

St Helena Flood Protection and Restoration Project

Public Hearing Summary of Comments and Responses

A public hearing was held on 11/12/2008 and continued on 5/21/2009 to address public sentiment about the St. Helena Flood Protection and Restoration Project to be funded by the Department of Water Resources (DWR) through the Flood Protection Corridor Program (FPCP). A summary of the comments and responses are provided below; please contact Earl Nelson at (enelson@water.ca.gov) for further information.

1. **What area should be included in this flood control project?** The Fulton Lane residents are equally as important as the Vineyard Valley and Hunts Grove residents, and should be included in any flood protection project that is implemented, so the Fulton Lane area receives flood protection at the same time as the other developments.

DWR response: From the State perspective, we would like to see everyone receive adequate flood protection at the earliest possible date, but sometimes because of limited resources difficult choices have to be made. Which areas within a community should receive flood protection, the level of flood protection, the timing of flood when protection projects are built, how they are financed, and how large they should be; these are all policy questions that fall within the jurisdiction of the local elected governing body, the City Council. Typically, when funding is limited only part of an area's problems can be solved with available resources. The worst problems are usually dealt with first, and that appears to be what is happening here. In any case, we as staff of the Department of Water Resources recognize that decisions have been made by the City Council and no decisions that have been made constitutes justification to withhold the grant, or to require that additional area be included. The funds are simply not available to expand the project at this time to include Fulton Lane, but solving the Vineyard Valley and Hunts Grove flooding issues will enable the City Council and City staff to turn their attention to the remaining problems.

2. **Should the Vineyard Valley wall first built in 1987 be accepted as baseline conditions for measuring the effects of flood control projects?** Some residents commented at the November 12, 2008 hearing that problems for Fulton Lane residents began with the construction of the wall.

DWR response: We recognize that there was controversy surrounding the construction of the wall in 1987, and that having the wall in place might affect the ability of the Napa River to convey high flows. Whether the wall should be considered the baseline condition is a legal question, so we asked DWR attorneys to advise us. They indicated that there may have been a window of opportunity to force removal of the wall or to force mitigation for the effects of the wall back around the time that the wall was first installed, but that window has since passed and the wall now has to be accepted as the existing baseline condition. Accordingly,

all modeling done by the City's engineers uses the existence of the wall as the existing condition against which all future anticipated changes are to be measured.

3. **Is the current flood control project to be blamed as the cause the Fulton Lane Residents and other upstream properties are being mapped within the 100-year floodplain?**

Comments from the prior public hearing indicate some landowners in this area believe this to be the case.

DWR Response: The National Flood Insurance Rate Maps were developed and are maintained by the Federal Emergency Management Agency also known as FEMA. FEMA several years ago recognized some potential inaccuracies in their Flood Insurance Rate Maps and embarked on a nationwide effort to update them. These map updates are happening all over the country. As a result, areas previously shown as outside the 100-year floodplain are being re-mapped, often showing the 100-year floodplain to be more extensive or more encompassing than previously thought. The 100-year floodplain boundary changes over time, and the maps have to be re-done periodically to reflect the changing conditions.

There are a variety of reasons why the 100-year floodplain boundary changes. In areas protected by levees, the levees may previously have been thought to provide 100-year protection, but new information gathered from new technological processes are being found to provide much lower protection than previously thought due to previously unknown construction flaws, under-seepage, weakness induced by burrowing rodents and roots, improper materials used in construction, increased surface runoff from urbanization, and subsidence of the surface of the ground due to groundwater pumping and other causes. Rainfall patterns used to calculate a 100-year storm also are changing because of the effects of global climate change and are now better understood because of more years of history and more storms factoring into the calculation, so what previously was thought to be a 100-year storm, might under today's conditions only be an 80-year storm. So the true 100-year storm under current conditions would cover a larger area than previously mapped using older data and older technologies.

One of the most significant technological breakthroughs has been the development of LIDAR aerial photogrammetry techniques that make it financial feasible to map surface topography using 1-foot contour intervals. Some of the earlier FEMA FIRM maps were developed using 20-foot or 40-foot contour intervals, which does not yield very accurate results in flat areas such as the west bank floodplain of the Napa River upstream of the Vineyard Valley Mobilehome Park. The recent re-mapping of the area done by the City used LIDAR to generate a 1-foot contour map which allowed much more accurate modeling of the 100-year floodplain than had been done previously. This modeling revealed that the prior FEMA map showed an incorrect boundary for the 100-year floodplain, and that the

properties shown to be within the 100-year floodplain contour after the flood control project is built are within the 100-year floodplain contour presently. Thus, the effect of the proposed project will improve their situation slightly. The modeling done to define the 100-year floodplain boundary shows that this project is not placing anyone into the 100-year floodplain that was not already in it.

4. **Are the floodplain modeling results produced by the City's engineers believable?**

Comments from the previous hearing indicate some residents think the modeling was based on flawed data.

DWR response: Our usual practice is to have flood stage modeling assumptions, data, procedures and results reviewed by an in-house engineer with no connections to the project or reasons to favor a particular outcome; in other words, and unbiased, independent reviewer. In this case, because of the controversy, we gave the project independently to two engineers that met the above criteria to review the modeling assumptions, source data, procedures and results. The City engineers had generated model results using data from the 1986 flood and the 1997 flood. Our engineers requested that they run the models additionally for the 2005-2006 flood and compare the predicted results with actual known flood stage data, as another check on the validity of the model and its calibration. Both of the DWR engineers who investigated the modeling work done by the City to establish the 100-year flood boundary under pre-project and post-project conditions, independently found that the modeling work was done correctly and that the results are credible.

5. **What about the levee that runs along the north boundary of the project? Would not moving this levee to the existing north boundary of the mobile home park and the Hunts Grove Apartment complex provide additional floodplain area and flood protection?**

DWR response: DWR engineers estimated that the flood benefit of this realignment of the levee would be very small, but to check for sure, DWR asked the City to model the effect of this change on flood stage. The modeling confirmed that the effect of realigning this levee on flood stage was so miniscule as to be insignificant.

6. **Again relative to the levee on the north boundary, is it not the goal of the Flood Protection Corridor program to preserve floodplains and agricultural land? Why would you consider funding a project that eliminates both floodplain and agricultural land?**

DWR Response: It is generally the goal of the Flood Protection Corridor Program to preserve agriculture and floodplains. However, always in determining where such preservation should occur, the context is considered along with local land use policy decisions. New development has to go somewhere, and good planning theory holds that infill and expansion

on the borders of existing developed areas is preferable to leapfrog development into rural areas. This agricultural site is on the edge of a developed area, has existing utilities and city services available, and has been planned as an area for future urban expansion. The floodplain will be all but eliminated with the City's plan to dispose of fill material here by raising the surface elevation of the site almost to the 100-year flood elevation, and if more fill material can be found, the site can be raised above the 100-year floodplain elevation. So the reasons to preserve it as open space are not as strong as in more rural areas without services where the flood risk may be higher and more costly to mitigate, and where the biological benefits of preserving the floodplain may be greater. The FPCP prefers to focus its resources on reducing flood risk in urban areas, and on preserving open space in the latter more rural type areas.