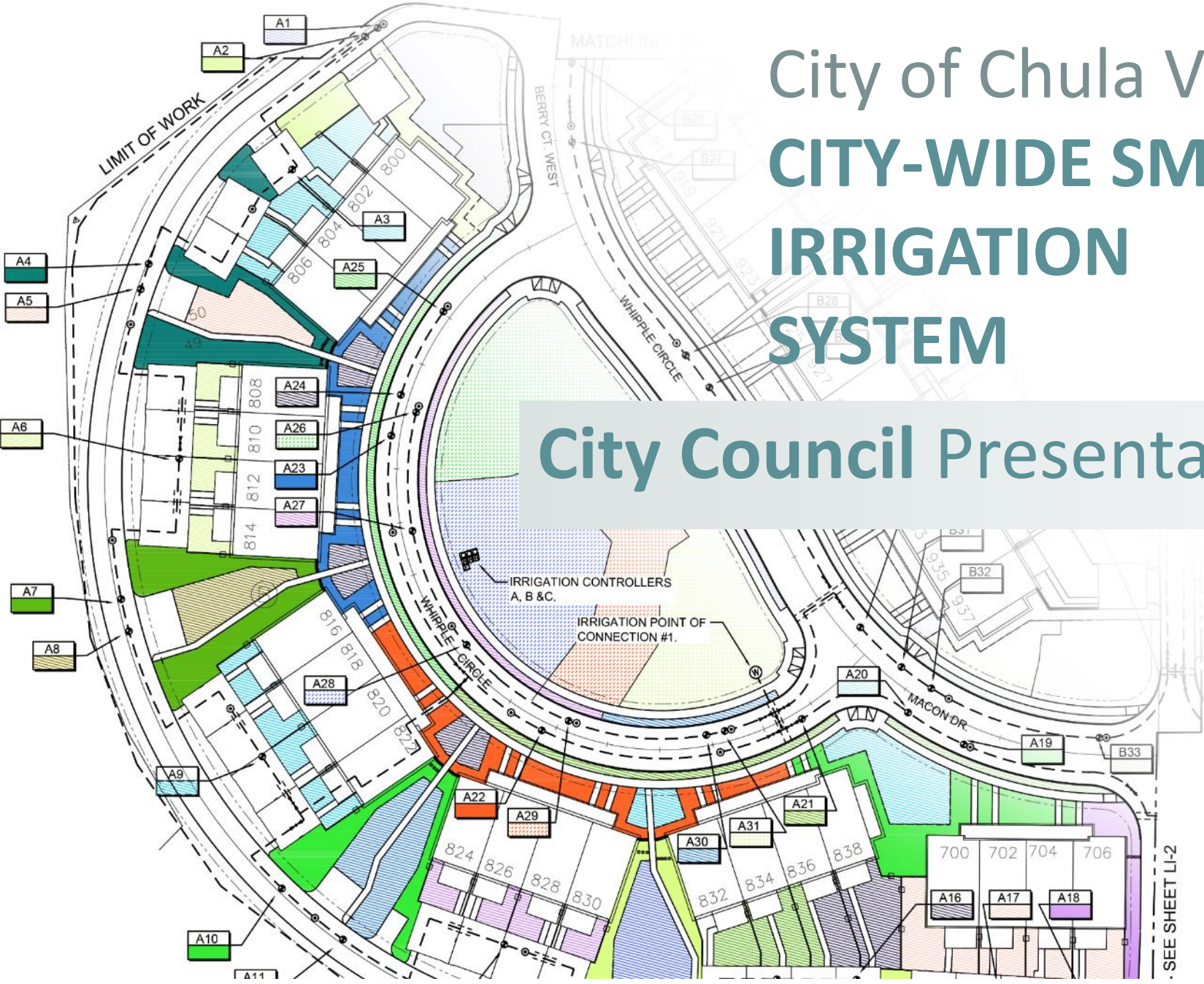
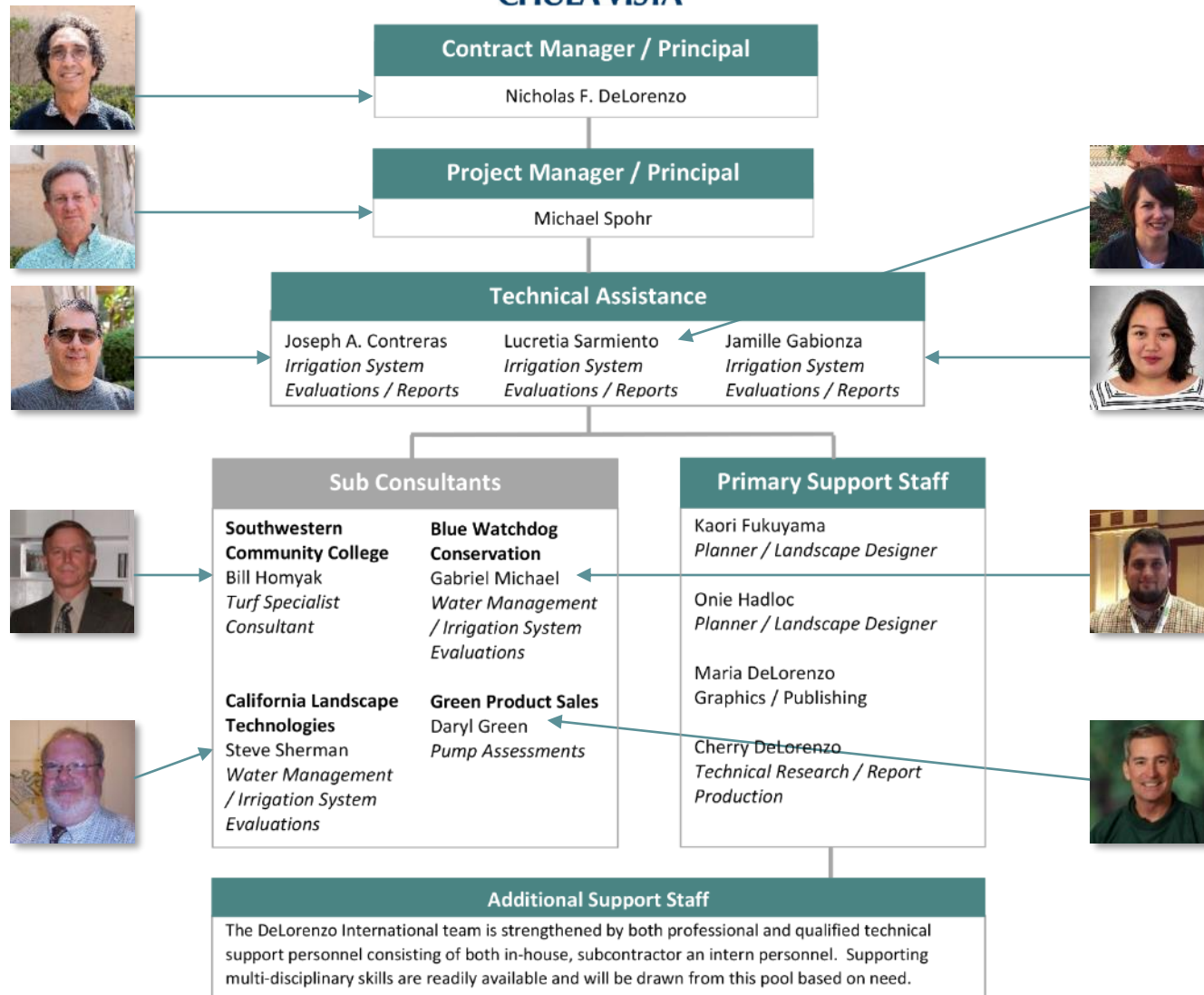


City of Chula Vista CITY-WIDE SMART IRRIGATION SYSTEM

City Council Presentation



PROJECT TEAM



PROJECT EXAMPLES



DeLorenzo International - Water Management Map California

San Diego County

- MCAS Miramar
- Replacement Naval Hospital Camp Pendleton
- Barona Resort and Casino
- San Diego Gas & Electric
- San Diego County Water Authority – WaterSmart Landscape Makeover Series (County-wide)

Orange County

- Municipal Water District of Orange County – California Friendly Landscape Program

Monterey County

- Monterey Bay Military Housing

Santa Clara County

- Moffett Field
- Camp Parks
- El Rancho Verde



PROJECT EXAMPLE – MCAS Miramar



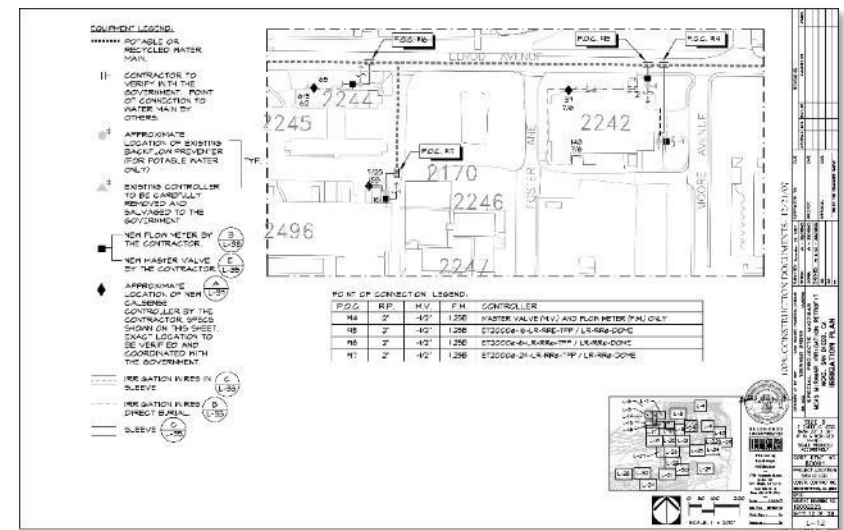
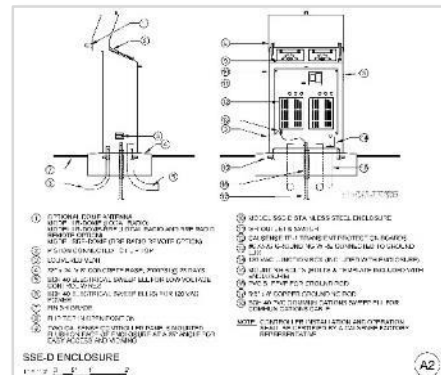
MCAS Miramar Calsense Retrofit and Reclaimed Water Conversion Project – San Diego, CA

- 82 Points of connection



MCAS Miramar Irrigation Retrofit- POC # 2 (Sheet L-5) 100% Cost Option Submittal

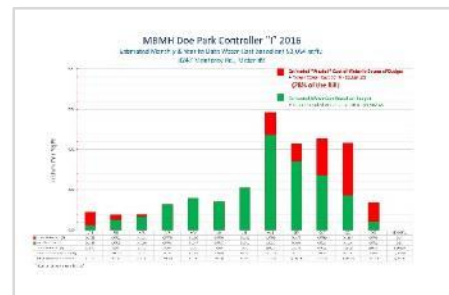
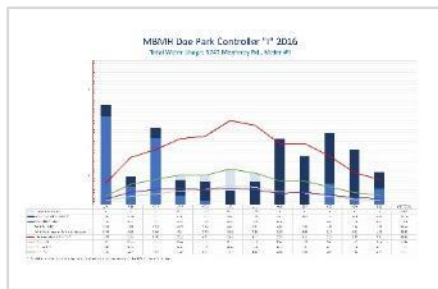
Item	Unit	Quantity	Unit Cost	Cost	Total Cost
Site Improvements and Irrigation Work (Contractor to purchase & install equipment from database)					
1. Installation of 1" PEX Water Valve & Gate Valve	SV	123	\$0.00	\$0.00	\$0.00
2. Installation of 1" PEX Water Valve & Gate Valve	SV	14	\$750.00	\$10,500.00	\$10,500.00
3. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
4. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$750.00	\$750.00	\$750.00
5. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
6. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
7. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
8. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
9. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
10. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
11. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
12. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
13. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
14. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
15. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
16. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
17. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
18. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
19. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
20. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
21. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
22. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
23. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
24. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
25. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
26. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
27. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
28. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
29. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
30. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
31. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
32. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
33. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
34. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
35. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
36. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
37. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
38. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
39. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
40. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
41. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
42. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
43. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
44. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
45. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
46. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
47. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
48. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
49. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
50. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
51. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
52. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
53. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
54. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
55. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
56. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
57. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
58. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
59. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
60. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
61. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
62. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
63. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
64. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
65. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
66. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
67. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
68. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
69. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
70. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
71. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
72. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
73. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
74. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
75. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
76. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
77. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
78. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
79. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
80. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
81. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
82. Installation of 1" PEX Water Valve & Gate Valve	SV	1	\$1,000.00	\$1,000.00	\$1,000.00
Net Cost Subtotal				\$25,728	\$25,728
General Conditions, Overhead & Profit (5%)				\$1,286	\$1,286
Net Cost (Construction Value)				\$27,014	\$27,014
Final Cost Option per Point of Connection (POC)				\$38,000	\$38,000



PROJECT EXAMPLES – Monterey Bay Military Housing

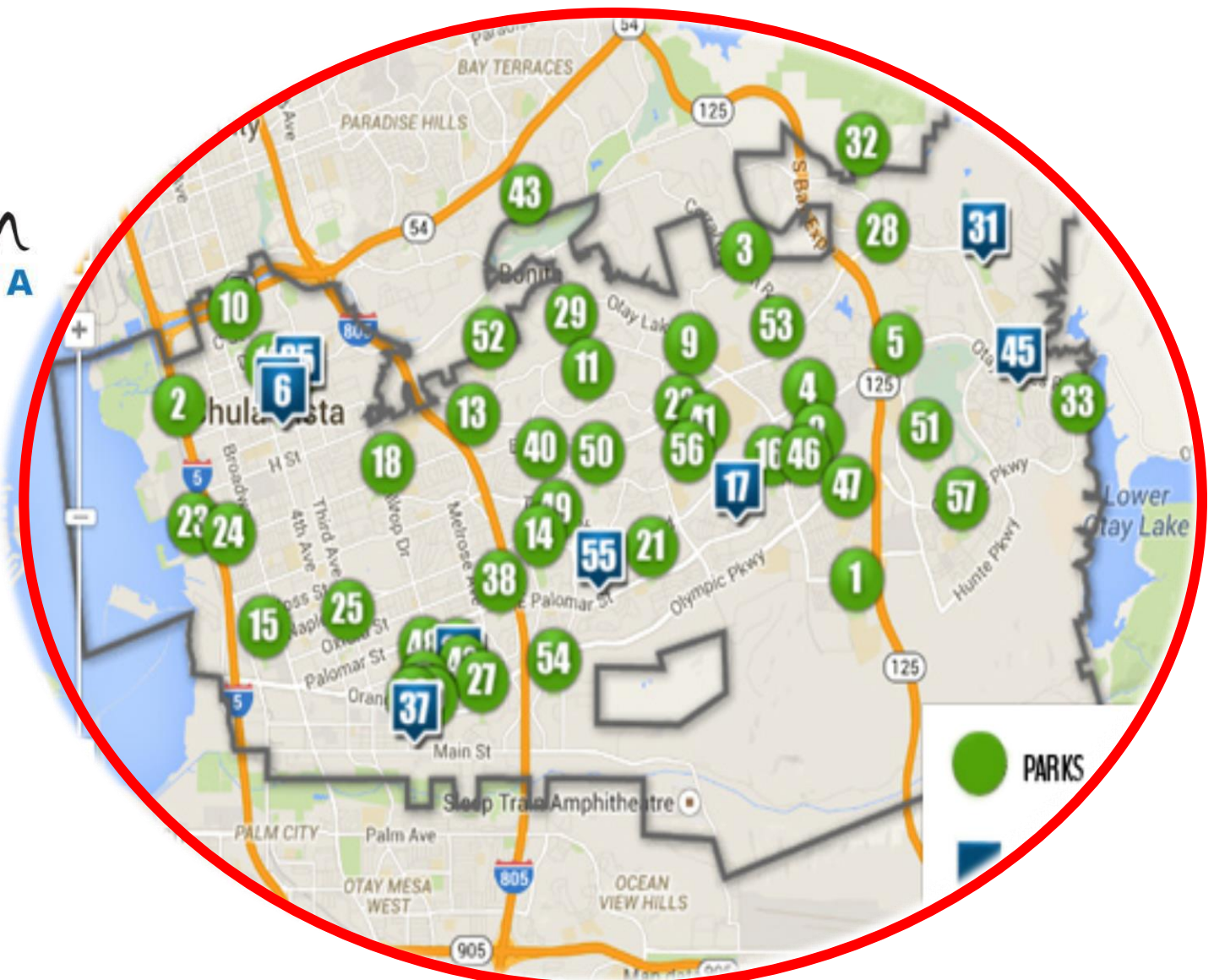


Monterey Bay Military Housing (MBMH) Water Tracking
– Monterey, CA





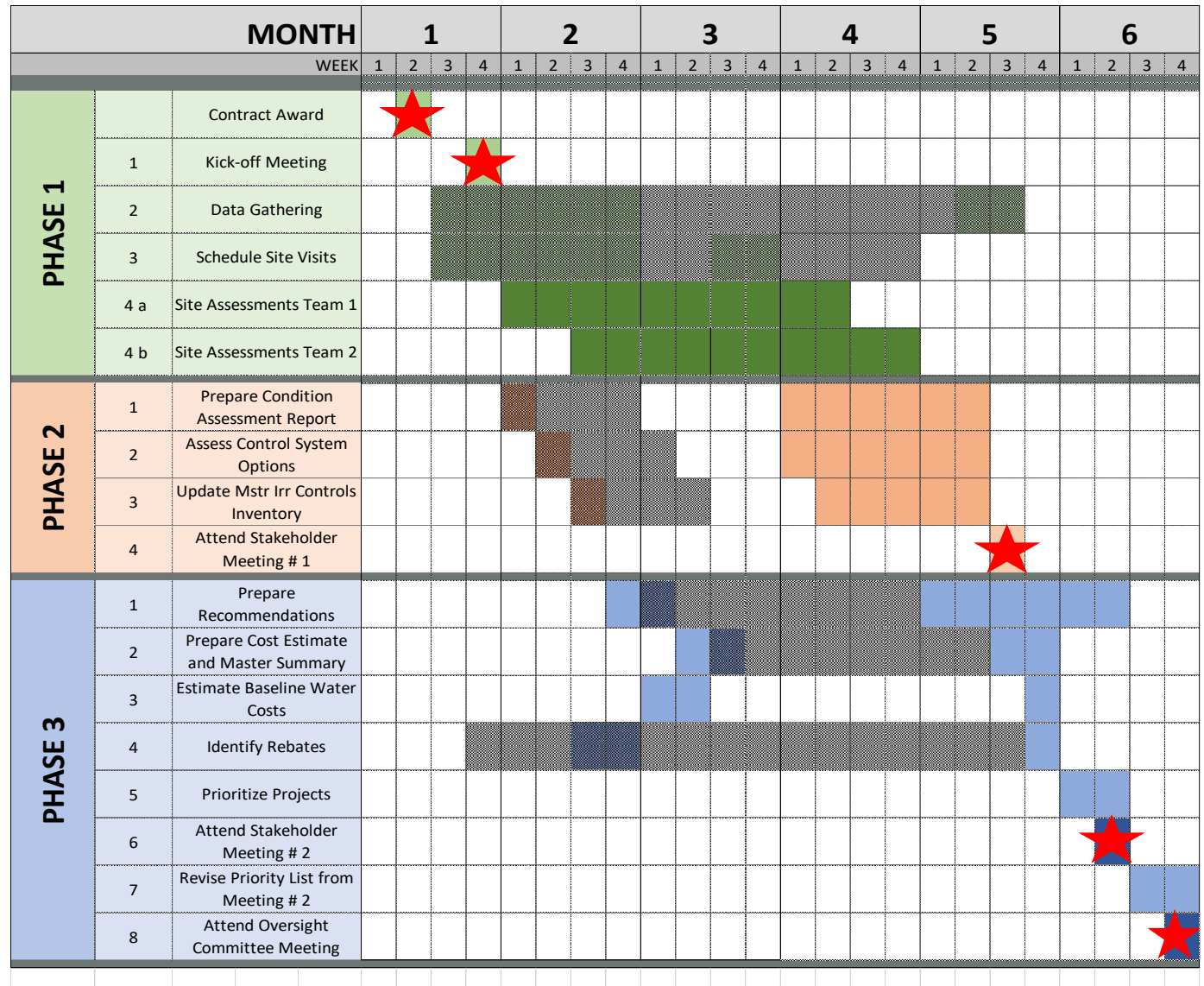
Valuation and Recommendation for controllers on City Parks, Fire Stations, Libraries and Median Strips



City of Chula Vista Parks and Recreation Map



**Expedite
schedule
to complete In
6 months
to take
advantage of
rebates**



APPROACH AND METHODOLOGY

Phase I

1. Site Assessments:

- 1 or 2 teams of 1 irrigation assessment specialist, 1 assessment recorder and a knowledgeable city maintenance staff member (certified recycled water site supervisor).

Phase 2

1. Prepare condition assessment report.
2. Assess control system options and recommendations.
3. Update Master Irrigation Controls Inventory.
4. Attend Stakeholder Meeting # 1.



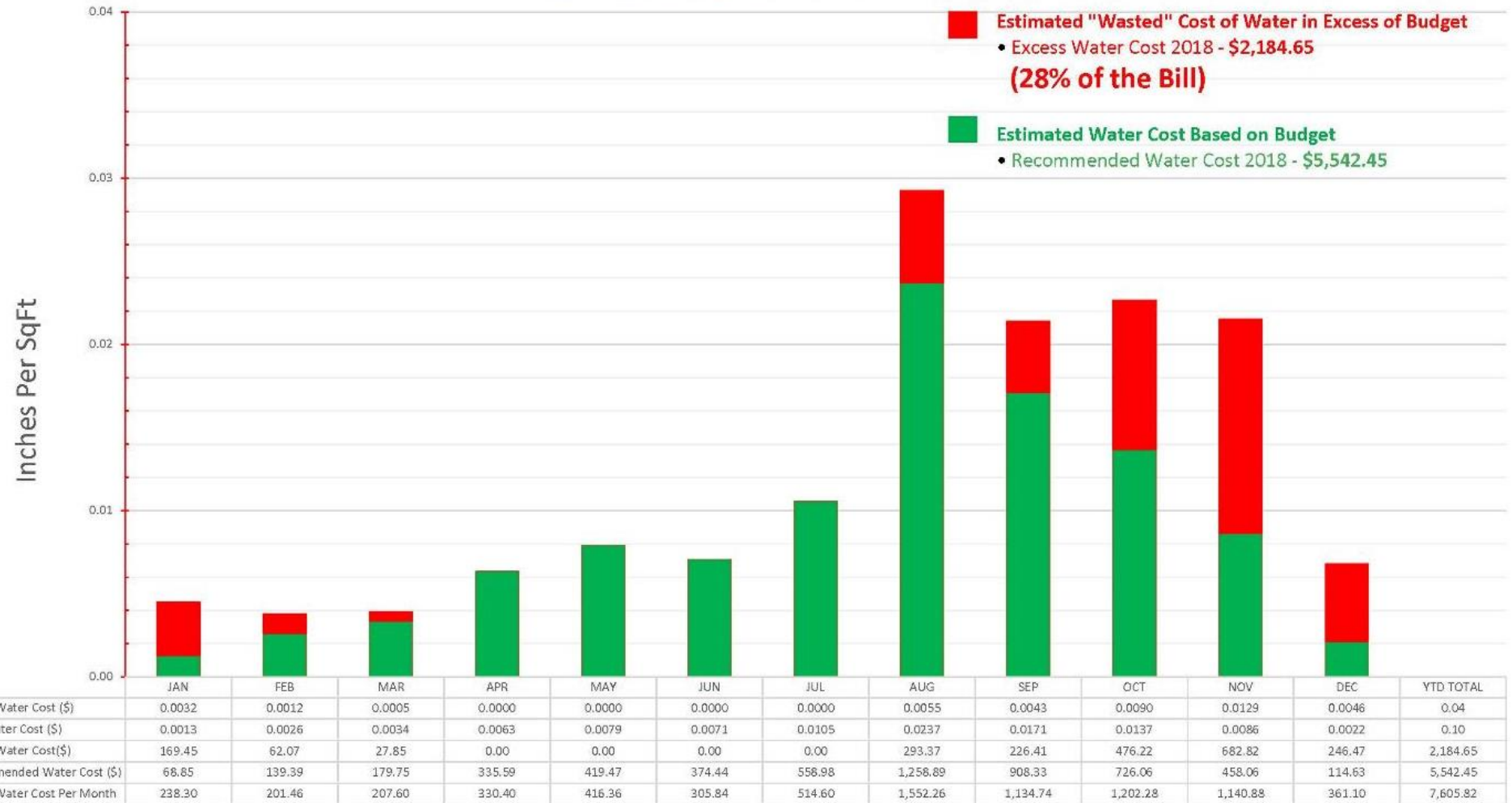
APPROACH AND METHODOLOGY

Phase 3

1. **Prepare biddable specifications** for repair, renovation, retrofit and/or installation of controllers, master-valves, flow meters & pumps.
2. Prepare cost estimates and master summary.
3. **Estimate baseline water costs**, future water use and potential water savings, if any. (How is this affected by water budgeting?)
4. Identify rebates.
5. **Prioritize projects.**
6. Attend Stakeholder Meeting # 2.
7. Revise priority list per direction from Stakeholder Meeting # 2.
8. Attend Oversight Committee Meeting.

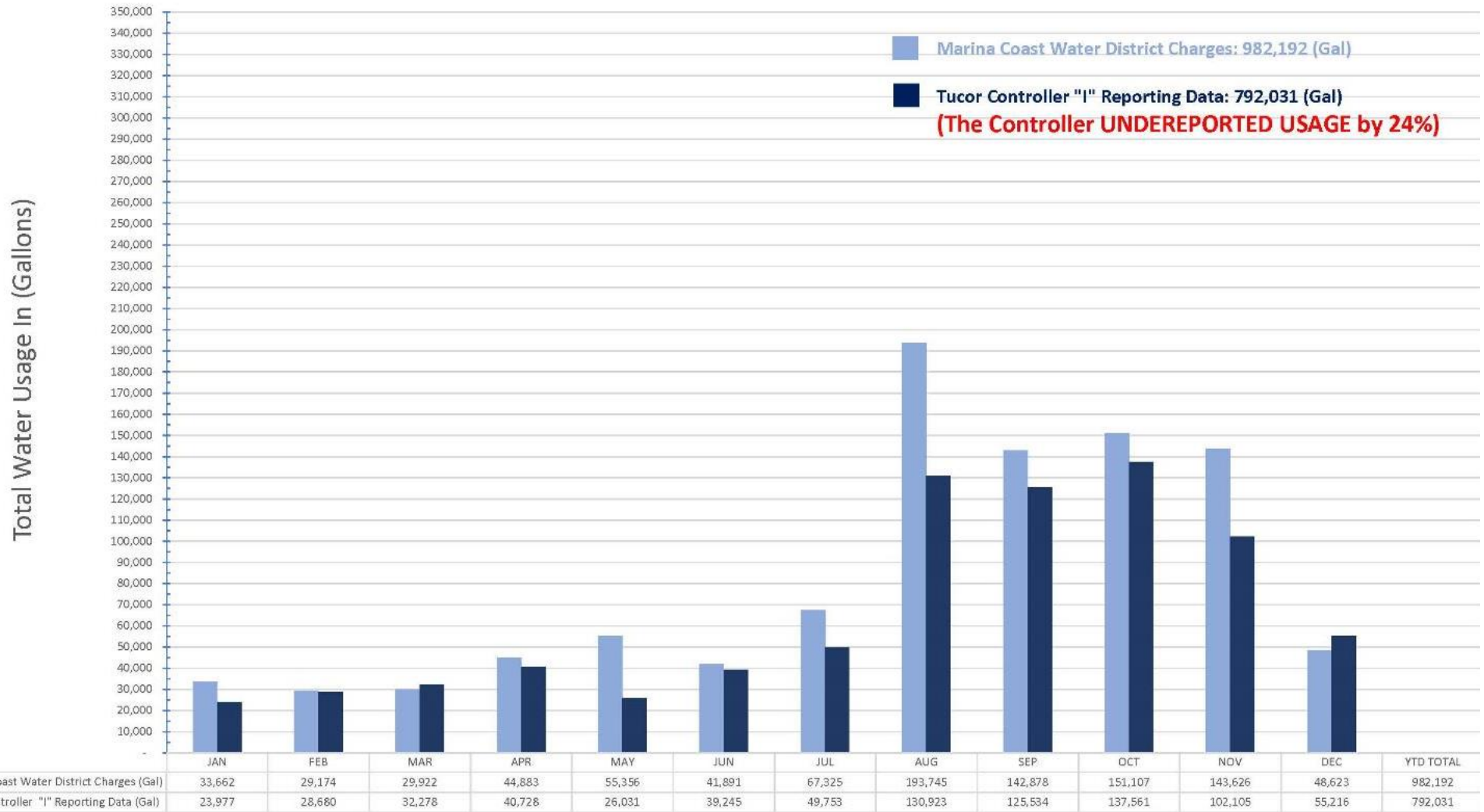


ESTIMATED BASELINE WATER COSTS



* Total Landscape area is 190,757

Water Meter vs. Smart Controller Comparison



PRIORITIZE PROJECTS

1. Identify locations where maximum water savings can be achieved.
 - Facilities where no smart controller currently installed.
 - Facilities where smart controller require upgrading.
(May not all be the same manufacturer)
2. Identify locations where smart controller currently working and connected.
 - No need to expend \$\$ on these (only failed assets).
3. Identify remaining locations where upgrading and/or repair will result in additional savings and/or conservation.