

**Q&A: Sutter Basin Pilot Feasibility Study: A Lessons Learned Webinar**  
**SMART Planning Webinar Series**  
**March 6, 2014**

The March 6<sup>th</sup> webinar, part of a series of information-sharing webinars hosted by the Planning Community of Practice, presented lessons learned and the experiences of the Sutter Basin feasibility study.

Miki Fujitsubo, Lead Planner, was joined by Nick Applegate and Peter Blodgett for the presentation and questions from the field.

For more information on the Sutter Basin project, please visit:

<http://www.spk.usace.army.mil/Missions/CivilWorks/Sutter.aspx> or contact the study team.

The questions and responses below are not a direct transcript; they have been reordered and edited for clarity. Additional questions and feedback are always welcome via the Planning Community Toolbox's SMART Guide comment form online at:

<http://planning.usace.army.mil/toolbox/smart.cfm?Section=10&Step=1>

### **Vertical Team Engagement**

**Can you expand a bit on the role of the Headquarters' Office of Water Project Review (OWPR) in the vertical team integration concept? What role if any did they play between policy milestone events?**

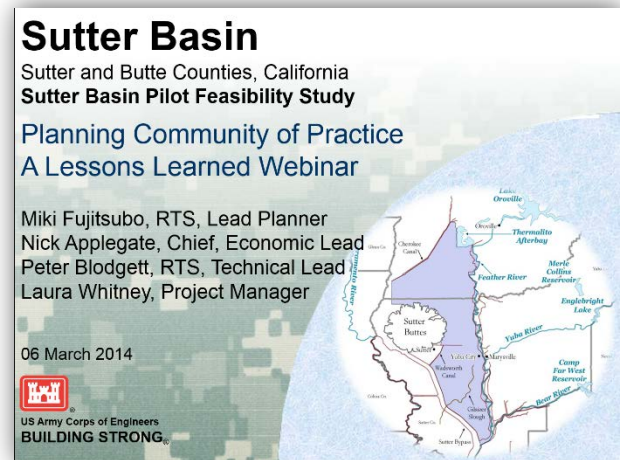
OWPR was actively involved all through the pilot planning process as process and policy issues arose. They were engaged not only with the pilot planning process, but with the plan formulation process. Their active involvement allowed for quick policy decisions and direction during the decision point meetings and In-Progress Reviews and facilitated smooth formal concurrent review with no surprises.

### **Available Data & Professional Judgment**

**Sutter had many years of prior analysis and available data; would a 3-year study have been possible if that wasn't available to the study team?**

Sutter Basin began as a pilot prior to the "3x3x3" rule; as a pilot study, it was tasked with completing the study in three years. The biggest challenge was the timeline – the three year sprint was a grueling process as the team worked through creating the pilot planning process and the feasibility study process itself to a successful recommended plan.

There was available data and engineering information, both because the study was already underway, but also because there was a parallel 408 process at the same time and the State of California has a lot of data / information about the study area.



Having the data and analysis available certainly helped the team meet that schedule, but it was also a very deliberate three years focused on risk management and level of detail. With hydraulic modeling, for example, as models have become easier and easier to use; with the faster and quicker ways of modeling, we tend to ask more questions. The challenge is to find the balance point, focusing on the questions you need to answer to make a decision.

**Please provide some specific examples of where you used Professional Judgment to make the process simpler and more effective?**

In Hydraulic Modeling, we were trying to isolate where the comingled flooding overlapped. One of the assumptions we used was assuming a levee breach at predicted points in the hydrograph; the stages in the floodplain aren't driven by the breach, but by the maximum stage of the river. There are many examples where we could get to the 95% answer effectively, and found that was sufficient.

When we're looking at a basin that has multiple index point failures, from an economic standpoint, there is a process we have to go through to assign the floodplain to various impact areas based on consequence. Rather than evaluating the consequences for each event by individual structure, we used a proxy based on the number of structures assuming the number of structures would correlate highly with the damages.

**The PDT integrated VE (value engineering) and plan formulation activities. Was that deemed successful, and if so, is it being replicated for other district studies?**

The Sutter pilot was one of the first to use the VE charette process and we found it was successful to address VE requirements as well as Plan Formulation needs. Other studies have now used this approach with some success.

One of the lessons learned with VE process was the importance of having current team members participate and bring the judgment and the information we already had at our fingertips to that VE workshop. We were able to bring background on the study area and alternatives and use it for the VE process. The maps, shapefiles of all of the floodplains, alternatives, etc. we brought in to the VE study enabled us to make progress on decisions. Although the VE outcomes were similar to our plan formulation outcomes, it complemented the 6-step planning process.

**Documentation and SMART Planning Tools**

**Did you use the decision log, was it beneficial? What is the difference between a risk register and a risk memorandum?**

The risk memorandum was a summary of where the risk register was at that point in time to give the reviewers / the vertical team a sense of where the current risks are. It was very beneficial so that the team didn't have to walk through the entire risk register spreadsheet, but could focus on areas of high risk where we needed to make a decision / have buy-in.

We also used the Decision Log as part of our IPRs and all of our meetings. The decision log also tied into some of our technical memos.

## **Cultural and Resource Agency Coordination**

**This study used Programmatic Agreements to meet Cultural Resource regulations; was an existing PA applied to the project or developed specifically for it?**

There was an existing Programmatic Agreement for the Sacramento River area and also the study area, so we were able to use that. New studies starting out should consider this approach in large and complex areas.

**What did the resource agencies and environmental NGOs think of this project?**

Two factors differentiate these levees from others in the Sacramento area and made coordination with the resource agencies and non-governmental organizations (NGOs) easier. The levees on the Feather River are set back several hundred feet from the riverbed, so there is existing floodplain / riparian area on the water side of the levee, which is far different than some other projects in this area. These levees also were better maintained than some other levees throughout the system so there were not vegetation issues that we had to address.

The NEPA document for the Section 408 report on the Feather River West Levee Project was out on the street two months before our document, so that addressed a lot of the concerns of the NGOs about their environmental concerns. Our non-federal sponsor had also worked with the NGOs to address their concerns about vegetation, floodplain management, and ecosystem restoration, so that smoothed the process.

In the study area there were one or two “Species of Concern” for the National Marine Fisheries Service, but those impacts were mitigated.

## **Wise Use of Floodplains (EO 11988)**

**Please say more about Executive Order 11988 and the ASA(CW)'s perspective on wise use of floodplains. The maps you showed indicate the project will take a lot of area out of the floodplain.**

The main concern from the ASA’s Office and during the Civil Works Review Board was land use and residual risk. Our local sponsors are very sophisticated and they had an excellent presentation in place about how they are controlling land use and development based on local regulations and zoning, providing assurance to the ASA’s Office and Civil Works Review Board about their ability to address Wise Use of Floodplains and the requirements of EO 11988.

From a “wise use” perspective, if development is going to happen in the basin, the areas that we did open up are the “wiser” part of the floodplain – in shallower areas that had longer lead times for evacuation, etc.

### **Total Study Cost**

**What was the total study cost and cost sharing? How would you characterize the priority of the project in the district?**

This was a pilot study and not scoped to be a 3x3x3 study. The rough cost, including federal and nonfederal contributions was \$10-11M since the beginning of the study.

Since this was a Pilot, it was high priority, high visibility from start to end for the District and Division.

### **Final Advice**

**What would your final advice be?**

Communication and consistency was key. With everything moving so fast, project documentation management and communication was really important – being able to share information, communicate it, and manage it for consistency.