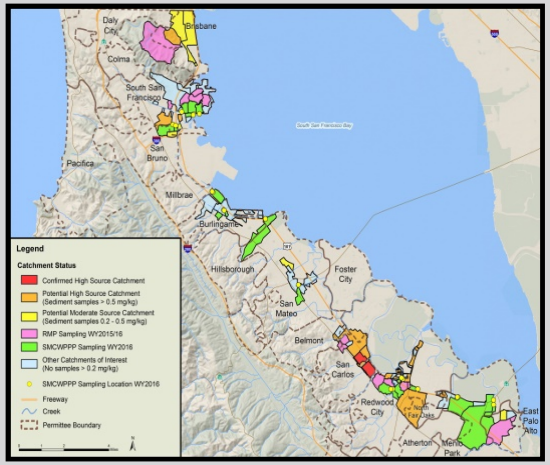
# PCBs and Mercury Load Reductions in San Mateo County





## Jon Konnan - EOA, Inc.


## C/CAG Stormwater Committee

**September 21, 2017**

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# PCBs Load Reduction Requirements

- Stormwater runoff
  - 14,400 g/year – MRP Permittees (TMDL)
  - 3,000 g/year – MRP Permittees (MRP 2.0)
  - 370 g/year – SM County Permittees (MRP 2.0)
  - 3,000 g/year – via green infrastructure (GI) by 2040

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# MRP PCBs Load Reduction Requirements

- San Mateo County stormwater 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


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# PCBs – Chronological over Permit Term

| 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 |

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# PCBs Controls

- Most prevalent so far:
  - Stormwater GI
  - Source property identification and referral for investigation and abatement
  - Management of PCBs in building materials during demolition

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# PCBs Load Reductions: Reported and Projected

| Control Measure Category | | PCBs Loads Reduced (g/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Reported To-date | | | | Projected[1, 2] | | | Cumulative Load Reduced through June 2018 | Required Load Reduction by June 2018 (g/year) | Cumulative Load Reduced through June 2020 | Required Load Reduction by June 2020 (g/year) |
| | | FY 13/14 | FY 14/15 | FY 15/16 | FY 16/17 | FY 17/18 | FY 18/19 | FY 19/20 | | | | |
| Source Property Identification and Abatement | | | | | | 26 | | | 26 | | 26 | |
| Green Infra-structure and Treatment Controls | Parcel-Based New or Redevelopment | 10.26 | 3.54 | 4.8 | 1.41 | 12.22 | 3.32 | 3.32 | 32.23 | | 38.87 | 15 |
| | Green Streets or Regional Retrofit | 0.18 | 0.09 | 0.02 | 0 | | | | 0.29 | | 0.29 | |
| | Trash Full-Capture | | | | | | | | 0 | | 0 | |
| Enhanced O&M Measures | | | | | | | | | 0 | | 0 | |
| Manage PCBs in Building Materials | | 0 | 0 | 0 | 0 | 0 | 0 | 246.67 | 0 | | 247 | |
| Manage PCBs in Infrastructure | | | | | | | | | 0 | | 0 | |
| Diversion to POTW | | | | | | | | | 0 | | 0 | |
| Source Controls/Other | | | | | | | | | 0 | | 0 | |
| TOTAL - ALL CONTROLS | | 10.44 | 3.63 | 4.82 | 1.41 | 38.22 | 3.32 | 249.99 | 58.52 | 60 | 311.83 | 370 |

[1] Credit for all parcel-based GI projects designated as "under construction" (8.90 g/year) is applied to FY 2017/18.

[2] Credit for all parcel-based GI projects designated as "planned" (9.96 g/year) is divided evenly over three fiscal years: FY 2017/18 through FY 2019/20.

**ALL LOAD REDUCTION NUMBERS ARE PRELIMINARY**

# 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 |

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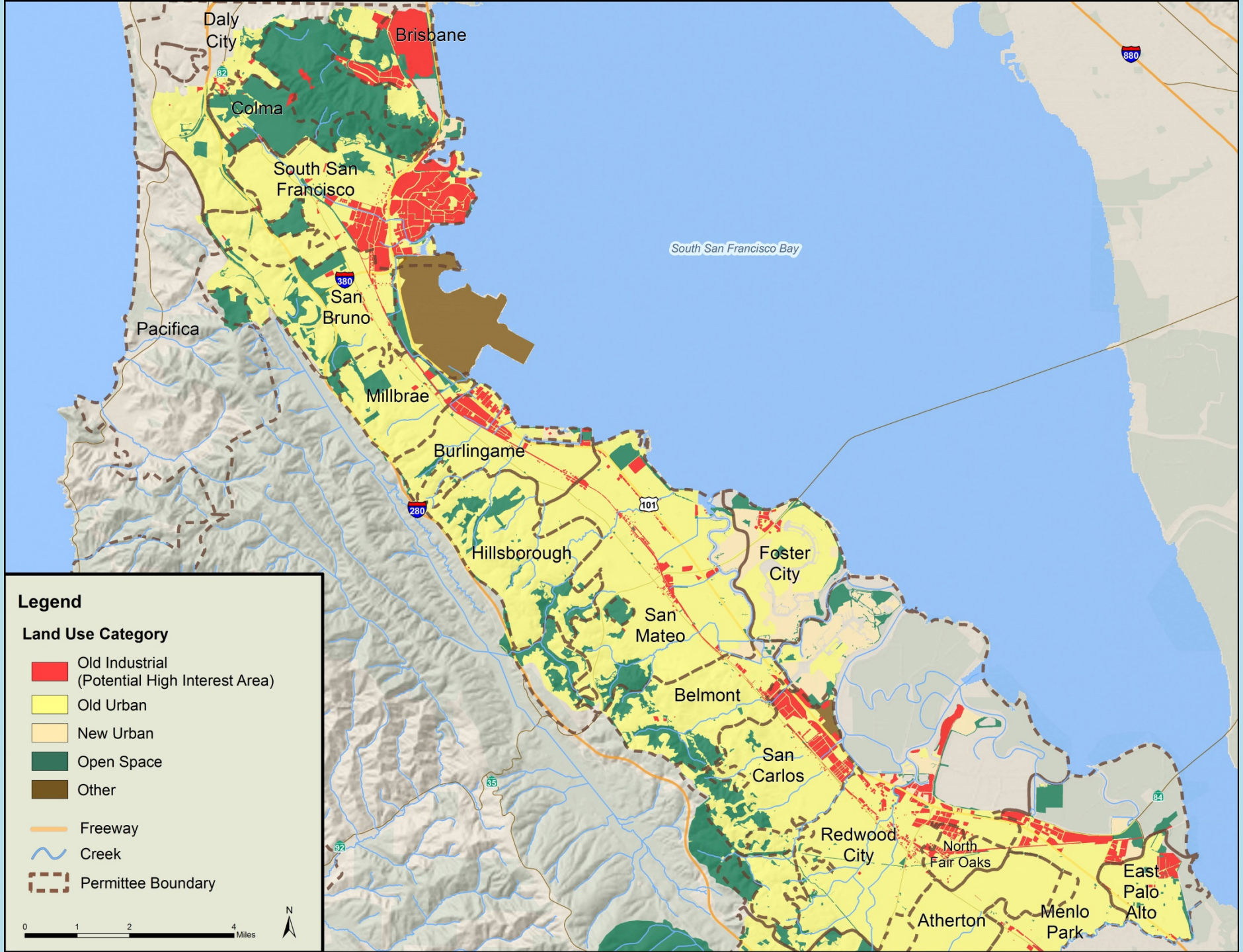
Daly City
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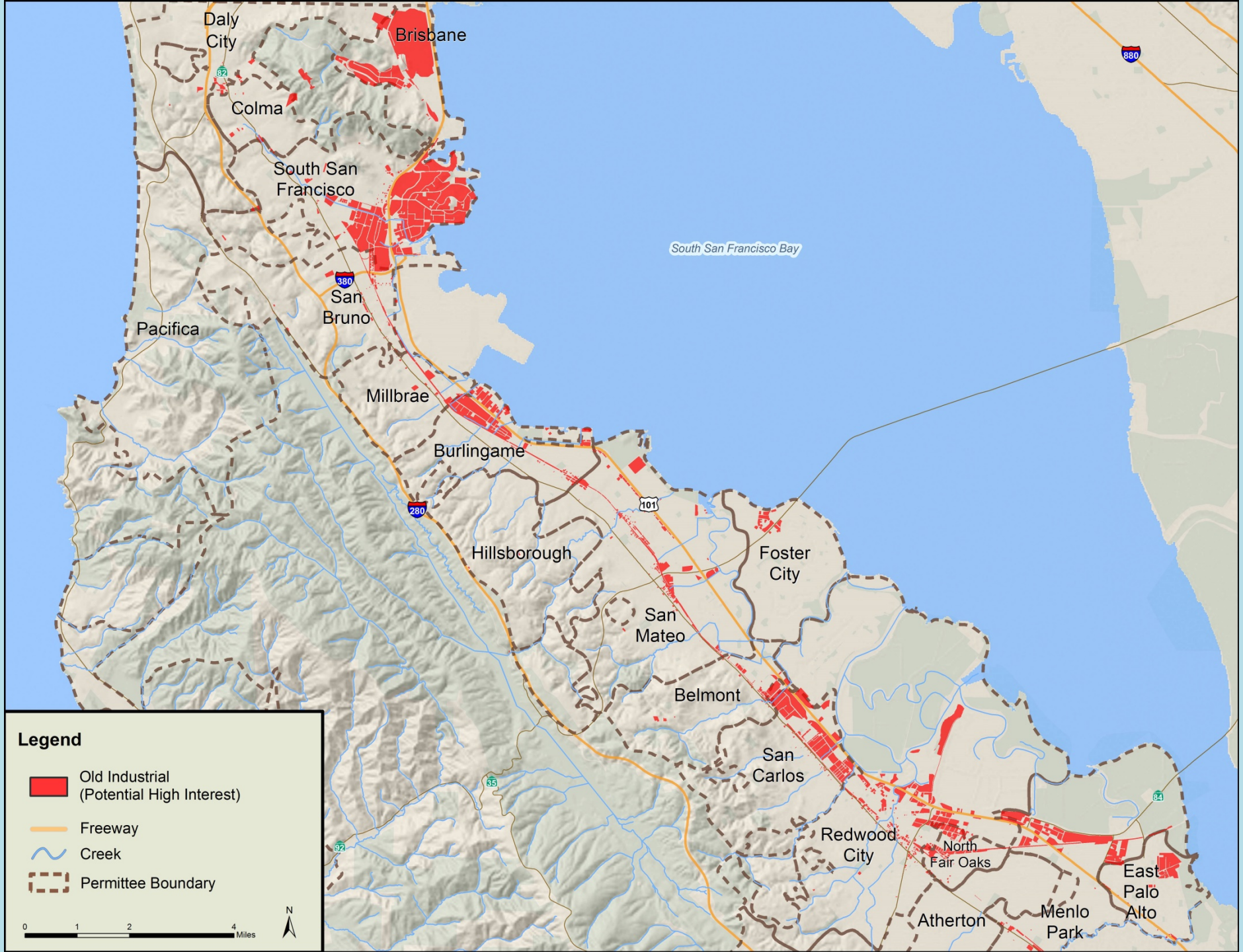
Colma
South San Francisco
South San Francisco Bay
San Bruno
Pacifica
Millbrae
Burlingame
Hillsborough
Foster City
San Mateo
Belmont
San Carlos
Redwood City
North Fair Oaks
East Palo Alto
Atherton
Menlo Park
Legend
Land Use Category
Old Industrial (Potential High Interest Area)
Old Urban
New Urban
Open Space
Other
Freeway
Creek
Permittee Boundary
0 1 2 4 Miles
N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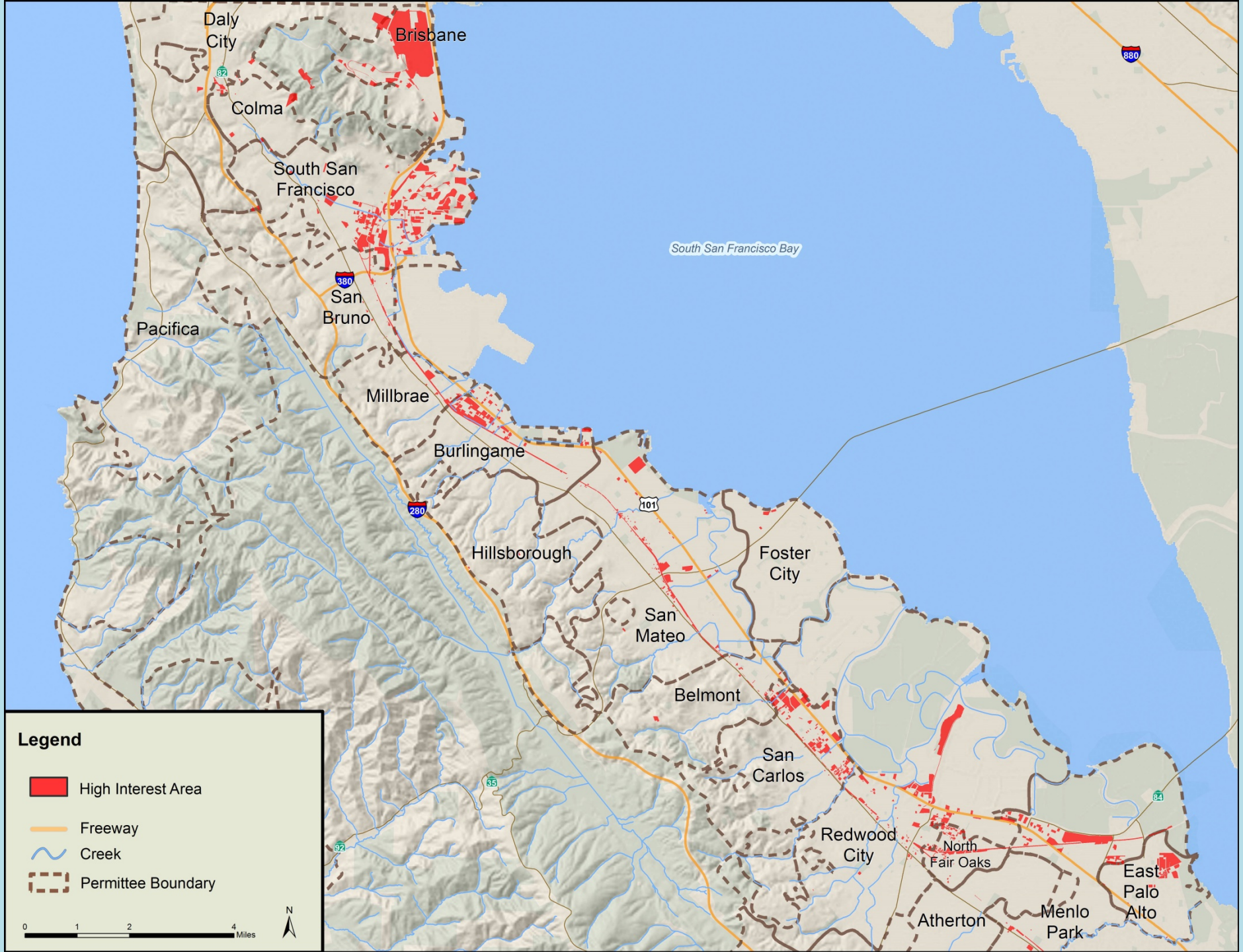
East Palo Alto
Atherton
Menlo Park
Legend
Old Industrial (Potential High Interest)
Freeway
Creek
Permittee Boundary
0 1 2 4 Miles
N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East Palo Alto
Menlo Park
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Legend
High Interest Area
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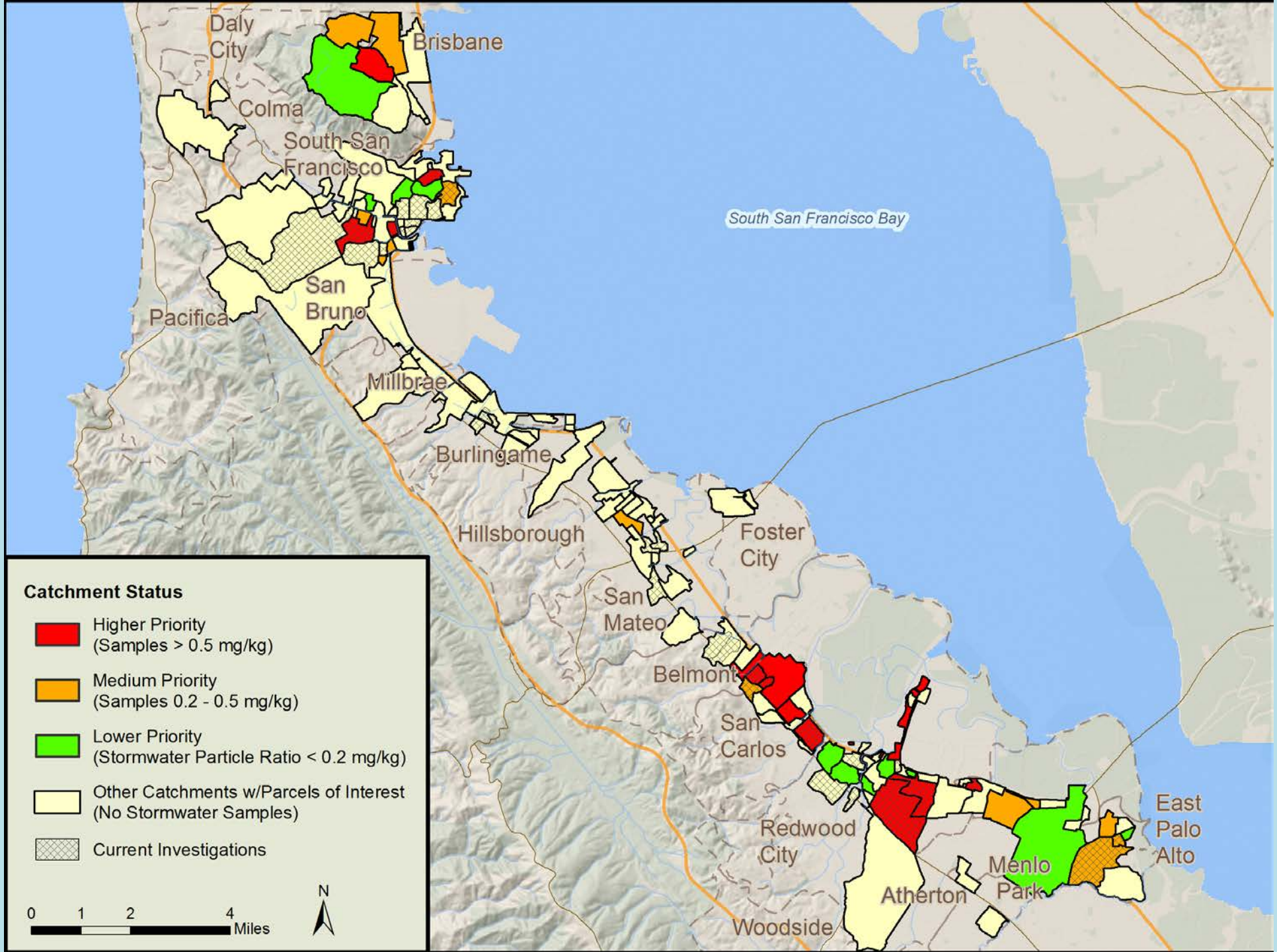
Creek
Permittee Boundary
0 1 2 4 Miles
N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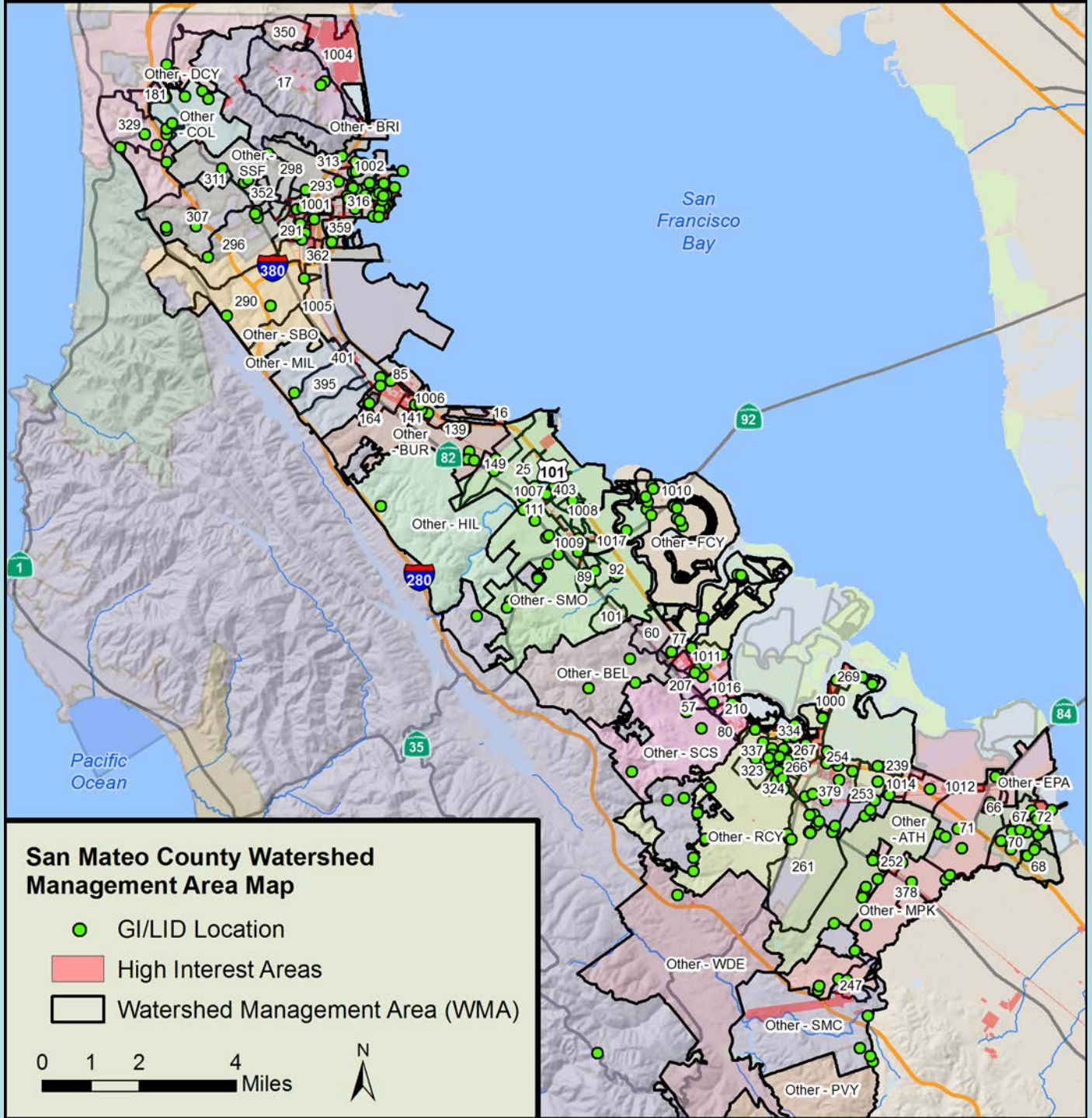
Pacifica
Millbrae
Burlingame
Hillsborough
Foster City
San Mateo
Belmont
San Carlos
Redwood City
Atherton
Menlo Park
East Palo Alto
Woodside
Catchment Status
Higher Priority
(Samples > 0.5 mg/kg)
Medium Priority
(Samples 0.2 - 0.5 mg/kg)
Lower Priority
(Stormwater Particle Ratio < 0.2 mg/kg)
Other Catchments w/Parcels of Interest
(No Stormwater Samples)
Current Investigations
0 1 2 4
Miles
N


San Francisco Bay
Pacific Ocean
Other - DCY
Other - COL
Other - BRI
Other - SSF
Other - SBO
Other - MIL
Other - BUR
Other - HIL
Other - SMO
Other - BEL
Other - FCY
Other - SCS
Other - RCY
Other - WDE
Other - SMC
Other - PVY
Other - MPK
Other - ATH
Other - EPA
380
280
101
92
82
84
35
1
San Mateo County Watershed Management Area Map
GI/LID Location
High Interest Areas
Watershed Management Area (WMA)
0 1 2 4 Miles
N

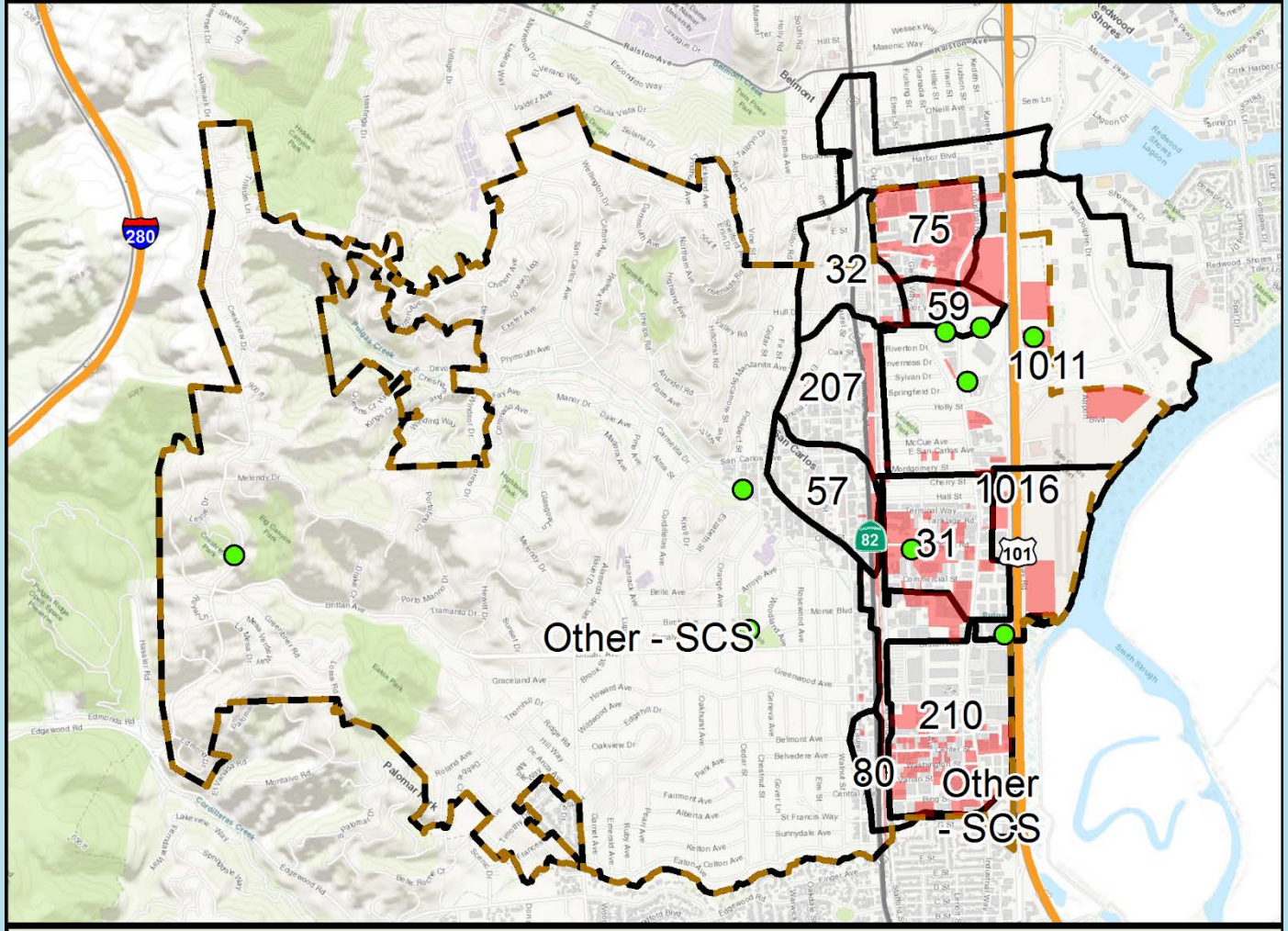



**Figure A-15.** WMAs and GI/LID in San Carlos

**San Carlos Watershed Management Area Map**

# POC Monitoring Submittal

| Pollutant of Concern | Media | Total Samples | Yearly Minimum | Yearly Average | Minimum Number of Samples That Must Be Collected for Each Information Need by the End of Year Four | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Source Identification | Contributions to Bay Impairment | Management Action Effectiveness | Loads and Status | Trends |
| PCBs | Water or sediment | 80 | 8 | 16 | 8 | 8 | 8 | 8 | 8 |
| Total Mercury | Water or sediment | 80 | 8 | 16 | 8 | 8 | 8 | 8 | 8 |
| Total & Dissolved Copper | Water | 20 | 2 | 4 | -- | -- | -- | 4 | 4 |
| Nutrients | Water | 20 | 2 | 4 | -- | -- | -- | 20 | -- |
| Emerging Contaminants | Special Study by RMP | | | | | | | | |

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# POC Monitoring Submittal

- Due to Regional Water Board on October 16
- Send draft out to WAM by September 25, two week review period (comments due to EOA by October 9)
- Need approval from “Duly Authorized Representatives”

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# Next Steps

- Submit three source property referrals (all in San Carlos) to the Regional Water Board, evaluate submitting other referrals
- Evaluate results of recent PCBs/mercury monitoring program (stormwater runoff last winter and sediment sampling conducted during spring 2017)
- Work closely with C/CAG staff to evaluate cost-effectiveness of conducting additional field monitoring
- Continue evaluating other opportunities to take credit for PCBs and mercury loads reduced (e.g., existing contamination site cleanups, enhanced municipal O&M activities)

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# Next Steps

- Evaluate regional progress towards PCBs load reduction requirements
- Transition from interim accounting to Reasonable Assurance Analysis (RAA) to support GI plan development and demonstration of mercury and PCBs load reductions (e.g., 3,000 grams PCBs by 2040)
- Begin developing RAA and PCBs/mercury control plan to meet TMDL allocations
- Develop system to better track GI/LID as new facilities are constructed (via C.3, retrofits, etc.) per MRP Provision C.3.j.iv requirement

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# QUESTIONS?

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