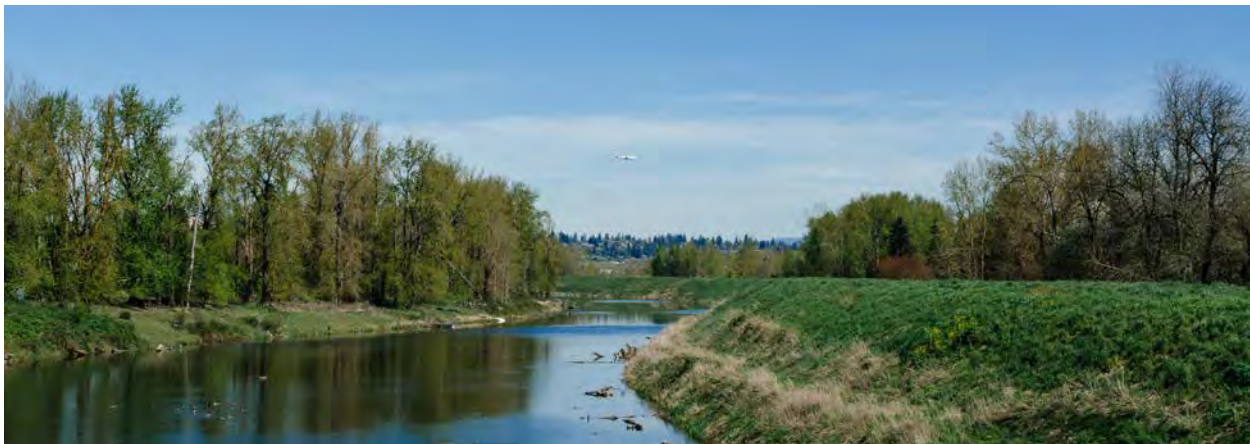


National Association of Flood and Stormwater Management Agencies

Oregon Levee Workshop

Portland, Oregon
August 22, 2016



Introduction

The National Association of Flood and Stormwater Management Agencies (NAFSMA) convenes its national convention in Portland, Oregon from August 22 to 25, 2016. The conference brings together federal, state, regional and local public agencies that have a shared responsibility for managing flood risks and stormwater runoff, while improving the sustainability and resilience of the nation's floodplains. The Portland location affords a particularly valuable opportunity for levee agencies in Oregon to engage nationally recognized levee experts, regulators and local colleagues about practical strategies to advance levee projects in their individual jurisdictions.

With the support of NAFSMA leadership and our partners at Levee Ready Columbia, Oregon Solutions has organized this workshop on levee accreditation in Oregon. The goals of the workshop are to:

- (1) increase local knowledge and understanding of levee accreditation requirements,
- (2) foster communications between levee agencies and federal and state partners,
- (3) initiate efforts to build a convening organization or network of Oregon levee agencies, and
- (4) help identify funding strategies for local levee projects included levee-focused grants and loans provided by the Oregon Infrastructure Finance Authority.

Workshop Agenda

The Oregon Levee Workshop begins with a conversation with leaders of the National Association of Flood and Stormwater Management Agencies. These nationally recognized experts come from local levee agencies across the United States. Next, the workshop offers a primer on levee accreditation from three professionals who have extensive experience successfully navigating the process of accrediting levee systems. The concluding panel provides insights and observations from the perspectives of four levee systems in Oregon.

1:00-1:05 Welcome – Dan Vizzini, Oregon Solutions

1:05-2:00 National Perspectives on National Flood Risk Management Issues

- Introductory Remarks – Susan Gilson, NAFSMA Executive Director
- Panel Moderator - Dusty Williams, NAFSMA’s Immediate Past President
- Panel:
 - o Tim Richards City of Charlotte, NC
 - o Steve Fitzgerald, Harris County Flood Control District, TX
 - o Janet Bly, Miami Conservancy District, Dayton, OH
 - o Mark Pestrella, LA County Department of Public Works, CA
 - o Steve Graham, San Antonio River Authority, TX
 - o Vincent Gin, Orange County Department of Public Works, CA
 - o Robert Turner, SE Louisiana Flood Protection Authority East, LA
 - o Steve Parrish, Clark County Flood Control District, NV
 - o Chal Martin, City of Bremerton, WA

2:00-3:00 Levee Accreditation 101 – A Primer for Oregon Levee Agencies

- Mike Meyer, Project Manager & Vice President, Cornforth Consultants
- James Heyen, WEST Consultants
- Scott Shapiro, Partner, Downey Brand LLC

3:00-3:50 Lessons Learned from Oregon Levee Projects

- Reed Wagner, Executive Director, Multnomah County Drainage District
- John Stokes, Public Works Director, Reedsport (invited)
- Richard “Collin” Stelzig, City Engineer, Warrenton
- John Wells, Senior Engineer, Anderson, Perry & Associates

3:50-4:00 Concluding Remarks – Dan Vizzini, Oregon Solutions

4:00-5:00 Working Together for Levees - A Convening of Oregon Levee Agencies and Partners

Working Together for Levees

A Convening of Oregon Levee Agencies and Partners

Immediately following the conclusion of the workshop, Oregon Solutions will facilitate an hour-long convening of Oregon levee agencies to focus specifically on the following critical initiatives:

- To assist the Oregon Infrastructure Finance Authority to strengthen and extend its financial assistance to local levee projects authorized by SB 306 (2015);
- To identify other current and new sources of funding for levee accreditation and maintenance; and
- To begin to build a statewide network of levee agencies to provide mutual support, information sharing and advocacy to strengthen local levee projects.

Special Thanks

Oregon Solutions recognizes the National Association of Flood and Stormwater Management Agencies, Levee Ready Columbia and the Port of Portland, ... for their generous financial and in-kind support of this workshop.

In particular, Oregon Solutions extends special thanks to Susan Gilson (NAFSMA Executive Director), Sara Morrissey (Levee Ready Columbia Program Manager), Phil Ralston (General Manager of Aviation Environmental and Safety Programs, Port of Portland), and more than 20 levee and flood management experts who have donated their time, energy and resources to help produce and deliver this workshop.

Finally, Oregon Solutions recognizes the expert technical services of Minh Ngo (PSU BA 2012, MA 2015) for his video recording of the workshop.

Working Together for Levees

A Convening of Oregon Levee Agencies and Partners

Local jurisdictions throughout Oregon are facing new challenges as they work to improve and maintain levee and flood management infrastructure to meet evolving federal regulations. Their individual success depends, increasingly, on their ability to find common cause with an emerging network of local levee agencies and partnering organizations. To that end, this document presents a set of ideas and proposals to stimulate substantive discussions leading to tangible action.

1. Organizing Local Levee Agencies

The success of individual levee projects across Oregon will depend on a concerted, long-term effort by local levee agencies and partnering jurisdictions to broaden and significantly increase federal, state and local financial support for levee projects, operations, and long-term maintenance.

The 2015 legislative session marked a milestone for levee projects in Oregon. The Legislature approved HB 2436, broadening the Infrastructure Finance Authority's loan program to include organizations that manage and operate levee systems. The legislation expanded the definition of "infrastructure" to include levee improvements. The Legislature also approved SB 306, authorizing \$5 million for grants and loans for levee projects. These two actions represent a significant opportunity for local levee agencies to advocate for financial support on the same basis as transportation, water and other infrastructure priorities.

In order to take advantage of these opportunities, local levee agencies should consider creating a more formal advocacy organization or association to develop information, arguments, strategies and proposals to advance shared interests and objectives. Such an association need not have a physical presence or permanent staff to effectively coordinate and advance an agenda for levee projects. Participating agencies might agree to purchase convening and lobbying services from existing organizations like the Special Districts Association of Oregon, the League of Oregon Cities, or the Association of Oregon Counties.

At a minimum, local levee agencies can begin by building a network of agency leaders who are committed to meeting four to six times over the next year to shape legislative initiatives and funding opportunities, provide information and advice to federal and state decision-makers, and coordinate public information and advocacy in support of specific funding and legislative proposals.

Oregon Solutions is prepared to work with local, regional and state partners to help build a statewide network of levee agencies. To this end, Oregon Solution will help organize three meetings of local levee agencies, prior to the start of the 2017 Legislative session.

2. Expanding Funding for Levee Projects Grants and Loans

The Infrastructure Financing Authority is currently completing work on its FY 2017-2019 proposed budget request to the Governor. The Authority plans to include a \$10 million expansion of levee project grants and loans. Local levee agencies can play a critical role in the successful inclusion of this request in the Governor's budget, and the final authorization of the request by the full Legislature in 2017.

The current structure of the program includes discretionary grants of \$50,000 per levee system, and loans not to exceed \$2.5 million per levee system. The loan program limits access to zero-interest loans to 50% of the loan amount up to \$1 million. As of August 2016, only three jurisdictions have taken advantage of the program.

Eligible projects must meet the following conditions and requirements:

- The project is for the purpose of completing certification documents or obtaining accreditation by the Federal Emergency Management Agency (FEMA) as defined in Chapter 44 of the Code of Federal Regulations (44 CFR), Section 65.2 or Section 65.10;
- The project, as determined by the Authority, will substantially contribute to the improvement, expansion or repair of the state's or municipality's infrastructure system; and,
- The project is essential for the continued use or development of farm, industrial, or commercial land in Oregon.
- Project financing may also be used for pre-construction activities defined in ORS 285B.410(10)(a) such as preliminary design and specifications, final or construction engineering.

Looking ahead to the next biennium and beyond, it is clear that local levee agencies are facing tens of millions of dollars of cost to complete the extensive engineering and planning tasks required to obtain levee accreditation. And in many, if not most cases, local levee agencies will face hundreds of millions of dollars in costs to rehabilitate and improve existing levees to current federal standards.

Addressing these obligations will require substantial efforts by local levee agencies to develop local and regional partnerships that can attract financial support from a wide range of public and private beneficiaries. Without such collaborative efforts, local levee agencies will be unable to make successful arguments for substantive financial assistance from the State of Oregon and the federal government.

A Call to Action

With these observations in mind, here is a list of recommendations for the possible expansion of the IFA levee assistance program, and related coordinating efforts with local levee agencies and state agencies:

1. ***Oregon Levee Assistance Program.*** Support IFA's budget request for \$10 million in the 2017-2019 biennium. Recommend an expansion of the current structure and requirements of the IFA levee assistance program to include local efforts to build capacity of public and profit organizations, landowners and other levee stakeholders to work collaboratively on levee projects.
2. ***Statewide Planning Model, Infrastructure Inventory and Funding Study.*** Support current state and federal agency efforts to develop a comprehensive inventory of levee systems as well as an examination of all potential local, regional and state funding sources to support these systems. Consider development and adoption of a statewide planning model to provide integrated long-term support for levee systems.
3. ***Intergovernmental Coordination and Collaboration.*** Work with state agency partners to promote strategies that coordinate and leverage existing state activities relating to flood hazards, habitat conservation, flood risk mitigation, disaster preparedness and levee operations and maintenance.
4. ***Long-Term Capital Financing Proposal.*** Initiate research into the development of a statewide bond measure or other statewide financing strategy to address the long-term capital and operating requirements of levee systems. Such an initiative was recently approved by voters in California, resulting in the availability of more than \$4 billion for local levee system improvement statewide.
5. ***Federal Infrastructure Investment Initiatives.*** In partnership with Oregon's Congressional Delegation, develop a long-term strategy to increase investments in levee systems as critical national infrastructure, in the same manner as exist in the federal budget for transportation, drinking water, stormwater, and wastewater infrastructure.

An Introduction to the Policy, Program and Regulatory Landscape

The workshop is designed for an audience of local public officials, public managers and professional staff who may have a limited familiarity with federal and state agencies and programs related to levees and flood management. The following brief introduction provides an overview of this policy, program and regulatory landscape. Workshop presentations will focus on ways that local levee and flood management agencies across the United States and in Oregon engage these agencies and programs to advance local flood control and management priorities.

Federal Regulatory Programs

The federal programs guiding the maintenance, operations, certification and accreditation of levee systems are ever-evolving to better identify and address flood risks across the nation. The Federal Emergency Management Agency (FEMA) and the U.S. Army Corps of Engineers (USACE) share primary programs and regulatory responsibilities for levee systems and flood management.

Federal Emergency Management Agency

FEMA's levee accreditation program, governed by 44 Code of Federal Regulation 65.10, sets the level of protection and associated design and documentation standards for communities to comply with on an ongoing basis to avoid the mapping of flood hazard areas land behind levees being mapped as a floodplain for flood insurance.

FEMA also administers the National Flood Insurance Program (NFIP) to reduce the impact of flooding on private and public structures by providing affordable insurance to property owners and by encouraging communities to adopt and enforce floodplain management regulations.

U.S. Army Corps of Engineers

USACE implements Public Law (PL) 84-99, the USACE Emergency Management authority, within its Flood Risk Management and Levee Safety Program. The program includes two activities of critical importance to levee systems in Oregon. The Specific, Measurable, Attainable, Risk Informed, Timely Planning Process (SMART) provides technical assistance and resources to complete feasibility studies of qualifying levee systems, and to subsequently make improvements to bring these levees into compliance with federal safety standards.

The Corps' Rehabilitation and Inspection Program (RIP) is a voluntary program by which USACE will assist in repairing levee systems and other flood risk management projects after a flood event if the projects meet the required eligibility criteria.

Participation in both USACE programs are limited to qualifying levee systems, and subject to budget, authorization and appropriation decisions by the President and Congress.

National Marine Fisheries Service

National Marine Fisheries Service of the National Oceanic and Atmospheric Administration (NMFS or NOAA Fisheries) provides science-based analysis and guidance to FEMA to ensure that policies and regulations governing the National Flood Insurance Program (NFIP) do not negatively impact salmon and other endangered species protected by the federal Endangered Species Act. Their partnership resulted in the issuance of a biological opinion (BiOP) by NOAA fisheries governing the NFIP in Oregon. The NMFS regulatory framework is summarized at

<http://www.habitat.noaa.gov/restoration/techniques/regulationspermits.html>

NOAA Fisheries also regulate and permits work on levee systems to ensure compliance with habitat conservation requirements of Section 404 of the federal Clean Water Act.

Oregon Technical Support Programs for Levee Agencies

Oregon has responded to evolving federal policies and regulations by providing technical tools and resources to local levee agencies that align with federal agency programs:

Department of Land Conservation and Development (DLCD)

FEMA partners with DLCD to implement the National Flood Insurance Program (NFIP) in Oregon. DLCD houses the State NFIP Coordinator and the State Risk Mapping, Assistance, and Planning (MAP) Coordinator. This partnership has developed into robust NFIP and Risk MAP programs for Oregon jurisdictions to identify flood risk, mitigate losses, and increase risk communication to communities.

To participate in the NFIP, communities are required to meet the following standards.

- Require permits for all floodplain development (any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard).
- Review building permit applications for new construction and substantial improvements within the floodplain and ensuring that developers take specific measures (e.g., elevation, anchoring, floodproofing, installation of flood vents, breakaway walls, etc.) to avoid or reduce flood damage.
- Obtain Elevation and Flood-proofing Certifications for new development and substantial improvements to existing developments.

- Ensure the prohibition of encroachments into the floodway portion of the 100-year floodplain if there would be any increase in flood levels.
- Notify permit applicants that other state and federal permits may be required (for example, wetland fill permits, permits for work in navigable waterways, etc.) and ensuring that the applicant obtains required state and federal permits.
- Maintain permit records and related materials and ensuring that these documents are available for public, state, and FEMA inspection.
- Educate local citizens about local flood hazards and local floodplain regulations.
- Implement Risk MAP to collect and digitize conditions on the ground surrounding flood prone areas around the state to inform land use, infrastructure and development decisions.

Oregon Biological Opinion

In 2016, National Marine Fisheries Service released the Oregon Biological Opinion (BiOp) to guide FEMA's implementation of the NFIP in a manner that prevents the loss of habitat and reduces risks of extinction of endangered salmon and other fish species protected under the federal Endangered Species Act. DLCD, in partnership with FEMA, is actively involved in helping local jurisdictions in Oregon respond to the Oregon BiOp. Complete information on the Oregon BiOp and a schedule of DLCD programs and events are posted at http://www.oregon.gov/LCD/Pages/NFIP_BiOp.aspx#Biological_Opinion.

For levee operators, the Oregon BiOp provides a strong incentive to maintain levee accreditation status with FEMA. Development restrictions articulated in the Reasonable and Prudent Alternatives (RPA) of the BiOp primarily apply to areas with Special Flood Hazard Area (SFHA) designations.

The law firm Miller Nash provides a more detailed analysis of how the BiOp will apply to accredited levees: <http://www.millernash.com/biop-on-the-oregon-national-flood-insurance-program-a-case-for-levee-accreditation-05-12-2016/>

Funding and Partnering Opportunities

The following federal and state programs provide financial and technical assistance to levee and flood management projects. Their availability depends, in large measure, on the extent to which Congress and the Oregon Legislature prioritize levee and flood management systems as critical infrastructure deserving of financial support and technical assistance. In some instances, federal and state support is available and underused due to a lack of local agency readiness and planning. The workshop will consider ways to access these funding and partnering opportunities to complement the primary financial investments required of local levee agencies and landowners.

USACE - SMART/New Start Program

To be eligible for federal funding, USACE must initiate a Water Resource Project through its New Starts Program as part of the President's Fiscal Budget for USACE Civil Works. If selected, USACE must first conduct a SMART 3x3x3 Feasibility Study that results in a Chief's report to Congress with a finding that the project is of national interest. The USACE will release its list of selected New Starts projects in early 2017.

FEMA Cooperating Technical Partners Program

FEMA enters into cooperative agreements with levee agencies and other local jurisdictions to maintain up-to-date flood hazard maps, asset mapping, inventories and other flood hazard information. Annually, FEMA publishes a Notice of Funding Opportunity and solicits applications via its website.

Follow this link to receive updates and notices automatically via email:

http://service.govdelivery.com/service/subscribe.html?code=USDHSFEMA_179

Post-Disaster Assistance from USACE, FEMA and NRCS

Three federal agencies provide post-disaster assistance to levee agencies depending on their eligibility:

- USACE's Rehabilitation and Inspection Program (RIP) provides financial assistance to levee agencies that are in compliance with RIP standards and requirements.
- The National Resources Conservation Service (NRCS) of the US Department of Agriculture provides assistance with post-disaster cleanup and repairs through its Emergency Watershed Protection Program (EWP). Funding by NRCS is subject to Congressional approval.
- FEMA provides assistance – including flood fighting - to levee agencies that do not qualify for RIP or EWP coverage.

Oregon Infrastructure Finance Authority (IFA) – Levee Grant and Loan Program

The 2015 Oregon Legislature provided \$5 million in grants and loans for local levee agencies to improve levee infrastructure. The IFA provides discretionary grants of \$50,000 to all qualifying levee agencies, and extends low interest and no interest loans not to exceed \$2.5 million per levee system. As of August 2016, more than \$4.5 million in loans have been made. Participating jurisdictions include Multnomah County, Scappoose Drainage Improvement Company, and the City of Reedsport. Loans to Multnomah County are supporting levee assessments in the Peninsula No 1, Peninsula No 2 and Multnomah County drainage districts, as well as the Sandy and Sauvie Island drainage improvement companies.

Department of Geology & Mineral Industries (DOGAMI) – Flood Hazard Risk Assessment

Beginning in 2008, FEMA has provided grant funding to DOGAMI to complete flood hazard risk assessments and build tools for local communities to use to identify immediate mitigation needs and to guide long-term planning efforts. The FEMA funding comes through the agency's Risk MAP and Cooperating Technical Partners programs. Current projects are underway in Clatsop, Tillamook, Lincoln, Curry counties; the coastal areas of Douglas and Lane counties; the Lower Columbia-Sandy Watershed (Troutdale, Gresham, Welches); and Silvies Watershed (Burns, Hines). Additional projects are planned for the Upper Rogue and Tualatin watersheds.

Watershed Enhancement Board (OWEB) – Watershed Restoration

OWEB operates two programs to provide grant funding for watershed enhancement projects. The Small Grants program offers grants up to \$10,000, primarily to private landowners. The Special Investment Partnership program targets long-term, large-scale restoration projects at specific locations on the Deschutes, Willamette and Upper Klamath Rivers.

APPENDIX A - Online Information and Technical Resources

OREGON SOLUTIONS Leveraging for Levees Event

<http://orsolutions.org/osproject/leveraging-for-levees-event-with-scott-shapiro>

FEMA Region 10 Floodplain Management Guidebook

http://www.oregon.gov/LCD/HAZ/docs/floods/localofficial_4th.pdf

FEMA Levee Resource Library

www.fema.gov/fema-levee-resources-library

FEMA Local Levee Partnership Team

http://www.fema.gov/media-library-data/1398346643889-66454caeb1894d6d52fd2cfid54ocfed/FactSheet_LLPT.pdf

FEMA Cooperating Technical Partners Program

<http://www.fema.gov/cooperating-technical-partners-program>

FEMA Analysis and Mapping Procedures for Non-Accredited Levee Systems

http://www.fema.gov/media-library-data/20130726-1922-25045-4455/20130703_approachdocument_508.pdf

USACE Specific, Measurable, Attainable, Risk Informed, Timely Planning Process

http://planning.usace.army.mil/toolbox/library/smart/SmartFeasibility_Guide_highres.pdf

USACE Rehabilitation and Inspection Program

www.usace.army.mil/Missions/Civil-Works/Levee-Safety-Program/Levee-Inspections/

USACE Locally Operated Levees: Issues and Federal Programs

<http://www.fas.org/sgp/crs/misc/R41752.pdf>

USACE Water Resource Authorizations, Appropriations, and Activities

<https://www.fas.org/sgp/crs/misc/R41243.pdf>

NOAA NMFS Habitat Conservation Regulations and Permits

<http://www.habitat.noaa.gov/restoration/techniques/regulationspermits.html>

USDA Natural Resources Conservation Service Emergency Watershed Restoration Program

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/>

Appendix B – Online Funding and Partnering Information

FEMA Cooperating Technical Partners Program

<http://www.fema.gov/cooperating-technical-partners-program>

FEMA Disaster Assistance Policy

https://www.fema.gov/pdf/government/grant/pa/9524_3_022509.pdf

FEMA Public Assistance Program and Policy Guide

http://www.fema.gov/media-library-data/1456167739485-75a028890345c6921d8d6ae473fbc8b3/PA_Program_and_Policy_Guide_2-21-2016_Fixes.pdf

USACE FY 2017 Civil Works Budget Fact Sheet

<http://www.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/651818/us-army-corps-of-engineers-2017-civil-works-budget/>

USACE New Feasibility Studies FY 2015

http://planning.usace.army.mil/toolbox/library/FactSheets/FactSheet_keystudies.pdf
http://planning.usace.army.mil/toolbox/library/FactSheets/FactSheet_fy15newstartfeasibility.pdf

USDA Natural Resources Conservation Service Emergency Watershed Restoration Program

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/>

OREGON Infrastructure Finance Authority – Special Public Works Fund

<http://www.orinfrastructure.org/Infrastructure-Programs/SPWF/>

OREGON Infrastructure Finance Authority – SB306 Levee Grants and Loans

<https://olis.leg.state.or.us/liz/2015R1/Downloads/MeasureDocument/SB306/Enrolled>
<https://olis.leg.state.or.us/liz/2015R1/Measures/Overview/SB306>
<https://olis.leg.state.or.us/liz/2015R1/Downloads/CommitteeMeetingDocument/73006>
<http://gov.oregonlive.com/bill/2015/SB306/>

OREGON Department of Geology & Mineral Industries – Flood Hazard Risk Assessment

<http://www.oregongeology.org/flood/risk.htm>

OREGON Watershed Enhancement Board - Grant Program

<http://www.oregon.gov/OWEB/GRANTS/pages/index.aspx>