IMCO Crew placing underdrain and backfilling with engineered media for new stormwater filtration system.

THE DIRT

February 2, 2022, Winter vol. 47

STORMWATER TREATMENT PLANT

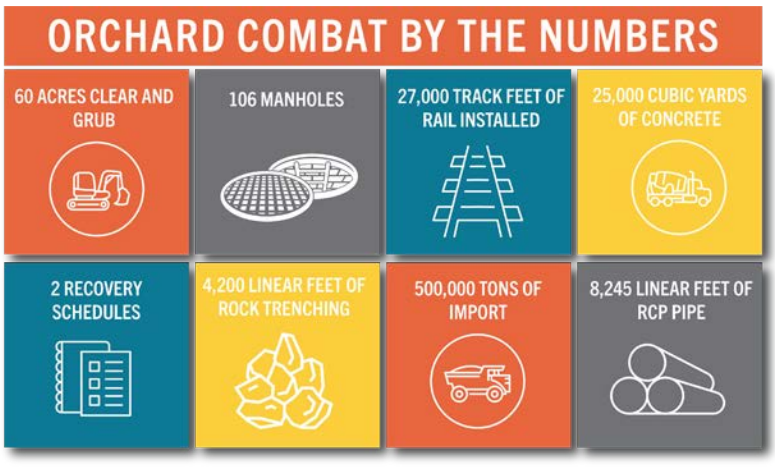
After delays late last year, the stormwater project picked up the pace winter quarter. The team is nearing completion of the new filtration bed that filters all of the stormwater from the client's manufacturing facility in Everett, WA. In total, the team will have placed 7,000 cubic yards of new engineered filtration media, 10,000 cubic yards of drain rock, and 1,500 cubic yards of pea gravel.

Installation of underdrain and disbursement piping is taking place while the team places new material. The site is split into two enhanced media filter (EMF) sections known as 'EMF North' and 'EMF South' and has required construction of a new road in order to access all areas of the site. IMCO's project team completed the EMF North system and is wrapping up EMF South in early February.

continued on page 2

ORCHARD COMBAT RAIL ADDITION

IMCO's Orchard Combat project team is wrapping up the last of the concrete work and erection of a shade structure on site. A recently executed change order added additional storm drainage and earthwork to the remaining scopes. Pouring the last 1,250 cubic yards of concrete is on hold while the team waits for the ice to melt on a site, where it is consistently 10 – 15 degrees colder than in the city of Boise. The project is scheduled to be complete in the Spring.



OXBOW HATCHERY RENOVATION

Built in 1961, Oxbow Fish Hatchery lies on the Oregon bank of the Snake River. The hatchery serves as a trapping, holding, and spawning facility for summer steelhead and spring Chinook salmon. More than one million eggs are fertilized and grow through their first stages of development at Oxbow Hatchery.

IMCO was selected to procure, construct, and commission a new hatchery at the site of an existing hatchery near Oxbow, Oregon. As part of the solicitation process, the client asked for value engineering alternatives. The estimating and proposal team worked together to develop 17 value engineering alternatives, totaling over $1.5 million in potential savings for the client. IMCO was awarded the project in July 2021.

IMCO's team is excited to deliver this state-of-the-art hatchery project, with construction beginning in March 2022. Major scopes include demolition of the existing facility, site improvements, river intake, aeration tower, adult holding facility, sorting and spawning facility, hatchery building, shop, and storage building.

NEW PROJECTS AHEAD

SPRING, SUMMER 2022

WSDOT
Samish River Bridge Deck Overlay, Burlington, WA

CITY OF SEATTLE
Tolt Pipeline No. 1 Rehabilitation, Duvall, WA

WSDOT
Unnamed Tributary to Fourmile Creek Fish Passage, Lynden, WA

CITY OF POCATELLO
Pocatello Creek Booster Station, Pocatello, ID

CITY OF BOISE
Boise Airport VALE West Cargo Apron EGSE, Boise, ID

continued from the cover

Once the filtration system is complete, the Owner is requiring the system be flushed 11 times, to push out any turbidity, including mud, sand, and silt, in the water. Each rinse will use up to 1.4 million gallons of water! This water will be flushed into Everett's sanitary sewer system. Once the system has been approved for use, the media filter will clean stormwater runoff from 700 acres of the Owner's campus.

A month after the system begins treating the stormwater runoff, a new lift station will be installed to further assist in moving the water. Once warmer weather arrives, a landscaping subcontractor will plant approximately 50,000 plants in the media filter.

IMCO placing media in pond.

IMCO crew excavating remaining pond export.

The IMCO 850 and rental D9 pushing material down the hillside to balance the pad for the batch plant site with archeological monitor watching for artifacts.

The wet-mix plant being erected at the batch plant site.

PRIEST RAPIDS RIGHT EMBANKMENT

The Priest Rapids Right Embankment project plant crew is completing the set-up of the roller compacted concrete (RCC) batch plant, performing installation of power, water, and plant office controllers. The plant is undergoing calibration and certification. The plant will receive National Ready Mixed Concrete Association certification, and the team will begin a trial placement in early February.

The excavation crew has reached bedrock elevation on the east end of the new dam alignment. IMCO crews will begin foundation cleaning and preparation, scheduled to be complete by March to allow phase one of RCC placement to begin. Dewatering of the excavation began in January and will continue as required.

The carpenter crew will prefabricate significant quantities of new formwork purchased for the project in February.

The trial RCC test section is the next phase of the project, beginning early this month, and includes approximately 1,200 cubic yards of RCC work to evaluate the workability of the mix design and to train IMCO craft on their roles and responsibilities. This section will also include conventional concretes, grouts, mortars, and foundation work.

IMCO held a pre-activity conference with representatives from the Federal Energy Regulatory Commission, Grant County PUD's Board of Consultants, the engineer of record, inspectors, and Grant County PUD project staff to demonstrate the approach to the trial RCC section, review work plans, and respond to questions. This meeting was required to be complete prior to the trial work.

The schedule had significant delays, and the team had to accelerate much of the early work on the project, requiring many submittals, work plans, and coordination on multiple scopes. This also required working multiple scopes concurrently, with competing interest for materials, equipment, and labor in a scarce market. The contract suspension ended after the team negotiated a $14.6 million dollar change order over the summer. This shifted the project from a winter/spring start to a fall/winter start, the project lost significant time to get RCC work started in the preferred cold months.

The Priest Rapids team has stayed focused on safety, pre-planning work and addressing risks and hazards early. The team is focusing on work observations! They have seen that an increase in work observations has decreased incidents, near misses, or other potential issues.

This spring marks the original required completion date for the project, if the notice to proceed had been issued on time. The project team will have spent nearly 1,500 days assigned to the project by the time construction is projected to be complete.

The site, surrounding properties, and access routes to the site are heavily controlled and restricted for public use. To help the project team maintain contractual obligations, schedule any visits in advance with the project team.

LEWISTON WTP PROGRESSIVE DESIGN-BUILD AND WELL NO. 7

Work is underway at the Lewiston Water Treatment Plant. Starting last fall, the City stopped drawing water from the Clearwater River and began utilizing a well system to supply water to the local community. This allowed IMCO's project team to make significant progress at the site, including major demolition of the existing plant, infill of the existing sediment basin, and installation of new piping systems to support the temporary and new plant. Starting in April, the City needs to start pulling water from the river again to support the irrigation season. At that time, IMCO and supplier Pall will have installed temporary membrane trailers to treat this water until the final plant is complete.

The Well 7 project, IMCO's second contract with the City of Lewiston, is currently underway. The project goal is to add more well capacity to the City during construction of the new water treatment plant. Crews are currently installing a new 16-inch ductile iron water main to connect the new well to the existing booster station. Over the next several months the team will finalize the transmission main, construct the well house, and install the vertical turbine pump that will draw water from the well, into the City's water system.

Demolition work at the Lewiston WTP jobsite.

ONTARIO SANITARY SEWER

The Ontario Sanitary Sewer project includes installation of cured in place pipe (CIPP) and sewer and water main repairs in a residential neighborhood for the City of Ontario, Oregon. The project started in October 2021 and is on track to be completed by Spring of 2022.

The biggest challenge the team has faced is providing temporary water to residences during pipe bursting. They are running pipe down three blocks at a time and connecting to each home's meter so that residents have water during pipe bursting operations. Performing this work in the winter has been extremely difficult, with snow and very cold days. The team makes sure the temporary water does not freeze by utilizing ground heaters and concrete blankets.

Titan Technologies is the subcontractor pipe bursting the water lines. Pipe bursting is a method in which the existing pipe is opened and forced outward by a bursting tool. As the expansion head is pulled through the existing pipe, it pushes that pipe outward until it breaks apart, creating a space for the new pipe. The bursting device then pulls the new pipeline behind it, filling the void with the new pipe.

Prior to bursting the pipe, IMCO crews dug pits and Titan's machine pulled the pipe through, removing valves and installing temporary water to the affected residences. Once the sewer and water lines have been burst, the team will hook-up the new services and cut in new valves and fittings. IMCO and Titan are roughly 50% complete with the pipe bursting, having completed six blocks. They plan to finish the remaining six blocks by late February.

During excavation the team uncovered old abandoned wood pipe used in the early 1900's in historic alleyways.

MADISON DAM

MADISON TURBINE-GENERATORS CIVIL PROJECT DEMOBILIZES

After more than two years of significant design changes, delays and change orders, the contract to upgrade the 109-year-old powerhouse on the Madison River is coming to a close. This project took incredible dedication and relentless teamwork. The crew was far from home and working in brutal, challenging conditions.

The final phase of work included installing the fourth turbine generator unit. IMCO coordinated closely with four separate partners, including the manufacturer, the installer, the underwater diving subcontractor, and the Owner, to finish the concrete work encasing the new turbine generator, and draft tube.

Thank you, to this incredible team for seeing this to the finish line!

Tail race with new draft tubes installed at Madison.

BLISS DAM

SPILLWAY REPAIRS DESIGN-BUILD

IMCO was recently selected to perform remediation to a hydroelectric dam near Bliss, Idaho. This facility was built in 1950 and is located on the Snake River. This design-build project includes improvements to an area downstream of the spillway to prevent future erosion. This logistically complicated project will focus on safety and coordination with dam operators in this active facility. Complicated scopes include underwater concrete construction and crane hoisting. Design for this project started in January 2022, and construction is slated to begin in July of 2023.

Finished product with new turbines and generators installed at Madison.