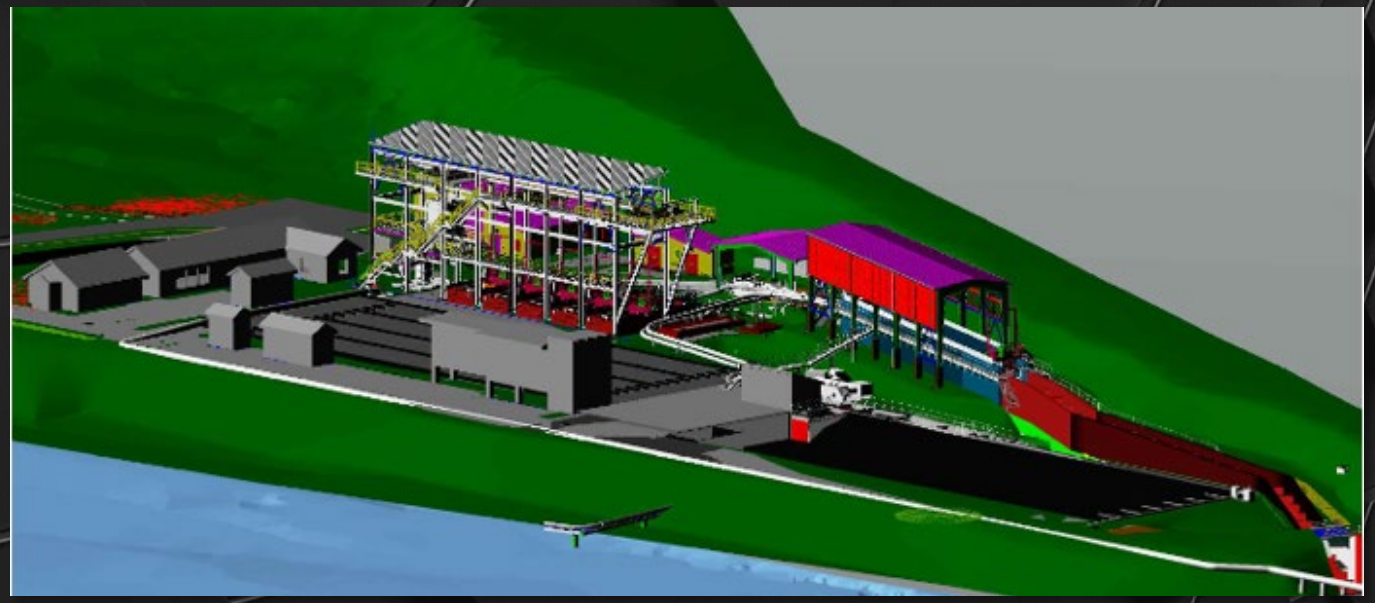
Dexter Fish Facility Upgrade



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USACE Portland District

Willamette Science Review
March 4, 2026



U.S. ARMY

US Army Corps of Engineers®

BACKGROUND

- Dexter Fish Facility (FF) was constructed in 1955.
- Located on the Middle Fork Willamette River, downstream of Lookout Point and Dexter Dams, east of Eugene, OR.
- Operated by Oregon Dept. of Fish and Wildlife (ODFW).
- Used mainly for collection of adult salmon for broodstock and rearing juvenile salmon.
- 2008 Biological Opinion issued by National Marine Fisheries Service required USACE to upgrade fish facilities in the Willamette Basin.
- USACE began engineering design for Dexter FF and design was placed on hold in 2014 due to lack of funding to complete the project.
- 2021 Injunction issued by Federal Court required USACE to complete construction by May 2026.
- Engineering team used NMFS Fish Passage Design Manual and experience from designing other fish facilities.



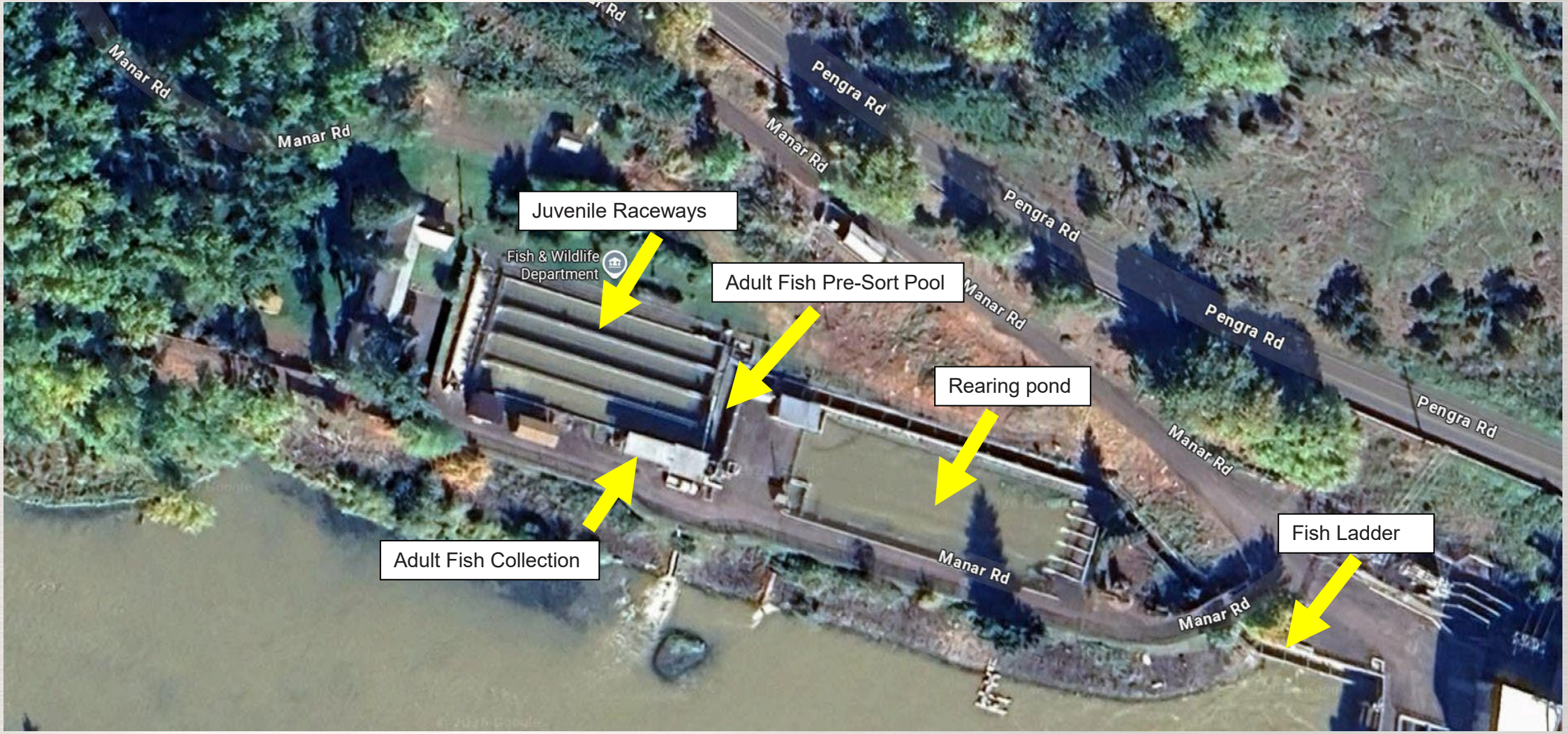


CHALLENGES DURING CONSTRUCTION

- Engineering team had 4 years to complete design and construction (2022-2026).
- Construction began in fall 2023 with completion by May 2026.
- Adult fish collection must continue during construction.
  - Normal adult fish collection: June – September.
  - ODFW proposed collection during mid-June – mid-July.
- Juvenile fish rearing must continue during construction.
- Facility shut-down periods for construction:
  - February 16 – May 15, 2025 and 2026.
- In-water work periods:
- July 16 – September 15, 2025.
- February 16 – May 15, 2026.
- USACE work was impacted during the Federal Government shut-down in fall 2025.
  - Construction continued, but USACE involvement was limited to oversight.
    - other things were delayed, such as commissioning plans, automation, change orders, etc.

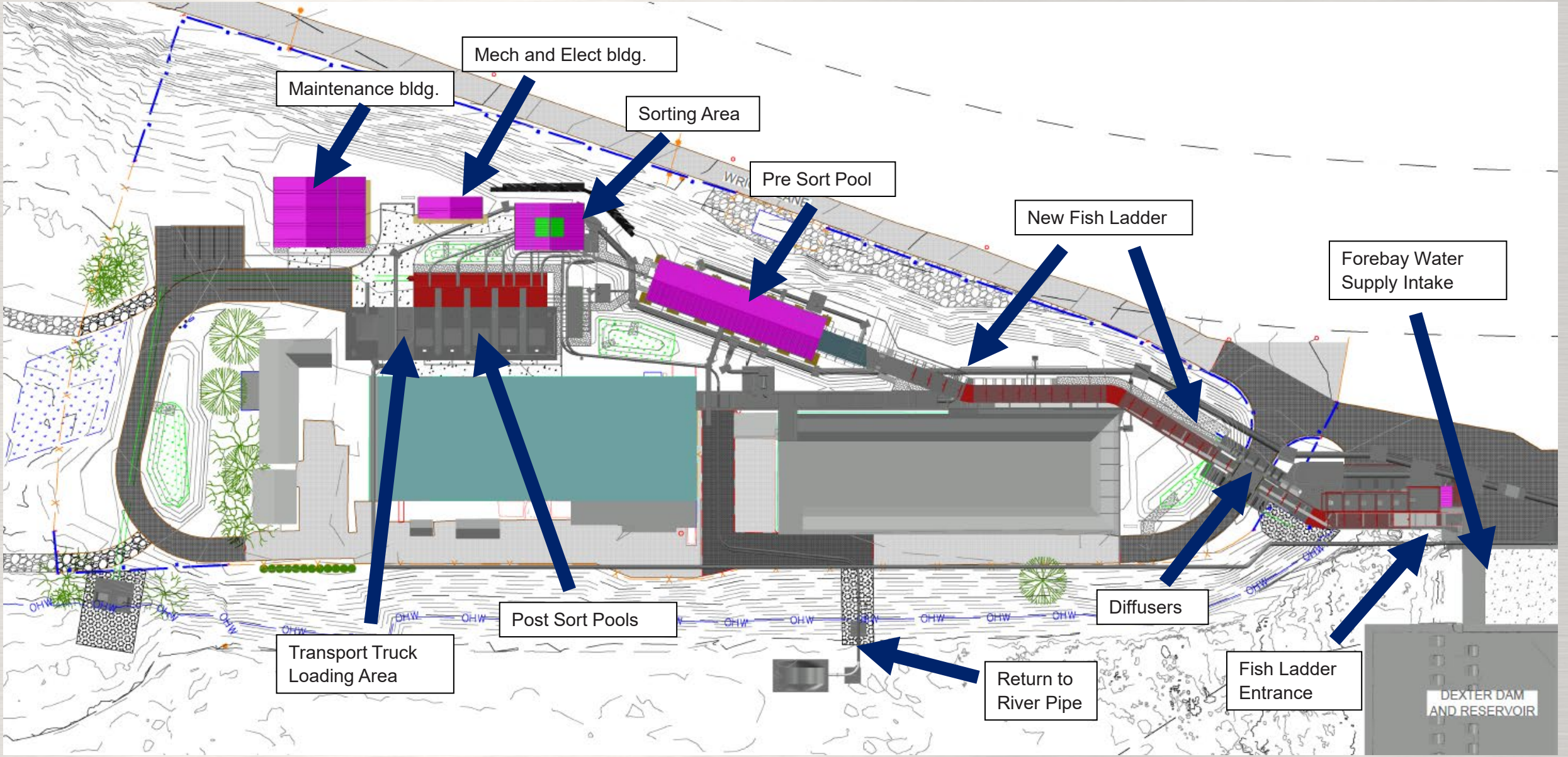
DEXTER FF BASE KEY FEATURES

- Facility is operated at about 35 cfs flow



Google maps 2026, Airbus, CNES, Airbus, Maxar Technologies 2026

DEXTER FF UPGRADED FEATURES



DEXTER FF UPGRADED KEY HYDRAULICS (FLOWS)

- Current facility is operated at about 35 cfs flow.
- Upgraded facility is designed for 239 cfs flow.

Hydraulic Feature	Flow (cfs)	Comment
Design Ladder Flow	30	
Sort Facility Supply (including false weir) *	3.5	0.5 cfs for wash down, 1 cfs for flume supply, 2 cfs for false weir**
Post-Sort Supply*	3.75	0.75 cfs/pond x 5 holding ponds
Juvenile Rearing Raceway Supply*	(35) 50 cfs	Piping will be added to potentially send 35 cfs efflux from the Juvenile Rearing Raceway to the existing AWS floor diffuser.
Truck Loading Hopper	0.3	
Asphalt Pond Supply*	10	
Return-to-River Pipe	7	Based on EDR and consultation with NOAA Fisheries for up to 6 inches flow depth
Total Water Supply Requirements	89.5	
Available Water Supply	**238.7**	Based on gravity supply at forebay el. 693.6 determined during EDR study
Auxiliary Water Supply	149.2	Available Water Supply less the Total Water Supply Requirements

CHALLENGES AT COMMISSIONING (START UP)

- <u>The forebay water supply intake screen design and construction was not funded.</u>
  - Funding was requested, however, unsure when we will receive funding.
- Commissioning (start up) scheduled for **May 2026** to meet the Injunction requirement.
- We are working closely with ODFW for commissioning and testing in May. *May will be a busy month!*
- Commissioning and testing will be conducted with limited flow of **90 cfs** and the facility will be operated at 90 cfs until construction of the water intake screen is complete.
  - Upgraded facility is designed for **239 cfs** of flow.
  - The old facility operated at 35 cfs, so 90 cfs is much more (not ideal).
  - Doing the math with 90 cfs: 30 cfs for the ladder + 50 cfs for the juvenile raceways = 80 cfs.
  - Remaining 10 cfs will be distributed through the rest of the facility (sorting and handling, post sort pools, return to river pipe, truck fill, and rearing pond).
    - ODFW not planning to use the rearing pond until we know the facility can operate at 90 cfs.
    - Juvenile raceways are more important than the pond.

* USACE will coordinate the limited flows with NFMS for input and concurrence.

CONSTRUCTION SITE LAYOUT





PRE-SORT POOL STRUCTURE





FISH LADDER & WATER SUPPLY







FISH LADDER





FISH LADDER





HOPPER AND POST-SORT STRUCTURES





POST-SORT POOLS





QUESTIONS

Much thanks to ODFW for the collaboration

