Assessment of Flood Risk Management Services in Sonoma County

Date:	Monday, August 14, 2023	
Subject:	Kick-off Meeting	
Attendees:	Sasha Ponomareva, Sonoma Water Dale Roberts, Sonoma Water Molly Oshun, Sonoma Water Jay Jasperse, Sonoma Water Susan Haydon, Sonoma Water Nick Malasavage, USACE Patrick Sing, USACE Alex Rosas, Permit Sonoma Nathan Quarles, Permit Sonoma Adriane Garayalde, Public Infrastructure Johannes Hoevertsz, Public Infrastructure Michael Makdisi, CARD	Jeanette Pantoja, COAD Lacie McWhorter, Dry Creek Rancheria Brianna Steel, Cotati Curt Bates, Healdsburg Gina Benedetti-Petnic, Petaluma Claire Myers, Santa Rosa Flannery Banks, Santa Rosa Neil Bregman, Santa Rosa Brittany Miller, Santa Rosa Oriana Hart, Sonoma Garrett Broughton, Windsor
Consultant Team:	Betty Andrews Avery Livengood, HDR	Trishna Patel, HDR Tammy Teurn, HDR

Meeting Notes

1. Introductions

- Betty Andrews welcomed participants to the meeting and facilitated introductions. As an optional icebreaker, Betty asked participants to share an experience from a memorable flood event in Sonoma County.
- Sasha Ponomareva, Climate Resiliency Program Manager at Sonoma Water, introduced the Sonoma Water team: Dale Roberts, Molly Oshun, Jay Jasperse, and Susan Haydon.
- Patrick Sing, Water Manager with USACE San Francisco District, is responsible for flood operations and releases at Lake Mendocino and Lake Sonoma.
- Nick Malasavage, Operations Manager at USACE San Francisco District.
- Alex Rosas, Permit Sonoma, oversees development services, such as grading permits and floodplain management. Alex's recalled the 1986 Valentine's Day downpours and flooding because of the impact it had on the community.
- Nathan Quarles, Deputy Director of Engineering and Construction at Permit Sonoma, and also the County Floodplain Manager.
- Adriane Garayalde, Sonoma County Public Infrastructure. Adriane has experienced many Russian River flood events. The 1964 flood was most memorable because they were flooded in for many days with no power, no communication, and no way to get out.
- Johannes Hoevertsz, Director of Sonoma County Public Infrastructure. Johannes recalled the County's efforts during the 2017, 2019, and 2023 disasters to close and reopen roadways and manage accessibility for residents.

- Michael Makdisi, Clean Water Analyst with County Administrator's Office for Climate Action and Resiliency. Michael is new to this position, so this past (2023) flood season was most memorable.
- Brianna Steel, City of Cotati Engineering Technician, sitting in for Craig Scott.
- Curt Bates, Principal Civil Engineer at the City of Healdsburg. Curt has experienced a couple dozen floods throughout the years. The New Year's flood in 2005-2006 in Petaluma is most memorable due to the impact.
- Gina Benedetti-Petnic, Assistant Director Public Works and Utilities with the City of Petaluma. Public Works and Utilities is responsible for airports, streets, and utilities. Gina is the Floodplain Administrator and supervises the Community Rating System (CRS) Coordinator. Gina recalled her brother piloting a boat up the street during the 1964 flood in Petaluma. Gina is struck by how flooding seems to have changed overtime, with less basin flooding and more from tributaries and creeks. Responses need to account for changes to the temporal aspect of floods.
- Claire Myers, Stormwater and Creeks Manager, City of Santa Rosa. Stormwater and Creeks coordinates closely with Emergency Management, Public Works, and Fire. In Claire's three years with the team, her most memorable flood was the 2021 vortex; she recalls seeing an inflatable alligator floating down the street.
- Flannery Banks, City of Santa Rosa Stormwater and Creeks Flood Engineer, working on asset management and storm drain infrastructure. Flannery's most memorable flood was the October 2021 event, for which there was over 4" in variation in rainfall across the city.
- Neil Bregman, City of Santa Rosa Emergency Manager. Neil has been with the City since 2014, and the most memorable was the 2021 event when many homes needed to be evacuated.
- Brittany Miller, City of Santa Rosa Deputy Emergency Manager.
- Oriana Hart, Project manager at City of Sonoma Public Works. Oriana oversees the City's environmental programs, including working with Zone 3A. Oriana's most memorable flood was in 2019 when Sebastopol's Barlow Market flooded.
- Garrett Broughton, Engineer with Town of Windsor Public Works, is involved in the Town's storm drain master plan and tracks all stormwater related issues for the department. Garrett recalled heavy downpours at 2am during the December 2014 flood event.
- Lacie McWhorter works on Environmental Resources for Dry Creek Rancheria. Lacie was born and raised in Sonoma County and has many flood memories, including Guerneville underwater almost every winter. This year, the Tribe's campground was flooded by a series of atmospheric rivers.
- Jeanette Pantoja, COAD Director, coordinates non-profit responses to disasters including long-term recovery. Jeanette recalled COAD's work providing assistance to homeowners and tenants who were not captured in the damage assessment conducted after the 1994 floods.

2. Overview of the Flood Risk Management Planning Initiative

- Sasha Ponomareva shared the background and origins of the project:
    - Sonoma Water is in partnership with Sonoma County Department of Emergency Management to assess flood risk management services in Sonoma County. The project is led by Sonoma Water, with consultant support from HDR and Betty Andrews.
    - In line with the County's resilience plan, one of the project goals is to improve cross-agency communication and equity.
    - The project is intended to align with Sonoma Water's Climate Adaptation Plan. Climate change impacts will continue to be significant factors in Sonoma's flood risk management. One of the motivating factors for this study include the fact that 99% of the damages in the County are attributed to atmospheric events, which will become more extreme with time.
    - Lastly, flood risk management has been disaggregated and spread across multiple agencies, resulting in a fragmented system and missed opportunities for alignment on projects. As part of these discussions, the group is looking to identify overlaps and gaps in flood risk management services and identify new services that align with available resources.
    - There is no preconceived notion from Sonoma Water of where this process will lead. The hope is for improved information sharing and the development of deliverable documents that can assist in collectively pursuing grant funding and other resources.
- HDR provided an overview of the project timeline and expectations:
    - The **Kickoff Meeting** is intended as a forum to get to know the other organizations and people involved in flood risk management and to have an initial discussion on your respective priorities.
    - Beginning in September, everyone will receive an email **Survey**. The survey will ask each organization to confirm and supplement the preliminary information collected on existing flood risk and the services that each organization provides. The survey will ask for input on challenges and opportunities for improving flood risk management. The team expects to follow-up by email and/or with calls to collect additional information, with follow-ups into November 2023.
    - Sonoma Water and HDR have created an **ArcGIS Online map**, populated with some initial public datasets and Sonoma Water datasets to show flood exposure and flood risk management facilities. The survey will include a request for any GIS data that can be shared to the map, and each partner will receive a password log-on to view the information in the map.
    - Initial findings from the survey will be presented at an in-person **Workshop on January 8, 2024**. The workshop will include deeper discussion where we'll be asking you all to take a deeper dive and discuss potential strategies to improve FRM.

- A **draft Recommendations Report** will be prepared and shared for partners' review and comment in Spring 2024. Comments will be addressed in the final Recommendations Report. While the report is the main output of the project, the process is intended to initiate a dialogue and collaboration that can continue beyond the life of the project, support implementation of the recommendations, and support future phases of work.

3. Preliminary Findings from Desktop Analysis

- Prior to this meeting, HDR conducted a desktop analysis to identify existing and future flood risks in Sonoma County, identify the organizations that are involved in the provision of flood risk management services throughout the County, and identify what those flood risk management services are.
- HDR presented an overview of the desktop analysis findings.
- The desktop analysis is based on a review of 15 plans and studies related to flood risk management or climate adaptation that were provided to HDR by Sonoma Water, as well as city and county department websites. Because the desktop analysis is based on plans and studies prepared by others at various points in time – as long ago as 1995 – it is not a comprehensive inventory of all information and some of the information may be out of date. The findings are intended as something for participating organizations to react to, and the survey will ask for help identifying gaps or outdated information.
- HDR presented a framework for organizing flood risk management services by activity type and by flood risk management "pillar" – based on the literature reviewed in the desktop analysis.
    - Activity types include:
        - **Coordination:** Inter-organizational communication, planning, and decision-making.
        - **Information development:** Data collection and analysis, modeling, and synthesis.
        - **Land management:** Regulation of development, land stewardship, and conservation.
        - **Capital projects:** Design, construction, and ownership of flood risk management facilities, including both natural and built infrastructure.
        - **O&M:** Operation and maintenance of natural and built infrastructure, and emergency operations.
        - **Training and awareness:** Participating in trainings or developing and communicating information to raise awareness.
        - **Funding:** Efforts to obtain and expend funding or financing for flood risk management.
    - Flood risk management pillars include:

- **Prevention**: Actions taken before or after a flood emergency to reduce the chance of a flood event happening or reduce the damaging effects.
- **Preparedness**: Plans or preparations made before a flood emergency to improve flood operations, which may include response and rescue operations.
- **Response**: Actions taken to save lives and prevent property damage in an emergency situation.
- **Recovery**: Actions taken to return to a normal or safer condition following a flood, including securing disaster recovery assistance to fund such actions.

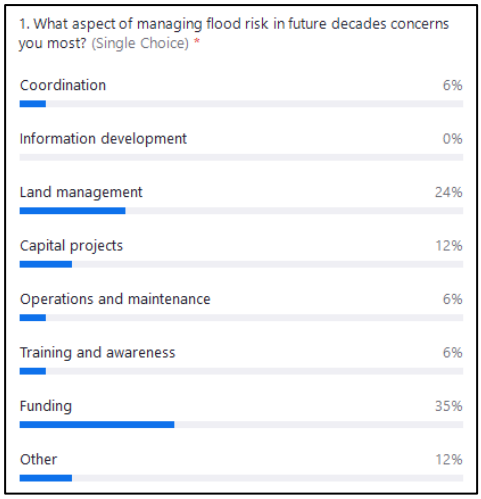
- The categories are not all mutually exclusive, but are intended as a way to organize all of the services that partner organizations are involved in so that it is easier to identify potential gaps, redundancies, or areas where collaboration could be beneficial.
- Partners will receive a copy of the desktop analysis technical memo when they receive the email survey.

4. Discussion

- **Are there any activity types that are missing from the proposed framework?**
  - Claire asked for clarification on whether each agency will be asked to populate the framework with their services, and whether they should identify gaps in services within a City or only interagency gaps.
  - HDR filled out an initial draft of the framework based on the desktop analysis findings, so each partner organization can review the existing information and identify things that are missing or inaccurate. Internal and external gaps are both relevant, as there may be other agencies or organizations that provide a service to fill an internal gap.
  - Adriane works in unincorporated areas of the County including Geyserville and the Alexander Valley. In these areas, infrastructure has adversely impacted Russian River health. Adriane recommended adding an activity type to reflect the need for improved river management and river health because river health goes beyond the Capital Projects category and accounts for the benefits to the ecosystem.
  - Michael agreed that accounting for river or ecosystem health could help inform strategy and project choice.
  - Jeanette noted that during floods, low-income renters are greatly impacted and their landlords do not provide information about known flood risks or potential resources or assistance programs. Where would flood risk notification fall within the framework? It is not necessarily captured by the Land Management category.

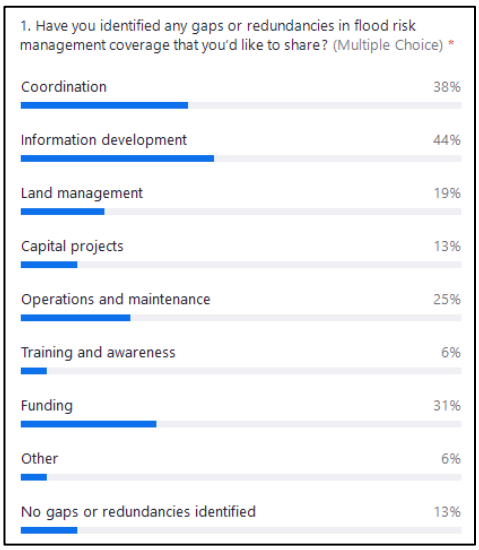
- **If there were no constraints or limitations – what would be your top flood risk management priority right now?**
    - Flannery chose *Capital Projects* because the City of Santa Rosa is wrapping up the Santa Rosa Creek Study and it demonstrates that flood risk is a big liability that will require capital projects to address.
    - Curt selected *Funding* because Healdsburg and other agencies have already prepared plans and studies and have identified projects that would reduce flooding risk and increase capacity, but these are waiting for implementation funding. Claire agreed.
    - Gina chose *Land Management* because it is an area where interagency coordination is really important. Properties in the County's jurisdiction are getting filled and affecting flood risk in Petaluma. Funding will come as projects are identified. There is a need for smarter land management, which requires better collaboration.

- **What aspect of managing flood risk in future decades concerns you most?**
    - Michael selected *Other* to represent the need for strategic, long-term planning. Many times, we are dealing with short-term projects and lack the willingness or time commitment to take on larger, longer-term solutions.
    - Claire also chose *Other* because climate uncertainty itself is a scary topic, and we are just getting a first taste of how bad things can get. We don't truly know where things will go, therefore all planning involves considerable uncertainty. There is a challenge in getting the public on board when there is uncertainty.



- **Have you already identified any gaps or redundancies in flood risk management coverage that you'd like to share?**

- Jeanette explained that during the January 2023 storms, the damage assessment data that was dependent on self-reporting did not capture a lot of what surfaced through later collaboration with recovery support centers. A lot of people who had to leave their tenancy situation because of flood damage were not originally accounted for. There is a gap on how the impact on the community is documented. It is important to go beyond the monetary damages and more into specific experiences that people are having.



- Flannery stated that the Advanced Quantitative Precipitation Information (AQPI) system has a lot of utility for flood risk management and suggested making an automated AQPI dashboard available to all agency staff, with live models for the most up-to-date NOAA information. An automated dashboard would avoid each agency having to interpret data from another source during a flood emergency.
- Adriane identified a gap in awareness and communication with certain populations during flood response. Sonoma County has a large amount of tourist activity and tourists typically do not know the area well and are not familiar if they are located in an area that can flood. There are deficiencies in communicating to this group.
- Susan agreed and pointed out that unsheltered people also need to be informed. Flannery and Neil shared that Catholic Charities leads emergency coordination and outreach with unsheltered people within Santa Rosa.
- Susan noted that during past flood events, when people are suffering from concerns and flood damage, they will call any phone number for the city or county without understanding the complexity of the roles of each agency. The public needs a clear idea of who is responsible and who to call for help. There is a need for coordinated messaging. The interagency wildfire communications are a good precedent.
- Jeanette noted a pattern in the poll responses. For the third poll question (about gaps and redundancies), *Information Development* and *Training and Awareness* received many responses. However, these were not popular choices in the first two poll questions, which focused on priorities. Preparedness is not accounted for enough. Systems-level solutions are needed. Policy and land management-scale solutions are needed.

- Claire agreed. In Claire's experience, when infrastructure is in bad shape, there is a tendency tend to focus on the immediate issue or need. Information development is inherently a longer-term priority when an agency is in "triage-mode."
- Flannery seconded the earlier idea of a regional flood support page for residents to find information about their flood risk and resources. For example, renters' insurance typically excludes flood damages, but this information is not widely known or understood. For a webpage to be effective, there is also a need for Spanish-language translation and direct engagement. Boots on the ground engagement and community events are needed to reach people and raise awareness.

5. Meeting Close and Next Steps

- Betty thanked everyone for making time to participate in the kickoff meeting and sharing initial thoughts on priorities and needs.
- Sonoma Water will follow-up after the meeting with partners who mentioned other staff contacts who should be included in this project.
- Meeting notes will be sent out to all participants.
- The desktop analysis technical memo will be distributed with the email survey in September.
- **Please save the date for the January 8th workshop!**