Stormwater Management Oversight Committee Meeting
April 18, 2018
Agenda

1. Minutes approval
2. Update on Green Stormwater Infrastructure Plan
3. Potential GSI projects in Palo Alto
4. FY 2019 Proposed Budget
   1. Proposed GSI tasks & budget
      (long term and short term)
   2. Proposed CIP projects & budget
   3. Overall budget
5. Recommend approval memo on Proposed Budget
CITY OF PALO ALTO
GREEN STORMWATER INFRASTRUCTURE (GSI) PLAN

City of Palo Alto

Consultant Team:
EOA, Inc.
Schaaf & Wheeler
Olaunu
Presentation Overview

- (Current) Project Lists
- Prioritization Process
- Project Ideas
- Next Steps
Update on Stormwater Resource Plan

• Completed screening of public parcels for GSI opportunities
• Completed metrics analysis and prioritization of potential (screened and City-submitted) projects
• Selected subset of projects for hydrologic model analysis to quantify benefits and for possible conceptual design
• Preparing Administrative Draft SWRP
• Next stakeholder meeting – April 23, 1:30-3:30
Prioritization Methodology for Potential Projects

Points assigned per metrics

Metrics - proxies for effectiveness & multiple benefits

Sum of points = rank on list

Regional  Street  Parcel
**Vetted SWRP list**

- Identified Capital Improvement Projects (CIPs)
- Potential redevelopment areas
  - Cal Ave. Priority Dev. Area
  - North Ventura Coord. Area Plan
- Surrounding properties: schools, parks
- Property ownership – public property ownership; added private property owners if leased by City
- Best Professional Judgement
High Priority Projects

- SWRP concept projects
  - Parks
    - Greer
    - Cornelis Bol
  - Green street
    - East Charleston b/ween San Antonio & Independence Ave.

- GSI Plan project list
  - Top 10
Concept Project #1: Greer Park
## Concept Project #1: Greer Park

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Palo Alto</th>
<th>Los Altos Hills</th>
<th>Santa Clara County</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>Drainage Area (ac)</td>
<td>4,745</td>
<td>2,290</td>
<td>2,125</td>
<td>9,160</td>
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<tr>
<td>Imperv. Area (ac)</td>
<td>1,680</td>
<td>340</td>
<td>440</td>
<td>2,460</td>
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<tr>
<td>% Impervious</td>
<td>35 %</td>
<td>15 %</td>
<td>21 %</td>
<td>27 %</td>
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</table>
Concept Project #2: Bol Park
## Concept Project #2: Bol Park

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Palo Alto</th>
<th>Los Altos Hills</th>
<th>Santa Clara County</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drainage Area (ac)</td>
<td>1,360</td>
<td>1,720</td>
<td>845</td>
<td>3,925</td>
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<tr>
<td>Imperv. Area (ac)</td>
<td>215</td>
<td>220</td>
<td>50</td>
<td>485</td>
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<tr>
<td>% Impervious</td>
<td>16 %</td>
<td>13 %</td>
<td>6 %</td>
<td>12 %</td>
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</table>
Concept Project #3: E. Charleston Green St
## Concept Project #3: E. Charleston Green St.

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Palo Alto</th>
<th>Mountain View</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td>Drainage Area (ac)</td>
<td>30</td>
<td>7.5</td>
<td>37.5</td>
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<tr>
<td>Imperv. Area (ac)</td>
<td>25.6</td>
<td>6.4</td>
<td>32</td>
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<tr>
<td>% Impervious</td>
<td>85 %</td>
<td>85 %</td>
<td>85 %</td>
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</table>
GSI Project List

Workgroup and Staff Meetings

Data and Info Analysis (GIS, Google Earth, City data sources)

CIP + City Plans

Stormwater Resource Plan
Suitability Mapping (Phase 1)

- Using GIS to filter out projects
  - Slope (≤15%)
  - Property ownership (public entities)
  - Speed limit (≤45 mph)
  - Groundwater plumes (no infiltration)
Prioritization Analysis

- Coordination with planned/proposed CIPs
- Street drainage issues (SDMP)
- Bike and pedestrian safety improvements
  - Safe Routes to School
- Potential redevelopment areas/Plans
  - Comprehensive Plan
  - Cal Ave. Priority Dev. Area
  - North Ventura Coord. Area Plan
- Pollutant of concern areas for PCBs & Trash
- Drainage area from SWRP
- Best Professional Judgement
Feasibility Review

• Initiated field visits
• Meetings with staff
  • PW Engineering
  • Parks re: maintenance needs/feasibility
  • Landscape Architect
• SWRP consultant support
GSI Potential: To be explored

- North Ventura Coord. Area Plan
- Grand Initiative Ped/Bike Safety (El Camino Real between Stanford and Lambert)
- Barron Park neighborhood
- Downtown alleys
- Cloverleafs & landscape ROWs

Limited control

- Cubberley Community Center
- Railroad Grade Separation
- Oregon Expressway Underpass
Next Steps

- Final draft list of projects
- Adjustments to SCVURPPP products
- 50% Plan
- Next Committee mtgs.
  - Mid August
  - Early December
- Feedback?

Data and Info Analysis (GIS, Google Earth, City data sources)
Workgroup and Staff Meetings
GSI Project List
Next Steps

- Continuous update of project maps
- Adjustments to SCVURPPP products
- 50% Plan
- Feedback?
GSI Budget

• Long-term funding needs
• Short-term proposed costs
FY2019 Proposed Budget

• GSI Long-term funding needs
• GSI Short-term proposed budget
  • GSI
  • Innovative/Incentive
• CIP 5-year proposed budget
• Recommendation Memo
## GSI Long Term Needs

<table>
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<tr>
<th>Long-term Funding Need</th>
<th>Est. Cost</th>
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<tbody>
<tr>
<td>Grant writing consulting services</td>
<td>$</td>
</tr>
<tr>
<td>Collaborating with requirements in other plans (e.g. Comp plan, Urban forestry plan)</td>
<td>$</td>
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<tr>
<td>On-going maintenance at City facilities/green streets (currently estimated ~ $100k/year)</td>
<td>$</td>
</tr>
<tr>
<td>GSI Concept ideas/designs</td>
<td>$-$$</td>
</tr>
<tr>
<td>CIP GSI design</td>
<td>$$</td>
</tr>
<tr>
<td>New MRP requirements: GSI implementation-related</td>
<td>$$-$$$</td>
</tr>
<tr>
<td>Pilot projects (e.g. Ventura - creek restoration)</td>
<td>$$$</td>
</tr>
<tr>
<td>CIP GSI construction</td>
<td>$$$$$</td>
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## GSI Short Term Proposed Plan

<table>
<thead>
<tr>
<th></th>
<th>FY 2018 Adopted Budget</th>
<th>FY 2018 Projection</th>
<th>FY 2019 Proposed Budget</th>
<th>FY 2020 Projection</th>
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<tbody>
<tr>
<td><strong>Green Stormwater Infrastructure</strong></td>
<td>380</td>
<td>380</td>
<td>380</td>
<td>380</td>
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<tr>
<td><strong>GSI - Other unassigned tasks</strong></td>
<td>15</td>
<td>15</td>
<td>0</td>
<td>40</td>
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<tr>
<td><strong>Innovative Project</strong></td>
<td>125</td>
<td>103</td>
<td>125</td>
<td>125</td>
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<tr>
<td><strong>Innovative Project - Rebates</strong></td>
<td>125</td>
<td>3</td>
<td>95</td>
<td>90</td>
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<tr>
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<td>100</td>
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</table>

[1] Charleston / Arastradero CIP project GSI elements  
[2] Contract with EOA on development of GSI Plan  
[3] Contract service to develop GSI engineering spec document  
Project Includes Installation of:

- 42,000 SF of landscaped medians, bulb-outs and bio-retention areas including 80 new street trees
- Widened sidewalks and bike paths
- ADA compliant curb ramps
- Traffic signal modifications and upgrades
- Street resurfacing and new pavement striping and markings
Charleston/Arastradero Corridor
Charleston/Arastradero Corridor

- 8 bio-retention locations
- 4,500 square feet
- $800K incremental cost vs. traditional landscaping
Charleston/Arastradero Corridor

BIO-RETENTION PROFILE
(TYPICAL)
NO SCALE
## GSI Short Term Proposed Plan

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GSI Short Term Proposed Plan

Maintenance and (Effectiveness) Monitoring Manual

GSI Specifications (Engineering, Utilities, Parks)

Design Guidelines

Concept designs
Planned CIP Projects

Recurring maintenance:

• Storm Drainage System Replacement and Rehabilitation

CIP in Ballot Measure

FY 2019

• Loma Verde Ave Trunk Line Improvement (#1)

FY 2020

• Corporation Way System Upgrades and Pump Station (#2)
  • West Bayshore Road Pump Station (#4)

FY 2022

• East Meadow Drive System Upgrades (#7)
## Planned CIP Projects

<table>
<thead>
<tr>
<th>Capital Improvements Program (13)</th>
<th>FY 2019 Proposed Budget</th>
<th>FY 2020 Proposed Budget</th>
<th>FY 2021 Proposed Budget</th>
<th>FY 2022 Proposed Budget</th>
<th>FY 2023 Proposed Budget</th>
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<tbody>
<tr>
<td>SD System Replacement &amp; Rehabilitation (SD-06101)</td>
<td>412</td>
<td>424</td>
<td>437</td>
<td>450</td>
<td>464</td>
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<tr>
<td>Projects identified from Ballot</td>
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<td>400</td>
<td>1,840</td>
<td>1,620</td>
<td>1,892</td>
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<td>Loma Verde Ave Trunk Line Improvements (#1, SD-19000)</td>
<td>2,200</td>
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<tr>
<td>West Bayshore Road Pump Station (#4, SD-20000)</td>
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<td>200</td>
<td>840</td>
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<td>Corporation Way System Upgrades and Pump Station (#2, SD-21000)</td>
<td></td>
<td>200</td>
<td>1,000</td>
<td>1,220</td>
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<tr>
<td>East Meadow Drive System Upgrades (#7, SD-22000)</td>
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<td></td>
<td></td>
<td>400</td>
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Planned CIP Projects
FY2019 Proposed Budget

1. Questions
2. Draft Recommendation Memo