Two sand separators that use centrifugal force to separate solids from the raw water prior to treatment.

THE DIRT

May 5th 2023, Spring vol. 52

Aerial footage of IMCO crew erecting pre-engineered metal building.

Primary pumps that push water through the treatment plant.

LEWISTON COMPLETION!

The Lewiston Water Treatment Plant team has reached the end of the final acceptance phase, collaborating with the City of Lewiston to work through challenges. The facility is now operational and delivering water to the community.

Congratulations to the Lewiston team for delivering IMCO's first progressive design-build contract.

The Lewiston WTP project broke ground on October 12th, 2021 for the City of Lewiston. This was incredible work by IMCO personnel to complete challenging and complicated project scopes in order to deliver a facility that can produce potable water.

Continued on page 2.

IMCO fabricated chemical metering skids.

Superintendent
Richie Jordan

Two water tanks: MF tank and chlorine contact tank.

Lewiston continued from cover

The work included the demolition of the existing treatment plant, installation of a temporary treatment system, and construction of a new membrane filter treatment plant. The scope also included two new treatment tanks, connection to an existing 30-inch raw water line, new 300-horsepower filter pumps, and electrical and controls for the plant.

EVERETT WATER FILTRATION PLANT EMERGENCY GENERATORS

The Everett WFP Emergency Generators project, the second of three projects at the City of Everett Water Filtration Plant, will replace two outdated emergency backup generators, electrical systems, and perform building upgrades for two new generators.

The team has finished the structural concrete work at the first location, replacing the existing generator with a new one-megawatt generator and building two steel buildings with metal and membrane roofing systems.

Several delays have challenged the project. The cooler than normal temperatures producing snow and rain have delayed concrete work, deliveries, and roofing. In addition, essential fuel equipment needed to progress has been delayed five months behind the original schedule. To offset these delays the project team has moved several scopes ahead to keep the project advancing.

"The subcontractors and owner have been great to work with, which helps keep the morale of the crew positive despite the delays," said Project Manager, Mitchell Sorestad.

EVERETT
WASHINGTON

EVERETT WATER FILTRATION PLANT 2 PROGRESSIVE DESIGN BUILD

The Everett WFP Phase 2 project team has met their design deliverable milestone which includes the basis of design report and 30% plans and specifications. Their main challenge has been developing the scope of design and construction after several significant changes to the original criteria. While these changes have delayed the project, they have also added great value to the project by reducing risks and impacts to operations during construction.

"I'm very proud of Mitchell, James, Erik and Colbi's investment in the design of this project. Their investments have provided added value to the project in cost, schedule, safety, and operational efficiency for the plant through the 30% design documents," says Senior Project Manager, Todd Pike.

The Everett WFP phase 2 project is planned to be complete by the end of 2024.

EVERETT WATER FILTRATION PLANT PORTAL 4 IMPROVEMENTS

The City of Everett Portal 4 Improvements project is the third of three projects at the City of Everett Water Filtration Plant. Our project Team has been balancing a multitude of scope changes and remedying a leaking water issue in the existing plant conveyance piping. The team has commenced the concrete building repairs, sandblasting, painting, and installation of fiber reinforced plastic. The remaining scopes of work should be completed in June, but electrical and HVAC will be waiting on material procurement. That said, we anticipate the City of Everett to issue additional scopes of work in the final design stages with the engineer of record.

The hard work and commitment from our IMCO Project Team is appreciated and will help deliver a successful project to the City.

SUBSTATION BATTERY STORAGE

This battery storage project is located 78 miles from another battery storage project and for an industrial client who IMCO's team is proud to partner with. This is part of the client's goal to build 1,700 megawatts of battery storage by 2040.

The IMCO team is preparing for earthwork and prepping for the concrete foundations to be poured in mid-May. The electrical subcontractor is installing underground conduit and working towards the grounding grid installation. This project is estimated to be completed by the end of 2023.

OXBOW HATCHERY RENOVATION

After over a year delay, the Oxbow team received notice to proceed on March 21st. The team is building a complex aeration tower, which will serve as the heart of the new fish hatchery, distributing water to all of the other buildings IMCO will be constructing. Last year the Oxbow team built an intake pump structure in the Snake River that will feed the tower.

Other scopes of work include demolishing the old fish-holding ponds onsite. The crew is using IMCO's Fastway concrete batch plant to make concrete on site. Bill Davis, the batch plant operator from Priest Rapids, was helped the team produce the correct concrete mix design.

The project team is taking strategic precautions working around the existing operational hatchery. Idaho Fish and Game has live Steelhead in one of the holding ponds and are storing eggs that cannot be disturbed.

Upcoming work includes building the new hatchery facility by March of next year to guarantee the facility is able to store and incubate eggs.

ENERGY STORAGE PROJECT

Heavy lifting is the current focus on the energy storage project site. This team has picked and set 120 20,000-pound batteries so far, and they have a total of 520 batteries to set by early fall. Currently, the electrical subcontractor is installing final terminations and connections to the batteries. The team is working with the battery supplier and Black and Veatch for a phased approach to commissioning. The team is facing the challenge of coordinating battery delivery to the site.

Mark West is the coordination/tracking master onsite and is the point of contact for all truck deliveries. Mark is tracking any potential issues regarding delays in deliveries, this proactive tracking will help resolve issues and avoid schedule delays.

Erik Boschulte has been pivotal in looking at crane operations and the challenges associated with working within an active substation. IMCO's in-house engineering team has been critical to helping figure out the challenges of lifting over 10-million pounds of batteries.

HYDROGEN PRODUCTION AND FUELING FACILITY

The Hydrogen Production Facility team has started mobilization efforts and initial construction activities. Pending building permit approval, the IMCO team will start this spring with underground utilities and site concrete. Later this summer, IMCO will begin erection of the pre-cast tilt-up building.

The IMCO team is excited to be part of this innovative, environmentally conscious project. The site sits on over 100-acres in the industrial area of East Wenatchee. Once complete in mid-2024, the plant will have the capacity to produce up to two tons of hydrogen per day. The facility will use water and power from the Douglas County PUD Wells Dam facility to produce green hydrogen using an electrolysis process. This is the first public utility in the nation to build a hydrogen plant. The green hydrogen will be trucked throughout Washington to commercial customers. It is most commonly used today in petroleum refining and fertilizer production. A fueling station is currently in design and will be built next to the plant.

Under a separate subcontract, IMCO is in an agreement with manufacturing company Cummins to install process equipment that will eventually be housed in the new facility. This separate agreement utilizes IMCO mechanical expertise.

EAST KUNA DATA CENTER

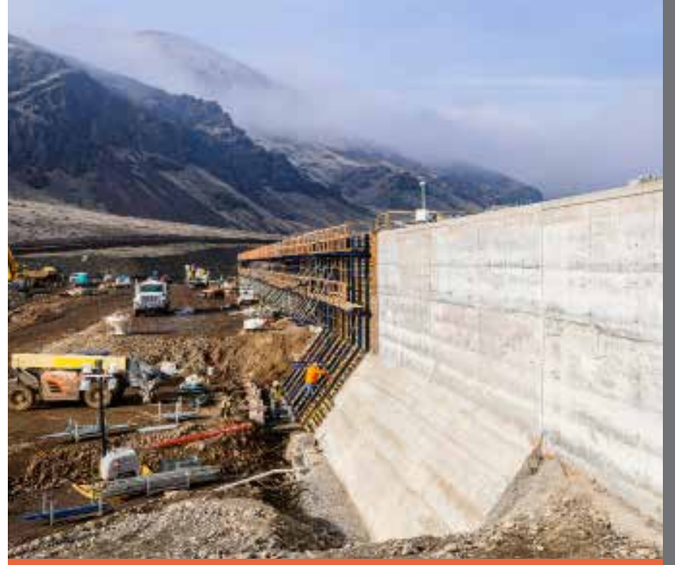
This ever-changing and growing team is conquering challenges with integrity and pride. The winter chill is still lingering, with occasional flurries through April and wind that made dust control a difficult task across this 50-acre site. 40,000 lineal feet of pipe has been installed in the ground since September of 2022, with approximately 30,000 lineal feet still to install by August.

The water supply site, which will eventually house a new pump station, has begun to take shape. Crews completed the tank spools, pump cans, and the waterline header in early April.

An important milestone was met in late April when three HDPE lines on Curtis Road, three miles in total length, passed hydrostatic pressure testing. Curtis Road is scheduled to be paved in late May.

The team is looking ahead to a large milestone at the end of May where water will be connected and supplied to the entire site. This milestone will be the completion of a two-mile-long, 50-foot-wide trench, that holds two 24-inch PVC pipes and two 18-inch PVC pipes.

Later in June, Cole Road will be paved and the first crossing of Kuna Mora Road will take place over the duration of a six-day closure. This connection will be a huge milestone, with crews working 24-hour shifts to complete the crossing connection. Teamwork and commitment to quality is the key to this logistically challenging project.



PRIEST RAPIDS RIGHT EMBANKMENT

GRANT COUNTY PUD

The Priest Rapids team completed a major milestone on March 31st, placing the final truckload of roller compacted concrete (RCC) at the dam! This has been a challenging scope of work and was achieved through an incredible commitment to teamwork and excellence. The team placed 50,000-cubic yards in total. To bring this project to completion, the team is working to finish the concrete decking section on top of the dam, large interconnecting secant pile wall scope, and remaining earthwork.

"We spent considerable time planning, building, and then evaluating our performance as a group," explained Senior Project Manager Alik Miller.

Early in the project, the team met every evening after the shift to discuss challenges and successes and how they could overcome the obstacles ahead of them the next day.

"These meetings included the entire team to ensure we were solving problems as a team, and to create an opportunity for everyone to have a voice. We received numerous suggestions and feedback from the entire craft force, who were continuously contributing ways to improve the process, quality of the work, production rates, and most importantly safety. Many of these suggestions were incorporated into how we planned and executed the work and the type and size of equipment we were utilizing," said Alik.

This project began construction in early 2020, after nearly two years of delays and extensive planning. The construction contract is nearly $60 million, and the scope consists of a new RCC dam to reinforce the existing Priest Rapids Dam, a short connecting embankment, and a secant pile cut-off wall tied-in to the impervious core of the existing embankment. The RCC dam is founded on basalt bedrock downstream of the existing embankment, having a total length of 1,785 feet. The total length of the secant pile wall is 250 feet. The existing embankment will remain in place.

Safety continues to be the highest priority for every employee at Priest Rapids. The combination of a large craft force, long work schedules, high production rates, large equipment in tight spaces, and challenging weather conditions could have resulted in very poor safety outcomes. The entire team has worked hard to continuously find safer ways to perform and to look for engineering controls as the first choice whenever possible. The team also continuously looks for opportunity to recognize individuals who embraced the proactive approach to safety, including participation in the Work Observation program.

The project team has significant work ahead, completing the concrete decking for the newly constructed RCC structure. This new reinforced concrete roadway will provide additional access to Grant County PUD, which allows for maintenance, safety inspections, and monitoring. The IMCO team is also conducting the test pile program for the secant pile work. This test program is to demonstrate the suitability of the materials and methods. IMCO's subcontractor is drilling three secant piles, each three meters in diameter, with five-foot rock sockets into the recently completed connecting embankment.

IMCO batch plant crews are working with a subcontractor to produce plastic concrete, a bentonite infused ready-mix, which IMCO is supplying to the driller. Once the test program is complete, the team will begin drilling six days per week, with IMCO providing concrete service for all piles.

The IMCO civil crew at Priest is working on large amounts of grading and reshaping to restore the 40-acre site. That work will continue as the breakdown and demobilization of batching equipment progresses. The RCC plant is scheduled to be disassembled in May and the conventional concrete plant in August.