

**THE NORTHWEST SEAPORT ALLIANCE**  
**MEMORANDUM**

**MANAGING MEMBERS**  
**STAFF BRIEFING**

Item No.	8A
Date of Meeting	August 2, 2022

**DATE:** July 14, 2022

**TO:** Managing Members

**FROM:** John Wolfe, CEO

**Sponsor:** Tong Zhu, Chief Commercial & Strategy Officer

**Project Manager:** Emma Del Vento, Capital Program Leader, Port of Seattle

**SUBJECT:** Terminal 5 Modernization Program Quarterly Update Q2 2022

**A. BRIEFING REQUESTED**

Regular Q2 2022 Terminal 5 Modernization Program Update.

**B. BACKGROUND**

In April 2019, The Northwest Seaport Alliance (NWSA) entered a long-term lease for the redevelopment of Terminal 5 in the Seattle Harbor to create a modern international container terminal for ultra-large container ships. Once the Terminal 5 Modernization Program is completed, the facility will have the capability to handle the largest vessels currently calling the west coast, allowing the NWSA to compete for the super post-Panamax vessels, increasing current container volumes, supporting economic development and both creating and securing current jobs in the region for the next thirty years and likely beyond.

**C. SYNOPSIS QUARTERLY PROGRAM UPDATE TERMINAL 5 MODERNIZATION**

**Scope and Recent Updates**

**Program wide updates:** Phase 1 (North Berth) dredging first pass was completed in March 01. Remaining high spots will be dredged in the 2022/23 dredge window. The Puget Sound Pilots have updated the least depth of the North Berth to 47.1' while maneuvering and 50' alongside and not maneuvering 50.0'.

Phase 2 (South Berth) Slope stabilization, structural pile and toe wall were installed during the program's 3<sup>rd</sup> in water work window. Engineering teams are now working on the analysis to ensure acceptance and to evaluate the potential need for future work.

**Berth Modernization:** There have been no scope changes to the Berth Modernization since the last briefing.

**Permit Conditions:** Construction of the final elements is planned to start in late 2022 and continue through 2023.

**Lease Obligations:** NWSA's Lease Obligations are in progress per agreements with the Tenant. Work is ongoing to coordinate with the tenant to complete the North Reefer Infrastructure project as a Tenant Reimbursable project to better meet operations and schedule needs. Assessment of cost and schedule total impacts is underway.

### **Budget**

Program Budget of \$340,000,000 was approved in April 2019. \$50,000,000 was added in July 2021 for a total Program budget of \$390,000,000. Per Managing Member action on December 21, 2021, \$2,500,000 was approved for the purchase and installation of 8 scales and for the south reefer restoration project as part the partial settlement agreement. This increased the total Program budget to \$392,500,000.

Through June 30, 2022, the spent to date amounts of \$252,564,490 are on track with forecast estimate at completion and progress.

### **Risk**

Recent Stochastic Analysis and Risk Register updates indicate the program has an 85% probability of being sufficient with a value of \$390.2M and a 100% probability of being sufficient with a value of \$399.8M.

The primary drivers leading to the \$0.9M increase in P-85 value over last quarter are as follows:

1. Increase – Bag Pile cost repair
2. Increase – Time Impact Analysis and Toe Wall
3. Increase – New Gate Complex estimate; North Reefer Infrastructure, and South Marine Building
4. Decrease – Removal of Reefer demarcation risk and associated allowance

### **Schedule**

Phase 2 (South Berth) construction project is currently behind the contract schedule date of December 31, 2022. The delay is due to the concrete strike and to material supply delays. Dredging is on track to be completed per contract before March 2023.

Permit Conditions will be complete in late 2023.

Phase II Lease Obligation project schedules (South Marine Building, New Gate Complex, North Reefer Infrastructure, Phase 2 Stormwater) are in the process of being finalized against the start of South Berth Operations.

### **Safety**

Orion Marine Contractors (T-5 Berth Modernization General Contractor) meets POS requirements with Health and Safety Plan, Site Specific Safety plans; and have led the way forward through the 28 months of COVID-19 with continual adjustments and

monitoring using additional supervision, access protocols, PPE to include face coverings, and hand washing. Orion has regularly had after action reviews with crews and has been responsive to all NWSA/POS direction. There have been no recordable incidents this quarter for almost 15,000 hours worked.

#### **D. PROJECT PROGRESS AND SCHEDULE**

The Program achieved two major milestones this quarter:

- Completion of the 3<sup>rd</sup> in-water window
  - a. North Berth Dredging
  - b. South Berth Toe Wall

Berth Modernization Project:

- South Berth: Activities are behind schedule due to concrete strike.
- Seattle City Light (SCL) on site work is complete, pending final invoice in July/August.

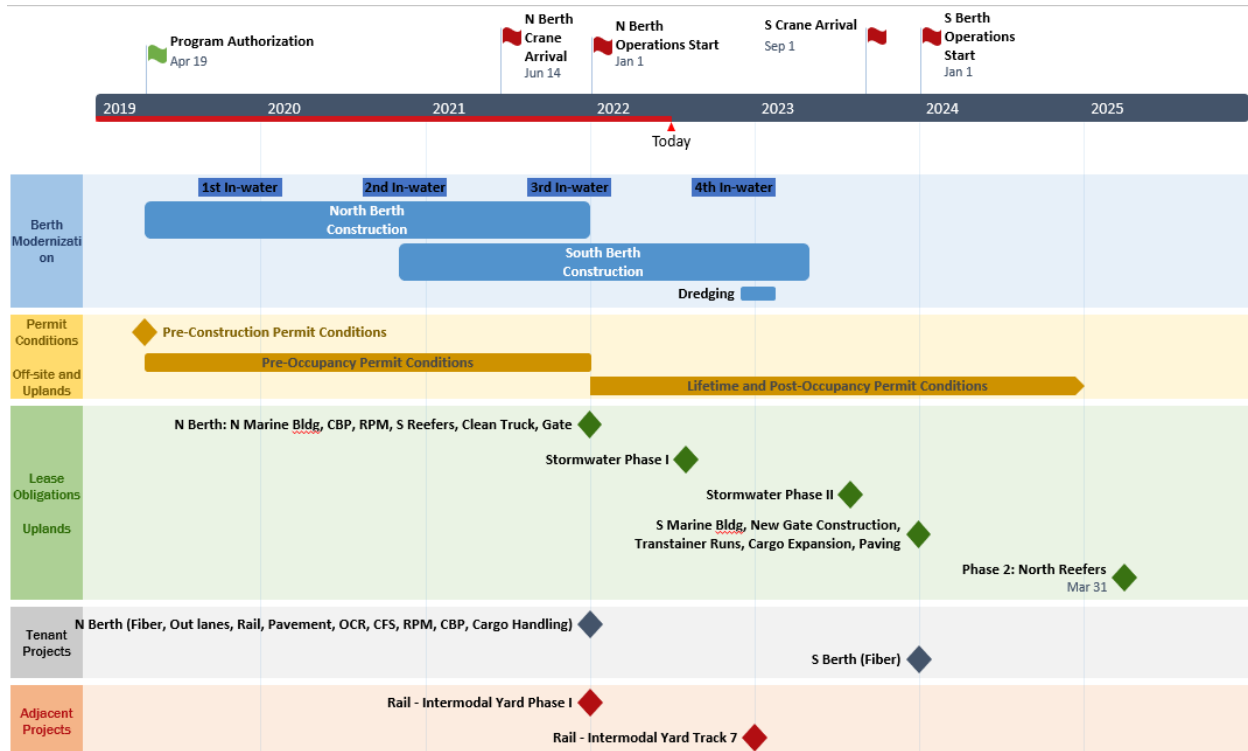
Major milestones for Permit Conditions and Lease Obligations through Q2 2022 include:

- Quiet Zone – progressing with design
- Stormwater Treatment – Phase 1 construction completion in Q3 2022; Phase 2 Award and NTP.
- S Marine Building – Bid Phase following construction authorization.
- RPM and CBP utilities – completed this quarter.
- North Reefer Infrastructure –Tenant Reimbursable agreement executed, design underway.
- New Gate (per Lease Amendment 2; Phase 2 deliverable) – 90% Design complete, plans in permitting review Project; construction timeline dependent on pending MARAD FY 2022 selection notification.

#### ***Schedule***

The T-5 Berth Modernization construction project is currently behind schedule to complete South Berth by the original schedule date of December 31, 2022. Current likely date of South Berth completion has not been negotiated and is estimated to be in Q2 2023.

The most significant element of risk to the Phase 2 delivery schedule is the concrete strike, material delays, and confirmation of in-water work completion per design.



**E. BUDGET (to JUNE 30, 2022)**

Budget numbers are updated through June 30, 2022. Numbers including overhead are posted the 10<sup>th</sup> of every month, except at year end when they are posted January 21.

- Program forecast currently exceeds the overall budget if all risks hit the Program at the high end.
- Construction is 85% spent and 79% complete (discrepancy is due to mobilization and early material purchase).

2022 Quarter 2 Program Budget	Authorized Budget	Quarter 2 Changes	Updated Budget	Spent to Date	Forecast at Completion	Remaining Authorized Budget
Design, Construction, Project Management	\$ 305.5		\$ 305.5	\$ 231.1	\$ 321.3	\$ 74.4
Permit Conditions	\$ 14.0	\$ -	\$ 14.0	\$ 6.2	\$ 14.1	\$ 7.8
Stormwater Treatment	\$ 30.0	\$ -	\$ 30.0	\$ 15.3	\$ 32.0	\$ 14.7
Management Reserve*	\$ 43.0		\$ 43.0		\$ 25.1	\$ 43.0
<b>Total</b>	<b>\$ 392.5</b>	<b>\$ -</b>	<b>\$ 392.5</b>	<b>\$ 252.6</b>	<b>\$ 392.5</b>	<b>\$ 139.9</b>

\*There were no material additions or subtractions from Management Reserve during this quarter.

## F. BUDGET BY PROJECT

The budget table below shows the budget breakdown for each project, or grouping of similar scopes (reefers, gate, permit conditions).

Total project costs are currently aligned with the authorizations. Pending the outcome of claims the T5 Berth will be over project budget. The current Program authorization is sufficient to cover the overruns.

P-85: \$390.2M P-100: \$399.8M	Original Authorized Project Cost	Current Authorized Project Cost	This Request	Total Project Cost	Cost to Date	Remaining Cost
T5 Berth + Design + SCL	\$ 276,000,000	\$ 274,800,000	\$ -	\$ 281,000,000	\$ 222,813,214	\$ 58,186,786
T5 Permit + Tribes	\$ 14,000,000	\$ 14,000,000	\$ -	\$ 14,000,000	\$ 6,193,404	\$ 7,806,596
T5 Stormwater Treatment	\$ 30,000,000	\$ 32,000,000	\$ -	\$ 32,000,000	\$ 15,241,081	\$ 16,758,919
T5 Management Reserve/Risk	\$ 20,000,000	\$ 26,300,000	\$ -	\$ 880,000	\$ -	\$ 880,000
T5 Clean Truck	\$ -	\$ 55,000	\$ -	\$ 55,000	\$ 55,000	\$ -
T5 Marine Buildings	\$ -	\$ 10,100,000	\$ -	\$ 11,200,000	\$ 4,940,877	\$ 6,259,123
T5 RPM + CBP	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ 366,443	\$ 633,557
T5 Reefers	\$ -	\$ 19,180,000	\$ -	\$ 24,200,000	\$ 1,501,700	\$ 22,698,300
T5 Gate Complex	\$ -	\$ 13,000,000	\$ -	\$ 26,100,000	\$ 735,054	\$ 25,364,946
T5 Operational	\$ -	\$ 1,360,000	\$ -	\$ 1,360,000	\$ 698,742	\$ 661,258
T5 MARAD Grant Admin	\$ -	\$ 705,000	\$ -	\$ 705,000	\$ 19,281	\$ 685,719
<b>Total</b>	<b>\$ 340,000,000</b>	<b>\$ 392,500,000</b>	<b>\$ -</b>	<b>\$ 392,500,000</b>	<b>\$ 252,564,796</b>	<b>\$ 139,935,204</b>
<b>Previously Authorized</b>			<b>\$ 52,500,000</b>			
<b>Revised Total Authorization</b>			<b>\$ 392,500,000</b>			
MARAD PIDP Grant - NWSA			\$ 7,481,133			
WA Ecology - Stormwater			\$ 5,000,000			
WA Commerce - Shorepower			\$ 4,268,000			
WA Commerce - Reefers			\$ 4,316,500			
<b>Authorization - Grants</b>			<b>\$ 371,434,367</b>			
T5 ERL (POS Only)	\$ -	\$ -	\$ 700,000	\$ 700,000	\$ -	\$ 700,000

## G. CONTINGENCY AND RISK

The contingency and risk section provide the Managing Members early visibility to emerging issues and associated costs in T5 Modernization Program implementation.

**Contingency Funding** – the program has three distinct forms of contingency funding to cover risk:

1. Typical construction contingency of 15%.
2. A unique management reserve of \$20M was established in April 2019 to cover both program unknowns, and knowns (but not budgeted for the initial management reserve calculation), like lease obligations and permit requirements. In July 2021 additional \$50M was approved to be added to the management reserve. In December 2021 additional \$2.5M was approved to be added to the management reserve.
3. A fortunate bid variance of \$24M from original engineer's estimate of the primary \$160M construction contract.

While these forecasted costs are designed to be comprehensive, conservative, and cover all project phases, final program completion is 2 years out and inherent unknown risks may still emerge, and other risks may not occur.

#### Stochastic Analysis and Risk Register (is being updated quarterly in 2022)

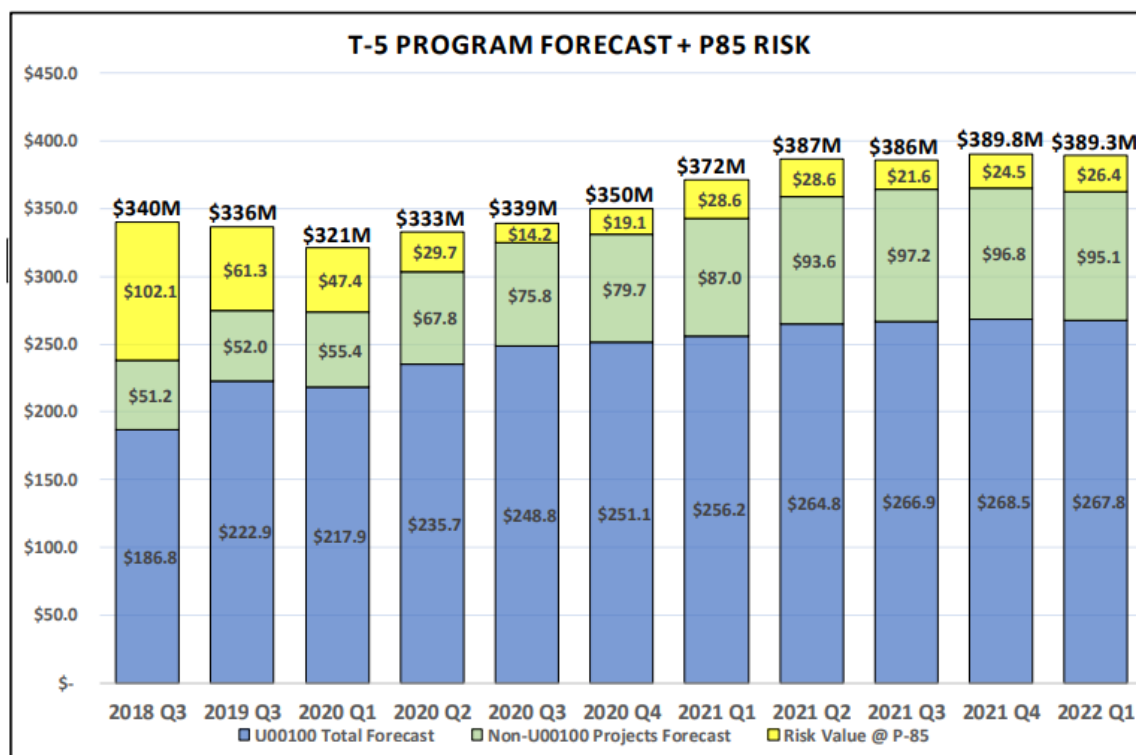
T-5 key staff meet quarterly with the T-5 Program risk consultant to model variables around future T-5 risk and update the risk register. Risks are identified by likelihood and impact to generate a score and are modelled into the forecast budget along with the actuals to date.

The largest risk to the program is the toe wall claim, this is pending further determination between NWSA and the General Contractor.

Recent Stochastic Analysis and Risk Register updates from March 2022 indicate:

- The program currently has a P-85 value (85% probability of being sufficient) of \$390.2M

The current expected cost of the program is \$371.4M (Authorization value \$392.5M minus grant funding \$21.07M).



Continuing risks:

- North Berth toe wall and entitlement
- Time impact for change order work cost uncertainty
- Paving bid item overruns
- Time impacts claim potential for S. berth pile damage repairs

- Repairs to S. berth pile repairs cost uncertainty
- N. Reefer infrastructure cost uncertainty
- Stormwater treatment cost uncertainty
- New Gate cost uncertainty

## H. OPPORTUNITIES

The opportunities section provides a status update on the T-5 grant agreements and reimbursements to date.

Reimbursements are on track with forecast milestones.

Grant Name	Agency	Grant Amount \$M	Agreement Date	Costs Submitted \$M	Reimburse- ments Received \$M
PIDP*	MARAD	7.48	12/20/21	0	0
Shore Power	WA DoC	4.27	10/18/21	3.1	3.1
Stormwater	WA DoE	5.00	07/01/20	3.39	1.82**
Reefers	WA DoC	4.31	Negotiation	0	0
<b>TOTAL</b>		<b>21.06</b>		<b>6.49</b>	<b>4.92</b>

\*PIDP MARAD grant total is \$10.6M. NWSA to receive \$7.4M / SSA to receive \$3.2M.

\*\*DoE Stormwater in process of reviewing costs submitted.

## I. COMMUNITY OUTREACH

July D1CM Meeting.

## J. Q3 2022 LOOK AHEAD

- Stormwater Phase 1: Completion
- Stormwater Phase 2: Start Construction
- South Marine Building: Bid
- New Gate: MARAD Selection
- North Reefer: 60% Design
- Permit Conditions: Construction Start



## K. PREVIOUS ACTIONS OR BRIEFINGS

Date	Action	Amount
May 2, 2022	T-5 Modernization – Program Update	\$0
February 1, 2022	T-5 Modernization – Program Update	\$0
December 21, 2021	Terminal 5 Partial Settlement Agreement with SSAT	\$2,500,000
November 2, 2021	T-5 Modernization – Program Update; Acceptance of T5 MARAD 2020 PIDP Grant Agreement; and POS only vote for ERL funding for T5 uplands soil disposal (\$700,000)	\$0
September 8, 2021	Terminal 5 ILA for Shore Power Grant with Department of Commerce	\$0
July 7, 2021	T-5 Program Update, Increased Auth and N Reefer Construction Auth	\$50,000,000
June 1, 2021	First Amendment to T-5 Lease authorization by MMs	\$0
April 6, 2021	Quiet Zone MOU	\$0
March 2, 2021	T-5 Modernization - Program Update	\$0
February 2, 2021	Approval for Construction of RPM, S Reefers, Clean Truck	\$0
October 6, 2020	T-5 Modernization - Program Update	\$0
September 1, 2020	T-5 Modernization - Tribal Agreement Update	\$0
August 4, 2020	T-5 Marine Building - Approval to advertise for N Building construction only	\$0
July 2, 2020	T-5 Marine Buildings - Auth to advertise for N and S Bldgs construction	\$0
July 2, 2020	T-5 Modernization - Program Update	\$0
April 7, 2020	T-5 Modernization - Program Update	\$0
January 14, 2020	T-5 Modernization - Program Update	\$0
October 1, 2019	T-5 Modernization - Program Update	\$0
August 6, 2019	T-5 Modernization - Program Update	\$0
June 4, 2019	T-5 Program Update	\$0
May 20, 2019	Authorization for Construction of Berth Modernization Program	\$0
April 2, 2019	Additional Program Funding and Auth to Fund T-5 Modernization Program	\$314,150,000
February 26, 2019	Authorization to advertise for construction	\$0
February 5, 2019	Pre-authorization Program Briefing	\$0
November 13, 2018	Motion to prepare construction docs for authorization to advertise	\$0
August 1, 2017	Railroad quiet zone funding, tribal payments, and Agreements	\$5,650,000
October 4, 2016	Additional Funding, Seattle City Light, and Proj Labor Agreement	\$8,200,000
June 7, 2016	DEIS Briefing	\$0
November 4, 2015	Additional SEPA and Design Funding	\$2,000,000
October 13, 2015	Test Pile Bids Exceeded Engineer's Estimate	\$0
July 14, 2015	Additional Design Authorization	\$5,000,000
June 3, 2014	Initial Design Authorization	\$4,700,000
May 13, 2014	T-5 Berth Modernization Briefing	\$0
March 12, 2014	Additional Pre-Design Authorization	\$150,000
October 27, 2013	Initial Pre-Design Authorization	\$150,000
<b>TOTAL</b>		<b>\$392,500,000</b>