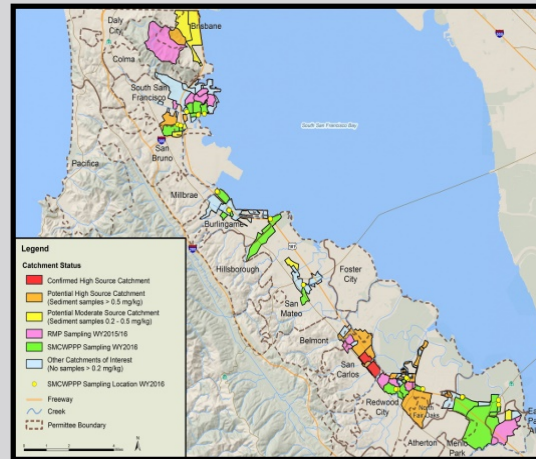


Identifying Management Areas and Controls for PCBs in San Mateo County Stormwater



Jon Konnan - EOA, Inc.
C/CAG Stormwater Committee

March 16, 2017

PCBs Load Reduction Requirements

- Stormwater Runoff
 - 14,400 g – MRP Permittees (TMDL)
 - 3,000 g – MRP Permittees (MRP 2.0)
 - 370 g – SM County Permittees (MRP 2.0)



MRP PCBs Load Reduction Requirements

- San Mateo County reductions
 - 370 g/year PCBs by end of permit term
 - 60 g/year by June 30, 2018
 - 15 g/year via GI by end of permit term
 - 6 g/year mercury via GI by end of permit term



Chronological

PCBs Load Reduction (g/yr)	Timeline
60	by June 30, 2018
247	total credit for demo program if each agency implements (July 2019)
63	additional by the end of the permit term
370	total by end of permit term



How far does GI get us?

Permit Term	Fiscal Years	PCBs Load Reduction (g/yr)	Comments
Early MRP 1.0	FY09-10 to FY11-12	5	Partial credit?
Late MRP 1.0	FY12-13 to FY14-15	15	Full credit?
MRP 2.0	FY15-16	5	Full credit
	FY16-17	13	Full credit
	FY17-18	13	Full credit
	FY18-19	1	Full credit
	FY19-20	4	Full credit, includes projects dated "future"



All load reduction numbers are preliminary

How Far Do GI + Demo Program Get Us?

San Mateo County Permittee	Preliminary PCBs Load Reductions (grams/year)						
	1	2	3	4	5	6	7
	Projected by June 2018 via GI	Required by All Controls by June 2018	Projected by End of Permit Term via GI	Required by GI by End of Permit Term	Credit for PCBs Demo Program by July 2019	Projected by End of Permit Term via GI + Demo Program Credit	Required by All Controls by End of Permit Term
Atherton	0.0	0.7	0.0	0.2	2.9	3.0	4.4
Belmont	0.2	2.7	0.3	0.7	11.0	11.3	16.5
Brisbane	0.7	0.4	0.7	0.1	1.8	2.6	2.7
Burlingame	0.5	3.0	1.3	0.7	12.3	13.6	18.4
Colma	0.3	0.2	0.3	0.0	0.8	1.1	1.1
Daly City	5.7	4.6	6.0	1.1	18.8	24.8	28.1
East Palo Alto	0.9	2.9	1.0	0.7	12.0	13.0	18.0
Foster City	0.8	3.2	0.8	0.8	13.0	13.8	19.5
Hillsborough	0.0	1.1	0.0	0.3	4.6	4.6	6.9
Menlo Park	4.5	3.3	4.5	0.8	13.6	18.2	20.4
Millbrae	0.0	2.2	0.0	0.6	9.2	9.2	13.7
Portola Valley	0.0	0.5	0.0	0.1	1.9	1.9	2.8
Redwood City	13.9	8.0	15.2	2.0	32.7	47.9	49.0
San Bruno	0.8	4.3	0.8	1.1	17.5	18.3	26.2
San Carlos	3.9	2.9	3.9	0.7	12.1	16.0	18.1
City of San Mateo	4.8	10.1	4.9	2.5	41.4	46.3	62.1
Unincorporated SM County	1.7	2.9	1.8	0.7	12.0	13.7	17.9
South San Francisco	7.2	6.6	9.2	1.6	27.1	36.3	40.6
Woodside	0.0	0.5	0.0	0.1	2.3	2.3	3.4
Total	45.9	60.0	50.7	15.0	247.0	297.7	370.0

Potential Source Properties

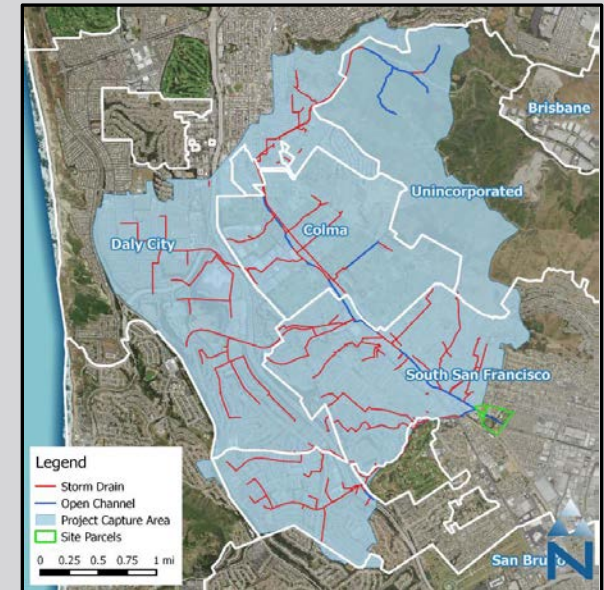
Location	Description	Acreage	PCBs Load Reduction Credit (g/year)	
			Referral	Abatement
Burlingame	Hoover Elementary - assumed acreage	2.00	4	8
Daly City	Bayshore Elementary	2.12	4	9
EPA	Romic - high PCBs near surface but low ROW sample	12.60	25	51
Menlo Park	Tyco - assume only part of acreage is actual source?	58.00	117	234
Redwood City	Tyco - 2201 Bay Rd. 3 acres. Currently in GI database so zero here	0.00	0	0
San Carlos	977 and 1007-1011 Bransten Road	3.06	6	12
San Carlos	Delta Star	5.60	11	23
San Carlos	Tiegel - assumed acreage	2.00	4	8
San Carlos	Industrial Rd site	1.28	3	5
SSF	CALTRANS / SSF MAINTENANCE STATION	1.28	3	5
EPA	391 Demeter - "many acres" - assumed 5	5.00	10	20
Total			187	375

Referrals – 50% credit at time of referral with enhanced O&M implemented in vicinity of site.

All site areas and load reduction numbers are preliminary. Totals represent a highly optimistic upper bound.

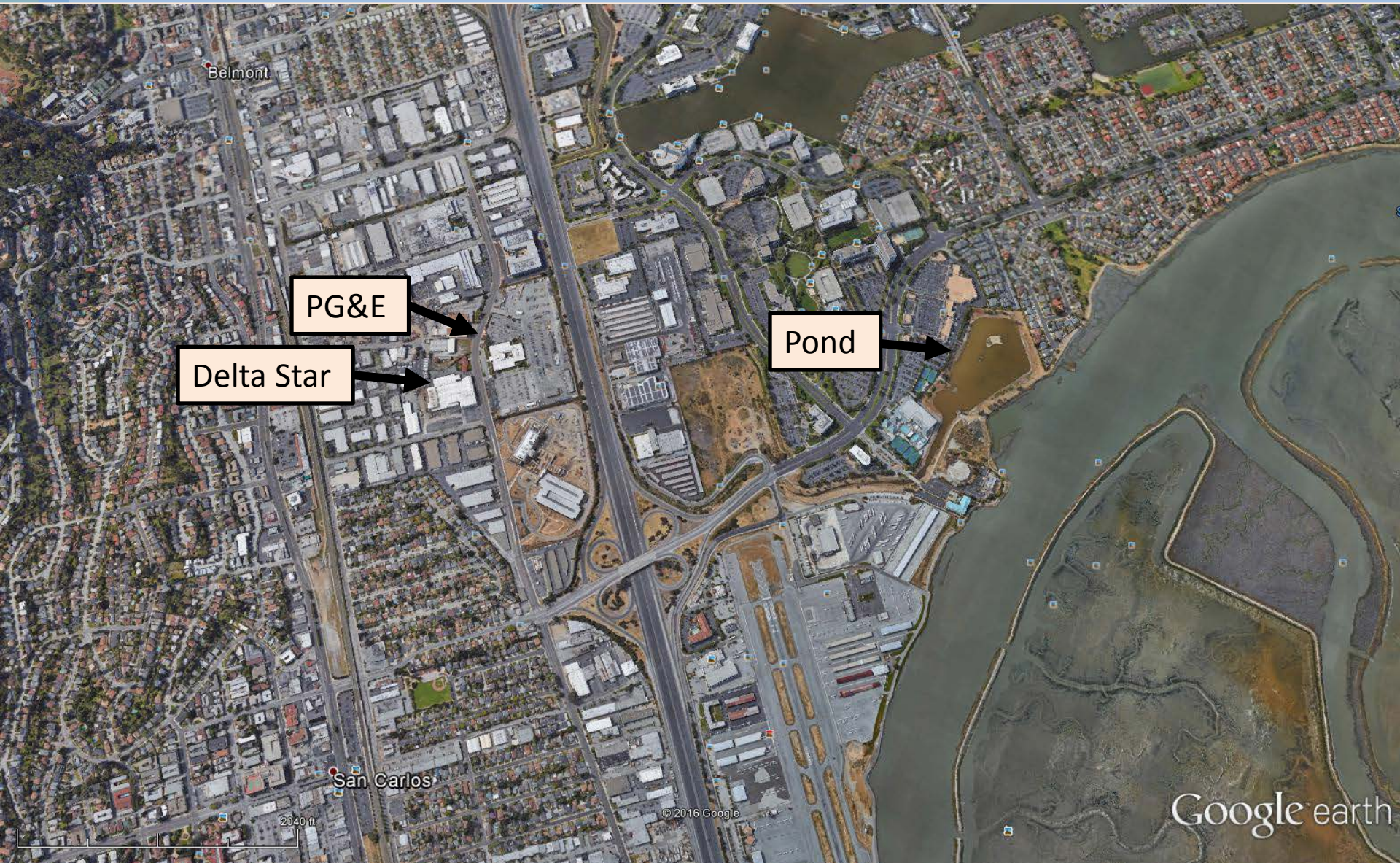
Other Possible Controls

Control	PCBs Load Reduction (g/yr)
San Carlos diversion to POTW	<5
Orange Memorial Park infiltration basins (Phase I)	<2
Others (e.g., channel desilting, CalWater tank, Redwood Shores pond)	?



All load reduction numbers are preliminary

Redwood Shores Ecological Preserve



Belmont

PG&E

Delta Star

Pond

San Carlos

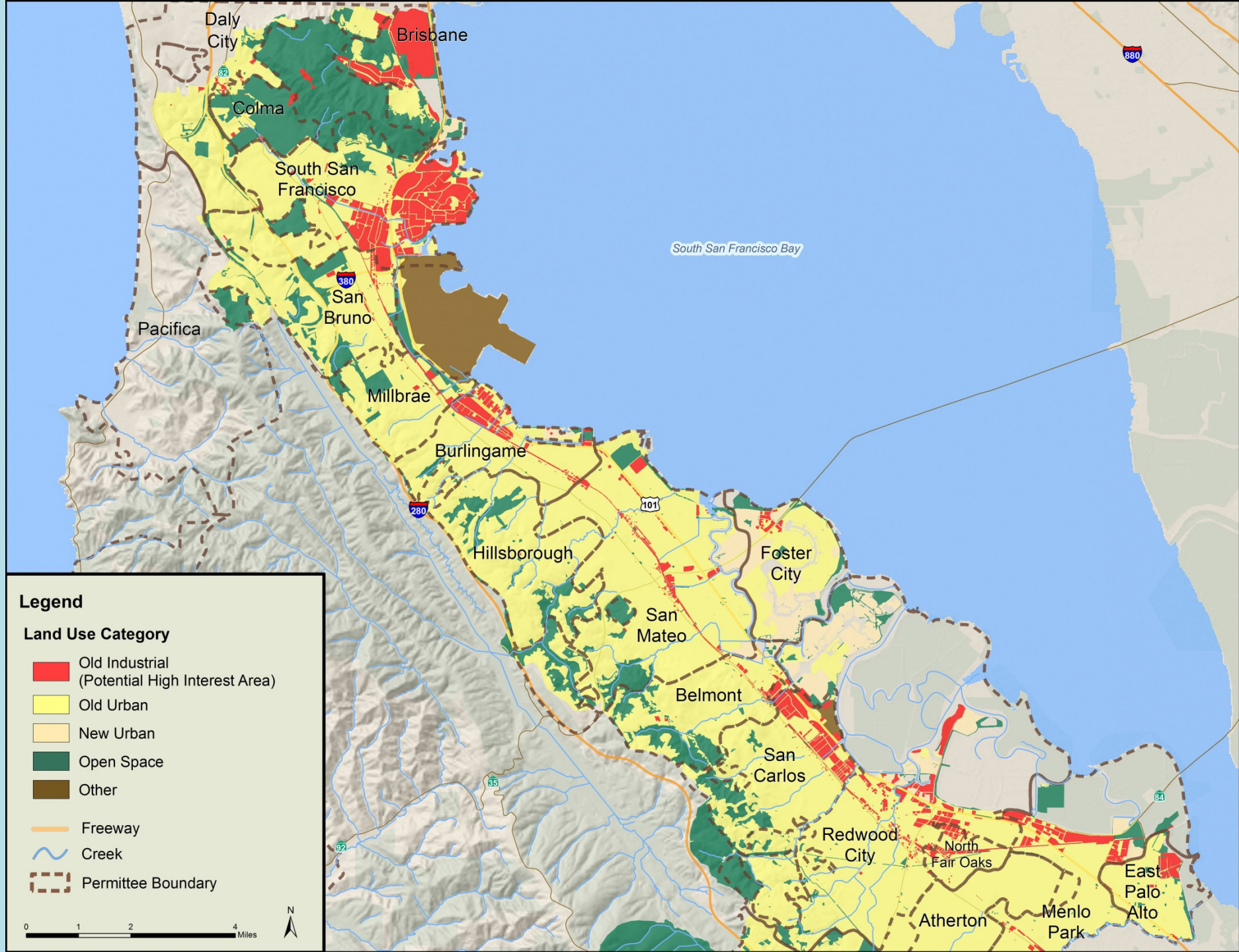
2040 ft

© 2016 Google

Google earth

Acres Addressed for 1 Gram/Year

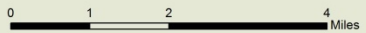
Control	Acres for 1 g/year PCBs Load Reduction
Treatment of old industrial parcel via redevelopment	12
Treatment of old urban parcel via redevelopment	37
Treatment of old industrial land use via GI retrofit	17
Treatment of old urban land use via GI retrofit	47
Referral of source property (with enhanced O&M)	0.5
Abatement of source property	0.25

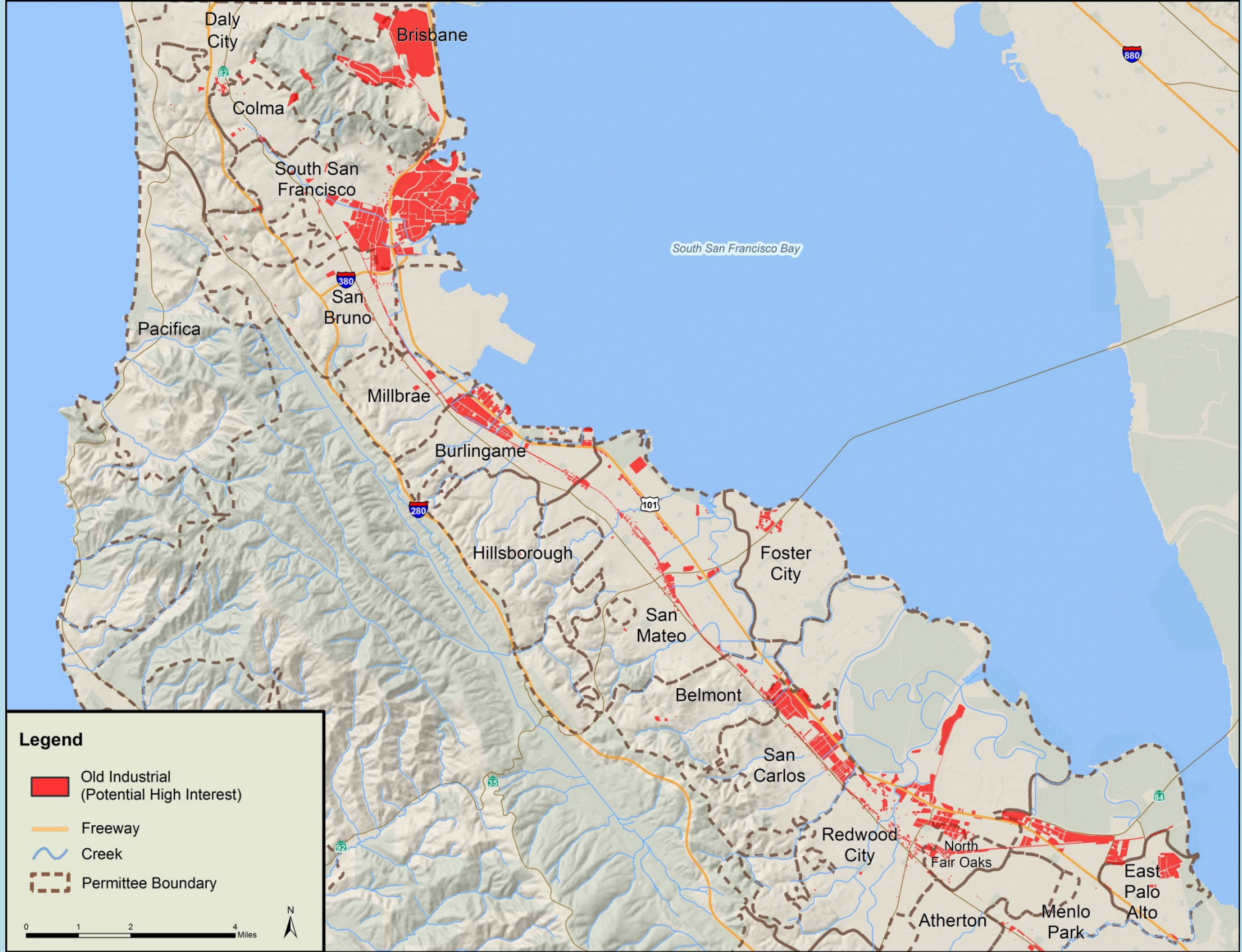


Legend





Land Use Category

- Old Industrial (Potential High Interest Area)
- Old Urban
- New Urban
- Open Space
- Other
- Freeway
- Creek
- Permittee Boundary



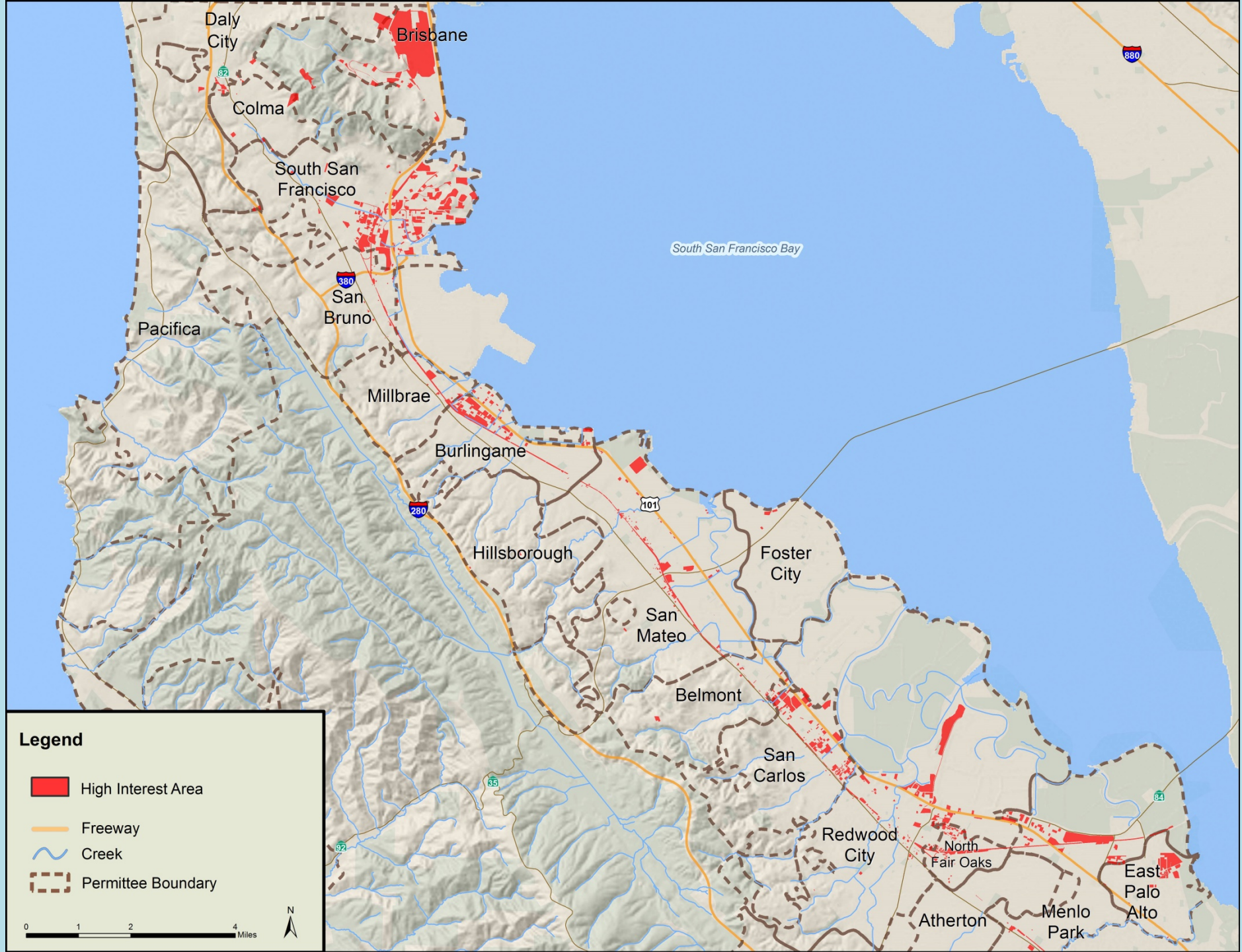


Legend





-  Old Industrial (Potential High Interest)
-  Freeway
-  Creek
-  Permittee Boundary

0 1 2 4 Miles



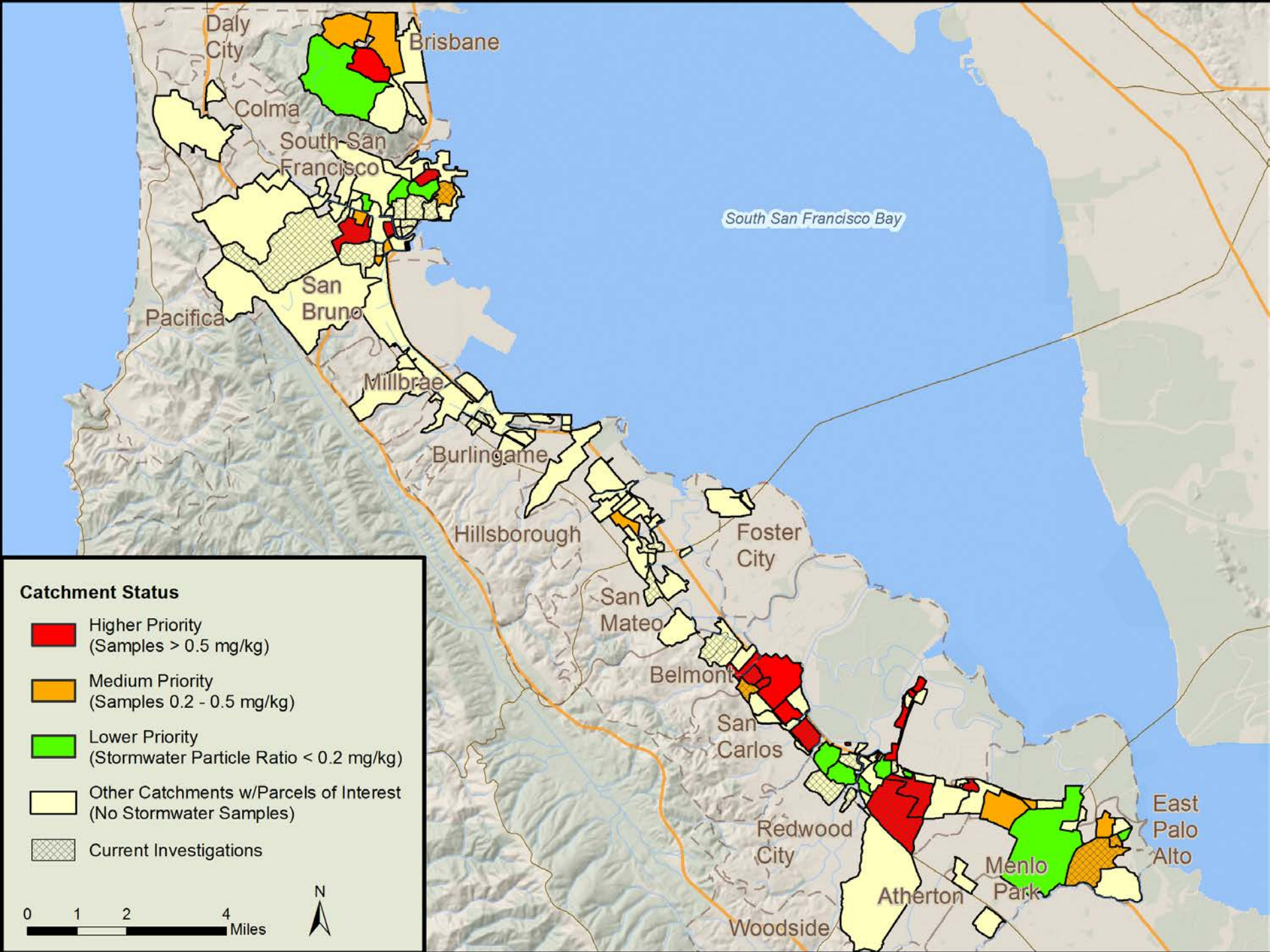


Legend






-  High Interest Area
-  Freeway
-  Creek
-  Permittee Boundary

0 1 2 4 Miles





Catchment Status

-  Higher Priority
(Samples > 0.5 mg/kg)
-  Medium Priority
(Samples 0.2 - 0.5 mg/kg)
-  Lower Priority
(Stormwater Particle Ratio < 0.2 mg/kg)
-  Other Catchments w/Parcels of Interest
(No Stormwater Samples)
-  Current Investigations

0 1 2 4 Miles



Next Steps

- Additional homework on potential source properties
- Compare load reductions with other counties, see where we are at regionally
- If needed, arrange additional communications with Regional Water Board
- Develop system to better track GI/LID as new facilities are constructed in future (via C.3, Prop 1, etc.)
- Additional field investigations this winter and spring
- Transition from interim accounting to Reasonable Assurance Analysis