



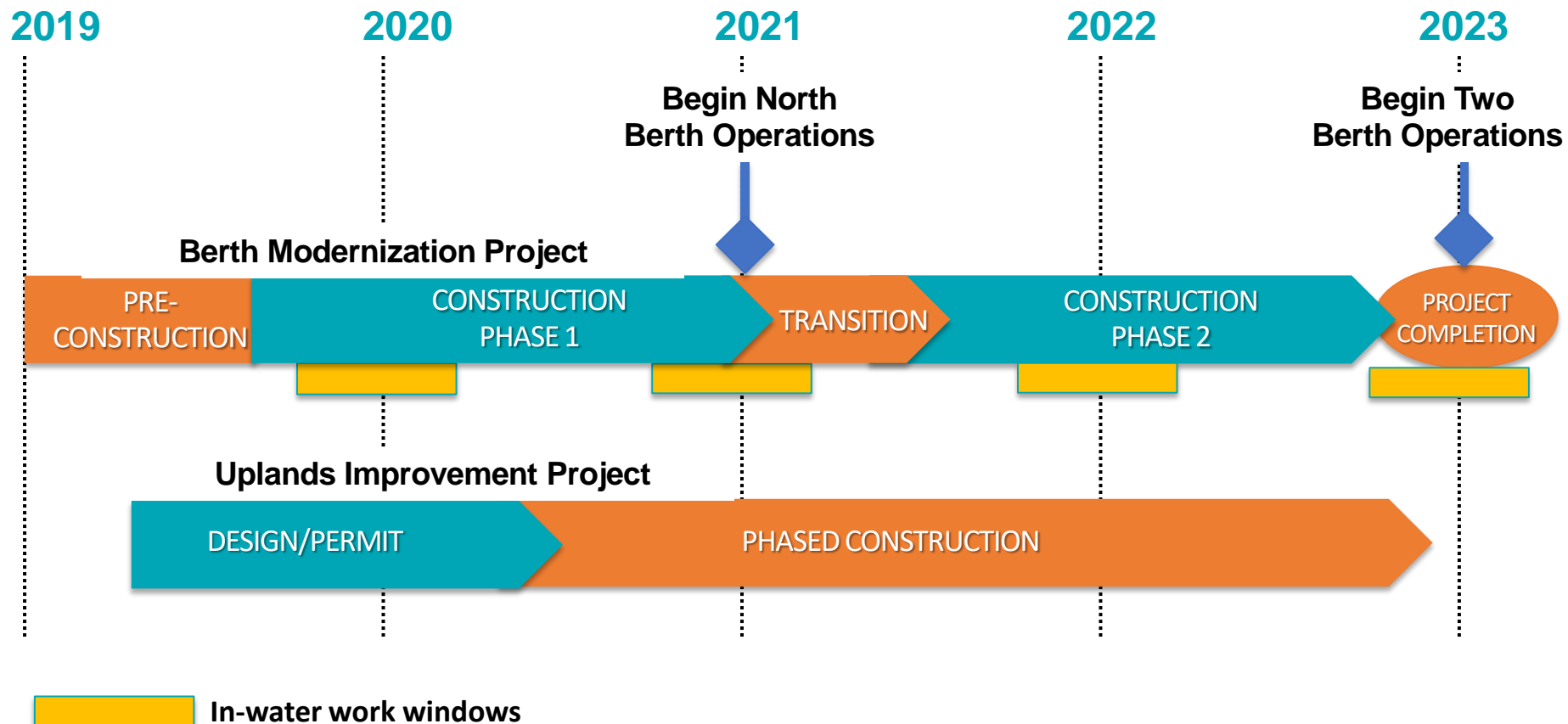
Item No.: 4A-supp
Date of Meeting: February 5, 2019

Terminal 5 Modernization Program Briefing

Presenter: Anne Porter
Title: POS Capital Program Leader



Terminal 5 – Schedule and Phasing



Schedule and phasing over next 4 years

Terminal 5 – Current Status

- Berth Modernization construction ready to advertise
 - Pre-solicitation complete
 - Environmental reviews and permit approvals complete
 - Construction schedule phased over next 4 years
- Uplands Improvement Project
 - Design & permitting 2019
 - Construction 2020-2023
- Estimated Program costs \$340 million including
 - Management reserve \$20 million
 - Stormwater reserve \$30 million

Status of program execution

Terminal 5 – Permit Conditions

- Air Quality
 - Implement Air Quality Management Plan
 - Monitor PM 2.5 to confirm operations meet modeled assumptions < 6 tons/year
- Noise
 - Implement Operations Noise Management Plan
 - All mobile cargo handling equipment uses broadband safety alarms
 - Railroad Quiet zone
- Traffic
 - Implement Gate Queue Management Plan
 - Avoid backups past intersection of SW Spokane St and access bridge
 - Roadway and signalization improvements
- Stormwater
 - Treatment system design is informed by future use
 - Tenant holds ISGP (Industrial Stormwater General Permit)
 - Best management practices and benchmark sampling

Key elements of permit conditions

Next Steps

Returning on 2/26 to request Managing Members of the Northwest Seaport Alliance (NWSA) authorization for program funding and construction authorization

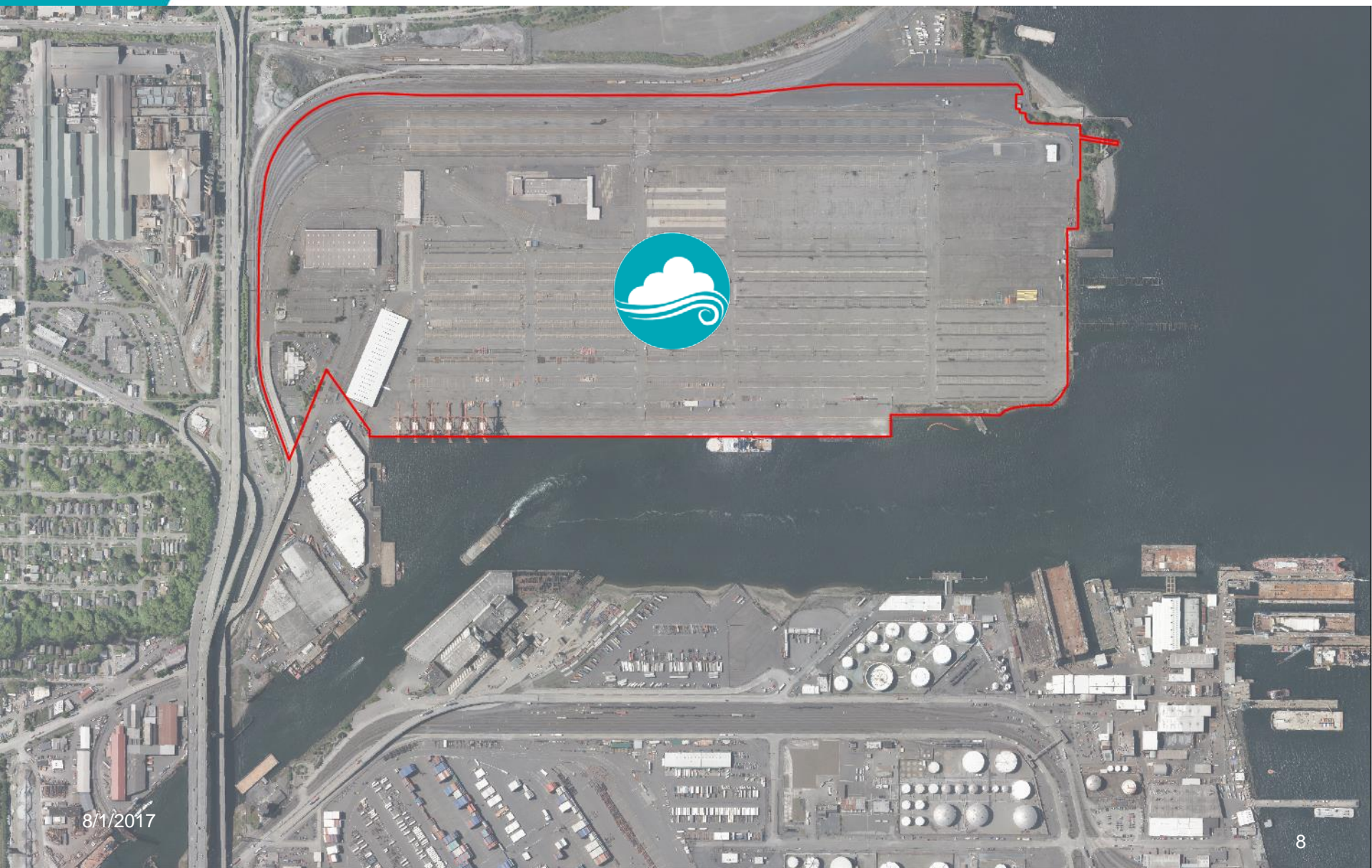
THE NORTHWEST SEAPORT ALLIANCE

Supplementary slides

**Terminal 5 Modernization
Program Briefing
February 2019**

Air Quality

Terminal 5 Berth Modernization



8/1/2017

Air Quality Condition

Terminal 5 Berth Modernization



- **Develop Air Quality Management agreement with PSCAA consistent with objectives of city land use decision**
 - Install Shore Power
 - Program to Maximize Shore power use
 - Measure PM 2.5 to confirm operations meet modelled assumptions in FEIS < 6 tons/yr
 - Track operational data related to Air Quality
 - Continue NWPCA strategy
 - Plan developed and implemented by terminal occupancy

T5 At-Berth Environmental Performance

- **Fine particulate matter emissions from T-5 will be capped at 6 tons per year for the first 10 years of operations, with stricter emission limits in subsequent years.**
 - The intensity of emissions (emissions per container) will be at least 45% lower at T-5 than current NWSA operations in the North Harbor.
- **Based on emissions modeling, shore power usage is not required to meet the emissions limits if cargo handling equipment meets tier 4i or better and cargo throughput remains below 647,000 TEUs.**
 - Tier 4 equipment emits 90% less fine particulate matter than the next cleanest models.
- **NWSA will invest \$4.4 million to build shore power infrastructure**
- **It is premature to require shore power because, in Washington, shore power has not yet been implemented for a diverse fleet of vessels**
 - Beginning with a voluntary approach is more appropriate; the port and tenant will need to develop clear and effective operating procedures and understand economics
 - NWSA is actively working to encourage shore power use and will develop a plan to reduce at berth vessel emissions with the T-5 tenant
- **51% of vessel calls at T-18, T-30, T-46, Husky, PCT, and WUT were capable of plugging in in 2018.**
- **Shore power, along with other zero or near zero emissions technology will be critical for reaching the NWSA' broader environmental stewardship goals.**
 - Northwest Ports Clean Air Strategy
 - GHG Resolution

Noise

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8/1/2017

Noise Conditions

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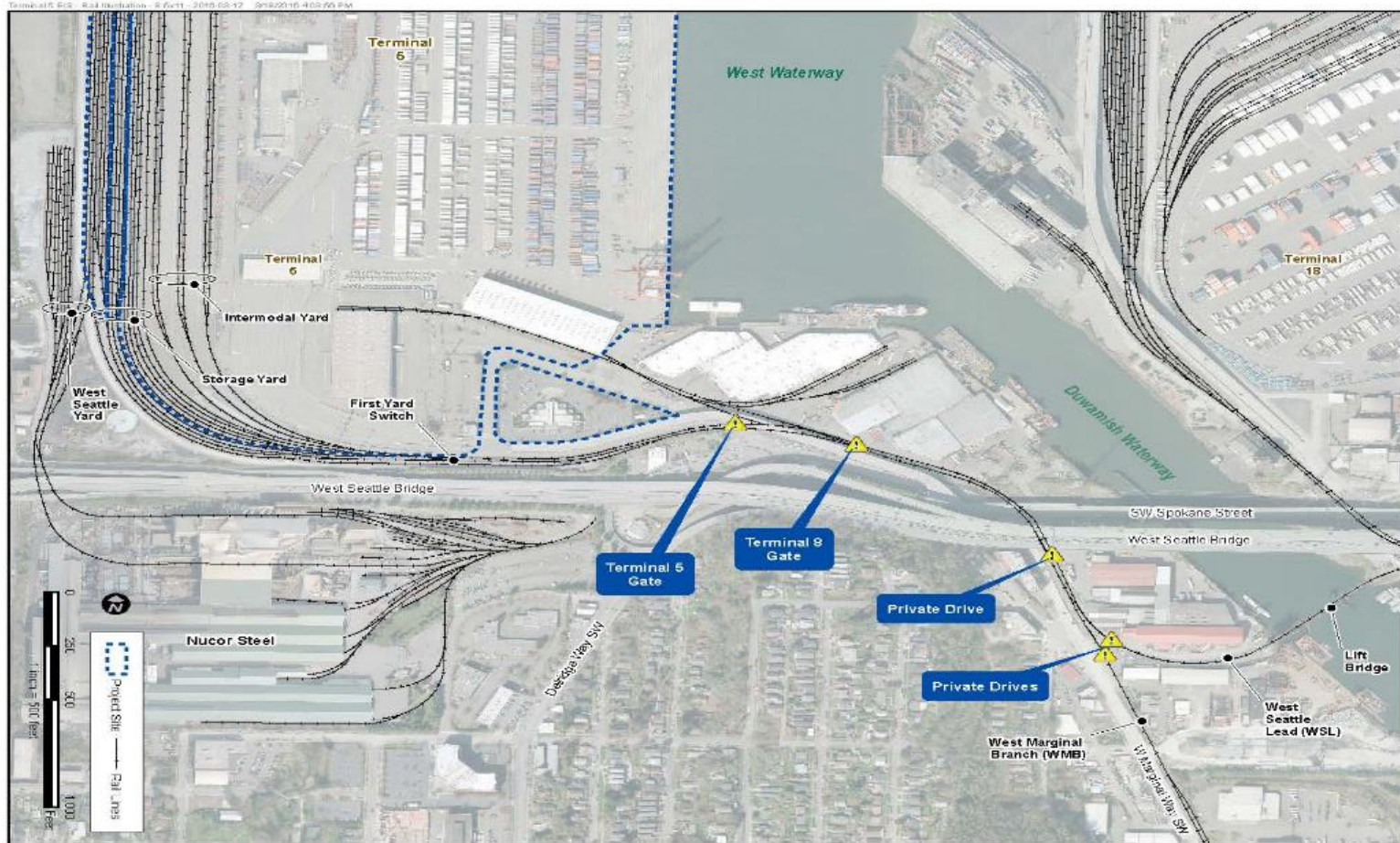


- **Design and Implement Operations Noise Management Plan**
- **All mobile cargo handling equipment uses broadband safety alarms**
- **Hotline for low frequency vessel noise complaints**
 - **Measurements to agreed upon limits**
 - **Adaptive responses, including shore power hookups**
- **Railroad Quiet zone**

Establish Quiet Zone Terminal 5 Berth Modernization



Figure x.x.x.x Near-Terminal Crossings



Railroad Quiet Zone Agreement

Terminal 5 Berth Modernization



- **MOU between SDOT/Port required as pre-issuance condition**
 - Port responsibilities:
 - Provide funding for design, infrastructure, and construction - estimated up to \$5.2M
 - BNSF will complete engineering design and construction prior to occupancy
 - Port will provide funding for maintenance to retain quiet zone designation

Traffic Mitigation Terminal 5 Berth Modernization



Gate Queue
Management



TWIC Security Gate



Local Access



Quiet Zone



Signalization