

# **Notes**

## **Stormwater Management- Groundwater Recharge Meeting with Regulators**

Wednesday, May 23, 2012  
9 a.m. – 10:45 a.m.

### **ATTENDEES**

#### **Agencies**

Steve Butkus	Regional Water Quality Control Board (Region 1)
Karen Weiss	California Department of Fish & Game
Adam McKanney	CDFG
Rick Rogers	National Marine Fisheries Service
Janice Thomas	California Department of Public Health
George Chien	CDPH
Reg Cullen	PRMD

#### **Consultants**

Iver Skavdal	GHD
Ken Schwarz	Horizon Water and Environment
Christy Kennedy	RMC
Betty Andrews	ESA-PWA

#### **Sonoma County Water Agency**

Kent Gylfe  
Keenan Foster  
Marcus Trotta  
Jay Jasperse  
Mike Thompson  
Ann DuBay

### **WELCOME & SELF INTRODUCTIONS – Kent Gylfe, Project Manager**

Welcomed everyone. Explained that purpose of meeting is to solicit input and feedback from regulatory agencies. Self introductions (see attendee list).

### **PROJECT OVERVIEW: Background, history and purpose of the project – Kent Gylfe**

Purpose of project is to reduce flood risks and to recharge groundwater in three watersheds: Laguna-Mark West, Sonoma Valley & Petaluma River. To do this, need projects that will attract grant funding, have public support, address flood control issues, and enhance stormwater management and groundwater recharge.

Three consulting teams were chosen, one for each area. A phased approach is being used, with scoping the projects being the first step. This first phase is wrapping up. A more detailed feasibility study will follow. We are entering the beginning of a larger, longer process.

## **STAKEHOLDER PROCESS: Outreach to Active Stakeholders – Ann DuBay, Public Information Officer**

Ann DuBay reported on public outreach. In addition to a meeting for active stakeholders from all three watersheds, each watershed held at least two meetings at different phases of the process to solicit input and feedback on objectives and concepts. There were three meetings and a tour in Petaluma, along with extensive postcard mailings, advertisements and emails. In total, 10 meetings and a tour were held. The Water Agency has a page on its website with information about meetings and all papers and memorandum on the project, [www.scwa.ca.gov/stormwater-groundwater](http://www.scwa.ca.gov/stormwater-groundwater).

## **PROJECT OBJECTIVES: Background & Findings on Objectives – Betty Andrews, ESA-PWA**

Core objectives of the project are to reduce flood hazards and increase groundwater recharge. For supporting objectives, the team looked to IRWMP process, stakeholders, and grant requirements for high-priority objectives. The supporting objectives that rose to the top were: water quality, water supply, system sustainability, ecosystem, agricultural land, open space, and community benefits.

## **FINDINGS: Brief review of Scoping Study results in each basin**

**Laguna-Mark West (LMW) Watershed.** Iver Skavdal (GHD) and Ken Schwarz (Horizon) presented. Iris Priestaf (Todd Engineers) is also on the team.

The LMW watershed is large, with three major tributaries, several cities, a large unincorporated area with many communities and many stakeholders. The team found that there was a lot of existing knowledge, which they tapped into by interacting one-on-one and in stakeholder meetings. For example, they talked to local public works staff for information on localized urban flooding.

The team discovered that a large number and a broad variety of projects already exist, including several education programs. The challenge was determining how to screen out projects and focus on those that have the potential to meet both core and supporting objectives. The screening process involved a series of questions: Can the project reduce urban flooding? Can it provide ground water recharge? How many supporting objectives can the project meet?

Through this process, the team narrowed the list down to eight projects. These projects tended to have common features defined by geography and topography that drove the hydrology. The projects are located on the eastern side of the valley, near source areas for urban flooding. In Rohnert Park, for example, Copeland Creek is located on the east side, with the project near its headwaters. The project will provide flood plain management, refugia, and habitat enhancement. Projects in Windsor are also on the east side, where there is potential for floodplain management. In Santa Rosa, the Southeast Greenway project could improve habitat, reduce flooding, and has groundwater recharge potential.

All the projects are conceptual. The next stage of the study is to prove them out through analysis and quantification. The challenge in LMW is finding the funds to take the projects to the next stage. The one project that has potential to move forward (because it has funding source) is Copeland. This project will move forward through feasibility phase.

**Upper Petaluma River Watershed.** Christy Kennedy from RMC presented. Randy Raines and Tim Harrison from RMC are also on the team.

The analysis in Petaluma started at a much coarser level. The Petaluma watershed has severe flooding. The team focused on developing and fleshing out project concepts, with the goal of reducing peak flows while considering the potential downstream impacts to the Petaluma River. In terms of recharge, soil formations defined areas where recharge is possible. There is recharge potential in the flats, with some opportunities in upper areas of watershed.

The team started with a variety of project concepts. At the second stakeholder meeting, stakeholders ranked objectives. These rankings, combined with work done by consultants, resulted in three tiers of project concepts. Tier one (Off-stream detention and floodplain modification) are moving forward. An example of floodplain modification is the terracing project in Denman Flats in Petaluma. The Tier Two concepts may be explored in the future. Tier Three concepts (including in-stream detention) won't be pursued under this project.

**Sonoma Creek Watershed. Betty Andrews, ESA-PWA, presented.** Team also includes Tim Parker (Parker Groundwater), and Jenny Sterling (Daniel B. Stevens Assoc.).

In Sonoma Valley, the conditions include large floods, especially in Schellville, Sonoma, and Kenwood. In terms of groundwater, Sonoma Valley has an active Basin Advisory Panel and there is a robust data set on groundwater levels. In terms of flooding, the Sonoma Valley stakeholders want better definition of flood issues. There is dissatisfaction with FEMA maps.

The Sonoma team conducted a screening and prioritization process similar to Petaluma. There were many project ideas that came forward, but nothing that had been really developed (with exception of a Sonoma Ecology Center project at Adobe Canyon). The team collected ideas and screened to see if they met objectives.

Screening considered regulatory constraints, siting feasibility and expected benefits. The second step was to look at the magnitude of core benefits. The third step was to look at potential water quality concerns and ability to meet supporting objectives. The screening process took several concepts off the table.

As part of the second step, the team looked at the magnitude of potential benefits. LID was screened out as a stand-alone project concept because the magnitude of one project is very small. LID could still be an element of a larger project, particularly if it enhances project's appeal to funders and the community.

The team subdivided the watershed into sub-basins to determine potential project areas. The shape of the valley is important in defining areas with higher value. Areas higher in the watershed (and further up valley) have more potential for benefits as they have greater impact throughout the valley. The lower end of valley was screened out because of limited benefits of stormwater retention.

Geologic conditions defined groundwater recharge benefits. Areas with soils amenable to recharge and with low slopes were ranked high.

The third step was to check for water quality issues. No concerns were identified.

The study found that offline basins have highest potential and meet all objectives. A short list of identified project types and subregions was developed. It was determined that 100-500 acf of storage is needed to provide protection for 10-year floods. The challenge now is to identify the best opportunities.

## **PROJECT IMPLEMENTATION: Potential Implementation Strategies – Christy Kennedy**

The next phase of the project is a feasibility study followed by implementation. The goal of feasibility is to establish project standards. How much flood management? How much groundwater retention? The studies will look at alternative sites, define alternatives, modeling hydrology, modeling recharge, modeling sediment transport, field testing, and develop cost estimates.

The implementation phase will include project design at 30 percent, 60 percent, 90 percent and 100 percent. Environmental documentation is also part of implementation. Environmental work (CEQA, and possibly NEPA) will include the project

description/initial studies, background studies & field studies, a draft environmental document, public comment and the final document. If NEPA is included, there would be additional studies.

Regulatory coordination will be critical to this phase. Today's meeting is the very early stages. Additional coordination will occur. Much of it will be dependent on project location, site, etc.

Funding is a big part of implementation. Proposition 50 and Proposition 84 are potential sources, along with federal grants. Successful projects will likely include a local match and project elements that are attractive to funding source.

Communication and outreach is part of implementation, and in addition to meetings, information will be available via the website, fact sheets and other materials.

The project timeline is very dependent on funding and on other factors, but it's possible that projects could be implemented within 2-3 years.

**QUESTIONS/DISCUSSION: Open discussion of scoping studies & findings – Iver Skavdal**

Reg Cullen: A few permits should be added to the list, including a roiling permit if the project is on a stream with running water. Zoning permits may be needed if the project is 100 feet from top of banks. Possible building permits (electric, pumps) could also be needed. The sooner the application, the sooner it moves.

Response: Thank you. It's very likely that local project partners (from the relevant municipalities) will be involved. Work with them and all agencies on identifying necessary permits.

Ken Schwarz: Projects have been identified in/near the laguna, which could involve sediment removal. Does this raise any issues?

Rick Rogers: NMFS would want to be kept in the loop.

Steve Butkis: Is working on Laguna TMDL. Is at the phase to be discussing these kind of projects. There could be some funding benefits if projects improve TMDLs in laguna.

Betty Andrews: If you know of projects that could fit, let us know.

Steve: Funding from nutrient offsets might be possible. The City of SR has net zero nitrogen discharge. It's trying to reduce loading in other parts of watershed. Other programs in TMDL program could follow this type of model. Sotoyome RCD may act as broker. The plan will be released in Fall or by the end of the year.

Rick Rogers: NMFS' steelhead recovery plan is coming out (probably at end of year). It would be good to include these types of projects.

Karen Weiss: CDFG would love to see projects at the 30-60 percent design phase rather than the 90 percent.

Rick Rogers: It's better for NMFS to see a project earlier, too, although the EIR must be certified before they can issue final permits.

Steve Butkis: Regional boards like to see earlier too.

Rick Rogers: Noted that the BO could help with permitting. For example, if you get Fish & Game funding to do off-channel detention to benefit fish, the BO could help.

Ken Schwarz: Daylighting a creek is an example of a project that could have obvious benefits.

George Chien: Wondered about the source of water? If the water being recharged is recycled water, it would require permitting. If the projects only use stormwater, he would need to check to see if can be waived from recycled water regs. Also, what would be quantity of water hold for each watershed? Is there an annual target?

Ken Schwarz: The water captured would only be natural runoff. No recycled water. Mostly upstream of urban areas. But ag areas could raise quality issues. The implementation phase of the study will identify the volume of water held in each watershed.

Janice Thomas: Doesn't see any fatal flaws from CDPH viewpoint, but they would be interested in knowing area that project are located because of potential impact on drinking water wells. They would be want to see how projects could affect these.

Marcus Trotta: Feasibility studies will address this issue, along with CEQA.

Kent Gylfe: Are there any glaring gaps? Do any objectives or concepts raise concerns?

Reg Cullen: One of the presentations discounted LID. But infiltration galleries are OK. What is going on?

Betty Andrews: It's a matter of scale. Need a LOT of traditional, small scale LID projects to make a difference. The term "LID" could capture lot of project concepts. The community likes LID. LID could be added to a package of projects.

Reg Cullen: Every grading permit has to address stormwater quality. Maybe the sheer number of small LID projects could accomplish the same goal without the grading permit.

Betty Andrews: For recharge, there would need to be a huge number of LID projects.

Keenan Foster: LID concepts are definitely part of the mix in making a successful project.

Ken Schwarz: Soil is a big factor. LID will have greater impact in the sands of Windsor could work versus clay of RP.

Iver Skavdal: If project remove sediments and habitat, there will be replanting and ongoing maintenance. Does this raise issues?

Adam MacKannay: Habitat must be replaced; permits are needed. Maintenance is needed. Infineon is an example of a location with a number of basins that are being maintained.

Keenan Foster: Depending on where projects are located, they may fit into stream maintenance program. If we build restoration that follows the natural path of vegetation, it should be ok.

Betty Andrews: There are steelhead in Sonoma Valley. Much less of a storm drain system. Water is diverted out of channels into steelhead habitat. For recharge, we need to divert water regularly. What could be impact on steelhead habitat? For example, there is a headwater channel near Los Guilicos (an ephemeral stream that feeds into a creek). Are there concerns about diversion of flow from top of system? Should only ephemeral streams be diverted?

Rick Rogers: Might be weighing projects that have a benefit for fish, versus those that don't. For off-channel storage, there may be screening needed to divert fish. Bay team biologists should be consulted. May not be restricted, but have more opportunities for natural off-channels. Could enhance natural channels. Certain seasonal watersheds are important for fish – it's very site specific.

Reg Cullen: It would be helpful to have a chart that shows "Depth to GW" on Y-axis and "Time to GW" on X-axis, with the goal of protecting water quality. This would help develop consistency among watersheds.

Rick Rogers: What is integration between GW management and GW recharge?

Marcus Trotta: In Sonoma Valley, the groundwater management process recommended this type of approach. It's too early to know if Santa Rosa Plain GW process will take this same direction.

**Next steps: Where do we go from here? – Kent Gylfe**

Scoping studies will be wrapped up in next couple of weeks. Feasibility studies start this summer, and will take about one year to complete. There will be an outreach component and you will be kept apprised of meetings.

An email will be sent to all of you with a link to the meeting notes and presentations.