

Minutes of the  
April 15, 2021 meeting of the  
State Interagency Hazard Mitigation Team (State IHMT)

Meeting location: webinar only

The following people participated in the meeting:

State Resilience Officer (SRO)  
Oregon Climate Change Research Institute (OCCRI)  
Department of Environmental Quality (DEQ)

Division of Financial Regulation (DFR)  
Dept. of Geology and Mineral Industries (DOGAMI)  
Oregon Health Authority (OHA)

Infrastructure Finance Authority (IFA)  
Department of State Lands (DSL)  
Dept. of Land Conservation and Development (DLCD)

OMD, Office of Emergency Management (OEM)

Office of State Fire Marshal (OSFM)  
Oregon Department of Forestry (ODF)  
Oregon Parks and Recreation Department (OPRD)  
Oregon Partnership for Disaster Resilience (OPDR)  
Oregon Department of Transportation (ODOT)  
Oregon Water Resources Department (OWRD)

Federal Emergency Management Agency (FEMA)

U.S. Army Corps of Engineers (USACE)  
Portland State University, EMCR  
WSP USA (E&E)

Mike Harryman  
Meghan Dalton  
Don Pettit  
Wes Risher  
Tracie Weeder  
Bill Burns  
Candy Cates  
Eric Gebbie  
Gloria Zacharias  
Lauren Brown  
Matt Crall  
Celinda Adair  
Katherine Daniel  
Marian Lahav  
Pam Reber  
Tricia Sears  
Anna Feigum, Acting Chair  
Joseph Murray  
Stephen Richardson  
Erik Rau  
Althea Rizzo  
Melanie Wadsworth  
Jenna Trentadue  
Jay Sennewald  
Michael Howard  
Jessica Gourley  
Tony Janicek  
Keith Mills  
Racquel Rancier  
Edgar Gomez  
Rynn Lamb  
Paul Sclafani  
Jeremy Spoon  
Trevor Clifford

1) *Welcome*

A couple of minutes after 9:00 a.m., Anna Feigum (OMD-OEM), Deputy SHMO and Acting Chair, welcomed everyone to the April meeting and said a little about her background and about Amie Bashant being out on leave.

2) *Introductions*

Joseph Murray (OMD-OEM), State IHMT Staff, facilitated introductions using the webinar logins as a guide.

3) *Silver Jackets (Flood Mitigation Subcommittee) and NFIP updates*  
**Celinda Adair, DLCD**

Celinda Adair (DLCD) noted that Silver Jackets (SJ) has formed a geospatial subcommittee, which received a recent presentation from the DAS Geospatial Enterprise Office (GEO). SJ has several subcommittees including for outreach. That subcommittee continues to do post-flood outreach. SJ has also restarted a strategic planning project that was delayed by the fires of September 2020. SJ also has a King Tide signage project going that is being well received by local communities, and are working on a tool to track HWMs. SJ continues to do a lot of work with Umatilla County in response to the floods of April 2019 and February 2020. Paul Sclafani noted that the new White House administration has put SJ in a bit of flux in terms of funding and emphasis. One new emphasis may be on helping vulnerable communities.

4) *Report from Landslide Mitigation Subcommittee (aka, Oregon Landslide Risk Reduction Team)*  
**Bill Burns, DOGAMI**

Bill talked about the January debris flow in the Gorge that caused one fatality, noting that debris flows from the Eagle Creek Fire scar may show us what will happen in other watersheds post-fires of September. Bill then mentioned the Governor's post-fire science team. Bill recommended that we invite the leads from this team to present; and that we collaborate; Bill will serve as the go-between. He talked about a mitigation proposal for the following fires: Beachie Creek, Lionshead, Archie Creek, Holiday Farm, and Eagle Creek, which will focus on work to characterize the hazards and inform the vulnerable communities about the risk.

5) *Report from FEMA Region Ten Mitigation Division*

Edgar Gomez talked about the release of ShakeAlert. Rynn Lamb and Edgar both talked about floodplain mapping that is occurring. Edgar talked about his work on the COVID-19 vaccination response under a deployment he has received, focused on equitable access. He talked about the Umatilla County MJ-NHMP that is under review. The date for FEMA Consultation with the State of Oregon has been set for July 8. Joseph asked Edgar to say a little bit about what Consultation is, which he did.

6) *Flood mitigation with dams and levees<sup>1</sup> (a USACE handout provided had been provided with the calendar invitation)*

The presenters for this agenda item were Keith Mills, OWRD; Paul Sclafani, USACE; and Celinda Adair, DLCD.

a) Keith led with a presentation; see the slide images that follow “g)” below.

b) Update on High Hazard Potential Dam (HHPD) project

See the slide image on HHPD that follows below.

c) Information to the public on dams

Paul talked about a major update to the National Inventory of Dams (NID) coming this year. He also talked about a major change in USACE policy that will now permit sharing inundation information with the general public. Paul said almost all high hazard dams in Oregon have Emergency Action Plans (EAPs).

d) Situational awareness, warning systems, EAPs, and flood-fight plans as mitigation

Keith talked a bit about working with OEM’s Erik Rau on planning for dam emergencies via the *State Emergency Operations Plan* (State EOP). He noted that flood-fighting occurs frequently elsewhere in the USA, but not commonly here. He said that with our atmospheric river events it is hard to predict exactly what watershed they will hit far enough in advance to conduct effective flood-fighting. Keith would like to see more work and coordination via the Flood Annex in the State EOP. In terms of flood mitigation, Paul said that OEM has done a lot of home and business elevations and acquisitions in the past, both of which reduce future vulnerability. Celinda talked about all the levees in Umatilla County that don’t have sponsors.

e) USACE levee program, levee databases, and levee certification

Paul talked about the things that a levee must have to be in the USACE program including a sponsor (he referred to the pre-meeting handout). He talked about the periodic and routine inspections that USACE conducts. He then talked about what happens after an event with facilities that are in the federal levee library. He gave an example of “in” versus “not in” in Umatilla County, where USACE was involved in rehabilitation post-flood. He said all this is different from levee certification.

Bill talked about the ARkStorm project done in California, a hypothetical, but realistic megastorm scenario.<sup>2</sup> Bill said we ought to do something similar here in Oregon. Bill thinks the State IHMT could push this forward. Paul referred to it as a state flood response master plan. We’d need to see how it was funded in California. It would probably be a good idea to take a comprehensive look at the kinds of flooding we might have in Oregon.<sup>3</sup>

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<sup>1</sup> We’ll also use this session to determine which topics State IHMT Members would like additional information at a future meeting.

<sup>2</sup> <https://en.wikipedia.org/wiki/ARkStorm>

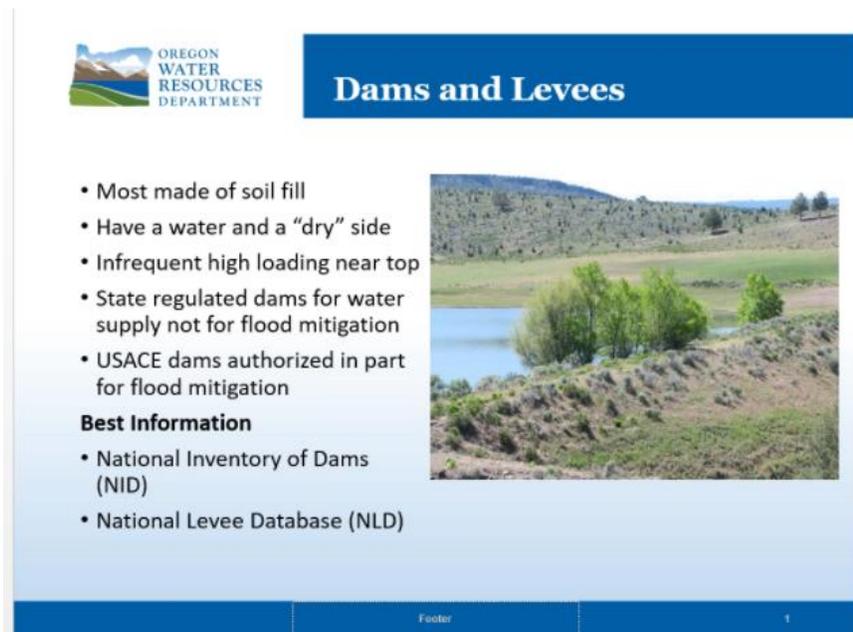
<sup>3</sup> Tentatively part of the October 2021 meeting agenda.

f) DLCD levee data; requirements for levees to be shown on FEMA FIRMs

This project began on the coast with DLCD, but has largely been turned over to DOGAMI. Celinda talked about data now in the State Geospatial Library. Bill said the Open File Report that provides all of this information is 017-02: <https://www.oregongeology.org/pubs/ofr/p-O-17-02.htm> Celinda talked about the additional requirements FEMA places on levees to be in the FEMA program: the requirements and evaluations are significant.

g) Using LIDAR to map levees which have no current government sponsor

Keith talked a little bit about this; he said doing this can be tricky because a lot of things that will look like levees on LIDAR are not in fact levees.



**OREGON WATER RESOURCES DEPARTMENT**

## Dams and Levees

- Most made of soil fill
- Have a water and a "dry" side
- Infrequent high loading near top
- State regulated dams for water supply not for flood mitigation
- USACE dams authorized in part for flood mitigation

**Best Information**

- National Inventory of Dams (NID)
- National Levee Database (NLD)



Footer



**OREGON WATER RESOURCES DEPARTMENT**

## Overtopping

- Most failures from overtopping and formation of breach during major flood
- Many close calls in Oregon
- Recent Midwestern failures of floods and levees
- Oregon will see bigger events



Footer

## Issues on smaller dams and levees

Lots of defects on some

- Narrow crest
- Less operating freeboard
- Less control waves
- More plants
- More burrowing animals
- Much shorter path for internal erosion



## Internal Erosion - conduit

- Many failures at conduit
- Irregular settlement
- Hydraulic fracturing
- Seepage collars
- **Constructed roofs**
- Corrugated metal culverts
- Lots of CMPs in Oregon
  - dams built between 1950 & 1980



## HHPD grant in Oregon

- NHMP updated for dams
- Risk Assessment methods
- Assessment -18 eligible dams
- These dams increase severe flood risk
- Floodplain Management Plans
- Required for HHPD project work
- Dam owners interested



Keith said that Congress may make additional appropriations for the HHPD program.



## OWRD Risk Assessments

- Oregon HHPD grants
- Risks - Six modes
- Events
- Comprehensive Review Inspections
- Risk assessment
- Actions



## Extreme flood recurrence

- Local Storms
- Atmospheric Rivers
- Limited remote gages
  - Precipitation
  - Streamflow
- Record storms
  - 1861 AR
  - 1903 Heppner
  - No gage info.

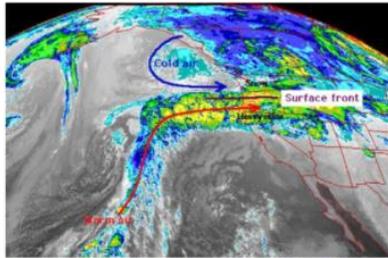


Figure 2. Infrared satellite photograph for November 18, 1996, showing subtropical jet stream bringing moisture from the southeast, and a cold air mass over Washington. (Photograph courtesy of the Oregon Climate Service, Corvallis, Oregon).

Expect bigger

Keith noted the 1861 atmospheric river; he also talked about the 1903 Heppner Flash Flood. Pam Reber shared in the chat the *Delta Science Plan* (for the Sacramento-San Joaquin Delta in California), “A coordinated, science-based approach for managing the Delta... in a manner that enhances and protects the Delta as an evolving place”: <https://deltacouncil.ca.gov/pdf/2019-delta-science-plan.pdf>

Keith reminded us that most of the state is in drought now. We have a D4 drought near the Klamath/Lake County line, “pretty sure we’ve never had one of these in Oregon”



## Dams help in a drought

- We are in a drought now
- D4 in places
- Drought mitigation
  - If safe
  - environmentally sound location
- Antelope dam in 2015



7) Oregon NHMP maintenance and implementation

Marian Lahav, DLCD, led this agenda item utilizing the following slides:

2020  
Oregon NHMP

Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- Expires 9/23/2025
- Standard Plan
- Implement & Maintain =
  - Advance programs and actions; monitor progress and adjust
- Update =
  - Evaluate and revise
- **YOU = SUCCESS!!**
  - **Need and expect all IHMT agencies and SMEs to participate.**

Marian noted that we have 4 and ½ years to implement, update, and maintain the plan. She talked about Oregon losing enhanced status with the most recent FEMA re-approval of the plan.

2020  
Oregon NHMP

Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- Previous Approach:
  - Annual reporting
  - 2-3 year update push
  - IHMT oversight
- New Approach:
  - Continual monitoring and adjustment
    - Beginning this quarter!
  - Quarterly reporting
  - 2-3 year update push
  - IHMT oversight

# 2020 Oregon NHMP

## Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- **How?**
  - Work Groups
  - SMEs
  - IHMT meetings
  - BOX – “Living Plan”
  - Formal Update Process
- **Work Groups**
  - Work between IHMT mtgs
  - Document activities
  - Revise “Living Plan”
  - Report at IHMT meetings
  - Bring discussion items to IHMT meetings
- **SMEs**
  - Participate in Work Groups
  - Revise Hazard Chapters

# 2020 Oregon NHMP

## Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- **Work Groups**
  - Enhanced Plan
  - Risk Assessment
  - Public Engagement
  - Mitigation Strategy
  - State/Tribal/Local Coordination
- **Requirements, FEMA Review, Goals, Aspirations**

# 2020 Oregon NHMP

## Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- **Enhanced Plan**
- Support a comprehensive, statewide, natural hazards mitigation program
- Build state and local government capacity
- Help secure and provide reliable mitigation funding
- Document effective use of mitigation funding
- Document program and project management capability
- Draft Enhanced Plan sections

# 2020 Oregon NHMP

## Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- **Risk Assessment**
- Develop a more sophisticated risk assessment methodology
- Improve data sources and analysis
- Develop, integrate, and align natural hazards mitigation and climate change adaptation efforts
- Review accuracy of risk assessment in context of natural disaster declarations
- Update regional profiles
- Draft risk assessment chapters

## 2020 Oregon NHMP

### Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- **Mitigation Strategy**
- Track progress of actions
- Revisit actions and prioritization
- Improve linkage to risk assessment
- Review actions for FEMA funding eligibility
- Implement loss avoidance studies
- Collect success stories
- Improve capability assessment
- Draft Mitigation Strategy chapter

## 2020 Oregon NHMP

### Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- **State/Tribal/Local Coordination**
- Develop and implement an approach to tracking “changes in development”
- Develop and implement an approach to assessing local mitigation capabilities
- Improve linkages between state and local NHMPs
- Develop and implement a mitigation action tracker
- Develop and implement an NHMP repository
- Draft the State/Local Coordination chapter

## 2020 Oregon NHMP

### Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- Public Engagement
- Develop and implement outreach and engagement strategies
- Facilitate posting information on OEM and DLCD websites
- Draft Planning Process chapter

## 2020 Oregon NHMP

### Maintenance & Implementation

Marian Lahav, DLCD  
Interagency Hazard Mitigation Team  
April 15, 2021

- **BEGIN THIS QUARTER!**
- Volunteer Survey
  - Volunteer for whatever interests you, even across work groups
- Box Access
  - “Living Plan”
- Launch Work Groups
- First Report at July IHMT

Paul asked if federal staff could serve on the workgroups. Marian said FMS is an official subcommittee of the State IHMT. She is open to federal participation. Marian will look for a champion for each group.

8) Mitigation grants update (handout provided with calendar invitation)

Anna talked about new positions OEM is hiring. She talked about the many Q&A sessions that OEM is doing. She noted that state agencies can apply for HMGP to implement actions that are in the Oregon NHMP. Stephen looped back to Marian's presentation and thanked everyone for their help with the Oregon NHMP. He talked about six open positions that OEM has on the streets.

9) *Other business/round robin*

Anna facilitated this agenda item, which was focused on the update on local mitigation planning handout put together by DLCDD and OPDR that had been provided with the calendar invitation.

10) *Develop agenda items for July meeting*

a) Gauge interest: Disaster Resilience Plan for Heritage Resources, and Guidebook

This is an OPRD project. Marian spoke about this. She talked about the pilot project for Cottage Grove. Erik spoke in support of this. Erik believes the Tribes will be interested in this topic. Don Pettit also spoke in favor.<sup>4</sup>

b) Gauge interest: Evaluating Rural Pacific NW Towns for Wildfire Evacuation Vulnerability<sup>5</sup>

Jenna spoke a bit about this. Don Pettit spoke in favor of it. Katherine took a look at the study. She is currently working in Wallowa County where there is mostly one way in and one way out. She is curious how the other factors play in. She'd like a deeper look. Jenna could ask the developers of the study to come present. Michael noted that OPDR is doing work right now with Lane County on studying evacuation planning. He could report on this as well. Bill noted that DOGAMI does a lot of work with evacuation planning for tsunamis on the coast. Don noted that before one can do evacuation, one needs to do proper notification. The first steps in mitigation after the event has happened are notification and evacuation. Pam noted how important this is. She talked about her work with coastal communities on mitigation. Pam talked about best practices for notification, evacuation, and evacuation infrastructure.

c) Other

Connecting with the Governor's Science Team (Bill's idea).<sup>6</sup> See also footnote #3 on Page 3.

11) *Public comment*

There was no public comment.

12) *Minutes from January 8, 2021 Meeting (handout provided with calendar invitation)*

We ran out of time for this and it was tabled.

13) *Adjourn*

Anna adjourned the meeting just after 11:30 a.m.

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<sup>4</sup> This topic is tentatively on the October 2021 agenda.

<sup>5</sup> Study authors were invited to the July 2021 meeting, but need to delay until at least October 2021.

<sup>6</sup> This topic is also tentatively on the October 2021 agenda.