

An aerial photograph of a residential neighborhood in South San Francisco. The left side of the image is covered by a semi-transparent blue overlay containing white text. The right side shows a detailed view of the ground, including a baseball field, tennis courts, and various houses and streets.

Orange Memorial Park Storm Water Capture Project

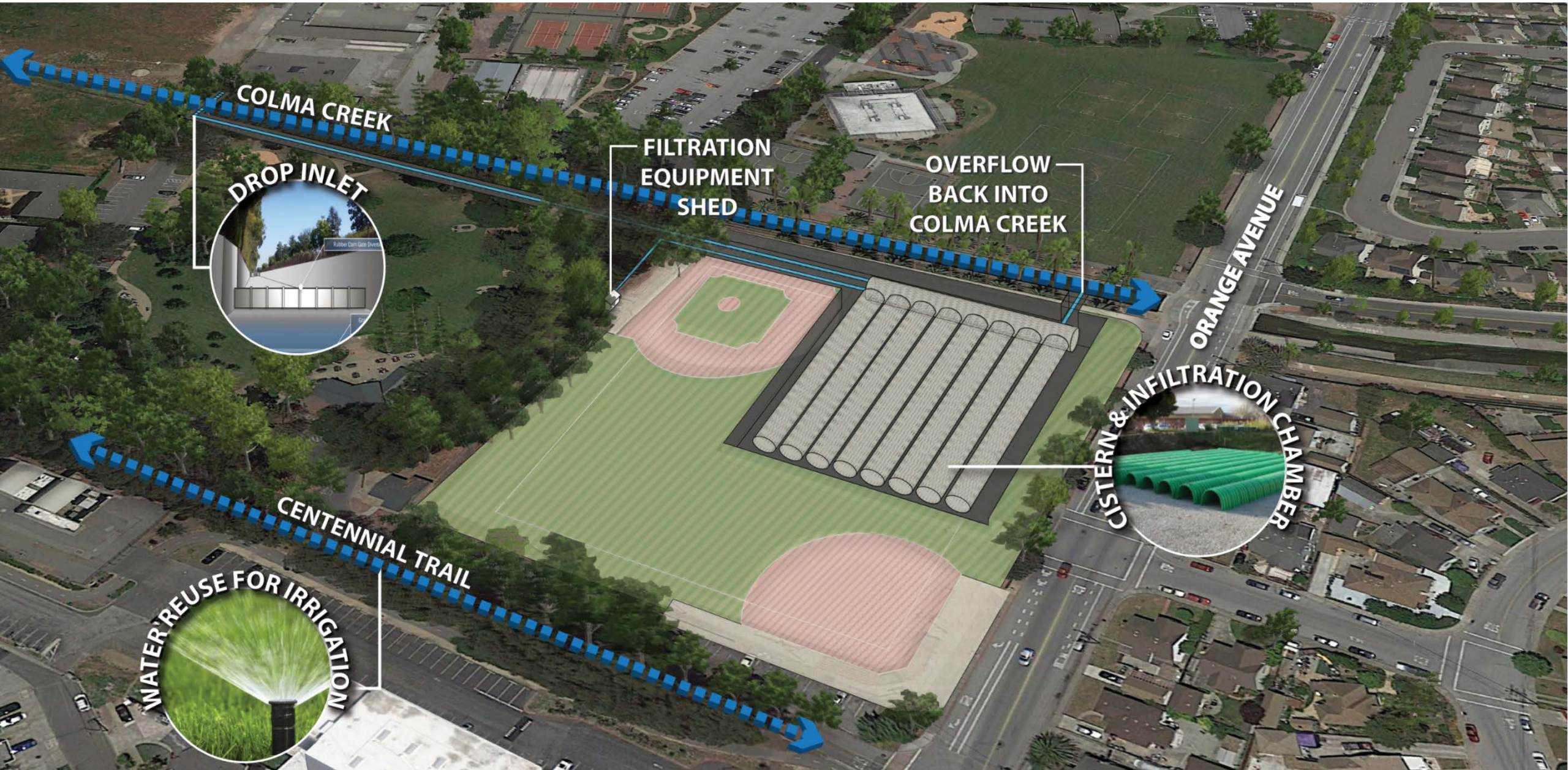
South San Francisco
City Council Meeting

June 26, 2019

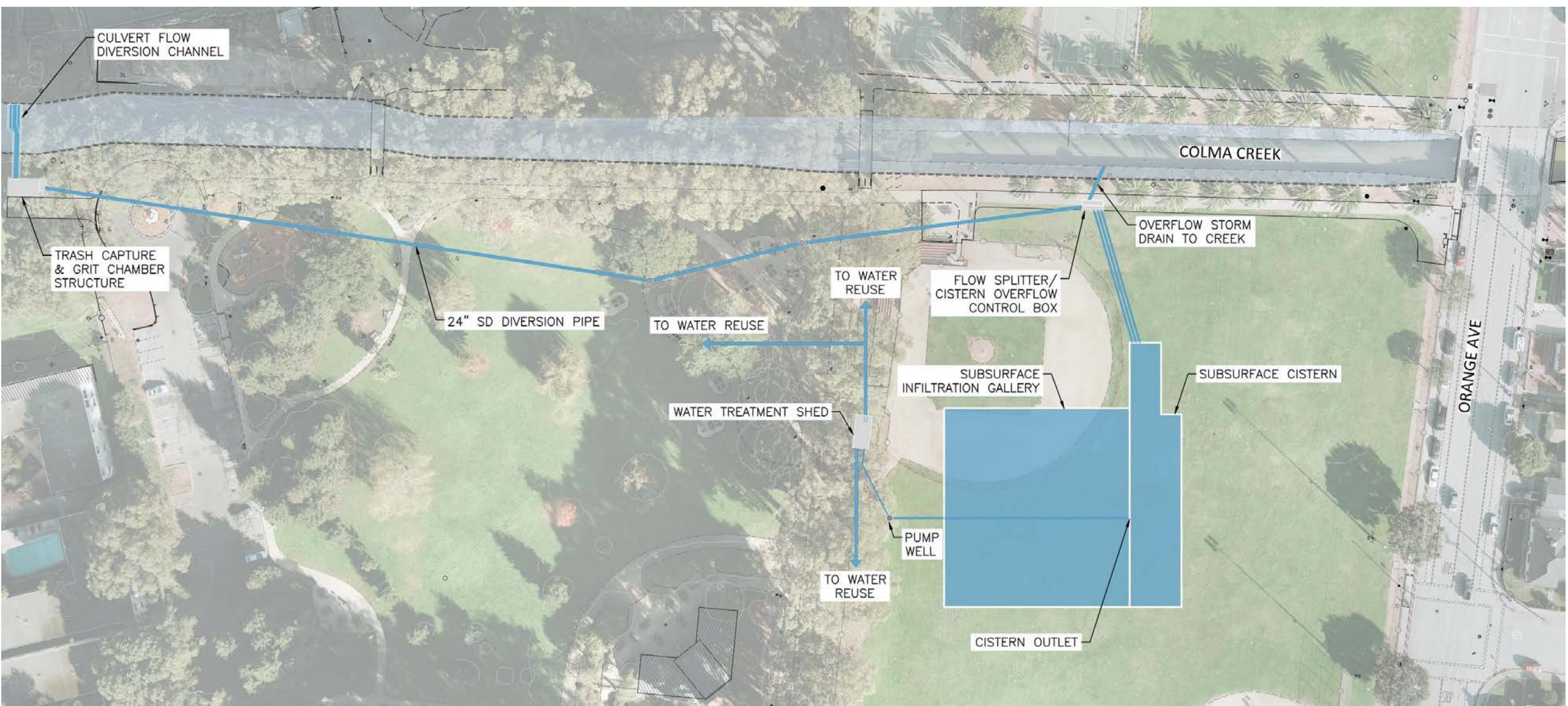


Project Update

Selected Alternative: Subsurface Cistern under Ballfields

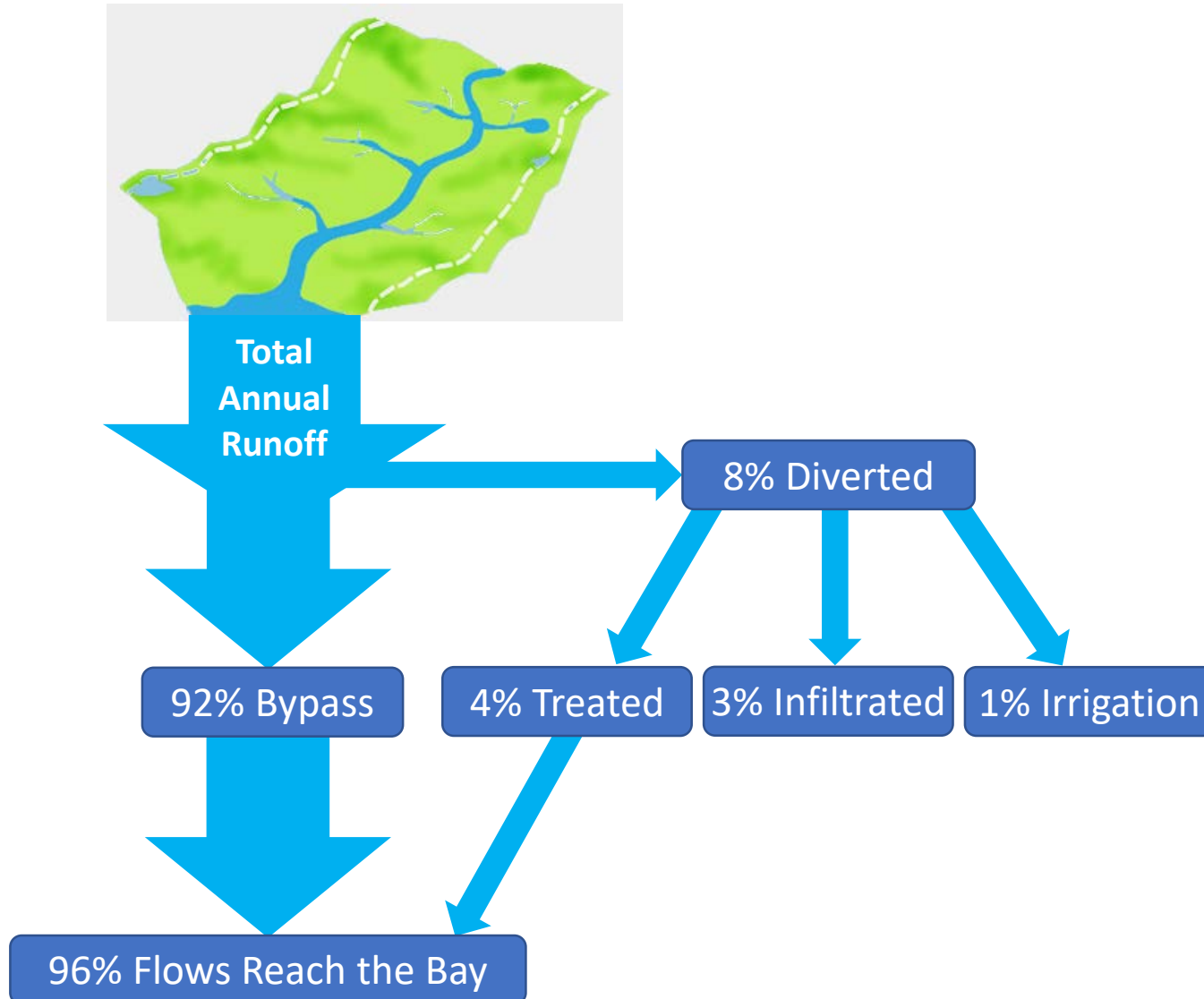


60% Design – Water Capture System Layout



60% Design – Water Capture System Performance

Hydrology



Annual Benefits (RAA Model)

Equivalent Areas treated

- 351 acres for general water quality (85th percentile storm)
- 133 acres for trash capture (1-yr, 1-hr storm)

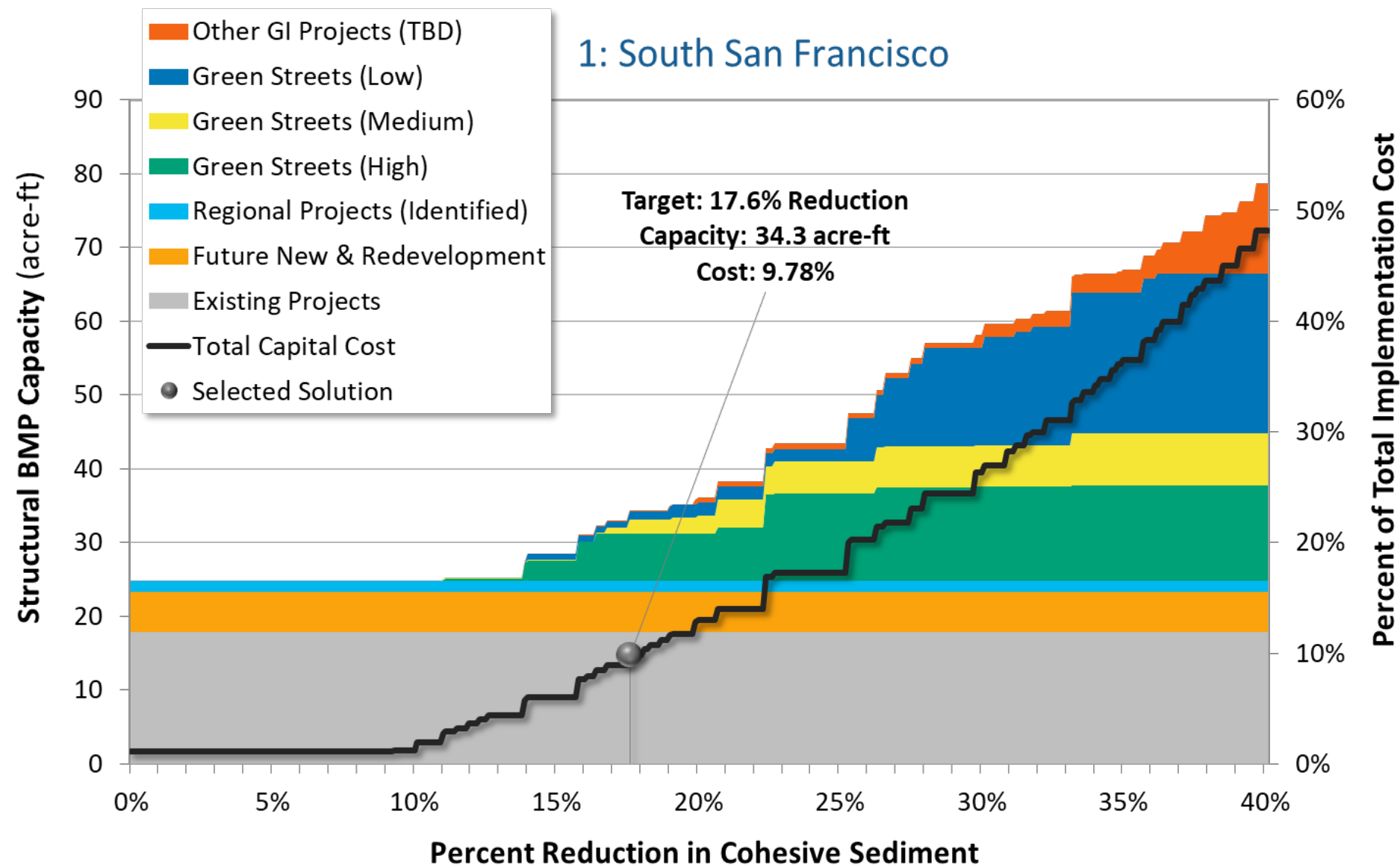
Pollutant Load Reduction

- 56 tons of sediment removed
- 5 grams of PCBs removed
- 16 grams of Hg removed

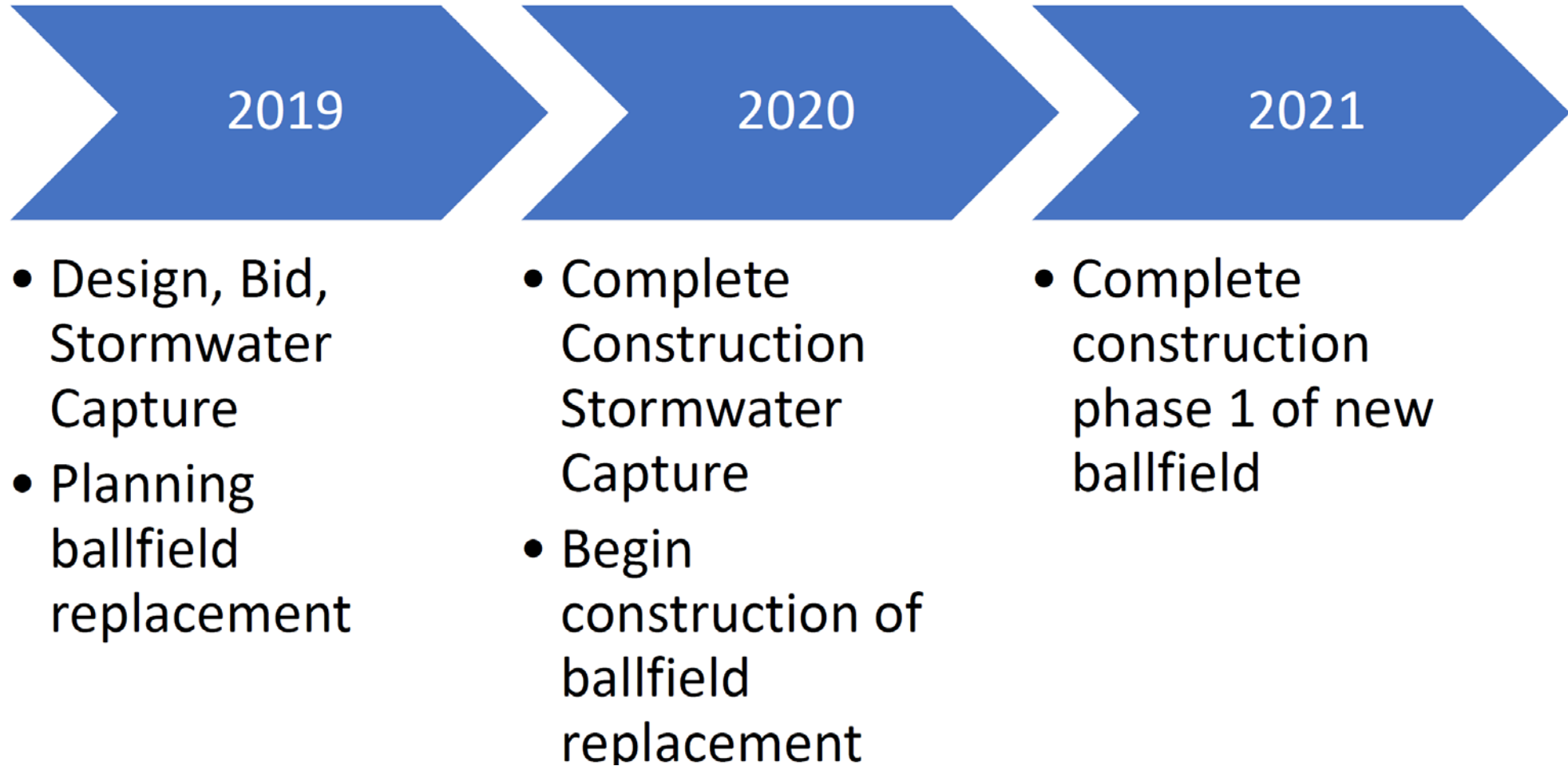
Beneficial Uses

- 120 ac-ft/yr groundwater recharge
- 40 ac-ft/yr potable offset
- 160 ac-ft/yr treated and returned

Water Quality Benefits



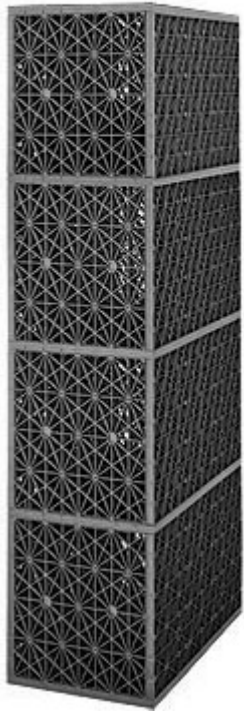
Schedule – Design, Bid, and Construction



Storage System Pre-purchase

Stormwater Storage System Products Comparison

Atlantis Corp.
Atlantis Quad Flo-Tank



RainHarvest Systems
Graf EcoBloc Maxx



California Filtration Specialists
R-Tank HD Pent



Storage System – Cost Comparison

Atlantis Flo-Tank

- Storage modules only: \$463,144
- Total cost: \$1,281,000

Graf EcoBloc Maxx

- Storage modules only: \$696,609
- Total cost: \$1,525,000

R-Tank HD Pent

- Storage modules only: \$676,425
- Total cost: \$1,492,000

Storage System – Warranty Terms

Atlantis Flo-Tank

- 10-year written warranty
- Applies to structural integrity of Atlantis Flo-Tank modules only

Graf EcoBloc Maxx

- Written warranty not yet provided

R-Tank HD Pent

- 10-year written warranty
- Applies to structural integrity of R-Tank modules only

Storage System – Certifications

Atlantis Flo-Tank

- Raw materials supplier compliant with ISO 9001

Graf EcoBloc Maxx

- Manufacturing certified according to ISO 9001
- Manufacturing certified according to ISO 50001

R-Tank HD Pent

- Raw materials supplier compliant with ISO 9001
- Independently certified AASHTO Load and Resistance Factor Design

Storage System – Testing

Atlantis Flo-Tank

- 3rd party testing done for samples from factory production of modules per in-house Atlantis Production Protocol and Atlantis Quality Requirements
 - Compression Tests
 - Flexibility & Deformation Tests
 - Drop Tests
 - Visual Inspection
- University of Technology Sydney performed creep tests and compression tests of Atlantis modules

Graf EcoBloc Maxx

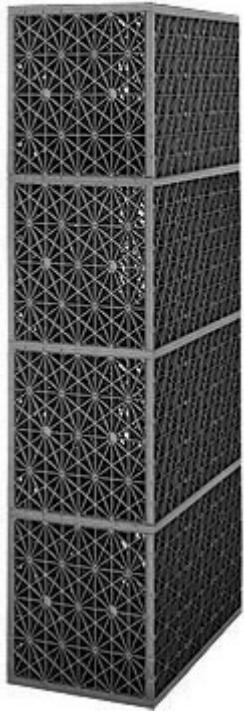
- Written warranty not yet provided
- Testing performed per requirements to obtain European product certificate (BBA)
 - Quick Compression Tests
 - Creep Rupture Tests
 - Design Strength
 - Installation Limits

R-Tank HD Pent

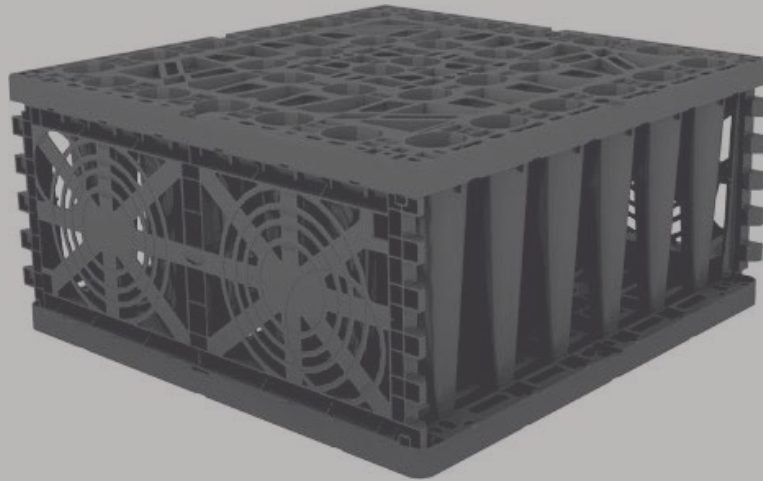
- *Information not yet provided*

Storage System – RECOMMENDATION

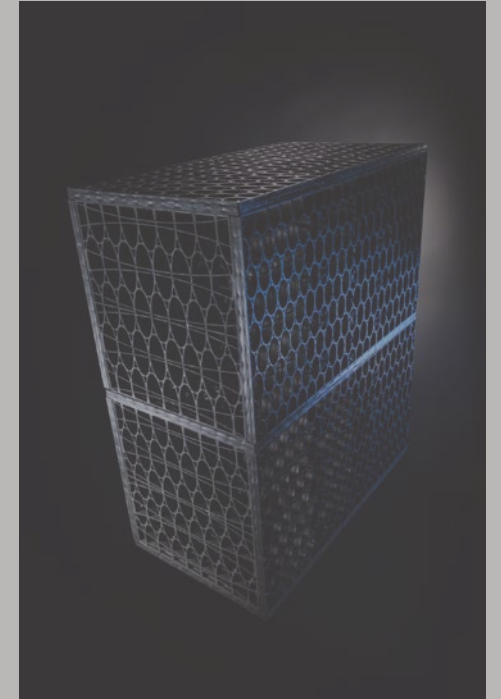
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Thank you!