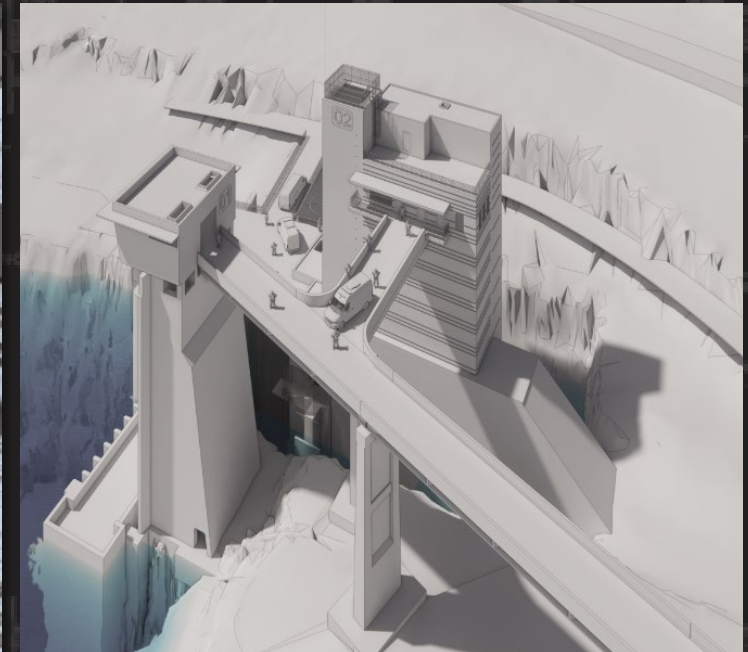


HOWARD A. HANSON DAM FISH PASSAGE FACILITY OVERVIEW AND UPDATE



Nancy Chin
Jessica Knickerbocker

January 2024



U.S. ARMY



US Army Corps
of Engineers®



ADDITIONAL WATER STORAGE PROJECT (AWSP): BACKGROUND, AUTHORITY, SPONSOR

Authorization: WRDA 1999, updated WRDA 2022

Sponsor: Tacoma Public Utilities

Multi-Purpose Project:

- M&I Water Supply
- Ecosystem Restoration

Phase 1: 20,000 acre feet of Municipal and Industrial Water and fish passage (1167')

Phase 2: 2,400 acre feet of M&I and 9,600 acre feet of low flow augmentation, additional fish and wildlife habitat (1177')





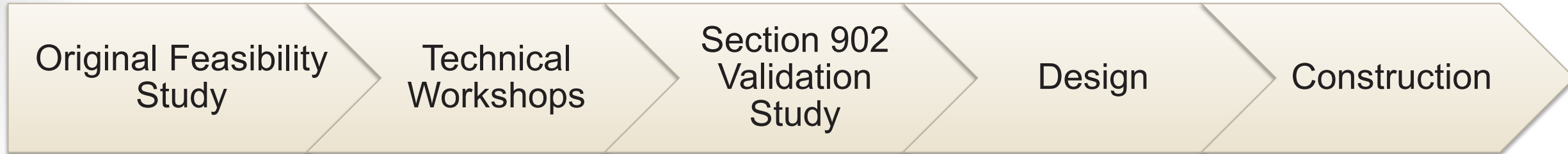
FISH PASSAGE OPPORTUNITIES & CONSIDERATIONS

Single most impactful project that USACE can take to benefit Puget Sound salmon & orca recovery without negatively impacting other user groups – Supports recovery of Puget Sound fall chinook which are the top priority chinook stocks for Southern Resident Killer Whales' recovery based on a June 2018 study by NOAA/WDFW

- **No significant trade-offs** with other authorized uses of HAHD caused by implementation
- Legally required by the **USACE commitment** to achieve the RPA presented in the 2019 Jeopardy BiOp
- **Apply lessons** learned from other FPF projects
- **Risk informed decision-making** is being applied early in the project life cycle to avoid unnecessary high risk in design & construction
- Significant salmon recovery efforts will enhance continuity of harvestable populations in furtherance of reserved **Tribal treaty rights**
- Tacoma Public Utilities has **invested \$400M for infrastructure** to use M&I water, and an upstream FPF that sits idle until our downstream FPF is operational
- **Diverse coalition** of regional support



HAHD AWSP HISTORY & PROCESS



- 1999: Downstream fish passage facility authorized
- 2005: Construction started
- 2011: Construction paused due to anticipated Section 902 cost overrun

- 2019 Jeopardy BiOp requires downstream fish passage facility by 2030
- FY20 funding received to re-initiate project
- Streamlined evaluation of design options
- Identify tentatively selected plan
- Define scope of the study phase

- Conduct limited technical analysis
- Complete conceptual design + updated cost estimate on recommended plan
- Develop integrated NEPA document (Supplemental EIS)
- Send Director's Report to Congress for approval and funding

- WRDA '22 Authorization
- BIL Appropriations to complete design phase and initiate construction
- Additional data acquisition or analysis
- Development of plans and specifications
- Pre-Solicitation contract acquisition

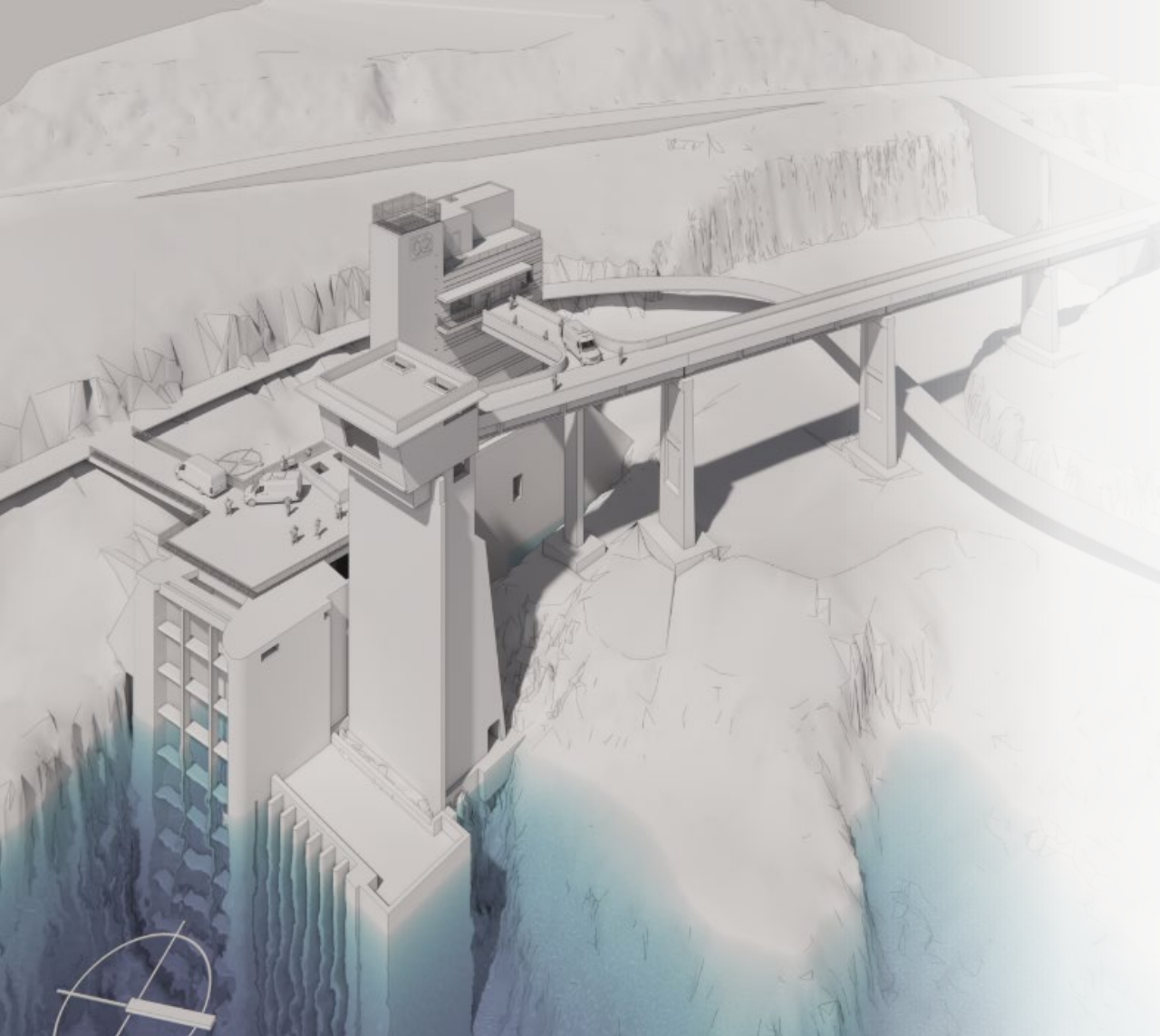
- Remainder of Construction Appropriation
- Contract acquisition
- 2030 deadline per BiOp requirements

Current Stage



FISH PASSAGE FACILITY FEATURES

Fixed Multiport Collector with Steep Slope Bypass



- Least cost alternative that is expected to meet established criteria of 95% collection and 98% survival outlined in the BIOP
- Received agency and stakeholder support for preferred alternative interagency workshops held in 2020 and 2021
- Significant reduction in estimated O&M costs by elimination of trap and haul from previous 95% design
- Allows for flexibility and adaptability
- Within scope of current authorization and builds on the technical analysis completed for the previous design
- Total authorized cost: \$921M



HOWARD HANSON CURRENT TASKS

Data collection and studies to inform design

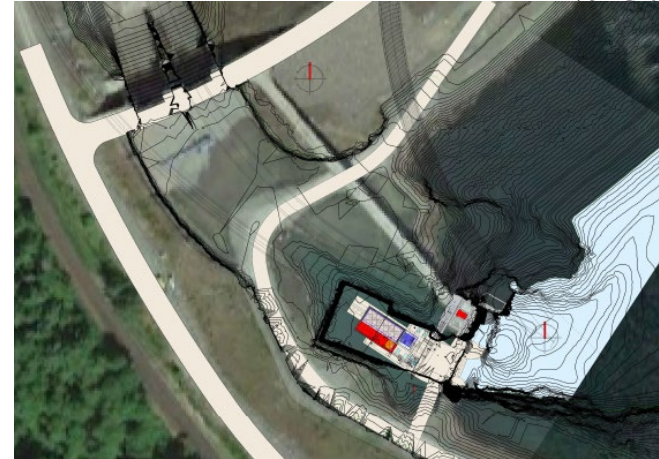
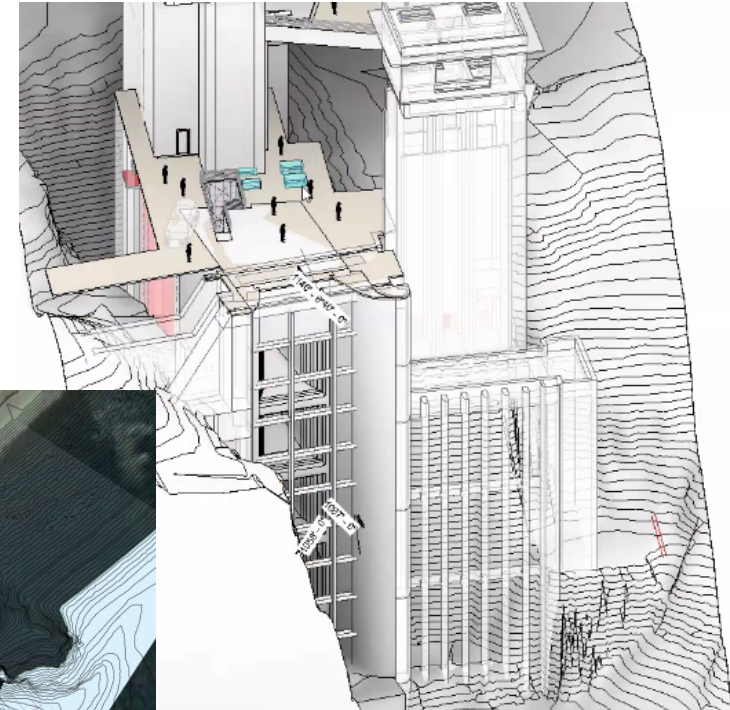
- ❖ Fish survivability studies
- ❖ Geotechnical explorations
- ❖ Hydraulic modeling

Engineering Technical Activities

- ❖ Design, Plans, and Specs
- ❖ Safety and Quality Reviews

Acquisition Activities

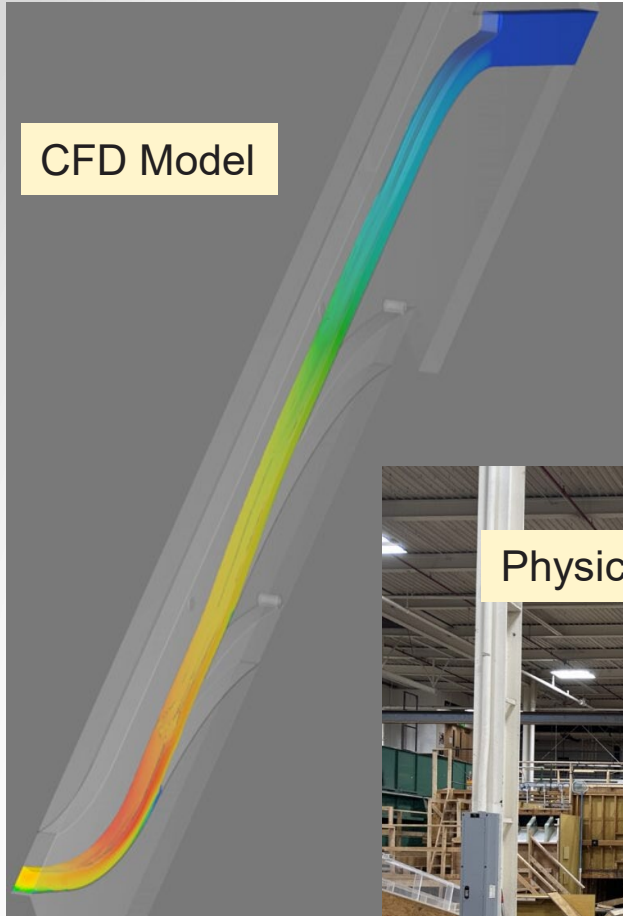
- ❖ Market Research
- ❖ Pre-Solicitation engagements





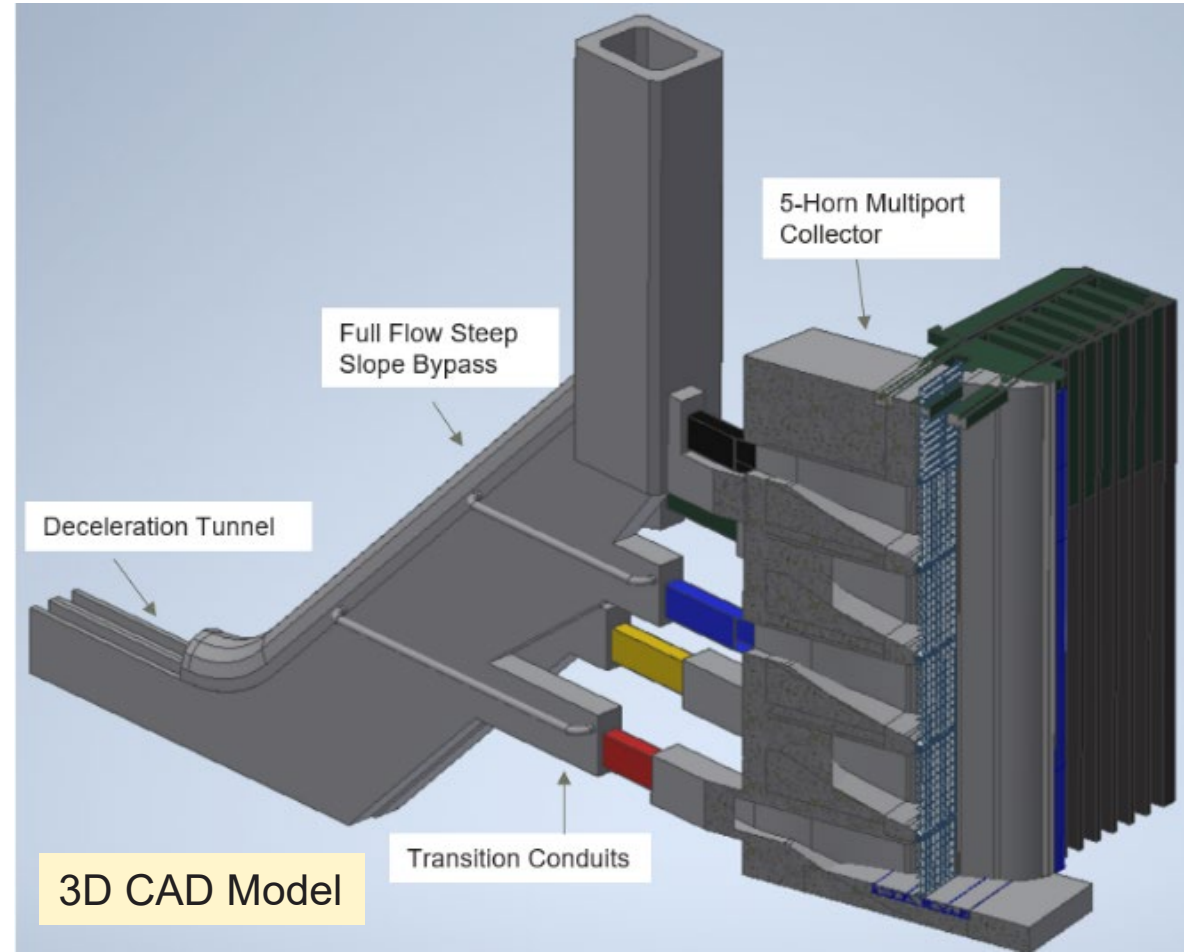
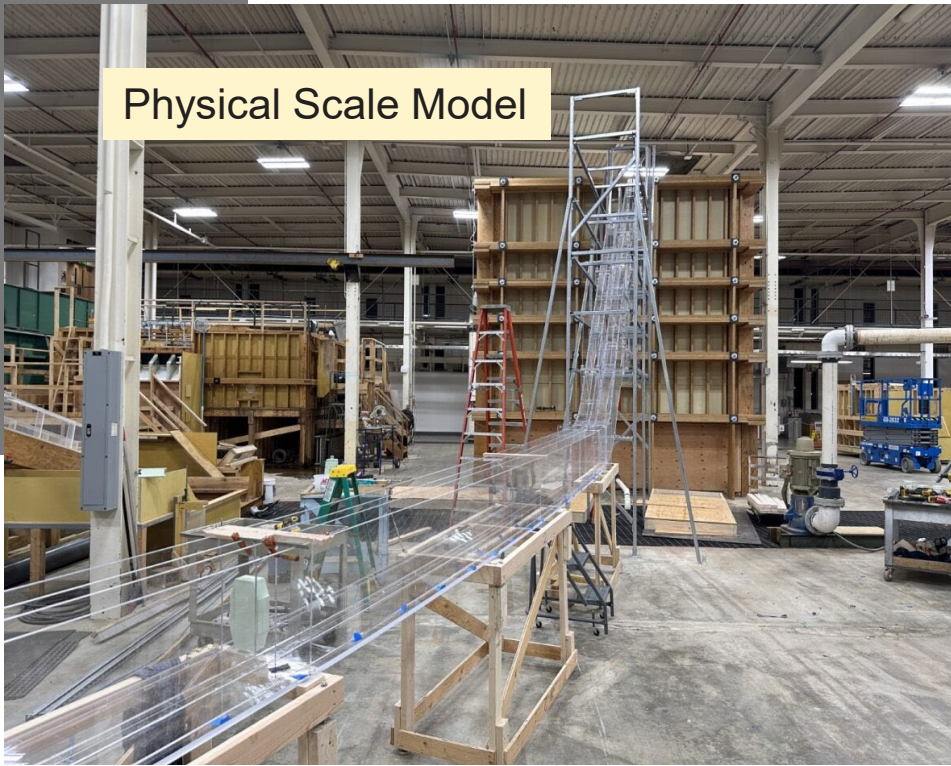
HOWARD HANSON FISH PASSAGE STATE OF THE ART DESIGN

CFD Model



- 5-Horn Multiport Collector
- Steep Slope By-Pass
- Deceleration Tunnel
- Outlet works
- Stilling basin

Physical Scale Model



3D CAD Model

IN-PROGRESS SCHEDULE

Anticipated completion in 2024

- Data collection
- Hydraulic Modeling
- 35% Design
- Contract Acquisition

Anticipated completion in 2025

- Design, Plans, and Specifications
- Safety and Quality Reviews

Construction 2026-2030



NEXT STEPS

- Continued unified stakeholder support on all levels
- Award contract and advance design
- Access and real property certification
- Construction contract contingent upon receipt of additional funding





NEXT STEPS FOR TACOMA WATER

Anticipate Completion in 2024

- Headworks Master Plan
- Headworks Operations Center Remodel

Planning Phase

- Upstream Fish Passage Facility Upgrade Project
- Fish Habitat Mitigation & Restoration Projects

Feasibility

- Forecast Informed Reservoir Operations





QUESTIONS

