

Bay Area One Water Network Workshop on Urban Stormwater



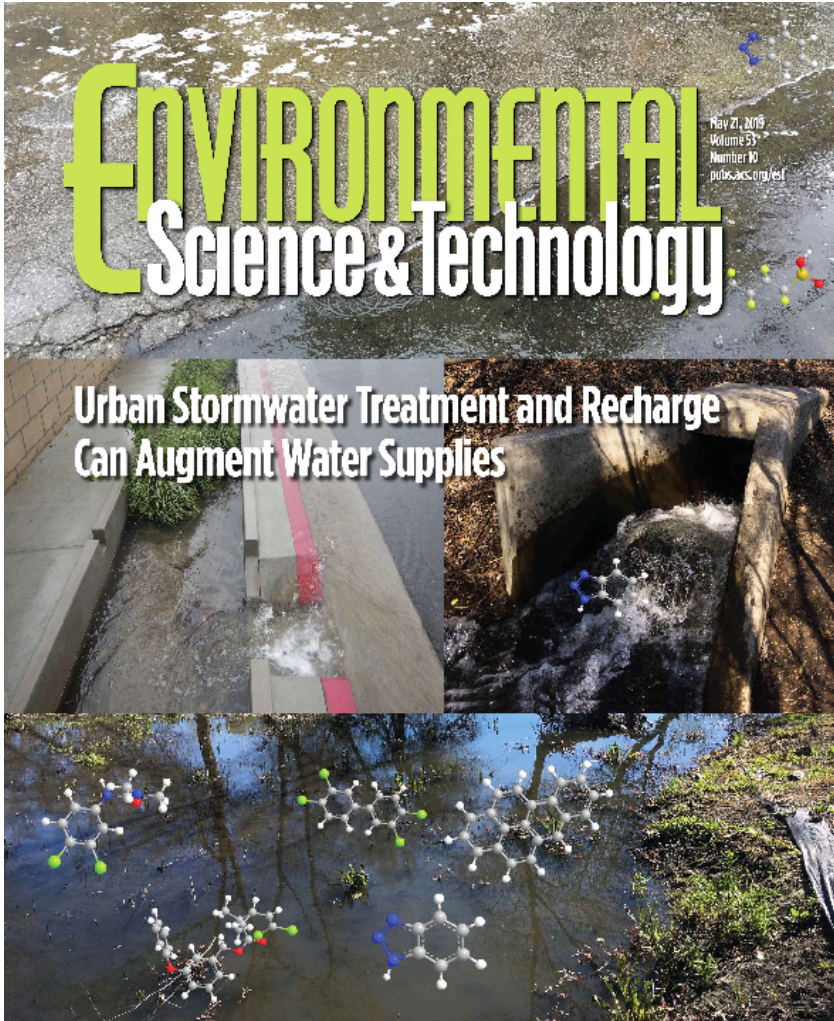
Trends in the Bay Area What's the feasibility? What should we prioritize?

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Bay Area One Water Network
July 25-26, 2019

Trends in Stormwater Use



- Push for resilient water supplies
- Regional assessments
- Leveraging existing infrastructure
- Quantifying co-benefits
- Water quality benefits
- Financing stormwater use

Resilient water supply portfolios



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GAVIN NEWSOM

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Governor Newsom Directs State Agencies to Prepare Water Resilience Portfolio for California

Published: Apr 29, 2019

... prioritize multi-benefit approaches, embrace innovation and new technologies, encourage regional approaches, ...



What's Happening (two views)

Prepared for

Bay Area Stormwater Management Agencies Association (BASMAA)
P.O. Box 2385
Menlo Park, CA 94026

**Harvest and Use, Infiltration and
Evapotranspiration Feasibility/Infeasibility
Criteria Report**

**Municipal Regional Permit
Provisions C.3.c.i (2) and C.3.c.iii(1)**



Prepared by

Geosyntec
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engineers | scientists | innovators
1111 Broadway, 6th Floor
Oakland, California 94607

WW1419
1 May 2011

Final Report

Five-county survey of soil groups for infiltration







Santa Clara Basin Stormwater Resource Plan

Public Draft
August 6, 2018

*Funding Provided by Proposition 1 Stormwater Planning Grant
Grant Agreement No. D1612605; Task 4.7*

Prepared By:
EOA, Inc.
Paradigm Environmental
Lotus Water

There exists thousands of public parcels and tens of thousands of public right-of-way segments across the County ... e.g., 22 high priority locations, 930 AFY

Leveraging Existing Infrastructure



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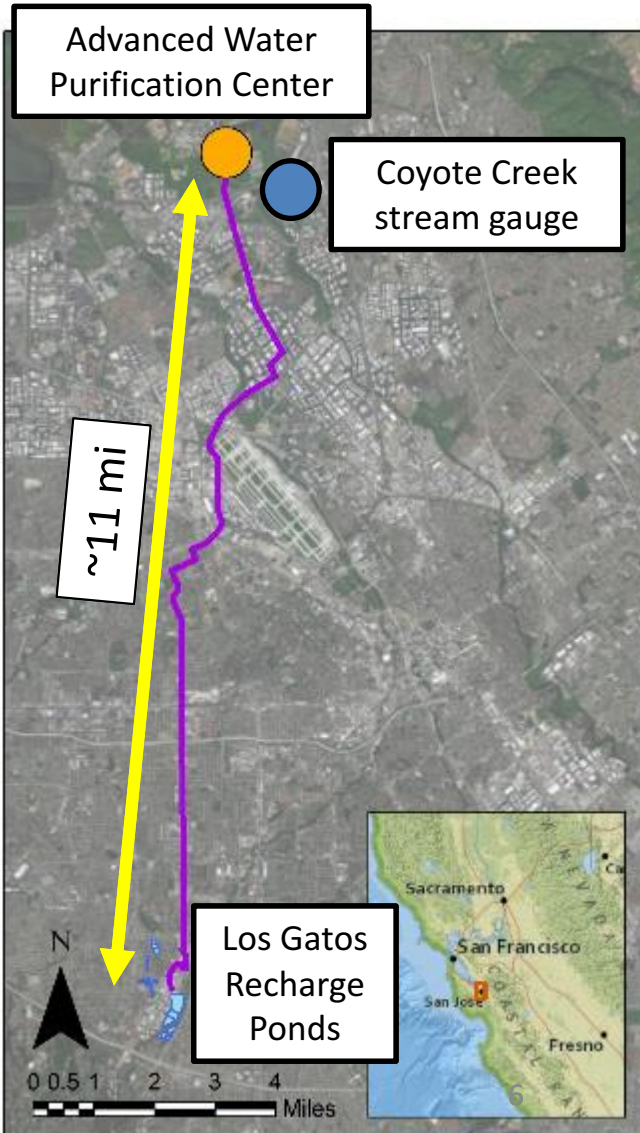


Capture stormwater and reverse pump to lake water storage for summer irrigation, 30 AFY

Alternative Compliance:
Greater overall water quality benefit than simply satisfying onsite structural BMP requirements associated with the Priority Development Project



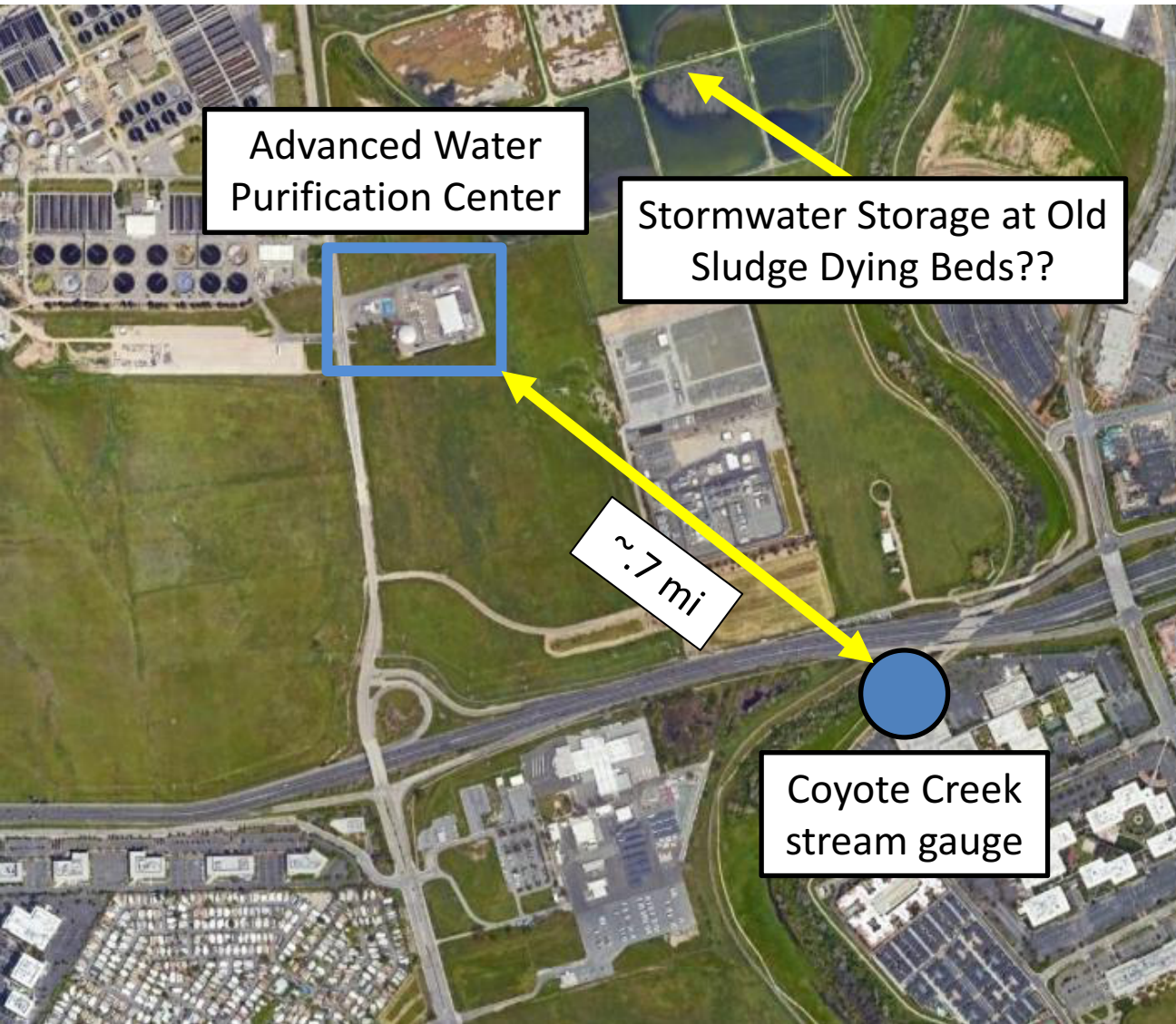
Leveraging Existing Infrastructure



- **Case study of Valley Water**
- Hydrologic analysis using 1999-2015 data
- Treatment options
 - UV/AOP
 - MF-UV/AOP
 - MF-RO-UV/AOP
 - O₃-BAC-UV/AOP
- Storage options

Potential pipeline drawn for illustrative purposes

Leveraging Existing Infrastructure



- Costs depend on treatment
- UV/AOP and pumping to storage ponds about \$2000/AF
- May achieve about 11,000 – 13,000 AFY depending on storage

Use + Water Quality Co-benefits



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“Protect Our Beaches”
“City Environment Better for All”

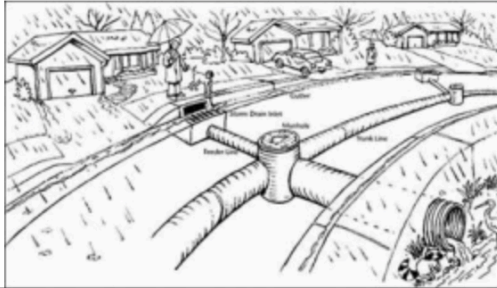


Financing Stormwater Systems



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Storm Water Management Fee



2017 Storm Water Management Fee Ballot Measure Passes

In April 2017, Palo Alto property owners voted to approve a new Storm Water Management fee that will replace the City's existing Storm Drainage fee. A typical homeowner will pay about \$13.65 per month, effective June 1, 2017.

Palo Alto, April 2017

Fee required 50% approval by property owners

Passed with 64%

For both maintenance and new projects

(note Proposition 218 thresholds)



MEASURE W

captures and cleans enough rain water to meet the needs of 2.5 million county residents.

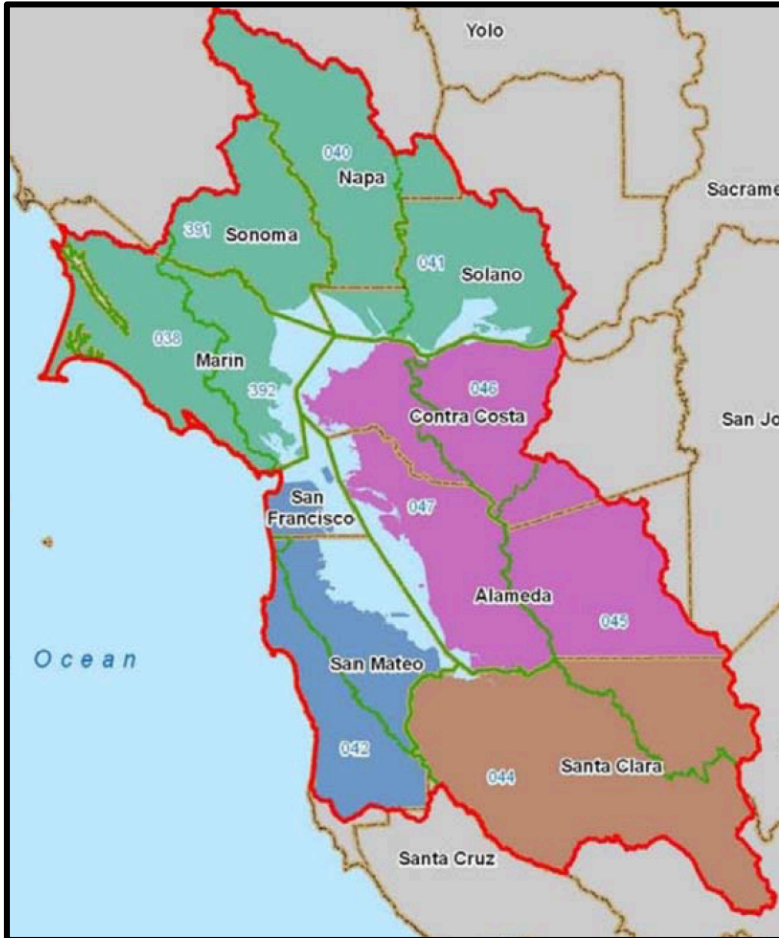
Los Angeles Measure W, Nov. 2018

Tax: 2.5 ¢/yr-sq ft impermeable space

Required 67% voter approval

County-wide passage (69.5%)

Where do we go from here ...



BAIWMP Regions (IRWMP, 2013)

- **County-scale collection & treatment**
 - Are there more opportunities for greater impact on supply?
- **Neighborhood-scale capture**
 - How do these fit into a larger management and supply picture
- **Co-benefits for stormwater and water recycling facilities**
 - How do integrated approaches work?
- **Small systems place in a recharge portfolio**
 - How do small systems add value?