Optimizing Capital Investment Strategy

Submitted by:

Kevin R. Beardsley, CPA

Chief Financial Officer

Duluth Seaway Port Authority

Email: kbeardsley@duluthport.com

Office: (218) 740-5433

Cell: (218) 830-0270

Ceasar C. Duarte, Jr. MPE

Director of Engineering and Operations

New Bedford Port Authority

Email: Ceasar.duarte@newbedford-ma.gov

Office: (508) 961-3000 ex. 67294

Cell: (774) 992-8003

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Author Bios

Kevin R. Beardsley, CPA, Chief Financial Officer, Duluth Seaway Port Authority

Mr. Beardsley joined the Duluth Seaway Port Authority in December 2014 as the third Chief Financial Officer in the agency's history. He is responsible for overseeing all financial activity and planning for the organization. For six months in 2018, he also served as interim executive director while a search for a new executive director was underway.

In the past 30 years, his work has encompassed managing resources at small privately-owned companies, an energy cooperative, and a large investor-owned energy corporation. Kevin has built a reputation for his expertise in financial analysis, accounting, taxation, financial management, and strategic planning, helping companies navigate complex financial landscapes.

Kevin holds an Associate of Arts in Business from Hibbing Community College, a Bachelor's of Science in Accounting from the University of Wisconsin-Superior, and is a Certified Public Accountant (CPA). He is a member of the American Institute of Certified Public Accountants (AICPA) and the Minnesota Society of Certified Public Accountants (MNCPA) and holds several certifications including, but not limited to, Maritime Port Executive (MPE) from the International Association of Maritime and Port Executives (IAMPE).

Ceasar C. Duarte, Jr. MPE, Director of Engineering and Operations, New Bedford Port Authority

Mr. Duarte joined the New Bedford Port Authority at the beginning of 2019 as the Director of Operations and Engineering. For the past few years, Mr. Duarte has been instrumental in the Port of New Bedford's revitalization. Having a strong engineering, project, and construction management educational and employment background, Mr. Duarte's responsibilities at the Port include coordinating, organizing, and managing all construction, inspection, dredging, engineering activities, and maintenance, of the Authority. He is also a vital part of the Port's team supervising all city-owned waterfront properties (19 commercial properties, docks, piers and wharves, 201 slip marina, parking areas, and boat ramps.)

Mr. Duarte holds a B.S. in Civil Engineering from the University of Massachusetts, Dartmouth, and has acquired several certifications including, but not limited to; Maritime Port Executive (MPE) from the International Association of Maritime and Port Executives (IAMPE).

Introduction

A well-defined capital investment strategy (CIS) is crucial for a port's growth and sustainability. It helps ports allocate resources toward achieving their long-term goals while mitigating potential risks. Capital investment decisions are critical in directing or deciding the future direction of ports, whether to expand operations, upgrade technology or enter new markets. This is true regardless of a port's size, annual revenue, location, or asset depth.

A port's CIS considers the need to balance revenue maximization and strategic alignment with the port's mission, risk management, ethical considerations, the impact of the global economy, and local community engagement concerns. For our analysis, we used the Duluth Seaway Port Authority (DSPA) and the New Bedford Port Authority (NBPA) as examples of two ports of similar size to develop the information needed for a CIS. In the end, this paper provides a roadmap for a port to assess its existing financial-planning structure and use the available information to develop a CIS.

The importance of a strong CIS for ports cannot be overstated. While both the DSPA and the NBPA are financially stable, there is always room for improvement through enhanced long-term planning and increased profitability. Since a CIS has not yet been developed for either Port, it is important to take the initial steps to create one. With increasing competition, costly projects, technological advancements, and stringent environmental regulations, ports must strategically allocate resources to maintain and enhance their competitive edge. This involves not only expanding and/or modernizing physical infrastructure but also integrating advanced technologies, such as automation and digitalization, to streamline operations and reduce costs.

Managing a port's finances typically involves two key concepts, a longer-term planning component CIS and a shorter-term component (e.g. the budget documents). Although they both involve planning and allocating resources, they serve different purposes and are approached in distinct ways.

CIS for DSPA and NBPA is a long-term financial plan focusing on large-scale projects and improvements to the port's infrastructure, equipment, and its facilities. It outlines significant investments needed for future growth, resilience, technological advancements, and ensuring the port remains competitive. These investments can include things such as upgrading cranes, expanding terminals, or building new docks. The strategy considers factors like future demand, industry trends, risk, and the economic return on investment. The goal is to enhance the port's capacity, profitability, and efficiency over time. These types of investments are reported on DSPA's and NBPA's balance sheets as shown in Exhibit A.

Typical port budget documents for DSPA and NBPA are shorter-term financial planning tools that cover the port's day-to-day operations over a one-year period. They include operational expenses such as salaries, utilities, maintenance, and administrative costs. While there might be smaller projects or maintenance-related expenditures, these documents don't focus on major, transformative investments. An example of these types of documents is shown in Exhibit B.

The objective of this paper is to identify best practices to develop a port-specific CIS that will help guide informed decisions regarding the allocation of capital resources, thereby driving growth, profitability, and long-term success. We focused on the maritime industry and will provide insights to port executives, senior management, and boards of directors seeking investment strategies to drive business growth and increase profitability.

This paper is designed to explore the foundational elements of a CIS. We will discuss key components such as strategic planning, investment techniques, risk management, and performance

measurement of the DSPA and the NBPA. Our goal is to help other ports recognize the importance of this planning process and understand that it can start at the most basic level, as demonstrated by our ports, rather than be perceived as an overwhelming task. Whether it's an internal effort to begin the process or a first step in determining the next course of action, progress can be made gradually.

Background

Duluth Seaway Port Authority (DSPA)

The Port of Duluth-Superior is the nation's furthest inland seaport and the largest port on the Great Lakes by tonnage. We move the raw materials of your everyday life through this port into and out of the North American Heartland. It is predominantly a bulk, non-hazardous, natural resources port, so from a tonnage perspective, most of what moves is iron ore, limestone, grain, coal, salt, and cement. There has been shipping through the port since the late 1800s and the DSPA was created in the late 1950s to support the opening of the Great Lakes-St. Lawrence Seaway in 1959.

The Port of Duluth-Superior has one general cargo/breakbulk terminal, the Clure Public Marine Terminal, and it is owned by the DSPA. In addition maritime activity at the Clure Terminal, we have on-dock rail from four Class I railroads, over 500,000 SF of warehouse space, trucker's services, an intermodal (container) facility for road and rail, and a monthly liner service between Antwerp and Duluth for containers and general cargo. Through the years, the Port Authority made many intentional capital investments, but it did not have a strategic capital investment strategy (CIS). The need for a more formal strategy was addressed when the Port Authority developed its first long-term strategic plan at the end of 2021.

New Bedford Port Authority (NBPA)

The port of New Bedford is a deep-water commercial port with easy access to the maritime corridor from the Massachusetts coast, located on the northwestern side of Buzzard's Bay. The Port is

approximately nine nautical miles from the Cape Cod shipping canal, 83 miles south of Boston, and 166 miles north of New York. For the past 21 years and counting, the Port of New Bedford has been America's highest-grossing commercial fishing port. According to one recent study, the port generates – largely through fishing, seafood processing, and related businesses – over $11 billion in economic output and supports nearly 7,000 jobs. (Martin Associates, 2019)

As a full-service port, the Port of New Bedford has businesses to support the fishing and cargo industries, including operations such as warehouses, ice houses, boatyards and ship repair yards, construction, engineering, tug assists, pilots, and other maritime services, including the emerging offshore wind industry. The NBPA manages city-owned waterfront property, including, five commercial wharves, a newly constructed 660 linear foot terminal, as well as a 204-slip recreational marina and 19 real estate assets.

Understanding Capital Investment

Capital investment refers to the funds that a port uses to purchase, improve, or maintain physical assets such as property, industrial buildings, docks, wharves, or equipment. It can also be used to refer to investments in ventures that will yield benefits in the future, contributing to the growth and development of the port. The key components of a capital investment can be found in Appendix A.

As global trade volumes continue to grow and evolve, ports must adapt to new challenges and opportunities through strategic capital investments. These investments are important for enhancing port capacity, improving operational efficiency, and ensuring sustainability.

The DSPA and NBPA, along with ports across the United States and beyond, must invest in deeper berths, larger cranes, and improved inland connectivity to accommodate these changes. Additionally, the shift towards greener and more sustainable port operations requires substantial

investments in renewable energy sources, energy-efficient equipment, utility infrastructure upgrades, and pollution control measures. The DSPA is one of the founding members of Green Marine and is focused first on reducing greenhouse gas emissions associated with our terminal, which is what we can control directly. In the case of the NBPA, the emergence of offshore wind, its ever-developing processes and the effects of the long-term operations and maintenance phases (O&M) will have on the port community are examples of shifting to greener operations.

Figure 1, This image created with the assistance of DALL E 2 software

To support international trade, ports must continuously evolve through strategic capital investments to meet the demands of an interconnected global economy.

Ports have significant capital investment needs and limited resources which is very true for the DSPA and NBPA. An effective CIS is not just a financial necessity but a strategic imperative for ensuring the long-term sustainability and competitiveness of ports.

Evaluation and Decision Making

Decision-making in a CIS is a critical process that involves evaluating multiple aspects of potential investments. The key to this process is to align these investments with the port's strategic goals, ensuring the long-term success and profitability of the port. This approach not only ensures efficient resource allocation and risk management, but also promises that the chosen investments contribute to the port's strategic vision.

Development of an effective CIS should include performing a needs assessment to identify investment opportunities and determine what the port needs to grow, maintain operations, or improve efficiency, and align with its strategic objectives. This analysis may be formal or informal, but it should include having a conversation with the port terminal operators and port users/customers directly to get a feel for what is possible for new business or understand what has changed in the business environment. Ports then prioritize projects by assessing the technical, economic, and legality aspects of potential projects, along with evaluating the strategic fit for each project and how it aligns with the port's long-term goals and strategic plan.

Performing a financial analysis to calculate the total cost of the investment, including acquisition, installation, interest rates if financing, and maintenance costs, is important. The port should also estimate the potential revenue the investment will generate and its projected cash inflows and outflows. This involves using various analytical tools and methodologies to assess the likelihood of profitability and viability of an investment for the port, as discussed above in the section on Evaluation and Decision Making.

When deciding what capital project is needed, ports should evaluate different scenarios and engage stakeholders and experts. Ports should also develop a stakeholder engagement plan and have early and continuous engagement throughout the project to ensure valuable input can be integrated into the port’s capital project.

It's equally important to develop a detailed plan for executing and implementing the investment. This should include timelines, responsibilities, and milestones, ensuring the investment's success and addressing any issues that arise. Furthermore, continuous monitoring of the investment's performance against projected outcomes is crucial, allowing for necessary adjustments to optimize the investment's performance.

Risks and Considerations

Capital Investment Strategy requires the characterization and consideration of several types of risk that ports must carefully manage to ensure successful project outcomes. Managing these risks involves thorough planning, due diligence, and often contingency strategies to mitigate potential negative impacts.

"Market risk" arises from changes in demand that can affect the revenue generated from the investment. A common source is price volatility, where prices of inputs, products, or services can impact the profitability of the investment. (Hull, John C., 2023)

"Credit risk" occurs when the business is not able to secure necessary funding or meet repayment obligations, or when investors perceive the port as a high-risk borrower, affecting the cost and availability of capital. (Hull, John C., 2023)

"Operational risks" involve the difficulty of integrating new assets or technologies into existing operations. The need for skilled labor to operate the new equipment or manage new processes, along with unplanned maintenance or operational downtime, can reduce the expected benefits (revenues) of the investment. (Hull, John C., 2023)

"Regulatory risk" derives from potential changes in laws and regulations that can alter project feasibility or profitability; a common example is stricter environmental laws that may require additional investments to achieve compliance. (Hull, John C., 2023)

"Technological risks" are where new technologies may render the investment outdated or less competitive, and rapid technological changes can alter the landscape, requiring further investments to stay current. (Hull, John C., 2023)

"Economic risk" involves (systemic economic) downturns that result in the reduction of the demand for products and services, affecting the return on investment and inflation, rising costs of material, labor, and other inputs, and eroding profitability. (Hull, John C., 2023)

"Strategic risk" is when the investment may not align with the overall strategic goals or market position, and competitors may respond aggressively, reducing the anticipated market share or profitability. (Hull, John C., 2023)

"Political risk" involves investments in geographic regions that are affected by political instability, leading to operational disruptions. Political risk is also affected by government policies, such as tax laws and trade tariffs, which can impact the cost and benefits of investments. (Hull, John C., 2023)

"Project-specific risks" involve delays in project completion that can lead to cost overruns and lost revenue due to unforeseen expenses. (Hull, John C., 2023)

"Environmental risks" includes natural disaster events such as earthquakes, floods, or hurricanes that can damage assets and disrupt operations as well as long-term changes in climate patterns that can affect the viability of certain investments. (Hull, John C., 2023)

A CIS evaluates risk by considering the likelihood of each of these risk categories affecting the project by leveraging historical data, and forecasts, engaging experts, and continuously reviewing and updating the risk assessment as the project progresses.

When considering capital investments, ports need to evaluate a variety of factors. This is essential to ensure that the investment aligns with their strategic goals and provides a satisfactory return. By thoroughly evaluating these considerations, ports can make informed decisions about their capital investments, ensuring they contribute positively to the port's growth and sustainability. Capital investment in ports is a multifaceted endeavor requiring careful planning, substantial funding, and strategic foresight. By understanding the various components and impacts of such investments,

stakeholders can make informed decisions to develop ports that are efficient, competitive, and sustainable.

Assessing Investment Opportunities

Assessing capital investment opportunities for the DSPA and the NBPA involves a comprehensive analysis of various factors to determine the potential return on investment and the strategic benefits of the investment. Here is the structured approach we used to assess these opportunities:

Strategic Fit

To ensure our investments align, we evaluate how the investment complements existing terminals, railways, highways, and logistics hubs. We consider the potential for future expansion and adaptability to changing market conditions within the port and surrounding region. For the DSPA and the NBPA, this is the first step when considering a capital investment project.

Market Analysis

We evaluate current and projected cargo volumes, including containerized, bulk, and liquid cargo with our terminal operator and identify major trade routes and emerging markets that the port could serve. We also analyze nearby ports, their capacities, capabilities, and expansion plans when considering a project, even including slightly speculative ones. For instance, some ports evaluate their potential role in something new or emergent, like offshore wind and whether to make significant investments in that area. This is the second step when we consider a capital investment project.

Operational Efficiency

The DSPA and the NBPA assess their current capacity and how efficiently it is being utilized. We then consider investments in automation, digitization, and other technologies that can improve the port's

operational efficiency, as well as evaluate the need for new berths, cranes, storage facilities, and other infrastructure at the port. This is the third step when we consider a capital investment project.

Risk Assessment

We evaluate risks related to market demand fluctuations, competition, and changes in trade policies within the port. We have considered risks like labor strikes, equipment failure, and natural disasters that could impact the port and surrounding region. We also assess the impact of current and future regulations, including environmental and safety standards that could affect our ports, as well as risks associated with financing and interest rates. This is the fourth step when we consider a capital investment project.

Financial Analysis

The DSPA and NBPA determine the total capital investment required for the proposed project, including construction, equipment, and contingencies. We estimate future revenues based on tariff rates, projected cargo volumes, and additional services. We also include operating costs, maintenance, and any incremental costs associated with the port's new investment. This is the fifth step when we consider a capital investment project.

Stakeholder Analysis

The DSPA and the NBPA assess the level of stakeholder support by engaging with local communities to gauge their support and address any concerns on a case-by-case basis. Proactively explaining the port's vision, plan and rationale is critical to ensuring fact-based dialog. This may involve preliminary briefings with key decision-makers, such as board members or commissioners, and I could also include ongoing sessions throughout project planning with key stakeholders and opinion-makers. This is the sixth step when we consider a capital investment project.

Initial Project Definition

After steps one through six have been analyzed, the DSPA and the NBPA develop the initial project definition that provides a clear and structured approach. It outlines the project objectives, scope, key deliverables, timeline, budget estimate, and risk management for the capital investment project. This seventh step is critical to be prepared and be ready to present to the board of commissioners/directors for approval.

Board of Commissioners/Directors Approval

To obtain the board of commissioners/directors' approval for a capital investment project, we prepare a detailed proposal and presentation that includes all critical aspects of the project that have been fleshed out in the completion of steps one through seven. This provides the board of commissioners/directors with all the necessary information to make an informed decision.

Project Management and Execution

After we receive board approval, the next step is to execute contracts for project management and construction and develop a detailed project timeline, including key milestones and deliverables. It is important to identify the expertise and resources required for project execution, including contractors, consultants, and technology providers. We establish a framework for ongoing monitoring and evaluation to ensure the project stays on track and meets its objectives. This is the final step in the process to ensure the capital investment project is a success.

After completion, we review each project and evaluate whether it was a success or if it turned out to be not as successful as we had expected. We routinely recognize and document the successes as well as what didn't go as planned so we can continue to learn and adapt to ensure success in future capital investment projects.

Assessing [Non-Financial] Factors

Project evaluation extends beyond financial analysis. The CIS must also account for non-financial factors by evaluating various qualitative and operational aspects. This comprehensive approach allows us to identify areas of strength and areas for improvement, impacting the efficiency, sustainability, and overall effectiveness of port operations.

For the DSPA, we focus on the regulatory environment. Our project site for reconstructing Dock C&D is located directly adjacent to the Clure Public Marine Terminal. It is comprised of nearly 28 acres of industrial waterfront that was constructed in the late 1890s and provides a good example of regulatory factors. Here we incorporated the environmental cleanup components into the project as well as U.S. Customs and Border Protection processes and the efficiency of their work. We also place a high priority on security and safety to prevent smuggling, piracy, and terrorism. Our commitment to safety regulations and the presence of an emergency response plan are key elements. The DSPA's low incidence of security breaches, accidents, and incidents is attributable to the measures taken to prevent these occurrences.

At the NBPA, we focus on environmental factors and community commitment. New Bedford Harbor is designated by the state of Massachusetts as a Designated Port Area (DPA), which classifies features important for water-dependent industrial uses—such as commercial fishing, shipping, and other vessel-related marine commercial activities—and/or for manufacturing, processing, research, and production activities that require marine transportation or access to large volumes of water. Also, New Bedford Harbor is a designated a superfund site by the U.S. EPA due to sediment contamination by polychlorinated biphenyls (PCBs) and heavy metals and in 1998 the EPA signed the New Bedford Harbor (NBH) Record of Decision (ROD) which included navigational dredging and disposal. (EPA ROD, 1998) Hence, we work closely with the EPA, the Massachusetts Department of Environmental Protection (DEP), and our stakeholders to perform environmental remediation, as can be seen in our grant-funded projects

listed in Table 3, such as the Phase 5 dredging remediation project, North Terminal 1, 1a & 2 expansion projects.

By evaluating these non-financial factors, stakeholders can gain a comprehensive understanding of a port's operational effectiveness, sustainability, and potential for future growth, beyond just its financial performance.

Capital Budgeting Techniques

Capital budgeting techniques are vital for evaluating and prioritizing large-scale infrastructure, equipment, and technology investments for ports. As discussed in the section on Evaluation and Decision Making, ports can use several financial analysis formulas to help provide a robust framework for making informed, strategic decisions on capital investments. These formulas ensure optimal resource use and longer-term value creation, instilling confidence in the efficiency of the decision-making process.

For the DSPA, the practical application of capital budgeting techniques is evident in our use of two financial formulas: return on investment and payback period. We also consider our current cash position for smaller capital projects (between $175,000 to $1,500,000). For instance, when we had a project to purchase a crane for the terminal, we conducted a thorough analysis. Our terminal operator rents cranes as needed throughout the shipping season, which starts in April and closes at the end of December when the St. Lawrence Seaway System shuts down for maintenance. The cost to purchase a crane was $1,361,600, and our terminal operator paid approximately $373,094 per year in crane rental costs. The Port Authority analyzed the purchase of the crane by going through the steps outlined earlier in Assessing Investment Opportunities, to determine the payback period as well as the ROI, compared to if the Authority invested the funds in CDs, which is the primary investment tool DSPA can use in compliance with Minnesota state statutes. As you can see from Table 1 below, the payback period for purchasing the crane is in year 6, and the 10-year return on investment is 25.59%. This analysis was done using cash

inflows and outflows generated by DSPA's terminal operator renting the crane on an annual basis vs. depreciation and maintenance on an annual basis and did not take into consideration net present value (NPV) in this analysis. DSPA concluded that purchasing the crane is a very good decision and a much better ROI than compared to investing the funds in a CD during that same period.

Table 1. DSPA Project Budget Analysis

Duluth Seaway Port Authority							
Crane Purchase Analysis							
June 28, 2024							
Buy Case Summary		**Rent Case Summary**					
Price	$ 1,361,600	Rent	$ 373,094				
Sales Tax	$ -		$ -				
Total Purchase Price	$ 1,361,600	Total Rent Exp/Yr	$ 373,094				
Depreciation Expense (15 Yrs)	$ 90,773						
Total Cash Outlay Year 1	$ 1,361,600		$ 373,094				
Total Cash Outlay Year 2			$ 373,094				
Total Cash Outlay Year 3			$ 373,094				
Total Cash Outlay Year 4			$ 373,094				
Total Cash Outlay Year 5			$ 373,094				
Total Cash Outlay Year 6			$ 373,094				
Total Cash Outlay Year 7			$ 373,094				
Total Cash Outlay Year 8			$ 373,094				
Total Cash Outlay Year 9			$ 373,094				
Total Cash Outlay Year 10			$ 373,094				
	$ 1,361,600		$ 3,730,940				
IF PURCHASED:							
	Cash Savings	**DSPA %**	**Depr Exp**	**Maint. & Ins.**	**Total Realized by DSPA**	**Payback Period**	
Savings per Year 1	$ 282,321	$ 141,160	$ 90,773	$ (35,750)	$ 196,184	$ 196,184	
Savings per Year 2	$ 282,321	$ 169,392	$ 90,773	$ (35,750)	$ 224,416	$ 420,599	
Savings per Year 3	$ 282,321	$ 204,682	$ 90,773	$ (35,750)	$ 259,706	$ 680,305	
Savings per Year 4	$ 282,321	$ 211,741	$ 90,773	$ (35,750)	$ 266,764	$ 947,069	
Savings per Year 5	$ 282,321	$ 211,741	$ 90,773	$ (35,750)	$ 266,764	$ 1,213,833	
Savings per Year 6	$ 282,321	$ 211,741	$ 90,773	$ (35,750)	$ 266,764	$ 1,480,597	
Savings per Year 7	$ 282,321	$ 211,741	$ 90,773	$ (35,750)	$ 266,764	$ 1,747,361	
Savings per Year 8	$ 282,321	$ 211,741	$ 90,773	$ (35,750)	$ 266,764	$ 2,014,124	
Savings per Year 9	$ 282,321	$ 211,741	$ 90,773	$ (35,750)	$ 266,764	$ 2,280,888	
Savings per Year 10	$ 282,321	$ 211,741	$ 90,773	$ (35,750)	$ 266,764	$ 2,547,652	
	$ 2,823,207	$ 1,997,418.72	$ 907,733	$ (357,500)	$ 2,547,652		
			Book Value at Year 10		$ 453,867		
			Total Net Value		$ 3,001,519		
IF INVESTED:							
Initial Investment	$ 1,361,600						
	1% Rate of Return	**Total Realized by DSPA**	**3% Rate of Return**	**Total Realized by DSPA**			
Year 1	$ 13,616	$ 1,375,216	$ 40,848	$ 1,402,448			
Year 2	$ 13,752	$ 1,388,968	$ 42,073	$ 1,444,521			
Year 3	$ 13,890	$ 1,402,858	$ 43,336	$ 1,487,857			
Year 4	$ 14,029	$ 1,416,886	$ 44,636	$ 1,532,493			
Year 5	$ 14,169	$ 1,431,055	$ 45,975	$ 1,578,468			
Year 6	$ 14,311	$ 1,445,366	$ 47,354	$ 1,625,822			
Year 7	$ 14,454	$ 1,459,819	$ 48,775	$ 1,674,596			
Year 8	$ 14,598	$ 1,474,418	$ 50,238	$ 1,724,834			
Year 9	$ 14,744	$ 1,489,162	$ 51,745	$ 1,776,579			
Year 10	$ 14,892	$ 1,504,053	$ 53,297	$ 1,829,877			
	$ 142,453	$ 1,504,053	$ 468,277	$ 1,829,877			
	CD Investment	**CD Return**	**VS**	**Purchase Crane**	**10 YR ROI**	**Total Net Value**	
	CD @ 1%	$ 1,504,053			$ 2,547,652	$ 3,001,519	
	CD @ 3%	$ 1,829,877			39.23%	64.03%	
				Total Return	25.59%	89.62%	

Grant-funded projects require a rather different approach than more traditionally funded capital projects using port funds. When ports contemplate large-scale capital projects that involve grants, they

consider many factors to ensure the project's feasibility, sustainability, and overall impact. We discussed these factors in Assessing Investment Opportunities.

The DSPA and NBPA analyze the scope and objectives, the costs of operating and maintaining the asset, and its overall lifecycle, as well as review the funding sources for the capital project, as several possible funding sources exist. There is the grant itself, the match requirements, which can come from the state, county, city, or the port itself, and additional funding such as loans, bonds, or private investments. We look at cash flow primarily to ensure the port authority can cover the matching funds required by the grant and the timing of reimbursements relative to payments to minimize the stress on the port's cash on hand. Table 2 and Table 3 demonstrate project funding sources from a grant perspective for actual projects of the DSPA and the NBPA.

Table 2. DSPA Grant-Funded Project Budgets

Project Costs, Sources and Uses for Project Funds, Non-Federal Matching Funds								
			Federal	**Non-Federal**				
Component	**Cost Estimate***		**Proposed MARAD PIDP Funds**	**2024 State PDAP Funds Requested****	**Committed State PDAP Funds*****	**Committed DSPA Funds**	**Total Non-Federal Funds**	**Total Funds**
Dock Wall Berth 11	$11,463,200		$10,583,800 (92%)	---	---	$879,400 (8%)	$879,400 (8%)	$11,463,200
Duluth Lake Port Demo	$10,466,150		$2,896,150 (28%)	---	$7,570,000 (72%)	---	$7,570,000 (72%)	$10,466,150
Dock Wall Duluth Lake Port	$26,654,700		$23,654,700 (89%)	$3,000,000 (11%)	---	---	$3,000,000 (11%)	$26,654,700
TOTALS	**$48,584,050**		**$37,134,650**	**$3,000,000**	**$7,570,000**	**$879,400**	**$11,449,400**	**$48,584,050**
Federal Funds (MARAD-PIDP): 76%				**Non-Federal Funds: 24%**				

(Duluth Seaway Port Authority, 2023)

The NBPA currently has five major grant-funded infrastructure projects in various phases of construction, which not only require precise timing for reimbursement funding requests due to managing cash flow but also understanding activation time and return on investment. It is essential to thoroughly plan and consider these factors before applying for grants and to strategically plan for the associated timing.

Table 3. NBPA Grant-Funded Project Budgets

Project Cost, Source and Uses for Project Funds, Non-Federal Matching Funds								
		Federal	**Non-Federal**					
Project	**Grant Authority**	**Proposed Grant Funds**	**State Grant or Match**	**Committed NBPA Funds**	**Committed City Funds**	**Other Source**	***Total Non-Federal Funds***	**Project Totals**
Leonard's Wharf Reconstruction / Extension	MARAD 2023 PIPD	$24,404,000 (55%)	$18,100,000 (41%)	---	$1,500,000 (3%)	---	*$19,600,000 (45%)*	$44,004,000
Phase 5 Dredging	MassWorks 2018*	---	$36,000,000 (78%)	$500,0000 (1%)	---	$9,650,000 (21%)	*$46,150,000 (100%)*	$46,150,000
North Terminal 1 Expansion	MARAD Build 2018	$15,400,000 (70%)	$5,920,000 (27%)	$550,000 (3%)	---	---	*$6,470,000 (30%)*	$21,870,000
Pier & Fender Repairs & North Terminal Phase 2	EDA 2020	$16,000,000 (80%)	$4,000,000 (20%)	---	---	---	*$4,000,000 (20%)*	$20,000,000
North Terminal 1A Extension	MassCEC (state grant)		$15,000,000 (80%)	$750,000 (4%)	$3,000,000 (16%)	---	*$18,750,000 100%*	$18,750,000
Totals		**$55,804,000**	**$79,020,000**	**$1,800,000**	**$4,500,000**	**$9,650,000**	***$94,970,000***	**$ 150,774,000**

(New Bedford Port Authority, 2023)

Risk Management in Capital Investment

Effective risk management strategies play a paramount role in port infrastructure development, operation, and sustainability. Given the significant financial, environmental, and social implications, these strategies are not just important but essential.

Below, we will briefly review how the DSPA and NBPA manages risks and consider them when evaluating a capital investment. Our commitment to effective risk management is unwavering, ensuring that stakeholders can feel secure and confident in the success of our projects.

The DSPA conducts a comprehensive risk assessment to identify potential risks at each stage of the project. We are a proactive entity that pays very close attention to regulations and compliance regarding environmental laws, possible changes in rules, and safety and security regulations. We engage with stakeholders, including the local community and regulatory bodies (State of MN, St. Louis County, and the City of Duluth), to address concerns and build support while maintaining transparent and open communication throughout the project.

The NBPA develops risk registers for its projects to better eliminate or mitigate risk. This applies to all aspects of the project, from planning and permitting to construction. The risk register is a planning tool used to identify project risks and the impact associated with those risks. Based on the predictions of such risk events, a management strategy is implemented. The management strategy is then used to mitigate a risk or to gather more information related to the risk during the planning phase.

Both the DSPA and NBPA implement monitoring and reporting to track the project's progress and any emerging risks. We regularly review and update risk management plans based on new information and changing conditions. We also develop strategies to mitigate identified risks, including contingency planning, insurance, and contractual safeguards, to keep the project on time and within budget.

Adapting to Market Changes

The DSPA has been actively adapting to market changes to enhance and strengthen its capital investment strategy. The following are some key aspects of our approach.

To mitigate the risks associated with reliance on a few types of cargo, the DSPA has been diversifying the types of cargo it handles. This includes general cargo, breakbulk, containers, as well as project cargo. The port authority has also invested in infrastructure upgrades to improve efficiency, safety, and capacity. This includes modernizing facilities, enhancing cargo handling equipment, expanding warehouse capacity, and upgrading rail and road connections to and from the port. We function as a multi-modal logistics hub and invest in infrastructure to support growth in our landside freight capabilities as well.

With a growing emphasis on sustainability, the DSPA has been implementing environmentally friendly practices. This includes investing in cleaner technologies and initiatives to reduce the Port Authority's carbon footprint and be a leader in the Duluth-Superior port. We have implemented a Climate Action Plan that our Board of Commissioners approved in June 2024, with a goal of being carbon neutral by 2050, (Duluth Seaway Port Authority, 2024).

To leverage expertise, streamline the supply chain, and offer a full-service multimodal hub, the DSPA formed a public-private partnership with Lake Superior Warehousing (LSW), which operates the Port Authority's assets on our behalf. The Railway Industrial Clearance Association has ranked LSW the top operator in North America, and Heavy Lift & Project Forwarding International magazine voted them the world's port/terminal operator of the year in 2019, (Heavy Lift & Project Forwarding International Magazine, Dec. 2019). The Port Authority works with LSW in project planning to ensure we are in alignment that the project will add capacity or streamline operations for additional efficiency for services, market growth and associated infrastructure needs.

DSPA and LSW closely monitor market trends and global trade patterns to ensure we can quickly adapt to changes. This flexibility helps us stay competitive and meet the evolving needs of our customers.

Through these measures, the DSPA aims to ensure long-term sustainability and growth, adapting to market changes while strengthening our CIS.

The NBPA has tried to strategically adapt to market changes by growing its capital investment approach to support its position as a leading commercial fishing port and an emerging hub for offshore wind operations. Historically, the port's primary business has been the berthing of fishing vessels, supporting a strong fishing industry with the necessary infrastructure. In 2012, the port demonstrated forward-thinking by integrating shore power capabilities, enhancing environmental sustainability and operational efficiency for docked vessels. Recognizing the growing offshore wind industry, the Port Authority has supported investments to transform New Bedford into a vital marshaling port. Additionally, the port benefits from land leases and a thriving recreational marina, further diversifying its revenue streams and strengthening its economic resilience. These strategic investments position New Bedford as a crucial long-term operations and maintenance (O&M) hub for offshore wind developments, ensuring its competitiveness and relevance in the evolving maritime and renewable energy markets.

Best Practices

The DSPA employs several best practices to optimize its CIS. These practices ensure the Port Authority remains competitive, efficient, and capable of handling diverse cargo while supporting sustainable growth.

By conducting a thorough market analysis, the DSPA can identify potential investment opportunities and risks. Using data-driven decision-making to prioritize projects ensures that capital is focused on projects that offer the highest return on investment and align with the Port Authority's strategic long-term goals.

Investing in workforce development programs ensures that there will be a skilled and adaptable labor force for the Port Authority and its terminal operator and partner. Providing continuous training and professional development opportunities keeps the workforce updated with the latest industry practices, standards, and technologies.

By investing in a mix of infrastructure, technology, and operational improvements, and expanding capabilities to handle a variety of cargo types, including general, breakbulk, containerized, and project cargo, the DSPA can reduce its dependency on any one single revenue stream as we discussed in the Adapting to Market Changes section.

Having established key performance indicators (KPIs) in place to monitor the progress and effectiveness of the port's capital investments is critically important, as is regularly reviewing and adjusting strategies based on performance and changing market conditions.

By implementing these best practices, the DSPA aims to ensure its CIS is robust, adaptive, and aligned with its mission to drive economic growth and sustainability.

The NBPA employs several best practices to optimize its CIS, ensuring both operational efficiency and long-term sustainability. Vital to this approach is the continuous upkeep of infrastructure to support its core commercial fishing activities. The port also leverages land leases and maintains a thriving recreational marina, providing diversified revenue streams and sustaining economic resilience. The port has focused on and been successful in identifying and securing grant funding to support its CIS. Our ability to obtain substantial funds from a variety of sources has been a key driver of successful outcomes. Through careful planning, stakeholder engagement, and a commitment to environmental sustainability, the NBPA ensures its investments are aligned with market trends and community needs, securing its status as a competitive and adaptable maritime hub.

A CIS is a rather comprehensive and dynamic endeavor that guides long-term vision for the port's development and infrastructure improvements. At the DSPA and the NBPA, executive management is responsible for managing the port's CIS and weaving it into the port authorities' overall strategic plan.

The CIS is a living, long-term plan that requires careful management and regular adjustments.

Conclusion

In conclusion, this paper provided a unique opportunity for two port professionals of different professional backgrounds (finance and engineering) to come together and evaluate a topic from two distinctly different viewpoints and work together towards a common goal.

What we have learned through this paper is that both ports' approaches to implementing a CIS are marked by comprehensive planning, diversification, stakeholder engagement, and a strong commitment to sustainability. By embracing best practices such as leveraging public-private partnerships, modernizing infrastructure, integrating advanced technologies, and prioritizing environmental stewardship, the DSPA and the NBPA are not only enhancing their operational capabilities but also driving long-term growth in their respective regions.

The emphasis on risk management, workforce development, and performance monitoring ensures that investments are strategic, efficient, and yield the highest returns possible. This learning process has highlighted the importance of adapting to market changes while maintaining a focus on sustainability and community impact. Through these concerted efforts, both port authorities contribute significantly to regional economic development and environmental stewardship, demonstrating an active and balanced approach to investment that ensures they remain competitive and vital hubs in the global shipping industry. While a GAP analysis should ultimately be performed by each port, this was outside the scope of this paper.

Reflections on Learning

Ports face challenges in terms of resourcing their capital investments/projects, as they can be big and expensive. We learned that identifying key components of a CIS helps with planning for funding from grant programs, and bond funding, to public-private partnerships. It gives ports an edge to have projects vetted and ready to go, so when the opportunity arises, we can jump on it.

We also learned that many factors go into a CIS and can be very daunting. However, understanding the big picture and going through the steps of writing this paper gives us information that we can use going forward to more efficiently and effectively develop and adopt a CIS for both the DSPA and the NBPA.

Resources

Our two ports are of similar sizes but feature different business models. We used both port's financial information to outline. Our goal was to understand the current needs of each of our ports and create a framework for the development of a CIS. We used publicly available port data, such as financial reports, historical investment data, and capital investment to achieve this.

1. Financial Statements and Reports from Duluth Seaway Port Authority and New Bedford Port Authority
2. Market Research and Industry Reports
3. Best Practices from Duluth Seaway Port Authority and New Bedford Port Authority
4. Regulatory Guidelines and Compliance Requirements from Duluth Seaway Port Authority and New Bedford Port Authority
5. Internal Stakeholder Input and Collaboration from Duluth Seaway Port Authority and New Bedford Port Authority

Acknowledgments

We would like to thank Deb DeLuca, Executive Director of the Duluth Seaway Port Authority, and Gordon Carr, Executive Director of the New Bedford Port Authority, for their invaluable feedback on the early drafts of this paper. Their insights and suggestions greatly improved the clarity and depth of the analysis. Additionally, Ceasar appreciated the contributions of George Krikorran, Director of Finance of the New Bedford Port Authority, and Kevin appreciated the contributions of Dean Lembke, Director of Building and Facilities and Jayson Hron, Director of Communications and Marketing of the Duluth Seaway Port Authority, for their participation in discussions that helped shape the direction of this research. Their input was crucial in refining the final paper. We would also like to thank Shannon McLeod and Julie Barelas of the AAPA for their continued support and guidance throughout the PPM program.

References

Duluth Seaway Port Authority. **(2024)** *Climate Action Plan, Project No. 14602*, https://duluthport.com/news/duluth-seaway-port-authority-adopts-climate-action-plan/

EPA ROD. (1998), *Declaration for the Record of Decision New Bedford Harbor Superfund site,* https://semspub.epa.gov/work/01/38206.pdf

Grammarly. (2024). (v1.2.89.1458) grammar checker. https://www.grammarly.com. This software was used on the entire paper for proper grammar and spell-checking.

Green Marine. (2021), Opportunities To Improve Environmental Performance In The Great Lakes St. Laurence Maritime Transportation System

Heavy Lift & Project Forwarding International Magazine. (2019), *Port/Terminal Operator of the Year honors,* https://www.heavyliftpfi.com/awards/heavy-lift-awards-2019-finalists-and-winners-/16573.article

Horngren, Charles T. & Foster, George. (1991) *Cost Accounting, A Managerial Emphasis*, (7th ed.)

Hull, John C., (2023), Risk Management and Financial Institutions, (Sixth Edition)

Martin Associates. (2019), Economic Impact Study of New Bedford /Fairhaven Harbor https://portofnewbedford.org/wp-content/uploads/2019/04/Full-2019-Martin-Report.pdf

Miles, Martin J., (1986), *Investment Math Mad Easy*

OpenAI. (2024). *Image; *A visual representation of a capital investment strategy focused on port development*, DALL·E. https://www.openai.com/dall-e

Appendix A – Definitions

Capital Investment Types

These definitions were referenced by (Miles, Martin J., 1986), (Horngren, Charles T. & Foster, George, 1991), and (Green Marine, 2021)

- *Fixed Capital Investments* include investments in buildings and structures such as warehousing, office buildings, docks, and wharves, purchases of industrial machinery, tools, vehicles, and other equipment necessary for operations, and, lastly, the acquisition of land for current use and future development. See Exhibit A, which shows where these assets are reported under Property and Equipment on the DSPA and NBPA Balance Sheet.
- *Strategic Capital Investments* involve the purchasing other companies, merging or partnering with them to expand market share or acquire new capabilities. Also, these investments could involve joint ventures by collaborating with other companies to undertake new projects or enter new markets by forming partnerships to leverage each other's strengths.
- *Working Capital Investments* are the funds allocated to purchasing materials, works-in-progress, and finished goods. This also includes accounts receivable and investments in extending credit to customers. Lastly, this includes cash reserves, maintaining a sufficient cash balance for daily operations, and unexpected expenses or emergency funds.
- *Intangible Capital Investment* funds are dedicated to developing new technologies or processes for operations by acquiring intellectual property rights to protect innovations, as well as investments in software, databases, and IT infrastructure to improve efficiency and productivity.
- *Human Capital Investment* invests in employee education and skill development and enhancing workplace safety and employee well-being.

- *Sustainability and Environmental Capital Investments* can be defined as investing in green technology, which is primarily in renewable energy sources, energy-efficient technologies, and sustainable practices such as infrastructure like substations and charging stations.
- *Growth and Expansion Capital Investment* involves in entering into new geographic markets or new market segments and developing new services to diversify their array of offerings.
- *Technology Capital Investments* entails investing in automation technologies to streamline productivity, reduce labor costs, and improve efficiency and profitability.

Sources of Capital

- *Internal Sources of Capital* include net assets or retained earnings, which represent the difference between a port's total assets and its total liabilities. This metric is essentially the business's equity and indicates the total value that one would theoretically receive if all the assets were liquidated and all the liabilities paid off. It includes infrastructure, equipment, cash and investments, and accounts receivable.
- *External Sources of Capital* include debt financing – bank loans, bond issuance, lines of credit, etc. Equity financing is issuing shares of ownership, or venture capital where the business receives funds from investors who provide capital in exchange for equity.
- *Government Grants and Subsidies* are the funds provided by government entities to support specific projects.
- *Leasing and Rents*, enable businesses to acquire the use of assets without purchasing them outright. Leasing and rents can be a source of income. See Exhibit B, which shows the various components of revenue including Real Estate Operations (where Leasing and Rents are reported) for both the DSPA and the NBPA.

Project Profitability and Viability Calculations

- *Net Present Value (NPV)* is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. A positive NPV indicates that the projected earnings (in present dollars) exceed the anticipated costs (also in present dollars), thus the investment is likely profitable.
- *Return on Investment (ROI)* measures the gain or loss generated by an investment relative to its cost. A higher ROI indicates that the investment gains compare more favorably to its cost.
- *Internal Rate of Return (IRR)* is the discount rate at which the NPV of all cash flows from a particular project equals zero. The IRR is used to evaluate the attractiveness of a project of investment. If the IRR exceeds the cost of capital, the investment is considered good.
- *The Payback Period* is the amount of time it takes for an investment to generate an amount of income or cash equivalent to the cost of the investment. A shorter payback period is preferred as it indicates that the investment recovers its cost faster.
- *The Profitability Index (PI)* is the ratio of the present value of future expected cash flows to the initial investment. A PI greater than 1 indicates a good investment.
- *Sensitivity Analysis* assesses how the uncertainty in a model's output can be apportioned to different sources of uncertainty in its inputs. It helps understand how different values of an independent variable affect a particular dependent variable under a given set of assumptions.
- *Scenario Analysis* evaluates the expected value of an investment under different scenarios (e.g., best-case, worst-case, and base-case scenarios). It helps to understand the impact of different scenarios on investment outcomes.
- *GAP Analysis* is a strategic tool used to assess differences between the current state and the desired future state of a port. The goal is to identify the gaps between where an organization is now and where it wants to be and develop a plan to bridge those gaps.

Financial Formulas for Capital Investment Analysis (Horngren, Charles T. & Foster, George, 1991)

Metric	Formula	Description
Net Present Value (NPV)	$NPV = \sum \frac{C_t}{(1+r)^t} - C_0$	The sum of the present values of incoming cash flows minus the initial investment.
Return on Investment (ROI)	$ROI = \frac{(Gain\ from\ Investment - Cost\ of\ Investment)}{Cost\ of\ Investment} \times 100$	Measures the gain or loss generated by an investment relative to its cost.
Internal Rate of Return (IRR)	The discount rate r where $NPV = 0$	The rate at which the NPV of all cash flows from an investment equals zero.
Payback Period	$Payback\ Period = \frac{Initial\ Investment}{Annual\ Cash\ Inflow}$	The time it takes for the initial investment to be recovered from the cash inflows.
Profitability Index (PI)	$PI = \frac{\sum \frac{C_t}{(1+r)^t}}{C_0}$	The ratio of the present value of future cash flows to the initial investment.

Variables

- C_t: Cash inflow at time t
- r: Discount rate
- C_0: Initial investment
- t: Time period

Exhibits A – Balance Sheets

EXHIBIT A		DULUTH SEAWAY PORT AUTHORITY BALANCE SHEET AT MARCH 31, 2024					
	ASSETS	Operations			LIABILITIES	Operations	
		AMOUNT CURRENT YEAR	AMOUNT LAST YEAR			AMOUNT CURRENT YEAR	AMOUNT LAST YEAR
CURRENT ASSETS				CURRENT LIABILITIES			
	Operating Cash & Invest	9,197,541.29	7,818,188.67		Accounts Payable	220,877.07	653,716.63
	Accounts Receivable	17,206,626.13	17,786,359.59		Accrued Liabilities	14,902,824.91	14,863,666.29
	Prepaid Expenses	125,620.24	116,265.33		Deferred Revenue	113,687.01	113,666.34
	Total Current Assets	26,529,787.66	25,720,813.59		Total Current Liabilities	15,237,388.99	15,631,049.26
RESTRICTED ASSETS				RESTRICTED CURRENT LIABILITIES			
	Cash & Investments	342,526.66	2,392,627.98		Accounts Payable	242,244.83	250,756.49
	Total Restricted Assets	342,526.66	2,392,627.98		Total Payable Restricted	242,244.83	250,756.49
PROPERTY AND EQUIPMENT				LONG TERM DEBT			
	Land	5,813,255.94	5,813,255.94		Unrestricted	2,518,969.21	2,707,004.93
	Land Improvements	44,528,071.07	41,954,534.10		Restricted		
	Accum Depr Land Improve	(15,280,350.53)	(14,043,324.34)		Total Long Term Debt	2,518,969.21	2,707,004.93
	Buildings	44,380,690.77	34,739,242.75				
	Accum Depr Buildings	(19,177,792.94)	(18,174,411.08)	NET ASSETS			
	Cargo Handling Equipment	6,301,295.99	6,102,045.99		Prior Years	70,034,580.19	62,957,570.14
	Accum Depr Cargo Handling	(3,784,006.62)	(3,618,467.17)		Current Year	3,785,910.44	7,077,010.05
	Shop Equipment	604,962.39	604,962.39		Total Net Assets	73,820,490.63	70,034,580.19
	Accum Depr Shop Equip	(595,325.20)	(593,586.15)				
	Office Equipment	1,118,603.72	1,082,183.47	TOTAL LIABILITIES & EQUITY		91,819,093.66	88,623,390.87
	Accum Depr Office Equip	(772,359.60)	(722,390.13)				
	Construction in Progress	988,345.81	6,544,514.99				
	Net Property & Equipment	64,125,390.80	59,688,560.76				
OTHER ASSETS							
	Land Held for Resale	821,388.54	821,388.54				
	Total Other Assets	821,388.54	821,388.54				
TOTAL ASSETS		91,819,093.66	88,623,390.87				

EXHIBIT A		NEW BEDFORD PORT AUTHORITY BALANCE SHEET AT MARCH 31, 2024					
	OPERATING ASSETS				OPERATING LIABILITIES		
		AMOUNT CURRENT YEAR	AMOUNT LAST YEAR			AMOUNT CURRENT YEAR	AMOUNT LAST YEAR
CURRENT ASSETS				CURRENT LIABILITIES			
	Operating Cash & Invest	909,364.87	4,022,285.48		Accounts Payable	87,027.73	41,786.39
	Accounts Receivable	320,602.78	402,543.09		Accrued Liabilities	51,262.72	140,987.25
	Total Current Assets	1,229,967.65	4,424,828.57		Deferred Revenue	537,500.18	557,423.68
RESTRICTED ASSETS					Total Current Liabilities	675,790.63	740,197.32
	Cash & Investments	8,467,613.37	6,102,068.92				
	Total Restricted Assets	8,467,613.37	6,102,068.92	LONG TERM DEBT			
					Unrestricted	2,072,472.72	1,845,274.06
PROPERTY AND EQUIPMENT					Restricted	9,984,910.00	6,010,480.00
	Land	42,000.00	42,000.00		Total Long Term Debt	12,057,382.72	7,855,754.06
	Land Improvements	17,877,664.17	17,873,564.17				
	Accum Depr Land Improve	(10,771,030.42)	(9,883,394.02)	NET ASSETS			
	Buildings	9,303,535.36	9,303,535.36		Prior Years	9,873,010.24	11,350,666.09
	Accum Depr Buildings	(7,783,941.36)	(7,318,916.44)		Current Year	625,646.44	724,556.58
	Equipment	1,710,783.79	1,664,729.79		Total Net Assets	10,498,656.68	12,075,222.67
	Accum Depr Shop Equip	(1,617,423.58)	(1,590,452.38)				
	Boat and Boat Equipment	1,034,366.07	968,915.91	TOTAL LIABILITIES & EQUITY		23,231,830.03	20,671,174.05
	Accum Depr Office Equip	(956,311.67)	(952,658.83)				
	Vehicles	279,816.14	219,115.19				
	Accum Depr Vehicles	(186,073.49)	(182,162.19)				
	Construction in Progress	-	-				
	Net Property & Equipment	8,933,385.01	10,144,276.56				
OTHER ASSETS							
	Due from Grant Accounts	4,600,864.00	-				
	Total Other Assets	4,600,864.00	-				
TOTAL ASSETS		23,231,830.03	20,671,174.05				

Exhibits B – Income Statements

EXHIBIT B						
DULUTH SEAWAY PORT AUTHORITY						
INCOME STATEMENT						
	Duluth	Duluth	Duluth	Duluth	Duluth	Duluth
	Budget FY '25	Budget FY '24	Actual FY '23	Actual FY '22	Actual FY '21	Actual FY '20
Revenue						
Governmental	$ 1,655,056	$ 1,436,494	$ 1,432,077	$ 1,369,919	$ 1,298,174	$ 1,221,729
Real Estate Operations	$ 2,430,912	$ 2,367,588	$ 1,930,516	$ 2,613,820	$ 2,337,669	$ 2,076,728
Terminal Operations	$ 899,600	$ 807,600	$ 1,899,131	$ 940,478	$ 2,915,909	$ 2,177,805
Interest, Other	$ 100,000	$ 75,000	$ 813,993	$ 32,542	$ 76,953	$ 197,669
Total Revenue	$ 5,085,568	$ 4,686,682	$ 6,075,718	$ 4,956,759	$ 6,628,705	$ 5,673,931
Expenses						
Payroll	$ 1,246,000	$ 1,279,700	$ 1,092,725	$ 1,052,143	$ 1,115,604	$ 1,021,149
Payroll Benefits	$ 530,000	$ 616,700	$ 504,082	$ 320,346	$ 359,084	$ 394,501
Professional Services	$ 459,500	$ 427,305	$ 389,947	$ 328,708	$ 343,668	$ 451,307
Travel	$ 127,200	$ 128,000	$ 96,389	$ 62,023	$ 8,725	$ 80,996
Communication	$ 326,400	$ 275,400	$ 279,096	$ 269,804	$ 283,129	$ 292,982
Supplies	$ 32,500	$ 17,000	$ 17,714	$ 19,477	$ 22,432	$ 21,292
Utilities	$ 114,000	$ 106,000	$ 110,260	$ 86,466	$ 37,980	$ 38,928
Maintenance	$ 587,000	$ 495,500	$ 374,745	$ 399,205	$ 351,051	$ 539,857
Business Insurance	$ 278,164	$ 264,917	$ 205,327	$ 226,030	$ 212,789	$ 147,656
Interest expenses	$ 113,210	$ 119,700	$ 127,646	$ 167,051	$ 184,035	$ 86,502
Total Expenses	$ 3,813,974	$ 3,730,222	$ 3,197,930	$ 2,931,253	$ 2,918,495	$ 3,075,169
Revenue Over Expense	$ 1,271,594	$ 956,460	$ 2,877,788	$ 2,025,507	$ 3,710,210	$ 2,598,762

EXHIBIT B						
	NEW BEDFORD PORT AUTHORITY					
	INCOME STATEMENT					
	NBPA	NBPA	NBPA	NBPA	NBPA	NBPA
	Budget FY '25	Budget FY '24	Actual FY '23	Actual FY '22	Actual FY '21	Actual FY '20
Revenue						
Governmental	$ 10,000	$ 21,282	$ 11,626	$ 15,220	$ 20,270	$ 46,805
Real Estate Operations	$ 198,606	$ 147,647	$ 209,150	$ 225,793	$ 277,494	$ 260,594
Terminal Operations	$ 2,911,282	$ 3,016,170	$ 3,582,926	$ 3,190,894	$ 3,172,760	$ 2,830,959
Interest, Other	$ 100,000	$ 100,000	$ 296,826	$ 16,730	$ 11,429	$ 40,877
Total Revenue	$ 3,219,888	$ 3,285,099	$ 4,100,528	$ 3,448,637	$ 3,481,953	$ 3,179,235
Expenses						
Payroll	$ 1,528,823	$ 1,500,274	$ 1,278,990	$ 1,066,700	$ 913,443	$ 958,488
Payroll Benefits	$ 318,011	$ 296,394	$ 279,270	$ 267,688	$ 261,782	$ 219,901
Professional Services	$ 307,554	$ 303,448	$ 165,062	$ 366,147	$ 236,601	$ 116,936
Travel	$ 30,706	$ 55,729	$ 30,758	$ 11,202	$ 1,271	$ 12,116
Communication	$ 53,443	$ 50,000	$ 26,489	$ 43,580	$ 21,034	$ 21,490
Supplies	$ 34,950	$ 36,000	$ 38,853	$ 38,225	$ 39,382	$ 23,809
Utilities	$ 330,840	$ 308,936	$ 293,720	$ 202,631	$ 183,870	$ 156,997
Maintenance	$ 188,400	$ 199,400	$ 258,082	$ 237,467	$ 419,174	$ 139,830
Business Insurance	$ 259,296	$ 225,475	$ 205,195	$ 187,061	$ 149,532	$ 111,150
Interest expenses	$ 81,500	$ 78,000	$ 46,916	$ 49,630	$ 24,792	$ 64,050
Total Expenses	$ 3,133,523	$ 3,053,656	$ 2,623,335	$ 2,470,331	$ 2,250,881	$ 1,824,767
Revenue Over Expense	$ 86,365	$ 231,443	$ 1,477,193	$ 978,306	$ 1,231,072	$ 1,354,468