

Ed Wallace:

Good morning. We won't actually do a duet. You don't want us to do that. But we will present together. Ken and my presentation sort of follows along the theme of Rick's and Meegan's of moving from some of the concepts and science that we heard about yesterday to some of the practical issues associated with implementation of the white paper policy. And one of the questions we'd like to answer is what are the typical conditions that flood control agencies will face in implementing the policy, and what's the magnitude and the type of the work required?

So, we're going to describe some work that was authorized by SAFCA to estimate the amount of vegetation that would be effected by implementation of the white paper policy. And Ken is going to discuss the details about how we made those estimates. But we thought it would be a good idea to start with an overview of the conditions in the form of an aerial video. So, we're hoping that provides some perspective and common ground for the panel discussion later today. And I'm going to show video segments from three portions of the system in the Sacramento area. The Natomis area, north of Downtown Sacramento, on the east bank of the Sacramento River, the Pocket area, south of Downtown Sacramento, also the east bank of Sacramento and the American River.

The upper right-hand corner here just shows you the perspective that you're going to have. We filmed this video from a helicopter, flying over the river, looking back towards the levee. You can normally see a little bit of water at the river's edge in the bottom of frame, and you can see the [back side or the land side] of the levee at the top of the frame. I put the giant Christmas tree there because sometimes when we have very high or very dense vegetation along the levee, that can actually obscure the view that we have of the waterside slope of the levee.

Just a quick definition sketch here. We've seen this. This is a typical cross section from the Sacramento River. Flood control projects showing the berm area on the waterside that varies from being nonexistent to being

several hundred feet in length. And when we have the berm, we identify the levee structure under that berm as 3 on 1, uh, projection. When we're talking about vegetation, we'll be talking about vegetation on the levee slopes, waterside and land side. And also about vegetation at the toe in the 15-foot vegetation free zone designated by the white paper policy.

So, this is the first clip. This is the Natomis area. Things to look for here. Variable berm width and, with that, variable location and extent of vegetation. One of the things that strikes you when you fly over this system is the nonuniformity of vegetation conditions in this system. And in Natomis we have a unique condition, which Ken will talk more about, with residences on the waterside of the levee.

So, this is the Sacramento River starting at [the cross canal about river mile 79]. Excuse my finger here, but I'm going to point. This is the levee crest, the Garden Highway Road, and you can see the levee slope with vegetation on the levee slope going right down to the water's edge. A little bit of a narrow berm appearing here. Maybe this vegetation is outside of the 3 on 1 slope, but it's close. The land side here, pretty clear levee slope. We can see some vegetation appearing at or near the levee toe on the land side.

And just coming up here -- recent bank protection projects. Toe protection, as [Steve] was talking about, vegetation on the levee slope above that toe protection, protected during that project. Moving a little farther downstream, we're moving now into an area that has residences on the waterside. Again, the levee crest here, Garden Highway, the tan stripe would be the land side slope of the levee, and this area here would be the waterside slope which has got lots of vegetation, driveways, other encroachment. Pretty wide [berm] here with riparian vegetation.

Farther downstream, this is a less developed section of berm. Really a pretty mature riparian forest here. You can just see the crest of the levee

here [and the Garden] Highway, obscured, in some places, by the height of the vegetation. Where we have gaps you can see through to the levee slope. You can see that that vegetation is on or near the levee slope, and the canopy extends over the waterside slope. As we go downstream the, the berm narrows up here, a couple of residences on the waterside. The berm goes away. Vegetation -- basically on the levee slope all the way to the water's edge and then widening up again.

Okay, that was the Natomis. The second area is the Pocket area, south of Downtown Sacramento. Here, moving into an urbanized area, what to look for here -- a very narrow berm, trees on the waterside slope, and landside vegetation and encroachment like Meegan just talked about. This is the Sacramento River at about river mile 54, I5 in the background. The levee crest here. We see some older bank protection work here, vegetation coming in near the summer water level. More vegetation on the levee slope here in the bank protected area. We begin to see some vegetation on the land side here. More mature vegetation on the levee slope and much more vegetation as we move into a more developed area on the land side, at the toe. One of the swimming pools Meegan was talking about. And pretty much continuous riparian vegetation on the levee slope. No berm.

Moving downstream, some recent bank protection work there. Again, preserving the trees on the upper levee slope. This is the levee crest here. You see the land side slope vegetation on the levee slope or on the toe of the levee slope. And a little farther downstream, similar conditions here, really not much berm to speak of, vegetation -- especially vegetation, like Steve was talking about, smaller vegetation along the water's edge, about at the summer water level. But also some very large trees on or near that levee slope. And continuing with the vegetation and encroachment near the levee toe on the land side.

And then coming towards the end here, a group of trees where you could imagine, if you moved all of those trees, the excavation that would be

required to remove the trees and roots and to rebuild the levees. Now, moving to the American River. Here we have a variable berm. The north bank of the river has a fairly wide berm through much of the lower American River. The south side, [in the lower part], we have very narrow or no berm. Trees on levee slopes and, again, land side vegetation and encroachment.

This is the American River, just coming up to the Owl Bridge. Here's the levee crest. You can see the vegetation coming right up to the levee crest on the land side. Really pretty clear slope here on the waterside with vegetation fences very near the toe on the land side. Swimming pool. About a six- or seven-year-old bank protection project here. Still a pretty clear waterside slope here. But as we move upstream, you'll notice more and more vegetation up here, close to the levee or on the waterside levee slope.

Okay, now moving to the south bank of the American -- this is the highway. Here Highway 160 crossing. Vegetation on the levee slope above. Bank protection project. Older vegetation and younger vegetation either planted or colonizing that lower slope. Vegetation above the bank protection here. [Some land side vegetation either on the slope] or near the toe. More vegetation on the recent bank protection project, and then more mature vegetation downstream. And then moving farther downstream, less dense but mature vegetation pretty continuously along the levee slope above older bank protection work. And landscaping vegetation very close to the toe on the land side. And that should bring us back to I5.

So, that's a quick aerial overview. Hopefully that gives some perspective on the types of vegetation problems we're dealing with. Ken is going to provide some details on our estimates of vegetation effected by the white paper policy in the Sacramento area.