

Flooding in Chickahominy/Moody-Dry Slough and Union School Slough Watersheds, and Covell Drain of Southwestern Yolo County

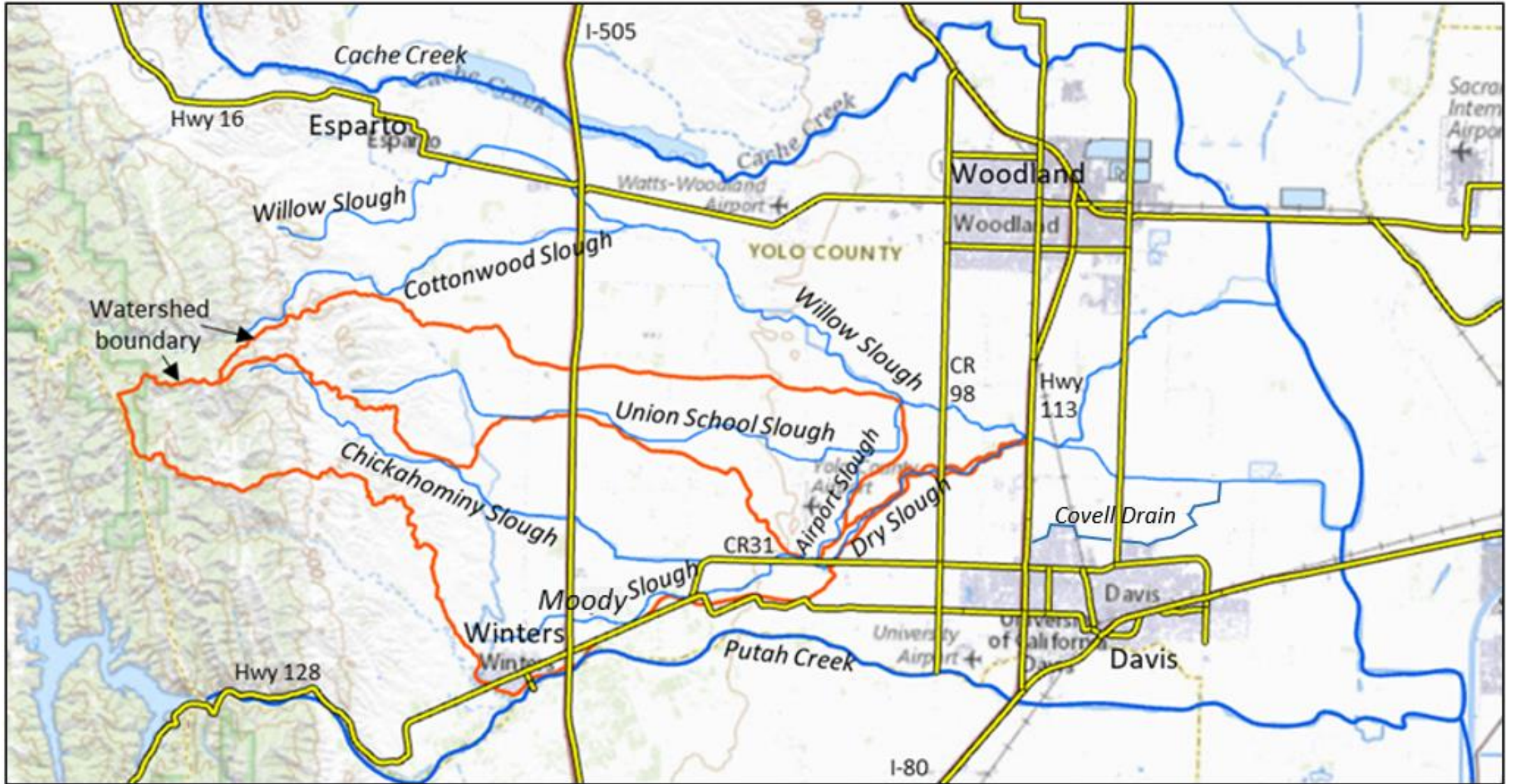
West Plainfield/Rolling Acres Flood Committee

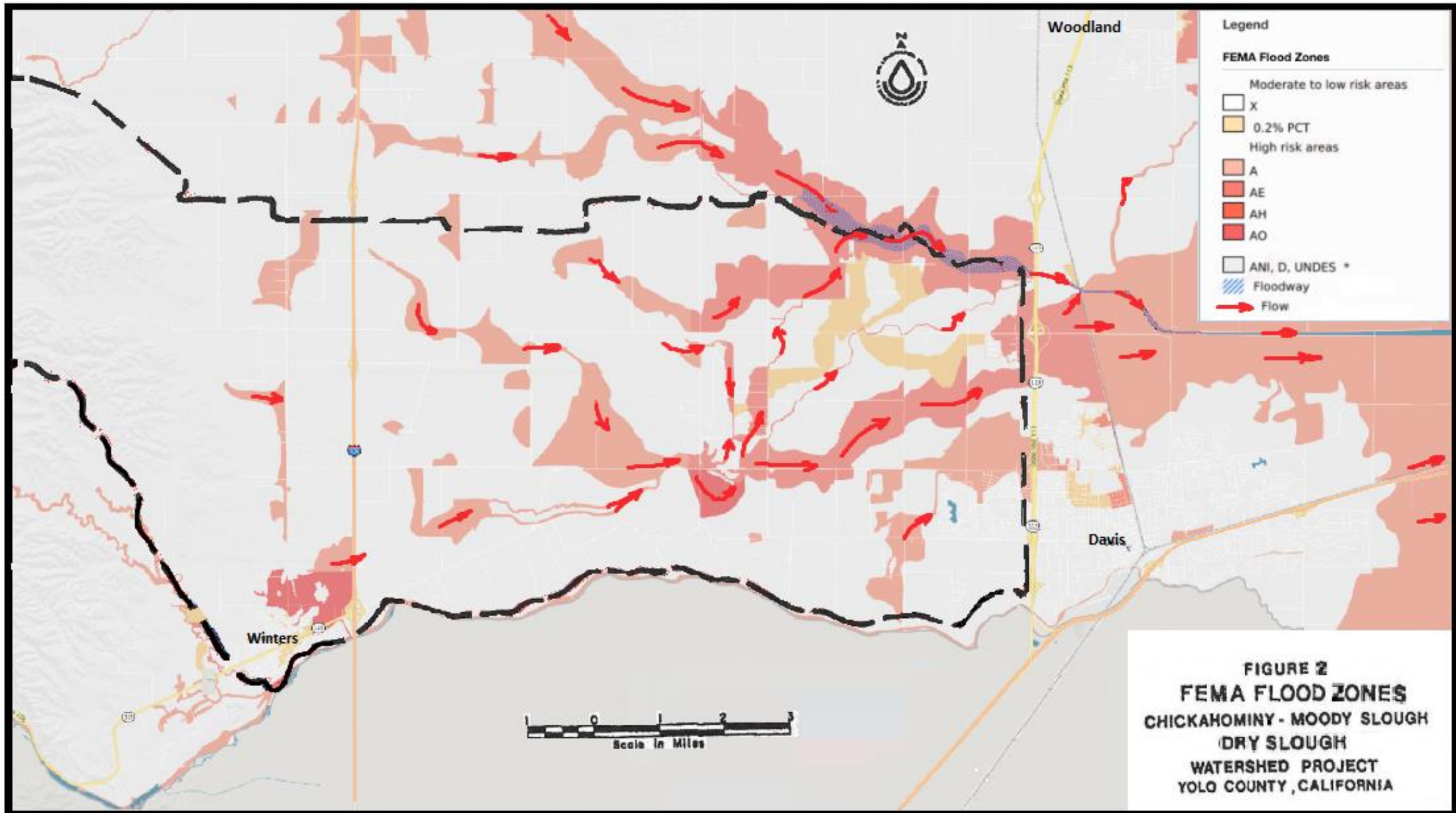
Briefing with Yolo County Board of Supervisors

Oct. 12, 2021

Background

- Flooding has worsened over the last few years in the Chickahominy/Moody-Dry Slough and Union School Slough watersheds in southwestern Yolo County
- Large impacts on both regional and local flooding are a result of permanent land occupation, farming, and irrigation
- Impacts include destruction of property and crops; damage to wildlife habitat; and threats to public safety through road washouts; impassability; and the spreading of pollutants





Background

- Approximately 85% of the average annual flood damage in rural parts of this watershed is related to agriculture.
- This includes direct crop loss, costs associated with re-leveling of fields, delayed planting, damage to irrigations systems, increased weed growth and dissemination, and limitations on crop selections because of flood risk.
- Erosion and sedimentation occur and cropland experiences loss of valuable topsoil.
- The regional nature of this problem is also evident in the road closures throughout the county, including the frequent flooding issues at Sutter Davis Hospital, where even a 5-year storm event in November of 2019 caused a complete lack of access, which should be of concern county wide.

Climate

- Analyses have shown that precipitation has declined over the last 28 years with slightly smaller storms and longer drier summers.
- Climate change is not amplifying flooding problems in the region.
- Therefore, active management of land use and drainage improvements are warranted.

The local problem



CR30 during the 2019 flood indicating dangerous conditions and no egress if necessary.



Yellowstone Ave. during the 2019 flood, with no ditches or driveways showing and the water over 1 foot deep. One truck ended up in a ditch under water.



Sutter-Davis Hospital during the 2019 flood, showing no access to the parking lot.

- General lack of maintenance of vegetation in channels has resulted in backwater effects and sedimentation.
- The installation of orchards has created more runoff.
- Bridges on CR95 and 96 are insufficient to carry flows
- Agricultural berms force water into roadside ditches creating large backwaters
- Culverts at road crossings and irrigation canals are insufficient, full of sediment, or crushed.
- Roadside ditches along agricultural fields are inadequate making egress nearly impossible.
- During floods Rolling Acres has egress that is dangerous in all 3 road directions.
- Flood waters cause deterioration of road surfaces due to the cross flowing flood waters.

Summary

- There has always been flooding in the Chickahominy/Moody-Dry Slough, Union School Slough and Covell Drain watersheds that unfortunately has worsened, not due to climate, but due to regional and local land use and lack of maintenance of drainage ways.
- While some of this flooding is nuisance in nature, much of it is a threat to infrastructure, property, structures, water quality and human health, preventing egress or entrance if necessary, and increasing costs to managing agricultural crops and soils.
- There are both possible regional and local solutions to reduce the harmful effects of flooding in southwestern Yolo County. While regional efforts will entail years of effort to plan, discuss, organize, fund, study, and final ultimately design and construct, local efforts should be done as soon as possible to reduce the harmful impacts.

Possible Solutions

- Considerations at the regional level involve the aligning of SGMA planning activities with these flood threats to include strategic managed aquifer recharge that not only would be beneficial to keep water in the watershed and recharge declining groundwater levels, but also reduce and capture floodwaters in the western portions of the watershed amenable to infiltration.
- Large scale diversions of flood waters higher up in the watersheds could improve fisheries in Putah Creek and would have the biggest impact if accompanied by recharge actions to replenish groundwater.
- Locally, maintenance of sloughs and drainages will reduce backwater effects, including cleaning or enlarging culverts and roadside ditches.
- Removal of agricultural berms would have a very large impact as well as enlarging the culverts at County Road bridges.
- A particularly useful solution to consider is a grading ordinance, the regulation of local berms and agricultural grading practices that increase the threat of flooding.

With Board approval to move forward with a regional plan

- Attain federal resources through Congressman Garamendi's office
- Army Corps of Engineers could help develop engineering aspects of the plan
- Develop a working group with potential interested stakeholders (Sacred Oaks, YC Airport, Sutter Davis Hospital, City of Davis and Winters, UC Davis, Putah Creek Council, Yolo Land Trust, YC RCD, SGMA Yolo County Subbasin, Wildlife Conservation District)
- With the help of Yolo County, assess funding sources and assist in grant writing