

## WASHINGTON STATE RISK MAP STRATEGY

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Identification of Stakeholders and Subject Matter Experts, including but not limited to:

### STATE GEOLOGIST

WA State Dept. of Natural Resources (DNR) provides the State's Chief Hazards Geologist and senior hazards specialists to select Risk MAP projects. DNR serves as the landslide, earthquake, and tsunami experts and is involved at the Discovery and Resiliency phases providing technical expertise. DNR performs HAZUS analysis for flood and seismic events, conducts vulnerability assessments for wildfire, landslide, tsunami, and analyzes other potential hazards including drought and volcanoes. The results are summarized in the Risk Report highlighting high risk facilities and locations.

### WADNR WILDFIRE GROUP

Washington State's largest on-call fire department consists of 1,200 permanent and temporary employees to fight fires on more than 13 million acres of private and state-owned forest lands. Fire protection and safety equipment requirements help local fire districts to respond to wildfires.

### STATE DAM SAFETY OFFICER

The Dept. of Ecology houses the State Dam Safety office and regulates over 1,000 dams in Washington State. The Dam Safety Officer, headquarters and regional staff are consulted and invited to participate in watersheds with State-operated dams or where dam expertise is warranted. The Office provides several services to communities including:

- emergency response services to floods, earthquakes, and acts of terrorism
- construction and inspection services
- disaster planning and risk assessments

### STATE EMERGENCY MANAGER, GRANTS SPECIALISTS, AND MITIGATION STRATEGISTS

Ecology's Risk MAP Coordinator, NFIP State Coordinator, and Regional floodplain specialist's team with EMD on pre and post disaster grant opportunities, short and long-term hazard mitigation planning, and during the Discovery and Resiliency phases of all Risk MAP projects. The team coordinates quarterly with FEMA Region X and DNR.

### STATE MITIGATION PLANNER

The WA Emergency Management Division (EMD) dedicates a Hazard Mitigation Officer and one or more mitigation & recovery strategists to the Risk MAP program. EMD is heavily engaged during Discovery and Resiliency phases as grants and mitigation specialists. The Team will work with the planner to organize a yearly meeting with partners to discuss project coordination and mitigation.

### TOPOGRAPHIC AGENCIES

WADNR is the LiDAR vendor in Washington for 2016 and beyond.

LiDAR data is made available through the Puget Sound LiDAR Consortium for public distribution in raw point data, first return 'Canopy coverage', and 'bare earth' digital elevation models.

## COASTAL HAZARDS RESILIENCE NETWORK (CHRN)

Coastal Planners from Ecology will complement the Risk MAP program by offering their extensive network of marine and coastal experts with expertise in coastal hazards, climate change impacts, multi-hazard planning, preparedness, adaptation, response, and recovery.

## STATE NFIP COORDINATOR

Ecology's State NFIP Coordinator serves as supervisor and mentor to four regional floodplain specialists, several grant specialists, project officers, and mentor to the Risk MAP Coordinator.

The NFIP Coordinator is engaged in the Floodplains by Design, Silver Jackets Program, Federal and State Grant Programs, and State Floodplain Policies and Programs.

## SHORELINE MASTER PROGRAM

Shoreline Master Programs are local land use policies and regulations designed to manage shoreline use. These local programs protect natural resources for future generations, provide for public access to public waters and shores, and plan for water-dependent uses. They are created in partnership with the local community and Ecology, and must comply with the state Shoreline Management Act and Shoreline Master Program Guidelines.

## STATE DEPARTMENT OF COMMERCE

Ecology is currently coordinating with the Dept. of Commerce for integration of the Risk MAP Program with growth management and critical areas ordinances and plans to formally integrate the agency's hazard related objectives with upcoming Risk MAP projects.

## STATE DEPARTMENT OF FISH & WILDLIFE

Ecology coordinates with the Dept. of Fish & Wildlife for ESA information and data.

## STATE DEPARTMENT OF HEALTH

The State Dept. of Health (DOH) on community specific data on environmental health issues.

## UNIVERSITY OF WASHINGTON (UW)

The University of Washington and Ecology collaborate frequently on planning and environmental issues challenging Washington State as well as programmatically through the UW Department of Urban Design and Planning. UW offers specialized tracks focusing on the study of coastal and riverine floodplain management.

The Director of the Institute for Hazards Mitigation Planning and Research at UW and a graduate student are CTP's on a project in Whatcom County, WA. The project goals are to integrate Risk MAP products and tools into their hazard mitigation planning efforts.

Climate Impacts Groups is involved as expertise in climate change and sea-level rise scenarios.

## ELECTED OFFICIALS

Ecology and FEMA introduce the Risk MAP project to elected officials to open the Resilience Workshop when mapping is complete and HAZUS analysis is available. Opportunities to engage with the elected official could be expanded to Discovery and mapping meetings.

## ASSOCIATION OF CITIES AND COUNTIES

Ecology utilizes the WA Assoc. of Counties and the Assoc. of Washington Cities in outreach, community surveys, and collaboration on rising floodplain issues and challenges on an as needed basis where and when appropriate.

Municipal Resource Service Center of Washington (MRSC)

Municipal Research and Services Center (MRSC) is a nonprofit organization dedicated to proactively supporting the success of local governments state-wide by providing collaborative consultation and immediate access to a vast research and knowledge base. Ecology engages with the MRSC as needed when targeted communication is a priority.

## CONSERVATION DISTRICTS

Conservation Districts can be key local stakeholders and knowledge base for flood and other natural hazards for multiple communities in a watershed. Ecology utilizes the Washington Assoc. of Conservation Districts for outreach and education of Risk MAP Programs and projects.

## STATE LAND USE AUTHORITY

WA State Floodway Prohibition, 1987 Legislative Session, directs communities to prohibit new residential development in designated floodways throughout the State. This provision prohibits the construction of new residential buildings in mapped floodways and prohibits the substantial improvement of residences in the floodway.

## STATE REGIONAL OFFICES

Ecology staffs floodplain specialists in four regional offices in Bellevue, Lacey, Yakima, and Spokane offer disaster support to communities. Regional staff work with local, state, and federal officials on all things floodplain management including disasters where floodplain specialists join State and Federal emergency management officials at joint disaster field offices for damage assessments and recovery planning. Flood plain specialists also work closely with FEMA and local staff to assess flood maps, storm damage, and flood control structures such as dikes and levees to help prepare requests for federal and state flood disaster assistance.

## STATE DEPARTMENT OF TRANSPORTATION

Ecology coordinates with WA State Dept. of Transportation (WSDOT) on their long-term strategies in the floodplain through the Office of Environmental Affairs. WSDOT is currently reviewing draft Risk Reports for potential ways to integrate Risk Map tools and products.

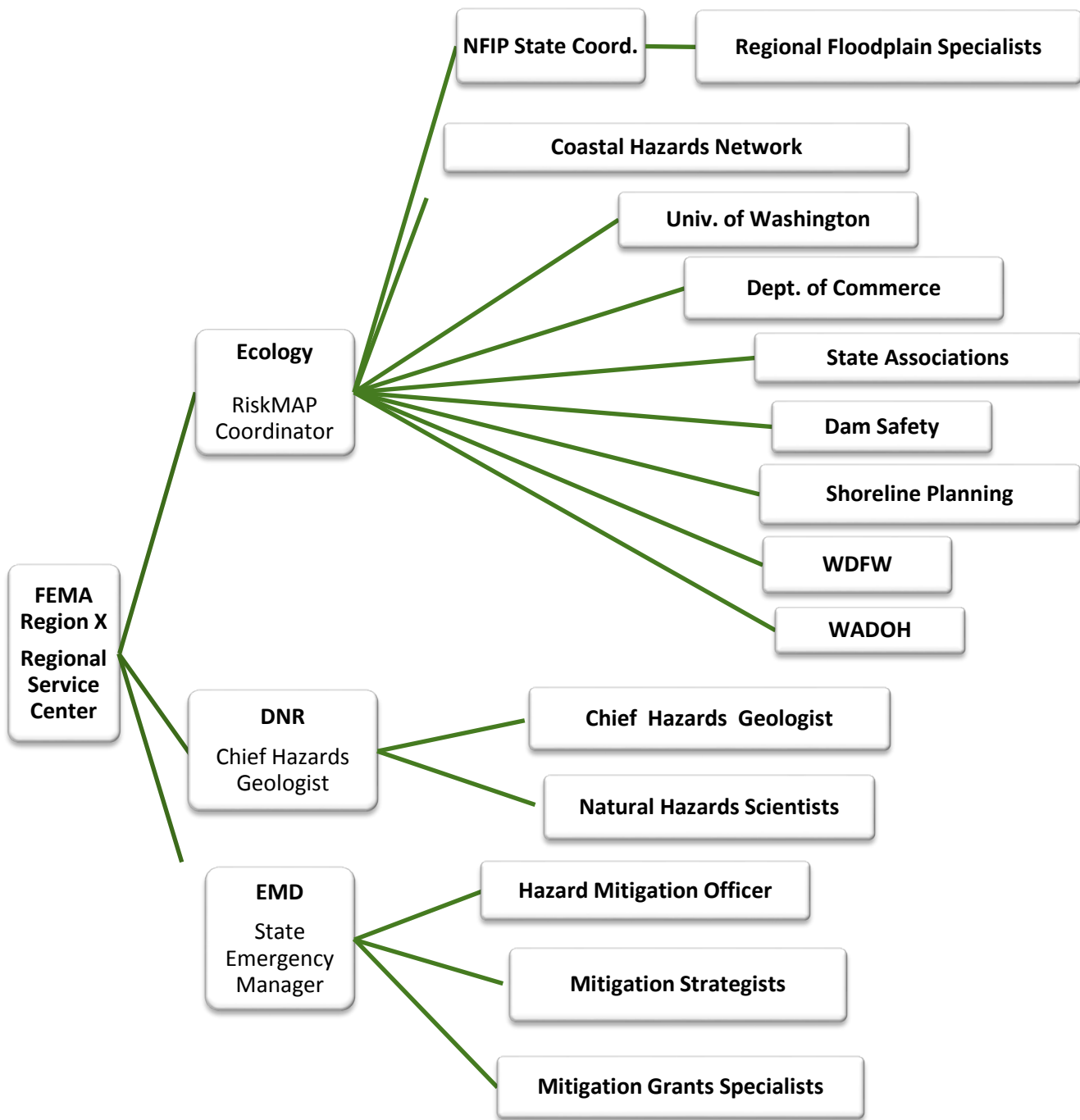
## PROJECT/THINK-TANK TEAMS

Northwest Floodplain Managers Association (NORFMA) is a nonprofit organization for regional networking and support on issues of environmental quality, economic sustainability, and scientific discovery on a watershed basis. The Association provides a channel for regional communication and cooperation in Oregon, Washington, Idaho, British Columbia and Alaska. Ecology serves on the NORFMA Board of Directors and has been a long-time working member in floodplain management projects & programs such as Map Modernization & Risk MAP.

## SUBJECT MATTER EXPERTS IN PLANNING, HAZARDS, OUTREACH, AND ENGAGEMENT

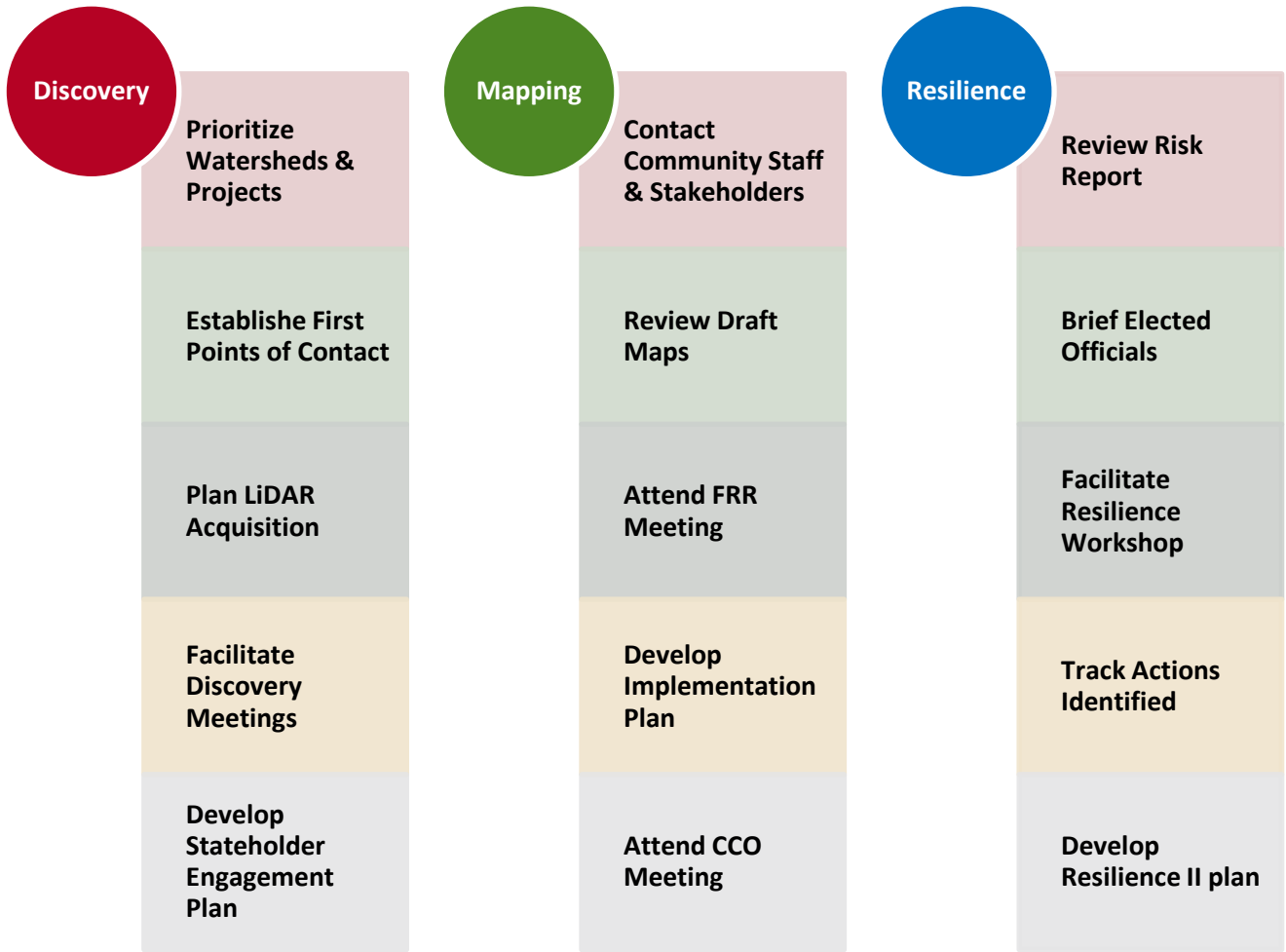
All Risk MAP projects begin with the identification of and involvement of subject matter experts in the fields of importance to risk and hazard mitigation planning. Ecology and FEMA Region X specifically call for State and Federal expertise through the development of the Risk MAP Partnership Agreement and expands to include hazard specific experts at local and regional levels as the project evolves.

## RISK MAP STATE AGENCY STRUCTURE AND PLAYERS



## RISKMAP COORDINATOR ACTIVITIES BY PHASE

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## When and How Stakeholders will be communicated with during:

### DISCOVERY PHASE

The State Risk MAP Coordinator makes the first contact with community leaders to establish all necessary Points of Contact for the Discovery interviews and remains the point of contact for local governments throughout the project. Sends meeting invitations & distributes Risk Reports.

Typical stakeholders include: Local Government Officials, Planners, Emergency Management, Public Works, Building Inspectors, Community Development, Public Utilities, and Tribes.

Other complimentary players could be invited to Discovery such as: Conservation and Irrigation Districts, Commercial and Industrial Facilities, etc.

### FLOOD MAP UPDATE PHASE

Ecology reviews all draft and preliminary maps prior to community coordination meetings and provides technical assistance to local governments during map updates.

Ecology posts draft and preliminary maps online providing easy access for communities to review and share map updates with stakeholders

Ecology's Risk MAP Coordinator and Regional Floodplain Specialists attend all three communities meetings: 1. Draft map or Flood Study Review Session, 2. Preliminary or CCO meeting, and 3. Public meeting or Open House.

### RESILIENCE PHASE

Ecology's Risk MAP Coordinator and Regional Floodplain Specialists attend all Resilience Meetings and Workshops providing facilitation and direct collaboration with local stakeholders.

Stakeholders include: property owners, community staff, elected officials, irrigation districts, diking districts, tourism, recreation, emergency management, agriculture, fisheries, fire and police, hospitals, surveyors, ports, insurance and mortgage, tribal governments, disaster relief organizations, academia, builders associations, and consultants, Stakeholder engagement during Resilience is tailored to meet the needs and level of involvement fitting each watershed. Ecology plans targeted discussions with stakeholders designed to encourage participation in the development of mitigation strategies with benefits to multiple stakeholders using Risk MAP tools and data.

### POST-RESILIENCE PHASE

Ecology's Resilience Phase II plan schedules community visits approximately one year following the Resilience Meeting or as appropriate for the local government.

Resilience Phase II primary objective is to further Phase I 'Actions Identified' to 'Actions Advanced' by integrating those actions into hazard mitigation plans or projects.

Ecology will use FEMA's Action Tracker to compile and track progress quarterly.

### WASHINGTON STATEWIDE WATERSHED RISK PORTFOLIO

Project planning begins with FEMA HQ targets if they apply, then Ecology uses its Watershed Risk Portfolio to evaluate and prioritize potential project areas with the main objective of delivering digital products to communities using paper products and maps.

The portfolio relatively ranks all watersheds across the State by combining three predominate risk factors across HUC8 watershed boundaries and applying a weighted analysis to emphasis the highest risk factors such as populations.

A series of other planning elements are incorporated as needed such as topographic data development, CNMS and NVUE values, mass Zone A modeling, and Levee and LAMP priorities.

The Portfolio is used to maintain focus on needs while integrating flexibility to take positive steps towards equity in natural hazard information to the general public while promoting detail in developed and developing areas.

The Portfolio incorporates risk factors into a GIS database for analysis, mapping, and project sequencing.

## State Land Use Policies and Programs

Description of the State's capacity to regulate land use and participate in land use planning

The WA State Dept. of Commerce (Commerce) regulates the GMA and urban growth areas in WA. Frequently flooded areas are identified in the GMA Critical Areas Ord. that typically reference FEMA FIRMs as the frequently flooded area. The Washington State legislature enacted RCW 36.70A.110 in 2009 declaring the expansion of an urban growth area is prohibited into the one hundred year floodplain; with exceptions.

Ecology Regional Floodplain Specialists review and make recommendations to GMA and flood related ordinances.

Risk MAP tools and data will serve as best available information for both frequently flooded areas and urban annexations.

Description of how State land use policies and programs can use Risk MAP data and products

Ecology is evaluating the potential for State-funded Floodplains by Design Projects to leverage Risk MAP Actions.

Ecology will make all Risk MAP products and tools available to FbD project applicants as leverage, cost-share, and for project design and feasibility analysis.

Description of any State Grant Programs that can support Risk MAP objectives or be linked to Risk MAP goals to better integrate existing activities of the State.

Hazard Mitigation Grant Program

Public Assistance Program

Pre-Disaster Mitigation Grant Program

Floodplains by Design grant Program

## Description of State's Roles and Responsibilities during Discovery, including:

### PRE-DISCOVERY COORDINATION

Discovery begins with a Core Team project planning meeting consisting of FEMA RAB and FM&I, Ecology, DNR, EMD, CERC, and STARR. The Core team dedicates a good portion of its resources in the preparation for the Discovery Meeting. Ecology serves as the face of the Discovery process, making the first point of contact (POCs) with community staff engaged in floodplain management, mitigation planning, or emergency management activities and will remain as a constant presence throughout the project. The goal is to reach the highest level staff member who can direct appropriate members of their community towards this effort. Key points to discuss during the first POC are:

- Introduce Risk MAP, Statewide plan and players
- Include multi-hazard and non-regulatory products
- Inform of upcoming project objectives and schedule
- Discuss link between the risk report and hazard mitigation planning
- Next steps, interviews, discovery meeting schedule
- Identify stakeholders of interest to the communities
- Challenges or potential obstacles

### DISCOVERY MEETING

Ecology, DNR, and EMD attend Discovery meetings. Ecology serves as State Coordinator, introduces FEMA, facilitates group breakouts, and concludes with next steps and points of contact.

DNR serves as the landslide, earthquake, and tsunami expert. DNR is involved at the Discovery and Resiliency phases providing technical expertise and data.

EMD provides grant, mitigation, and recovery strategists. EMD's role is to help link Risk MAP tools and data with the hazard mitigation process.

## POST-DISCOVERY COORDINATION

Ecology works directly with each community on outreach that focus' on stakeholder engagement, local needs, challenges, and strategies.

## ECOLOGY PLANS FOR LIDAR ACQUISITION

Ecology works with FEMA and DNR on LiDAR acquisition. WADNR is the State agency lead on LiDAR and plans to house and distribute the data publically.

## Description of State's Roles and Responsibilities during mapping process, including:

### SCOPE DEVELOPMENT

Ecology works with FEMA to prioritize and plan within the FEMA regional mapping budget to maximize the depth and extent of Risk MAP projects while maintaining State wide priorities.

Ecology serves as mentor for local CTP's developing Risk MAP projects providing guidance, project opportunities and solutions, and leverage.

### STUDY KICK-OFF MEETING

Ecology serves as the local POC providing guidance on outreach, messaging, managing expectations, important outcomes, stakeholder engagement, and gaining leadership from department directors and elected officials.

### DRAFT MAPS RELEASE

Ecology Risk MAP Coordinator and the Ecology Regional Floodplain Specialist attend the draft map meetings providing mapping and regulatory expertise. Ecology coastal and shoreline planners are invited where appropriate.

Ecology reviews draft maps prior to community meetings and provides comments to FEMA for clarification and discussion.

Ecology posts draft maps online for communities to review and share with stakeholders

### FLOOD RISK REVIEW MEETING

Ecology and State Regional Specialist attend all Flood Study Review Session. Ecology coastal and shoreline planners are invited where appropriate.

Ecology provides GIS mapping and regulatory guidance directly and specifically to communities prior to public meetings and map adoption.

### CCO MEETING

Ecology Risk MAP Coordinator and the Ecology Regional Floodplain Specialist attend the CCO meetings providing guidance on map adoption, community outreach, planning for the Public Open House, and stakeholder engagement.

Ecology coastal and shoreline planners are invited where appropriate.

### PUBLIC MEETING

Ecology's primary mapping tools are the WA State Coastal Atlas and ESRI ArcGIS.com. Both online applications are managed by Ecology and deliver an interactive mapping experience open to the public with address search functions, access to GIS data, and several background options.

Ecology can provide GIS support, maps and links to property owners, identifying stakeholders and community staff, and facilitation.



Ecology Regional Floodplain Specialists engage directly with property owners and community staff on options, impacts, and solutions to regulations. Ecology provides map online free, open to the public, and distributes the links to the local governments

## MAP ADOPTION PROCESS

Ecology Regional Floodplain Specialists work directly with communities on map adoption by reviewing the existing ordinance and recommending changes and/or upgrades for reasons specific to the community's standing with the NFIP, CRS, and Hazard Mitigation Planning.

## Description of State's Roles and Responsibilities during the Resilience phase, including:

### DEVELOPMENT AND COMMUNICATION OF RISK REPORT

DNR or the PTS produces the Risk Report

Ecology reviews the GIS data, provides comments to DNR or PTS, and works with the communities to compile and tailor the information to express risks meaningful to community leaders and stakeholders.

Ecology will provide links to all Risk Reports on the State Risk MAP website.

### PRE-RESILIENCE WORKSHOP COORDINATION

Ecology begins coordinating with Region X on Resilience planning approximately three months prior to the meeting to define roles and responsibilities. Ecology typically makes the first POC to identify a local sponsor and plan logistics.

3 months prior: Ecology begins Workshop Planning; 1 month prior: Invite Communities; 2 weeks prior: e-mail draft Risk Report; 1 week prior: Pre-Meeting Planning. Ecology focuses on gaining support from the elected officials prior to the Resilience workshop by affirming to them the importance of their leadership as Actions Identified move toward implementation. Ecology works directly with community POCs on messaging, education, and outreach to elected officials from within the ranks of the community. Ecology has learned this brings trust to the top officials without imposing outside philosophies or agendas. CERC provides support

### RESILIENCE WORKSHOP

Ecology, DNR, and EMD attend all Resilience meetings and workshops.

Ecology hosts the meeting and introduces the Risk MAP Program to both elected officials and community staff.

Ecology serves as group facilitator using FEMA data gathering tools and guidance.

For coastal communities, Ecology brings the Coastal Hazards Resilience Network focusing on mitigation, outreach, and mitigation planning to coastal communities with their extensive network of marine and coastal experts.

EMD communicates funding opportunities available to communities' pre and post-disaster

### POST-RESILIENCE WORKSHOP COORDINATION

The Risk MAP Coordinator enter Actions Identified and Actions Advanced into FEMA's Action Tracker approximately two months following the Resilience workshop.

Ecology will schedule community coordination calls with community POCs approximately one year following the Resilience Meeting or when appropriate for the local government to help communities integrate Risk MAP GIS data with hazard mitigation plans and projects. Communities are encouraged to use the information provided in the Risk Report in conjunction with the data in the risk database to:

- Update local hazard mitigation plans, shoreline master programs, and community comprehensive plans
- Update emergency operations and response plans
- Communicate risk
- Inform the modification of development standards
- Identify mitigation projects

## IMPLEMENTATION AND TRACKING OF RESILIENCE STRATEGIES

Ecology will use FEMA's Action Tracker to manage and evaluate actions throughout Risk MAP projects.

RiskMAP Coordinator will hold quarterly conversations with CERC to discuss Action Tracking

Risk MAP Coordinator will coordinate with WAEMD, WADNR, and other State Partners as needed to help capture all actions. Ecology plans to further develop 'Actions Advanced' mitigation strategies through the next hazard mitigation planning cycle.

## RISKMAP WORKFLOW

