approximately \$11.42 million.

- **Statewide (including Jefferson County):** The broader impact across Washington included a total economic output of \$57.56 million, supporting 365 jobs and providing \$14.41 million in labor income. The overall value added by these investments reached nearly \$27.97 million.

**Discussion:** Visitor spending is a significant contributor to economic vitality in both Jefferson County and the surrounding area. These expenditures not only support local retail and service industries but also generate substantial employment and add value to the economy through multiplier effects. The dispersion of spending across multiple counties highlights the park's influence as a regional economic driver. Moreover, the analysis demonstrates the importance of maintaining and enhancing park amenities and accessibility to sustain and grow these economic benefits, underscoring the park's role in boosting tourism-related economic activities.

### Economic Impact of Operational Expenditures

**Description:** Operational expenditures at Fort Worden encompass a broad spectrum of activities crucial for daily maintenance and smooth operation. These expenses include staffing, landscaping, facility maintenance, and utilities, essential for maintaining the park's accessibility and enjoyment for visitors.

**Methods Summary:** Operational spending was analyzed using an input-output model equipped with regional economic multipliers from RIMS II, the Bureau of Economic Analysis' economic impact dataset. This method quantifies both the direct impact of the park's spending and the secondary effects that propagate through the local economy. The analysis leveraged financial data collected from operational partners at the park, including Centrum, Corvidae Press, FW Hospitality, PDA, Washington State Parks, KPTZ, Madrona MindBody Institute, and the School of Woodworking, reflecting expenditures specifically related to park operations.

**Results:** In fiscal year 2023, operational spending by Fort Worden and its partners totaled \$13.886 million. This spending generated a total economic output of \$23.4 million within the state, supporting 204 jobs annually across various sectors. The breakdown is as follows:

- **Jefferson County:** The direct and multiplier effects within the county contributed to \$17.114 million in output, supported 168 jobs, and generated \$4.96 million in labor income.
- **Statewide (including Jefferson County):** Total impact extended to \$23.403 million in economic output and supported 204 jobs with a total labor income of \$7.445 million.

**Discussion:** The substantial economic output and employment generated by operational spending underscore its critical role in the local economy. Beyond maintaining park

facilities, these expenditures stimulate significant economic activity across various sectors, from service industries to construction. This multiplier effect enhances the overall economic stability and growth of the region, making a strong case for sustained or increased investment in park operations.

### Economic Impact of Capital Improvements

**Description:** Capital improvements at Fort Worden involve substantial investments in the construction, enhancement, and restoration of park facilities. These projects range from updating air conditioning and heating systems to enhancing audio-visual equipment and maintaining or upgrading park infrastructure. Such capital investments are important for ensuring the park meets current standards and remains a vibrant attraction for visitors.

**Methods Summary:** To evaluate the economic impact of capital expenditures, an input-output model incorporating regional economic multipliers was applied to capital expenses. This analysis relies on a consistent yearly estimate, derived from both recorded and planned capital expenses from the park's partners, averaged over multiple years. It accounts for the direct financial impacts as well as the broader ripple effects these investments have on both the local and state economies.

**Results:** Between 2023 and 2026, Fort Worden is projected to spend an average of \$1.982 million annually on capital improvements. This investment results in significant economic returns:

- **Jefferson County:** Direct and multiplier effects from this spending generated a total economic output of \$2.705 million, supporting six jobs and contributing \$467,971 in labor income. The value added by these expenditures amounted to \$844,766 annually, with tax contributions of \$143,175 in state and local taxes and \$68,505 in federal taxes.
- **Statewide (including Jefferson County):** The wider impact across Washington includes a total economic output of \$3.217 million, supporting seven jobs and providing \$678,178 in labor income. The overall value added by these investments reached \$1.255 million, with further tax contributions of \$190,437 in state and local taxes and \$214,599 in federal taxes.

**Discussion:** The investments in capital improvements at Fort Worden enhance its infrastructure and visitor experience, which in turn bolsters the local and regional economies. These expenditures not only sustain construction-related jobs but also stimulate economic growth across various sectors, from engineering services to equipment maintenance. The multiplier effect of capital spending allows the park to be a strong tool for economic development in the region.

## NONMARKET BENEFITS

Beyond their direct financial contributions, the parks and recreation facilities at Fort Worden provide substantial nonmarket benefits that are pivotal for community well-being and environmental sustainability. These benefits, though not directly transacted through financial means, play a critical role in enhancing quality of life. They include health improvements through physical activities, educational opportunities through various programs, community building through volunteer efforts, and ecosystem services that maintain natural balance. This section explores each of these categories, detailing how they contribute to the social fabric and ecological health of the region.

### Nonmarket Value of Consumer Surplus

**Introduction:** Consumer surplus represents the additional value that visitors receive from using parks and recreational facilities over what they actually pay. It quantifies the benefit to consumers in monetary terms, reflecting the personal satisfaction or utility gained from park activities that exceeds the cost of participation. This surplus is a useful measure in understanding the non-market value that parks provide to the community, showcasing how much visitors value these resources above the price they are charged.

**Methods Summary:** To estimate the consumer surplus, the number of park visits were multiplied by an average consumer surplus value derived from similar recreational settings. This approach utilizes existing research and case studies to assign a dollar amount to the perceived value that visitors gain from park activities, providing a quantifiable measure of the parks' intangible benefits.

**Results:** The analysis finds that in 2023, the park generated a total consumer surplus of \$80,645,651. This figure was calculated by multiplying the 809,625 park visits by an average consumer surplus of \$91.13 per visit.

**Discussion:** The consumer surplus of \$80.6 million at Fort Worden in 2023 indicates the park's appeal and utility to visitors, presenting a basis for potential enhancements in funding and investment, either through increased government investment and/or the introduction of innovative funding mechanisms. As improvements are made to the park, increasing its desirability, the consumer surplus per visit may also rise. This trend can help justify strategic investments aimed at elevating visitor satisfaction and engagement, thereby enhancing the park's economic and social benefits.

### Nonmarket Value of Physical Activity

**Description:** Fort Worden's recreational facilities provide an essential venue for various physical activities, including hiking, kayaking, and cycling. These activities are important for enhancing both physical and mental health, offering significant nonmarket benefits. The

park's accessibility and diversity of recreational options also play a role in promoting active lifestyles, which are key to combating obesity, reducing stress, and improving overall mental health.

**Methods Summary:** The analysis uses public health research that establish the link between regular physical activity and reductions in healthcare costs and chronic disease incidence. We also incorporate data on absenteeism and presenteeism reductions, drawing from studies that correlate physical health with workplace productivity. This approach allows us to quantify the overall health-related economic benefits attributed to the park's activities.

**Results:** In 2022, activities at Fort Worden accounted for 135,707 days of physical activity. This activity translated into significant economic benefits:

- **Avoided Healthcare Costs:** Regular physical activities at the park have led to an estimated \$10.34 saved per visit in healthcare costs. This results from fewer medical visits and a decreased reliance on healthcare services, totaling approximately \$1.4 million annually in healthcare cost savings.
- **Productivity Gains:** The park's role in enhancing mental health and overall well-being contributes approximately \$9.67 per visit in increased productivity, through reduced absenteeism and improved presenteeism, amounting to \$1.3 million annually.
- **Total Economic Value of Physical Activity:** Combining healthcare savings and productivity gains, the total nonmarket value of physical activity provided by the park in 2022 was \$2.7 million.

**Discussion:** The data highlights Fort Worden's impact on reducing healthcare costs and increasing productivity through physical activity. These benefits demonstrate the park's role in supporting public health and economic stability. Ongoing investment in the park's facilities can continue to support these benefits, reinforcing its value as a public health asset.

### Nonmarket Value of Educational Programs

**Description:** Educational programs at Fort Worden provide substantial nonmarket value by offering diverse learning experiences outside the traditional classroom setting. These programs, delivered by partners such as Centrum, Northwind Arts, and the Port Townsend Marine Science Center, utilize the unique environment of the park to enhance educational outcomes and personal development for youth.

**Methods Summary:** The economic valuation of these educational programs is calculated by applying the cost of public education per hour, adjusted for the specific instructional setting at the park. For 2023, the value of one hour of youth education was estimated at



\$16.87. This rate is derived from the adjusted annual per-pupil expenditure in Washington State, providing a conservative estimate of what it would cost to deliver similar educational content in a conventional school environment.

**Results:** In 2023, the educational activities facilitated by Fort Worden's partners amounted to a total of 119,640 hours of youth programming. By applying the hourly educational value, the total economic value of these educational programs in 2023 reached approximately \$2,017,956. This significant figure highlights the critical role of the park's educational offerings in both enhancing academic learning and contributing to the holistic development of young participants through immersive, place-based experiences.

- **Hours of Youth Educational Programming:** 119,640 hours
- **Hourly Value of Youth Education:** \$16.87
- **Total Economic Value of Education:** \$2,017,956

**Discussion:** The educational programs at Fort Worden offer unique, real-world experiences that are important for fostering a deeper understanding of local history and natural sciences. Engaging students in this kind of hands-on, contextual learning can help develop interest in subjects like history and environmental science. Additionally, these experiences help in developing critical thinking and problem-solving skills outside the conventional classroom setting.

### Nonmarket Value of Volunteerism

**Description:** Volunteers are integral to the operations of Fort Worden, contributing significantly to its maintenance and program execution. The labor provided by volunteers helps reduce operational costs and increases the park's capacity to offer diverse programs and services without a proportional increase in expenses.

**Methods Summary:** The economic value of volunteer contributions is calculated by applying the Independent Sector's rate of \$40.28 per hour, which represents the average monetary value of volunteer time. This metric allows us to quantify the economic impact of the 17,600 hours volunteered at the park in 2023.

**Results:** In 2023, the total volunteer hours at Fort Worden were valued at \$708,930, reflecting substantial cost savings and added operational value. This valuation demonstrates the significant role that volunteers play in supporting the park's operations, directly contributing to cost efficiencies and enhancing service capacity without corresponding financial expenditures:

- **Total Hours of Volunteer Work:** 17,600 hours
- **Hourly Value of Volunteer Work:** \$40.28
- **Total Economic Value of Volunteer Contributions:** \$708,930

**Discussion:** Volunteer efforts help offset labor costs, allowing for the reallocation of funds to other areas like facility upgrades and program expansion. Additionally, volunteer engagement strengthens community bonds with the park. Enhancing and sustaining volunteer involvement should be a strategic goal, given its significant economic benefit.

### Nonmarket Value of Natural Capital

**Description:** Fort Worden delivers a range of ecosystem services that enhance environmental sustainability and local quality of life. Ecosystem services are natural processes that provide benefits to humans, and include improving air quality, stabilizing climate, regulating water, retaining soil, and supporting biodiversity. The park's varied natural landscapes, from forests to wetlands, are crucial in maintaining ecological balance and biodiversity.

**Methods Summary:** The valuation of ecosystem services at Fort Worden relies on the economic benefit estimates from a 2020 study by Mojica et al. To ensure accuracy, these figures have been adjusted to reflect 2023 economic conditions by applying appropriate inflation rates, updating the 2020 values to current USD.

**Results:** The total annual value of ecosystem services provided by Fort Worden amounts to \$3,981,909. The breakdown of these values by specific services and landcovers is as follows:

- **Aesthetic Information:** \$3,449,780
- **Air Quality:** \$80,751
- **Climate Stability:** \$66,426
- **Cultural Value:** \$3,677
- **Disaster Risk Reduction:** \$30,478
- **Food Provision:** \$3,244
- **Habitat Provision:** \$54,012
- **Science & Education:** \$672
- **Soil Retention:** \$437
- **Water Capture, Conveyance, & Supply:** \$62,165
- **Water Quality Improvement:** \$230,267

**Total Annual Value:** \$3,981,909

**Discussion:** The value of ecosystem services identified in this analysis emphasizes Fort Worden's role in supporting ecological and economic sustainability. These natural assets support environmental functions like climate regulation and water filtration and also aid in disaster risk reduction and cultural enrichment. Accurately assessing these nonmarket benefits is important for effective land use and environmental planning. Investing in these

landscapes helps maintain essential ecological functions and contributes to the region's socio-economic stability.

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