Marin City Stormwater Plan Update

MARIN COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

FLOOD ZONE 3 ADVISORY BOARD MEETING

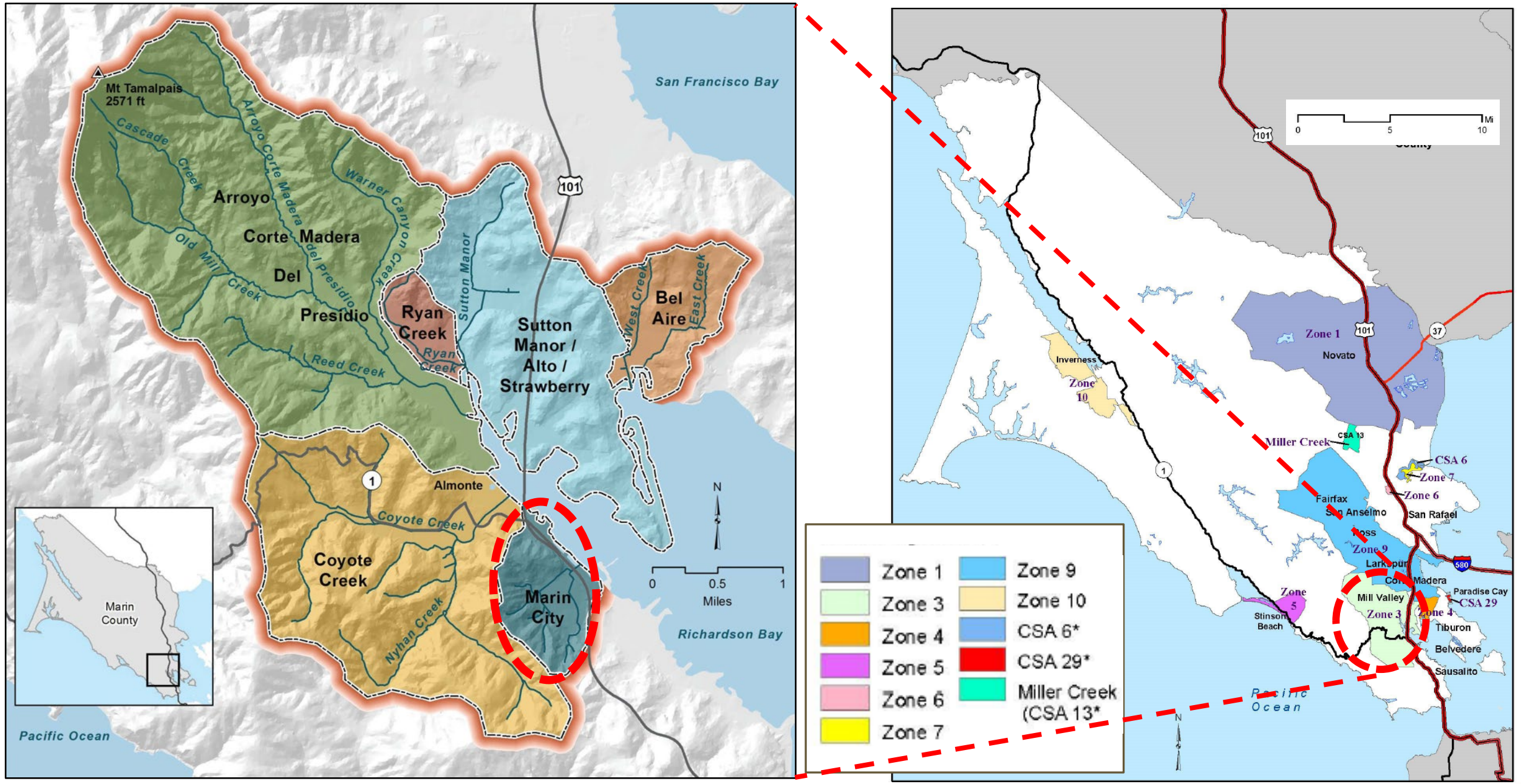
APRIL 9, 2024

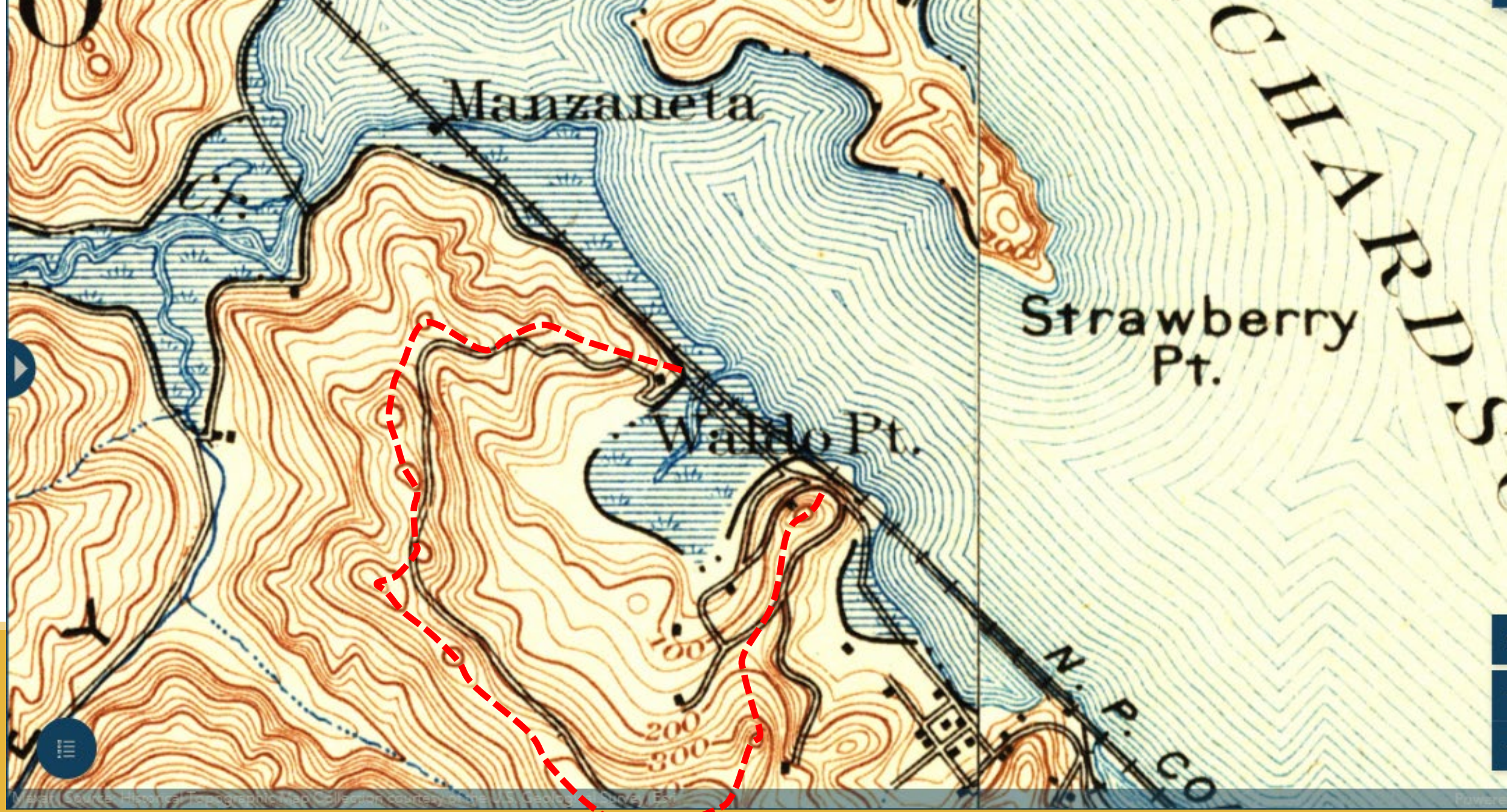
Judd Goodman, PE
Senior Civil Engineer

Agenda

- Setting
- Stormwater Plan Background
- Improvements
- Evaluation

Setting


Mt Tamalpais
2571 ft
Cascade Creek
Arroyo Corte Madera del Presidio
Warner Canyon Creek
Old Mill Creek
Arroyo
Corte Madera
Del
Presidio
Reed Creek
Ryan Creek
Ryan
Creek
Sutton Manor
Sutton
Manor /
Alto /
Strawberry
West Creek
East Creek
Bel
Aire
San Francisco Bay
101
Almonte
1
Coyote Creek
Coyote
Creek
Nyhan Creek
Marin
City
Richardson Bay
Pacific Ocean
Marin
County
N
0
0.5
1
Miles
Zone 1
Zone 3
Zone 4
Zone 5
Zone 6
Zone 7
Zone 9
Zone 10
CSA 6*
CSA 29*
Miller Creek
(CSA 13*
Inverness
Zone
10
Zone 1
Novato
37
Miller Creek
CSA 13
CSA 6
Zone 7
Zone 6
Fairfax
San Anselmo
San Rafael
Ross
Zone 9
Larkspur
Madera
Mill Valley
Zone 3
Zone 4
Paradise Cay
CSA 29
Tiburon
Belvedere
Sausalito
Zone
5
Stinson
Beach
580
Pacific
Ocean
0
5
10
Mi


Manzanita
Waldo Pt.
Strawberry
Pt.
CHARDS
N. P. R. R. Co.
100
200
300

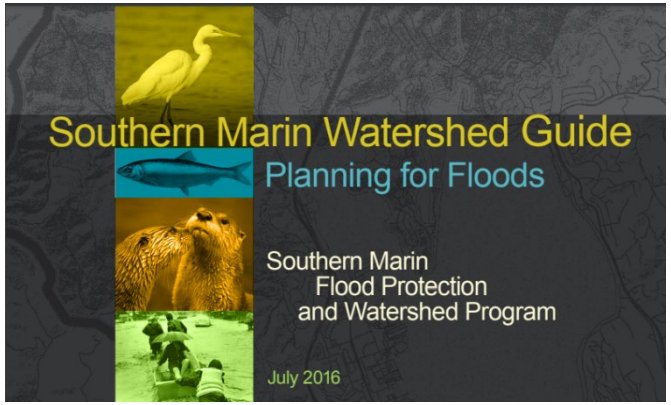

Almonte
Hawk Hill
Tamalpais Valley Junction
Manzanita
Kay Park
Farnwood Cemetery
Marin City
Gateway Shopping Center - Marin City
Marin View
Waldo Point Community
Richardson Bay
Waldo
Clipper Yacht Harbor - Sausalito
Martin Luther King Jr Park
Sausalito
Sausalito Shipyard And Marina
Marinship Park
Bay Model
Schoonmaker Point Marina
Bayside Elementary - Sausalito Marin City
Maxar | Esri, HERE, Garmin, GeoTechnologies, Inc.
Powered by Esri

History

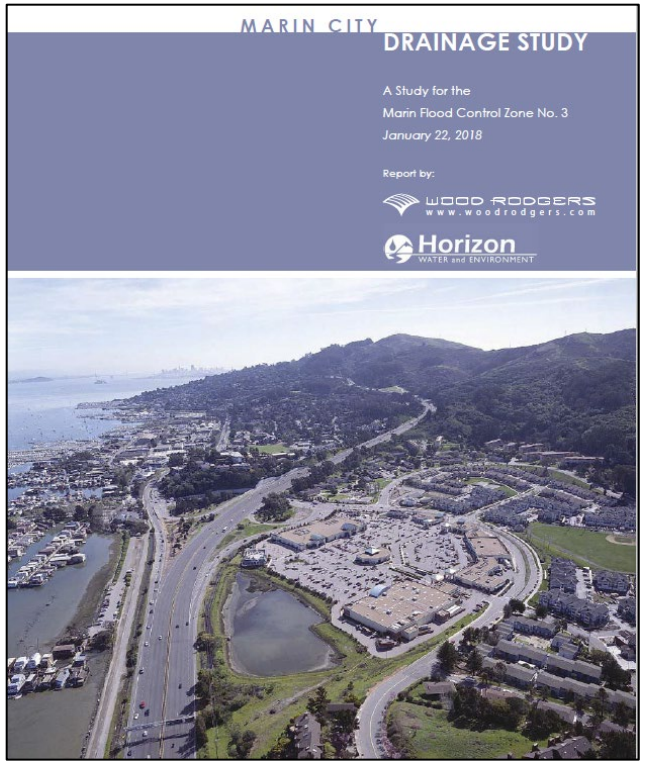
- Dairy Farm
- World War II Ship Building
  - 1942-1945
- Marin Housing Authority redevelopment
  - 1950s
- Community Services District
  - 1958
- Residential and commercial development
  - 1980s & 90s

Past Flooding and Actions

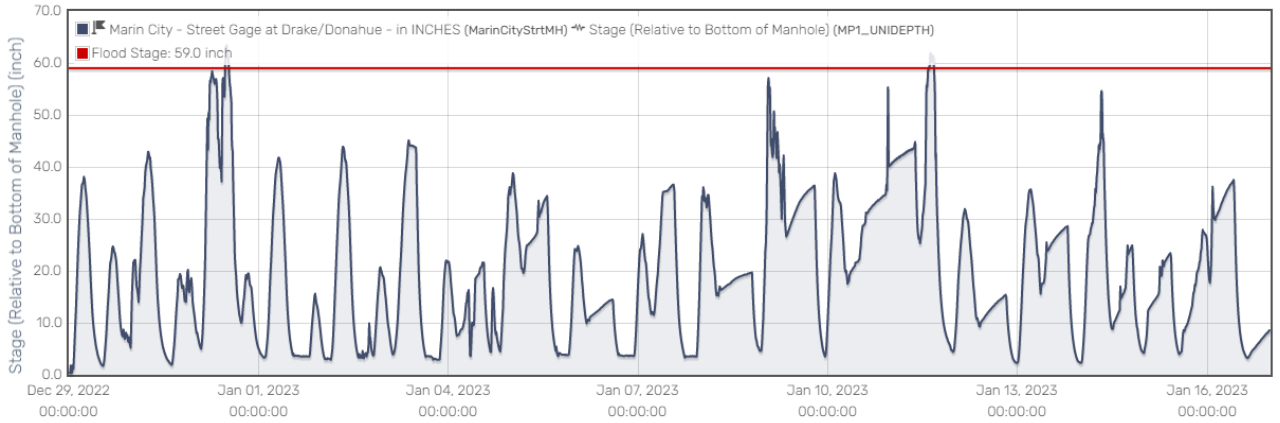
- **2014** →



- **2017** →

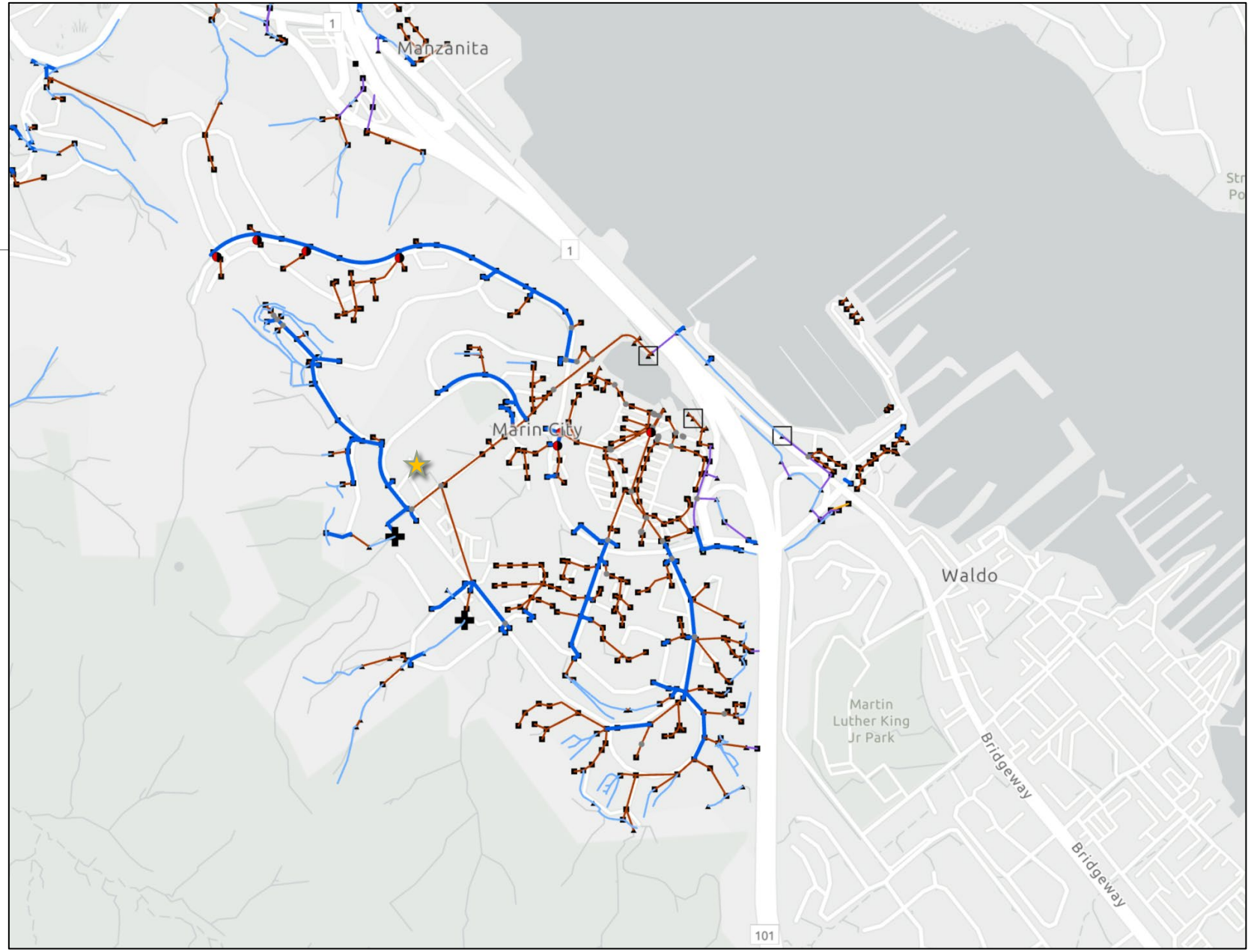


- **2021** →



Ownership

- Private 66%
- County 28%
- Caltrans 6%



Stormwater Plan Background

Stormwater Plan Purpose

- **Identify** flood and drainage issues
- **Recommend** and prioritize improvements to reduce flood risk with **community** input
- **Improve** effectiveness of flood management operations
- **Integrate** with Caltrans Planning
- **Attract** funding

Work Plan

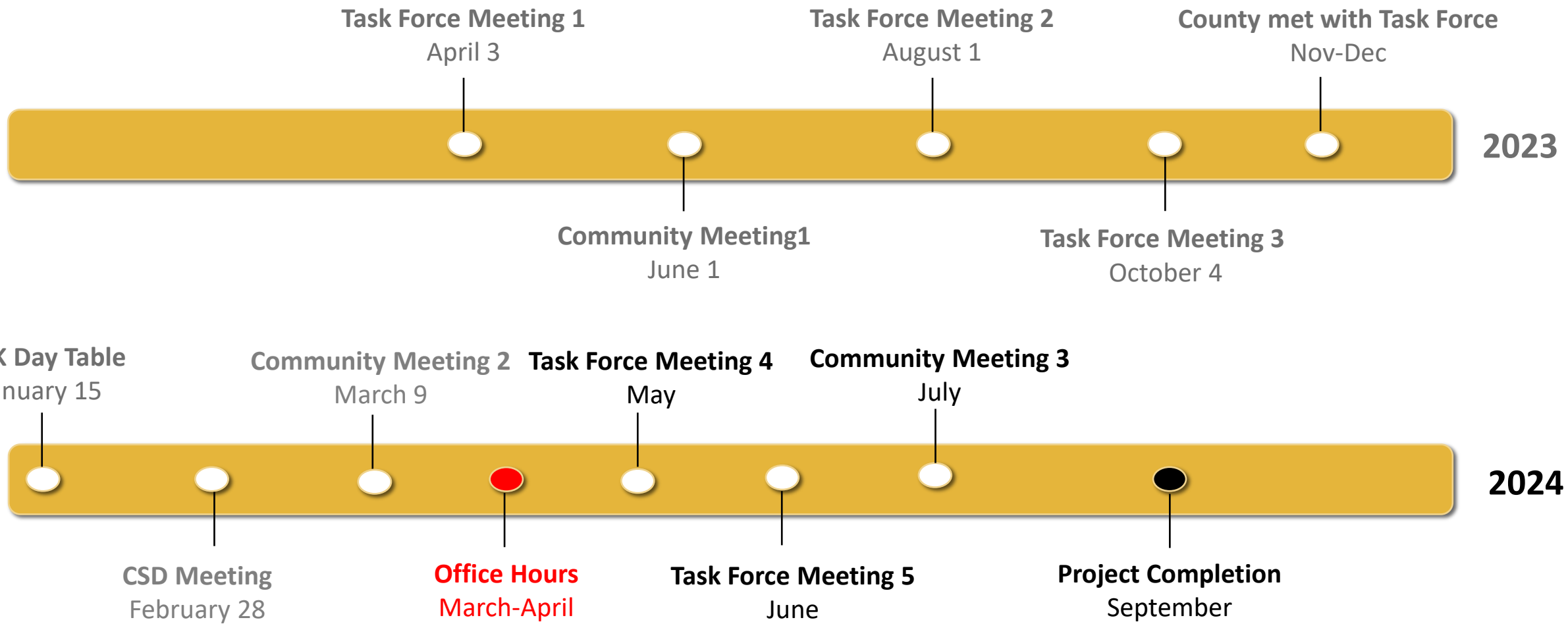
- **Collect Ideas/Data**
- **Modify model**
- **Analyze**
- **Recommend**
- **Prioritize**
- **Document**

COLLABORATE

Community Communication

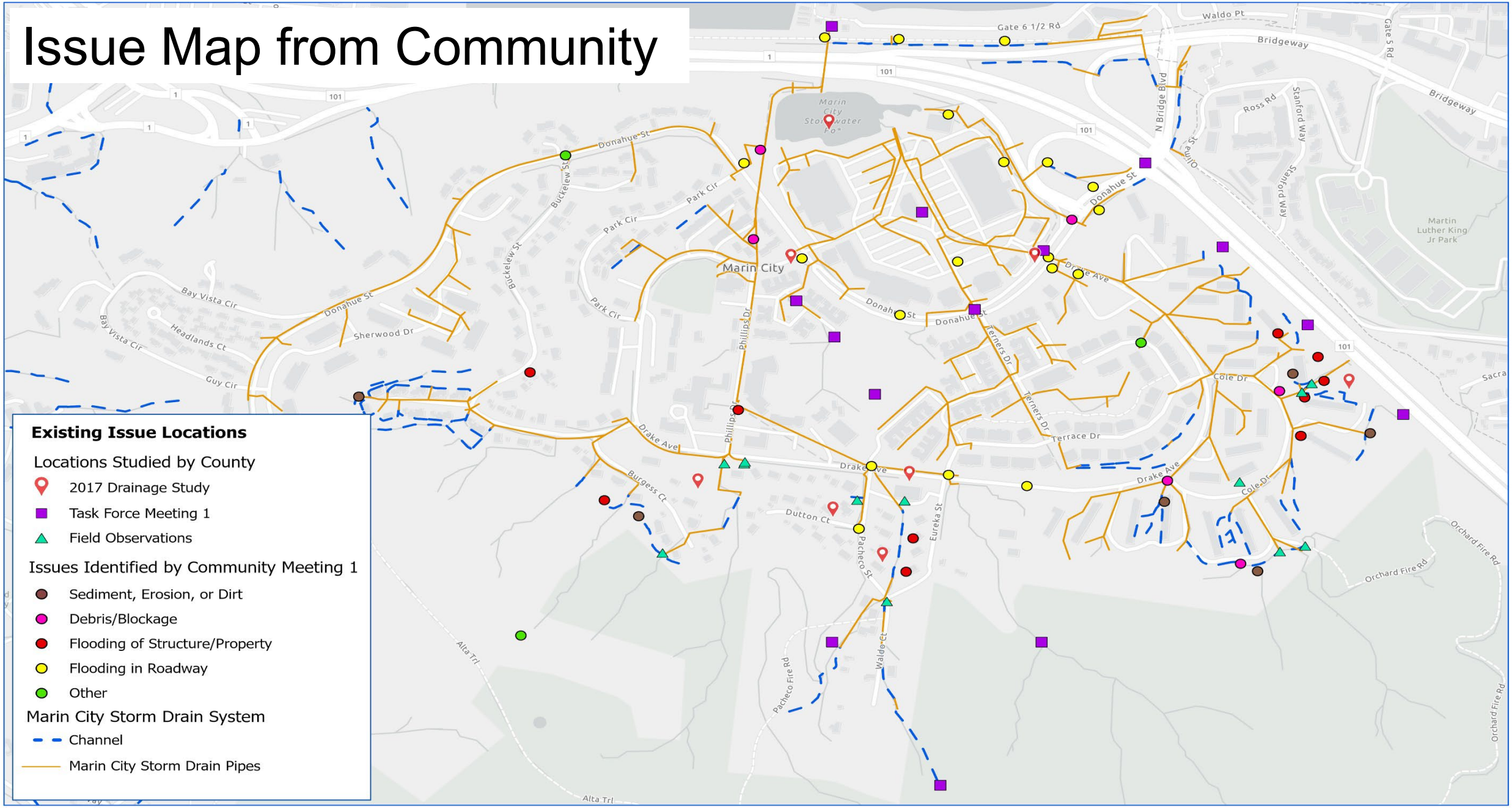
- 13 small outreach events
- 3 task force meetings
- 2 community meetings
- 1 CSD meeting

Timeline


Task Force Meeting 1
April 3
Task Force Meeting 2
August 1
County met with Task Force
Nov-Dec
2023
Community Meeting1
June 1
Task Force Meeting 3
October 4
MLK Day Table
January 15
Community Meeting 2
March 9
Task Force Meeting 4
May
Community Meeting 3
July
2024
CSD Meeting
February 28
Office Hours
March-April
Task Force Meeting 5
June
Project Completion
September

Improvements

Issue Map from Community

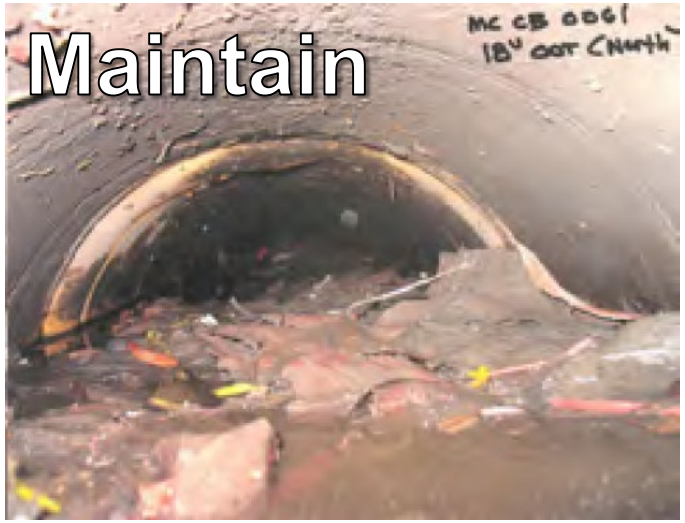


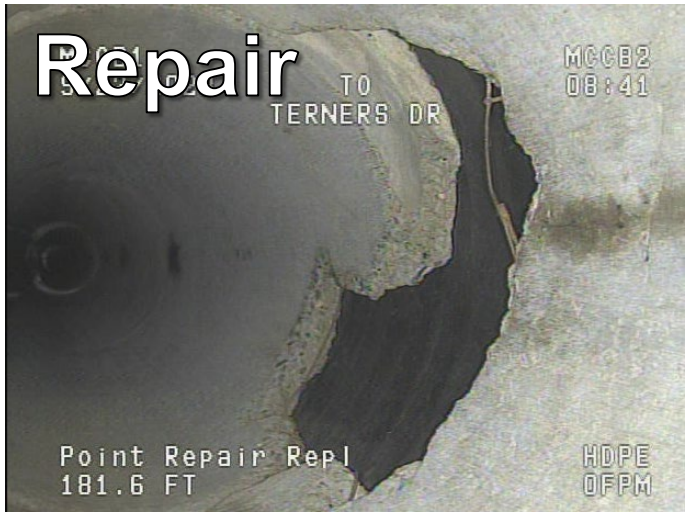
Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

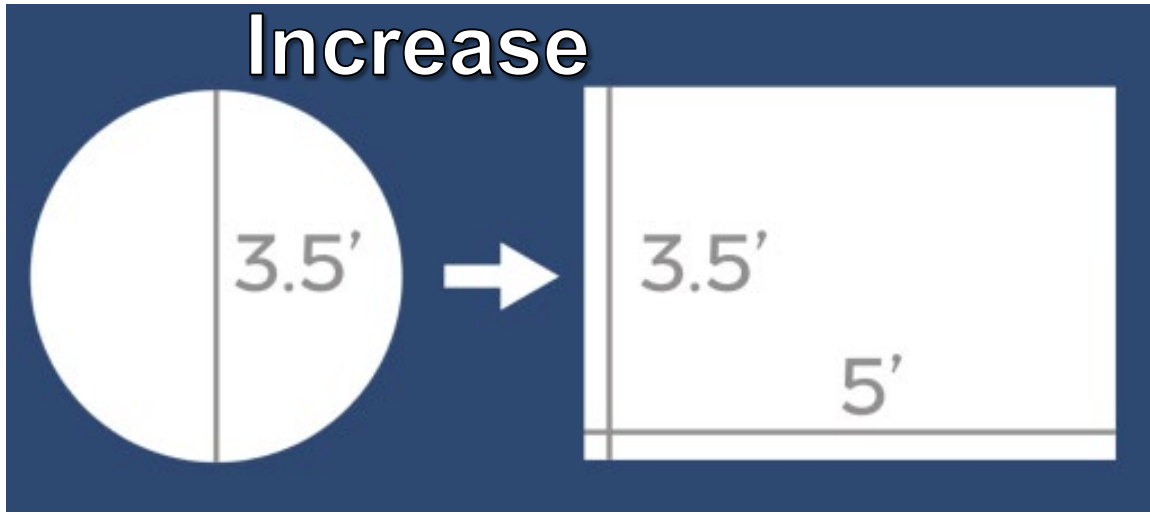
0 200 400 Feet

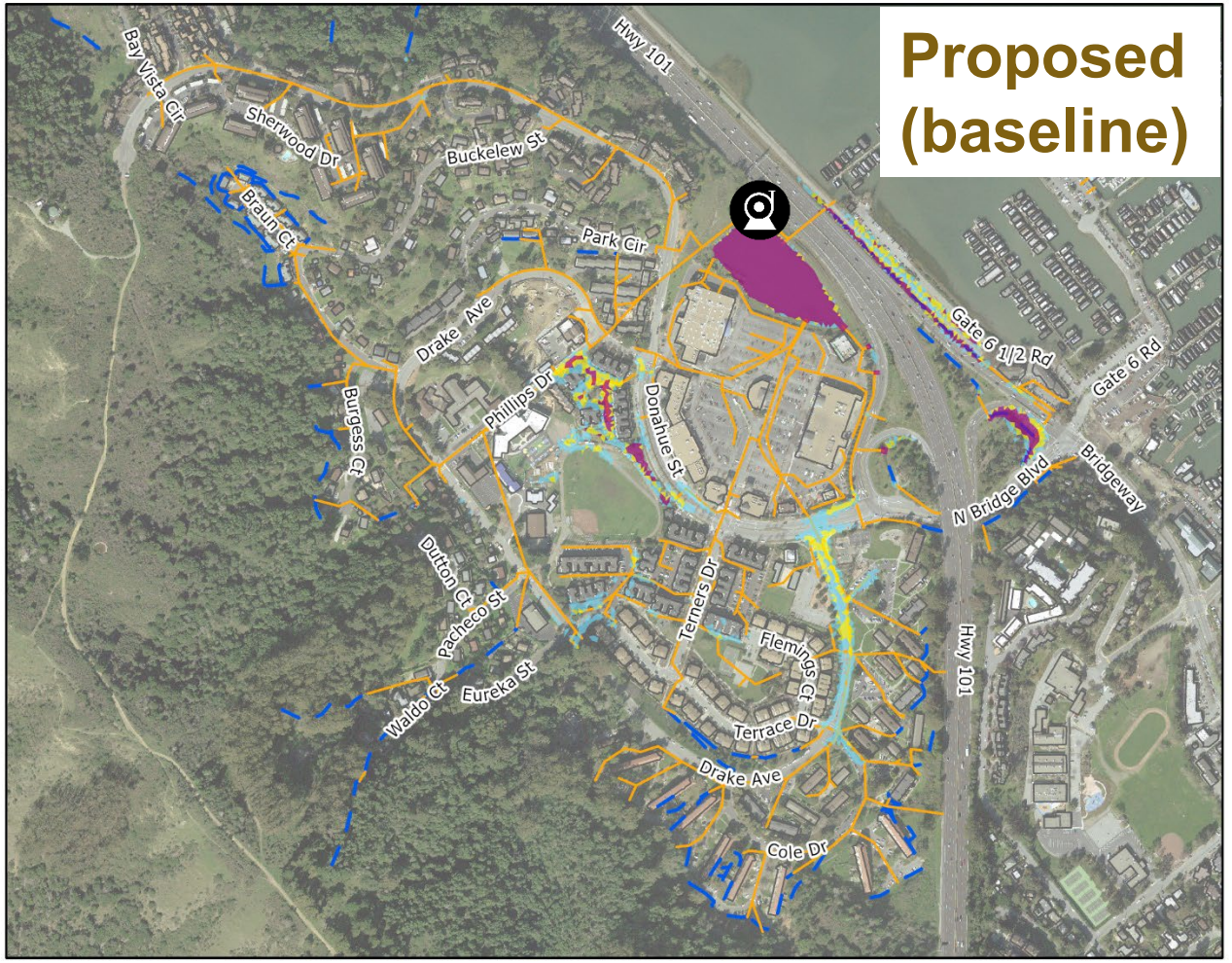
Drainage and Flooding Issue Map

Improvement Types







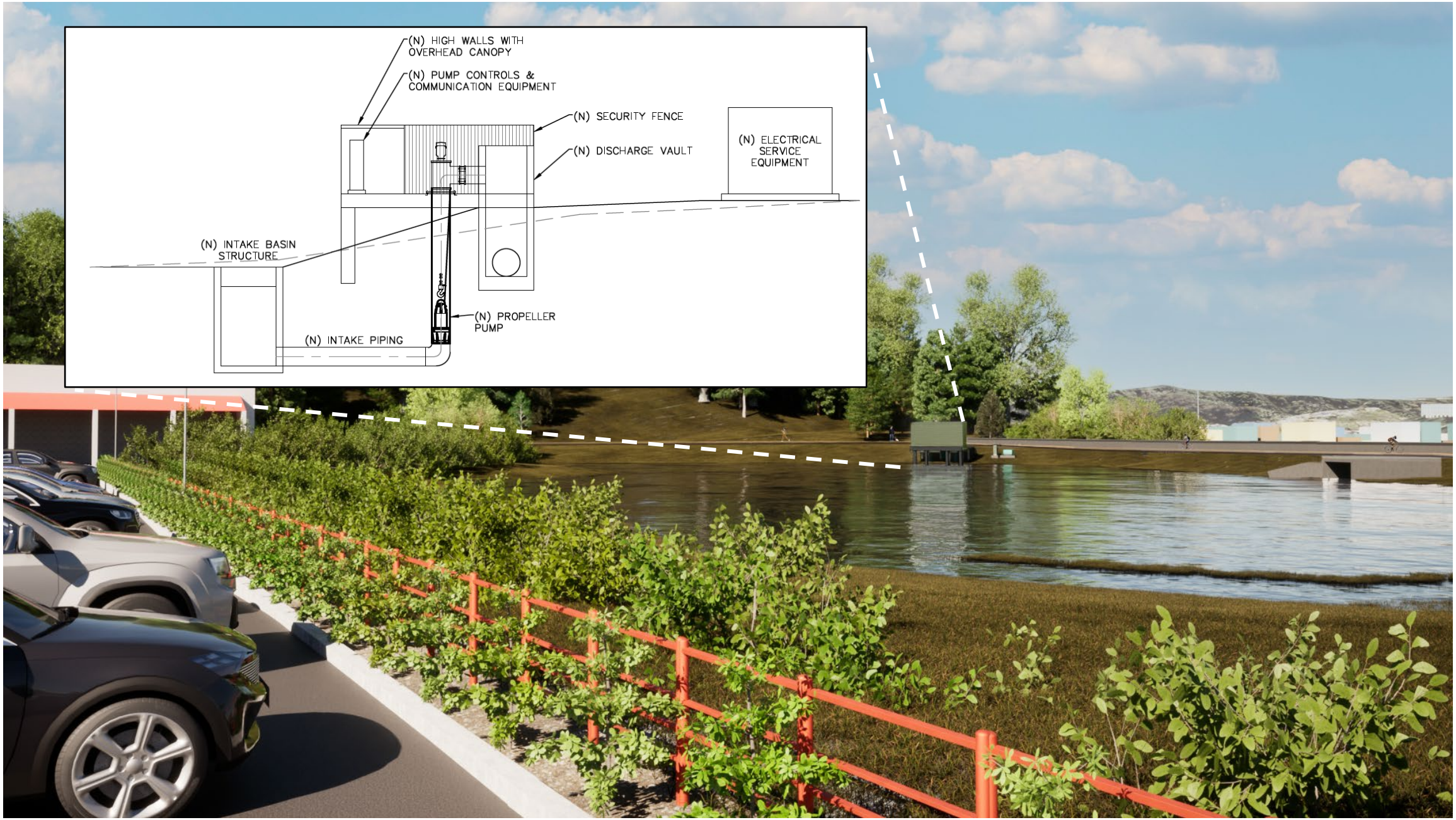


Flood Risk Reduction

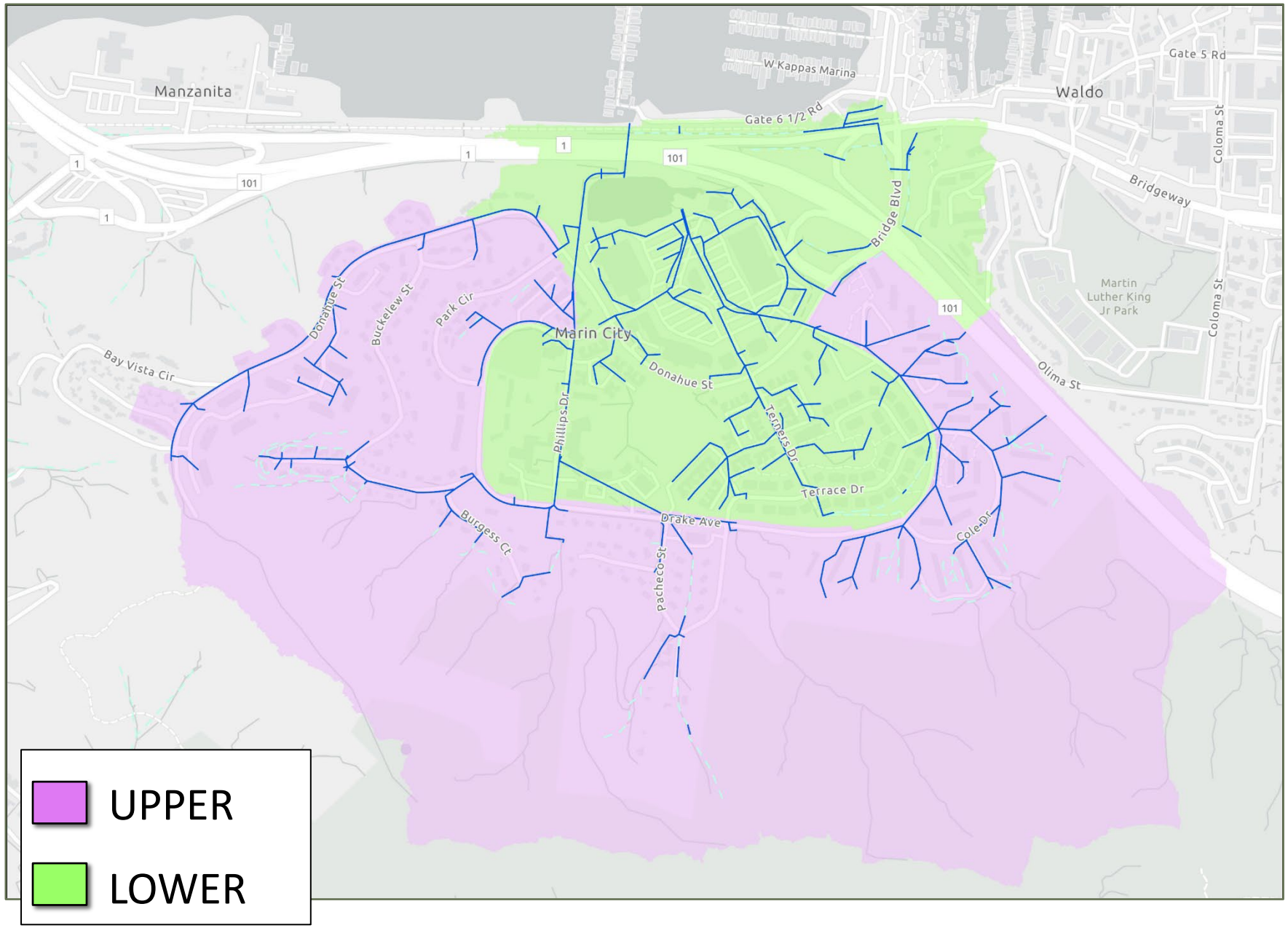
Flood Depth (Ft)

- 0.1 - 0.5
- 0.5 - 1
- > 1

- Channel
- Pipe


(N) HIGH WALLS WITH OVERHEAD CANOPY
(N) PUMP CONTROLS & COMMUNICATION EQUIPMENT
(N) SECURITY FENCE
(N) DISCHARGE VAULT
(N) ELECTRICAL SERVICE EQUIPMENT
(N) INTAKE BASIN STRUCTURE
(N) PROPELLER PUMP
(N) INTAKE PIPING

Upper vs Lower Watershed



Lower Watershed Concepts

- Drake Pipe Upsize and Increase Inlet Capacity
- Bypasses
  - Donahue Full Bypass
  - Drake Partial Bypass to Pond
  - Drake Partial Bypass to Bay
- Drake and Donahue Street Raising
- Drake Watershed Detention
- New Outfall
- Maintenance & Repair!

Drake Pipe Upsize and Increase Inlet Capacity

Marin City Pond Flood Reduction Project (under design, construction 2026)

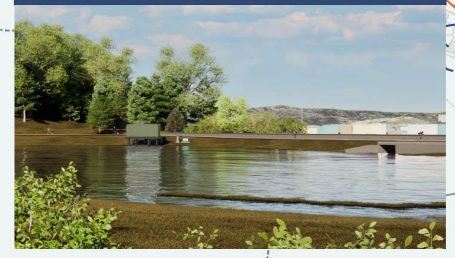
New inlets with increased capacity

- Marin City Storm Drain Pipe
- Channel
- Proposed Improvement Pipe

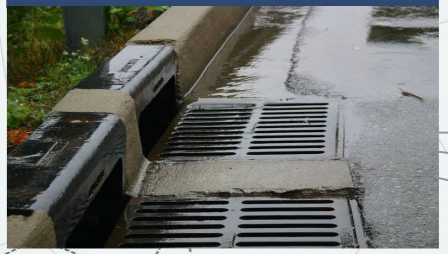
New upsized pipe

Donahue Full Bypass to Bay

Marin City Pond Flood Reduction Project (under design, construction 2026)



New inlets with increased capacity



~1,600 feet of **new** 5-foot by 3-foot box pipe to Bay outfall

New Bay Outfall

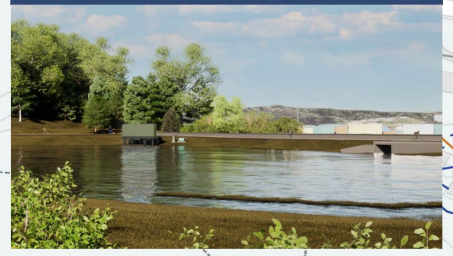
Phased pumping for future resilience

New upsized pipe

- Marin City Storm Drain Pipe
- Channel
- Proposed Improvement Pipe
- Alternate Alignments for Improvement Pipe

Drake Partial Bypass to Pond

Marin City Pond Flood Reduction Project (under design, construction 2026)



Bypassed flows are conveyed in existing 2-ft pipe to pond

New inlets with increased capacity

135 feet of upsized 2-foot to 3-foot pipe

Phased pumping for future resilience

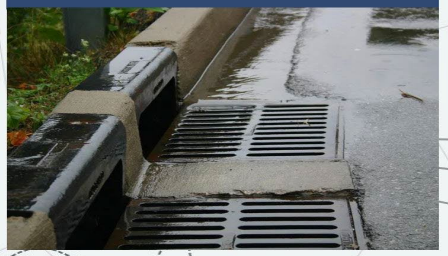
New upsized pipe

- Marin City Storm Drain Pipe
- Channel
- Proposed Improvement Pipe
- Alternate Alignments for Improvement Pipe

Drake Partial Bypass to Bay

Marin City Pond Flood Reduction Project (under design, construction 2026)

New inlets with increased capacity



~1,600 feet of **new** 5-foot by 3-foot box pipe to Bay outfall

New Bay Outfall

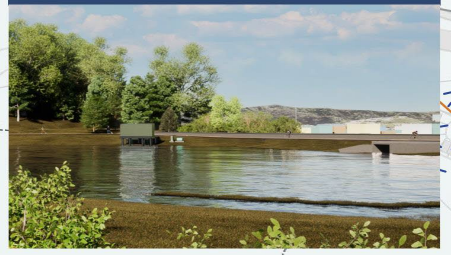
Phased pumping for future resilience

New upsized pipe

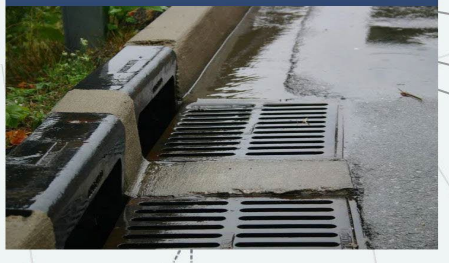
- Marin City Storm Drain Pipe
- Channel
- Proposed Improvement Pipe
- Alternate Alignments for Improvement Pipe

Drake Watershed Detention

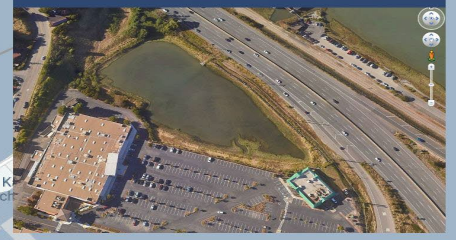
Marin City Pond Flood Reduction Project (under design, construction 2026)



New inlets with increased capacity



Above ground detention site



Possible underground detention sites

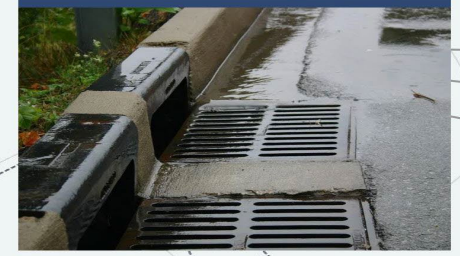
New upsized pipe

- Marin City Storm Drain Pipe
- Channel
- Proposed Improvement Pipe
- Possible Underground Detention Site

Drake and Donahue Street Raising

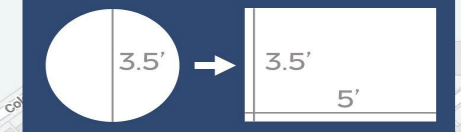
Marin City Pond Flood Reduction Project (under design, construction 2026)

New inlets with increased capacity



Raised roadway

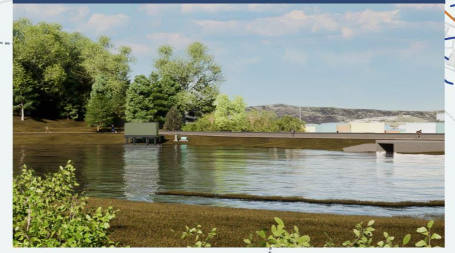
New upsized pipe



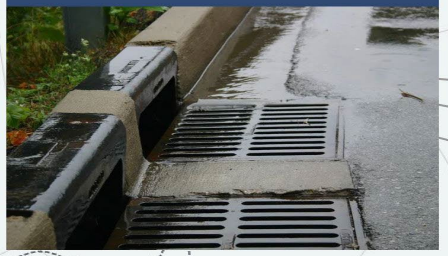
- Marin City Storm Drain Pipe
- Channel
- Proposed Improvement Pipe

New Outfall to Bay

Marin City Pond Flood Reduction Project (under design, construction 2026)



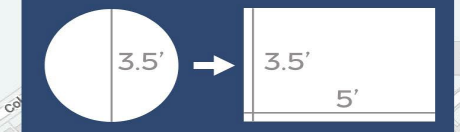
New inlets with increased capacity



New Bay outfall with flap gate (Caltrans)

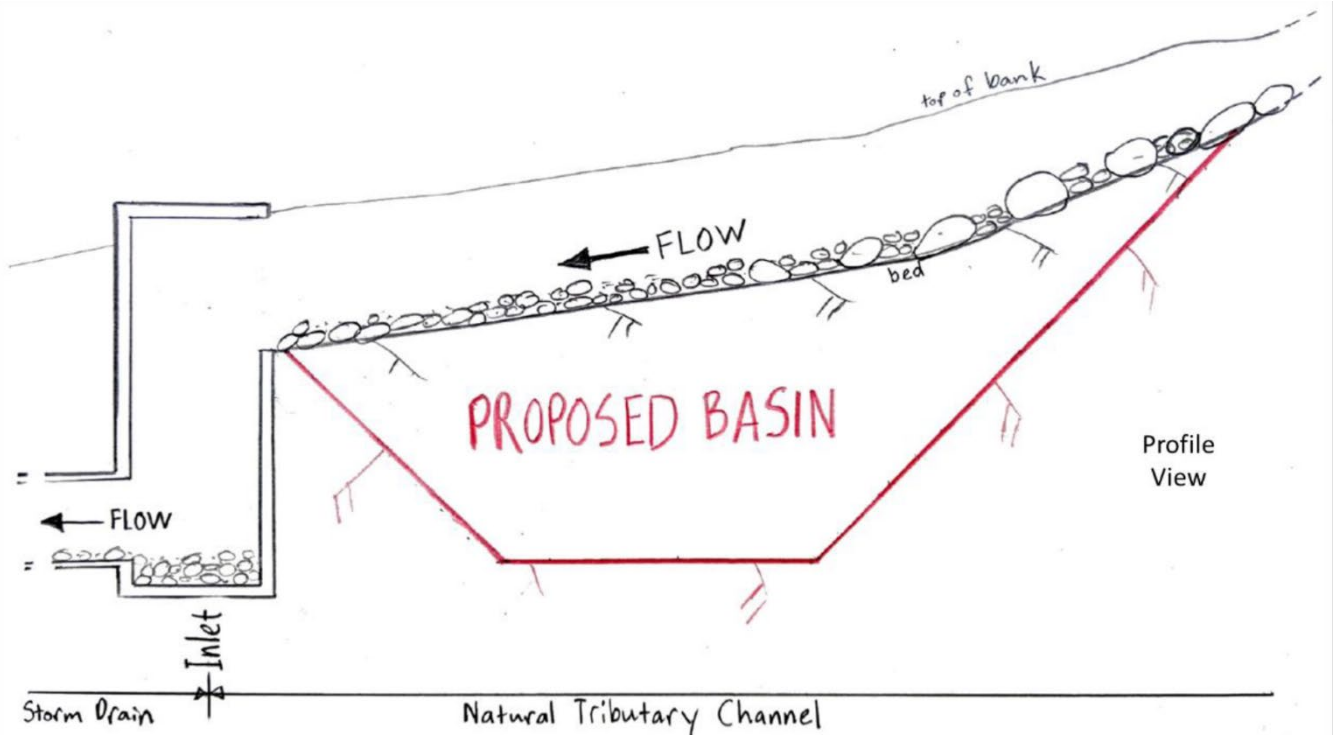
- Marin City Storm Drain Pipe
- Channel
- Proposed Improvement Pipe
- Alternate Alignments for Improvement Pipe

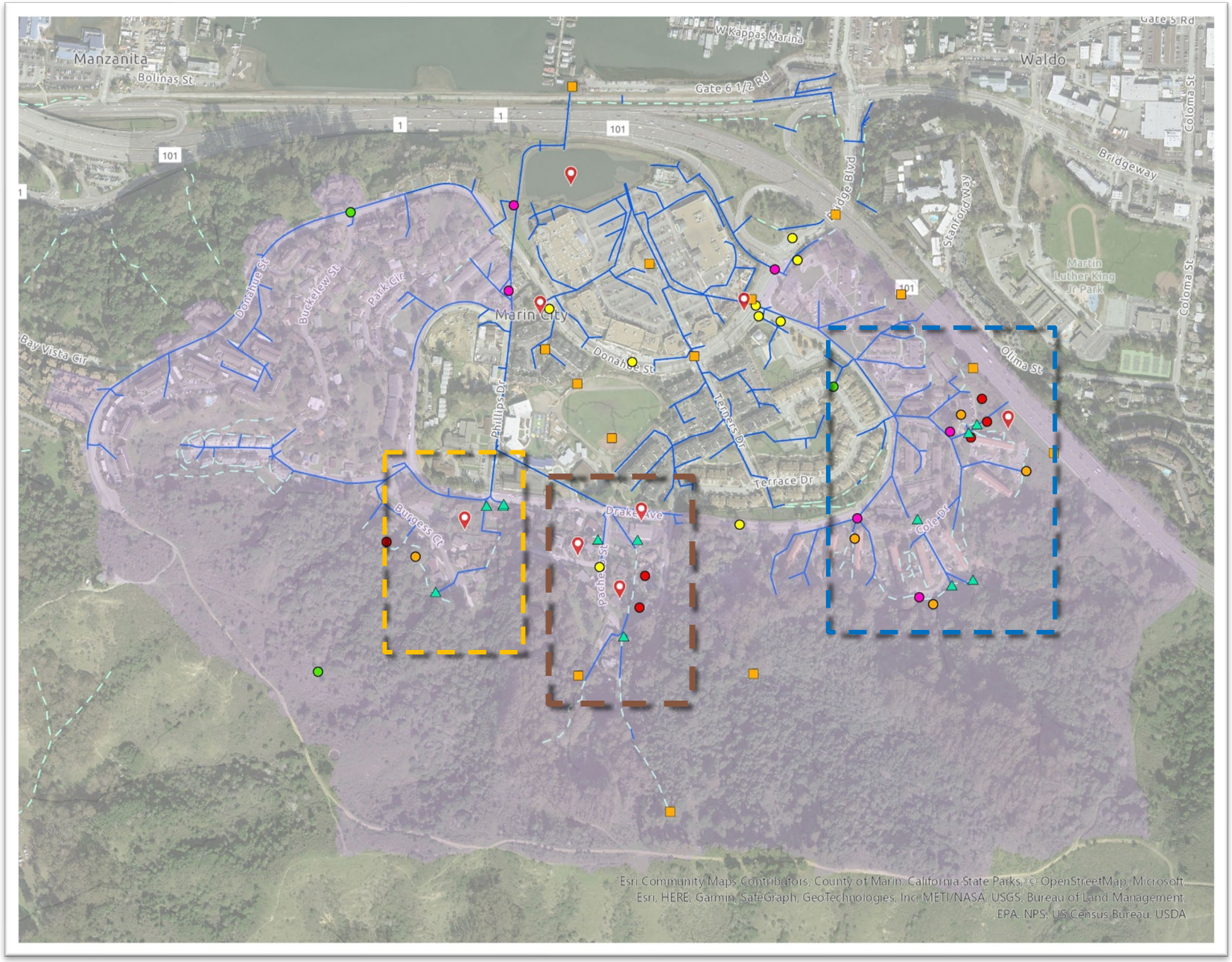
New upsized pipe



Upper Watershed Concepts

- Improve trash racks
- Increase inlet capacity
- Connect hillside drainage
- Hillside Management
- Sediment Basins
- Maintenance & Repair!





A. Burgess and Phillips/Drake Staircase

B. Eureka / Pacheco Ditch

C. Hillside Drainage / Cole Drive

Evaluation

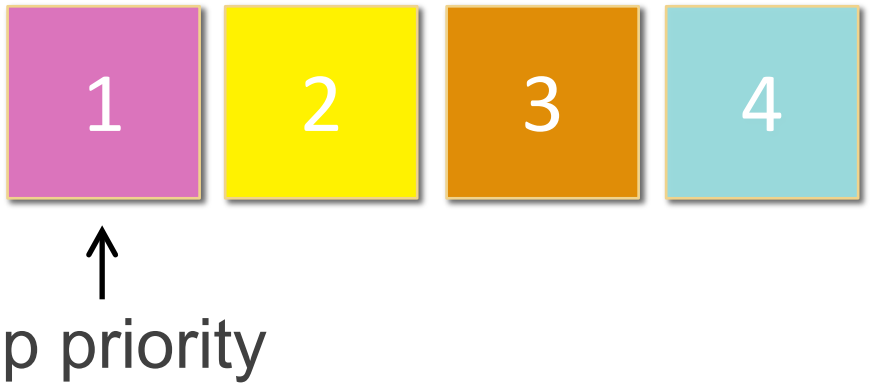
Criteria

- Flood management effectiveness
- How can this improve the entrance/exit to Marin City?
- Does this reduce flooding near our homes and buildings?
- Climate change resiliency
- What is the impact on our community's health?
- Will this project affect our plants, air, trees, water, etc.?
- Will this increase access to our recreational areas?
- Can the project be combined with green infrastructure features?
- How will this impact our community during construction?

Criteria Weight

- Online Survey
  - https://www.surveymonkey.com/r/MarinCityTaskForceSurvey

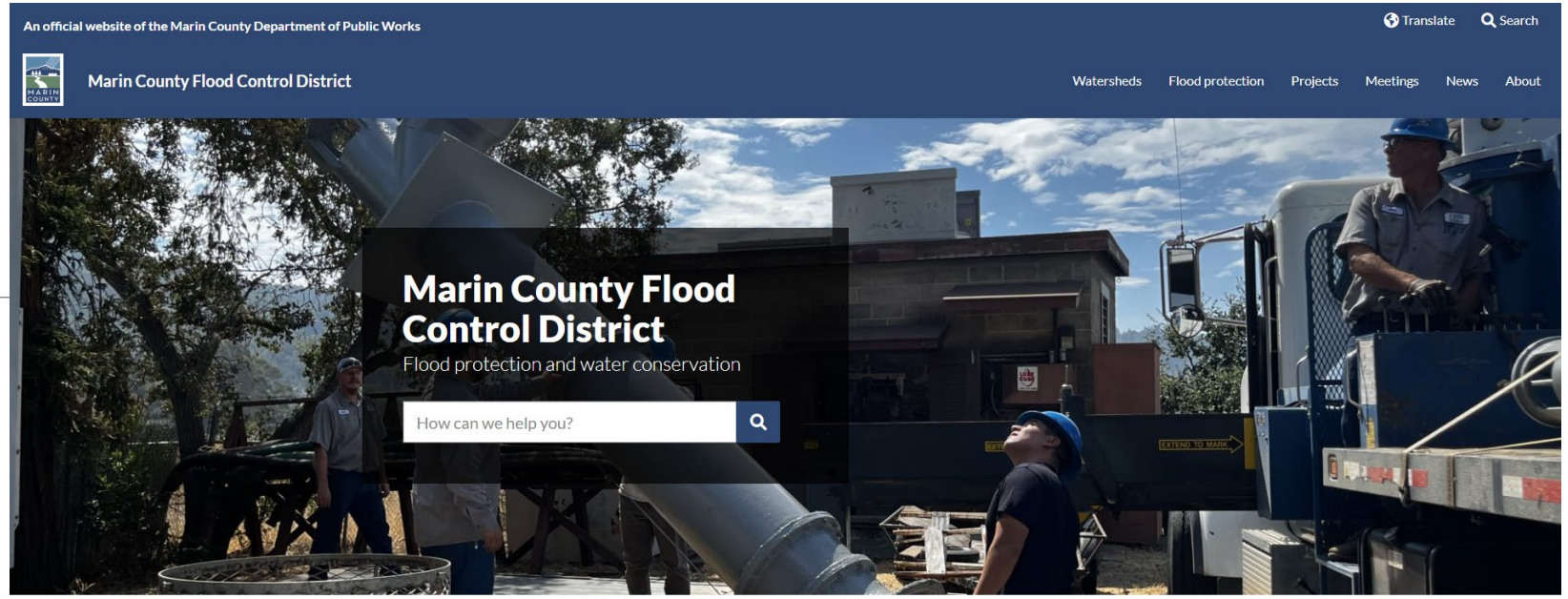
- Community Meeting Exercise
  - Place cards in appropriate bin:



Mock Report Card

PROJECT CONCEPT	COMMUNITY CRITERIA			Overall / Grade Point Average
	Flood Control	Environmental & Community Health	Construction Impact	
Units/Credits/ Weight	12	6	4	22
#1	B	B	C	2.8
#2	A	C	D	2.9
#3	C	A	B	2.7

Thank You!



- Website
  - https://marinflooddistrict.org/marin-city-stormwater-plan/
- Email
  - MarinCityStormwaterPlan@marincounty.org
- Office Hours
  - Thursdays, 5 pm @ Marin City CSD

Question & Answer

Marin City Pond Pump Station

Description

- Outlet for entire watershed
- New Pump Station (50 cfs)
- Improve entrance/exit of City

Schedule

- Design & Permitting = April 2025
- Construction = Summer 2026

Cost

- ~$10 Million