Agenda Overview

12:00 p.m.	Welcome, Introduction to the BAOWN Noontime Summer Seminar Series and Agenda Review
12:05 p.m.	Overview of the BAOWN and the Workshop on Urban Stormwater *Richard Luthy, Stanford University*
12:15 p.m.	Panel Discussion: Opportunities and Overcoming Challenges *Mike Thompson, Sonoma Water* *Matt Fabry, City/County Association of Governments of San Mateo County* *Pam Boyle Rodriguez, City of Palo Alto* *Josh Bradt, San Francisco Estuary Partnership*
12:35 p.m.	Q&A with Panel
12:50 p.m.	Closing Comments
1:00 PM	Adjourn

Bay Area One Water Network
Workshop on Urban Stormwater

Stormwater Capture to Augment Water Supplies in the San Francisco Bay Area

Richard G. Luthy
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Bay Area One Water Network
July 6, 2020

Bay Area One Water Network

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Re-inventing the Nation's
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Clearinghouse for stakeholders and water managers in the region to share information, build collaborative capacity, and develop strategies for implementing resilient, integrated water systems.

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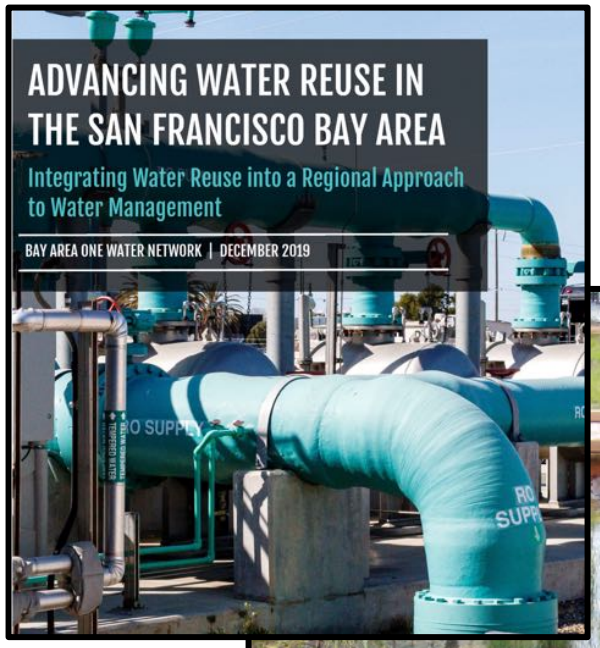
Advance safe and resilient Bay Area water systems

- **Workshops**
  - Advancing Water Reuse
  - Stormwater as a Water Source
- **Off-the-record discussions**
- **Synthesis reports & recommendations**



Stormwater workshop & synthesis report

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- History and current state of stormwater capture
- Case studies and innovative management
- Regional drivers
- Range of opportunities
- Spur discussion and future actions

Challenges, opportunities & next steps

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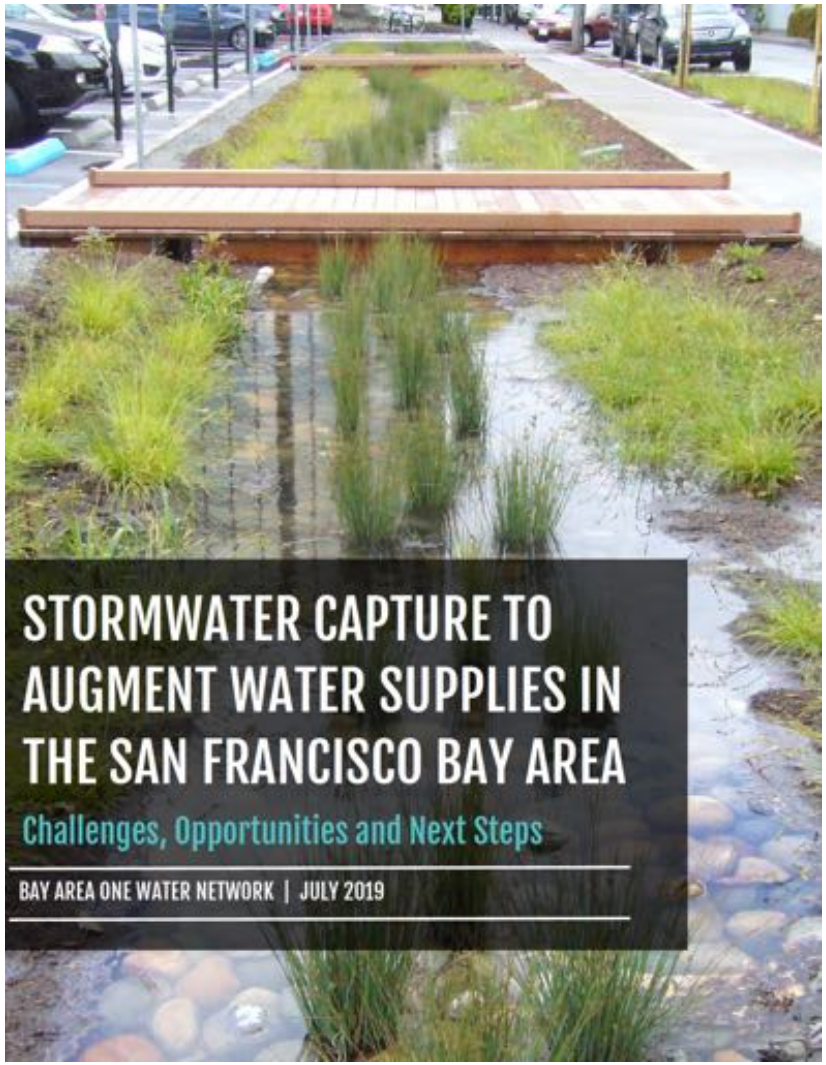

- **What's special about the Bay Area**
- **Integrating water supply into the stormwater equation**
- **Key steps to advance stormwater capture**
- **Collaborating for integrated solutions**

The logic of stormwater

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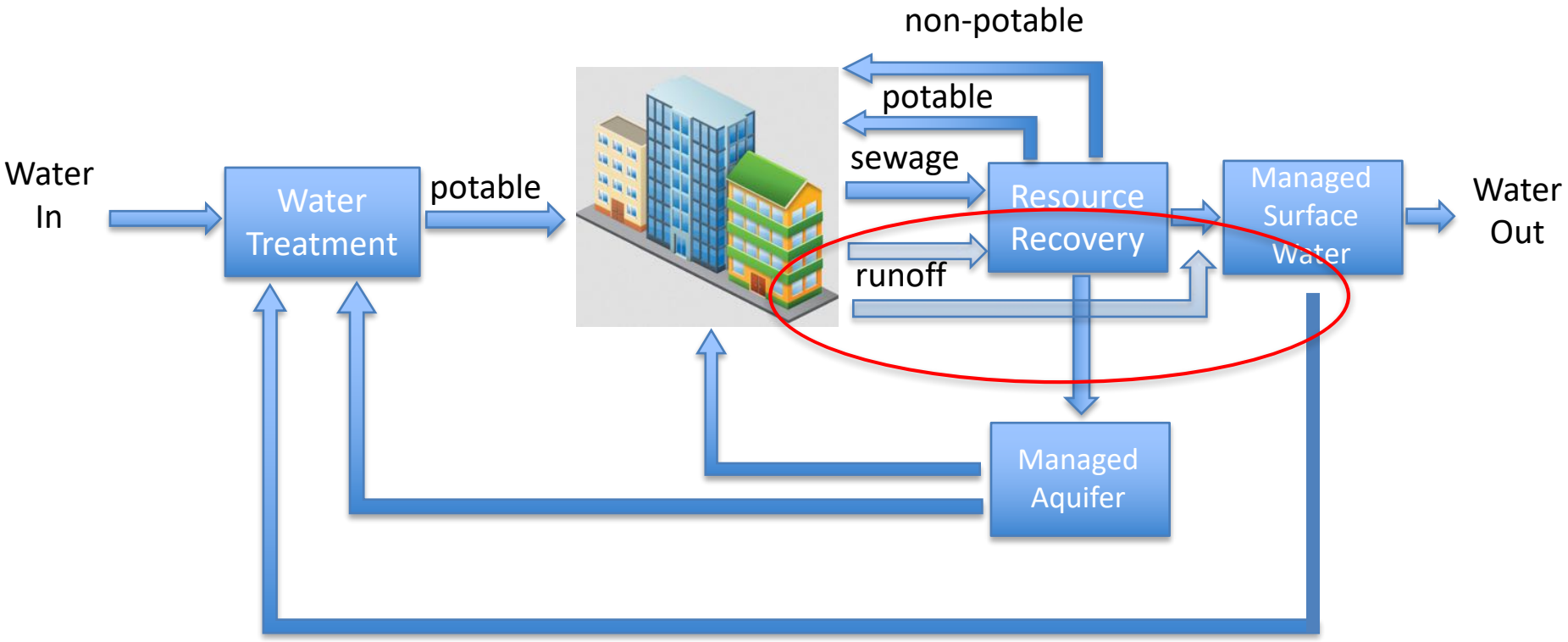

- **Fits with the Governor's water resilience portfolio**
- **Popular with the public**
- **Cost effective "new" water source**

The opportunity for stormwater

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- Over half of the urbanized land is impervious
- If only a fraction is captured, it could represent a significant contribution to water supply
- Multi-benefit appeal
  - Reduce dependence on water imports
  - Flood control
  - Pollution prevention
  - Urban green space
  - Habitat & recreation

The business case

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- **Large stormwater capture projects for water supply are cost-competitive with other sources of new water**
- **$500 -- $1,000 / acre-ft**
- **Wholesale water price ~ $1,800 / acre-ft**
- **Compliance with MS4 permits requires infrastructure investment**
- **Popular with the public**

Stormwater capture not simple

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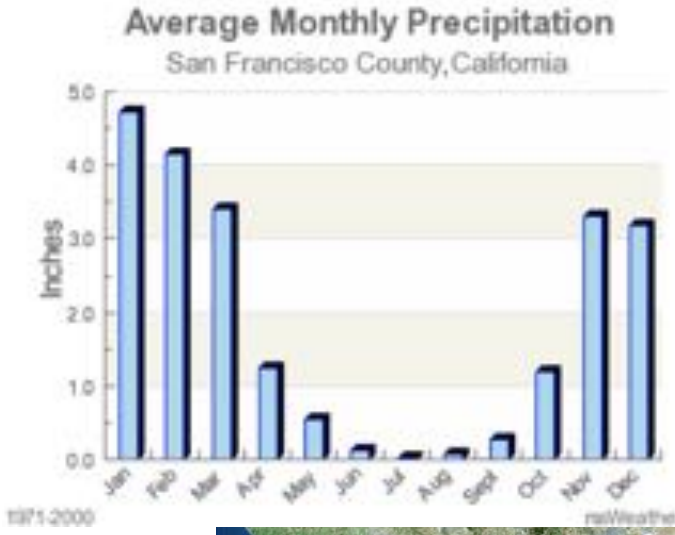
- Seasonal precipitation
- Much of the region has steep slopes and clay soils that are not conducive to capture and infiltration
- Most favorable locations already developed
- Expensive land
- Prevention of GW contamination
- Institutional barriers (flood protection, pollution control, water supply often managed by separate entities)



Innovative approaches

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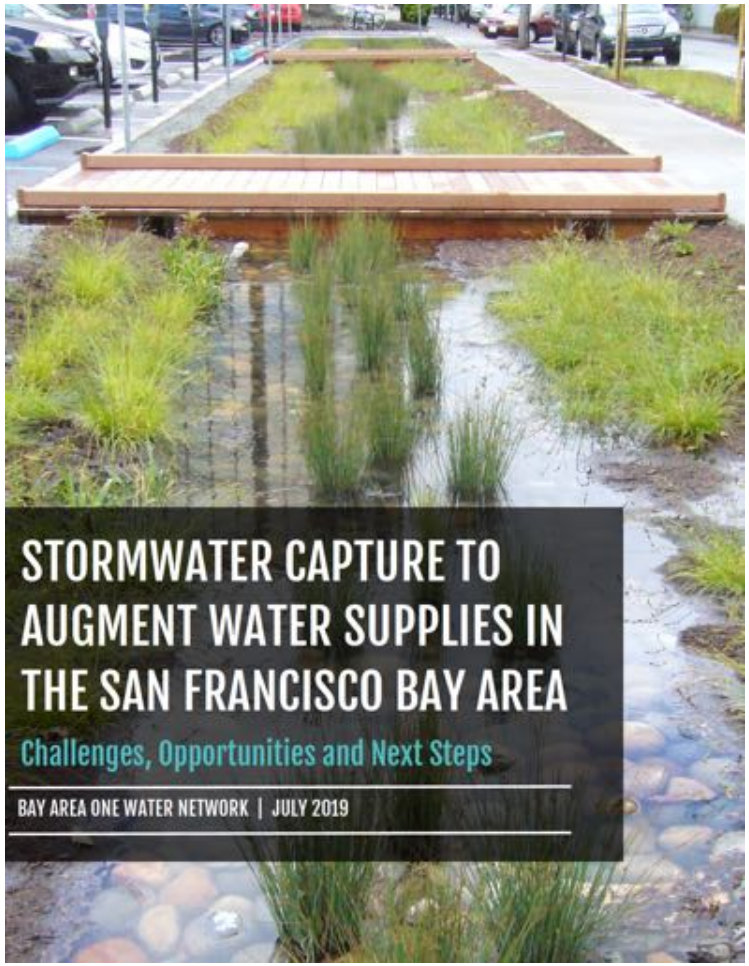
- **Monterey One Water (stormwater & drainage)**
- **Sonoma & Livermore (flood protection, capture & recharge)**
- **San Mateo (green streets to control PCBs and Hg)**
- **Stanford (leveraging existing infrastructure)**
- **Leveraging with water recycling**

Strategies

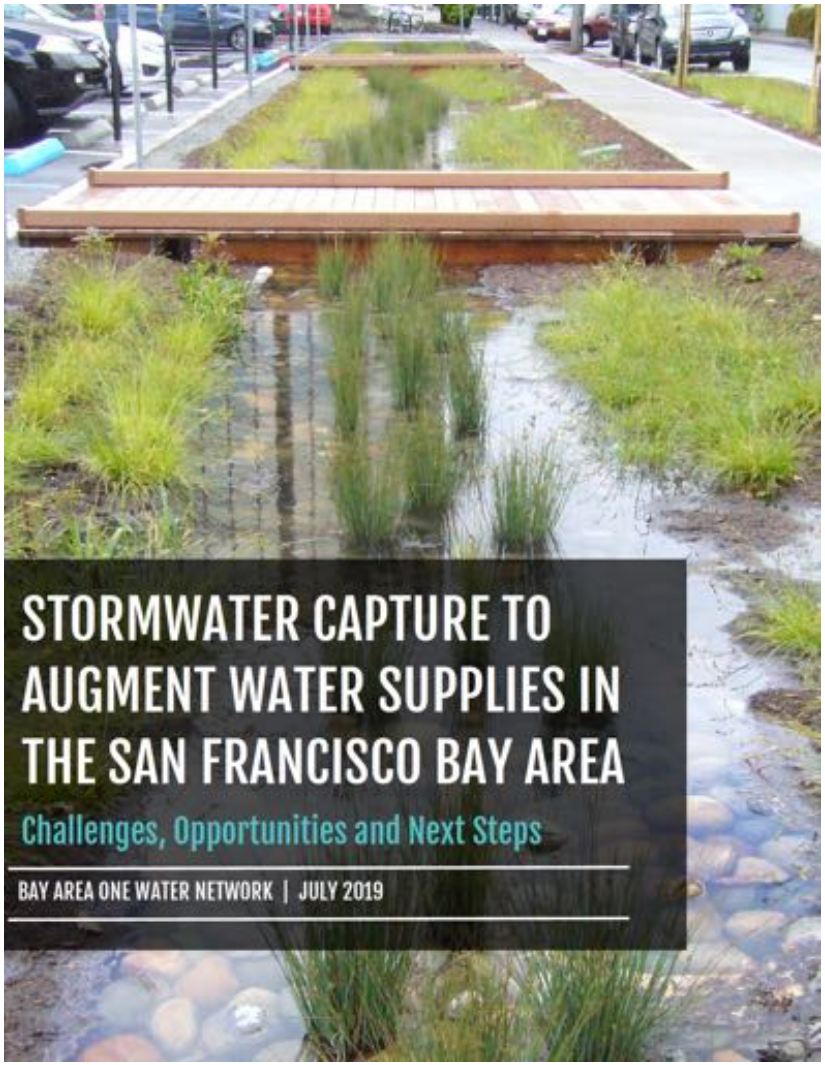
- Large-scale capture and diversion
  - A few opportunities with good geology
- Neighborhood and green streets
  - More expensive but integrate with “one dig” approach
- Diversion of runoff to wastewater treatment plants for recycling
  - Opportunities for dry weather flows and small storms
- Small-scale systems
  - Expensive but can help with early and late storms

Path forward

- Continue to assess the potential and region-specific questions
  - Feasibility
  - Effectiveness of existing projects
  - Technology improvements
- Develop metrics for inclusion of multi-benefits in decision making
- Assess ways that existing infrastructure may be leveraged for stormwater capture
- Incorporation of stormwater capture into local planning documents
- Explore innovative partnerships to creatively fund mutually beneficial projects
  - Expand capacity of working groups



Stormwater future …



- One piece in sustainable water supply for the Bay Area
- Continue to assess the potential and region-specific questions
- Build from existing local successes & embrace a range of scales
- Leverage existing infrastructure; diversion of stormwater to water recharge & recycling facilities
- Build relationships among stormwater managers, water & wastewater utilities, urban planners, regulators, and advocates in local communities

Bay Area One Water Network, July 6, 2020