

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

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

Item No.	10A
Date of Meeting	May 2, 2022

**DATE:** April 22, 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 Q1 2022

**A. SYNOPSIS**

Regular Q1 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. Least depth of North Berth is under review with Puget Sound Pilots.

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 December 31, 2021, the spent to date amounts of \$236,458,489 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 \$389.3M and a 100% probability of being sufficient with a value of \$404.3M.

The primary drivers leading to the \$0.5M decrease in P-85 value over last quarter are as follows:

1. Increase – N. Reefer Infrastructure cost responsibility
2. Increase– Bag Pile cost repair
3. Decrease – Bid item underruns
4. Increase – New Gate Complex estimate
5. Decrease – RPM installation – SSA agreed to pay and NWSA no longer needs to reimburse SSA for the work
6. Decrease – Berth Modernization soft cost reductions
7. Decrease – Stormwater phase 2 bid lower than estimated
8. Decrease – Quiet Zone property acquisition cost settling in lower than expected

### **Schedule**

Phase 1 (North Berth) Punchlist items are in progress.

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. The other major schedule risk to this date is the final determination of the successful completion of the in-water work. Dredging will 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) will be shared in Q2 2022.

## **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 24 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. During this quarter there has been one positive case of COVID-19 on site. There have been no recordable incidents this quarter for almost 15,000 hours worked.

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

The Program achieved four 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:

- North Berth: Punchlist activities are in progress.
- South Berth: Activities are behind schedule; concrete has recently started arriving on site.
- Seattle City Light (SCL) on site work is mostly complete, pending final invoice in April/May.

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

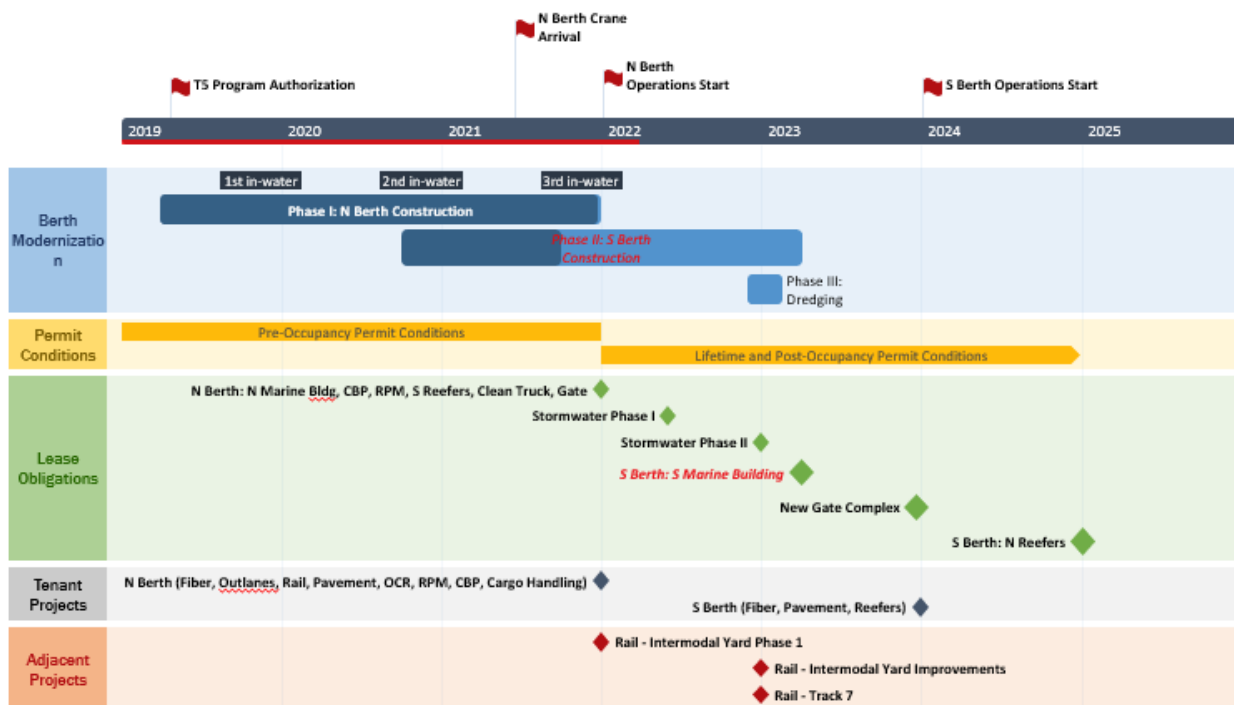
- Quiet Zone – no action until Q2 2022
- Stormwater Treatment – Phase 1 construction completion Q3 2022; Phase 2 Award and NTP.
- S Marine Building – Bid Phase on hold until further direction
- RPM and CBP utilities – on track, will be completed after resolution of concrete strike
- North Reefer Infrastructure –Tenant Reimbursable agreement in process.
- New Gate (per Lease Amendment; Phase 2 deliverable) – 90% Design complete April 2022

### 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.

The Program Master Schedule is illustrated below, projects in red are subject to schedule change for ongoing decision making and agreements, finalization is anticipated with Phase 2 lease agreement.



**E. BUDGET (to MARCH 31, 2021)**

Budget numbers are updated through March 31, 2021. 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 82% spent and 79% complete (discrepancy is due to mobilization and early material purchase).

2022 Quarter 1 Program Budget	Authorized Budget	Quarter 1 Changes	Updated Budget	Spent to Date	Forecast at Completion	Remaining Authorized Budget
Design, Construction, Project Management	\$ 305.3	\$ 0.2	\$ 305.5	\$ 219.5	\$ 320.7	\$ 85.8
Permit Conditions	\$ 14.0	\$ -	\$ 14.0	\$ 6.0	\$ 14.1	\$ 8.0
Stormwater Treatment	\$ 30.0	\$ -	\$ 30.0	\$ 11.0	\$ 32.0	\$ 19.0
Management Reserve*	\$ 40.7	\$ 2.3	\$ 43.0	\$ -	\$ 25.7	\$ 40.7
<b>Total</b>	<b>\$ 390.0</b>	<b>\$ 2.5</b>	<b>\$ 392.5</b>	<b>\$ 236.5</b>	<b>\$ 392.5</b>	<b>\$ 153.5</b>

\*\$200K Marine Building + \$1M Gate Scales + \$300K Interim gate + \$705 MARAD Admin moved out of Management Reserve this quarter and into construction; \$2M moved back to Management Reserve from the December authorization to not refund the RPM/CBP.

## 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.

	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	\$ -	\$ 274,800,000	\$ 211,389,835	\$ 63,410,165
T5 Permit + Tribes	\$ 14,000,000	\$ 14,000,000	\$ -	\$ 14,000,000	\$ 5,965,820	\$ 8,034,180
T5 Stormwater Treatment	\$ 30,000,000	\$ 32,000,000	\$ -	\$ 32,000,000	\$ 11,048,943	\$ 20,951,057
T5 Management Reserve/Risk	\$ 20,000,000	\$ 27,120,000	\$ -	\$ 20,000,000	\$ -	\$ 20,000,000
T5 Clean Truck	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ 32,713	\$ 67,287
T5 Marine Buildings	\$ -	\$ 10,100,000	\$ -	\$ 10,100,000	\$ 4,830,792	\$ 5,269,208
T5 RPM + CBP	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ 345,828	\$ 654,172
T5 Reefers	\$ -	\$ 19,180,000	\$ -	\$ 35,000,000	\$ 1,489,255	\$ 33,510,745
T5 Gate Complex	\$ -	\$ 13,000,000	\$ -	\$ 16,000,000	\$ 701,939	\$ 15,298,061
T5 Operational	\$ -	\$ 1,200,000	\$ -	\$ 1,200,000	\$ 653,364	\$ 546,636
<b>Total</b>	<b>\$ 340,000,000</b>	<b>\$ 392,500,000</b>	<b>\$ -</b>	<b>\$ 404,200,000</b>	<b>\$ 236,458,489</b>	<b>\$ 167,741,511</b>
<b>Previously Authorized</b>			<b>\$ 52,500,000</b>			
<b>Revised Total Authorization</b>			<b>\$ 392,500,000</b>			
MARAD PIDP Grant			\$ 10,700,000			
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.

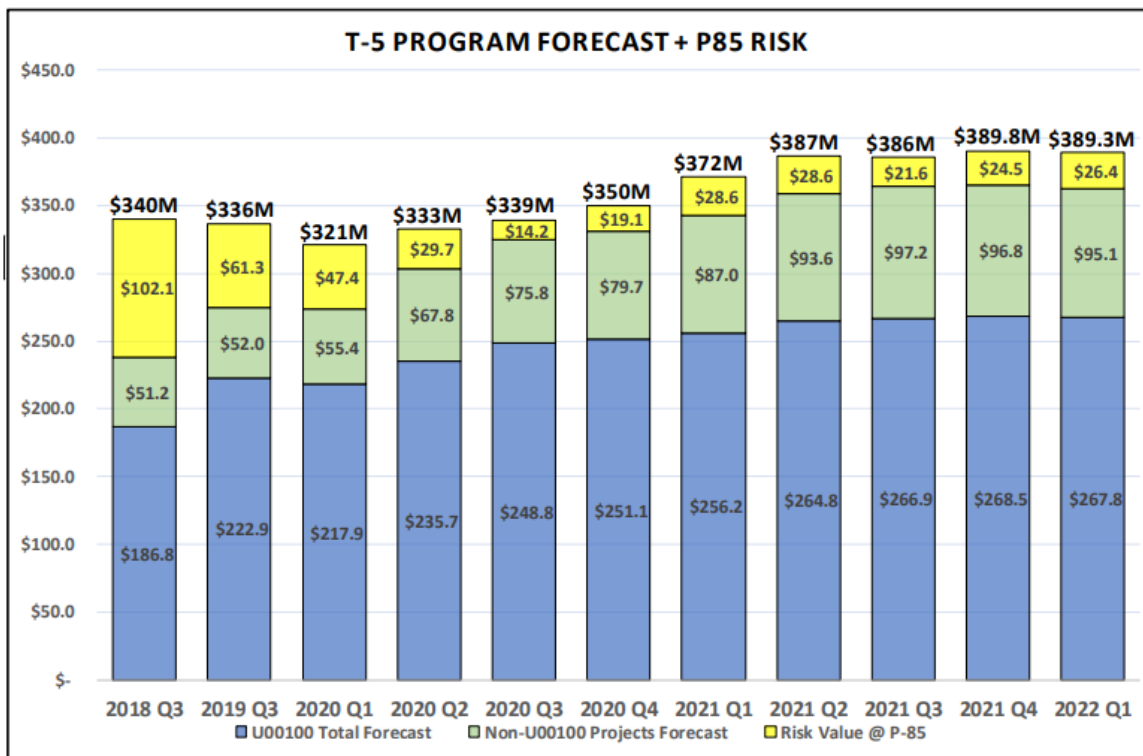
**Stochastic Analysis and Risk Register** (is being updated quarterly in 2022)

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.

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 \$389.3M

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 cost uncertainty
- 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 demarcation responsibility cost & probability uncertainty
- Probability of Phases 1 & 2 reefer allowance
- N. Reefer infrastructure cost uncertainty
- Stormwater treatment cost uncertainty
- Supply chain related cost and schedule 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	10.7 (7.48 NWSA)	12/20/21	0	0
Shore Power	WA <u>DoC</u>	4.27	10/18/21	2.58	2.58
Stormwater	WA DoE	5.00	07/01/20	0.76	0.76
Reefers	WA <u>DoC</u>	4.31	Negotiation	0	0
<b>TOTAL</b>		<b>24.28</b>		<b>3.34</b>	<b>3.34</b>

DoE Stormwater in process of approving \$250K in Change Orders – will request additional funds after reaching total grant amount.

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## I. COMMUNITY OUTREACH

Various media events are planned in Q2 2022.

## J. Q2 2022 LOOK AHEAD

- Berth Modernization South Berth Uplands
- Invoicing of Seattle City Light (SCL) work
- Stormwater Phase 1 Completion
- Stormwater Phase 2 Start Construction
- RPM and CBP Utilities Completion (pending concrete strike)
- T-5 North Reefer Infrastructure Design
- New Gate 100% Design



**K. PREVIOUS ACTIONS OR BRIEFINGS**

<b>Date</b>	<b>Action</b>	<b>Amount</b>
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>