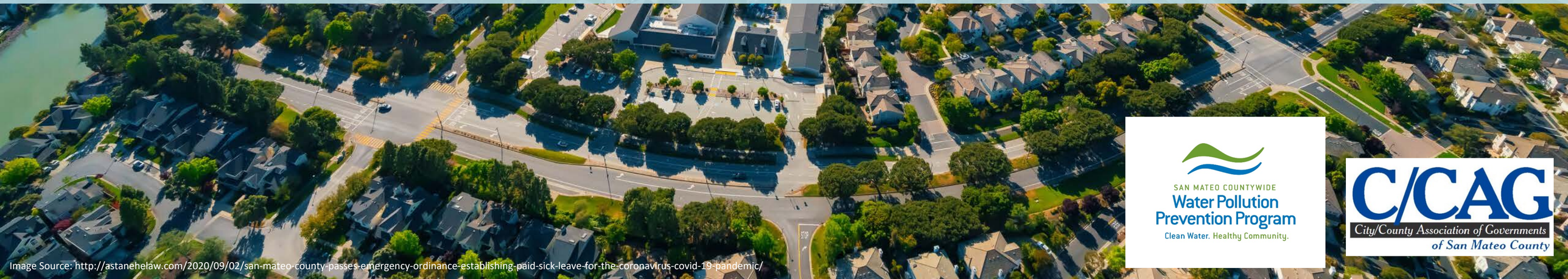
Regional-scale Stormwater Management and Regional Projects in San Mateo County

SMCWPPP C.3 Workshop – January 30, 2023



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SAN MATEO COUNTYWIDE Water Pollution Prevention Program
Clean Water. Healthy Community.

C/CAG City/County Association of Governments of San Mateo County

Regional Collaborative Program (RCP) Context

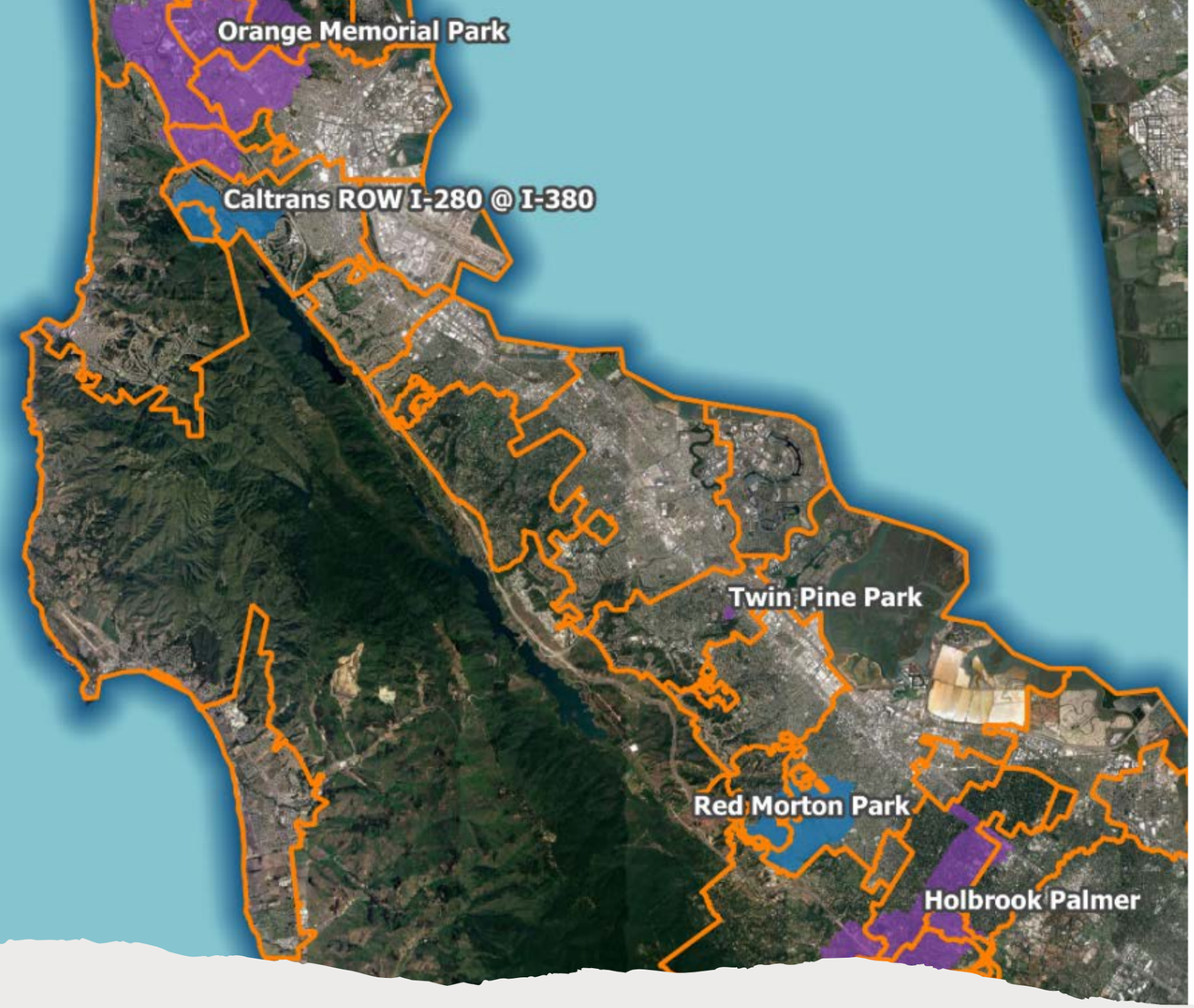
- Initiated during GI RAA and Stormwater Resource Plan
- Focus on cost-effective MRP compliance but also potential to work with OneShoreline on regional multi-benefit projects
- Focus on regional-scale projects but also programmatic distributed GI

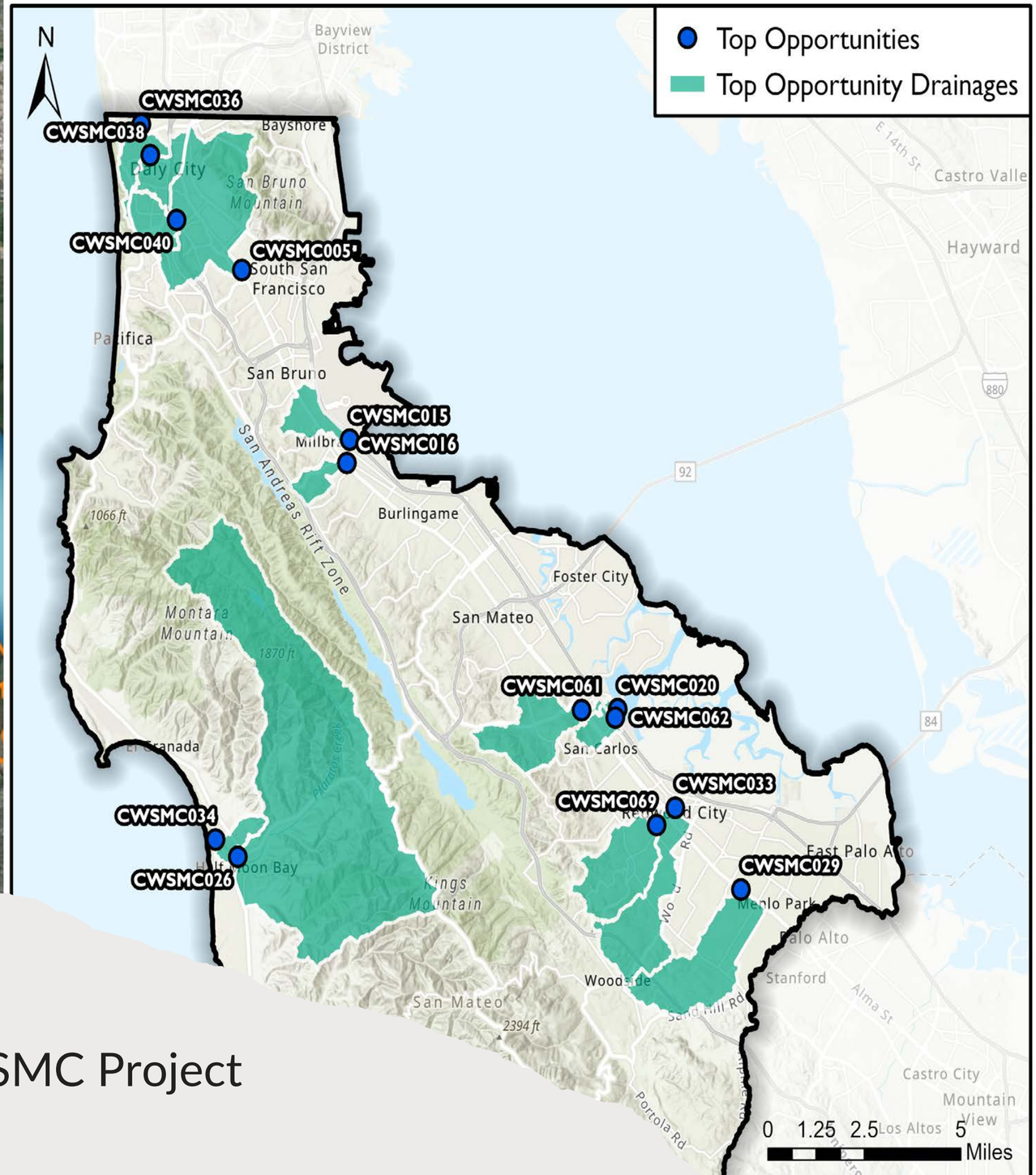
Regional Collaborative Program (RCP) Context

- RCP in two phases:
  - Interim MOU-Based RCP
    - Focus on MRP 3.0 compliance
    - Small pool of buyers/sellers
    - Project by project
  - Market-Based RCP
    - Longer-term
    - Broader pool of buyers/sellers (public/private/cross-sector)
    - Broader geographic area
    - Potentially more project types (and exchange units)
    - Alternative project delivery

Regional Collaborative Program (RCP) Context

- Interim MOU-Based RCP:
  - C.3.j retrofit targets
  - C.3.e.i alternative compliance for public Regulated Projects
- Market-Based RCP:
  - Ongoing C.3.j requirements
  - Alternative compliance for C.3.b (public/private)
  - Additional pollutants/benefits linked to exchange units
    - Trash
    - PCBs
    - Water supply augmentation
    - Flood risk reduction
    - Park space/canopy

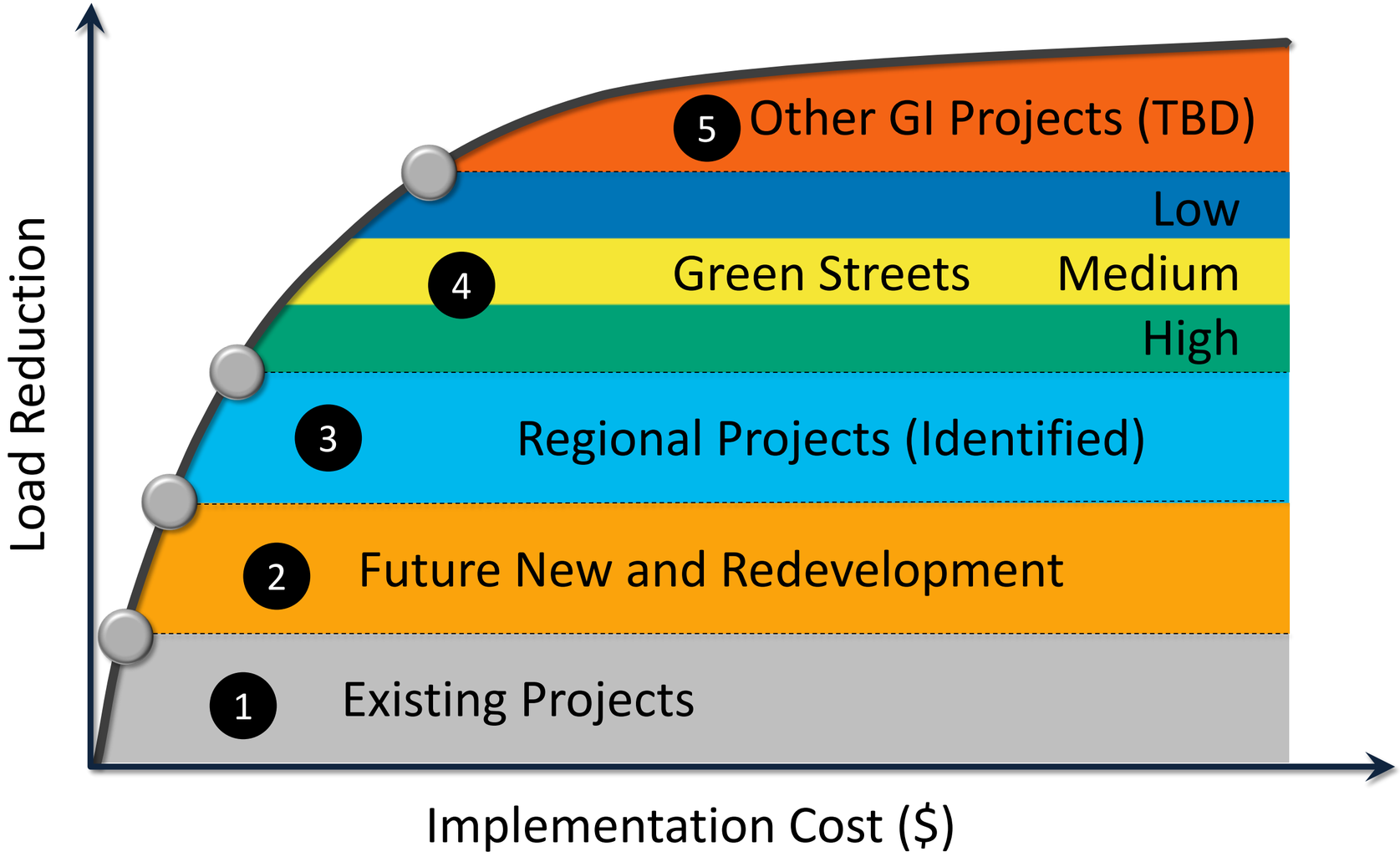




Menu of Regional Projects

- Stormwater Resource Plan
- Regional-Scale Stormwater Management in SMC Project

Reminder from RAA Cost-Effective GI Planning (with a caveat for MRP 3.0)



Regional Collaborative Program FY22-23

- Countywide collaboration can save costs on MRP related goals
  - Cost-sharing on capital costs
  - Dedicated funding for O&M and Inspections
  - Significant, larger scale multi-benefit projects

- Developing Interim MOU-based program foundation this year
  - Legal analysis approach
  - MOU document template and supporting materials
  - Case study for initial exchange for Orange Memorial Park Project

- Quantitative metrics needed to serve as basis for “exchanges” and cost-share agreements

Translating Metrics

- Recognized need to provide translation of metrics for planning and tracking various project types:
  - Regional projects
  - Sustainable Streets projects
  - Alternative compliance for Regulated Projects
- 80% annual runoff volume capture is an option that provides:
  - The most overlap across project types
  - The most flexibility in translating a stormwater capture performance metric to “Greened Acres”

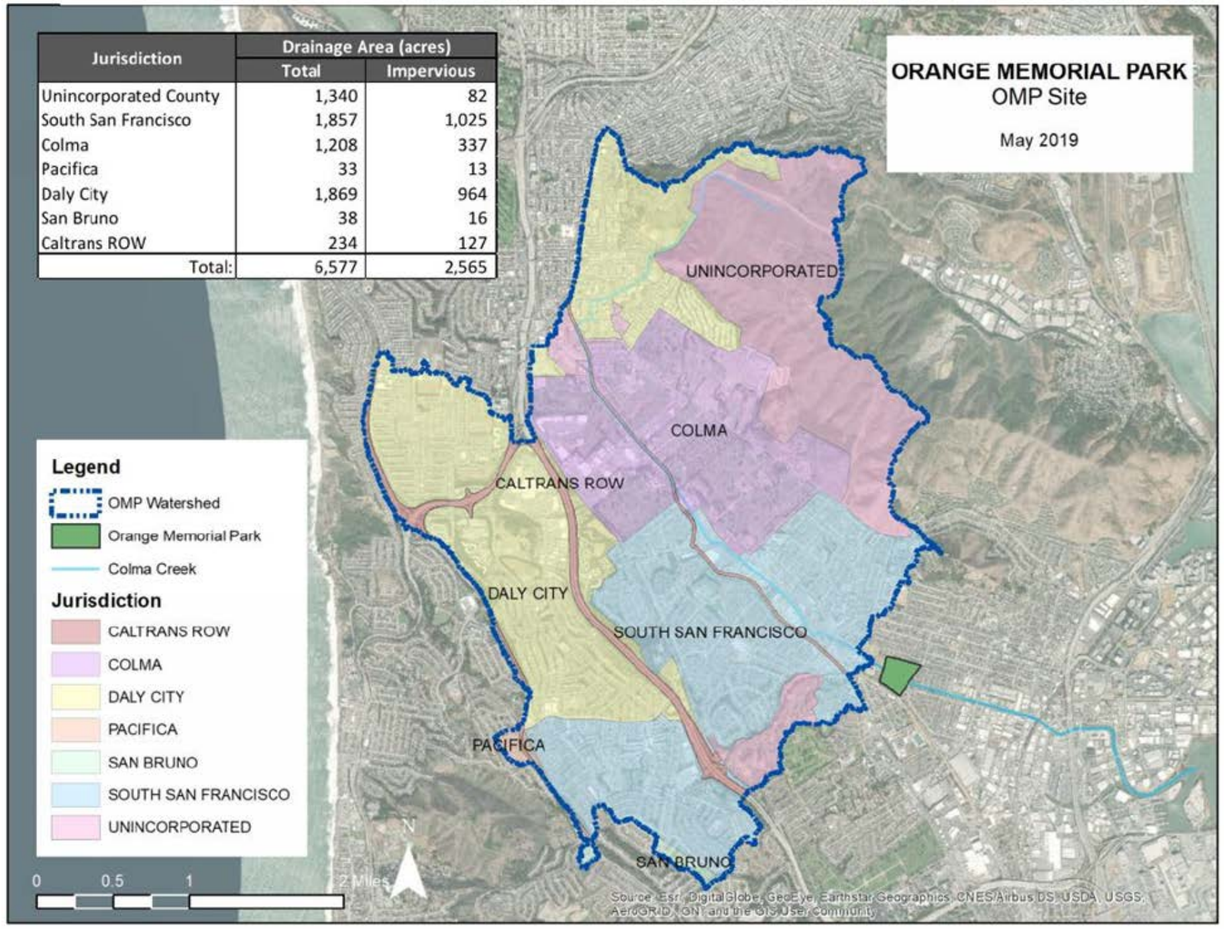
Translating Metrics

$$Greened\ Acres = \frac{Vol_{capture}}{80\% \times Vol_{runoff}} \times Total\ Impervious\ Acres$$

$Vol_{capture}$ $= the\ annual\ average\ volume\ captured\ and\ treated\ by\ the\ project$

Vol_{runoff} $= the\ annual\ average\ runoff\ volume$

Example for Orange Memorial Park



Jurisdiction	Drainage Area (acres)	
	Total	Impervious
Unincorporated County	1,340	82
South San Francisco	1,857	1,025
Colma	1,208	337
Pacifica	33	13
Daly City	1,869	964
San Bruno	38	16
Caltrans ROW	234	127
Total:	6,577	2,565

Design Specifications

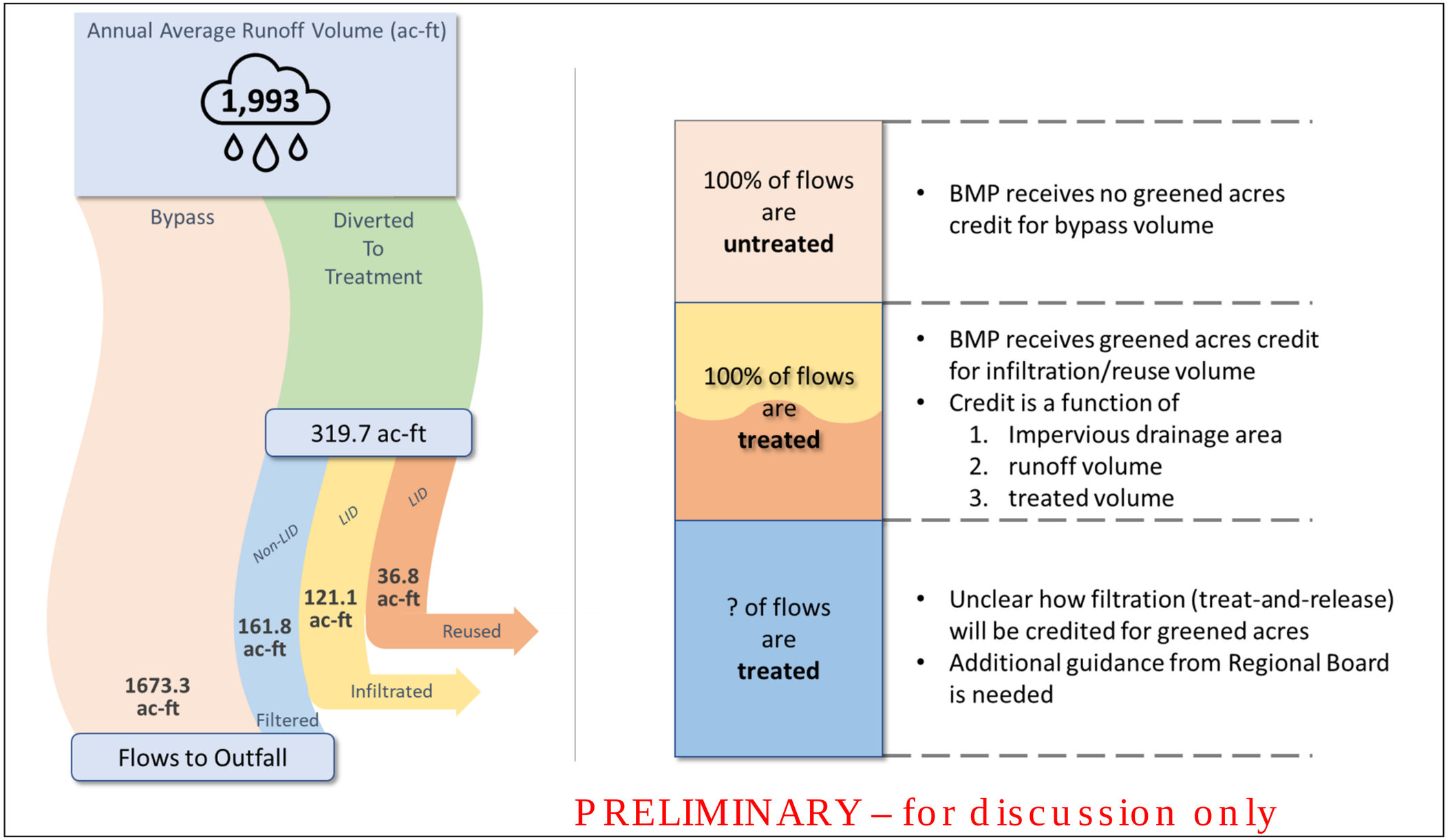
Drainage Area (ac)	Impervious Area (ac)	Diversion Rate (cfs)	Treatment Mechanism	Storage Capacity (ac-ft)
6,577	2,565	30	Filtration (Non-LID)	-
			Infiltration (LID)	4.3
			Reuse (LID)	0.7

Modeled Volume Estimates

Runoff (ac-ft/yr)	Treated* (ac-ft/yr)	Filtered Non-LID (ac-ft/yr)	Infiltrated LID (ac-ft/yr)	Reused LID (ac-ft/yr)
1,993	320	162	121	36.8

PRELIMINARY – for discussion only

Example for Orange Memorial Park



PRELIMINARY – for discussion only

Any Questions?

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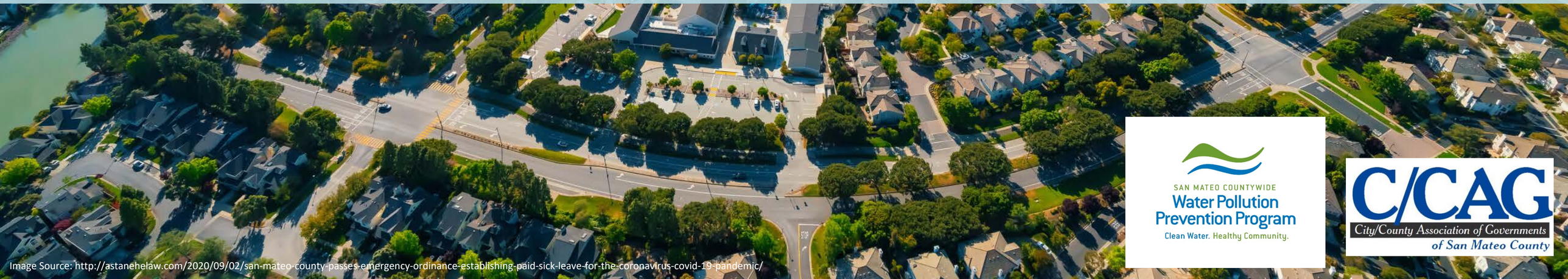

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