

Responses to Council Questions and Comments

1/8/2024

Item #11: Flood and Sea Level Rise Mapping Update Workshop

- Question: FEMA insurance maps changed in 2016. What was that based on? Is there a typical long lag time between FEMA and NFIP?
 - Response: Most recently there was a 2022 Flood Insurance Study (initiated by FEMA/NFIP) that affected the Santa Rosa Plain, not the Petaluma flood basin. Before that there was a 2016 FIRM update that reflected the “A-99” changes which removed many newly protected properties near the Payran flood control project from the 100-year floodplain. Before those, the FEMA FIRMS were amended in 2008 when we created digital files of the FIRM’s after the adoption of the General Plan.

Further, FEMA technically “amends” the FIRM whenever a Letter of Map Revision (LOMR) or a Letter of Map Amendment (LOMA) are approved. These tend to be very small in scale and related to specific parcels. The most recent of these was in 2023: the Casa Grande LOMA reflected new subdivision building pad elevations and a small retention basin.

There is no lag between FEMA and NFIP: as soon as FEMA approves a map, it is subject to all regulatory floodplain standards. We would immediately use the new map. As far as insurance policies for homeowners and businesses, it is the responsibility of the mortgage companies to assess if a property is added to the flood insurance requirement by NFIP. That said, as a Class 6 community (and working toward a Class 5), the City will be doing a great deal of outreach to inform residents long before the FEMA FIRM is adopted.

- Question: What is the relationship between HEC, Corp of Engr and FEMA? Does one agency dictate standards or practices to another?
 - Response: HEC is part of the Corps and only creates/maintains software. The HEC-RAS software is an approved tool by both the US Army Corps of Engineers and FEMA. FEMA runs the National Flood Insurance Program (NFIP) and any map changes go through them. (The Corps is aware of FEMA requirements and typically designs features like floodwalls to meet them.)
- Question: pg 3 staff report - 1 foot freeboard - is that above the 100-year storm?
 - Response: That is correct.
- Question: pg 5 – why would the City proactively revise the FIRM maps? Are Petaluma’s calculations the same as FEMA would make? Is each jurisdiction required to provide their own calculations to FEMA?
 - Response: FEMA expects communities to update their maps when needed. The data supporting the map change request is reviewed/approved by FEMA (actually their technical contractor – currently Atkins). In general, FIRM maps should be updated periodically to reflect changes in the modeling, new data, and physical changes from local development and natural forces to more accurately reflect the floodplain. This can in some cases trigger updated flood insurance requirements and/or development criteria in the affected areas.

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Specific to Petaluma's situation, the new modeling reflects updated LIDAR data, field survey of vegetation, new and more rain gauge data, and state-of-the-art modeling software that together inform updated storm flow, velocity, and creek conditions. (Light Detection and Ranging, or LIDAR, survey data is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth.)

Each jurisdiction is required to provide model calculations and assumptions to FEMA for map review and approval. FEMA map revisions are often initiated by the jurisdiction for these reasons.

- Question: Can you please provide us a high-resolution map?
 - Response: The link provided in the staff report (pg. 5) directs to the Flood and Sea Level Rise maps webpage on the General Plan Update website and provides higher resolution. Here it is again for reference: <https://www.planpetaluma.org/slr-flood-map>. GIS maps are being developed with a user interface that will provide the ability to look at parcels and manipulate map layers for a more interactive experience. Further, once FEMA approves updated FIRM maps, those will be posted as GIS maps on the City's and FEMA's websites.
- Question: What specific existing and/or new policies is the whitepaper supposed to inform?
 - Response: This work will inform the General Plan Land Use alternatives, adaptation policies, and other policies that relate to the Petaluma landscape and ecosystem. It will also inform an anticipated process to update the City's mapping with FEMA, a process that will be led by Public Works and is anticipated to take approximately two years.
- Question: What policy direction are you hoping to get from the council at this workshop?
 - Response: This is an informational presentation, and no policy direction is required at this time. Because this mapping is complex and impactful, the staff team wanted to share this work with the Council on its own to allow a full understanding and discussion of the material. These maps are being used to develop draft land use alternatives and General Plan policies on many topics, but most specifically flood adaptation, which will be presented to and reviewed by Council later this year.
- Question: Has there been any analysis done regarding the impacts of development on large greenfields within the city UGB, as well as on the urban expansion areas?
 - Response: There are previously undeveloped parcels along the Petaluma River, as well as lightly developed areas inside the UGB west of Petaluma Boulevard North and adjacent to the planned Corona Road SMART Station. The General Plan team, including the CEQA consultants, has developed extensive Existing Conditions reports for Petaluma, which can be found here: <https://www.planpetaluma.org/documents#ecr-final>.

Managing flood risk is a major focus of the General Plan. The General Plan administrative drafts currently propose establishing significant setbacks along waterways, as well as other adaptation-related policies. The future designations of these areas will also be discussed as part of the review of Land Use Alternatives. This

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discussion has begun at the GPAC meetings. The January 2024 GPAC meeting will be on Land Use. All of this work will be reviewed by the public in the Spring of 2024. The Planning team will also bring a more comprehensive update on the General Plan process to the Council in the spring.

- Question: Can we get a better understanding of actions we need to start taking now. What do we need to do this coming year and do we need to get this in our top 10 priority list?
 - Response: We have a fairly assertive approach to adaptation that we are drafting as part of the General Plan - this includes policies that will go into effect immediately on GP adoption, including required setbacks from waterways of flood risk areas that are shown in these maps, increase in base floor elevations, and consideration of flood protections needed for different kinds of uses.

The General Plan will also call for the development of a more detailed adaptation plan that will include longer term decisions about flood mitigation infrastructure that can change flood hazard protections in specific areas. For example, flood walls or flood wall extensions may prevent some neighborhoods from future flooding.

In the immediate term, these maps will inform review and discussion on current projects where we have discretion in our review. Additionally, these maps inform Public Works initiatives for infrastructure projects in the near term.

The primary focus at this time is to complete and adopt the General Plan update, therefore placing the General Plan on the Top 10 priority list will ensure continued staff and community focus on these issues.

- Question: Deer Creek is not on the maps, why?
 - Response: The developed areas upstream of Hwy. 101 drain to Lynch Creek and the Petaluma River. There is a remnant channel under 101 that used to be Deer Creek and now only drains a small area. Part goes to Lynch Creek and the other part directly to the Petaluma River.
- Question: Flood insurance: Added development in the upper reach, how will that affect downstream flooding and flood insurance cost or ability to purchase flood insurance.
 - Response: The City's existing surface water model assumed a land use development scenario in accordance with the General Plan Land Use Map. The new storm and rainfall data, and the existing conditions of our creek corridors, are increasing the regulatory floodplain and the Base Flood Elevation. As such, more people will now need flood insurance. As the City moves forward with the updating of the FIRM, the work effort will include a great deal of outreach and information sharing with all affected property owners and residents.
- Question: Corona Overcrossing: McDowell/Petaluma Blvd/Bridge west of the Corona overcrossing. Has flood modeling been done with existing conditions? Has modeling been done if the bridge was raised for water to flow? How would improved water flow impact downstream modeling, specifically from the Corona overcrossing to the Weir/ Lynch Creek Trail. Modeling with these changes: Would this decrease flooding on North McDowell. Specifically, Petaluma

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Estates, Youngstown and the Corona/McDowell intersection. Would raising the bridge on the west side of the Corona Overcrossing protect the North McDowell fire station from flooding?

- Response: The models show existing conditions. The General Plan policy framework drafts recommend developing a detailed flood management plan. Potential scenarios such as the one described could be examined as part of that process.
- Question: Leaking underground storage tanks: I assume we're referencing gas stations. I don't see the city school maintenance (maintenance?) shop at the south end of the fairground included. Are those tanks leaking and have the existing gas pumps been updated to prevent fumes from being expelled while filling gas tanks.
 - Response: The City currently has a project to clean up a previous leaking fuel storage tank (removed long ago) at the old fire house at 301 Payran Street. This project has been active for a number of years due to the extent of the leak at the site, but the tanks have been removed and no active fueling is done at that site.