

Scoping Study for Upper Petaluma River Watershed Flood Control Project

Frequently Asked Questions

December 8, 2011

1. Why was the public not notified of the April 28 meeting?

The April 28 meeting was intended to be a preliminary information gathering meeting involving active watershed stakeholders, like the Resource Conservation District, the City of Petaluma, agricultural landowners, and nonprofit agencies routinely engaged in watershed based projects. Such entities or representatives were anticipated to be the most familiar with the types of the objectives, priorities, and project concepts that typically make for successful watershed projects. As initially thought, the broader public outreach would have followed this preliminary information gathering phase, however based on the comments that have been received, the meeting planned for October 5th, and all future workshops, will be publicly noticed.

2. What is the purpose of the Upper Petaluma River Flood Control Project?

The purpose of the Project is to identify and implement a multi-benefit project or projects, if feasible, that would provide flood hazard reduction and groundwater recharge. Flood hazard reduction benefits will be based on evaluations of impacts to known flood zones, such as those projected by the latest FEMA flood maps. Groundwater recharge is intended to enhance local supplies for water supply reliability in dry year (drought) conditions. Recharge projects are not intended to provide water for future developments not already designated in the City of Petaluma or County of Sonoma General Plans. Additional benefits, such as water quality improvements, ecosystem protection, land use preservation, and educational opportunities could also be realized through implementation of recommended project(s).

3. What work is being accomplished in the Scoping Study?

The Scoping Study is the initial phase of the overall project. This phase includes:

- Defining project issues and objectives;
- Initiating a stakeholder process;
- Identifying and describing project concepts; including reviewing of projects identified and described by others;
- Screening and prioritizing those concepts;

- Developing a strategy for implementing the ultimate project or projects, and;
- Scoping the next phase of work.

The work in the Scoping Study is preliminary level and does not evaluate specific sites for benefits or impacts as individual project descriptions are not yet available.

The Scoping Study is not part of the CEQA process. An appropriate CEQA process will be initiated at a later date.

4. What would be the next phase of work after the Scoping Study?

The next phase of work would be the Feasibility Study. The Feasibility Study would begin providing additional detail to the point where feasibility can be determined. An individual project would only be feasible if it is determined to be likely to satisfy the project objectives, capable of being implemented, and the environmental, social, and financial benefits outweigh the costs. To help determine this balance, the following represents some of the work that would likely be included in the Feasibility Study:

- Hydraulic modeling – Hydraulic modeling would confirm that project concepts would provide flood hazard reduction benefits while meeting minimum environmental standards and generate other useful information, including the ability to recharge groundwater through percolation.
- Geomorphologic studies – An understanding of the current and potential future geomorphology (the physical features of potential sites) would allow the Water Agency to better design projects that could reduce sediment deposition in streams and help prevent erosion.
- Geologic field work – Based on available geologic mapping, there are limited locations for recharge that would improve water supply reliability in the project areas. By testing soils, scientists and engineers are able to classify materials and identify whether projects in that area could be expected to provide recharge.
- Habitat and endangered species evaluation – As specific project areas are identified, an evaluation of local habitat and species of concern can take place.
- Water quality sampling – Surface water and groundwater sampling would likely be necessary to better understand the potential benefits and impacts to existing resources and assess a specific projects potential to dilute or mobilize contaminants.

- Land ownership and easement identification – Understanding which properties are public, which are privately held and which have existing easements that could limit application of project concepts is important to identifying feasible locations for projects
- Cost and benefit analysis – Costs associated specific alternatives, as opposed to the concepts developed in the Scoping Study, will be developed. The financial, environmental, and social benefits will also be evaluated for comparison to the alternative cost.

5. How is the work being funded?

The Water Agency is funding the Scoping Study with Zone 2A funds. These monies are collected annually from property owners who live in the designated Zone 2A area (essentially, the upper Petaluma River watershed). Future phases of the Project and implementation of project concepts are anticipated to be funded through a variety of sources. Enhancing the multiple benefits of the ultimately recommended project or projects will increase the number of potential funding sources and improve the chances of obtaining that funding. Once obtained, those funds can be used to implement the recommended project(s).

6. How was RMC selected for the work?

The Water Agency issued an invitation to multiple firms to submit qualifications for conducting engineering and related services associated with flood control and groundwater recharge projects. RMC responded to the invitation by providing a statement of qualifications and subsequently participating in an interview process. The Water Agency selected RMC based on the information provided, demonstrated qualifications, and past project experience.

7. What are the project concepts being identified?

Project concepts address one or more of the Key Project Objectives (flood hazard reduction and groundwater recharge). Concepts identified to date include:

- Managed floodplain
- Detention basin
- Floodplain modification
- Levee/floodwall
- Channel modification
- Bypass channel
- Bridge improvements and debris removal

- Low Impact Development
- Policy review and development
- Direct recharge wells

8. Where would these project concepts be located?

General project areas have been identified at a conceptual level. The identified areas serve only to demonstrate where the concept could potentially be feasible (based on general topography, geology, flooding patterns, and high level review of aerial photography) and are not intended to indicate that any particular property or location has been specifically selected for implementation. Land within and outside of City boundaries has been identified as potential areas for project concepts. Cooperation of private property owners impacted by a specific project would be necessary for that project to be implemented. Additional screening of locations based on other factors will be conducted at the beginning of the Feasibility Study.

9. How can detention basins provide groundwater recharge in locations where there is no percolation?

It may not be possible to provide groundwater recharge, but regional geologic maps indicate that there are outcroppings of water bearing formations within the Upper Petaluma River Watershed area. Based on field testing during the feasibility phase, additional information would be developed regarding local geology and the required depths and methods necessary for recharge to occur.

10. Why would you use a detention basin for ball fields when this will cause contamination or reduced soil permeability?

Using a detention basin for recreational fields would not necessarily cause contamination or reduce soil permeability. Joint use facilities have been implemented elsewhere, such as Herbert Slater Middle School in Santa Rosa. Studies to be conducted during the feasibility phase, including geomorphologic and water quality studies, will help to address these questions. Exposure to contamination, if any, would be at safe levels. Soil permeability would be considered during future phases of the Project, as would the operations and maintenance that would be necessary to maintain the dual functions of the facility.

11. Is groundwater recharge being looked at to find water for new development?

No. Recharge would be used to improve water supply reliability during droughts. New developments are not a consideration for the Project.

12. Why is there no mention of greywater systems for water supply reliability?

Greywater systems would not achieve either the primary flood hazard reduction or groundwater recharge goals and, therefore, are not considered for the Project. There have been studies in the past by the City of Petaluma and the Water Agency of alternative water supplies, but that is not the focus of this Project.

13. What measures will be taken to protect open space and agricultural lands?

The Water Agency recognizes the social, cultural, and economic value of open space and agricultural lands. As such, it is a stated objective to minimize the use of such lands and to enhance them where possible. One of the identified concepts would utilize easements to ensure that the open space and agricultural land remain as such. Where open space or agricultural land is necessary for a proposed project, the Water Agency will work with the land owners and guardians to minimize the impact to the land and to build in features that could benefit the existing land use. Existing easements would be respected in all cases.

14. What plans do you have to utilize or impact private property?

There are no plans at this time to target private property for any project concept. It is preferable to use public lands wherever possible. As project concepts become better defined and specific locations are identified in the feasibility phase, the Water Agency would approach land owners to determine if a mutually beneficial agreement can be reached for use of the land. In some cases, project features could be included in the design to provide benefits to the land owner, but also allow continued use of the property in a manner similar to current conditions.

15. Why are stream and bank maintenance not the first priority?

Regular maintenance of project features would be incorporated into any proposed project. Feasibility-level studies would be undertaken to identify design characteristics that will help to create stable channels that would minimize maintenance needs. Stream and bank maintenance for the entire project area is not considered a stand-alone concept. The Water Agency has an existing maintenance program that it is implementing on the creeks, streams and

flood control channels it manages. Information on the Water Agency's existing stream maintenance program can be found on their website at <http://www.scwa.ca.gov/stream-maintenance-program/>.

16. Are you considering capture and transfer of storm water to other areas?

Stormwater would remain within the Petaluma River system. Some concepts, such as a bypass channel, remove high flows from one part of the waterway system and reinsert it further downstream. Supplementing existing flows to meet environmental or recharge demands is not being considered for the project.

17. What is creating salt water intrusion into the groundwater?

It is possible that groundwater pumping could contribute to saltwater intrusion; this would be assessed as a possible benefit of groundwater recharge in the Feasibility Study.

18. Where are the overdraft effects?

Overdraft occurs where groundwater pumping exceeds replenishment of the aquifer. Existing groundwater conditions and the potential for groundwater recharge would be assessed as part of a subsequent Feasibility Study.

19. Will results of the project lead to a need for a biological opinion?

It is unknown at this time whether a recommended project would trigger the need for a Biological Opinion. Such a determination would be assessed as part of a subsequent Feasibility Study.

20. How are LID strategies being incorporated into project concepts?

Low Impact Development (LID) is one of the concepts being evaluated as part of the Scoping Study. LID is particularly effective at providing runoff reduction and water quality benefits for smaller rain events. It is a concept well suited for implementation during development or retrofit of properties and neighborhoods.

21. How would you ensure the integrity of flood control levees?

If levees or floodwalls are determined to be among the recommended project(s), such features would be designed based on the latest hydraulic model results and construction standards. Regular inspection and maintenance would be critical to

ensuring the long-term viability of the project and maintenance of its flood hazard reduction benefits.

22. Do you plan to adhere to Petaluma’s zero-net fill policies?

Yes. Design of the recommended project or projects would include adherence to all applicable codes and adopted policy.

23. What other benefits are envisioned with this project?

Implementation of the Project could lead to many additional benefits beyond flood hazard reduction and groundwater recharge, including improved environmental conditions and habitat, protected or improved water quality, land use preservation, and recreational and educational opportunities. Incorporating elements that will achieve these benefits could ease the permitting process and help projects obtain grant funding.

24. How would you use stormwater “as soon as possible” during a flood?

Use of detention ponds to reduce peak flows in the Petaluma River may be one of the strategies considered for further evaluation if a Feasibility Study is conducted subsequent to this scoping phase of the project. Typically, if stormwater is stored in a detention pond there would be a need to utilize the water for beneficial purposes or release it back into the stream soon after a storm event to “free up” the capacity of the pond for the next storm event.

25. Would this project block wildlife migration?

One of the supporting goals of the project is to enhance ecological resources. Proposals that blocked wildlife migration would be at odds with that goal, and would be subject to a thorough environmental analysis.

26. Where can I go to find additional information about this Project?

The Water Agency maintains a website describing this Project, and similar projects, at <http://www.scwa.ca.gov/stormwater-groundwater/>. The website includes document downloads for this Project.