

Getting Started On Your Green Infrastructure (GI) Plan

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Presentation Outline

- MRP 2.0 C.3.j (GI) requirements
- GI Framework elements
- GI Plan elements

Strategy to Meet MRP 2.0 GI Requirements

- 1st Year:
Develop and approve a GI Framework
- 2nd Year:
Prioritize & map planned potential GI projects
- 3rd Year:
Continue to develop GI Plan
- 4th Year:
Finalize, approve & Submit GI Plan



GI Framework Development

GI Framework

- 1st Task in C.3.j – sets stage for GI Plan
- Desired outcomes:
 - Get “buy-in” from electeds and management on a GI approach/process with both short term and long term goals
 - Describe GI Plan and MRP requirements
 - Estimate and allocate resources required for preparation of GI Plan

Contents of Framework

MRP requires that the following items be addressed in the Framework that are needed to complete the GI Plan:

1. Statement of Purpose
2. Tasks and Timeframes
3. Plans, Policies and Specifications to be updated.
4. GI Measures to be selected

1. Statement of Purpose

- Overall GI goal is to disconnect impervious areas (IA) throughout urban watersheds to reduce runoff and improve water quality
- Describe water quality problems including pollutants of concern in permit (TMDLs)
- Describe multiple benefits of GI Measures
- Time frames – short and long term
- Coordination with transportation projects: integrate complete streets and green streets

2. Tasks and Timeframes

- Tasks:
 - Describe tasks that will be undertaken in order to develop the GI Plan such as:
 - Collecting data and maps
 - Using/developing a prioritization mechanism such as the GreenPlan IT tool
 - Assembling a interdepartmental team
 - Process for educating staff, electeds and public
- Timeframes:
 - Break out tasks for each permit year

3. Plans, Policies and Specs

- General Plan & specific/area/precise plans
- Bicycle and pedestrian plans
- Storm drain master plan
- Long term trash plan
- Parks and open space plans
- Urban forestry plan
- Transportation & pavement maint. plan
- Complete streets policy
- Street design specifications

4. GI Measures

■ Biotreatment Measures:

Green Streets:

- Green Bulb-out
- Sidewalk planter
- Traffic Circle
- Tree Trench
- Rain garden

Buildings and Parking lots:

- Flow-through planter
- Green roof
- Tree Trench
- Rain garden

■ Other Measures

- Pervious Paving
- Infiltration trenches
- Cisterns

Biotreatment: Green Bulb-out



Palo Alto



Campbell

Biotreatment: Sidewalk Planter



San Mateo



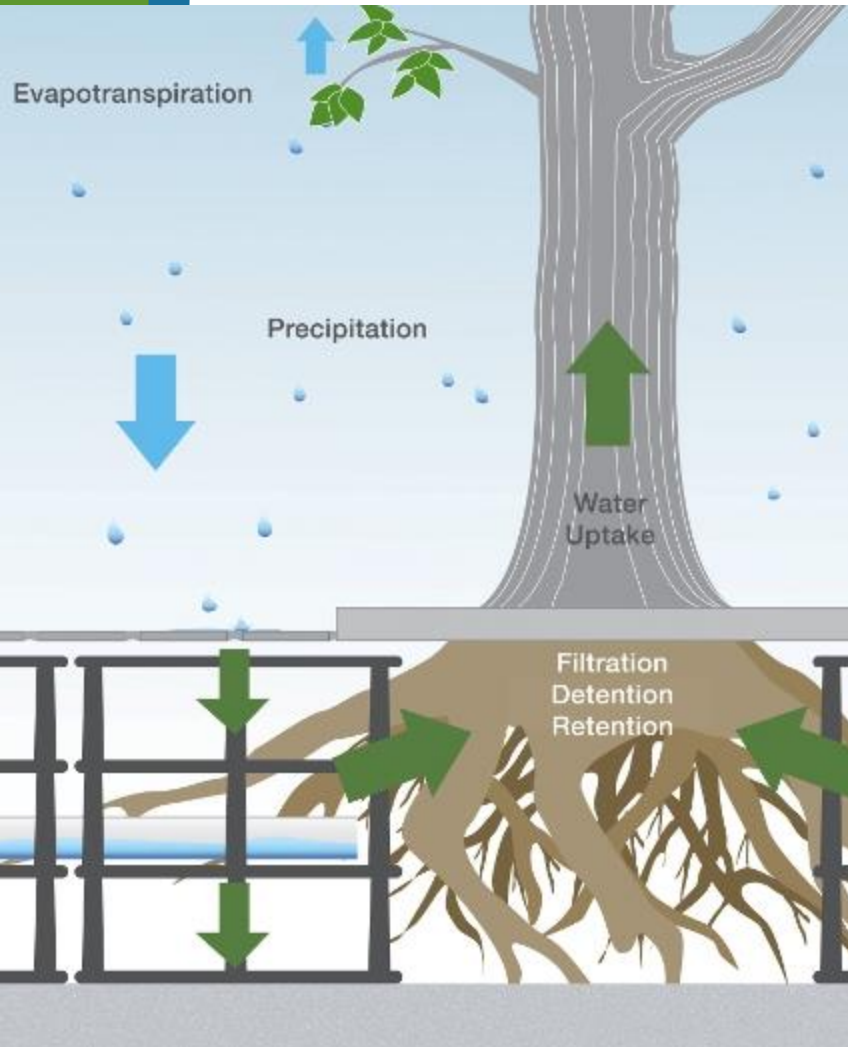
Alameda

Biotreatment: Traffic Circle



Berkeley

Biotreatment: Tree Trench



Sunnyvale

Biotreatment: Rain Garden



San Jose



El Cerrito

Biotreatment: Flow-Thru Planter



Emeryville



Alameda

Biotreatment: Green Roofs



San Jose



San Bruno

Pervious Paving



Berkeley



Berkeley

Infiltration Trenches



San Jose

Cisterns



Oakland



Berkeley

Framework: 1st Step Guidance

- The following slides give suggestions for initial steps that jurisdictions can take to begin the GI planning process.
- Your jurisdiction may already have completed some or all of these steps
- BASMAA and/or your Countywide Stormwater Program may be able to provide assistance in some of these areas.

1. Assemble Staff from Related Departments

- Engineering
- Planning
- Transportation
- Maintenance
- Urban Forestry
- Landscaping
- Community Development
- Parks

2. Identify Gaps in Engineering Data

- Engineering data:
 - Geometry: widths and lengths of streets (curb to curb), rights of way, curbs, gutters, sidewalks, planting strips, medians, travel and parking lanes
 - Topography and drainage: street cross slopes, longitudinal slopes, crown heights, curb cuts, curb ramp slopes, sidewalk slopes, underground utility maps, storm drain system maps and drainage areas

Data continued...

- Planning and environmental data:
 - Street tree inventory, Priority Development Areas, projected areas of development, existing and proposed land uses, parcel and building footprint data, creek buffers and water bodies
 - Pollutants of concern - land use (proxy for PCBs), trash management areas, roadway vehicles per day volumes (proxy for vehicle-related pollutants)
 - Treatment system inventory

3. Educate Management, Electeds and the Public on Green Infrastructure Issues

- City of San Mateo Taste and Talk Series
www.sustainablestreetssanmateo.com/tasteandtalk/
- Public Hearings
- Workshops
- Staff Training



GI Plan Development

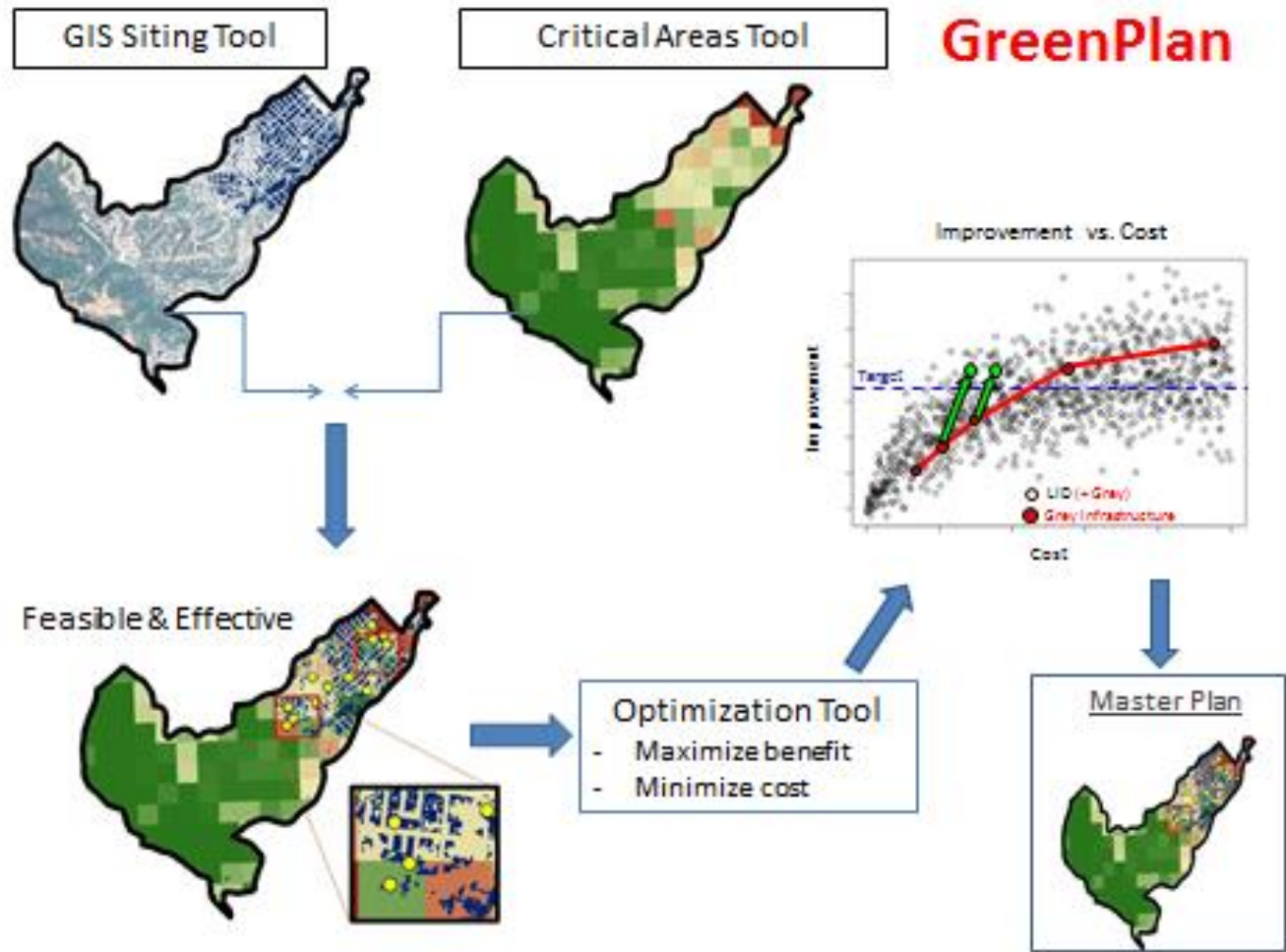
Required GI Plan Elements

- Statement of Purpose and Tasks
- Timeframes and Targets for Retrofitting IA
- Plans and policies coordinated and updated
- GI Tools, prioritization mechanisms to be used and outputs (maps)
- Integration of GI into future projects
- Process for tracking and mapping progress
- Streetscape Design Guidelines and specs
- Alternative Compliance Coordination
- Funding options discussion

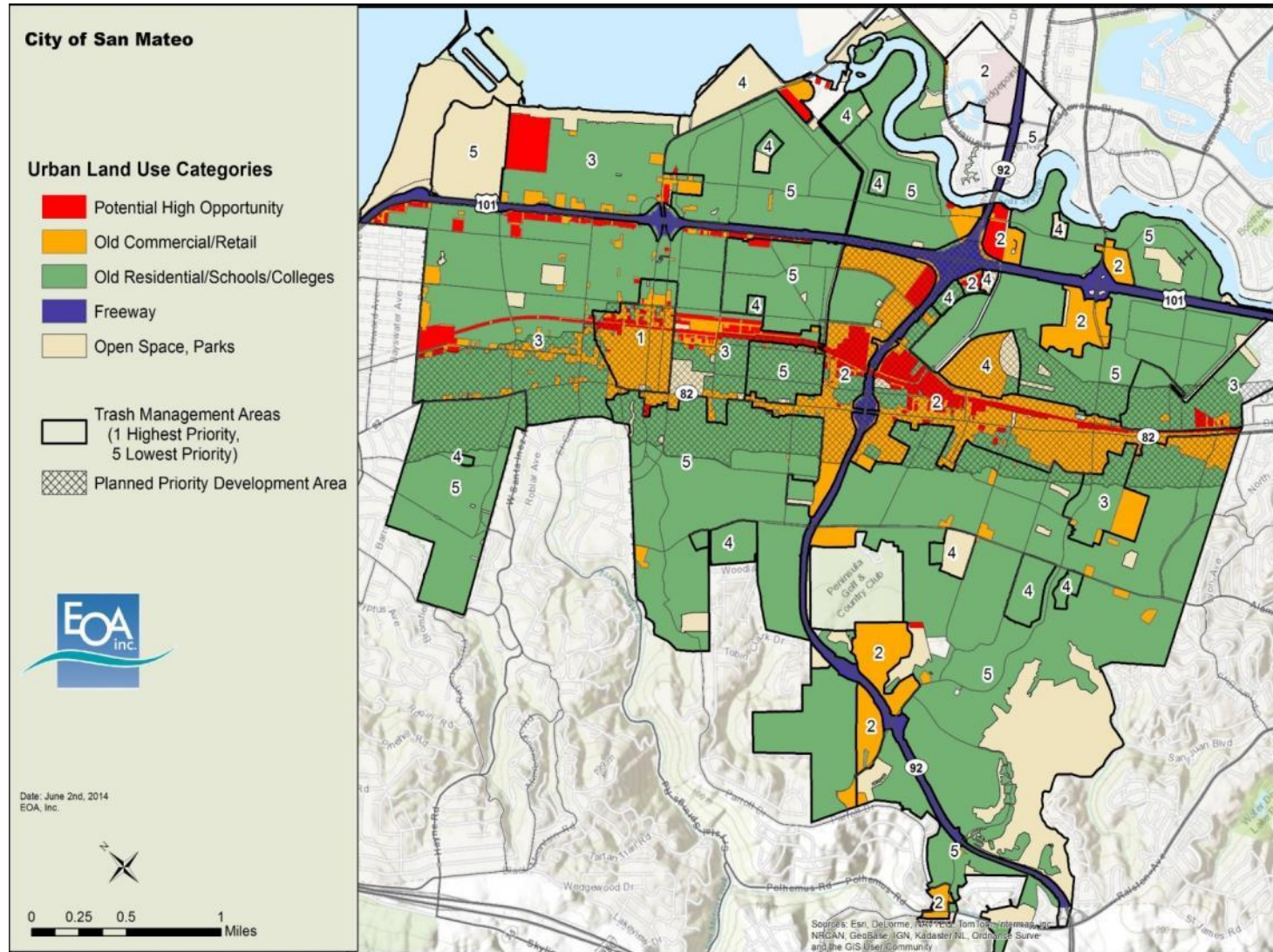
Step 1: Prioritize Efforts

- Using the existing list of plans, GIS data, maps, and other resources, begin to prioritize short term and long term planning efforts.
- Consider using GreenPlan IT, Google Earth or similar tool to identify areas of prioritization.
- Another option is to overlay maps of Priority Development Areas, Trash Management Areas, and land uses.

Example: Large/Medium City



Example: Medium/Small City



Step 2: Early Implementation

- Review Capital Improvement Projects to identify opportunities for GI:
 - Road diets (bicycle lane projects)
 - Pedestrian Safety projects (use bulb-outs)
 - Street Tree Planting (suspended pavement)
 - Roadside Landscaping (rain gardens)
 - Storm drain maintenance (curb extensions)
 - Utility work (curb extensions)
 - Roadway reconstruction (all options)
 - Diagonally angled street intersections (space)
- Checklists to assist in reviewing projects will be developed

Road Diet Example: Colma

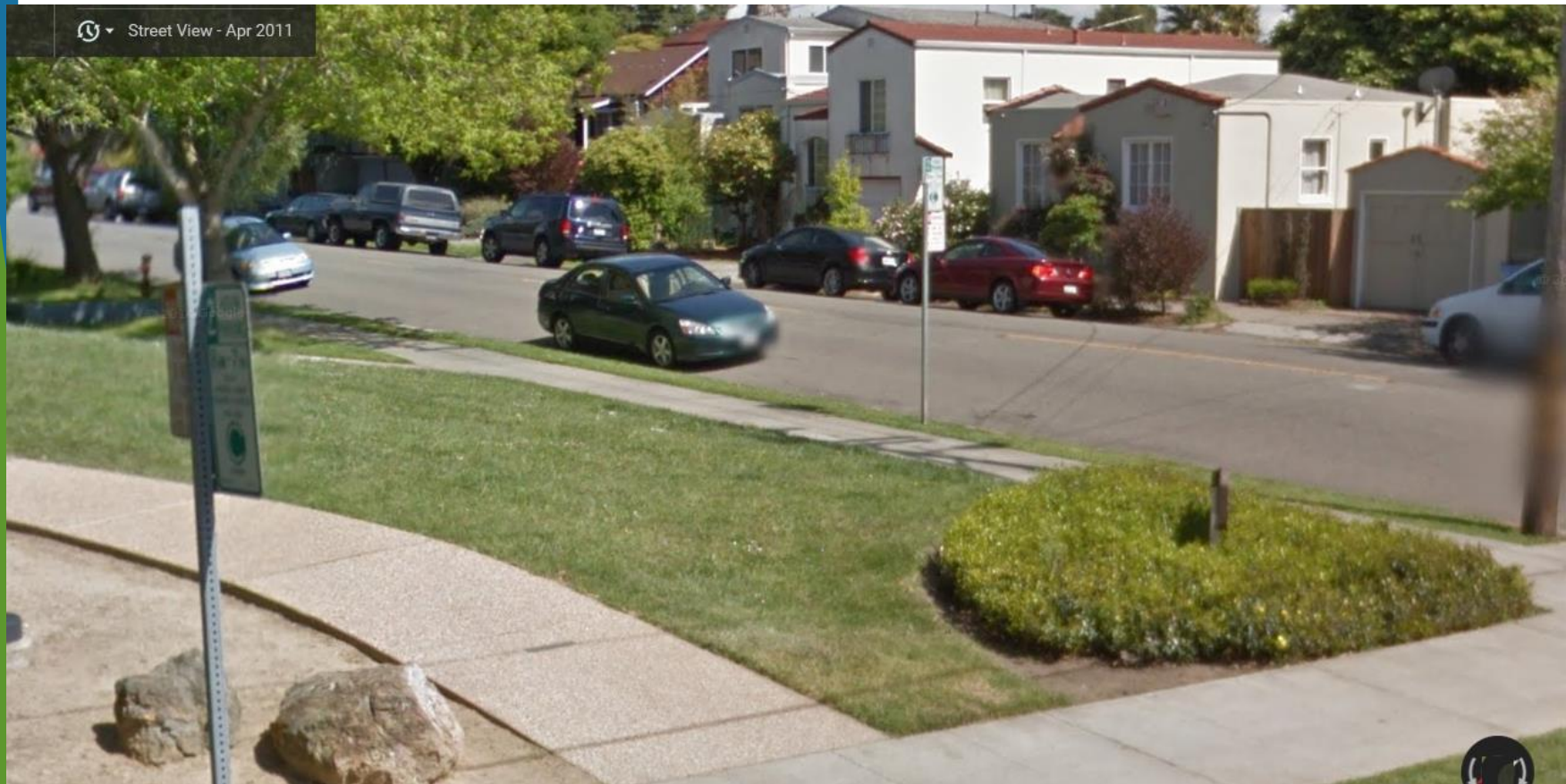


Before: two travel lanes in each direction,
no parking and no cross-walks



After: new bike and parking lanes & green bulb-outs with cross walk.

Roadside Landscaping Retrofit Example: Berkeley



Before: City park area - low use
with high maintenance



After: re-graded area with new rain garden treating street run-off

3. Leverage Private Development

- Review Private Projects in the pipeline for opportunities to add GI elements
- Consider adding public roadway runoff treatment landscapes to conditions of approval on project frontages where curb, gutter, sidewalk and/or street tree improvements will be taking place.

4. Review Standard and Typical Details

- Consider adding new typical or standard green infrastructure construction details to jurisdictional toolbox.
- Discuss common construction errors and training needs for staff.
- Regional standards are being developed as part of the Urban Greening EPA grant

For More GI Information...

- San Mateo County Green Streets Guide:
www.flowstobay.org/gdesignguide
- SFPUC GI Typical Details:
www.sfwater.org/index.aspx?page=446
- Central Coast LIDI GI Typical Details:
www.centralcoastlidi.org

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