

## DRAFT MEMORANDUM

DATE: July 6, 2022  
TO: David J. Powers and Assoc.  
FROM: Robin J. Lee, PE  
SUBJECT: Danville Housing Element Update Program EIR Draft Report

### Approach to Analysis

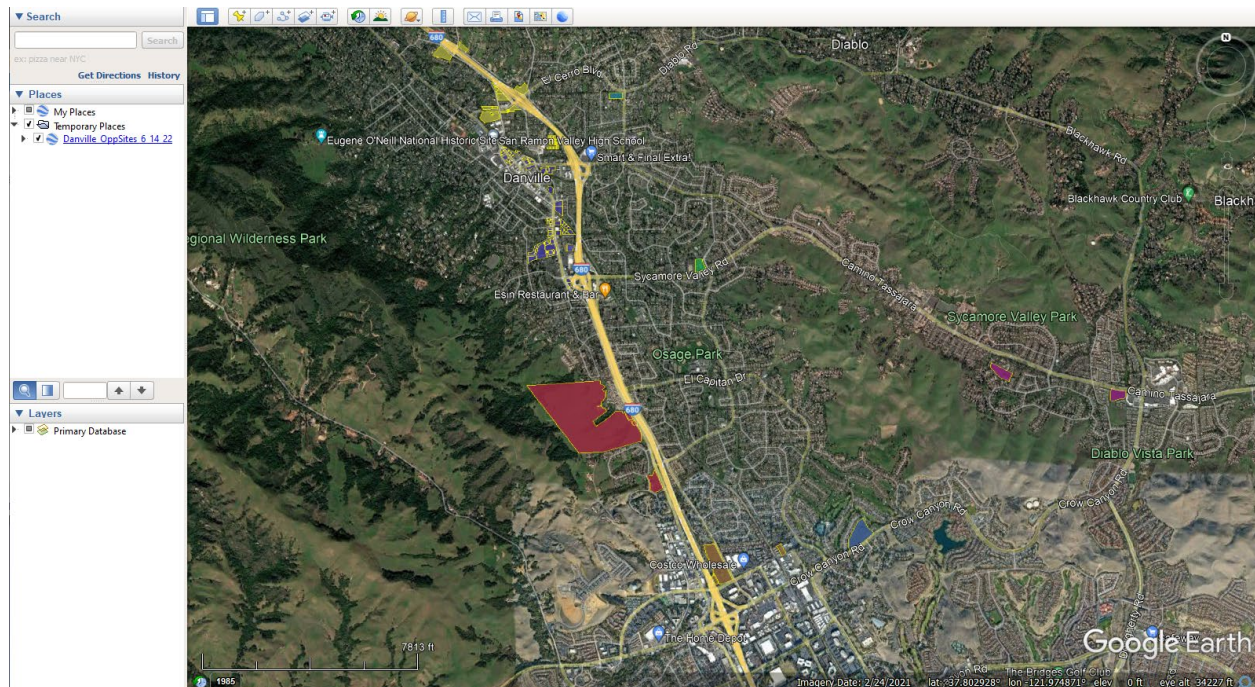
This impact analysis for the Housing Element Update Program in the Town of Danville identifies potential hydrologic and water quality impacts of all subareas of the housing locations. This study does not include any hydraulic modeling as each development subarea has varying conditions. The impact measures include of a brief description and have been found to be “less than significant”.

### Thresholds of Significance

The subareas were reviewed, using CEQA Guidelines, to identify potential significant environmental impacts regarding hydrology and water quality if it would:

- Impact 1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- Impact 2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Impact 3: Substantially alter the existing drainage pattern of the subarea or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
- Impact 4: Result in a substantial erosion or siltation on- or off-subarea;
- Impact 5: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off subarea;
- Impact 6: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Impact 7: Impede or redirect flood flows;
- Impact 8: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- Impact 9: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

### Figure 1. Danville Zoning Map



**Figure 2. Housing Element Update Program Subareas**

### Housing Element Update Program Description

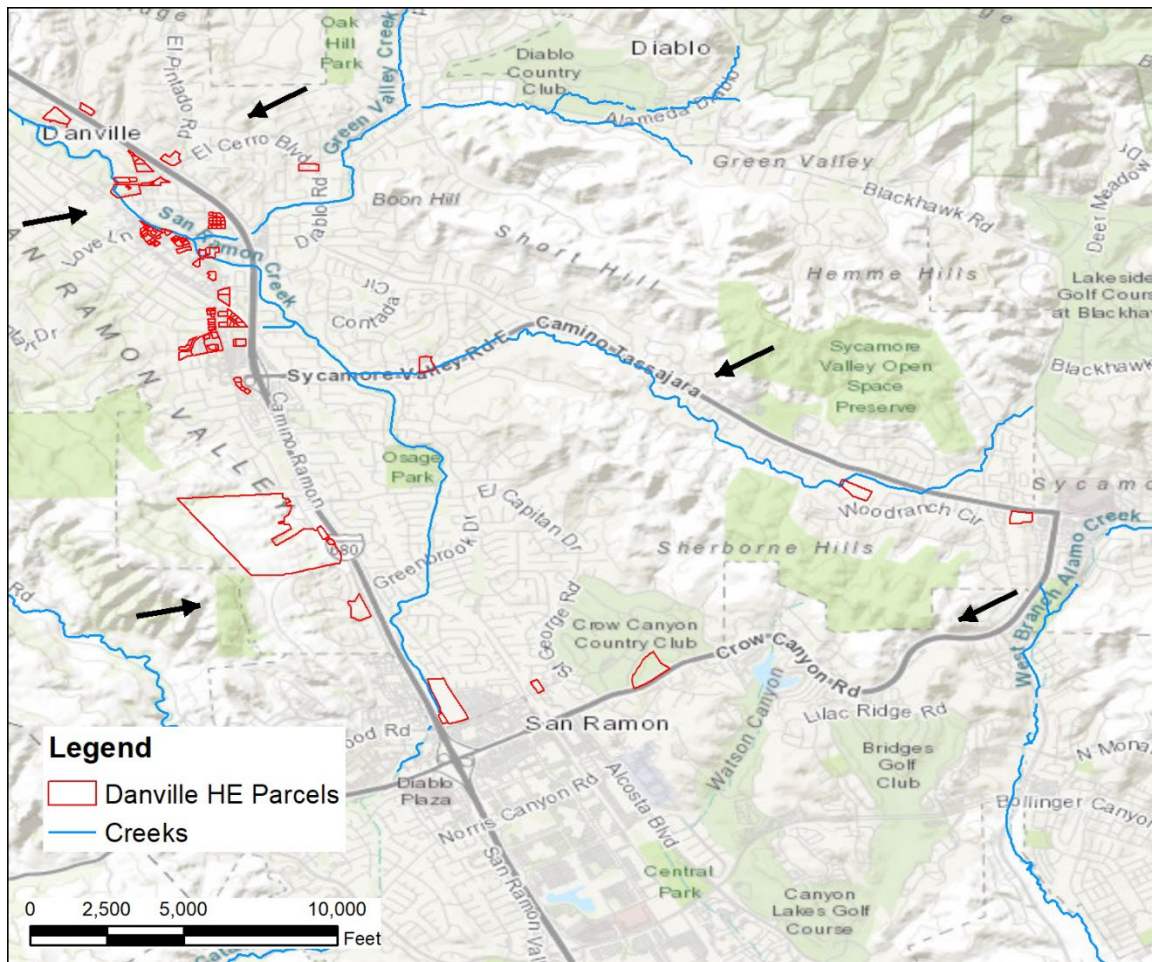
The Danville Housing Element is conducted every 8 years to stay up to date with RHNA requirements and the latest version of the General Plan. Under the Housing Element update, a diverse mix of housing to enable affordable housing and accommodate a wide range of densities is discussed. The subareas are spread throughout the Town, but the majority are located east of Highway 680. The existing subareas are made up of residential, office and parks/open space which will be converted into dense, residential developments. See Table 1 for a breakdown of subarea land uses and capacities.

**Table 1. Subarea Summaries**

Subareas	Parcel Area (ac)	New Zone Designation	Residential Capacity Units
1	26.8	P-1	1,137
2	39.6	MF-HD / P-1	1,523
3	152.1	P-1	575
4	2.7	P-1	108
5	3.8	P-1	151
6	10.5	P-1	412
7	19.4	P-1	514
8	12.8	P-1	200



The 8 subareas are located either near Green Valley Creek, Sycamore Creek, San Ramon Creek or local ditches throughout the Town. Green Valley Creek and Sycamore Creek meander through steep areas on the eastern side of the Town and are tributary to San Ramon Creek. The San Ramon Creek cuts across the western side of Danville and runs parallel along the East side of Danville Blvd. It should be noted that flooding can occur at Green Valley and San Ramon Creek during the rainy season. The 8 subareas and the channels locations are shown in Figure 3.



**Figure 3. Housing Element Parcels and Creeks**

## Project Impacts and Mitigation Measures

### Impact 1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality

#### Finding: Less than Significant Impact

The Housing Element would not conflict with existing water quality and discharge standards. The Danville General Plan considers regional and county requirements for water quality and waste discharge control. The Regional Water Quality Control Board Region 2 (San Francisco Bay Region) have developed the San Francisco Bay Basin Plan that is a master policy document providing water quality regulations within the region. The Basin Plan is summarized in the Natural Resources section in Chapter 6 Resources and Hazards of the General Plan.

The San Francisco Bay Region also implements the Municipal Regional Permit (MRP) requiring programs and operations focused on trash reduction, water quality monitoring, controls on pollutants etc. The Town of Danville has adopted a Stormwater Management and Discharge Control Ordinance, consistent with the regional permit, providing the regulatory framework to implement source control, site design, and treatment measures (C.3 requirements.) The Town concurrently developed the CCCWP Stormwater C.3 Guidebook providing design assistance for projects going through development review.

The Housing Element Update Program will be subject to requirements stated in the General Plan to reduce pollutants in stormwater. Therefore, a **Less than Significant Impact** will occur.

### Impact 2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin

#### Finding: Not Studied under This Memo

### Impact 3: Substantially alter the existing drainage pattern of the subarea or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces

#### Finding: Less than Significant

Runoff flows generally northeast and northwest towards San Ramon Creek. Water then continues to Walnut Creek and Pacheco Creek before eventually discharging into Suisun Bay. Subareas 6, 7 and 8 are primarily pervious land turning into impervious development, which will experience the most change to drainage patterns. However, the increased runoff will be captured by existing storm drain system and creeks throughout the Town. All proposed development will follow the 2030 General Plan which outline requirements for addressing surface runoff and flooding. No changes are planned for the existing drainage patterns and no work is planned within creeks.

In the Flooding Hazards section of Chapter 6 of the General Plan states, large subareas may require stormwater retention basins to reduce the need for channel improvements. Refer to Goal 26 of Flooding Hazards in the General Plan for policies to control runoff. The Town is currently completing a Storm Drain Master Plan (SDMP) which will identify storm drain infrastructure that is in poor condition and in need of improvements.

Subareas will incorporate on-site improvements to keep impacts to a **less than significant level**.

**Impact 4: Result in a substantial erosion or siltation on or off subarea of the plan area****Finding: Less than Significant**

Soil erosion generally occurs during peak rainfall when runoff volumes are high. The Housing Element program will be subject to flood control, erosion and siltation requirements and improvements to urban runoff. Policy 24.07 in the 2030 General Plan states: maintain structural design and engineering standards which ensure that buildings and infrastructure are constructed to minimize damage resulting from expansive soils, erosion, subsidence, and other local geologic conditions. Proposed developments need to consider for flooding, erosion, sedimentation, and other effects of construction in its engineering design. The Town of Danville promotes protection of its soil resources by enforcing its Grading Ordinance, discouraging construction on steep slopes, and requiring erosion control measures during construction. Future development within the subareas would require preparation of a Stormwater Pollution Prevention Plan (SWPPP) and a Stormwater Management Plan (SWMP) to avoid erosion.

Therefore, the risk of increased erosion or siltation is negligible to all subareas, resulting in a ***less than significant level***.

**Impact 5: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off subarea of the plan area****Finding: Less than Significant**Existing Subarea Drainage

Existing runoff throughout the 8 subareas area drains towards local ditches, creeks, or storm drain systems along major streets. The existing storm drain network varies from 12-inch to 84-inch in diameter. The captured runoff discharges to the nearest creek, where ultimately runoff enters San Ramon Creek that cuts through the western side of Danville, see Figure 4.

Post Project Subarea Drainage

Future development will generally maintain the existing drainage patterns. Subareas 6, 7 and 8 will experience an increase surface runoff as the open space changes to paved proposed development. The proposed storm drain systems will be used to capture runoff and stormwater BMPs, such as bioretention areas, are used to treat stormwater runoff from development and redevelopment subareas. The proposed storm drain systems will tie into the existing public storm drain networks. The General Plan requires the use of detention basins to reduce peak runoff to predevelopment levels to prevent flooding. See the Goal 26: Flooding Hazards subsection in Chapter 6 of the General Plan.

The impacts of higher surface runoff are alleviated by implementing requirements outlined in the General Plan. The Housing Element Update Program will result in the ***less than significant level***.



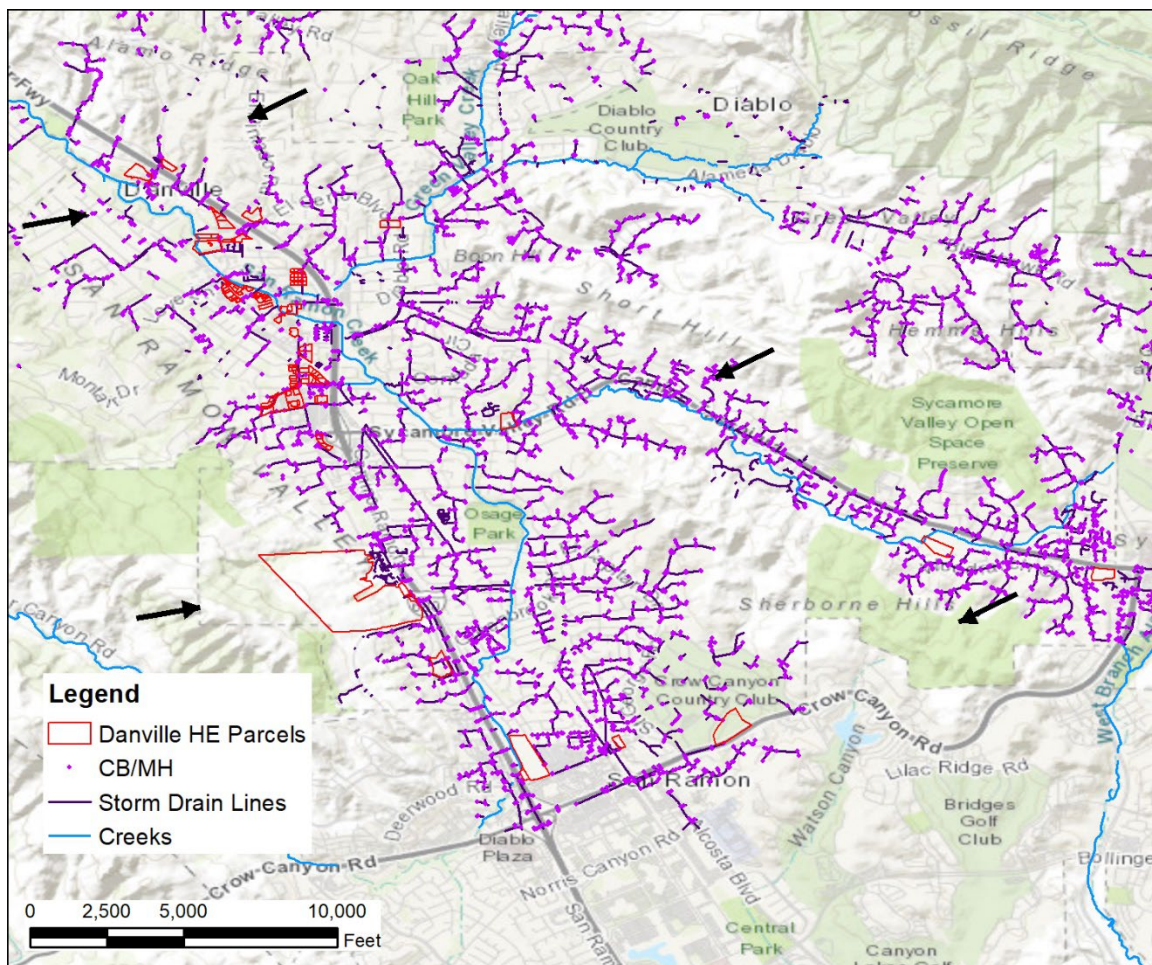


Figure 4. Existing Storm Drain Network

**Impact 6: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff**

**Finding: Less than Significant Impact**

As stated in General Plan, future housing development will be required to manage runoff and prevent flooding on the sites and downstream area. Section 31-25.7 Minimum Drainage Capacities in Danville's Municipal Code states, major drainage channels contain the 50-year discharge capacity and 10-year discharges to be carried by minor storm drain system. Future housing development will also be subject to the Stormwater Management and Discharge Control Ordinance to apply source control, site design, and treatment measures. The Ordinance will be used to minimize non-stormwater discharges to streams, reduce increases in nonpoint source pollution from urban runoff, control discharge of stormwater from spills and dumping, and reduce runoff rates and volumes to reduce public safety hazards. Refer to Chapter 20 of the Town's Municipal Code for more information about the ordinance. Therefore, the project has a **Less than Significant Impact**.



### Impact 7: Alter existing drainage patterns, including streams and rivers, that impede or redirect flood flows

#### Finding: Less than Significant Impact

Historically, flooding occurs in Danville during winter rains at major creeks temporarily. Subareas are located in two FEMA flood hazard designations, as shown in Figure 5. The Zone X designation is for areas of 0.2% (i.e. 500-year) chance flood; areas of 1% (i.e. 100-year) chance flood with average depths of less than one foot or with drainage areas less than one square mile. Zone A is defined as areas that have not been assigned base flood elevations as there has been no detailed study conducted by FEMA. Zone A are within creek extents and Zone X extends throughout the rest of the subarea. Some parcels within subareas 1, 2, 5 and 6 are within the Zone A extent in the current condition. No major changes will be done to the existing drainage pattern and creeks. The 2030 General Plan states that new development runoff must be within 100-year flood capacity of the Town's flood control system. Refer to policy 26.03 of the Flooding Hazards subsection in Chapter 6 of the General Plan.

Therefore, the Housing Element Program would have a **Less than Significant Impact** with regards to impede or redirect flood flows.

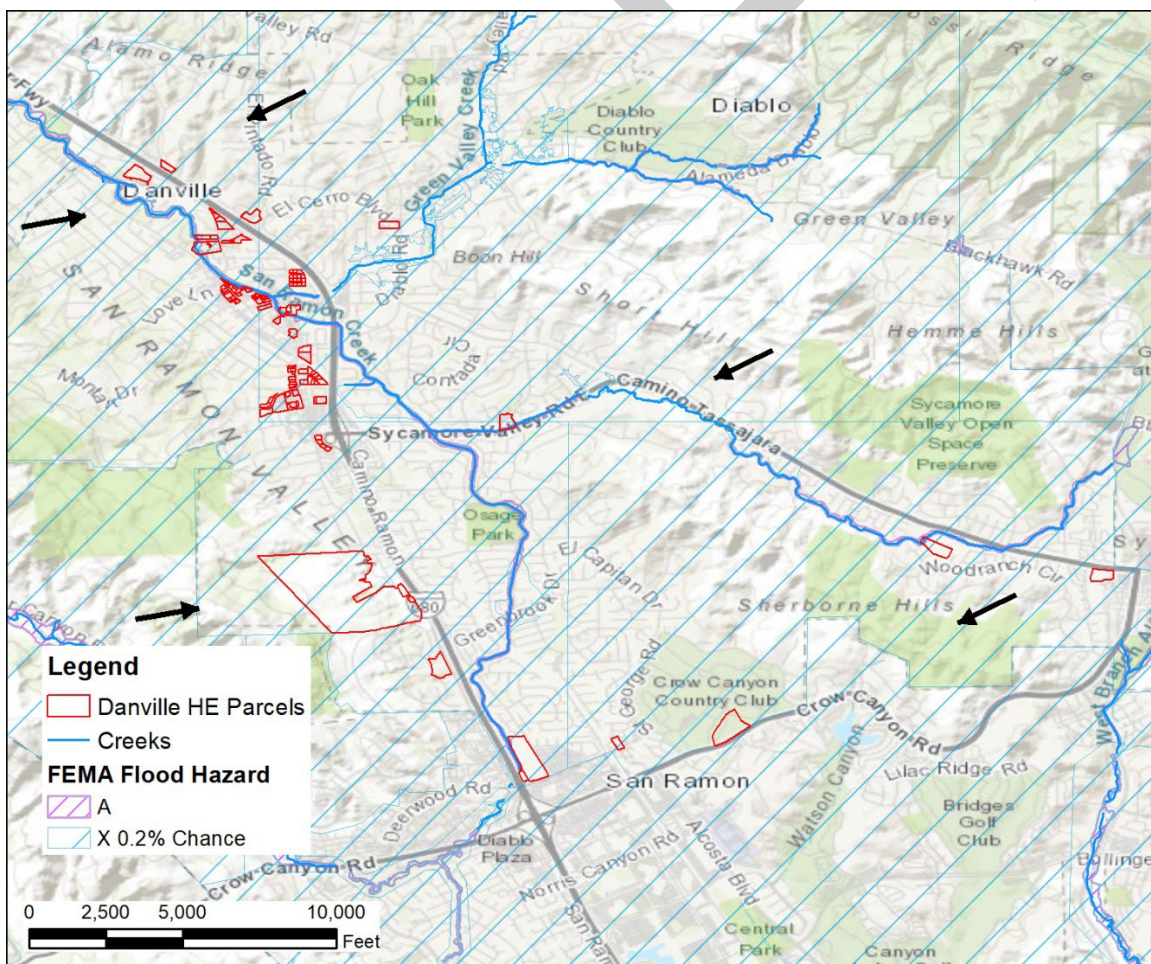


Figure 5. FEMA Flood Areas from General Plan



### Impact 8: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation

#### Finding: Less than Significant

Danville would not be affected by a tsunami and is not in a seiche zone. The Town is located significantly far enough away from the ocean, where tsunami events would not affect all subareas. There are no large bodies of water within the Town extent so a seiche cannot occur. The flood risk map, found in the 2030 General Plan, was used to identify flood prone areas within the Town. No flooding was observed at the subareas except for the 100-year flood zone areas along creeks, see Figure 6.

Therefore, **No Impact** with regards to flood hazard, seiche zones, or tsunami at the Town.

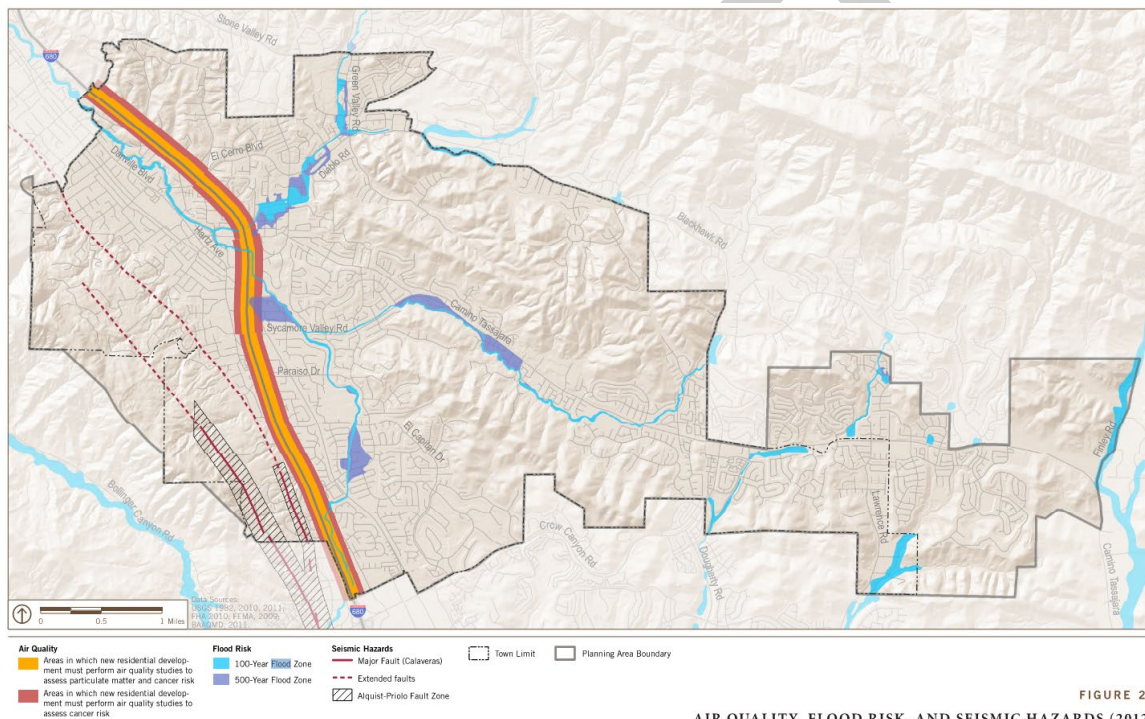


Figure 6. Flood Risk Areas from General Plan

### Impact 9: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

#### Finding: Less than Significant Impact

The San Francisco Bay Region implements numerous standards to protect surface water bodies and groundwater by enforcing National Pollutant Discharge Elimination System (NPDES) Permit requirements. Danville also has a Stormwater Management and Discharge Control Ordinance to minimize increases in nonpoint source pollutions, control discharges of stormwater from spills and dumping etc. Pollutants from construction and post-construction conditions can be mitigated through preparation and implementation of a storm water pollution prevention plan (SWPPP) and a storm water management plan (SWMP). The design and construction of future housing within

developments would be consistent with recommended design criteria. Refer to page 6.4 for the Town of Danville Water Quality Activities subsection in Chapter 6 of the 2030 General Plan.

Thus, the Housing Element Program would have a ***Less than Significant Impact*** to control water quality of surface runoff.

DRAFT