



Upgrading San Mateo County's Flood Warning System

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San Mateo County Flood Resilience

Projects

- Bayfront Canal/Atherton Channel Flood Management and Restoration Project
- Belmont Creek Flood Management Plan
- Navigable Slough Flood Management Plan
- County-Wide Flood Warning System Upgrade and Expansion



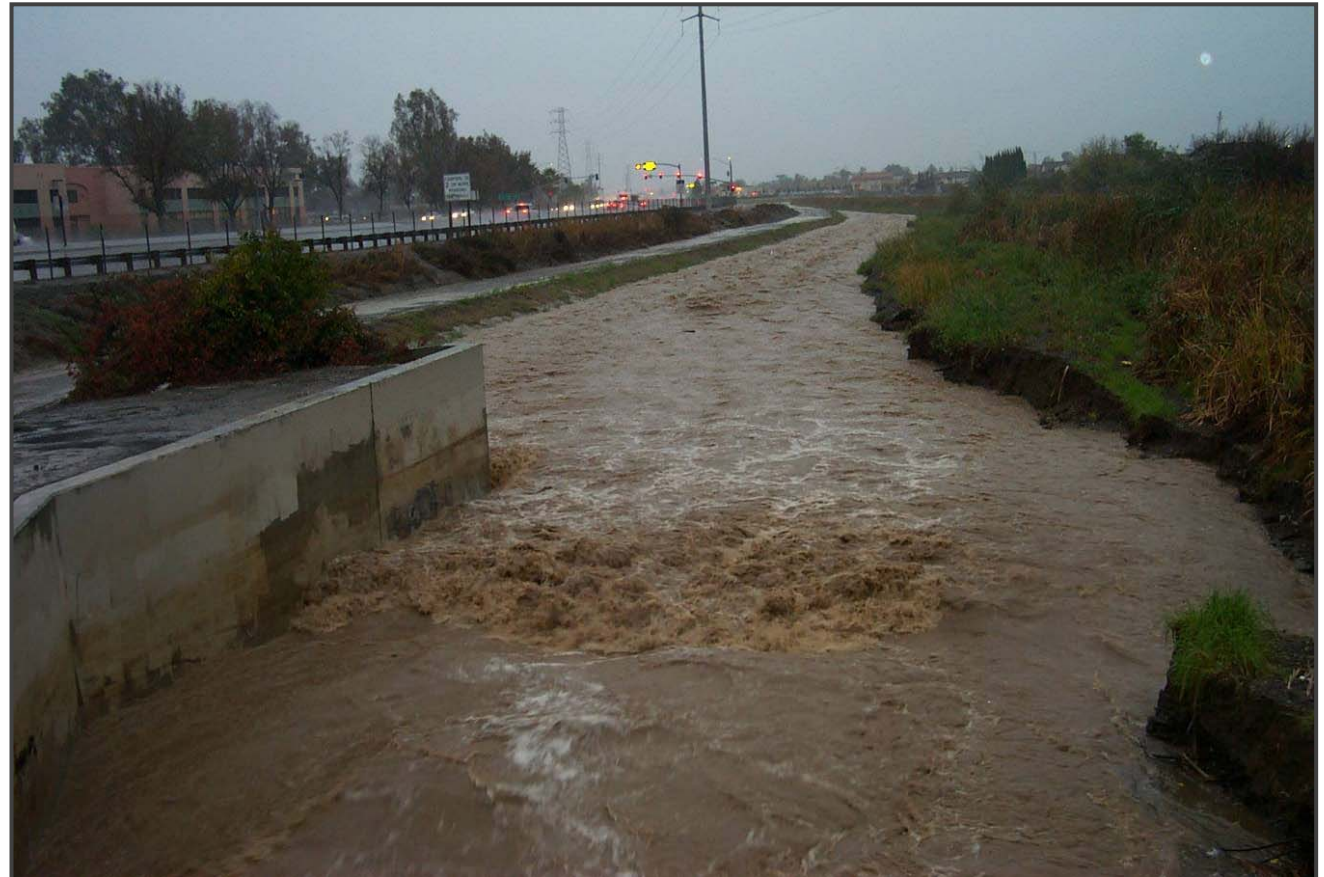
DWR Grant Components

- **Update Emergency Operation Plan and Develop Watershed-specific Emergency Action Plans**
- **Upgrade existing flood monitoring network**
- **Create a web-accessible data display portal**
- **Establish new stream/rain monitoring stations**



Flood Warning Components

- Pre-storm
 - Planning
 - Preparation
- Monitoring
 - Rainfall
 - Streamflow
 - Stage
- Emergency Action
 - Maintenance
 - Closures/evacuations
 - Post-storm follow-up

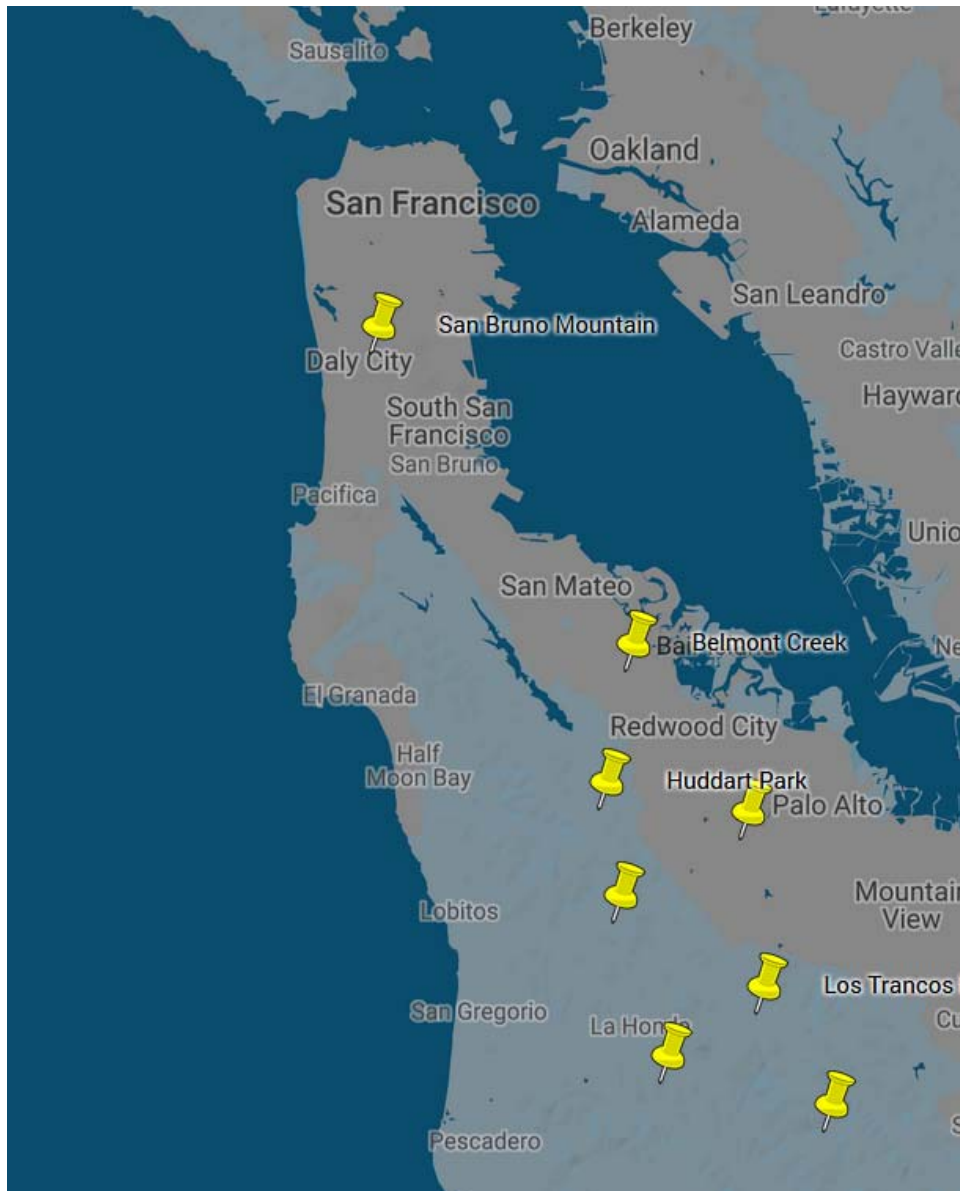


February 2017



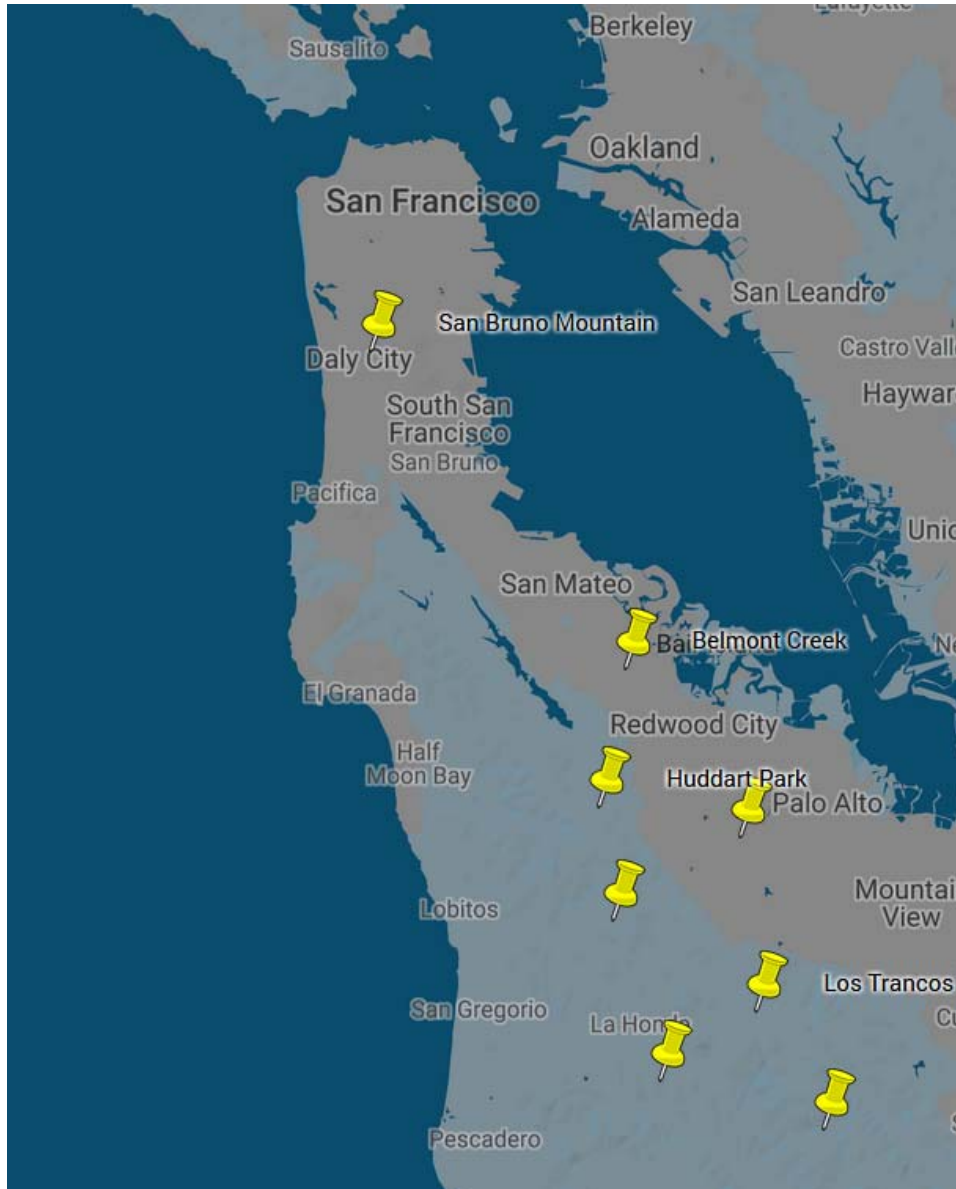
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San Mateo County Existing Stations



- San Bruno Mountain
- Belmont Creek
- Huddart Park
- San Francisquito Creek
- La Honda Ck Pk (repeater)
- Los Trancos Park
- Towne Ridge
- Saratoga Summit

San Mateo County Existing Stations



Upgrade stations to ALERT2 protocol

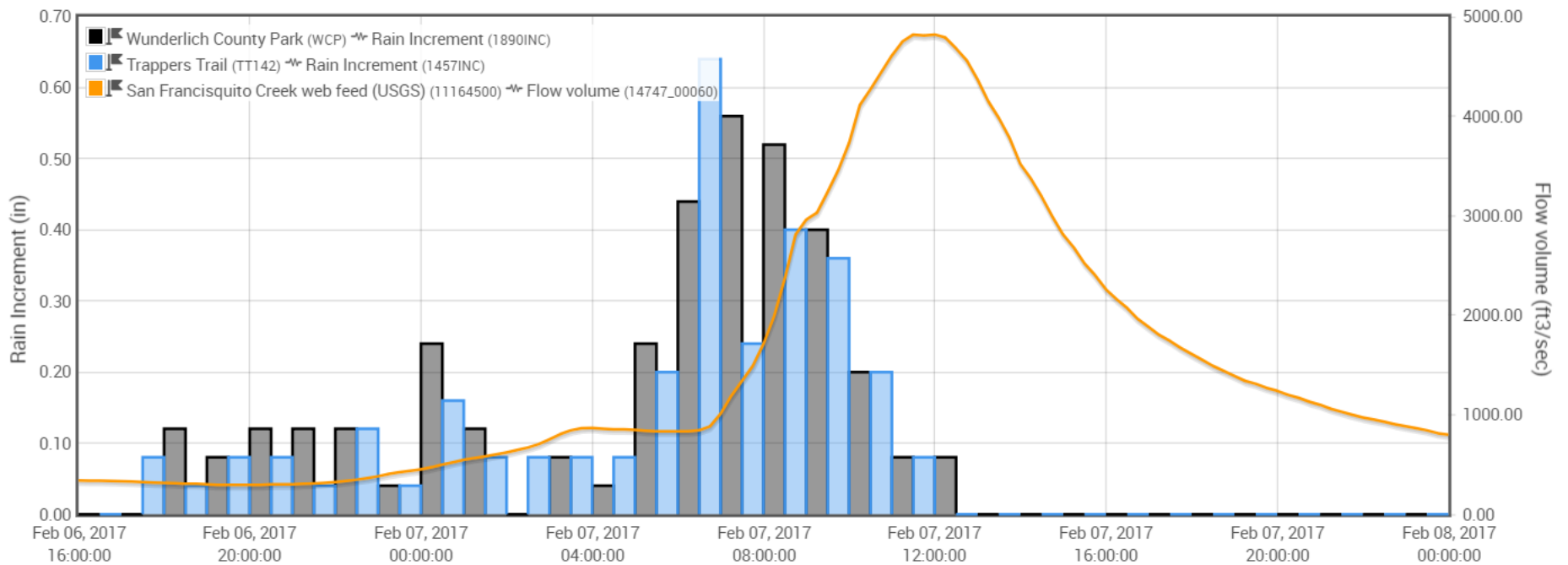
- Increase network reliability
- Minimize data loss

Data Display

February 6, 2017 - February 8, 2017

Markers Legend | Hourly Invert

Fill by Type Latency +

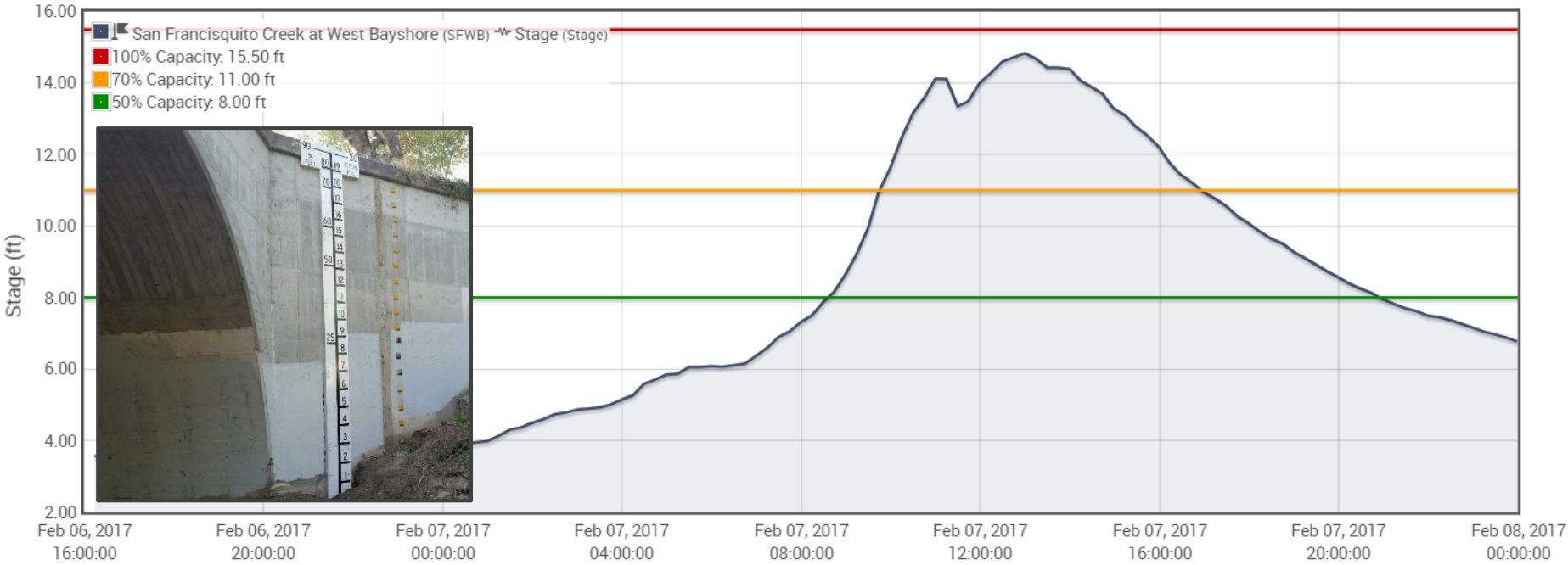


Data display

February 6, 2017 - February 8, 2017

Markers Legend Thresholds

Latency +



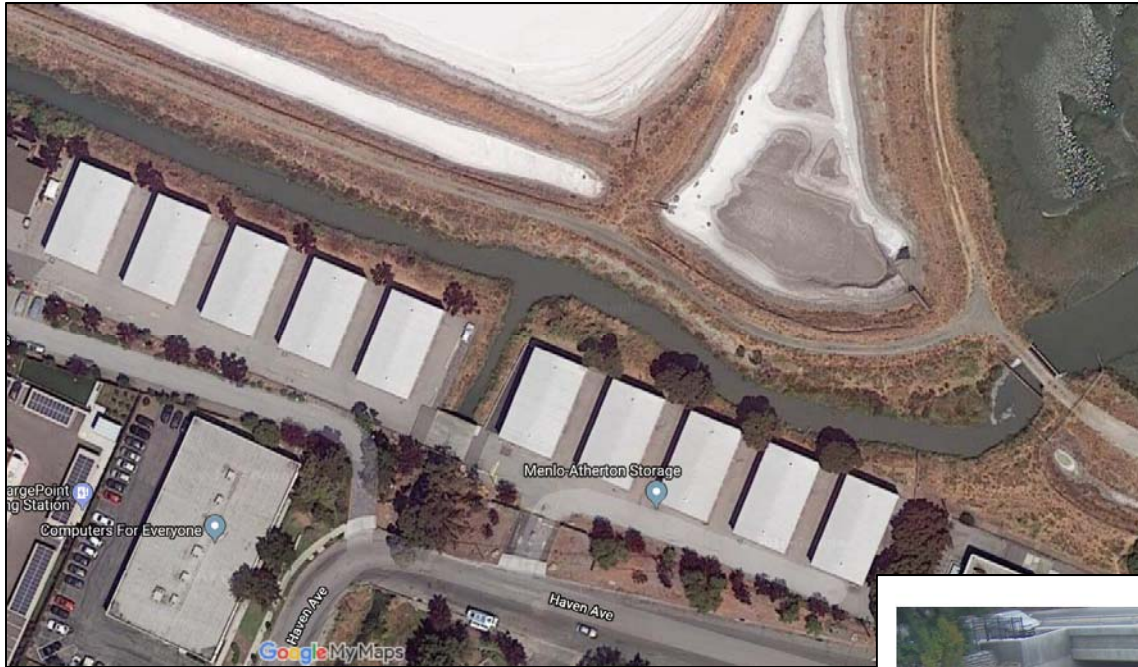
New Staff Gauges



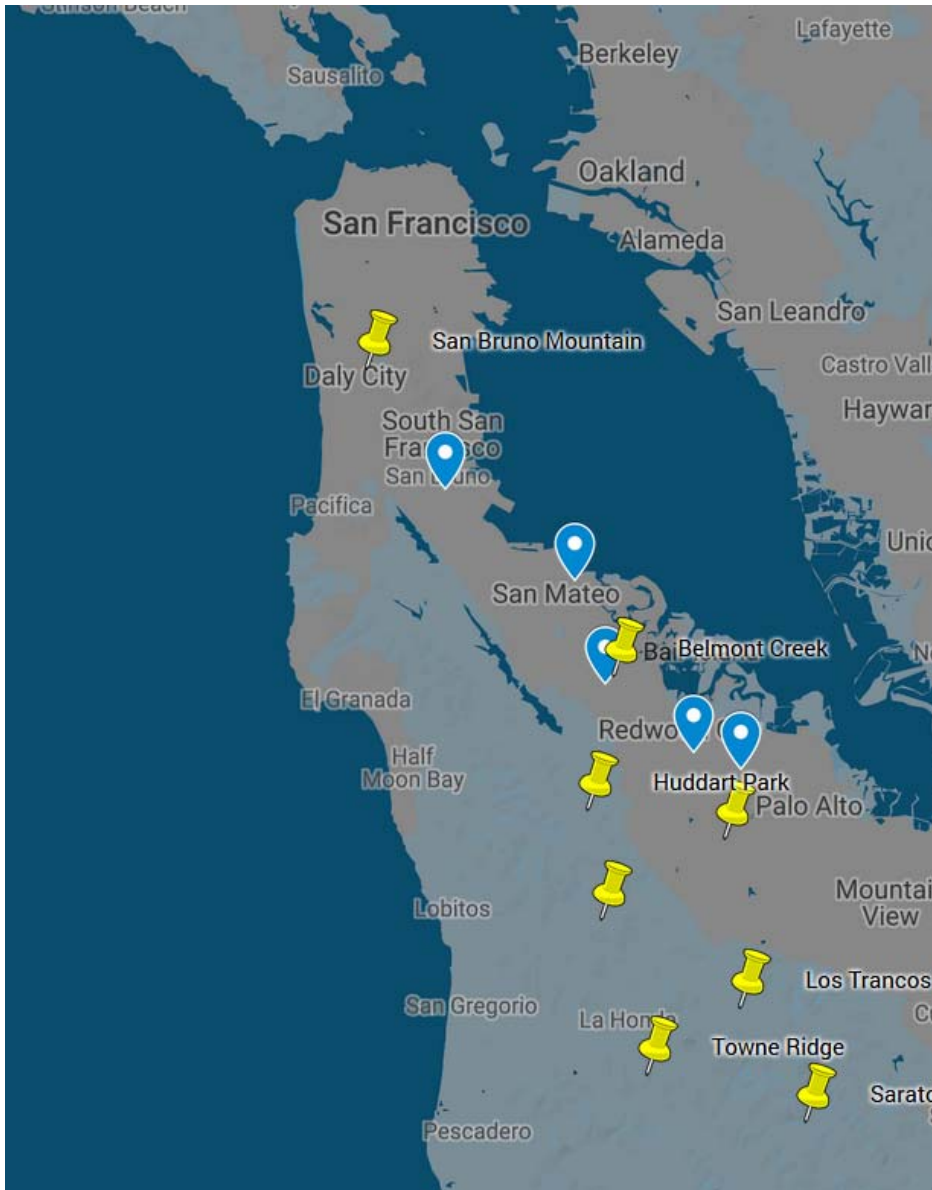
- Belmont Creek
- Cordilleras Creek
- Pescadero Creek
- Colma Creek
- Broadmoor Creek
- San Carlos Creek
- Pilarcitos Creek
- Butano Creek
- Bayfront Canal



Webcam



Proposed Monitoring Stations



- Colma Creek
- San Bruno Creek
- San Mateo Creek
- Upper Belmont Creek
- Redwood Creek
- Atherton Channel

Monitoring location considerations

- Purpose of the station
- Position in the watershed
- Site access/conditions



- Communications
- Maintenance/ calibration
- Potential for vandalism

Monitoring location considerations

- Site-specific concerns
 - Tidal effects
 - Capacity/timing constraints
 - Cross-watershed flooding



San Mateo Creek at Highway 101

- Critical points-of-concern
- Urban versus upper watershed inflows

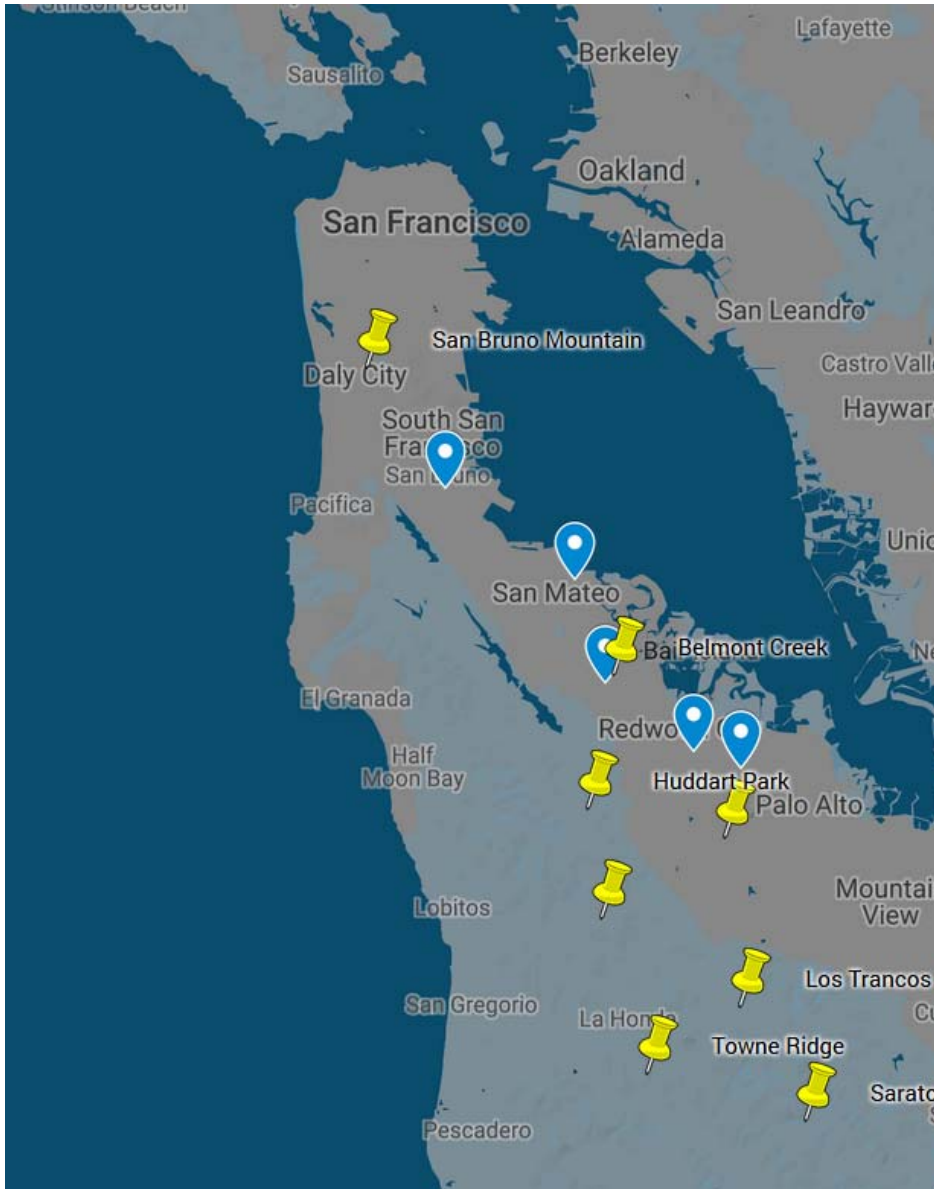
Standpipe



Telemetry Cabinet



San Mateo County Proposed Stations

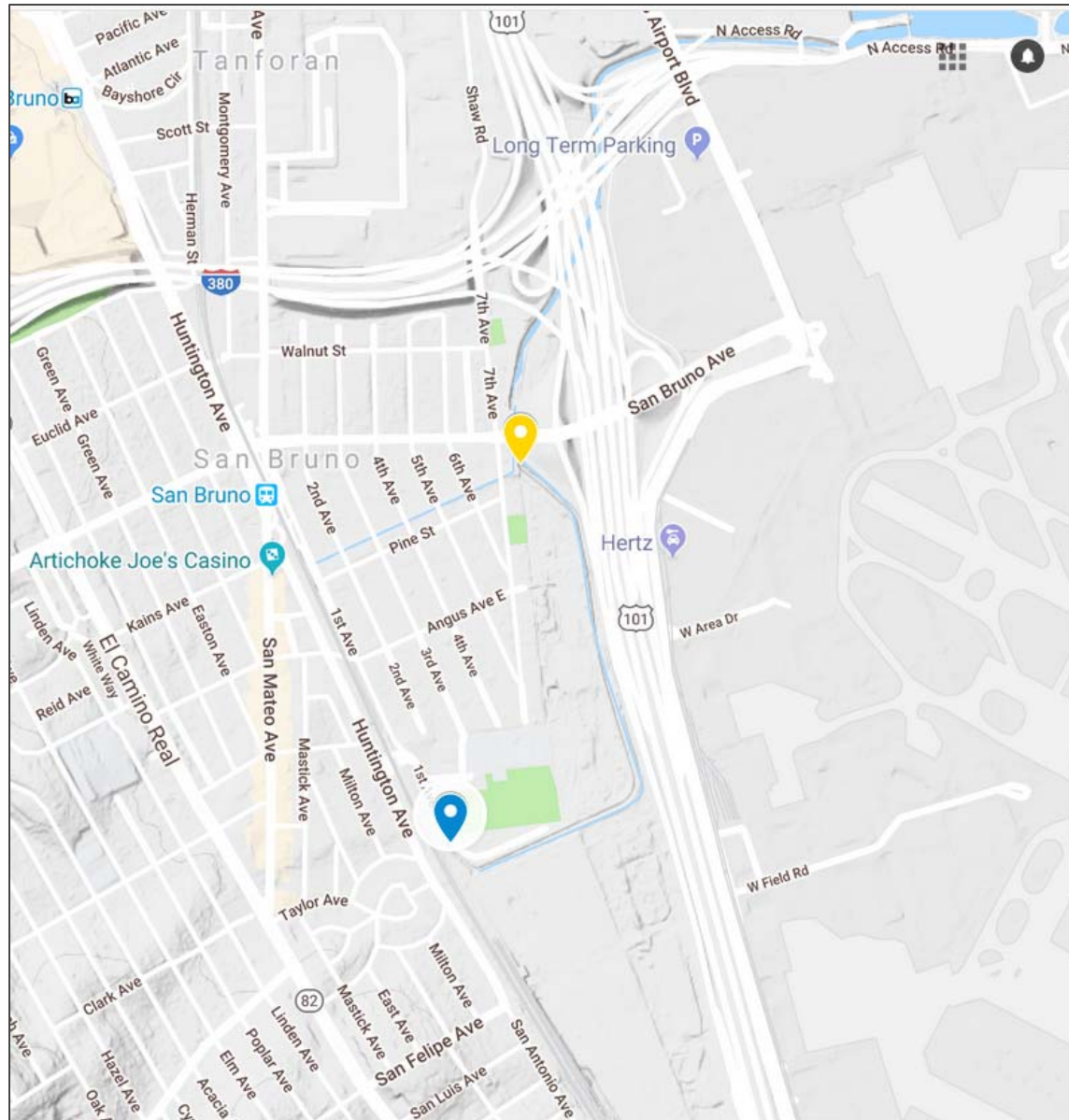


- Colma Creek
- San Bruno Creek
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- Atherton Channel

Colma Creek at Orange Memorial Park



San Bruno Creek



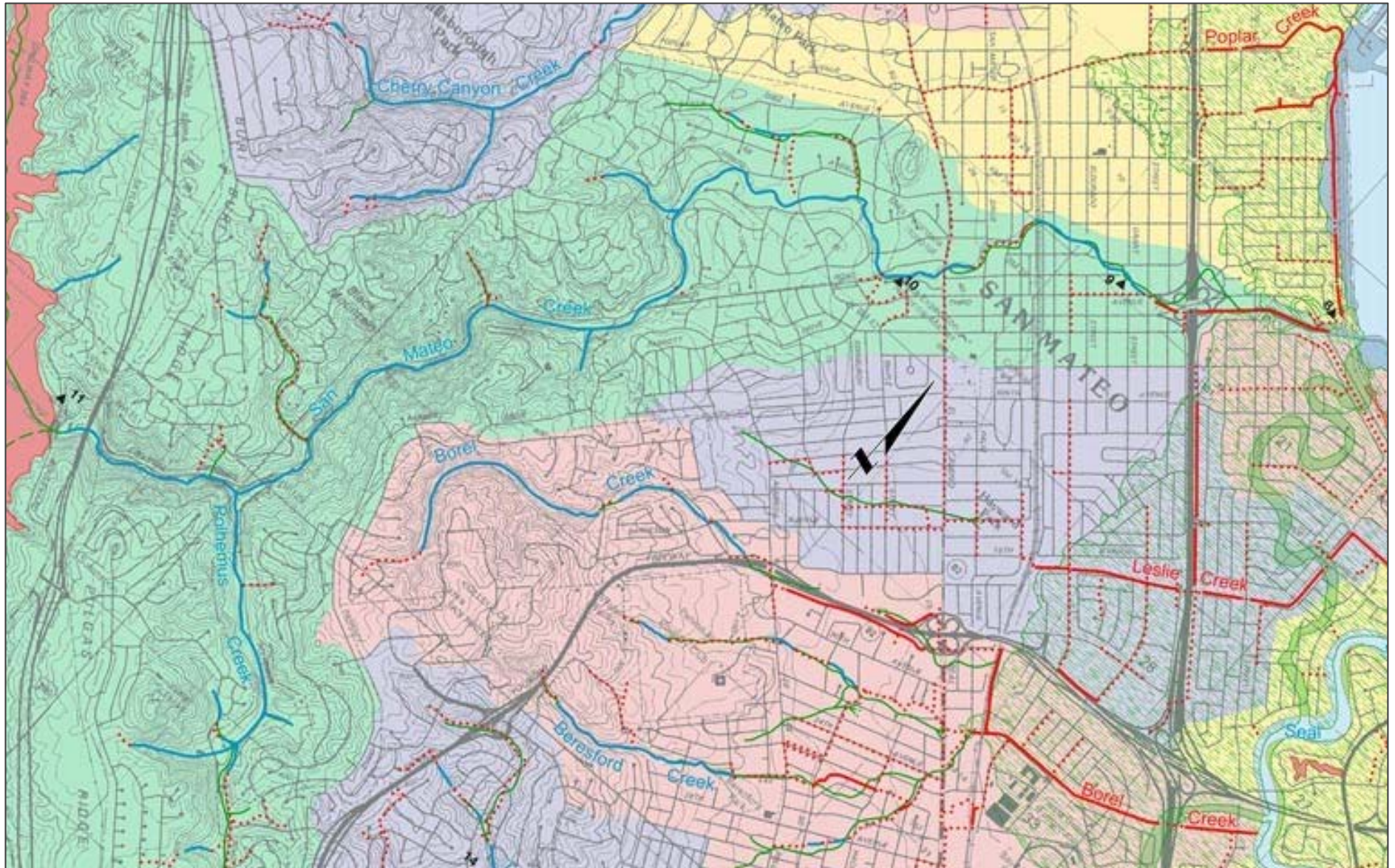
El Zanjon Creek below Cupid's Row



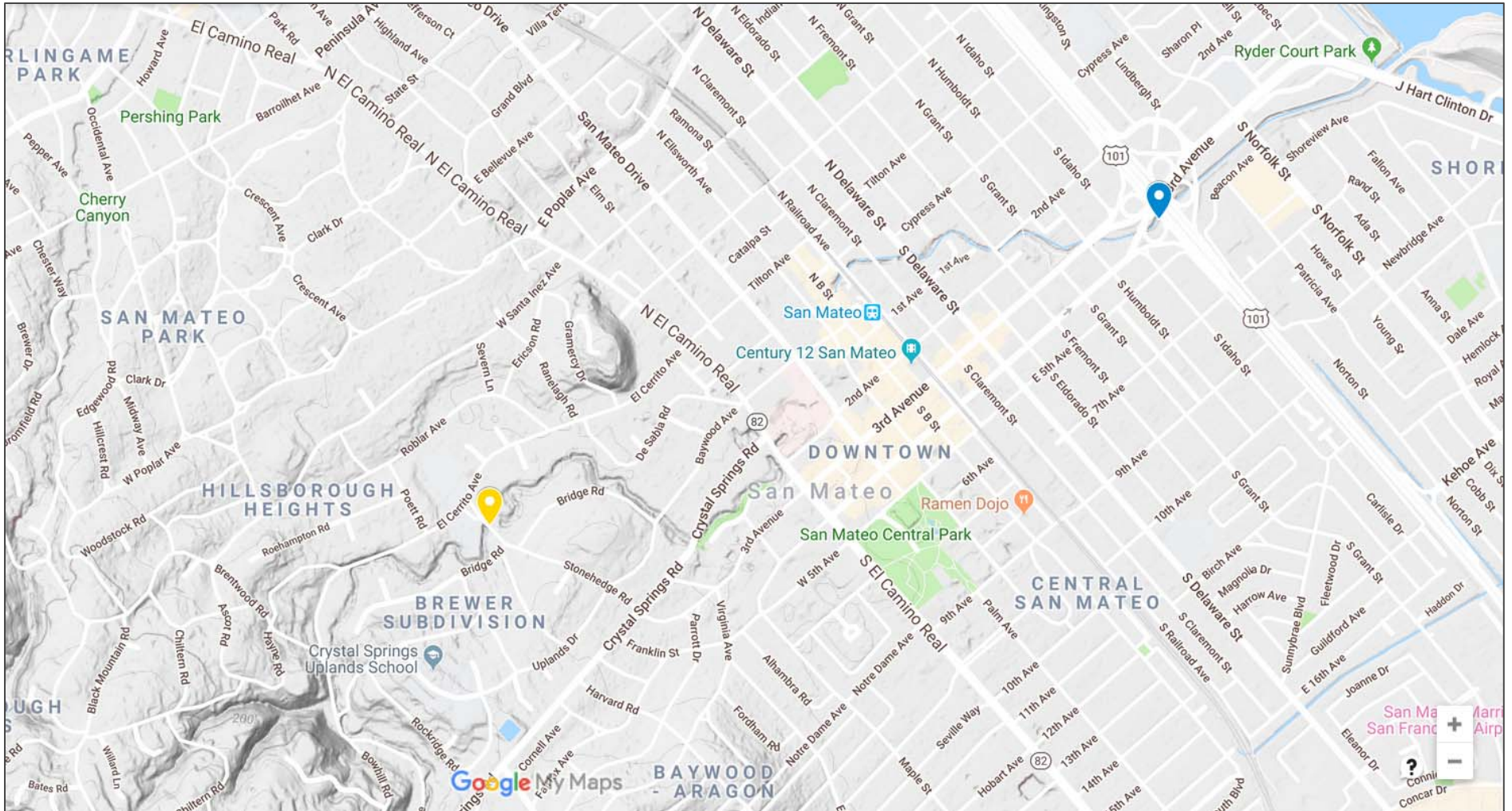
El Zanjon Creek below Cupid's Row



San Mateo Creek



San Mateo Creek

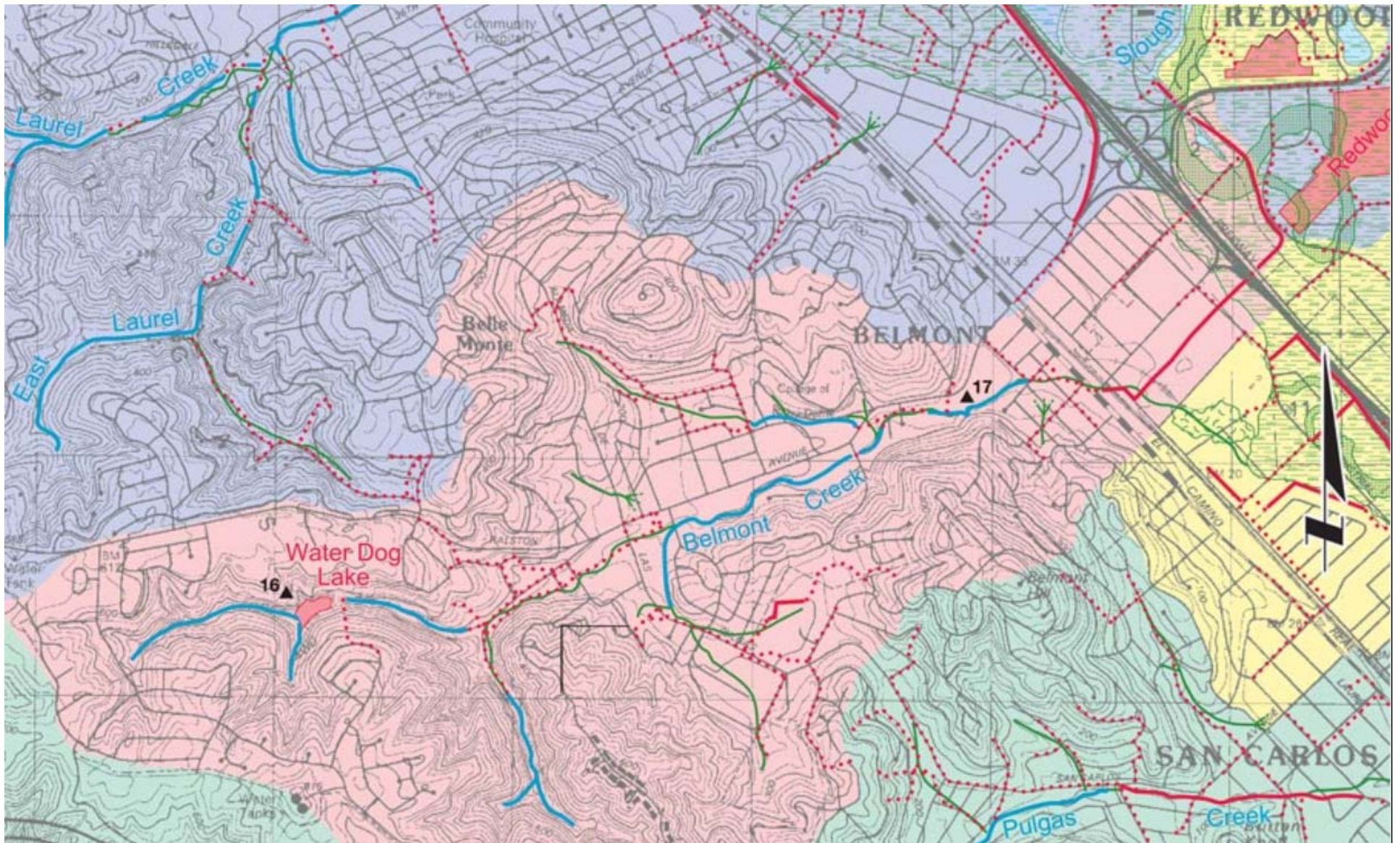


San Mateo Creek at Hwy 101

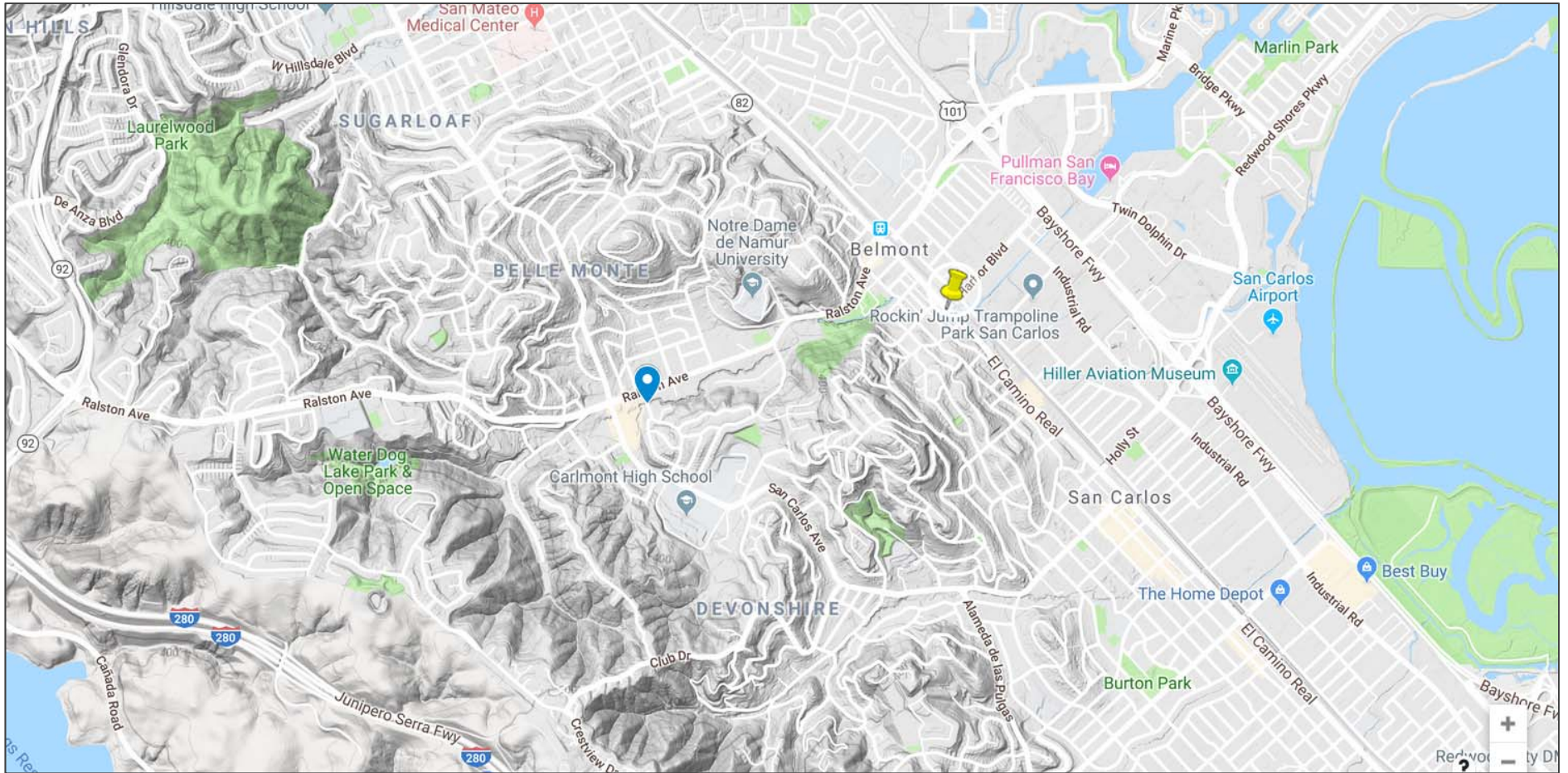


Augmented photograph showing potential option for San Mateo Creek gage installation at Highway 101.

Belmont Creek



Upper Belmont Creek



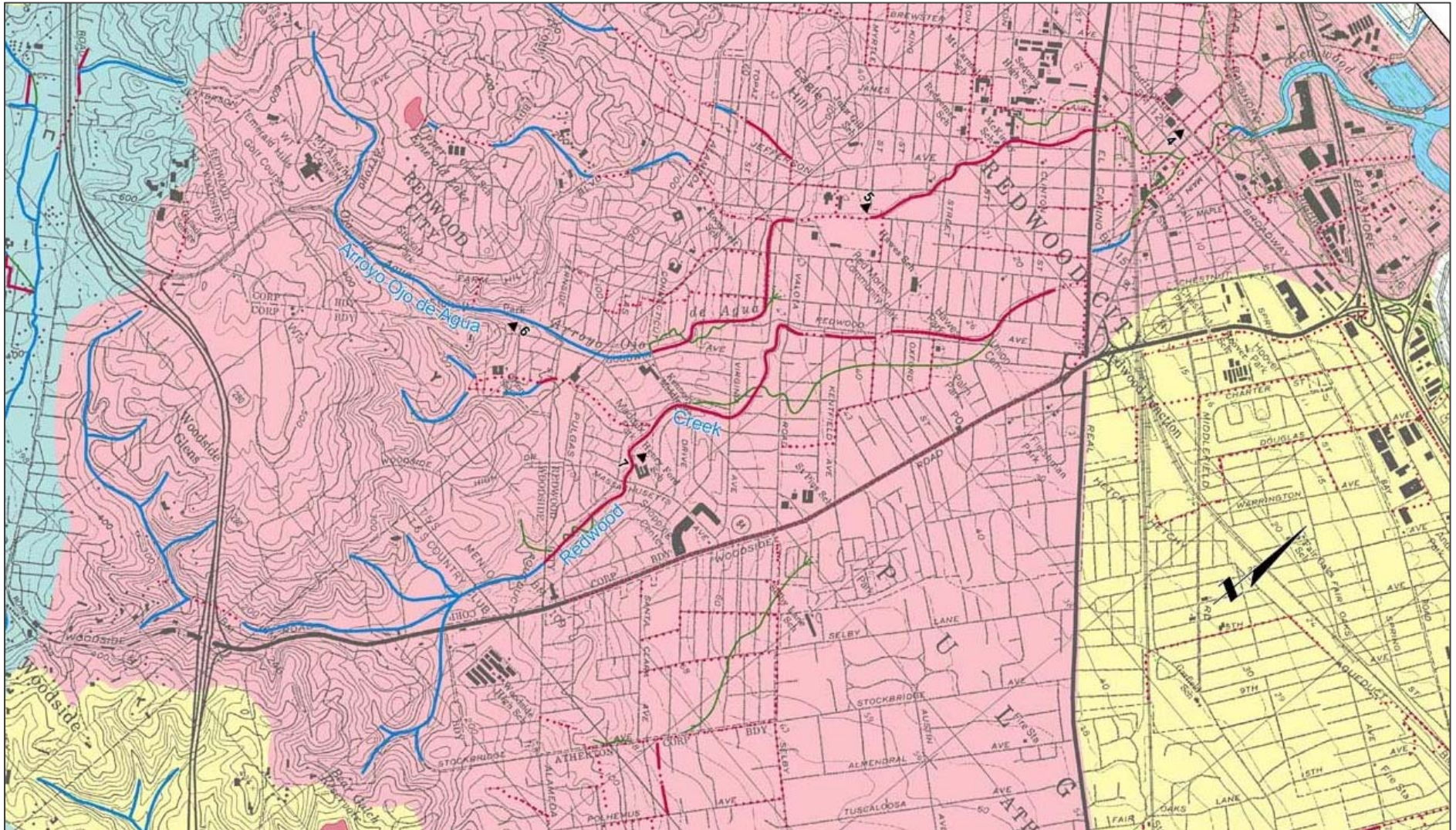
Upper Belmont Creek



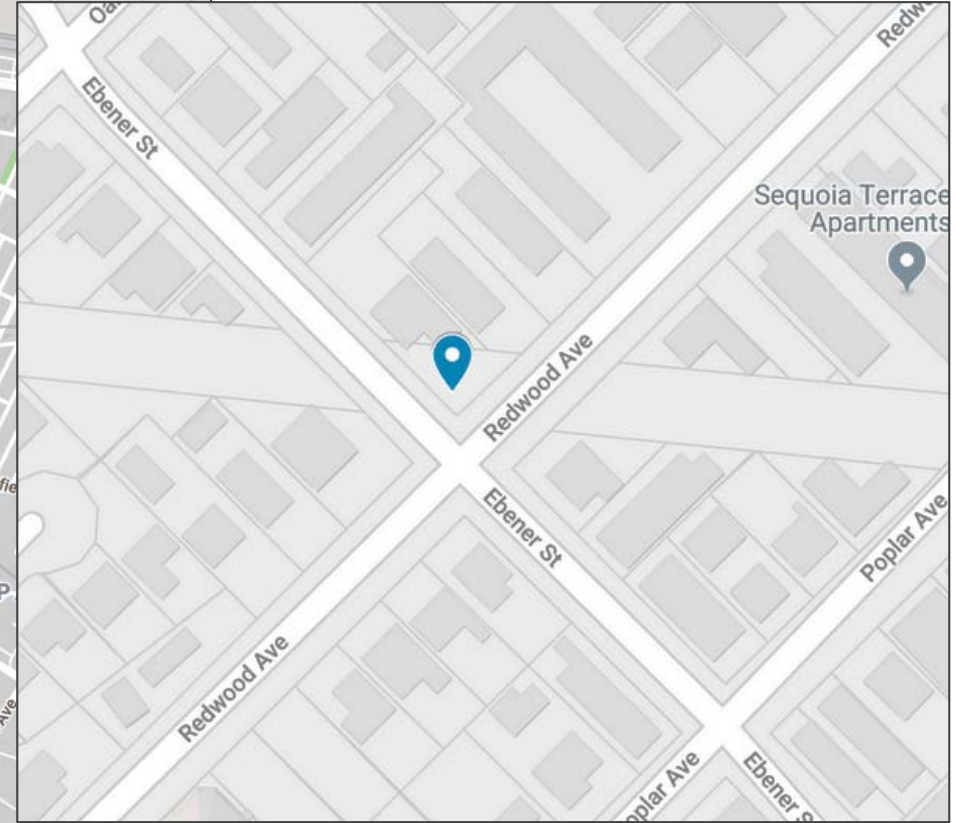
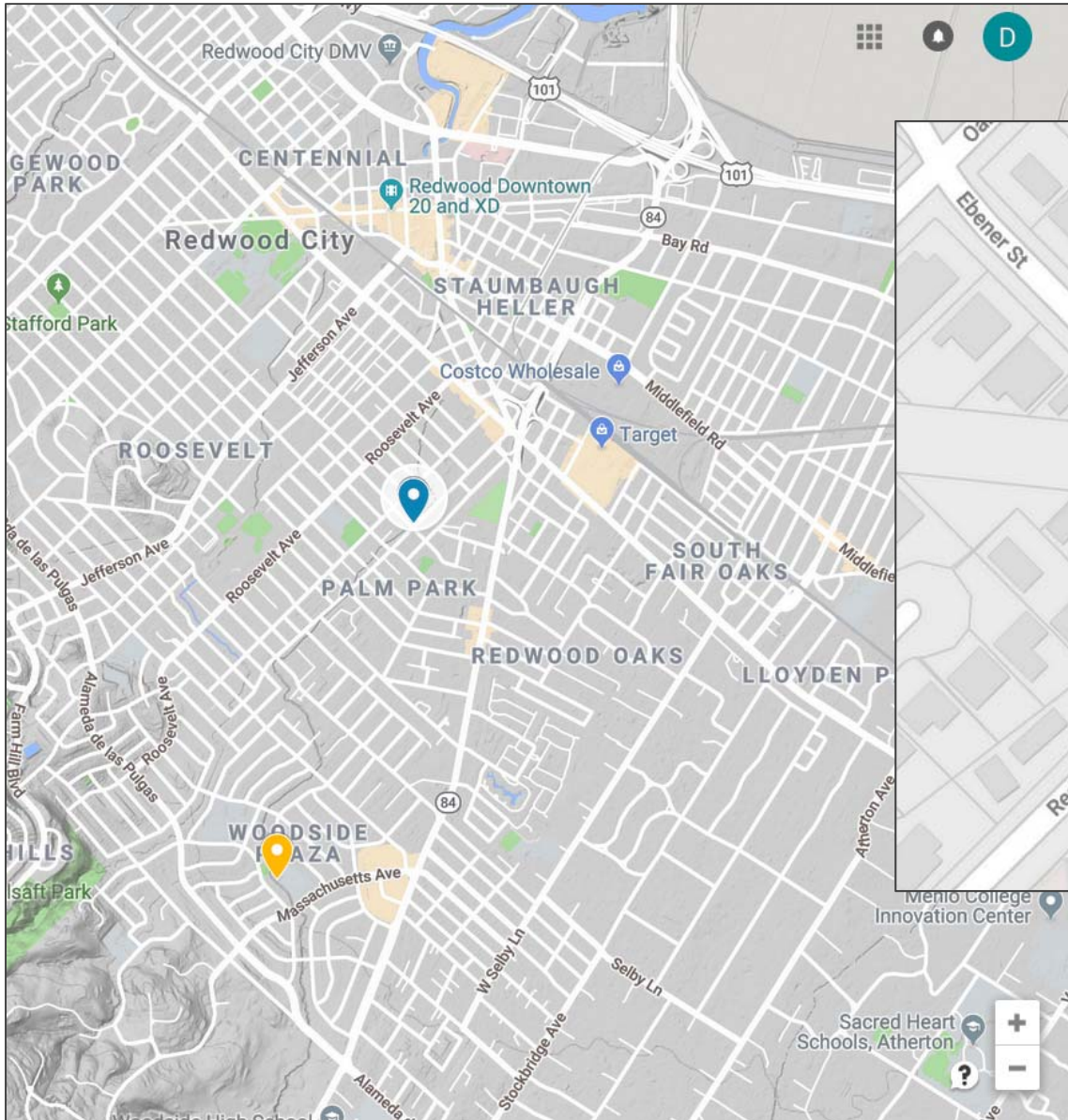
Upper Belmont Creek



Redwood Creek



Redwood Creek



Redwood Creek at Ebener St.



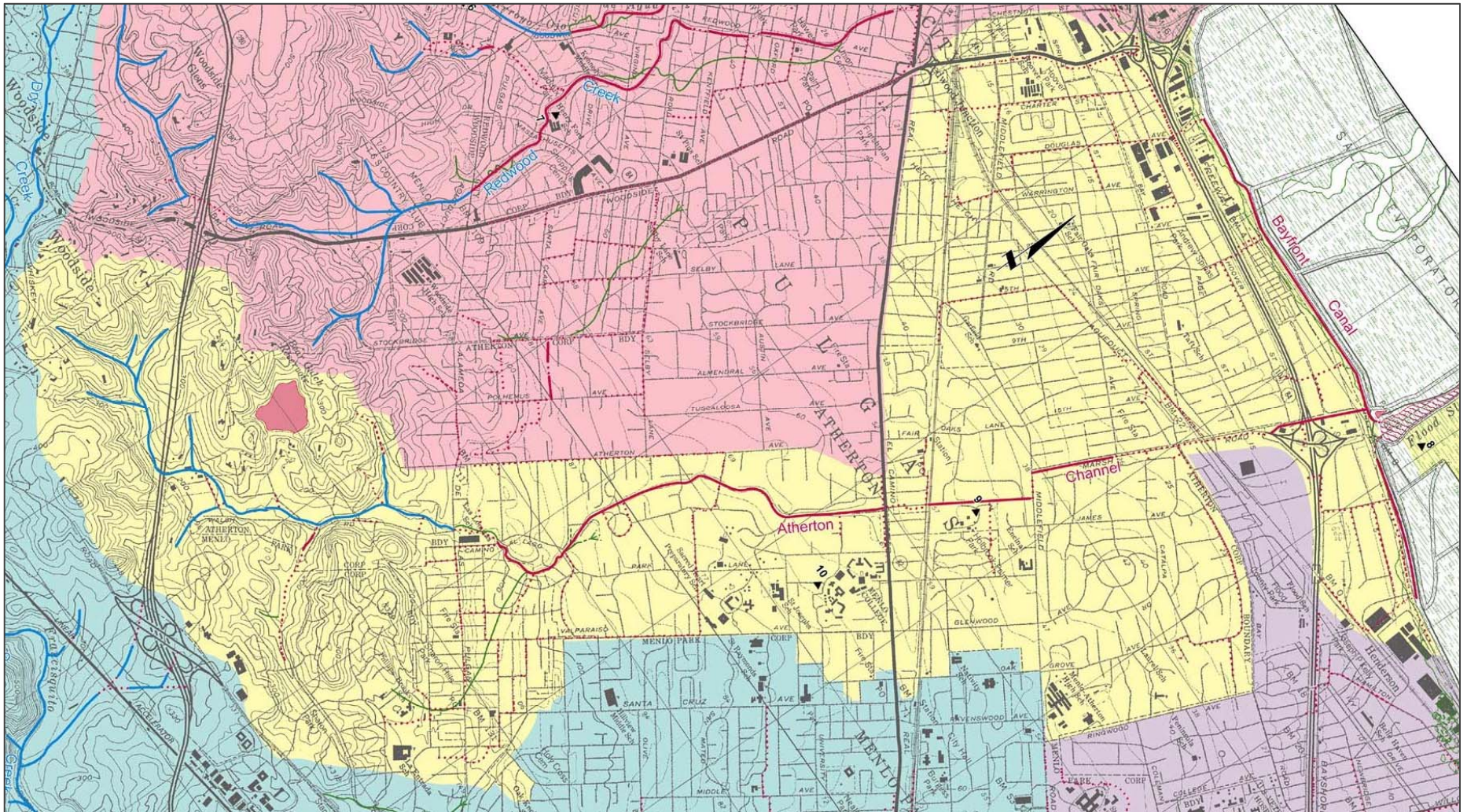
Redwood Creek at Ebener St.



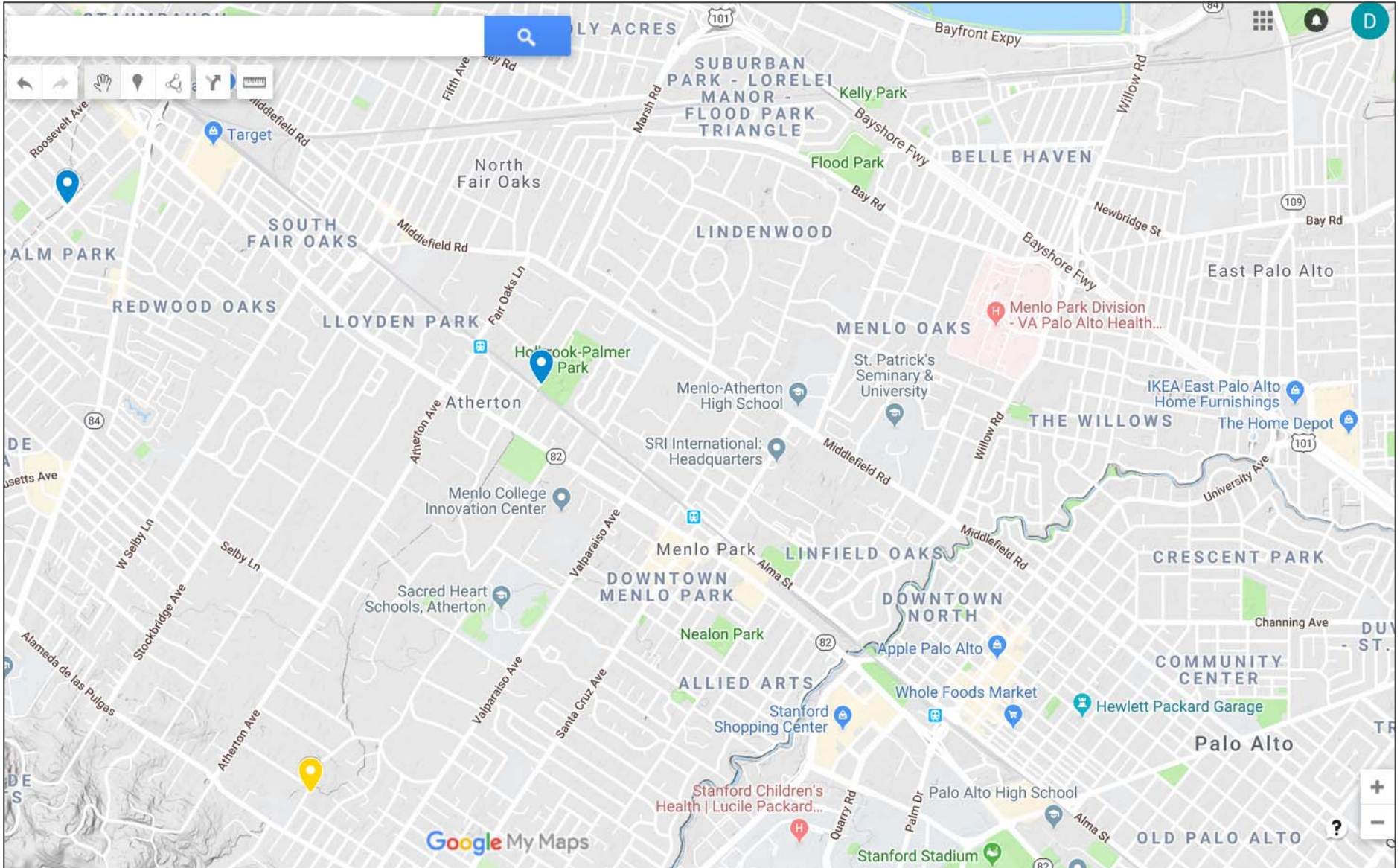
Redwood Creek at Henry Ford Elementary



Atherton Channel



Atherton Channel



Atherton Channel at Holbrook Park



Atherton Channel at Holbrook Park



Questions or comments?



Colma Creek at Orange Memorial Park