

MCDD • PEN1 • PEN2 • SDIC

2020-2022

ANNUAL REPORT



Photo Credit: Metro

**PROTECTING COMMUNITIES
FROM FLOODING**

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A Vision for the Future of Flood Management

Along the Columbia River

I truly enjoy telling people there is critical infrastructure along the Columbia River in Multnomah County that is mostly hidden in plain sight that helps to protect lives, homes, and important services from flooding.

As recently as June of 2022, there was a high-water event along the Columbia River. We all should be proud of the team of professionals who demonstrated an exceptional level of commitment to keeping this community safe. Our team responded quickly, and our flood safety infrastructure performed well, even though a lot of it is more than 100 years old.

Most importantly, no one was hurt.

As a community we are poised to do great things to strengthen our flood safety infrastructure and to take a more environmentally friendly and equitable approach to flood management moving forward.

The reason? We are at a pivotal moment of consolidating four separate drainage districts into one unified agency with leaders elected by the people. The infrastructure across the four districts functions as a single system. The transition underway will allow us to better manage it as such.

With this transition comes an opportunity to upgrade 100-year old flood safety infrastructure, integrate environmental benefits and cultural history recognition into flood management, embed equity into our operations, and prepare for more frequent and severe rain events that we are seeing across the country and the world.

Here's to a safer, more efficient, and more representative flood safety system.

**Jim Middaugh,
Executive Director**

100 YEARS OF FLOOD SAFETY

The four existing Drainage Districts have nearly 100 years of experience providing flood protection for northern Multnomah County. Those districts are Multnomah County Drainage District (MCDD), Peninsula Drainage District #1 (PEN1), Peninsula Drainage District #2 (PEN2), and Sandy Drainage Improvement Company (SDIC).

The system operated by the four districts is comprised of levees and pump stations that helps to protect an area the size of Beaverton from flooding, including:



almost
8,000
residents



nearly
60,000
jobs



Drinking water for
1 million



20 million
passengers annually at PDX



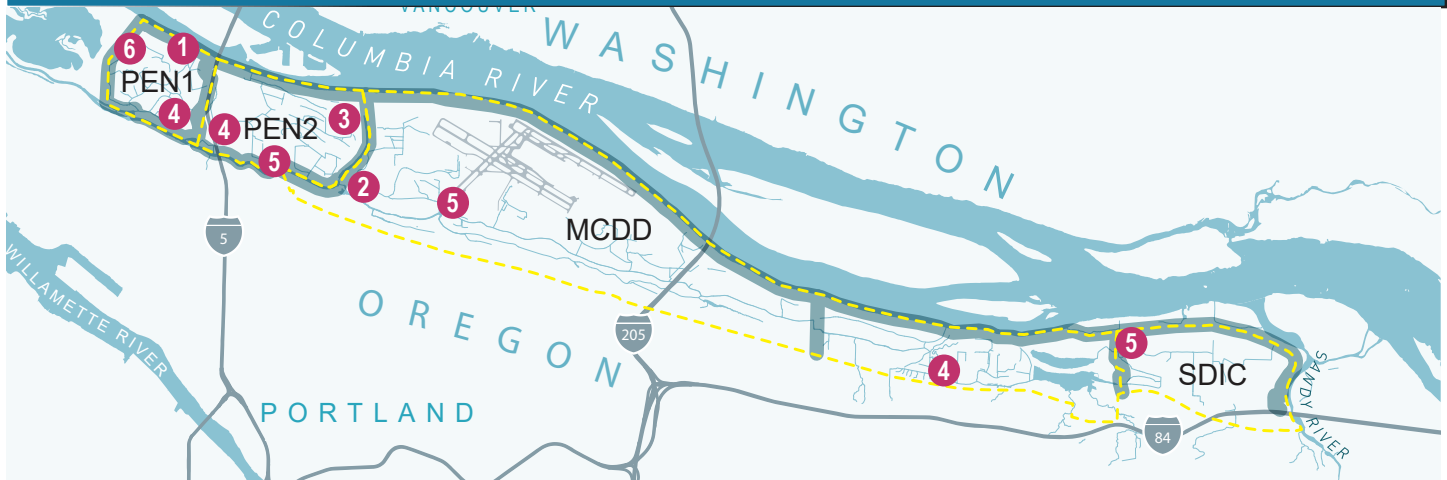
about
2,000 acres
of parks & natural spaces



3 Major highways
(I-5, 1-205, I-84)

With over a century of flood management experience, we have a unique opportunity to envision what flood protection could look like for the next 100 years and beyond.

Drainage District Activities



The Drainage Districts have been hard at work maintaining and upgrading our flood protection system, developing an environmental program, improving responses to emergencies, and working in partnership with the community.

Infrastructure Projects

Improved the drainage system in PEN1 by replacing the motor at the Vanport Wetlands pump station, and rebuilding pumps at the PIR pump station **1**

Replaced the trash rakes at Pump Station #1 in MCDD to reduce blockages and allow for more efficient water conveyance **2**

Worked with the City of Portland to reduce neighborhood flooding in PEN2 by replacing a drainage pipe near NE 13th Ave & South Shore Road **3**

Completed four projects in PEN1, PEN2 & MCDD to improve field safety conditions for the operations crews when accessing important drainage infrastructure **4**

Extended the life of existing pump stations in MCDD, PEN2, & SDIC by replacing motors and other infrastructure **5**

Improved efficiency for required maintenance and inspections by installing access locations to levee drain pipes in PEN1. **6**

Planning Projects

We completed Drainage Master Plans in PEN1 & SDIC to evaluate the drainage system, identify areas that need improvement, and prioritize future investments. In PEN1 the master plan integrated drainage and water quality. These master plans go along with the already completed Drainage Master Plans for PEN2 & MCDD.

We collaborated with partners to produce Working Together for a Resilient Columbia Slough – a report that sets shared goals and opportunities for long-term environmental and community improvements in the Columbia Slough, derived from interviews with 22 different organizations.



Environmental Projects

Beavers are ecosystem engineers with an important job to do in the slough. We manage beavers where they are whenever we can, using a range of tools to keep water flowing past beaver dams.

We work with the City of Portland to remove invasive aquatic weeds in the Columbia Slough in PEN2 & MCDD. Invasive weeds are aggressive and destructive. They choke out native plants, degrade water quality, and block the flow of water through the Slough. Removing them helps keep water flowing freely and improves habitat for fish and wildlife.

Education & Outreach

In 2022 we were excited to once again host in person events and bring flood education into the classroom.

We partnered with the Columbia Slough Watershed Council to provide education about the flood protection system and flood history to nearly 350 students in the Columbia Slough Watershed, and to bring over 80 people to the MCDD campus to tour the flood protection infrastructure.

We also partnered with Vanport Mosaic, Verde, the Community Cycling Center, and the Columbia Slough Watershed Council to host our annual Bike the Levees event, with over 60 participants. This year, the tour was multilingual, and was a part of the 2022 Vanport Mosaic Festival.

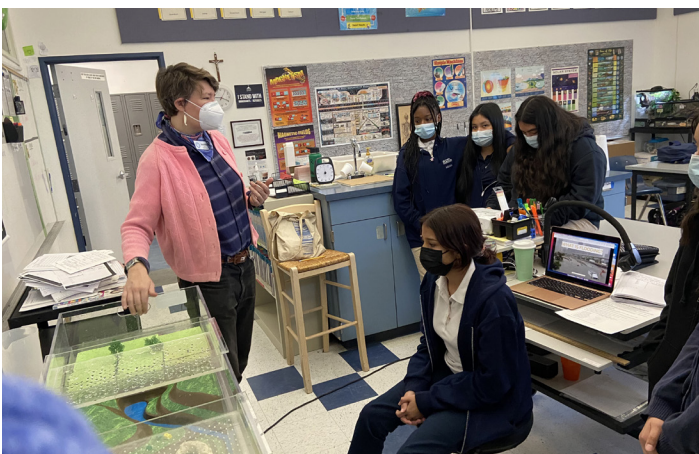


Photo Credit: Columbia Slough Watershed Council

Houseless Coordination

We improved safety conditions for the field crew by removing illegal dumping and hazardous materials on critical flood protection infrastructure and conducting trauma-informed outreach to the houseless population through our partnership with Cascadia Health.

Thank to you to our agency partners who have supported us with this work: the City of Portland, Metro and the Port of Portland.

Partner Highlight

A special thanks to the City of Portland's Impact Reduction Program for cleaning up the Big Four Corners Natural area, which has allowed our crew to more safely access an important pump station.



Photo Credit: City of Portland, Impact Reduction Program

Emergency Management

We have activated our emergency response protocols due to minor flooding conditions twice in the past couple of years.

In November 2021, Fairview Lake experienced minor flooding due to heavy rains and unsafe conditions at a nearby pump station. Thank to our partners, our crew now has safe access to this pump station.

In June of 2022, the Columbia River reached minor flood stage. The levee performed well and sustained no significant damage.



Preparing for the Future

An Integrated Approach to Flood Management

In 2019, the Oregon State Legislature created a New District – the Urban Flood Safety & Water Quality District – that will take over the management of the flood protection infrastructure along the Columbia River in Multnomah County. This New District will integrate environmental benefits, climate change preparedness, equity, and cultural history into flood safety operations.

In practice, this means incorporating natural ecosystem functions into our current practices to help manage flooding, preparing the flood system for more frequent and severe rain events, ensuring that the most vulnerable communities are protected from flooding, and sharing the history of community displacement and loss related to flooding to ensure that we don't make the same mistakes of the past.

Ongoing Responsibilities

-  Drainage Management
-  Levee Maintenance
-  Emergency Response
-  Support Regional Partnerships

New Responsibilities

-  Contribute to water quality, habitat, floodplain restoration, and landscape resilience.
-  Promote equity and social justice in all aspects of operations
-  Prepare for and adapt to climate change in relation to the managed floodplain
-  Provide the public with information on the cultural history of the managed floodplain

Working with Partners and the Community

This work of standing up the New District has involved years of collaborating with partner agencies, elected officials, environmental groups, non-profits and residents to help identify solutions for making the needed upgrades to our flood protection system.

During the Summer of 2022, staff conducted additional engagement activities to raise public awareness about New District activities, and to create a vision for how to integrate environmental benefits, cultural history, and equity into future flood safety activities.

Themes from these conversations included:

- General public support for New District activities
- Enthusiasm for an integrated approach to address water quality, habitat, climate, and food safety goals
- Support for intentional planning and partnerships
- A strong call for an equitable process to shape future programs and investments, including engaging Tribal Nations early & often
- Support for integrating Indigenous Traditional Ecological Knowledge, first foods, and traditional medicine into habitat and restoration activities
- Recommendations for cultural history investments to support educational programming, oral history, signage, artwork, and interpretation



Photo Credit: Connswater Community Greenway

Standing up the New District

Creating a vision for New District activities is just one side of the coin – we also need to ensure that the New District is financially stable. This is the charge of the temporary Urban Flood Safety & Water Quality District Board of Directors.

The work to formally stand-up the New District includes:

- Developing a revenue structure to fund operating expenses
- Developing a modest bond package to fund infrastructure improvements
- Electing a single board to oversee the work



**FLOOD SAFE
COLUMBIA RIVER**

Flood Safe Columbia River is an initiative that aims to raise awareness about the importance of upgrading the flood protection infrastructure along the Columbia River in order to better protect vulnerable communities and the natural environment from flooding.

This initiative folds in the various transition efforts of the New District and the four Drainage Districts, and will be the primary education and engagement platform of the New District until the agency is fully stood up.

Investing in Resilient Infrastructure

The Portland Metro Levee System Project

Like other infrastructure, our local flood safety system is aging and requires repairs and upgrades to continue to meet the needs of the community and federal safety standards. This new district will make the needed investments to our flood protection system.

After Hurricane Katrina in 2005, federal safety standards for levee systems increased significantly. To that end, a coalition of regional partners asked Congress to provide the US Army Corps of Engineers (the Corps) with resources to assess the condition of the system and develop a plan to make it more reliable and resilient for the next generation and beyond. This effort is called the Portland Metro Levee System Project.

What's Included?

These projects are a mix of levee and pump station improvements and upgrades that will meet present and future needs.

Key recommended improvements include:

- Creating a higher level of protection on the western end of the system by building a levee alongside the railroad embankment that failed in 1948, leading to the destruction of the city of Vanport, and the displacement of over 18,500 people.
- Addressing points of weakness that could result in levee breaches or overtopping
- Increasing the level of protection along the river in PEN1 and PEN2 by raising the levee that Bridgeton Road and Marine Drive were built on by approximately 1-2 feet
- Reducing the risk of flooding caused by heavy rain events by adding pumping capacity, and creating redundant power supplies



1948 railroad embankment breach that led to the destruction of the City of Vanport



After the flood, this railroad embankment was replaced, and does not meet new Federal safety standards

Photo Credit: Oregon Historical Society (upper), Jaime Valdez, Pamplin Media Group (lower)

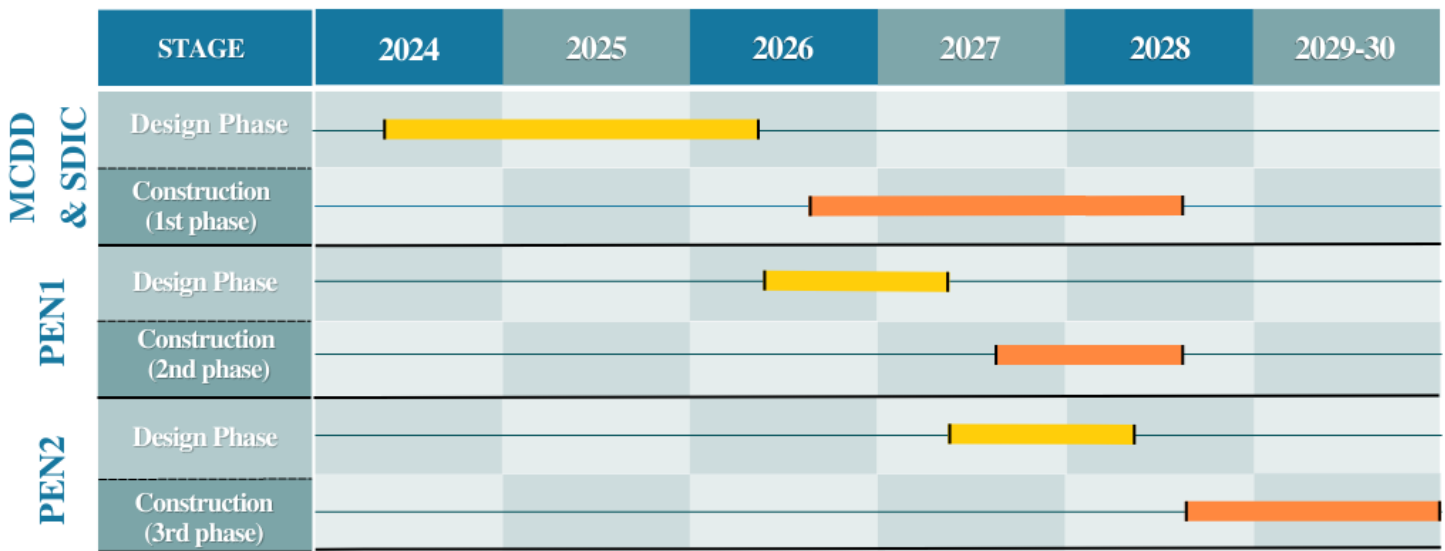
Portland Metro Levee System Project Updates

Over the past two years, the project has secured the necessary resources and support to move from planning to design.

- In 2021, the Corps approved the Final Feasibility Study, which provided recommendations for \$130 million in projects to upgrade the flood protection system to a uniform level of protection and to meet modern levee design standards.
- In April of 2022, the Corps issued a Finding of No Significant Impact in accordance with the National Environmental Policy Act of 1969, indicating that the recommended plan has no significant impacts to environmental assets or cultural resources
- In Spring of 2022, we developed a plan to secure local partner contributions and state grant funding for project design efforts
- In December of 2022, Congress passed the Water Resources & Development Act of 2022, which authorizes the construction of the project
- In December of 2022, the Corps received funding for the project design in 2023 through the Federal Energy & Water Appropriations Bill

Project Timeline

The Design and Construction Schedule is broken up into three phases.



Design & Construction Schedule as of February 2023, Subject to Change

What's Next?

We will work closely with the Corps, agency partners, and potentially effected residents and property owners – especially those living along Bridgeton Road & Marine Drive in PEN2 – to ensure that community and stakeholder needs are incorporated into the design.

We will continue to advocate for the necessary Federal appropriations to continue to advance the project in the coming years. A proposed bond package will be referred to voters in 2024 to fund the local share of project costs, which will be matched by 65% by the Federal Government.