One Water LA
Stakeholder Workshop #2
June 29, 2016

Today's Workshop Agenda

1. Introductions
2. Agenda Overview & Ground Rules
3. RWAG Integration into One Water LA
4. Draft GWR Environmental Impact Report
5. GWR Pilot Study Phase 2
6. One Water LA Phase 2 Update
7. Partnerships, Collaboration & Innovation Report
8. Decentralized/Onsite Treatment Report
9. Next Steps
10. Recycled Water Fill Station Training (Optional)

Today's Workshop Objectives

1. Provide update on upcoming recycled water projects
2. Provide overview of Phase 2 progress and next opportunities for stakeholder involvement
3. Provide opportunity for discussion and input on the Special Topic Group meetings held to date

GROUND RULES

We Commit To:

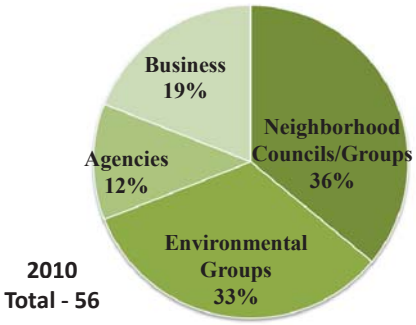
1. Listening attentively and with an open mind.
2. Ensuring transparency in sharing information.
3. Respecting your ideas and perspectives.
4. Keeping good records of discussion and input.
5. Providing information in a timely manner (whether at the workshop or as a follow-up).

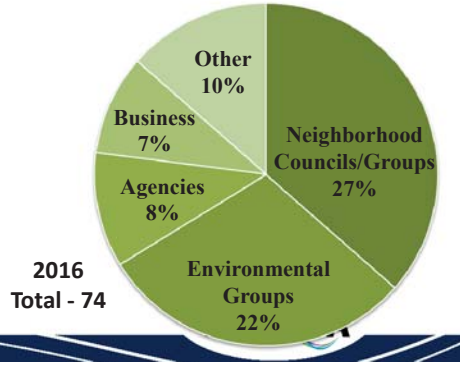
RWAG Integration into One Water LA

What we expect from you:

1. Contribute to make the group's time together productive.
2. Respect the ideas and perspective of others. Give everyone a chance to speak. Don't interrupt.
3. Listen attentively and with an open mind.
4. Maintain focus on the topic currently under discussion. Avoid repeating issues that have already been raised or recorded.
5. Consistent participation and engagement is critical. Commit to attend workshops, tours, and other sessions as often as possible.

Over 70 RWAG Participants





Over 70 RWAG Participants

- Congestion
- Homeowners of Encino
- TreePeople
- Canada Goose Project
- LA Community Garden Council
- Santa Monica Bay Restoration Foundation
- Forest Lawn Memorial Park
- Green LA Coalition
- Arthur Golding & Associates
- The River Project
- Natural Resources Def. Council
- City of Beverly Hills - Water Technical Com.
- North Hills West NC
- Pacoima Beautiful
- Los Angeles Kayak Club
- Heal the Bay - WQ
- Food and Water Watch - OC
- Silver Lake Improvement Association
- Studio City Beautification

Accomplishments

Recycled Water Master Planning Documents

RWAG Consensus Statement

Working Groups

Engaged and Informed Stakeholders

RWAG Goals

- Share information
- Address Concerns
  - Health and Safety
  - Project Cost
  - Rate Impact
  - Oversight
  - Process
- Receive Feedback

Reason for the RWAG Integration to One Water LA

Recent RWAG Meetings: June 25th and September 1st 2015

Consolidate efforts | More efficient | Consistent Messaging

Residential RW Fill Stations
Pick Up Free Recycled Water!

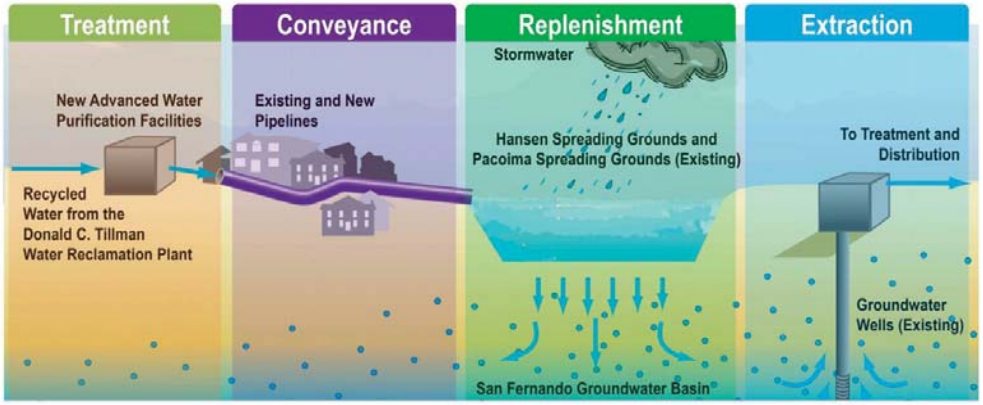
- Up to 300 gallons of FREE recycled water
  - LADWP Customers Only
- LA Zoo Parking Lot (Northside)
- Tuesdays 8 am – 11 am
  - *Subject to change*
- Brief Training Required
  - *Today at 3:30 pm*
- LAG – 2nd location to open soon

Learn More:

www.LADWP.com/RWFS

One Water LA

Groundwater Replenishment

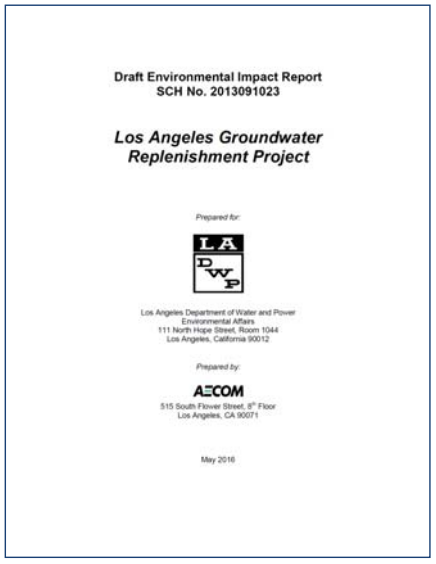


One Water LA

Los Angeles Groundwater Replenishment Project

One Water LA

Draft Environmental Impact Report (EIR)



Draft Environmental Impact Report
SCH No. 2013091023

Los Angeles Groundwater Replenishment Project

Prepared for:

LA DWP

Los Angeles Department of Water and Power
Environmental Affairs
111 North Hope Street, Room 1044
Los Angeles, California 90012

Prepared by:

AECOM
515 South Flower Street, 8th Floor
Los Angeles, CA 90071

May 2016

- GWR EIR can be found at: www.ladwp.com/envnotices
- Draft EIR public review: May 12 – July 11, 2016 (60 days)
- Public Comment Meeting: Tuesday, June 14, 2016
- Arleta Projects Meeting (Public Comments Accepted): Monday, June 13, 2016
- Send comments to Nadia Parker nadia.parker@ladwp.com

One Water LA

Draft Environmental Impact Report (EIR)

Thank you

Questions?

www.ladwp.com/GWR

lagwr@ladwp.com

Draft Environmental Impact Report (EIR)

ANC Arleta Neighborhood Council

Encino Neighborhood Council

Pacoima Neighborhood Council

LANCC Los Angeles Neighborhood Council Coalition

Mission Hills Neighborhood Council

Valley Alliance of Neighborhood Councils VANC The Voice for Valley Neighborhood Councils

LB LAKE BALBOA Neighborhood Council

Pacoima Beautiful

The Japanese Garden

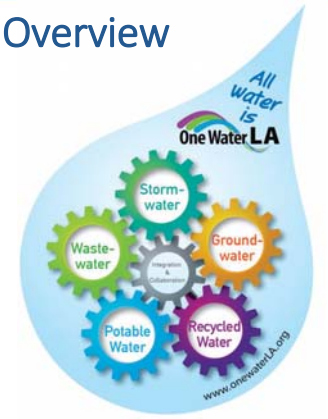
Sepulveda Basin Wildlife Areas Steering Committee

Van Nuys Neighborhood Council

WARNING! ALERTA! MISSION HILLS BASIC CAR 19A43 NEIGHBORHOOD WATCH

One Water LA Phase 2 Update

ONE WATER LA: Program Overview



Vision: ***One Water LA is a collaborative approach to develop an integrated framework for managing the City's watersheds, water resources, and water facilities in an environmentally, economically and socially beneficial manner.***

One Water LA 2040 Plan: To be completed early 2017

Phase I (completed July 2015):

Extensive outreach to compile diverse stakeholder database
Developed Vision, Objectives, and Guiding Principles;
Developed **Initial Water Balance Tool**;
Over 25 mtgs. held w/City Departments & Regional Agencies to find integration opportunities

Phase 2 (began in Sept. 2015):

Developing Integration Strategies for Citywide projects and policies, Funding Strategies, Wastewater and Stormwater Facilities Plans, and Special Studies
Stakeholder Involvement will continue
Collaboration w/City Depts. & Regional Agencies will continue to develop local and regional integration strategies

SPECIAL TOPIC GROUPS

Decentralized Use & On-site Treatment
- *12 stakeholders*
- *3 meetings*

Funding & Cost-Benefit Analysis
- *13 stakeholders*
- *3 meetings*
- *1 meeting pending*

Outreach & Communication
- *7 stakeholders*
- *3 meetings*

Partnerships, Collaboration & Innovation
- *15 stakeholders*
- *3 meetings*

Stormwater & Runoff Management
- *21 stakeholders*
- *3 meetings*

Total : 43 Stakeholders, 15 meetings

COMPREHENSIVE STAKEHOLDER OUTREACH TO INTEGRATE MULTIPLE VIEWPOINTS

Steering Committee — Over 30 reps from City Depts. & Regional Agencies

Advisory Group — 10 Stakeholder Advisors representing a diversity of groups & interests

Ad Hoc Technical Experts — Collaboration w/Academia & other subject matter experts

One Water LA Team

Focused Meetings — Over 30 One-on-One mtgs. w/Depts. & Reg. Agencies

Stakeholder Workshops — 350+ stakeholder database; 6 Workshops held to date

Special Topic Groups
- Funding & Cost-Benefit
- Decentralized/On-site Trmt.
- Outreach & Communication
- SW Runoff & Mgmt.
- Partnerships, Collaboration & Innovation

MAYOR'S REQUEST: "INCLUDE AND ENGAGE ALL CITY DEPARTMENTS"

More than 20 different departments and agencies are engaged!

	Water Departments and Agencies	Departments with Water-Related Needs			
		Transportation	Construction & Code Enforcement	Open Space Recreation Education	Land Use Planning & Community
City	✓ Water and Power ✓ Bureau of Sanitation	✓ Street Services ✓ Dept of Transportation ✓ Port of LA ✓ LAX Airport	✓ Engineering ✓ Building and Safety ✓ General Services	✓ Recreation & Parks ✓ LA Zoo	✓ City Planning ✓ Neighborhood Empowerment
Non-City	✓ Metropolitan Water District ✓ LA County Public Works ✓ LA County San Dist. ✓ US Army Corps	✓ Caltrans ✓ High Speed Rail ✓ METRO		✓ LA Unified Schools	✓ SoCal Assoc. of Governments

One Water, One Integrated City

Short-Term Integration Opportunities: Potential Case Studies

10 Potential Case Studies

#	Lead Agency	Project Name	Stormwater Component	Recycled Water Component	Department(s) Involved
1	LA County Flood Control District	Rory M. Shaw Wetlands	✓		HSR, LADWP, LASAN, RAP
2	LARiverWorks	Restoration of G2 Parcel at Taylor Yard	✓		BOE, HSR, LASAN, RAP
3	Los Angeles Unified School District	Capture of off-site stormwater on a school site	✓		LASAN
4	Los Angeles World Airports	Design & Construction of Recycled Water Pipeline		✓	Caltrans, LADWP
5	LA Zoo	Recycled Water at the Zoo		✓	LADWP, LASAN, RAP
6	METRO	LA River Bike Path	✓		LARiverWorks, LADOT, LASAN
7	Port of Los Angeles	Wilmington Waterfront Development	✓	✓	LADWP, LASAN
8	Rec & Parks	MacArthur Park	✓	✓	BOE, LASAN, LADWP
9	Rec & Parks	Rancho Park	✓	✓	LADWP, LASAN
10	Rec & Parks	Caballero Creek Park	✓		LARiverWorks, LASAN

Identifying Case Studies

Asked City Depts. & Reg. Agencies for **Top 3-5 Water Projects/Concepts for Integration**

Received 40+ projects/concepts

10 Concepts identified to move further as Case Studies

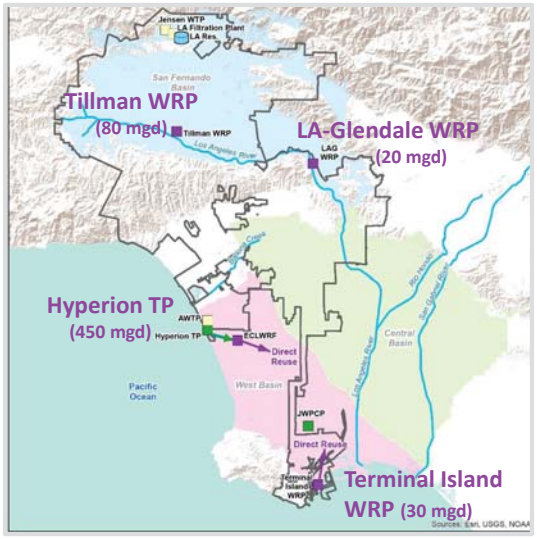
Case Study Project Descriptions

Screening based on:
- **Collaboration Potential**
- **Tim**
- **Soc**
- **"Re**

- **Project Objective(s) and Benefits**
- **Project Timing**
- **City Dept.(s)/Agencies Involved (Lead/Support)**
- **Water Type and Volume (e.g. recycled water, stormwater)**
- **Agreements & Policies (existing, pending, required)**
- **Estimated Project Cost: Capital, O&M**
- **Cost Sharing Opportunities: Capital, O&M**

Long-Term Integration Opportunities: Alternative Analysis

Wastewater Facilities Master Plan



PLAN DEVELOPMENT PROCESS

Data Gathering
Treatment Plant Descriptions
Conveyance System Description

↓

Wastewater Flow Analysis
Alternatives Evaluation
Capital Improvement Program

↓

Wastewater Facilities
Master Plan

The Stormwater and Urban Runoff Master Plan will build upon existing documents and plans

PLAN DEVELOPMENT PROCESS

Data Gathering
Stormwater Flows & Events
Stormwater Conveyance System

↓

System Consideration
Stormwater System Analysis
Capital Improvement Program

↓

Stormwater & Urban Runoff
Facilities Master Plan

The Wastewater Facilities Master Plan will ultimately answer many key questions

What conveyance improvements are needed?

How much wastewater shall be recycled from Hyperion in 2040?

How much equalization storage is needed at Hyperion?

How best to optimize the sewer collection system operations?

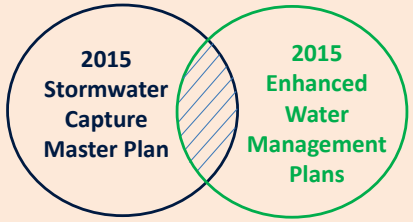
How can we best maximize recycling from Tillman WRP?

What is the flow impact of low flow stormwater diversions?

What treatment technologies will be utilized at each plant?

How to prioritize and phase improvement projects?

The Stormwater Facilities Master Plan will provide a roadmap for the future



Unique Plan Elements:

- Identify Gaps & Overlap of SCMP & EWMPs
- Combine Stormwater Quality & Supply
- Grey Infrastructure Operations
- Stormwater System Rehabilitation Needs
- Incorporate Flooding Drainage Needs
- Stormwater Capital Improvement Plan

Cleaner Beaches & Ocean

Stormwater Capture & Recharge

Reduced Flooding

Special Topic Group Report Out (Part 1): Partnerships, Collaboration & Innovation

Partnerships, Collaboration & Innovation Special Topic Group (cont'd)

The Process:

- Three Special Topic Group Meetings
- Survey sent to group members for feedback
- Categories Identified by Group included:
  - Potable & Non-Potable Reuse
  - Process Streamlining
  - Mapping
  - Water Conservation
  - Climate Change
  - Other
- Priority Recommendations & Quick Victories were selected by the group for Report Out

Partnerships, Collaboration & Innovation Special Topic Group

Purpose of Group:

- ID and enhance water-management partnerships between the City, regional agencies, private organizations and non-profits
  - Provide input to City on whether changes are needed or should stay status quo related to Partnerships, Collaboration and Innovation
- Identify, solicit and evaluate potential innovations (technological or other) that the City may want to consider to further promote the One Water LA vision.

Expected process of input received from Special Topic Group Meetings:

Identify priority recommendations and quick victories → Discuss with key City leaders and the Mayor's Office → Present at the City's Water Cabinet, led by Mayor's Office → Incorporate recommendations into One Water LA 2040 Plan

Priorities

Topic	Priority Recommendation
Potable and Non-Potable Reuse	• Recruit the largest water users and work with Industry & Manufacturing Associations to build programs that finance infrastructure implementation and other partnerships • Work with outside groups to advance lobbying for Direct Potable Reuse
Process Streamlining	• Reform City Department (e.g. LADBS, DCP, etc.) decision making processes so that several processes occur in series, rather than in succession • Develop web portal to connect large users to recycled water and match innovators with the finance community to facilitate water-related startups • Develop web portal for connecting willing partners with researchers or companies who need a site to pilot new technologies • Develop portal to track grants that agencies (and partners) are eligible for • Determine potential opportunities to work with incubators/private companies on technologies related to water
Mapping	• Map underdeveloped land along the LA River and contact owners to obtain rights to use of land for stormwater capture & habitat restoration • Map permeability over useful piece of water supply for areas in the City • Map locations for mulch and compost distribution

Quick Victories

Topic	Quick Victory
Water Conservation	• Partner with California Urban Water Conservation Council • Expand partnerships with residents to increase public awareness on locations for mulch and compost distribution
Climate Change	• Participate in the MC4 Climate Conference and highlight One Water LA's proactive efforts
Other	• Engage the Los Angeles Business Council, BizFed and Chamber of Commerce • Engage finance community to invest in modern technologies

Special Topic Group Report Out (Part 1): Decentralized and Onsite Treatment

Discussion

Graywater/Decentralized Special Topic Group

1) Graywater Meeting
   - Open discussion forum
   - Opportunity for Stakeholders to bring up thoughts and ideas
   - Direct policy or guiding principles will not be established at this time

2) Onsite Treatment Systems Meeting
   - Guiding Principles are more appropriate than an overly prescriptive policy
   - Application process will be developed to review applications and issue permits on a case-by-case basis

3) Stakeholder Report-Out

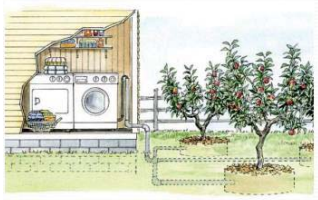
Graywater Status Update

Onsite Treatment Guiding Principles Summary

Draft Guiding Principles

- The City currently has no plans to incentivize residential graywater systems.
- Graywater will be considered as part of the City's overall water supply and recycled water strategy.
- Data gaps exists to quantify the amount of water conserved by implementation of graywater systems.
- The City characterizes Graywater as a potential water supply offset and will follow-up with further studies beyond the current.

Multi-Residential/ Commercial



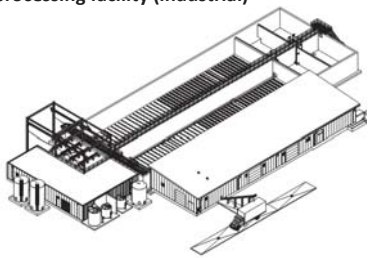
Single Household
'laundry-to-landscape'
'showers-to-flowers'

Draft Guiding Principles for Applicants

The City is exploring strategic locations for City-owned onsite treatment facilities (OSTF). These guiding principles apply to private OSTFs:

- Existing customers should not have to pay or subsidize the capital cost or operations of the OSTF.
- Wastewater cannot be taken from existing sewers if such removal impairs the operation of LASAN's system, impairs the City's recycled water program, or was not generated by the entity that wishes to remove said wastewater.
- City will not be responsible for the operation or maintenance of privately owned OSTFs.
- Owners/Operators of OSTFs will be required to indemnify City.
- Owners/Operators of OSTFs will be subject to fees that will be paid to City.
- OSTFs will not be allowed where purple pipe is available.

Potato processing facility (industrial)



Golf course facility (irrigation)

Draft Overarching Guiding Principles

- **Protection of public health shall be first and foremost**. A failure plan must be submitted that demonstrates 100% of flows can be disposed in event of a system failure.
- OSTFs should be solutions for the **greater good of all City customers** and consider **long-term feasibility**.
- **Education and outreach** are needed for OSTFs. New OSTFs should communicate with neighbors and provide information regarding potential uses of water treated onsite, which may include irrigation, and industrial applications.
- An entity should have an **operations and maintenance plan**. The design, operation, and maintenance are performed by qualified individuals, and monitored by the City.
- **City will evaluate impacts of proposed OSTFs and will specify requirements**. LASAN may limit materials that can be returned to the existing sewer, or may assess additional fees.
- **City will evaluate any impacts to water quality** where it pertains to groundwater and/or drinking water.

Discussion

Overview Onsite Treatment & Graywater

- **Onsite Treatment**
  - Comes in many different options (size, public, private, end-use)
  - Needed to understand financial and system-wide impacts
  - Needed to understand how other public agencies are handling
- **Graywater**
  - Mostly focused on residential applications
  - City has researched this topic extensively
  - Simple single household laundry-to-landscape are allowed under the CA Plumbing Code without a permit

Conclusion:

- Direct policy or guiding principles will not be established at this time. Graywater will be considered as part of the City's overall water supply and recycled water strategy.

Next Steps

Next Steps

- **Report Out on remaining Special Topic Groups**
  - Funding & Cost Benefit Analysis
  - Outreach & Communication
  - Stormwater & Urban Runoff Management
- **Pursue several Case Studies with Interdepartmental/Interagency collaboration**
- **Obtain input at future workshop on criteria and ranking of One Water LA alternatives being considered**

One Water LA

INNOVATION + INTEGRATION + INCLUSION

= A SUSTAINABLE & RESILIENT CITY

For more updates, follow us:

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www.onewaterla.org

One Water LA

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STAKEHOLDER WORKSHOP #3 (09/13/16)

The following pages present the meeting agenda, summary of the discussion, and the presentation given at the Stakeholder Workshop #3, held on September 13, 2016.

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One Water LA Plan Phase 2
Stakeholder Workshop #3
Agenda

Tuesday, September 13, 2016, 9:00 am-1:30 pm

Location: Grace Simons Lodge in Elysian Park (1025 Elysian Park Drive, Los Angeles, 90012)

Workshop Objectives:

1. Get input on potential project approaches and evaluation criteria through interactive World Café discussion.
2. Provide updates on outcomes from Special Topic Groups.
3. Present Climate Change analysis approach with interactive quiz.
4. Provide a preview of future workshop topics.

Agenda

1. **Welcome and Introductions (15 minutes)** — **9:00 am**

2. **Alternatives Analysis - World Cafe (2 hours)** — **9:15 am**
   - **a.** Introduction
   - **b.** World Café Discussion:
     - i. Instructions
     - ii. Question 1 and rotation
     - iii. Question 2 and rotation
     - iv. Question 3
   - **c.** Wrap-Up's by Table

3. **Special Topic Group Presentations (45 minutes)** — **11:15 am**
   - **a.** Funding
   - **b.** Outreach and Communication
   - **c.** Stormwater

4. **Lunch** — **12:00 pm**

5. **Climate Change (50 minutes)** — **12:30 pm**
   - **a.** Interactive Presentation
   - **b.** Q&A (5 mins)

6. **Closing (10 minutes)** — **1:20 pm**
   - **a.** Summary of today's workshop outcomes
   - **b.** Planning for the next workshops - anticipated topics

7. **Optional Activity: Recycled Water Fill Station Training (30 minutes)** — **1:30 pm**

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CITY OF LOS ANGELES
One Water LA
Stakeholder Workshop #3 (Phase 2)
Tuesday, September 13th, 2016 9:00 am -1:30 pm

Meeting Summary

This summary is not intended to be a transcription of the third One Water LA Workshop. This summary generally expresses the sentiment and information provided by those that attended.

Please refer to attachments for additional information regarding this summary.

INTRODUCTIONS:

Attendees were welcomed with opening remarks by Ali Poosti from Los Angeles Sanitation (LASAN) and Bill VanWagoner from the Los Angeles Department of Water and Power (LADWP). Ali Poosti mentioned that it was the 131st day since the City has had any measurable precipitation in downtown Los Angeles; thus emphasizing the need to address water issues and develop strategies to make the City more sustainable. Ali also expressed gratitude to stakeholders who committed their time to participate in the five One Water LA Special Topic Groups.

Bill Van Wagoner mentioned that it will take a City-wide collaborative effort to make the City sustainable and he valued the partnership between LADWP and LASAN in leading the One Water LA effort. Additionally, Bill provided the following LADWP updates: 1) City has removed 47 million square feet of turf in LADWP's Conservation Program; 2) City is down to 105 gallons per capita per day; and 3) Starting on October 1st, a recycled water fill station will be opening at the Los Angeles Glendale Water Reclamation Plant on weekends.

Lewis Michaelson (Katz & Associates) was the meeting facilitator and he reviewed the agenda and meeting objectives. The workshop agenda was organized as follows:

1. Alternatives Analysis – World Café
2. Special Topic Group Presentations (Funding, Outreach & Communication, Stormwater and Urban Runoff)
3. Lunch
4. Climate Change Interactive Presentation
5. Next Steps & Closing

1. Alternatives Analysis – World Café

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 3-9)

The objective and desired outcome of the Alternatives & Integration Strategy Analysis was presented to set the stage for the World Café discussion. The following three questions were

presented during the World Café discussion and stakeholders provided their input on the draft project/portfolio evaluation criteria:

World Café Questions

1. Given One Water LA's goals to reduce our reliance on purchased imported water, and develop more sustainable local water supplies, what potential projects, programs, and/or policies are you most excited about?

2. Thinking about the concepts you just discussed, what are the most important benefits that One Water LA needs to achieve?

3. Understanding that many objectives need to be considered, what evaluation criteria are most important to make the One Water Plan a success?

After three rounds of questions for the World Café Discussion, table hosts briefly reported out the key themes the stakeholders mentioned at their respective tables.

World Café Report Out (Themes per table)

Table 2
- Integration of efforts is significant.
- Diversification of large and small projects.
- Restoration of watersheds.
- Multi-benefit projects should be the priority.
- Capture public interest and imagination and get them involved.

Table 3
- Have more regionalization – get the County more involved because water knows no boundaries.
- Identify who pays for projects using a cost-benefit analysis.

Table 4
- Collaboration among agencies at the federal, state and local level especially for businesses subject to requirements.
- Implement feasible projects on a neighborhood scale - part of the change in mindset.
- Have a systems-based approach for: 1) Green infrastructure, and 2) economic, environmental and social sustainability.
- Give people (e.g. industries) credit for what they have already done for water conservation and stormwater management.

Table 5

- Capture, conserve and reuse. Simply relying on one approach will not achieve goals for One Water LA.
- A paradigm shift is needed in community perceptions and attitudes about water.
- Quantifiable targets (e.g. percent reduction in imported water) are crucial for evaluation criteria.

Table 6

- LA River Revitalization – have more of a coordinated approach that involves community.
- Have standard plans for stormwater capture.
- Quantify benefits.
- Maximize Hyperion reuse.
- Evaluate all criteria as a group – don't just focus on cost but also social and environmental benefits.

Table 7

- Define the water we have in the City both on available supply and what we can do on the demand side (e.g. decreasing demand by conserving).
- Figure out how much water we have (e.g. think about captured volumes of stormwater).
- Get public and institutional buy-in to make changes happen (incorporate engagement plans).
- Have more green infrastructure and permeable surfaces. Figure out how to get more water into the ground. Part of that is figuring out conductivity of stormwater and groundwater from a water supply standpoint.

Table 9

- Have cost effectiveness considered in all work that comes out of One Water LA.
- Reduce reliance on imported water (cleaning up San Fernando Valley Aquifer is a critical component).
- There is a need for infrastructure to make One Water LA happen.
- Maximize the use of reclaimed water (IPR & DPR) and maximize use of stormwater.
- Implement multi-benefit projects as opposed to single purpose projects.
- Change public opinion and educate the public (e.g. youth) to make change in regional attitudes about the City's water supply and water reliability.

Table 10

- Establish partnerships to address issues related to cost and innovation.
- Pay more attention to distributed projects (stormwater capture for reuse and stormwater capture for recharge to groundwater).
- Distributed graywater and direct potable reuse.
- Habitat and ecosystem function, value and benefit both at the local community level and regional connectivity side.
- Consider energy and carbon footprint of projects during project selection (both in materials cost and in operation).
- Have community engagement and acceptance of every project.
- Maximize recycling and look for public acceptance on direct potable reuse.

Note: The full summary of the World Café exercise is attached separately.

2. Special Topic Group Presentations – Funding and Cost-Benefit Analysis, Outreach & Communication, Stormwater and Urban Runoff Management.

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 10 – 37)

Stakeholders participated in three different Special Topic Groups (STGs): 1) Funding and Cost-Benefit Analysis, 2) Outreach & Communication and 3) Stormwater and Urban Runoff Management. Representatives reported on key outcomes and recommendations from their respective STGs. The key recommendations for each STG are briefly summarized below.

Funding and Cost-Benefit Analysis Special Topic Group

Key Recommendations

- Explore Stormwater Tax/Fee Options, State Revolving Funds and State Bonds as funding opportunities.
- Develop partnerships to reduce costs and maximize upstream solutions by:
    - Utilizing NGOs, neighborhood councils to assist with implementation and solutions
    - Creating public-private partnerships.
    - Involving other public agencies to share in projects, such as; stormwater from State, Federal, and Local Roads.
    - Developing incentives for leveraging private sector funds.

- Highlight benefit-based funding to enable multi-benefit projects to be built and maintained. Potential cost benefit considerations include the following:
    - Determine how to prioritize projects by measuring results and the value of benefits.
    - Highlight benefit based funding to enable multi-benefit projects to be built and maintained.
    - Understand how multiple agencies can and should contribute in identifying costs and benefits of water projects.

After the Funding and Cost-Benefit Analysis STG presentation, stakeholders provided the following comments:

Comment: In terms of quantifying intangibles, the US Army Corps of Engineers (US ACE) did their LA River Revitalization Study and they have a methodology for quantifying the benefits of ecosystem restoration. That methodology can be adopted and incorporated by One Water.

Comment: The Los Angeles Unified School District has been resistant to doing any regional/sub-regional scale projects on their property but they have ideally situated properties all over the region. Incorporating a strategy that provides an incentive for them to work with the City and other municipalities is brilliant.

Outreach & Communication Special Topic Group

Important themes that were recognized by group are listed below:

- One Water LA is a long-term plan to address long-term solutions.
- One Water LA is winnable and doable and progress is well underway.
- Water issues are interrelated and complex.
- Costs must be communicated in a transparent way.
- This is a city-wide collaborative effort; not just a government program – everyone needs to be involved.

Key Recommendations

- Include simple call to actions (e.g. capture, conserve and reuse) that would be applicable to all audiences.
- Make communication personal and relatable, ensure multilingual outreach and empower others to carry the message.
- Coordinate with other programs (e.g. "Save the Drop").

After the Outreach & Communication STG presentation, stakeholders provided the following comments:

Comment: There are a lot of people who can do outreach but they need materials. One Water LA should develop and provide materials so that people could present and help with One Water LA outreach.

Comment: There are a lot of general discussions of One Water LA as a concept; thus the public who needs to support it doesn't have a very clear idea. One Water LA materials need to have specific points (e.g. costs, benefits) that are not easily recognized.

<u>Stormwater and Urban Runoff Management Special Topic Group</u>

Key Recommendations for major topics of discussion including: Incentives & Rewards, Outreach & Recognition, Regulatory Policies, Partnerships and Grants are listed below:

Rewards and Incentives

- Stormwater Fee Discount for property retrofits.
- Dedicate minimum percent for Community Grant Green Projects.
- Modify current Turf Removal Program to include stormwater capture.
- Foster NGO partnerships with City.
- Subsidize stormwater capture on private, commercial and industrial properties.
- Funding for Public Education Programs by City and non-profits.
- Impervious Buy-back program
- Initiate Stormwater Trading Credit System – Cap & Trade.
- Pervious Pavement Rebate and School Upgrade Incentives.
- Bonus for Improved Floor to Area Ratio.
- O&M Cost Share between Public/Private Entities.

Outreach & Recognition

- Create measureable metrics to communicate SW capture goals.
- Yard Signage and other property owner recognition programs.
- Promote property value benefits from Green infrastructure.
- Business acknowledgement for Sustainable Practices.
- Home improvement store water conservation promotion.

Regulatory Policies – Public/Private Development

- Remove regulatory barriers to aid adoption; standard forms for streamlined planning and approval process.
- Increase City requirements for stormwater capture using re:Code LA.
- Increased engagement of Industrial Community.

Partnerships, Grants, Other Program(s) Considerations

- Integrate conservation and green City programs.
- Metro grant program to include stormwater capture and green infrastructure.
- Have air quality agencies and regulatory bodies consider tree installation rebates.

After the Stormwater STG presentation, stakeholders provided the following comments:

Comment: We need to be able to have stormwater capture in our parkways through curb cuts you currently need a permit. An easy solution would be to develop a series of Best Management Practices (BMPs) standards where you do not need a permit if you meet the specification requirements of the BMPs.

Comment: One Water LA should learn from other Cities (e.g. Albuquerque, Phoenix etc.) that have retrofitted their existing facilities (e.g. parking lots) to create integrated comprehensive stormwater management systems.

3. Climate Change Interactive Presentation – Bill McMillin, CH2M Hill

Please refer to Climate Change PowerPoint Presentation

Bill McMillin (CH2M Hill) presented on climate change work that was implemented for New York City, Boston and Miami. The presentation also covered the climate change work underway for One Water LA including potential adaptation measures being considered for the City's wastewater and stormwater infrastructure.

The presentation was interactive and allowed stakeholders to respond to questions via handheld clickers. The questions asked solicited stakeholder feedback to the One Water LA Team regarding perceptions that would help frame future work related to climate change.

After the Climate Change presentation, stakeholders provided the following question and comment:

Question: On the coast, does the storm surge take into account high tide?

Response: The storm surge is independent of high tide but storm surge damage is exacerbated when accomplished by a high tide.

Comment: During the presentation, there was a clear indifference in the audience's response to the wastewater program as far as concerns on potential climate change impacts. Part of that indifference may be that people believe that the wastewater system is working really well.

4. Next Steps & Closing – Lenise Marrero (LASAN), Lewis Michaelson (Katz & Associates)

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 39 – 45)

Examples of potential key programs, projects and policies to be considered were presented and the alternatives analysis process overview for screening projects using evaluation criteria was also presented. Additionally, upcoming water-related events were announced.

The next steps for the One Water LA Plan include the following:

1. The draft evaluation criteria will be revised, finalized and presented at the next stakeholder workshop.
2. Potential topics to be covered during upcoming workshops include but are not limited to: 1) Special Studies update, 2) Long Term Policies, and 3) Final Criteria and Portfolio Development.

ADDITIONAL ATTACHMENTS

- One Water LA Workshop PowerPoint Presentation
- World Café Questions and Responses by table
- Climate Change Presentation
- List of Attendees

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One Water LA

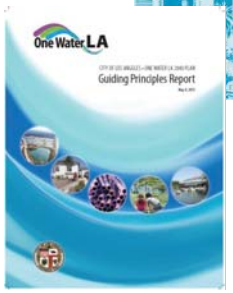
Stakeholder Workshop #3

September 13, 2016

All Water is One Water

Alternatives & Integration Strategies Analysis

- Objective: Identify the best implementation strategy to achieve the One Water LA Objectives coupled with the Sustainability Plan targets
- Desired Outcome: A prioritized list of key projects and programs that collectively achieve the objective with dynamic trigger-based implementation plans



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Workshop Agenda

1. Welcome & Introductions
2. World Café - Alternatives and Integration Strategies Analysis
   a. Alternatives Analysis Overview
   b. World Café Discussion
   c. Wrap-up by Table
3. Special Topic Presentation
   a. Funding
   b. Outreach & Communication
   c. Stormwater
4. Climate Change Interactive Presentation
5. Next Steps and Meeting Close
6. *Optional Activity: Recycled Water Fill Station Training*

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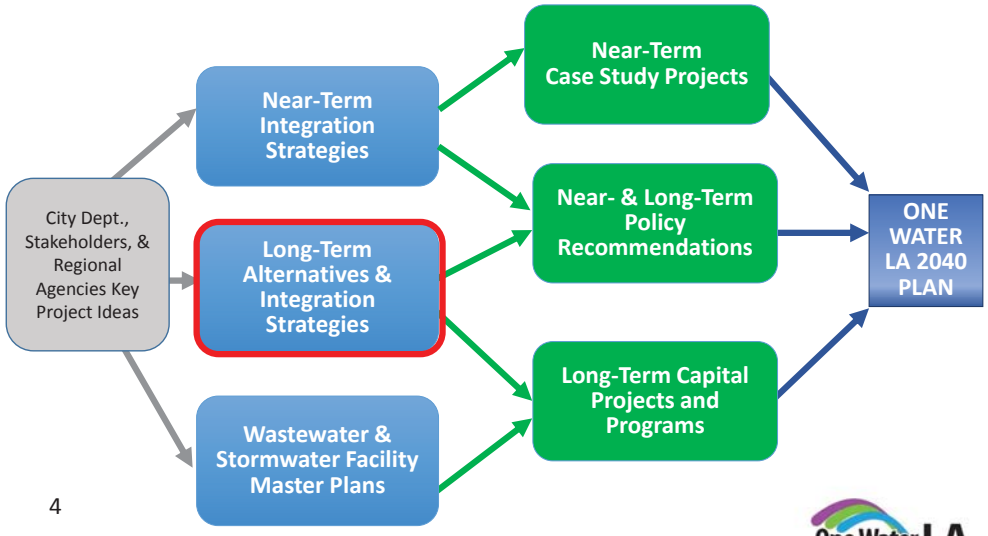
Alternatives Analysis of the One Water LA 2040 Plan



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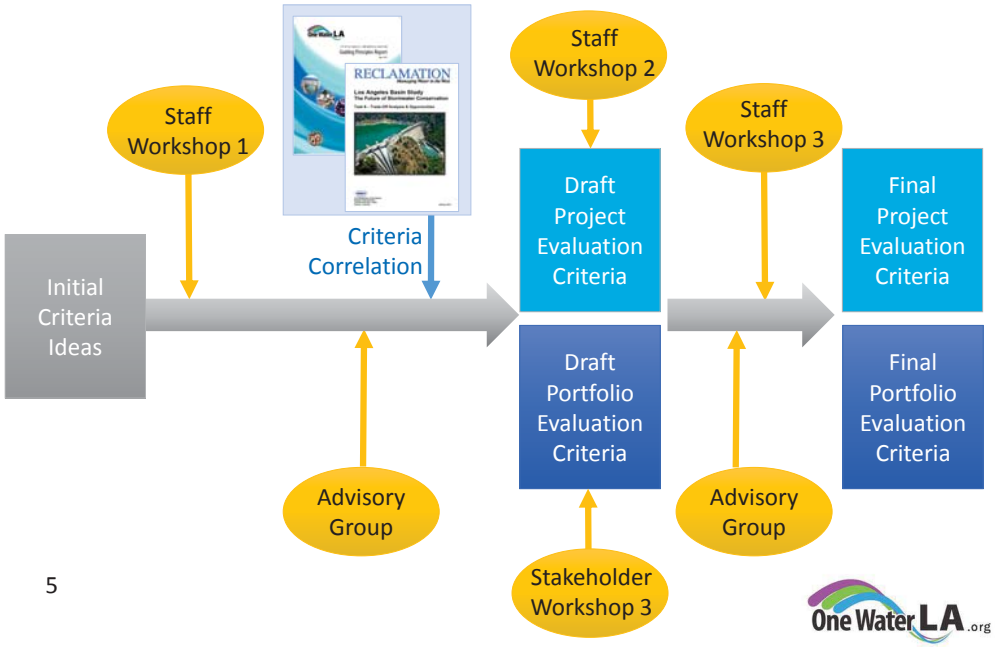
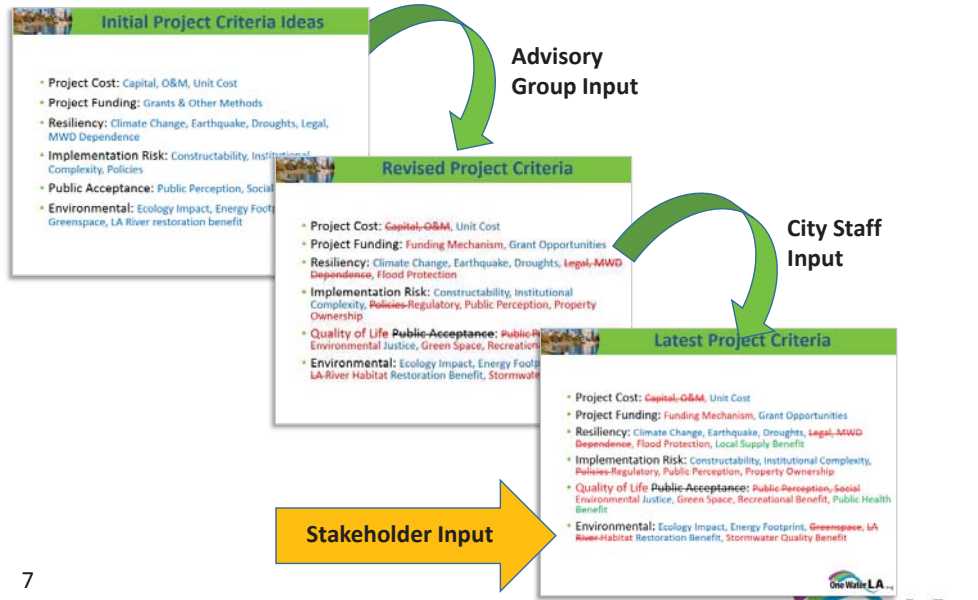
Criteria Development Process



Project Criteria Evolution Process



Criteria Correlation with Previous Planning Documents

Current Status of Evaluation Criteria

- Cost: Capital, O&M, Unit Cost
- Funding: Funding Mechanism, Grant Opportunities
- Resiliency: Climate Change, Earthquake, Droughts, Flood Protection, Local Supply Benefit
- Implementation Risk: Constructability, Institutional Complexity, Regulatory, Public Perception, Property Ownership
- Quality of Life: Environmental Justice, Green Space, Recreational Benefit, Public Health Benefit
- Environmental: Ecology Impact, Energy Footprint, Habitat Restoration Benefit, Stormwater Quality Benefit

World Café

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Funding & Cost-Benefit Analysis Special Topic Group

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Special Topic Meetings Report Out

1. Funding
2. Outreach & Communication
3. Stormwater

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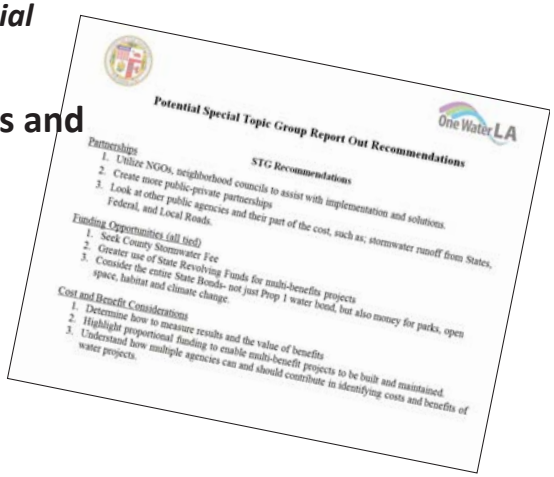
Meetings 1-4 Recommendations

Topics discussed at each Special Topic Group meeting:

1. **Funding Opportunities and Considerations**
2. **Partnerships**
3. **Cost-Benefit Considerations**
4. **Funding Tool Matrix Exercise**



Potential Special Topic Group Report Out Recommendations

STG Recommendations

Partnerships
1. Utilize NGOs, neighborhood councils to assist with implementation and solutions.
2. Create more public-private partnerships
3. Look at other public agencies and their part of the cost, such as; stormwater runoff from States, Federal, and Local Roads.

Funding Opportunities (all tied)
1. Seek County Stormwater Fee
2. Greater use of State Revolving Funds for multi-benefits projects
3. Consider the entire State Bonds- not just Prop 1 water bond, but also money for parks, open space, habitat and climate change.

Cost and Benefit Considerations
1. Determine how to measure results and the value of benefits
2. Highlight proportional funding to enable multi-benefit projects to be built and maintained.
3. Understand how multiple agencies can and should contribute in identifying costs and benefits of water projects.

Meetings 1-4 Recommendations:

Funding Opportunities

- Explore Stormwater Tax/Fee Options
  - Develop an integrated planning approach with the County and other Cities
  - Additional research is needed
- Greater use of State Revolving Funds for multi-benefits projects
- Consider the entire State Bonds- not just Prop 1 water bond, but also money for parks, open space, habitat and climate change.

Meetings 1-4 Recommendations:

Partnerships

Goal - Develop partnerships to reduce costs and maximize upstream solutions.

- Utilize NGOs, neighborhood councils to assist with implementation and solutions.
- Create public-private partnerships
- Involve other public agencies to share in project costs , such as; stormwater runoff from States, Federal, and Local Roads
- Develop incentives for leveraging private sector funds

Meetings 1-4 Recommendations:

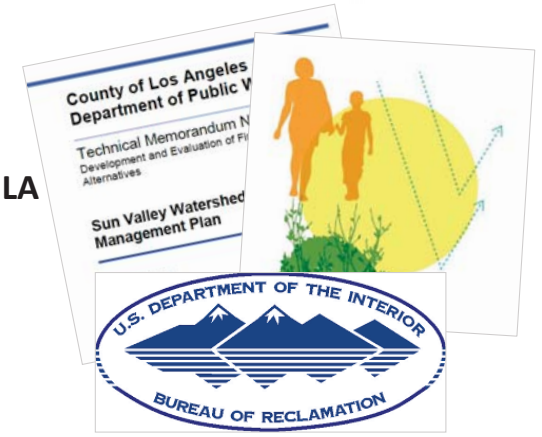
Cost Benefit Considerations

- Determine how to prioritize projects by measuring results and the value of benefits
- Highlight benefit based funding to enable multi-benefit projects to be built and maintained
- Understand how multiple agencies can and should contribute in identifying costs and benefits of water projects

Potential Cost-Benefit Approaches for One Water LA

Baseline:

- **One Water LA Guiding Principles**
- **LA Basin Study (BOR & LA Co)**
- **Sun Valley Plan: TM 5**
- **Living Streets**
- **Stormwater Capture Master Plan (LADWP)**



One Water LA

Q & A

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Outreach and Communication Special Topic Group

Purpose:

- Provide input for the One Water LA message plan
- Provide input for the Public Outreach and Marketing Strategies plan development
- Assist with developing special topic messages
- Help expand our stakeholder database
- Help develop website and informational materials

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Outreach & Communication Special Topic Group

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Expanded Outreach

Public Outreach Plan

- Purpose: Establish the stakeholder involvement process to be conducted as part of **Phase 2** of the One Water LA Plan.

Marketing Strategies Plan

- Purpose: Maximize awareness and understanding of the One Water LA program among stakeholders and the general public **over long term**.

Special Topic Group Main Topics

- What are the most important things people need to know about OWLA?
- How can we communicate most effectively with all audiences?
- Who should we be reaching?
- How should we be reaching them?
- What do we want them to do?

Audience Categories

- Agriculture
- Business
- City/Other Government
- Community Leaders
- Disadvantaged Communities and Representatives
- Education Youth Organizations
- Environmental Groups
- Faith-Based Organizations/Groups
- Food/Gardening Groups
- Institutes, Foundations
- Multicultural Leaders/Groups
- NGOs
- Public Health and Medical Organizations
- Ratepayers
- Science and Academia
- Senior Citizen Organizations/Clubs
- Sports and Entertainment
- Taxpayer and Advocacy Groups
- Theater/Art/Libraries/Museums
- Trade and Development
- Tribes

Important Themes

- One Water LA is long-term plan to address long-term solutions
- One Water LA is winnable and doable and progress is well underway!
- Water issues are interrelated and complex
- Costs must be communicated in a transparent way
- This is a city-wide collaborative effort; not just a government program – everyone needs to be involved

Specific Topics Require Specific Messages (Stormwater Capture, Reuse, Funding, Facilities)

Strategies

- Keep in simple (i.e. Save, Capture, Reuse)
- Make communication personal and relatable
- Go to groups at their meetings
- Ensure multilingual outreach
- Include simple call to actions
- Coordinate with other programs (i.e. “Save the Drop”)
- Empower others to carry message
- Be creative and cross promote (sports, entertainment, art, theater)
- Use social media platforms; monitor what people are saying online
- Use graphics/videos, especially for complex concepts (urban water cycle)
- Develop public event partnerships
- Respond to water news events
- Publicize positive efforts
- Show and Tell: Tours

Implementation

- Near-Term: Focus on engagement with key stakeholders and input for One Water LA Plan development
- Update and simplify materials
- Be strategic: Can't do everything
- Include Special Topic Group in review of topic-specific messages
- Roll-out outreach gradually, start with groups, build information as plan develops
- Measure effectiveness and course correct
- Confirm communication roles/responsibilities

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Stormwater Special Topic Group

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Q & A

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Stormwater Special Topic Group Purpose

- Discuss diversity of stormwater projects and programs throughout the City
- Acknowledge the EWMP goals and SCMP targets can only be met with everyone's involvement
- Identify opportunities to partner with public/private/ NGOs for projects and programs
- Participate in identifying stormwater priorities of the city

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Major Topics

- Project Integration
- City & Regional Targets
- Incentives
- Policies
- Partnerships, Grants, Rebates
- Research
- Resources
- Promotional Strategies
- Polling for Prioritization

Incentives & Rewards

Rewards

- **Stormwater Fee Discount**
- **Modification of current Turf Removal Program**
- **Subsidizing SW Capture on private, commercial, industrial**
- TreeBate
- Residential Cisterns
- Tenant Inclusion
- Eco-Roofs

Funding 3rd Party Assistance

- **Minimum percent for Community Grant Green Projects**
- **NGO partnerships with City**
- **Public Education Programs by City/NGO**
- NGO funding for SW Projects
- Adopt a Parkway Swale or Tree

Incentives & Rewards

Development/Redevelopment

- **Impervious Buy-back Program**
- **Pervious Pavement Rebate**
- **Bonus for Improved Floor to Area Ratio - FAR**

Public/Private Development

- **Stormwater Trading Credit System – Cap & Trade**
- **School Upgrade Incentives**
- **O&M Cost Share Between Public/Private Entities**

Outreach & Recognition

Promotional Strategies

- **Measureable Metrics to communicate SW capture goals**
- **Promote Property value benefits from Green infrastructure**
- **Home improvement store water conservation promotion**
- LA Chamber of Commerce/Bizfed cross promotion
- Property Owner Recognition
- Online Platform for information Sharing on Projects, Programs, Research
- Public Education

Awards

- **Yard Signage**
- **Business Acknowledgement for Sustainable Practices**
- **Property Owner Recognition**
- Grand Prize for Innovation
- Water Heroes Program

Regulatory Policies

Public/Private Development

- **Remove Regulatory Barriers to aid Adoption; Standard forms for streamlined planning and approval process**
- **Increase City Requirements for SW Capture using re:Code LA**
- **Increased Engagement & Oversight of Industrial Community**
- Public/Private Development Buffer Requirements Environmental Buffers
- Use City's Watershed motion for SW Capture
- Tiered Water Pricing System
- Common Water rights managed under One Agency
- Revise Residential Parkway Landscape Guidelines

Partnerships, Grants, Other Program(s) Considerations

- **Integrate conservation and green City programs**
- **Metro grant program to include SW capture and green infrastructure**
- **Have Air Quality Agencies and Regulatory Bodies consider tree installation rebates**
- Share Match Requirements for Grants
- Standardize agreements to Streamline Project Development
- Leverage Universities/Research Institutions for Research Grant Funds
- Partner with NGOs to pursue/increase funding opportunities

Suggested Research Topics

- Policies and Programs to make Stormwater Capture cost-effective for property owners
- Financing Framework from other sectors (i.e. the Electricity Sector)
- Benefits of different trees for stormwater capture to develop Sustainable Tree Guidelines
- Track and Monitor BMP Costs (Installation and O&M) and Effectiveness
- Differing perceptions of stormwater as a resource between different agencies
- Potential Opportunities for runoff capture and reuse throughout watershed to determine best use
- Modeling linkage between stormwater and groundwater
- Alternatives to 'rational method' of quantifying infiltration rates for nature based green infrastructure

Suggested Resources

- Ecosystems in a Green Economy; Nature Based Solutions from the EU
- Sustainable LA Water – UCLA
- Historical Hydrology Patterns of LA River and Other Streams and Liquefaction Zones from NRCS Soil Study Before Finalizing Plans
- Resiliency in Flood Protection; Adaptation; Breaking the Disaster Cycle
- Water LA, The River Project Recommendations for ED5 (pLAn)
- Stormwater Capture Projects and Opportunities in SCMP, EWMPs, South LA Green Alley Master Plan, City of Sidewalks Policy, Re:Code LA, LA Basin Stormwater Conservation Study
- LMU database of NGO's and projects (in progress)

Q & A

Next Steps

Climate Change Interactive Presentation

Criteria Development Process

Potential Key Projects, Programs, and Policies

Example Potential Projects

- Low Flow Diversions – Runoff to sewer
- Advanced treatment at Hyperion
- XX miles of Green Streets
- …

Example Potential Programs

- Minimum percent for green community grant programs
- Expansion of recycled water fill stations program
- …

Example Potential Policies

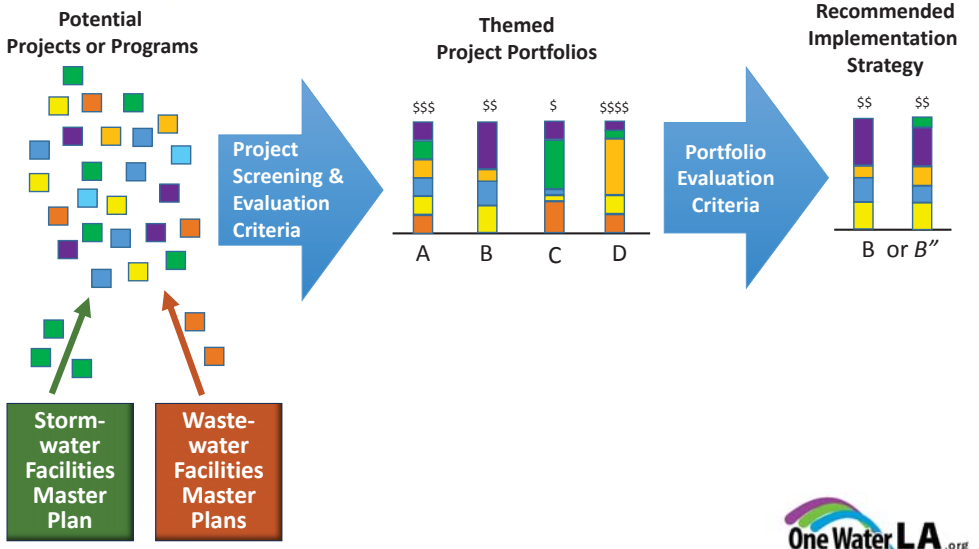
- Institutionalize processes for joint projects and cost-sharing
- Construction dewatering beneficial reuse
- Incorporate additional stormwater capture in re:Code LA update
- …

Upcoming Stakeholder Workshops

Potential timeframe and topics

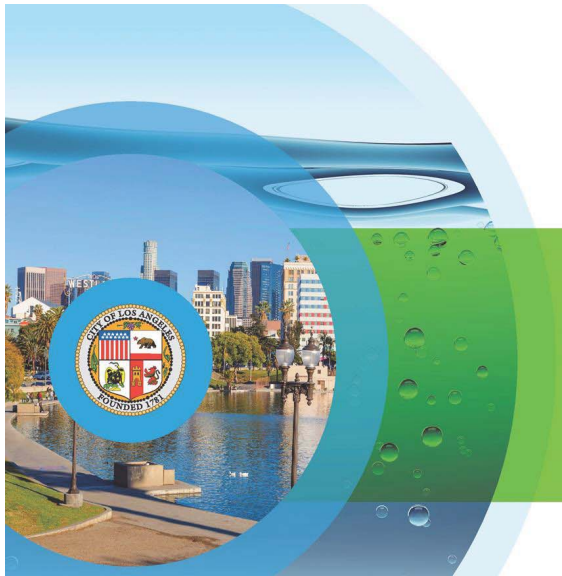
- Late October:
  - Final Criteria and Portfolio Development
  - Update on Special Studies (LA River, Satellite Water Reclamation)
  - Long Term Policies
- Early December
  - Portfolio Development and Implementation Strategy
  - Long Term Policies Wrap-Up

Alternatives Analysis Process Overview



THANK YOU & Announcements

- Imagine a Day Without Water (September 15, 2016)
  - http://imagineadaywithoutwater.org/participate
- Third Annual LA River Boat Race (September 17, 2016)
  - https://paddleguru.com/races/LARiverBoatRace
- Annual Congress of NCs (September 24, 2016)
  - http://www.nccongressla.com/
- NWRI Workshop (October 19-20, 2016)
  - http://www.nwri-usa.org/dwr_drought_oct2016.htm



One Water LA

Stakeholder Workshop #3

September 13, 2016

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STAKEHOLDER WORKSHOP #4 (10/26/16)

The following pages present the meeting agenda, summary of the discussion, and the presentation given at the Stakeholder Workshop #4, held on October 26, 2016.

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One Water LA Plan Phase 2

Stakeholder Workshop #4

Agenda

Wednesday, October 26, 2016, 1:00 pm-4:00 pm

Location: Goodwill Center, 3150 N. San Fernando Road, Los Angeles, 90065

Optional Overview Meeting, 12:30 pm -1:00 pm

OPTIONAL: One Water LA 2040 Plan overview for new or interesting participants ***12:30 - 1:00 pm***
(ROOM Glassell Park)

Stakeholder Workshop #4 **1:00 - 4:00 pm**

Objectives:

1. Provide an overview of the **Alternatives Evaluation Process**
2. Present the **Potential Projects** that are evaluated to meet 2040 Goals
3. Get input on the relative importance of project **Evaluation Criteria**
4. Get input on Project **Portfolio Themes**
5. Provide a preview of future workshop topics

Agenda

1. **Welcome and Progress Update (15 minutes)** **1:00 - 1:15 pm**
    a. One Water LA Progress Update
    b. Stakeholder Input to-date & look-ahead

2. **Alternatives Analysis (45 minutes)** **1:15 - 2:00 pm**
    a. Alternatives Analysis Process
    b. Questions & Answers
    c. Projects Review
    d. Questions & Answers

3. **Evaluation Criteria (60 minutes)** **2:00 - 3:00 pm**
    a. Criteria Definitions and Q&A
    b. Exercise Instructions
    c. Evaluation Criteria Exercise
    d. Initial Observations & Wrap Up

4. **Project Portfolio Themes (45 minutes)** **3:15 - 3:45 pm**
    a. Portfolio Goals & Objectives
    b. Initial Portfolio Ideas
    c. Brainstorm Discussion

5. **Closing (15 minutes)** **3:45 - 4:00 pm**
    a. Summary of today's workshop outcomes
    b. Planning for the next workshops; anticipated topics
    c. Upcoming events

PROJECT EVALUATION CRITERIA

Category	Criteria
Economic	Unit Cost
Economic	Financial Benefits
Economic	Project Funding Mechanism
Economic	Likelihood to obtain Outside Funding
Resiliency	Drought Resiliency
Resiliency	Earthquake Resiliency
Resiliency	Flood Risk Mitigation
Resiliency	Local Supply Benefit
Resiliency	Energy Impact/Greenhouse Gas Emissions
Implementation	Constructability
Implementation	Institutional Collaboration
Implementation	Regulatory Approval
Implementation	Public Engagement
Implementation	Property Ownership
Implementation	Public & Political Support
Environmental	Environmental Justice
Environmental	Air Quality Improvement
Environmental	Open/Natural Space & Recreational Benefit
Environmental	Stormwater Quality
Environmental	Ecological Benefit/Habitat Restoration

CITY OF LOS ANGELES
One Water LA
Stakeholder Workshop #4 (Phase 2)
Wednesday, October 26th, 2016 1:00 pm -4:00 pm

Meeting Summary with Additional City Responses

This summary is not intended to be a transcription of the fourth One Water LA Workshop. This summary generally expresses the sentiment and information provided by those that attended. Where appropriate, the Project Team has added responses to questions or comments that were not addressed during the meeting.

Please refer to attachments for additional information regarding this summary.

INTRODUCTIONS:

Attendees were welcomed with opening remarks by Ali Poosti from Los Angeles Sanitation (LASAN) and Serge Haddad from the Los Angeles Department of Water and Power (LADWP). Ali Poosti mentioned the importance of collaboration and stakeholder inclusion to discuss strategies for water conservation, water recycling and stormwater capture. The workshop was part one out of a three workshop series and Ali encouraged attendees to continue to participate in the remaining workshops to provide insight and input on finalizing the One Water LA 2040 Plan.

Serge Haddad mentioned that Marcie Edwards has retired as the General Manager for LADWP and David Wright is the new General Manager. The Assistant General Manager (in the Water Sector) Marty Adams is now the interim Chief Operating Officer. Penny Falcon, who led the Conservation, Legislative and Grants Program under Water Resources has been promoted into another Conservation Group under Joint Services so she is not going to be as involved with One Water LA Program. The Recycled Water Fill Station Program for free recycled water is available at the Los Angeles Glendale Water Reclamation Plant. The Fill Station is open Saturdays and Sundays from 8 am -11 am every weekend (website: ladwp.com/rwfs).

Hampik Dekermenjian (CDM Smith) was the meeting facilitator and he reviewed the agenda and meeting objectives. The workshop agenda was organized as follows:

1. One Water LA Progress Update
2. Alternatives Analysis
3. Project Evaluation Criteria
4. Project Portfolio Themes
5. Next Steps & Closing

1. One Water LA Progress Update

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 5 -13)

One Water LA Updates are summarized below:

- Foundational Work Completed:
    - Developed Mass Balance Model which will be used to evaluate Project Portfolios.
    - Completed first chapters of Wastewater and Stormwater Facilities Plans. Now looking at what projects are needed for Facilities (this will feed into the Alternatives Analysis).
    - Combined three elements (Water Quality, Water Supply and Flooding) for the Stormwater Facilities Plans to identify Grey and Green infrastructure projects to support One Water LA Long-Term plan.
    - Conducted Special Studies related to Onsite Treatment.
    - Conducted Climate Change Vulnerability Analysis.
- Tasks Currently In-Progress:
    - Compiling input and recommendations from Special Topic Groups to develop Funding Strategies for One Water LA.
    - Conducting LA River Flow Study to understand what the flows are in the LA River.
    - Looking at Near-Term integrated projects (Case Studies) that other departments are leading to learn what agreements need to be in place for more integrated projects.
    - Incorporating stakeholder input in Climate Change Study.
- Final Steps:
    - Looking at triggers to help determine when a project will be implemented.
    - Developing Short-term and Long-term policies to promote more integrated multi-benefit projects.
    - Developing a Programmatic EIR once the plan is completed

2. Alternatives Analysis

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 14 – 26)

An overview of the Alternatives Analysis process was presented. The primary objective of the Alternatives Analysis is to identify the best implementation strategy to achieve One Water LA Guiding Principles and Objectives. The expected outcome is a prioritized list of key projects and programs that collectively achieve One Water LA Objectives and goals in the Sustainability pLAn. The 7 step process for the Alternatives Analysis includes: 1) Developing Evaluation Criteria, 2) Developing and Evaluating projects, 3) Developing Conceptual Project Description Sheets, 4) Ranking and Scoring Projects (each project will have a total benefit score and projects that are the most

beneficial and valuable will move into portfolios), 5) Defining Portfolio Themes, 6) Evaluating Portfolios using Mass Balance Model to conduct a flow analysis and test how each portfolio does compared to objectives, 7) Defining Recommended Portfolio.

After the Alternatives Analysis presentation, stakeholders provided the following questions and comments:

Question: Are the presentation slides online? They are far too complicated to understand in 3 seconds.
Response: A draft presentation was emailed to all stakeholders on Monday, October 24th. The presentations slides will be online shortly after the workshop.

Question: On the evaluation criteria list, the last thing on the list is ecological benefit and habitat restoration. Why is it not first?
Response: There is no particular order of importance on the list. Today we want to get input from stakeholders on what is more important and least important.

Comment: A very complex evaluation system has been proposed by City staff and advisors. You are asking us to fine tune something that is very complex and already formed. When it comes down to evaluating what happens, we need to have a much better understanding of the actual process that the City has put together regarding the definition of each criteria and how we are going to look at individual projects and weigh in.
Response: As far as the process to come up with the approach, the criteria have been vetted by stakeholders and advisors. The purpose of the exercise today is to get input on the weighting of criteria *(weighting has not been determined)*. The purpose of building portfolios is to compare extremes of what we can do (e.g. minimizing cost, maximizing recycled water etc.). As a result you end up picking the best projects out of each portfolio and that is why you potentially end up with a hybrid.

Comment made by stakeholder to address previous comment regarding the development of the City's Alternatives Analysis process: The criteria and projects presented are a compilation of the needs of the agencies as well as input provided by stakeholders at the very beginning at workshops. There is still room for input by the public.

Comment: Concerned about the credibility of this whole process. We went through a process about a year ago to restore the ecology pond at Chatsworth Nature Reserve. We were promised a lot of things and it turned out to be a disaster for that site. The Alternatives Analysis Process is in jeopardy because of the lack of credibility that has been demonstrated with respect to Chatsworth Reservoir.
Response: As far as the process and credibility, the reason for stakeholder workshops is to have a transparent and open process. We want to continue these conversations throughout implementation of the Plan to make sure we stick to our commitment. LADWP also mentioned that the dialogue on the Chatsworth reservoir will continue.

Question: Is the Mass Balance tool publicly available? If it is, is there supporting documentation to understand its depth?

Response: The tool is not publicly available. Assumptions and information behind all of the flows are going to be part of the Tech Memos included in the final One Water LA report.

Comment: It is a little bit of a con job to bring the public along. The Rate Payer's advocate *(somebody who knows what is going on with these complex issues)* should be included in these discussions as a counter balance to the City team.
Response: Rate advocate has been invited to all meetings. Representatives from this office have regularly attended our stakeholder and other One Water LA meetings.

Comment: We sacrifice detail and stakeholder involvement in order to meet tight schedules. Not all of the Advisory Group input is reflected here. Without having criteria everybody is happy with that has very clear definitions, it is premature to go to the weighting exercise. In terms of criteria given where we are it's important that our overarching objective here is to enhance rather than destroy diversity, reduce not increase pressures on land, limit rather than add to Greenhouse Gas emissions, and to make sure that the benefits and risks are distributed equitably, that we are context aware, adaptive and flexible.
Response: Please refer to slide 17 for the criteria development steps. Initial criteria was developed in August 2016 and reviewed by the Advisory Group and Stakeholders. Revisions were made and final criteria was drafted and shared with the Advisory Group and Stakeholders in October 2016. Despite efforts to ensure stakeholder input is included in the final outcome, a balance of opinions is reflected in the criteria. We can share the correlation exercise regarding how the 20 criteria relate to Guiding Principles and how they have synergies with the LA Basin Plan and the One Water LA Guiding Principles we built upon those two documents and we can share those documents with stakeholders so it is clear on how the criteria relate to the Guiding Principles to achieve the One Water LA goals.

Comment: The Recycled Water Advisory Group had an academic panel that was parallel to the stakeholder workshop. One Water LA does not have that. Taking the evaluation criteria and Mass Balance Model and not exposing it to peer review for the Academic community is a core failing. It has to be out there for peer review so that those who understand the model have access to the information.
Response: The One Water LA Team is actively collaborating with UCLA. We will consider how to bring in more technical experts for the Mass Balance Model and other technical tasks.

Context was provided on the types of projects to be evaluated by the evaluation criteria. A list of Foundational Projects and Potential Projects was presented. It was mentioned that the evaluation criteria was developed to only assess projects on the Potential Projects List.

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 27 – 38)

Questions and comments received from stakeholders during and after the presentation of Foundational and Potential Projects are summarized:

Question: What is the time frame for the Ground Water Replenishment (GWR) Project?
Response: The Final Environmental Impact Report (EIR) for the project will be taken to the Board of Water and Power for approval either in late November or early December.

Question: Who is the final decision maker for approval of the GWR Project?
Response: LADWP works with Regulatory Agencies to ensure that the GWR Project is moving along with the California Environmental Quality Act.

Question: Has the City obtained permission from the US Army Corps of Engineers (US ACE) who is the lessor of land for the GWR Project or is the City waiting for the EIR to be finalized?
Response: The City is in negotiations with US ACE. The lease is being finalized for the Donald C. Tillman Water Reclamation Plant (DCT). One of the elements of that approval is the Advanced Water Purification Facility at DCT which is being considered.

Question: Why are the Foundational projects not being evaluated under the same criteria as the Potential Projects? Can we change the name "Foundational Projects" to "Projects in Process"? All the Foundational Projects are regional and large scale which implies a hierarchy that doesn't serve the One Water LA purpose. Also why are Prop O Projects included in the Foundational list of Projects? Prop O is done.
Response: The purpose of the Foundational Projects list is to account for projects that are already underway. It is not a hierarchy or prioritization. Foundational Projects were already vetted through public processes. The projects are underway independent of One Water LA. Prop O Projects are included because some of the projects are still in construction (e.g. Penmar Phase II and Phase III). The One Water LA team agreed to reconsider the name "Foundational Projects." These projects will not be reevaluated through the criteria since they already went through a public evaluation process.

Comment: Make it consistent throughout all slides and use either acre feet or MGD. Using different units creates confusion.
Response: Annual water supply is typically provided in AFY, while treatment capacities are expressed in MGD. Where applicable, both measurements will be used. However, because the majority of the Sustainability Plan goals are stated in AFY, many elements of the long-term One Water Plan strategy will be described in AFY, with the exception of (waste)water treatment capacities.

Comment: Just because a project is underway doesn't mean that it shouldn't be evaluated through the evaluation criteria. Looking at centralized/regional Upper LA EWMP Projects for example, a lot of the large projects are on land that hasn't been purchased and we don't know what that cost is. It may turn out that distributed projects may be more cost effective if you put Foundational Projects through an evaluation process.

Comment: The Foundational Projects are already happening and we need to get on with it. Ratepayers are spending money not accomplishing anything because we are not moving forward with these projects.

Comment: A lot of things were scheduled to be implemented under Prop O. How well are the projects turning out? I would like to see an evaluation process for Foundational Projects to see

if the goals have been accomplished. We don't know for sure if Plans we spend so much money on are actually working.

Comment: The funding for some of the Foundational Projects hasn't even been identified. If we aren't putting these projects through evaluation, we are eliminating the concept of adaptive management. One Water LA should review the Foundational Projects list and identify the projects that are already funded which would indicate the projects that are already a sealed deal.
Response: The project team will review the Foundational list and identify which projects are funded.

The Potential Projects list was presented. Questions and comments received from stakeholders during and after the presentation are summarized:

Comment: I heard about a demonstration project led by LAUSD, LADWP, TreePeople and LA County to put watershed projects under every new school. That was supposed to happen about 10 years ago and nothing has happened. The project is not shown on the Potential Projects list.
Response: The project will be discussed for inclusion in the Potential Projects list.

Comment: Having decentralized projects is good for resiliency. Atmospheric Water Generation (pulling water out of the air) is not included on the list. There are a variety of projects on a large scale that could do tens of thousands of gallons a day at less than a kilowatt hour per gallon.
Response: The project will be discussed for inclusion in the Potential Projects list.

Question/Comment: For item 17 on the Potential Projects list, open reservoirs are prohibited by the State regulators so why is the item on the list? Lastly rather than satellite plants being an item on the list as a potential project, it should be a targeted Program. There are many large land holdings where satellite plants could be applied (e.g. college, hospital, industrial campus).
Response: Open reservoirs are prohibited for treated potable water storage, but are allowed if followed by a treatment plant that complies with the Surface Water Treatment Rule.

Question: We have no projects for the Los Angeles Glendale Water Reclamation Plant (LAG) in regards to Indirect Potable Reuse and Direct Potable Reuse. Why are we skipping out on LAG?
Response: It has to do with water availability and the location of the facility. LAG currently produces about 20 MGD and it is already being maximized.

Comment: (Referring to items 1 and 7 on Potential Projects list). There are opportunities that exist right now that could be implemented within a few months regarding treatment of Upper LA River Watershed stormwater. The treated stormwater could be used to solve the problem with respect to Chatsworth Nature Reserve. For number 7 on the list, if you are putting rubber dams you need to consider the effect on the attempts to restore fish to that body of water, in particular the steel head trout.

Question: For Potential Projects list, will One Water LA look into Direct Potable Reuse from Hyperion to West Basin?
Response: The project will be discussed for inclusion in the Potential Projects List.

Comment: The Mass Balance Model has a need and potential to guide us in our strategic planning for the future, which would mean looking at some completed projects to see if they worked or not and looking at alternatives. The MBM should: 1) Evaluate the before and after cases for distributed plants when we go to Direct Potable Reuse and 2) Envision Capital expenditures which may be beyond the City's bonding ability. Don't just look at whether or not these things pencil out on operating costs and bond payback if the 30 year bonds can't even be floated because it exceeds our ability.

Comment: Focusing on the potential for LAG, to state that it is maximized is not completely accurate because we have both diurnal and annual cycles of supply and demand so there are times when you have considerable surplus and times when you do not. The proposal to put some of that water into headworks gets interesting because headworks (100 million gallon capacity) which is built to replace Silverlake Reservoir may be a good resource for that potential surplus to be stored, treated and reused.
Response: Discussions are ongoing with the community of Silverlake regarding the purpose and use of Silverlake Reservoir. Because this is a current ongoing project it would fall under the Foundational Project list. We will work with LADWP to determine the inclusion to the Foundational Project list.

Question: For the distributed Stormwater Low Flow Diversions (LFDs), does that refer to the potential for appropriation of effluent discharge that might otherwise make its way into the LA River? For the LA River storage with recharge in the LA Forebay is this referring to the process for the mechanical forcing (a process similar to fracking) of large amounts of water in the area immediately South of Downtown Los Angeles which would be the LA Forebay? Lastly for Groundwater expansion to full water rights outside the San Fernando Basin does this refer to a further exercise or exertion of the City's Water Rights?
Response: The LFDs would be taking dry-weather runoff water that ordinarily ends up in the City's stormdrain system, which ultimately discharges stormwater into the Pacific Ocean via the LA River and other creeks/channels. Criteria accounts for environmental benefit and that is where the LFD project may or may not score lower. Regarding the LA Forebay, the potential project concept is referring to injection wells to recharge the aquifers underlying the LA Forebay (Central Basin). Regarding the expansion to full water rights, this does indeed refer to strategies and improvements needed to fully utilize the City's existing water rights.

Comment: For the Ballona Watershed I am very concerned about water that we can already capture as a result of storms and water that already exists. For instance with Playa Vista what they do in order to meet their methane mitigation needs is that they dewater 950,000 gallons per day. There are many places with temporary dewatering permits, which is low hanging fruit. Why can't One Water LA check out all the temporary dewatering permits in the City?
Response: One Water LA is already looking to make policy changes to change the dewatering requirements, quantify the amount of water and look into all facilities in the city that dewater.

Comment: Regarding number 17 on the Potential Projects list, LADWP is not trying to eliminate all open reservoirs. LADWP is trying to eliminate open treated water reservoirs.

Comment: For the Potential Projects list, the distributed stormwater projects have very distinct types and sizes of projects and yet they are all lumped into a basket. When you get down to DPR and IPR they are very specific and they aren't grouped into types of projects by watershed. It is very telling about the focus of the project overall. With the Basin Study process there was a fair amount of time put into soliciting ideas from stakeholders and projects were put through the criteria.
Response: Stormwater projects are grouped because there are a lot of options that could be listed and for ease of communicating/presenting those projects we grouped them as distributed projects. It does not mean that we are not looking at specific solutions and categories for distributed projects.

Question: Can we switch the order of how we are thinking about defining the problem? Coming up with a draft list of Potential Projects could be infinite and it is meaningless unless we define our criteria and goals. If we defined our criteria and goals first, we can come up with a set of matrices and a value of criteria that a lot of the projects would drop off very quickly and we can hone in and make the process and projects more transparent and quicker to implement because it would make sense upfront.
Response: There is a challenge to presenting projects before the criteria and after the criteria. The list of potential projects will provide some context to the criteria that is going to be presented. Regarding specific projects that have not been included, we can offer a separate forum and workshop to talk about specific projects.

Comment: It would be great if we could see cost per gallon to recharge and pull out water. Not everywhere in LA does it cost the same to get water to users. Not everywhere in LA does it cost the same to get water to Hyperion. To see the cost and see where appropriate technologies would be deployed would be great.

3. Evaluation Criteria

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 39 - 47)

The Project Evaluation Criteria and the definitions for each of the 20 evaluation criteria were presented to stakeholders to assist with the scoring exercise.

Questions and comments received from stakeholders during the presentation of the Evaluation Criteria are summarized:

Question: Will construction materials be part of the equation for constructing a big treatment plant? Is embedded energy included in the equation?
Response: The energy footprint associated with building a project would be related to City policies in terms of using local sources and reducing carbon footprint. We don't know enough about these projects to know exactly what materials would be used and where they would come from. Embedded energy is not included because it would be very difficult to quantify for a high-level project description. The One Water LA team will continue to discuss ideas on how to incorporate embedded energy. Also, we have included this issue as a policy recommendation.

Comment: We haven't talked about aqueduct supplies at all. When we talk about resiliency, we have different aqueduct sources and different groundwater sources.
Response: For the earthquake resilience criteria, there are existing facilities in place that reach far outside the City boundaries that are subject to earthquake issues. Those will be considered under the "No Project Portfolio". The criteria being presented primarily focus on evaluating the benefits of the proposed new projects and the existing projects will be part of the do nothing alternative.

Comment: We have three different aqueduct sources. If you want to evaluate incremental energy cost for some new water supply, it is important to have a rigorous process of determining what the existing energy cost is for each of the three aqueducts.

Question: For energy impacts, you can frame it in terms of "please provide a whole cost accounting of GHG emissions for each particular project". There are methods (e.g. UC Santa Barbara) that provide the framework for that. For the drought resilience criteria, how is One Water LA defining dry and normal? As historical normal is probably going to be wet, and dry will become normal as we move forward in time.
Response: As part of our Basis of Planning efforts, we conducted a long-term hydrology analysis (over the past 100 years) to look at different hydrological sequences to come up with a definition of what is normal, wet, and dry for the purpose of this study and to compare with other exercises that have been going on. It is the intent of One Water LA to look at all Portfolios from a drought resilience perspective over a hydrologic cycle of 10 years rather than looking at the same year.

Comment: We get almost nothing from Owens Valley and Colorado River. The absolutely highest GHG cost water is the State Water Project. Anything local is going to have a more beneficial effect. There is a lot of GHG benefit from locally sourcing our water.

Question: Why are we not incorporating stormwater capture with flood risk mitigation considering there are hundreds of gallons of water when it does rain?
Response: Flood risk mitigation is captured under the Resiliency category. Under the environmental category we have additional criteria related to stormwater quality. This is also being addressed in the Stormwater Facilities Plan three legged stool (water supply, water quality and flood risk mitigation).

Comment: The definition of Flood Risk Mitigation criteria should be: "Evaluate the ability for the project to mitigate existing flood risk". The definition of Local Supply Benefit criteria should be: "Evaluate the ability for the project to offset imported supplies". We are not giving a project points only if it gives supplies to the City. Projects could also give supplies to businesses that can also offset imported water.
Response: The criteria definitions will be considered and discussed with the Advisory Group.

Comment: A hundred years isn't very much. These last 150 years have been the wettest in the last 4000 years according to studies. If we base what we are doing on 150 years we are probably all going to die from the lack of water.

Comment: For the constructability criteria, if you are not talking about cost it's a pretty slippery category. It could include how long it might take to implement a project, what kind of disruption might it cause, what kind of environmental impact it might have (e.g. destroying habitat in order to gain access to a project).
Response: For the Implementation category there are a lot of different elements to constructability. We are ranking constructability from very difficult to very straightforward. There are some metrics (e.g. miles of pipeline needed to be built, etc.) that help the scorer know if it is going to be a 1-5 in terms of ranking.

Comment: For the Public and Political Support criteria, we should also mention the voters since they approve propositions (e.g. stormwater tax).
Response: Voters are made up of members of the public.

Question: Why is property ownership not included in the constructability criteria? Also in regards to evaluating projects based on ease of construction, some projects that we evaluate may be different from standard practice in terms of being multi-beneficial. What will One Water LA do to ensure that a project isn't scored lower in terms of difficulty just because a project type isn't familiar?
Response: Property ownership is not included under constructability because we followed the model of the LA Basin Plan Study where it was also a separate project evaluation criteria. We want to keep property ownership separate from constructability at this point because it can delay a project versus other constructability issues that may be a little bit easier to solve with by spending more money on a project. If you don't get a piece of land it could be a fatal flaw for a project.

Comment: For the Mayor's Sustainability pLAn, there are elements and criteria that the City is being held accountable for and some of those criteria (e.g. community wellness, local hiring, etc.) don't seem to be reflected in the One Water LA criteria. It would be interesting to look at the criteria that City departments are already being judged for and make sure that they are included in the One Water LA criteria.
Response: We will review targets in other categories of the Sustainability pLAn to compare if and how the One Water LA criteria incorporates elements required by those targets.

Comment: One Water LA has to find ways to incorporate Public health impacts. Public and Political support does not belong on the list of criteria because public support is covered in Public Engagement criteria and elected officials are going to follow their constituency. Constructability remains subjective so there needs to be a better definition. As time has gone on, property ownership has shifted, changed and become moot (e.g. Headworks, Spreading Grounds, Taylor Yard, etc.)
Response: Comment will be considered and discussed with the Advisory Group.

Comment: Regarding Regulatory Approval criteria, a lot of these projects will require a CEQA/NEPA analysis. Some clarification is needed to distinguish those projects that may not require those processes and might already be covered by existing regulatory frameworks.

Comment: Stakeholders who have been involved in this One Water LA process have a responsibility to engage the public, executives, and legislative people because if we just provide public input and we don't provide any affirmative guidance about why, we are not going to get One Water LA and we will get massive push back.

Comment: This idea about public engagement and political support is temporal and it's about investment in education. It is one thing to ask "What do you think about a project?" and a totally different thing to say "Let me explain why this project is important". They are two different degrees of investment.

Comment: For the Stormwater Quality criteria, measuring the quantity of stormwater isn't the right way to measure water quality. Also for the Ecological Benefit/Habitat Restoration criteria, One Water LA should take a look at the US ACE criteria they developed for how to measure ecological benefit.

After the presentation, stakeholders were given instructions for the Evaluation Criteria Scoring Exercise to provide their input on the relative weighting and importance of the 20 project Evaluation Criteria presented. In tabulating the results of the Evaluation Criteria Scoring Exercise some discrepancies were found, likely due to clarity of exercise directions. As a result, another scoring exercise will be conducted in an upcoming Stakeholder Workshop.

4. Project Portfolio Themes

The Project Portfolio Theme discussion will be deferred to an upcoming Stakeholder Workshop

5. Next Steps & Closing – Lenise Marrero (LASAN), Hampik Dekermenjian (CDM Smith)

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 52 - 59)

The next steps for the One Water LA Plan include the following:

- A separate meeting within the next month for interested parties to provide additional project ideas.
- Workshop #5 will cover Portfolio themes and Policy Ideas. One Water LA is looking to make short-term and long-term policy changes to better integrate projects. Workshop will serve as a forum for obtaining input on new policy ideas.
- Few announcements of Upcoming Events:

- LADWP Integrated Resource Plan (Power) – Wednesday, October 26th, from 6 -8 pm.
- Community Climate Action Summit – Saturday, October 29th, 9 am – 6 pm.
- LA County GIS Day Steering Committee – Wednesday, November 16th, 9 am – 3 pm.
- One WATER LA Holiday Event – Thursday, December 1st, 5:30 pm – 8:30 pm
    - RSVP to Lenny Chavez (Lchavez@carollo.com)
- One Water LA Stakeholder Workshop #5 – Early December.
- One Water LA Stakeholder Workshop #6 – Mid 2017.

ADDITIONAL ATTACHMENTS

- One Water LA Workshop PowerPoint Presentation
- Evaluation Criteria and Definitions

One Water LA

Stakeholder Workshop #4

October 26, 2016

All Water is One Water

Objectives of **One Water LA Decision Time (Part 1)**

- Present an Overview of **Alternatives Analysis Process**
- Present **Potential Projects** to meet 2040 Goals
- Conduct **Evaluation Criteria Exercise**
- Obtain Input on **Portfolio Themes**

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One Water LA Decision Time

Series of 3 Workshops

Part 1 (Today)

- Projects & Criteria
- Criteria Exercise
- Portfolio Themes

Part 2 (Early December)

- Long-term Policies Brainstorm
- Project Scoring Update
- Portfolio Evaluation Update

Part 3 (Early 2017)

- Long Term Policies Wrap-Up
- Implementation Strategies
- Wastewater & Stormwater Facilities Plans

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Agenda

1. Welcome & Progress Update — 1:00-1:15 pm
   a. One Water LA Progress Update
   b. Stakeholder Input To-Date & Look-Ahead
2. Alternatives Analysis — 1:15-2:00 pm
   a. Alternatives Analysis Process
   b. Q&A
   c. Projects Review
   d. Q&A
3. Evaluation Criteria — 2:00-3:00 pm
   a. Criteria Definitions with Q&A
   b. Exercise Instructions
   c. Evaluation Criteria Exercise
   d. Initial Observations & Wrap-up
4. Project Portfolio Themes — 3:15-3:45 pm
   a. Portfolio Goals & Objectives
   b. Initial Portfolio Ideas
   c. Brainstorm Discussion
5. Next Steps and Meeting Close — 3:45-4:00 pm

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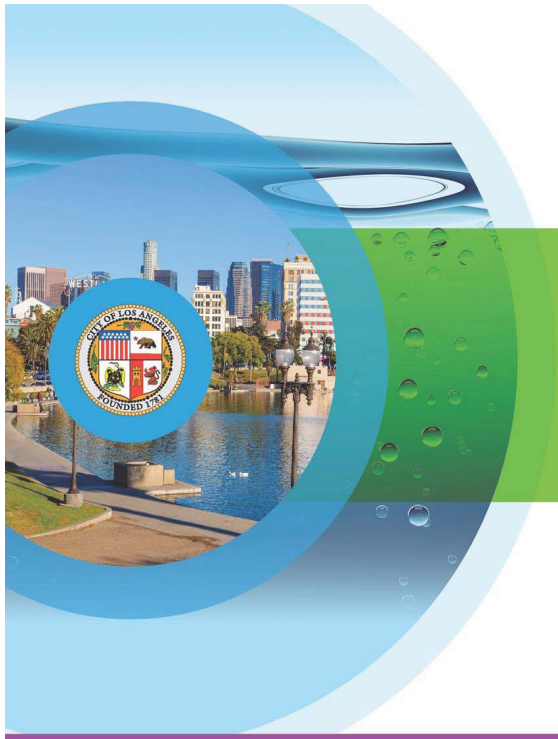
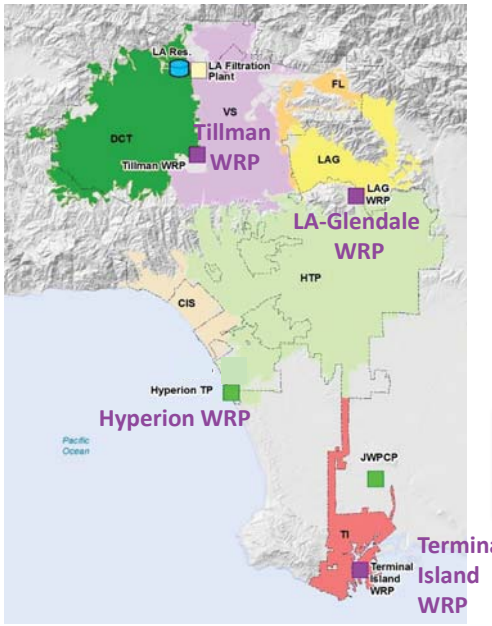


One Water LA

1a. Progress Update

All Water is One Water

Wastewater Facilities Plans - Status



PLAN DEVELOPMENT PROCESS

- **Data Gathering**
  Treatment Plant Descriptions
  Conveyance System Description ✓
- **Wastewater Flow Analysis**
  Alternatives Evaluation
  Capital Improvement Program — In Progress
- **Wastewater Facilities Master Plan** — Dec. 2016

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Progress Update - Overview

Final Steps:

Q1 2017

- Project Timeline & Triggers
- Short- & Long-Term Policies
- One Water LA 2040 Plan
- Programmatic EIR

Key Tasks Currently In-Progress:

Q4 2016

- Wastewater Facilities Plans
- Stormwater Facility Plan
- Long-Term Alternatives Analysis
- Funding Strategies
- Climate Change Adaptation & Mitigation Plan
- LA River Flow Study

Foundational Work Completed to-date:

- Existing & Future Flow Conditions
- Mass Balance Model
- Description of Existing Wastewater & Stormwater Facilities
- Climate Change Vulnerability Assessment
- Near-Term Integration Opportunities/Case Studies
- Long-Term Integration Opportunities/Basis of Planning
- Several Special Studies

Stormwater Facility Plan - Status

PLAN DEVELOPMENT PROCESS

- **Data Gathering**
  Stormwater Flows & Events
  Stormwater Conveyance System ✓
- **System Consideration**
  Stormwater System Analysis
  Capital Improvement Program — In Progress
- **Stormwater & Urban Runoff Facilities Master Plan** — Dec. 2016

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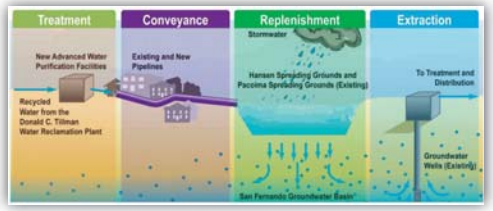
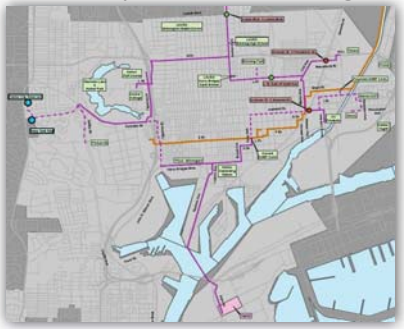
Other Related Projects & Activities

San Fernando Basin Groundwater Replenishment Project



Recycled Water Fill Station Update

Terminal Island Advance Water Purification Facility (AWPF) Expansion to 12 mgd



Asset Management Customer Value Leading Practices Conference (late Nov)

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Stakeholder Input To-Date

Stakeholder Workshop #1 (12/10/2015)

One Water LA Phase 2 Overview
Presented **Mass Balance Model**
Special Topic Groups invitation
Brainstorm of solutions for:
- **Recycled Water**
- **Stormwater Solutions**

Stakeholder Workshop #2 (6/29/2016)

GWR Project Presentation Q&A
Special Topic Groups, input on:
- Partnership & Collaboration
- Decentralized Treatment

Stakeholder Workshop #3 (9/13/2016)

World Café, input on:
- Evaluation Criteria
- Project Concepts & Policies

Input on **Climate Change** Vulnerabilities & Approach

Special Topic Groups, input on:
- Funding
- Outreach & Communication
- Stormwater

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1b. Stakeholder Input To-Date & Look-Ahead

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World Café

Input on Project Evaluation Criteria, Project Concepts, and Policies

Stakeholder Input Look-Ahead

Decision Time Series

Part 1 (Today)
Stakeholder Workshop #4
→ **Project Evaluation Criteria**
Project Concepts
Portfolio Themes

Part 2 (Early December)
Stakeholder Workshop #5
→ **Long-term Policies Brainstorm**
Project Scoring Update
Portfolio Evaluation Update

Part 3 (Early 2017)
Stakeholder Workshop #6
→ **Long Term Policies Wrap-Up**
Implementation Triggers
Wastewater Facilities Plans
Stormwater Facility Plan

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Alternatives Analysis

Objective

Identify the best overall implementation strategy to achieve the One Water LA Guiding Principles & Objectives, coupled with the Sustainability Plan targets.

Desired Outcome

A prioritized list of key projects and programs that collectively achieve the objective with a dynamic trigger-based implementation plan.

Process

A 7-step Alternative Analysis Process that provides the road-map to achieve the objectives & desired outcomes.

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2a. Alternatives Analysis

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Alternative Analysis 7-Step Process

EVALUATION CRITERIA

1 *Develop Evaluation Criteria:*

Category	Criteria
Economic	Unit Cost
Economic	Financial Benefits
Economic	Project Funding Mechanism
Economic	Likelihood to obtain Outside Funding
Resiliency	Drought Resiliency
Resiliency	Earthquake Resiliency
Resiliency	Flood Risk Mitigation
Resiliency	Local Supply Benefit
Resiliency	Energy Impact/Greenhouse Gas Emissions
Implementation	Constructability
Implementation	Institutional Collaboration
Implementation	Regulatory Approval
Implementation	Public Engagement
Implementation	Property Ownership
Implementation	Public & Political Support
Environmental	Environmental Justice
Environmental	Air Quality Improvement
Environmental	Open/Natural Space & Recreational Benefit
Environmental	Stormwater Quality
Environmental	Ecological Benefit/Habitat Restoration

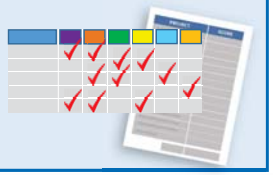
Collaborative Process
- *Task 5 Project Team*
- *Task 5 Workgroup*
- *Advisory Group*
- *Stakeholders*

DEVELOP & EVALUATE PROJECTS

2 *Define Projects*

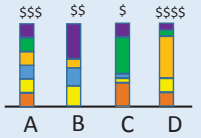
3 *Develop Conceptual Project Description Sheets*

4 *Project Cost & Benefits Scoring and Ranking*



DEVELOP & ANALYZE PORTFOLIOS

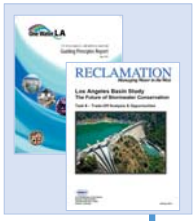
5 *Define Portfolio Themes & Bundle Projects*



6 *Evaluate Portfolios using MBM, CBA & $*

7 *Define Recommended Strategy & Roadmap*

Step 1 - Criteria Development



Staff Workshop 1 — 8/9

Criteria Correlation — 8/30

Staff Workshop 2 — 9/1

Staff Workshop 3 — 10/11

INITIAL Evaluation Criteria Ideas

DRAFT Project & Portfolio Evaluation Criteria

FINAL Project & Portfolio Evaluation Criteria

8/17 — Advisory Group

9/13 — Stakeholder Workshop 3

10/6 — Advisory Group

10/26 — Stakeholder Workshop 4

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Step 2 – Define Projects

Foundational Projects

Potential Projects

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Step 1 – Develop Evaluation Criteria

Category	Criteria
Economic	Unit Cost
Economic	Financial Benefits
Economic	Project Funding Mechanism
Economic	Likelihood to obtain Outside Funding
Resiliency	Drought Resiliency
Resiliency	Earthquake Resiliency
Resiliency	Flood Risk Mitigation
Resiliency	Local Supply Benefit
Resiliency	Energy Impact/Greenhouse Gas Emissions
Implementation	Constructability
Implementation	Institutional Collaboration
Implementation	Regulatory Approval
Implementation	Public Engagement
Implementation	Property Ownership
Implementation	Public & Political Support
Environmental	Environmental Justice
Environmental	Air Quality Improvement
Environmental	Open/Natural Space & Recreational Benefit
Environmental	Stormwater Quality
Environmental	Ecological Benefit/Habitat Restoration

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Step 3 – Develop Project Descriptions

Regional Stormwater BMPs

Advanced Treatment (IPR/DPR)

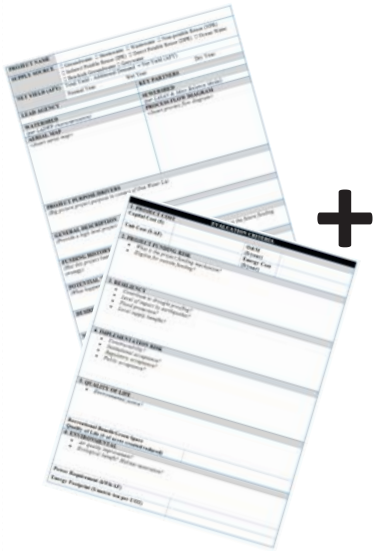
Distributed Stormwater BMPs

LA River Storage & Reuse

Groundwater Recharge (IPR)

Ocean Desalination

Step 4 - Project Benefits Scoring



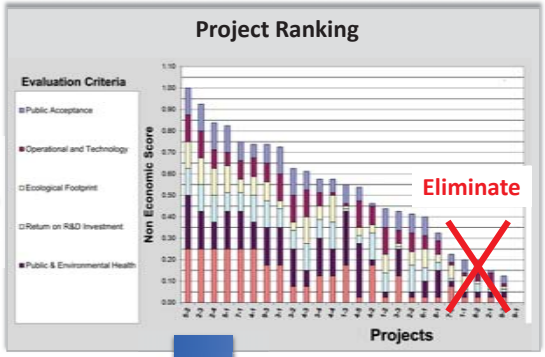
Category	Criteria
Economic	Unit Cost
Economic	Financial Benefits
Economic	Project Funding Mechanism
Economic	Likelihood to obtain Outside Funding
Resiliency	Drought Resiliency
Resiliency	Earthquake Resiliency
Resiliency	Flood Risk Mitigation
Resiliency	Local Supply Benefit
Resiliency	Energy Impact/Greenhouse Gas Emissions
Implementation	Constructability
Implementation	Institutional Collaboration
Implementation	Regulatory Approval
Implementation	Public Engagement
Implementation	Property Ownership
Implementation	Public & Political Support
Environmental	Environmental Justice
Environmental	Air Quality Improvement
Environmental	Open/Natural Space & Recreational Benefit
Environmental	Stormwater Quality
Environmental	Ecological Benefit/Habitat Restoration

1. Review Project Description
2. Assign Score 1-5 for each criteria
3. Calculate Total Benefit Score per Project

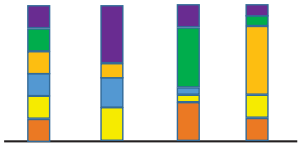
Step 5 – Define Project Portfolios

Project Scoring

1. Calculate Total Benefit Score per Project
2. Rank Projects based on Total Score
3. Select projects for Portfolio Evaluation



Themed Portfolios



Step 6 – Evaluate Portfolios

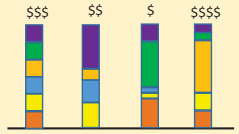
Total Portfolio Benefit Scores

Define Preferred Portfolio

Mass Balance Tool Analysis

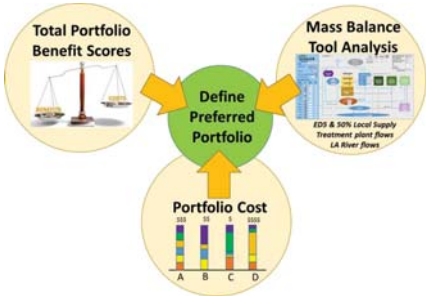
ED5 & 50% Local Supply Treatment plant flows LA River flows

Portfolio Cost

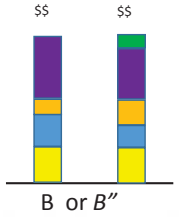


Step 7 – Define Long-Term Strategy

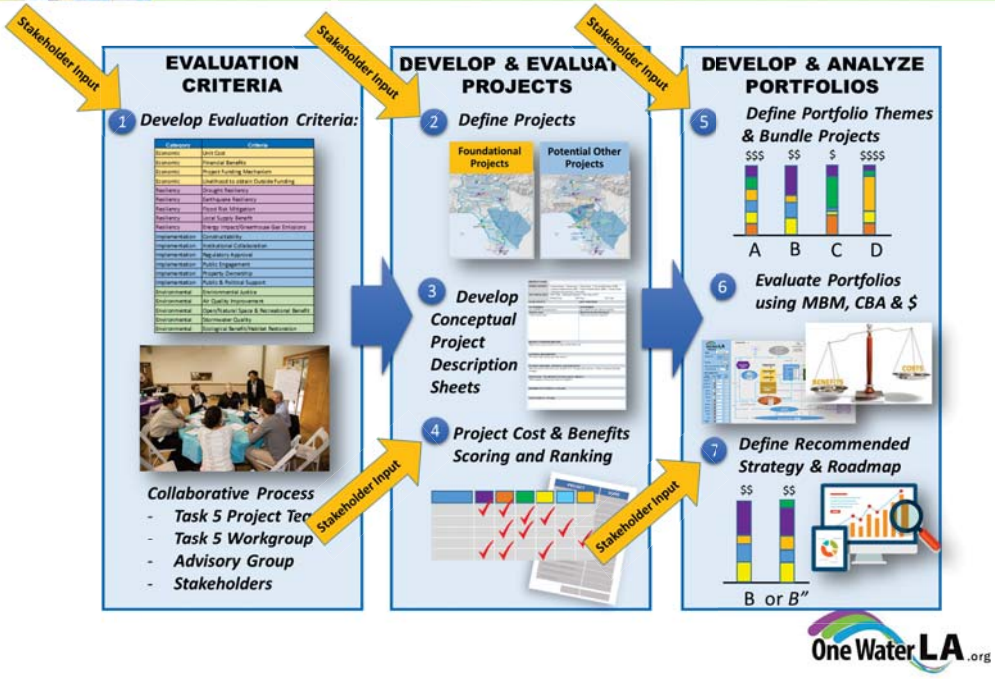
Portfolio Evaluation

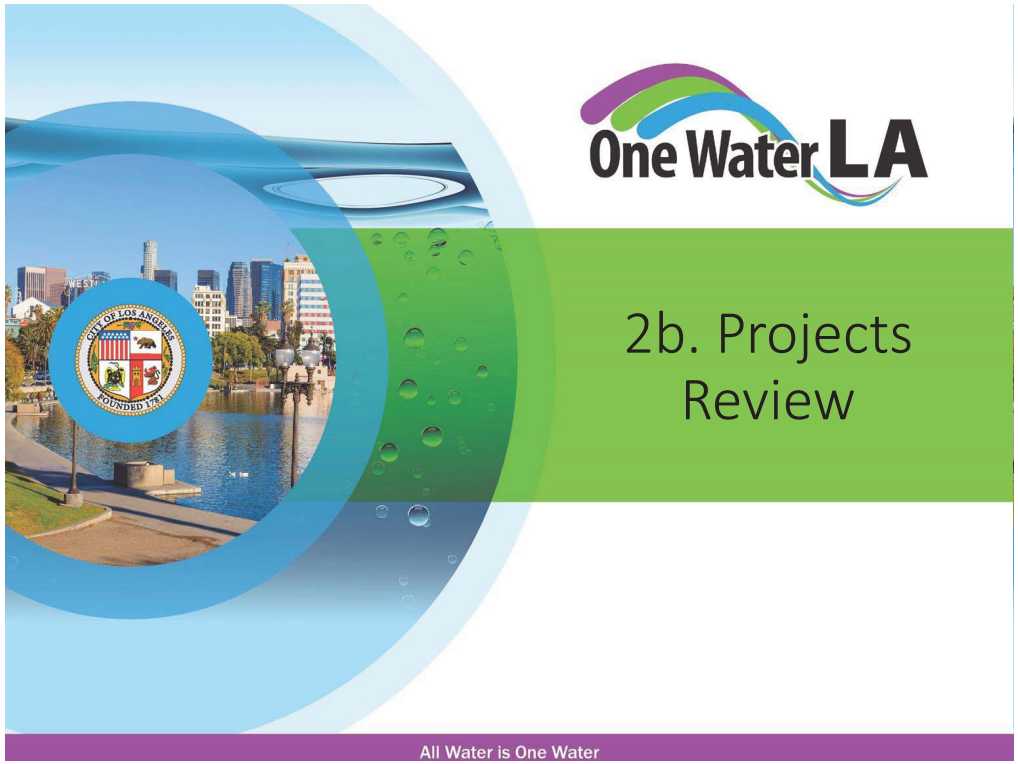


Recommended Portfolio

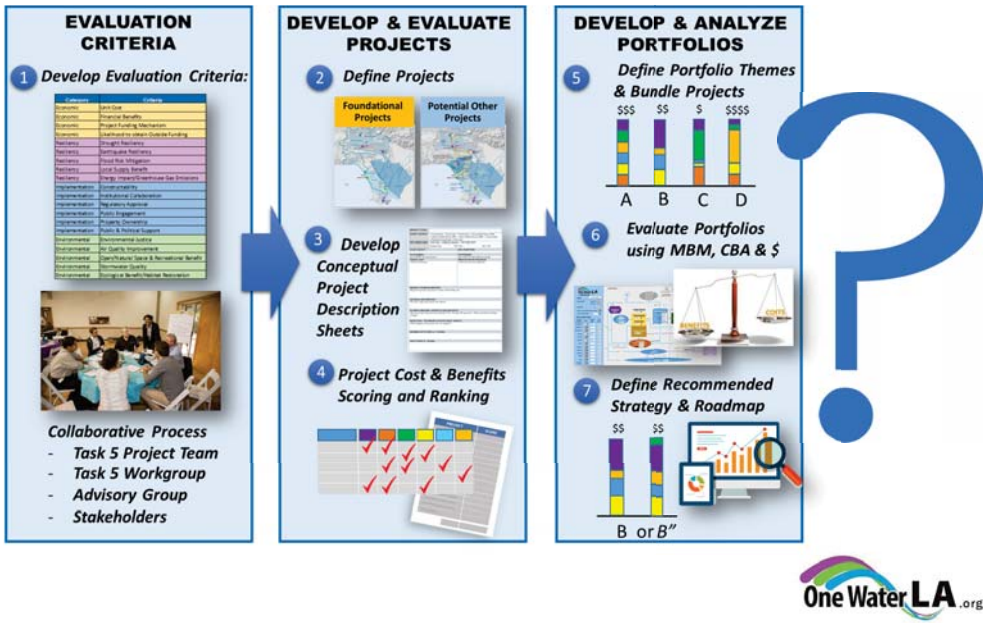


Alternatives Analysis - Stakeholder Input





Alternatives Analysis Process – Q&A



Two Primary Project Categories

Foundational Projects

Projects that are expected to occur independent of the One Water LA Plan

- Some may be funded
- Some may have complete EIRs
- Some may be in LASAN's CIP
- Some may be in LADWPs CIP

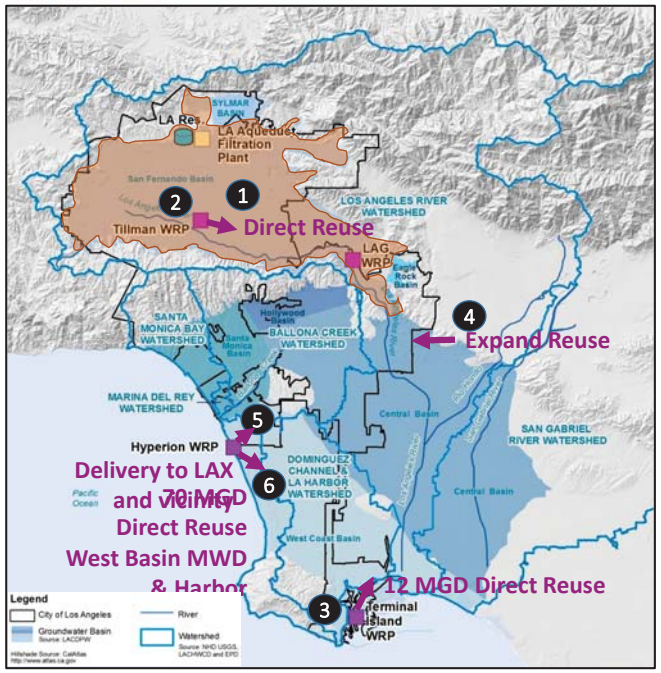
Potential Projects

Projects that are assessed as part of the portfolio analysis of the One Water LA Plan

- No commitment has been made to implement at this time

- **Historical water conservation** contributes to the 50% local supply goal.
- **New water conservation** is included as part of the total water demand target and therefore is not a separate project.
- **Graywater** is considered as a method of water conservation and will also be addressed under policy recommendation.

Foundational Project Locations



1. Groundwater - San Fernando Groundwater Basin Cleanup & Remediation
2. Groundwater Replenishment Project with AWFP at Tillman WRP (up to 30,000 afy in San Fernando Basin)
3. Recycled Water - Terminal Island Expansion to 12 mgd
4. Recycled Water – Expansion of NPR per 2015 Urban Water Management Plan
5. Recycled Water - Hyperion WRP Demonstration Plant & delivery to LAX and vicinity
6. Recycled Water - Hyperion WRP Delivery expansion to 70 mgd for West Basin MWD and Harbor

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Draft Foundational Project List

1. Groundwater - San Fernando Groundwater Basin Cleanup & Remediation
2. Groundwater Replenishment Project with AWFP at Tillman WRP (up to 30,000 afy in San Fernando Basin)
3. Recycled Water - Terminal Island Expansion to 12 mgd
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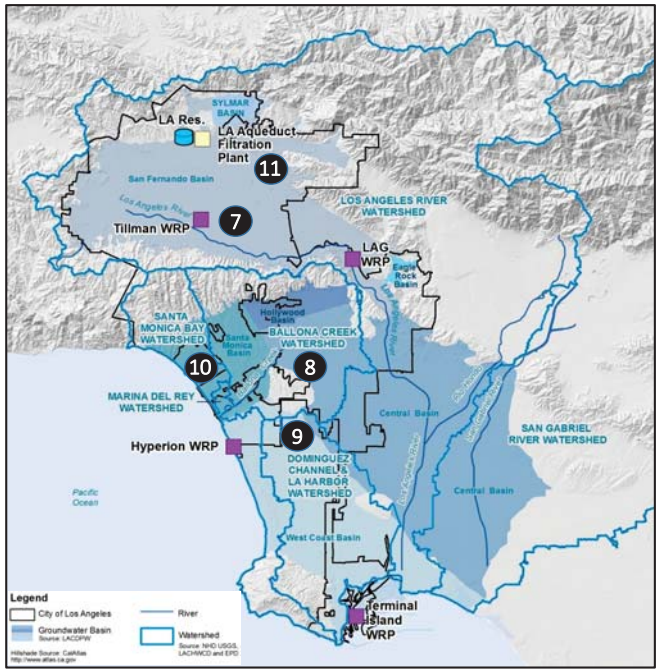
6. Recycled Water - Hyperion WRP Delivery expansion to 70 mgd for West Basin MWD and Harbor
7. Stormwater Projects - Upper LA River Watershed (EWMP/SCMP Regional/Centralized & Prop. O)
8. Stormwater Projects - Ballona Creek Watershed (EWMP/SCMP Regional/Centralized & Prop. O)
9. Stormwater Projects - Dominguez Channel Watershed (EWMP Regional/Centralized & Prop. O)
10. Stormwater Projects - Santa Monica Bay/Marina del Rey Watersheds (EWMP Regional/Centralized & Prop. O)
11. Stormwater - Other Planned Projects within the City (e.g. Sun Valley Watershed Management Plan & Greater LA IRWMP)

Foundational Project Locations



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10. Stormwater Projects - Santa Monica Bay/Marina del Rey Watersheds (EWMP Regional/Centralized & Prop. O)
11. Stormwater - Other Planned Projects within the City (e.g. Sun Valley Watershed Management Plan & Greater LA IRWMP)

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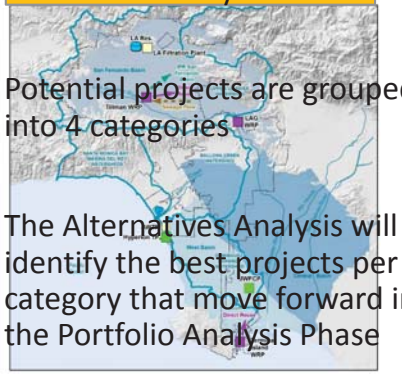
Draft Potential Projects

- Not all potential project can be implemented together due to water availability constraints
- Potential projects are grouped into 4 categories
- The Alternatives Analysis will identify the best projects per category that move forward into the Portfolio Analysis Phase

Foundational Projects



Potential Projects

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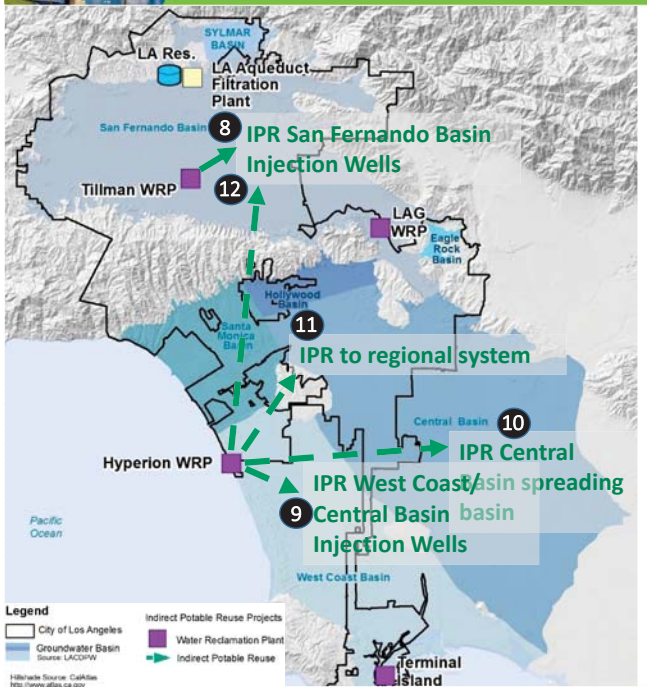
Draft Potential Project List

Projects are listed in random order

1. Distributed Stormwater – Upper LA River Watershed 2. Distributed Stormwater – Ballona Creek Watershed 3. Distributed Stormwater – Dominguez Channel Watershed 4. Distributed Stormwater – Santa Monica Bay/Marina del Rey Watersheds 5. Distributed Stormwater – Low Flow Diversions 6. LA River storage with recharge in LA Forebay 7. LA River storage with rubber dams	**Stormwater**
8. IPR – Tillman WRP to San Fernando Basin (Phase 2) 9. IPR – Hyperion WRP to West Basin/Central Basin Injection wells 10. IPR - Hyperion WRP to Central Basin/Spreading Basins 11. IPR - Hyperion WRP to other regional system 12. IPR - Hyperion WRP to San Fernando Basin	**IPR Projects**
13. DPR - Tillman WRP to LA Reservoir/LAAFP 14. DPR - Tillman WRP to LADWP distribution system 15. DPR - LA/Glendale (LAG) to Headworks Reservoir 16. DPR - Hyperion WRP to LADWP distribution system 17. DPR - Hyperion WRP to an open reservoir + SWTP 18. DPR - Hyperion WRP to LA Reservoir/LAAFP	**DPR Projects**
19. Groundwater expansion to full water rights outside the San Fernando Basin 20. East-West Valley Interceptor Sewer 21. Increase Recycled Water demand beyond 2015 UWMP 22. Rancho Park Recycled Water Satellite Plant 23. Ocean desalination 24. Brackish groundwater desalination	**Other Projects**

Potential Projects - IPR



8. Tillman WRP to San Fernando Basin (Phase 2)

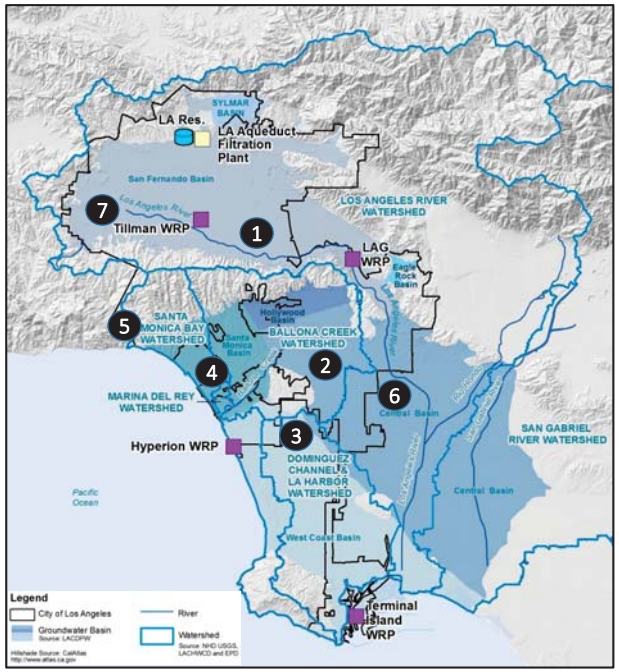
9. Hyperion WRP to West Coast/Central Basin Injection wells

10. Hyperion WRP to Central Basin/Spreading Basins

11. Hyperion WRP to other regional system

12. Hyperion WRP to San Fernando Basin

Potential Projects - Stormwater



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2. Distributed Stormwater – Ballona Creek Watershed

3. Distributed Stormwater – Dominguez Channel Watershed

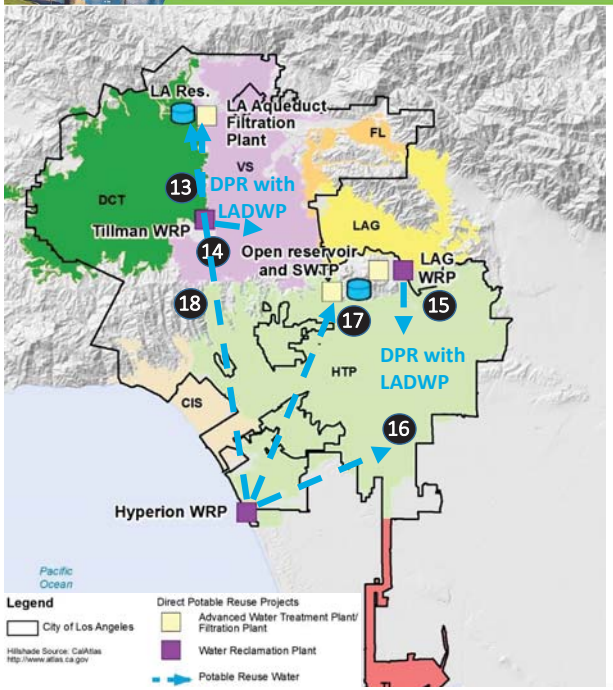
4. Distributed Stormwater – Santa Monica Bay/Marina del Rey Watersheds

5. Distributed Stormwater – Low Flow Diversions

6. LA River storage with recharge in LA Forebay

7. LA River storage with rubber dams

Potential Projects - DPR



13. Tillman WRP to LA Reservoir/LAAFP

14. Tillman WRP to LADWP distribution system

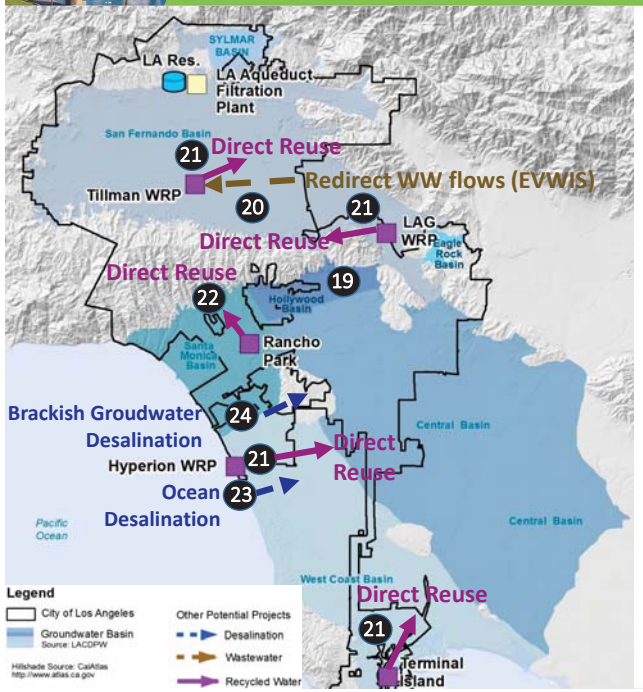
15. LA/Glendale (LAG) to Headworks Reservoir

16. Hyperion WRP to LADWP distribution system

17. Hyperion WRP to an open reservoir + SWTP

18. Hyperion WRP to LA Reservoir/LAAFP

Potential Projects - Other



19. Groundwater expansion to full water rights outside the San Fernando Basin

20. East-West Valley Interceptor Sewer

21. Increase Recycled Water demand beyond 2015 UWMP

22. Rancho Park Recycled Water Satellite Plant

23. Ocean desalination

24. Brackish groundwater desalination

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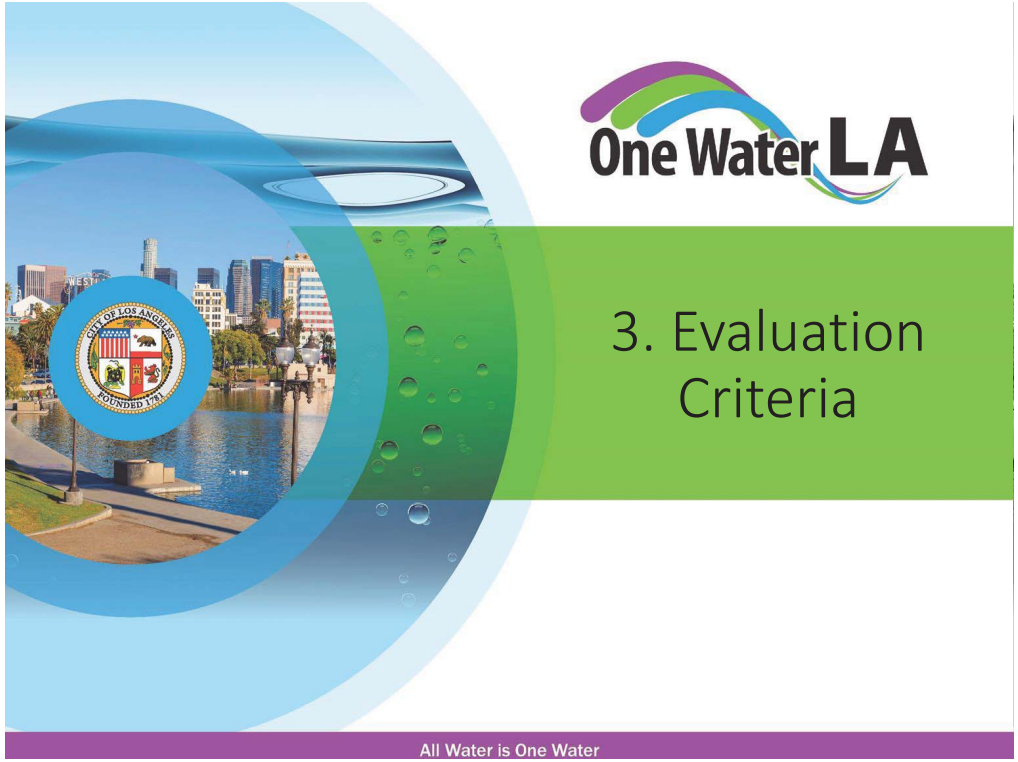

One Water LA

3. Evaluation Criteria

All Water is One Water

Q&A: Project List

Foundational Projects

Potential Projects

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Final Evaluation Criteria

Category	Criteria
Economic	Unit Cost
Economic	Financial Benefits
Economic	Project Funding Mechanism
Economic	Likelihood to obtain Outside Funding
Resiliency	Drought Resiliency
Resiliency	Earthquake Resiliency
Resiliency	Flood Risk Mitigation
Resiliency	Local Supply Benefit
Resiliency	Energy Impact/Greenhouse Gas Emissions
Implementation	Constructability
Implementation	Institutional Collaboration
Implementation	Regulatory Approval
Implementation	Public Engagement
Implementation	Property Ownership
Implementation	Public & Political Support
Environmental	Environmental Justice
Environmental	Air Quality Improvement
Environmental	Open/Natural Space & Recreational Benefit
Environmental	Stormwater Quality
Environmental	Ecological Benefit/Habitat Restoration

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Project Evaluation Criteria

ECONOMIC CATEGORY

Criteria	Definition
Unit cost	Evaluate the unit cost of water supply for the project. It is calculated as: $Unit\ Cost = \frac{Annualized\ Capital\ Cost + Annual\ O\&M\ Cost}{Annual\ Net\ Yield}$, where $Annual\ Net\ Yield = Total\ Annual\ Yield - Annual\ Demand\ Created$. The calculation assumes inflation rates, interest rates, and life expectancies.
Financial Benefits	Evaluate financial merits and impacts should the Project be implemented, or consequences if the Project is not implemented, considering opportunity cost, revenue increases, avoidance of fees, and avoidance of major repairs/damage.
Project Funding Mechanism	Evaluate the opportunity for inter-departmental cost-sharing based on benefits that are aligned with departmental missions and the ability for the Project to be funded using existing funding mechanisms or structures, the ease of creating the new funding mechanisms, and the ability to gain sufficient revenue from those mechanisms for funding the Project. New funding mechanisms would include items such as creating a new type of charge (e.g. a stormwater fee, where this is not one already). Existing structures include existing rates or fees.
Likelihood to obtain Outside Funding	Evaluate the ability for the project to receive outside project funding and the portion of the project that could receive funding. Outside funding is defined as funds from State, Federal, or community grant or low-interest loan programs.

Please see your handout

Project Evaluation Criteria

IMPLEMENTATION CATEGORY

Criteria	Definition
Constructability	Evaluate the ease of constructing the project. Types of project components are considered wells, pipelines, treatment plants, green infrastructure, habitat restoration, wetlands etc. (Does not include Property Ownership).
Institutional Collaboration	Opportunity for inter-departmental collaboration on the Project based on benefits that are aligned with departmental missions measured by the ability to increase coordination between City departments, partners, stakeholders and outside agencies (such as Metropolitan Water District [MWD] or METRO).
Regulatory Approval	Evaluate the ease of obtaining regulatory approval for the Project. Considers whether existing regulatory framework exists for approving the project.
Public Engagement	Evaluate the opportunity for the public to be involved in project planning and implementation, and after project completion through ongoing education programs, and volunteer opportunities.
Property Ownership	Evaluate the ease to acquire necessary parcels/easements, focusing on large project components that do not include assets in public right-of-way.
Public & Political Support	Level of City Hall, City Council, Commissioners, Mayor's Office, non-governmental organizations (NGOs), Neighborhood Councils, other governmental agencies, and the public or other political stakeholders support, acceptance and willingness to embrace and be involved in the Project.

Please see your handout

Project Evaluation Criteria

RESILIENCY CATEGORY

Criteria	Definition
Drought Resiliency	Evaluate the ability for a project to provide water during a drought. This will be calculated by a ratio between normal and dry year supplies as follows: $Drought\ resiliency\ ratio = \frac{Volume\ of\ water\ available\ in\ a\ dry\ year}{Volume\ of\ water\ available\ in\ a\ normal\ year}$
Earthquake Resiliency	Evaluate the ability for the project to withstand earthquakes, based on the ability for the project to deliver water after a major earthquake and the chance that the project would still operate after a major earthquake.
Flood Risk Mitigation	Evaluate the ability for the project to bring flood protection benefits and/or reduce existing flood risk.
Local supply benefit	Evaluate the ability for the project to deliver local supplies to the City.
Energy Impact/Greenhouse Gas Emissions	Evaluate power consumption, defined as amount of power used per unit of water processed (kWh per acre-ft of water). The total annual energy consumption per unit of supply is the metric for greenhouse gas emissions and climate change impacts.

Please see your handout

Project Evaluation Criteria

ENVIRONMENTAL CATEGORY

Criteria	Definition
Environmental Justice	The fair treatment and meaningful involvement of all people in the development and implementation of a project (including the enforcement of environmental laws, regulations and policies) with the goal of delivering specific benefits to previously underserved communities.
Air Quality Improvement	Degree of potential benefit or damage to air quality.
Open/Natural Space and Recreational Benefit	Level to which the project creates locations of open/natural space, reducing heat-island impacts, creating recreational areas and ecosystem function and connectivity. Defined as the amount of open/natural space created/destroyed. Paved open space is not considered beneficial. Turf is limited to recreational benefits.
Stormwater Quality	The goal is assessing the quality of stormwater reaching rivers and oceans. This will be calculated by stormwater volume reduction.
Ecological Benefit/Habitat Restoration	Degree of the Projects potential benefit or damage to surrounding or downstream ecosystems, flora, and fauna.

Please see your handout

Evaluation Criteria Exercise

Category	Criteria
Economic	Unit Cost
Economic	Financial Benefits
Economic	Project Funding Mechanism
Economic	Likelihood to obtain Outside Funding
Resiliency	Drought Resiliency
Resiliency	Earthquake Resiliency
Resiliency	Flood Risk Mitigation
Resiliency	Local Supply Benefit
Resiliency	Energy Impact/Greenhouse Gas Emissions
Implementation	Constructability
Implementation	Institutional Collaboration
Implementation	Regulatory Approval
Implementation	Public Engagement
Implementation	Property Ownership
Implementation	Public & Political Support
Environmental	Environmental Justice
Environmental	Air Quality Improvement
Environmental	Open/Natural Space & Recreational Benefit
Environmental	Stormwater Quality
Environmental	Ecological Benefit/Habitat Restoration

Which criteria is most important to you?

Evaluation Criteria Exercise Wrap-Up

Category	Criteria
Economic	Unit Cost
Economic	Financial Benefits
Economic	Project Funding Mechanism
Economic	Likelihood to obtain Outside Funding
Resiliency	Drought Resiliency
Resiliency	Earthquake Resiliency
Resiliency	Flood Risk Mitigation
Resiliency	Local Supply Benefit
Resiliency	Energy Impact/Greenhouse Gas Emissions
Implementation	Constructability
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Implementation	Property Ownership
Implementation	Public & Political Support
Environmental	Environmental Justice
Environmental	Air Quality Improvement
Environmental	Open/Natural Space & Recreational Benefit
Environmental	Stormwater Quality
Environmental	Ecological Benefit/Habitat Restoration

Evaluation Criteria Exercise Instructions

Around the room you will see each criteria on the wall

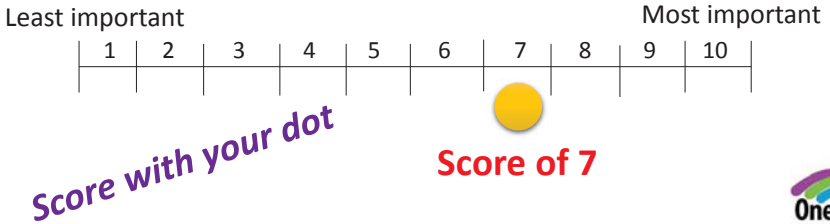
Category:	**ECONOMIC**
Criteria:	**Unit Cost**
Definition:	Evaluate the unit cost of water supply for the project. It is calculated as: $Unit\ Cost = \frac{Annualized\ \ Capital\ \ Cost + Annual\ \ O\&M\ Cost}{Annual\ \ Net\ Yield}$, where $Annual\ Net\ Yield = Total\ Annual\ Yield - Annual\ Demand\ Created.$ The calculation assumes inflation rates, interest rates, and life expectancies as listed in Table G.21 of TM5.1.

What You'll Need:

- Stickers
- Handout of Criteria Definitions

...and please direct questions to the One Water Team

Ask: On a scale of 1 to 10 how important is this criteria (10 being most important)?



4a. Portfolio Goals & Objectives

Goals

Identify the preferred portfolio/implementation strategy to achieve the One Water LA Objectives coupled with the Sustainability Plan targets

Objective

Define portfolio themes to test the sensitivity of projects and programs

Desired Outcome

A portfolio of projects/programs collectively achieve the objective with dynamic trigger-based implementation plans

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Portfolio Theme Brainstorm

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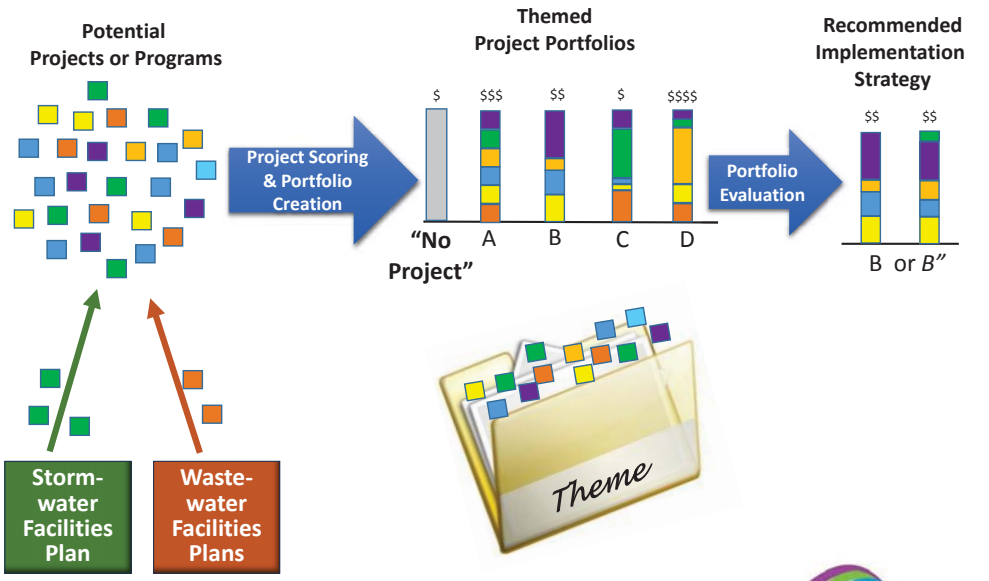
Portfolio Development & Evaluation



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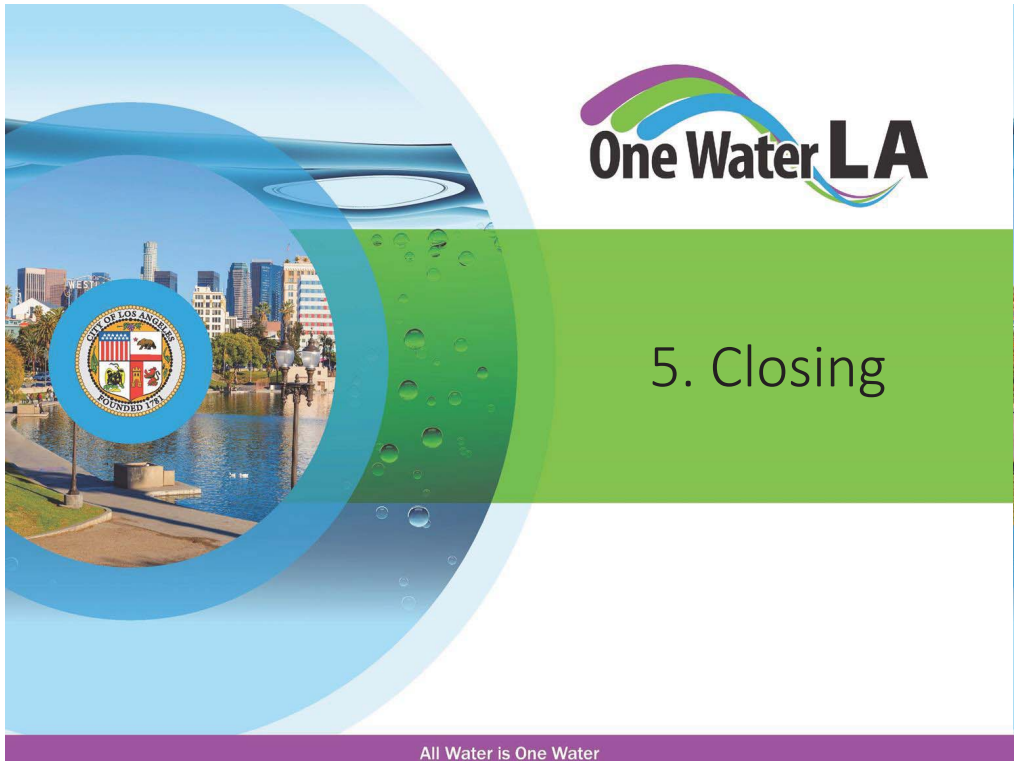

Outcomes of **One Water LA Decision Time (Part 1)**

Present an Overview of **Alternatives Analysis Process**

Present **Potential Projects** to meet 2040 Goals

Conduct **Evaluation Criteria Exercise**

Obtain Input on **Portfolio Themes**

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Decision Time Part 2 - Policy Brainstorm

Foundational Projects

Potential Projects

Short & Long Term Policies

Policies that support the implementation of One Water LA Plan projects

Examples:

- Institutionalizing processes for joint projects and cost-sharing
- Construction dewatering beneficial reuse

One Water LA Decision Time

Series of 3 Workshops

Part 1 (Today)

- Projects & Criteria
- Criteria Exercise
- Portfolio Themes

Part 2 (Early December)

- Long-term Policies Brainstorm
- Project Scoring Update
- Portfolio Evaluation Update

Part 3 (Early 2017)

- Long Term Policies Wrap-Up
- Implementation Strategies
- Wastewater & Stormwater Facilities Plans

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Decision Time Part 2 - Policy Brainstorm

Foundational Projects

Potential Projects

Short & Long-Term Policies

Wastewater Facility Plans Projects

Stormwater Facility Plan Projects

Plan Implementation

Upcoming Events

- **LADWP Integrated Resource Plan (Power)** – Be a part of LA's Clean Energy Future
  - Wednesday October 26 from 6-8 pm, LADWP Headquarters or Webcast
  - Wednesday November 2 from 6-8 pm, Workshop at Wilmington Senior Citizen Center, Wilmington
  - Thursday November 3 from 6-8 pm, Workshop at Pacoima Neighborhood City Hall, Pacoima
- Saturday October 29 – **Community Climate Action Summit**
  - 9 am – 6 pm in Santa Monica
- Wednesday November 16 – **LA County GIS Day Steering Committee**
  - 9 am – 3 pm in Downtown Los Angeles
- Thursday December 1 - **One Water LA Holiday Event**
  - 5:30-8:30 PM in Downtown Los Angeles (AON building)
- Early December – **One Water LA Stakeholder Workshop #5**
  - Date, time, and location TBD
- Early 2017 - **One Water LA Stakeholder Workshop #6**
  - Date, time, and location TBD

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Dec 1st One Water LA Holiday Event

Carollo Engineers will be hosting a **Holiday Celebration** in honor of **One Water LA** and the work done through this innovative project

December 1, 2016
5:30 PM – 8:30 PM

RSVP via email to:
LChavez@carollo.com

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PROJECTS BRAINSTORM WORKSHOP (11/18/16)

The following pages present the agenda, meeting summary and the presentation given at the Project Ideas Workshop held on November 18, 2016. The subsequent pages present several of the conceptual ideas collected from the Project Brainstorm workshop held November 18, 2016. The ideas include the following:

- Distributed greywater reuse plan for laundry (permit exempt) greywater systems
- Septic system retrofit to prevent pollution and reuse water
- San Fernando Great Streets - Calle Verdes
- Mar Vista Water - Untapped by LADWP

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One Water LA Plan Phase 2

Project/Program Concept Ideas Brainstorm Meeting

Agenda

Friday, November 18th, 2016, 10:00 am-12:00 pm

Location: Media Center, 2714 Media Center Drive, Los Angeles, 90065 (Training Rooms A & B)

Objectives:

1. Explain Level of Detail for Project/Programs
2. Gather your ideas verbally
3. Gather additional ideas with written template

Agenda

1.	**Introductions – Name & Organization (10 minutes)**	**10:00 - 10:10 am**
2.	**Meeting Objectives & Discussion Guidelines (5 minutes)**	**10:10 - 10:15 am**
3.	**Stormwater Definitions and Current Planning Efforts**	**10:15 - 10:20 am**
4.	**Present List of Current Project/Program Ideas (5 minutes)**	**10:20 - 10:25 am**
5.	**Review Project/Program Description Example (10 minutes)**	**10:25 - 10:30 am**
6.	**Brainstorm of New Ideas (85 minutes)**	**10:30 - 11:55 am**
7.	**Next Steps (5 minutes)**	**11:55 - 12:00 pm**
8.	**Meeting Close**	**12:00 pm**

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CITY OF LOS ANGELES
One Water LA
Project Ideas Workshop (Phase 2)
Wednesday, November 18, 2016 10:00 am -12:00 pm

Meeting Summary

This summary is not intended to be a transcription of the Project Ideas Workshop. This summary generally expresses the sentiment and information provided by those that attended.

Please refer to attachments for additional information regarding this summary.

INTRODUCTIONS:

Attendees were welcomed with opening remarks by Hampik Dekermenjian from CDM Smith and requested stakeholders to introduce themselves and their affiliation.

The meeting facilitator reviewed the agenda and meeting objectives. The workshop agenda was organized as follows:

1. Stormwater Definitions and Current Planning Efforts
2. Present List of OneWaterLA Project/Program Ideas
3. Review Project/Program Example and Template
4. Brainstorm of New Ideas
5. Next Steps

1. Stormwater Definitions and Current Planning Efforts

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 5 -10)

Stormwater Definition

Lenise Marrero from Los Angeles Bureau of Sanitation (LASAN) mentioned that the workshop was a result of the clarification about distributed stormwater projects as well as other projects. Stormwater definitions were discussed. *Distributed stormwater* definition is consistent with the EWMP definition. *Green streets* definition is consistent with the Stormwater Capture Plan (SWCMP). **LASAN Action Item - Refine Glossary of Terms and Acronyms on the One Water LA website.**

Current Planning Efforts

A list of LADWP and LASAN collaborative projects looking at Distributed Stormwater Capture Projects in the San Fernando Valley was presented. Policy ideas and example policy that support distributed project to provide context, focusing on ideas for Distributed Stormwater Projects was also presented.

2. Present List of OneWaterLA Project/Program Ideas

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 11 – 12)

A potential project and program concept list was presented. The projects were broken down into four categories: *Stormwater, IPR Projects, DPR Projects, and Other Projects.* Some projects are more specific than others, especially for the distributed stormwater projects. The focus of this meeting is to get more details on projects and programs.

3. Review Project/Program Example and Template

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 13 - 16). The project template presented does not necessarily apply to all project/programs/ideas. Some of the ideas will be more of a program.

General Comments:

- Major concern about sizing of IPR/DPR facilities was expressed, including concern of drought with water reduction and flow rates.
- A request was made for the team to consider the IRWMP OPTI project list to see what project opportunities may be in it. There are **1000s projects in the** IRWMP database. **LASAN Action Item - Look at IRWMP list for potential project ideas.**
- A suggestion was made to have a project example that is primarily water quality.
- Written ideas regarding policy ideas will be presented at the next stakeholder meeting. **LASAN Response - A list of policy ideas and suggested action will be shared at the next stakeholder workshop.**

4. Brainstorm of New Ideas

4.1. <u>Project Concepts Discussion</u>

a) *Debra Bloome*, Tree People: Programmatic perspective.
   - Advancing stormwater capture on a distributed level for single family residential (SFR) homes, same concept applies to other parcels.
   - Understand opportunity for single family homes city-wide. Need to address roadblocks to implementation. Finished Multi-Agency Collaborative report with LADWP, LACFD and LASAN which Identifies policies/plans needed.
   - Complex policies and regulations required/pre-requisites for building any other program.
   -

b) *Andy Lipkis*, Tree People:
   Two tools needed to support the program.
   - Programmatic Approach: Policies Ideas presented show that you are heading in the right direction. We can't afford a strategy that is focused on large programs that spends billions of dollars. For instance, EWMPs alone cost $30 Billion county-wide and annual O&M of $100 millions of dollars. We need a commitment to a programmatic level of implementation, that will save a lot of money, avoid reliance on imported water, and carbon footprint versus human

footprint. Currently, we choose what looks to be cheaper, imported water. Carbon based energy instead of human based energy. We should be considering the whole investment and considering the outcomes we need from Sustainable Development, Jobs. Have a program succeed/ability to train and support a workforce for these BMPs.

- Tools to make Multi Benefit Project happen. Tools including modeling Tools, cost Benefit/Sharing tools, and modeling results to support decisions. Tools to support the implementation. Potential long-term flows. Must be multi-purpose, multi-agency, and involve co-investment. Tools or vehicles to plan or finance to make a difference whether projects can be funded or not. Modeling tools to determine what can be captured at the residential and where our investment goes. Hold you accountable for investment. These tools are important so we can see the big picture implications.

c) *Hampik Dekermenjian,* CDM Smith
   - The guiding principles support what you've described, energy independent, and part of guiding principles.

d) *Ava Bobby* - Brown and Caldwell
   - Capture stormwater before it enters the collection facilities, store in underground tanks, treat water, and route. Use very large underground storage tanks and pump the stormwater to Wastewater Reclamation Plants for non-potable reuse.

e) *Christoper Mickining* - Mar Vista Community Council
   - Ancient springs on University High School, spring water goes into a storm drain as part of Joint LASAN/LADWP project. Tongva Tribe has water rights for the spring and in conjunction with LAUSD and is looking for help. Currently in very poor condition. Other springs on the site. Use that water instead of down storm drain, infiltrate.
   - Sawtelle/Sepulveda army flood control channel. Ended up in Ballona Creek, Flood control channel in Mar Vista has dry and wet weather water (stormwater) flows. Could be pumped up into water the medians in Venice Blvd and other areas.
   - Adjacent to the flood control channel, 2 wells (Charnock Wells/SM City, was contaminated with MTBE and pumping water to City mixing facility w/ Met water). Golden State Water Company pumping and that water goes to Culver City. West LA is unadjudicated and be adjudicated and take over Golden State Water company well and feed west LA with water.
   - Further downstream from Mar Vista to Ballona Creek dry/wet and could be part of purple pipe system.

f) Carolyn Casavan - Casavan Consulting
   - Springs in Hillsides behind Sherman oaks with water continuously running down the streets. Water could be captured and put to beneficial use.
   - Distributed stormwater – Plan is currently looking at Low Flow Diversions. Should also consider storing High Flow Diversions offline and then diverting to treatment plants. Already have storm drains/collect water from storm drains for eventually DPR.
   - Look at adding medians and parkletts (mini-parks) for stormwater capture, and design for stormwater capture. Policy and programs

g) Scotty Probert - FOLAR -
   - 2007 Master Plan – Make an effort to balance needs and consider possibility of recreational (Rec 1) uses of the River.

h) Jill Sourial -The Nature Conservancy
   - Habitat Enhancement Site for the LA River. We need consensus around water. TNC is completing a flow scenarios study.

i) DeAndre Valencia – BIA
   - Stormwater Fee concerns the property owners. When considering fees, don't further squeeze developers with in-lieu fees.

j) Kevin Fellows – Parsons Brinkeroff
   - Reinforced the need for multi-agency cooperation and to incorporate green infrastructure elements into Measure A and Measure M projects.

k) Ken Murray
   - Sand Dams & Check Dams are similar types of structures (1-5 ft)
   - Sand Dams - permeable to slow water
   - Check Dams - impermeable to catch water

l) Natalia Gaerlan – Trust for Public Land
   Be sure to include Green Alleys in Green Streets programs and consider parks as opportunities.

m) Paul Herzog - Surfrider Foundation
   - Barrier is a lack of standards on rebate programs. Need to make sure money is invested in projects that meet watershed objectives. Every site is a potential solution.
   - Modeling from One Water needs to account for water held in soil.
   - Need job training as part of programs and policies.

n) Steve Williams – Surfrider Foundation
   - Worked for two years on LADWP Community Partnership Grant for Ocean Friendly Gardens and nearly every participant utilized the turf rebate program.
   - Encourage neighborhoods to get together to trigger additional incentives like large trash bins and mulch delivery.

o) Ty Teserra - Greywater Action
   - Greywater Incentive plan - distributed grey water reuse for laundry/incentive program for residential scale (save 5 mg per year)
   - Commercial scale composting toilets – ease the permitting process
   - septic system retrofit to prevent pollution and reuse water/black water reuse using active aeration such as sludge hammer system

p) *Guangu Wang* - Santa Monica Bay Restoration Commission
   - Emphasizing programmatic and policy. More critical to provide program, policy and incentive ideas than more project ideas. Rudimentary knowledge of EWMP.
   - Program that incentivizes commercial property owners and school districts to implement SW capture and recharge. An example is Home Depot parking lot in Culver City.
   - In-line infiltration along the storm drains that are owned by the City or County, both in the pipes and the public ROW adjacent to storm drains

q) *Larry Tudor* - Rio Tinto
   - Concept of using their stormwater to feed the Terminal Island treatment plant. One constraint is the capacity of Terminal Island.
   - Utilize easement that connects the Port with the Rest of LA (ease of construction).

- Green highway concept along the 405 fwy. Hyperion may have a need to send water in the future.

r) *Brenna* Norton- Food & Water Watch
- Neighborhood council investment in local and regional water supplies reducing reliance on imported water.

s) *Meredith McCarthy* - Heal the Bay Director of Programs and Policies.
- Grateful for the event itself
- LADWP Owens River tour, when you built great infrastructure need to protect green infrastructure, spent $1B on watering Owen's Lake. Vulnerability of the unknown, need for super flexible local projects should echo loud across the room.
- Spending $2 billion to pump water
- Spent the last year doing water education/literacy across the region. Behavioral changes need to come first. "*Know the flow*" water literacy program, down to 5th graders. People aren't afraid of DPR, aren't afraid of the fixes. Communities are ready for this, they read the paper, and they understand what is happening.

t) *Conner Everts,* Southern California Watershed Alliance
- Thanks for opportunity for all of us to focus on projects.
- West Basin is doing Direct Potable Reuse gathering today
- Santa Monica is working with Beverly Hills and LADWP to solve Groundwater issues
- Groundwater Sustainability Act - Santa Monica is working with Beverly Hills and Los Angeles across jurisdictions on the GSA. That process should involve One Water and public input.
- Colorado River, and San Luis and Oroville reservoirs are being drained due to drought.
- Would like to see East Valley Recycling Facility completed.
- LA River flows should go dry in summer time. Distinguish those, Look at on a watershed approach in. Investments in Mono Lake and Community-based organizations for conservation resulted in thirty percent offset so we should consider doing again. Invest in areas with Environmental Justice needs for programs that result in jobs and economic development.

u) *Azita Yazdani - Exergy*
- Focused on decentralized systems.
- Decentralized system, consider what the future will look like.
- Trend is away from putting piping in the system and technologies. CA building code is being revised.
- Allow recycled water inside buildings and homes. In the coming years to see that in homes/indoor water use. Building, reuse water indoors. Big strategy of big plants and recycling.

v) *Melanie Winters* – The River Project
- A project/exercise would be great that acknowledges the prospect of decentralized systems as the priority. Reframe the discussion so that decentralized water treatment system and the benefits of decentralized systems (i.e., more cost effective) are considered first.
- Revisions to policies and ordinances to facilitate new way of doing things. What we are doing here, bouncing off of what we have done before. Take the best of what is in the existing plans and build off of that. What can we do differently from what we have always done?
- Packaged plants being considered don't go far enough. This effort is expensive.
- We need to take the best part of EWMPs, Stormwater Capture Master Plan, etc. and then take those to the next level.
- City staff need be recruited from a broader and more diverse educational background. New hires need training in new trades. In general, smaller the project is more cost effective in the long-term result.

- The reclaimed and sewage side, we know what GHG is on large projects. We have to facilitate in-building reuse, LADWP and LASAN pushing against that. Distributed was such a general concept. Distributed needs to be the theme for all projects – it is just a question of scale.
- We need to first acknowledge what distributed projects mean at all levels.

4.2. Policy Ideas

a) Waste recycling arena set up this hierarchy of best use. Setting up a hierarchy of best use of water would be helpful in decision making. Using recycled water within a building versus for irrigation is an example of the best use of water.
b) Measure A - Water was originally used very loosely in the definition but many in the room worked to make multi-benefit approach the backbone. Definitions in that ordinance are water-ready but Open Space District will now write the program for grant funding. We needs to establish goals for program that every park project should be multi-benefit and be able to use stormwater or recycled water. We all need to work with Open Space District during grant guideline development.
c) Create a stormwater policy that ranks distributed project on the top before you do the large projects. Develop an ordinance, first at the City level, then involve the County Public Health, then the State Level. Let's start with the opportunities of distributed stormwater from existing plans including the Stormwater Capture Master Plan, EWMPs, and the Basin Conservation Study, and then move backward. What policies do we need to make decentralized happen first?
d) How does this tie into the plumbing code changes and other efforts at the State Level? Can we have this better coordinated? Example of San Francisco allowing decentralized reuse in buildings.
   - Response - There are policies in place for recycled water at the State level, and ordinance and policies that match will be developed to be similar to those.
e) There is a bias towards minimizing cost over short-term due to planning horizon. Minimize cost by leveraging existing infrastructure. Look at very long-term planning horizon. 200 years from now, existing infrastructure will not be here. Multiple lifecycles. How do we save money today?
f) Save money by recycling water onsite.
g) The state has gotten in the way of distributed projects because of concerns about defunding the centralized network. Policy objective is to create mechanisms to fund the transition. Whether it's the highways or electrical systems. Prices are exploding to maintain the old systems. Need a funding strategy/policy and mechanism to fund a transition to decentralized. Need new policy from the start. Unless address that we will be at war with the old system.
h) Distributed systems - one contractor installing/study/design etc. Studies are needed/charting new territory. A study to show how better trained contractors result in increased or cleaner water could be a project.
i) Training as a project and guided by scientific fields. As we are putting together our plans/programs and policies. Engineering is often considered above science. There is a need to elevate involvement of science in its function, specifically related to sciences of our natural world. This needs to be incorporated in this plan.
j) Implement a checklist for every project that is being implemented that shows if a project improves, hurts, or has no impact our natural water resource. The water issue needs to be elevated into our elected official decision making in a transparent manner.
k) Training and diversifying the workforce. Us and engineering and LADWP. Different universities, diversifying workforce, mostly environmental. Agree on the transparency and the checklist is in order.
l) Look at merging the functions of LASAN and LADWP.

m) *Measure M*: Sidewalk settlement $30M/year for 30 years. This puts a lot of trees at risk, that consume water. OWLA provides an opportunity to co-fund stormwater curbcuts. We have opportunities to co-fund similar projects and meeting multiple goals with the same projects. LASAN's interest in this approach will accelerate this approach.
n) Prioritize the sidewalk program, the cost benefits of focusing on "black streets" make this CB skyrocket
o) Look at the Cost/Benefit analysis for Living Streets. When you replace a street and the sidewalk, there are greater benefits. Develop a map layer to prioritize projects.
p) Priorities should be public projects, standards, and rebates. Different sectors and different types of infrastructure and properties. City needs a strategy for market transformation that involves: 1) educating the consumer about benefits of landscape transformation in including value increases, 2) Training a workforce, 3) regulations that promote and don't hinder.
q) Refer to website for one water LA - how to shift the market to landscaping. Need show these needs and that there is a commitment from water sector to transform the market.
r) Model water landscape ordinance. Don't require pulling a permit. We are not creating enough Triggers. From a transition point, look at existing infrastructure, haven't gotten the feeling of commitment of funding toward Market Transformation/ water supply silo. No incentive for integration.
s) Conservation is exceeding the City's expectations. This hurts revenue, so the City doesn't want this. Customers are upset that they still pay the same even though they are using less water. It is critical to put a value on that, so that this value can be moved around (e.g. not paying a stormwater fee). There needs to be collaboration between agencies to avoid competing interests.
t) Stormwater Quality strategies/projects involving toxics specific/water quality specific such as metals (Electrical Vehicles), Nutrients - (less fertilizer), trash (Increase trashcans to avoid trash ending up in the storm drain).
u) GIS parkways layers / sidewalk / parkway cuts / curb cuts / support street tree shade / parkway layers. Mulch is critical to turf rebate, every green infrastructure.
v) Look at 5-years on the Water LA program. ED5 not addressed.
w) Mulch is required for everything – We need better quality and more availability. Free give aways.

5. Next Steps & Closing – Lenise Marrero (LASAN), Hampik Dekermenjian (CDM Smith)

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 19-20)

Next Steps

- Submit additional ideas in writing by 11/30 (see template)
- Tabulate & Review New Ideas from Brainstorm Session
- Provide Feedback to Stakeholder Group
- Prepare New or Update Concept Descriptions
- Present Findings to Stakeholder Group

Upcoming meetings

- Next Advisory Group meeting on 12/6

- Next stakeholder meeting on 12/13 (focus on policy ideas)
- Future stakeholder meeting(s) in early 2017

ADDITIONAL ATTACHMENTS

- One Water LA Project Ideas Workshop PowerPoint Presentation

Project/Program Concept Ideas Brainstorm with Stakeholders

November 18, 2016

All Water is One Water

Meeting Agenda

1.	Introductions – Name & Organization	10:00 am
2.	Meeting Objectives & Discussion Guidelines	10:10 am
3.	Stormwater Definitions & Current Planning Efforts	10:15 am
4.	Present List of OneWaterLA Project/Program Ideas	10:20 am
5.	Review Project/Program Example & Template	10:25 am
6.	Brainstorm of New Ideas	10:30 am
7.	Next Steps	11:55 am
8.	Meeting Close	12:00 pm

Meeting Objectives

Meeting Objectives

- Explain Level of Detail for Project/Programs
- Gather your ideas verbally
- Gather additional ideas with written template

Discussion Guidelines

1. Gathering of Ideas **only**
2. Focus on Project/Program Ideas (Next stakeholder meeting on 12/13 is dedicated to discussing policy ideas)
3. Focus on **new** project/program concept ideas
4. Share 1 to 2 ideas
5. Say "**pass**" if you prefer not to share
6. We will not have time to discuss the ideas in detail
7. Additional ideas welcome in writing (see template)
8. Roundtable format gives everyone an opportunity to share their idea(s)
9. Keep an open mind
10. Listen to others

Stormwater Definitions

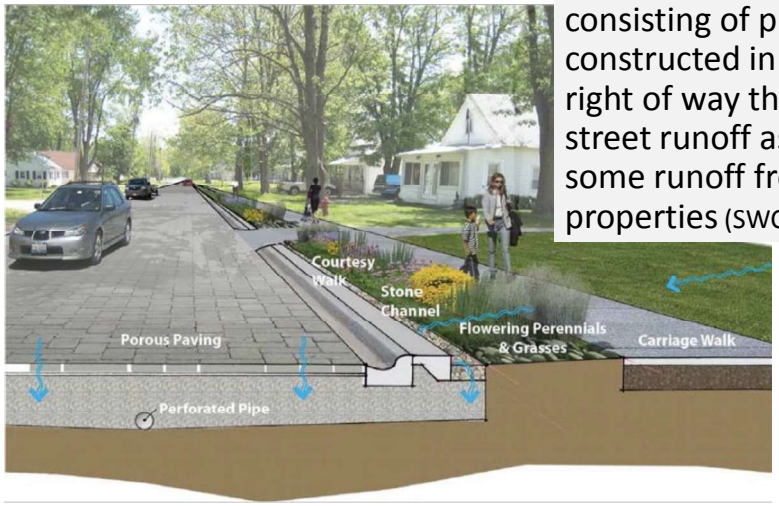
All Water is One Water

Definition: Distributed Projects

Any stormwater captured prior to collection in the storm drain, which includes green streets and parcel level BMPs such as cisterns, rain gardens, and bioswales (LASAN definition).

Definition: Green Streets

Distributed stormwater capture program consisting of projects constructed in the street right of way that capture street runoff as well as some runoff from adjacent properties (SWCMP definition).



Current Planning Efforts

All Water is One Water

Stormwater Capture Projects

LADWP and LASAN are collaboratively looking at the following Distrubuted Stormwater Capture Projects in the San Fernando Valley:

- Sheldon Green Street Project (I-5 to Tujunga Spreading Grounds)
- Glenoaks-Nettleton Median Stormwater Capture Project (SWCP)
- Victory-Goodland Median SWCMP
- Saticoy Street SWCMP
- Lankershim Blvd SWCMP
- San Fernando Gardens SWCMP
- Whiteman Airport (Concept Report in Progress)
- North Hollywood Recreation Center (Concept Report in Progress)

Policy Ideas

Example policy ideas that support distributed projects

- Address policy, permit process, and current standard plan requirements to remove barriers and simplify process for installing parkway swales and other stormwater BMPs.
- Create a vehicle that allows shared operation and maintenance duties between public/private entities for stormwater BMPs.
- Develop a Stormwater Fee Discount or credit program for property retrofits (include schools, industrial, commercial, etc.)
- Create a "Percent for Green" fund that supports construction of Green Street facilities. Dedicate a minimum percent for green infrastructure Community Grant Project.
- Develop design guidance for on-site infiltration and direct use projects.
- Maximize use of City owned property for Stormwater capture retrofits.

One Water LA

One Water LA Project/Program Concepts

All Water is One Water

Potential Project/Program Concepts List

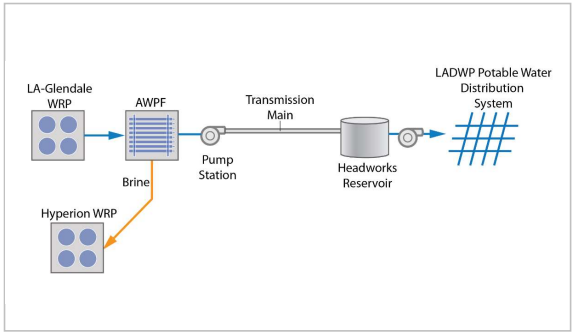
1. Distributed BMPs & Green Streets – Upper Los Angeles River Watershed 2. Distributed BMPs & Green Streets – Ballona Creek Watershed 3. Distributed BMPs & Green Streets – Dominguez Channel Watershed 4. Distributed BMPs & Green Streets – Santa Monica Bay/Marina del Rey Watersheds 5. Distributed Stormwater – Low Flow Diversions 6. LA River Recharge into LA Forebay	**Stormwater**
7. IPR – Tillman WRP to San Fernando Basin Injection wells 8. IPR – Hyperion WRP to West Coast Basin/Central Basin Injection wells 9. IPR – Hyperion WRP to Central Basin/Spreading Basins 10.IPR – Hyperion WRP to other regional system 11.IPR – Hyperion WRP to San Fernando Basin Injection wells	**IPR Projects**
12.DPR – Tillman WRP to LA Reservoir/LAAFP 13.DPR – Tillman WRP to LADWP distribution system 14.DPR – LA/Glendale (LAG) to Headworks Reservoir 15.DPR – Hyperion WRP to LADWP distribution system 16.DPR – Hyperion WRP to open reservoir + SWTP 17.DPR – Hyperion WRP to LA Reservoir/LAAFP	**DPR Projects**
18.East-West Valley Interceptor Sewer 19.Non potable reuse beyond 2015 UWMP 20.Rancho Park Recycled Water Satellite Plant 21.Ocean desalination	**Other Projects**

Conceptual Project/Program Description Examples

All Water is One Water

DPR Option 14 – LA/Glendale WRP to Headworks Reservoir

Description: Treat LA/Glendale WRP effluent with Advanced Water Purification Facility (AWPF) and pump water directly into the LADWP distribution system at Headworks Reservoir.



Key Concept Components:

- 1.6 MG equalization storage
- 11,000 AFY (10 mgd) AWPF (located near headworks reservoir or LAG)
- 500 hp pump station
- 4 miles of 30-inch diameter transmission pipeline
- Brine disposal is assumed to utilize the existing Hyperion outfall (no facilities included)
- Land acquisition cost not included

Partners:

LASAN
LADWP
RAP
Caltrans
LADOT
METRO

Yield: 11,000 AFY (10 mgd)

Normal Year: 11,000 AFY
Wet Year: 11,000 AFY
Dry Year: 11,000 AFY

DPR Option 14 – LA/Glendale WRP to Headworks Reservoir

Challenges and Considerations:

- DPR regulations
- Construction challenges: Pipeline construction will have to cross under the I-5 in vicinity of Griffith Park.
- Public Acceptance
- Permitting
- City of Glendale has rights to approximately 50 percent of the flow (assume 11,000 AFY/10 mgd)
- Impacts to LA River flows (assume 0 mgd per IRP)
- Potential reduction of wastewater flows due to water conservation and/or greywater systems

Estimated Cost:

Capital: $280 - $370 million
O&M: $5 - $7 million/yr
Unit: $1,600 – 2,200/AF

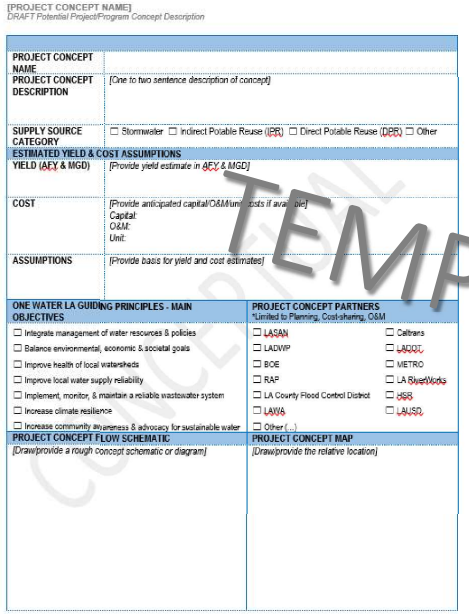
Timeline:

2035 - 2040

Triggers:

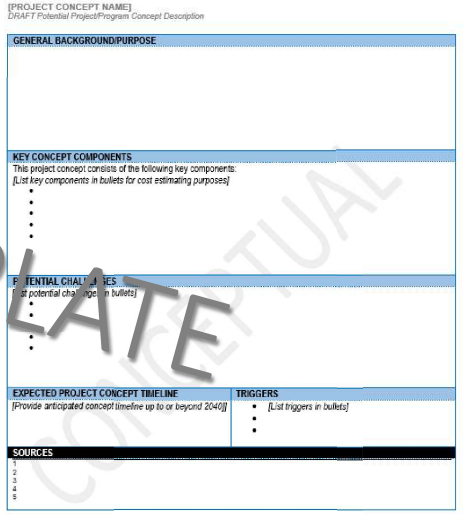
- DPR regulations
- LA River minimum flow requirements

Project/Program Concept Template


[PROJECT CONCEPT NAME]
DRAFT Potential Project/Program Concept Description

PROJECT CONCEPT NAME	
PROJECT CONCEPT DESCRIPTION	[One to two sentence description of concept]
SUPPLY SOURCE CATEGORY	☐ Stormwater ☐ Indirect Potable Reuse (IPR) ☐ Direct Potable Reuse (DPR) ☐ Other
ESTIMATED YIELD & COST ASSUMPTIONS	
YIELD (AFY & MGD)	[Provide yield estimate in AFY & MGD]
COST	[Provide anticipated capital/O&M/unit costs if available] Capital: O&M: Unit:
ASSUMPTIONS	[Provide basis for yield and cost estimates]

ONE WATER LA GUIDING PRINCIPLES - MAIN OBJECTIVES	PROJECT CONCEPT PARTNERS *Limited to Planning, Cost-sharing, O&M	
☐ Integrate management of water resources & policies	☐ LASAN	☐ Caltrans
☐ Balance environmental, economic & societal goals	☐ LADWP	☐ LADOT
☐ Improve health of local watersheds	☐ BOE	☐ METRO
☐ Improve local water supply reliability	☐ RAP	☐ LA River Corps
☐ Implement, monitor, & maintain a reliable wastewater system	☐ LA County Flood Control District	☐ HSR
☐ Increase climate resilience	☐ LAWA	☐ LAUSD
☐ Increase community awareness & advocacy for sustainable water	☐ Other (...)	
PROJECT CONCEPT FLOW SCHEMATIC	PROJECT CONCEPT MAP	
[Draw/provide a rough concept schematic or diagram]	[Draw/provide the relative location]	


[PROJECT CONCEPT NAME]
DRAFT Potential Project/Program Concept Description

GENERAL BACKGROUND/PURPOSE

KEY CONCEPT COMPONENTS
This project concept consists of the following key components:
[List key components in bullets for cost estimating purposes]

POTENTIAL CHALLENGES
[List potential challenges in bullets]

EXPECTED PROJECT CONCEPT TIMELINE	TRIGGERS
[Provide anticipated concept timeline up to or beyond 2040]	[List triggers in bullets]

SOURCES

TEMPLATE

CONCEPTUAL

CONCEPTUAL

Project/Program Ideas Brainstorm

New Ideas suggested at Stakeholder Workshop (10/26)

- Stormwater capture/recharge at LAUSD school sites
- IPR – LA Glendale WRP to San Fernando Basin
- IPR/DPR – LAG/HWRP to Silverlake Reservoir
- DPR – Hyperion WRP to other regional system
- Decentralized Satellite Plant Program to increase NPR
- Atmospheric Water Generation
- **OTHER??????**

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Next Steps

Next Steps

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4. Prepare New or Update Concept Descriptions
5. Present Findings to Stakeholder Group

Upcoming meetings

1. Next Advisory Group meeting on 12/6
2. Next stakeholder meeting on 12/13 (focus on policy ideas)
3. Future stakeholder meeting(s) in early 2017

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Distributed greywater reuse plan for laundry (permit exempt) greywater systems

DRAFT Potential Project/Program Concept Description

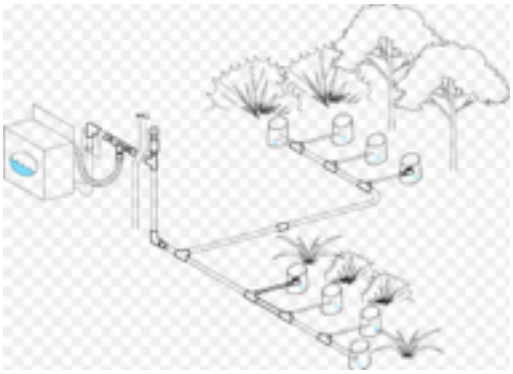
PROJECT CONCEPT NAME	**Distributed greywater reuse plan for laundry (permit exempt) greywater systems**
PROJECT CONCEPT DESCRIPTION	Incentive residential greywater systems for 500 laundry greywater systems to collectively reuse 5 MGY of water.
SUPPLY SOURCE CATEGORY	☐ Stormwater ☐ Indirect Potable Reuse (IPR) ☐ Direct Potable Reuse (DPR) x Other
ESTIMATED YIELD & COST ASSUMPTIONS	
YIELD (AFY & MGD)	*~14,000 GPD* *~15 AFY*
COST	*Education program: $600 per class (for 20+ people), 25 classes: $15,000* *Incentive: $85/system Total: $42,500*
ASSUMPTIONS	*10,000 gpy savings per system*

ONE WATER LA GUIDING PRINCIPLES - MAIN OBJECTIVES	**PROJECT CONCEPT PARTNERS** *Limited to Planning, Cost-sharing, O&M	
☐ Integrate management of water resources & policies	x LASAN	☐ Caltrans
☐ Balance environmental, economic & societal goals	x LADWP	☐ LADOT
x Improve health of local watersheds	☐ BOE	☐ METRO
x Improve local water supply reliability	☐ RAP	☐ LA RiverWorks
x Implement, monitor, & maintain a reliable wastewater system	☐ LA County Flood Control District	☐ HSR
x Increase climate resilience	☐ LAWA	☐ LAUSD
x Increase community awareness & advocacy for sustainable water	☐ Other (…)	

PROJECT CONCEPT FLOW SCHEMATIC	**PROJECT CONCEPT MAP**

Distributed greywater reuse plan for laundry (permit exempt) greywater systems

DRAFT Potential Project/Program Concept Description



[Draw/provide the relative location]

Any one or two family dwelling with a suitable landscape in Los Angeles

GENERAL BACKGROUND/PURPOSE

Residential greywater reuse for landscape irrigation offers a water saving and proactive option for people who have already adopted water-efficient fixtures and appliances. With proper education and design, these simple greywater systems can save around 10,000 gallons a year, which translates to typically more than 20% reduction in use.

Residents need education and incentives to uptake this existing technology. The laundry-to-landscape system does not require permits and is a great type of system to incentivize due to its low cost and lack of permits required.

KEY CONCEPT COMPONENTS

This project concept consists of the following key components:
[List key components in bullets for cost estimating purposes]

- ***Design education program***
- ***Work with local irrigation stores to carry the necessary parts***
- ***Plan and conduct outreach for workshops***
-
-

POTENTIAL CHALLENGES

[List potential challenges in bullets]

- ***Continued enthusiasm from the public for greywater systems in case of a few rainy years.***
-
-
-

EXPECTED PROJECT CONCEPT TIMELINE	TRIGGERS

Distributed greywater reuse plan for laundry (permit exempt) greywater systems

DRAFT Potential Project/Program Concept Description

[Provide anticipated concept timeline up to or beyond 2040]] 2017 Develop program 2018-2040 Implement program, with targets of 50 systems per year.	• *[List triggers in bullets]* • •

SOURCES

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Septic system retrofit to prevent pollution and reuse water

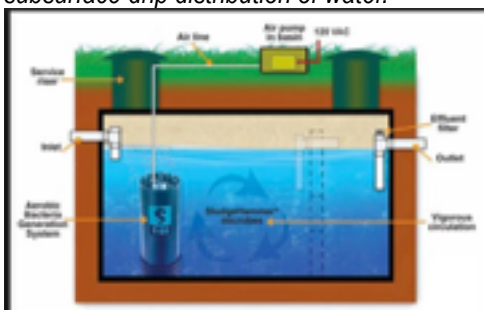
DRAFT Potential Project/Program Concept Description

PROJECT CONCEPT NAME	**Septic system retrofit to prevent pollution and reuse water**
PROJECT CONCEPT DESCRIPTION	*Retrofit existing septics in Los Angeles with blackwater reuse systems, (aerated treatment system, such as SludgeHammer), for subsurface infiltration that provides moisture for plants and prevents groundwater pollution from failing septics. Create a permitting pathway and incentives for residential systems.*
SUPPLY SOURCE CATEGORY	☐ Stormwater ☐ Indirect Potable Reuse (IPR) ☐ Direct Potable Reuse (DPR) x Other
ESTIMATED YIELD & COST ASSUMPTIONS	
YIELD (AFY & MGD)	*Depends on number of installation. First step is to create a permit pathway and demonstration project.*
COST	*$6,000- $15,000 per system depending on site conditions. Cost could be lowered with more local installers.*
ASSUMPTIONS	*[Provide basis for yield and cost estimates]* Personal communication with Topanga septic company, who installs these types of systems. Cost could be lower with a company located closer to the sites.

ONE WATER LA GUIDING PRINCIPLES - MAIN OBJECTIVES	**PROJECT CONCEPT PARTNERS** *Limited to Planning, Cost-sharing, O&M	
☐ Integrate management of water resources & policies	x LASAN	☐ Caltrans
☐ Balance environmental, economic & societal goals	☐ LADWP	☐ LADOT
x Improve health of local watersheds	☐ BOE	☐ METRO
x Improve local water supply reliability	☐ RAP	☐ LA RiverWorks
x Implement, monitor, & maintain a reliable wastewater system	☐ LA County Flood Control District	☐ HSR
x Increase climate resilience	☐ LAWA	☐ LAUSD
x Increase community awareness & advocacy for sustainable water	x Other (Env. and Public Health Depts)	
PROJECT CONCEPT FLOW SCHEMATIC	**PROJECT CONCEPT MAP**	

Septic system retrofit to prevent pollution and reuse water

DRAFT Potential Project/Program Concept Description

Aerated treatment system of septic or cesspool to subsurface drip distribution of water. 	*Mt. Washington is a neighborhood with a lot of these old, failing septic and cesspool systems. LASAN has a map of all of the sites.*

GENERAL BACKGROUND/PURPOSE

There are thousands of old and failing septic and cesspool systems that need to be upgraded. Connecting to the sewer system can be costly. This presents an opportunity of residential homeowners to choose a more ecological, on-site wastewater treatment system that can allow the water to benefit their landscape.

KEY CONCEPT COMPONENTS

This project concept consists of the following key components:
[List key components in bullets for cost estimating purposes]

- ***Identify a site***
- ***Create a regulatory pathway to permit a blackwater reuse system***
- ***Install system and document the process***
- ***Monitor the system***
- ***If successful, create incentives for others to do the same***

POTENTIAL CHALLENGES

[List potential challenges in bullets]

- ***Finding funding to support pilot project***
- ***Cultivating local installers to lower cost (currently the closest installer is in Topanga Canyon)***
-
-
-

EXPECTED PROJECT CONCEPT TIMELINE	TRIGGERS

Septic system retrofit to prevent pollution and reuse water

DRAFT Potential Project/Program Concept Description

[Provide anticipated concept timeline up to or beyond 2040]]	• *[List triggers in bullets]* • •

SOURCES

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Commercial-scale composting toilet project

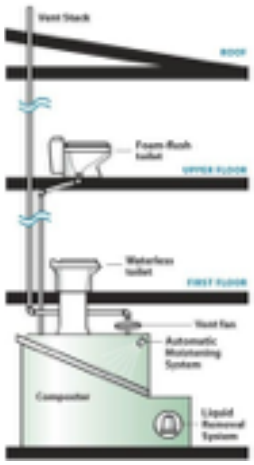
DRAFT Potential Project/Program Concept Description

PROJECT CONCEPT NAME	**Commercial-scale composting toilet project**
PROJECT CONCEPT DESCRIPTION	Create a regulatory pathway for commercial projects seeking to install a composting toilet.
SUPPLY SOURCE CATEGORY	☐ Stormwater ☐ Indirect Potable Reuse (IPR) ☐ Direct Potable Reuse (DPR) x Other
ESTIMATED YIELD & COST ASSUMPTIONS	
YIELD (AFY & MGD)	*Depends on usage and site.* *97% to 100% savings in toilet water flushing compared to a 1.6 gallon/flush toilet.* *As an example, a project at the Bronz Zoo restroom, saves 1 MGY with the toilets.*
COST	*Depending on size and building structure: $6,000 to $8,000, increased costs for building alterations if needed.*
ASSUMPTIONS	*Phoenix toilet public building price sheet. Clivus Multrum fact sheet about existing projects.*

ONE WATER LA GUIDING PRINCIPLES - MAIN OBJECTIVES	**PROJECT CONCEPT PARTNERS** *Limited to Planning, Cost-sharing, O&M	
☐ Integrate management of water resources & policies	x LASAN	☐ Caltrans
☐ Balance environmental, economic & societal goals	x LADWP	☐ LADOT
x Improve health of local watersheds	☐ BOE	☐ METRO
x Improve local water supply reliability	☐ RAP	☐ LA RiverWorks
x Implement, monitor, & maintain a reliable wastewater system	☐ LA County Flood Control District	☐ HSR
x Increase climate resilience	☐ LAWA	☐ LAUSD
x Increase community awareness & advocacy for sustainable water	☐ Other (Env and Public Health)	
PROJECT CONCEPT FLOW SCHEMATIC	**PROJECT CONCEPT MAP**	

Commercial-scale composting toilet project

DRAFT Potential Project/Program Concept Description



Anywhere in Los Angeles.

GENERAL BACKGROUND/PURPOSE

Composting toilets save significant amounts of water that would otherwise be used for toilet flushing. Foam flush toilets offer the user a similar experience to a typical water-flush toilet. Since there is no state wide code regulating composting toilets getting permits can be challenging and an unclear process. By clarifying the regulatory pathway to obtain permits for such a toilet, and sharing this information widely, people interested in installing a composting toilet will have a clear method to do so.

KEY CONCEPT COMPONENTS

This project concept consists of the following key components:
[List key components in bullets for cost estimating purposes]

- ***Identify site***
- ***Secure funding (from developer of site)***
- ***Clarify permitting pathway***
- ***Install system***
- ***Document and share process***

POTENTIAL CHALLENGES

[List potential challenges in bullets]

- ***Cost***
-
-
-
-

EXPECTED PROJECT CONCEPT TIMELINE

TRIGGERS

[Provide anticipated concept timeline up to or beyond 2040]]	• *[List triggers in bullets]* • •

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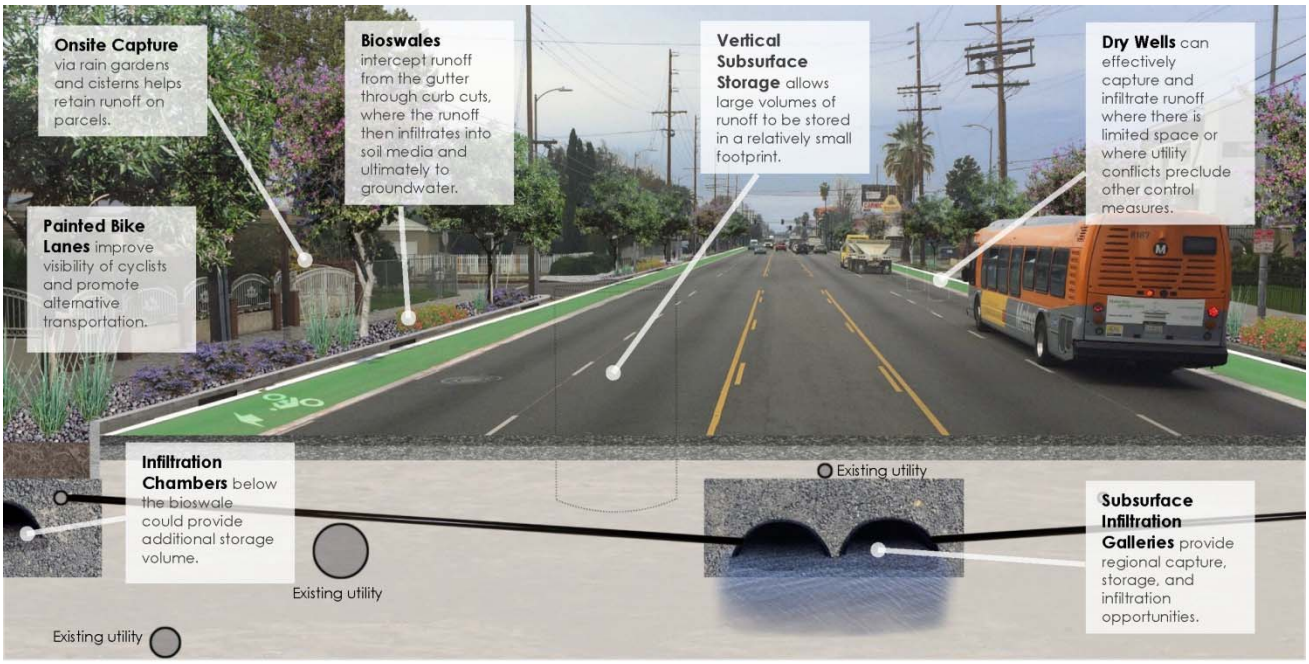
PROJECT CONCEPT NAME	San Fernando Green Streets – Calle Verdes
PROJECT CONCEPT DESCRIPTION	*San Fernando Green Streets - Calle Verdes* is a five-year design and implementation project that will create a 21st century, climate-resilient global city to serve as a model for other urban centers facing the impacts of climate change. TreePeople will plan, design, and implement a green infrastructure project emphasizing trees, bioswales and native vegetation on seven or more city streets and in pocket parks, a city park and a parking lot as part of a larger effort to create a model climate-resilient and water-secure community.
SUPPLY SOURCE CATEGORY	☒ Stormwater ☐ Indirect Potable Reuse (IPR) ☐ Direct Potable Reuse (DPR) ☐ Other
ESTIMATED YIELD & COST ASSUMPTIONS	
YIELD (AFY & MGD)	Yield: 54 AFY or 0.05 MGD
COST	Capital: $1.2 million O&M: Provided by City of San Fernando Unit: $22,377/AF (one year); $1,018/AF (project duration, 2018-2040)
ASSUMPTIONS	• Total catchment area: 40 acres • Average rainfall (16 in/yr for City of San Fernando) • Total capital cost of project $1.2 million • O & M provided by City of San Fernando • All sites are self-mitigating only and are designed to capture 100% of stormwater within footprint • Parking Lot: Cesar Chavez rec. center • Green Streets: Fourth Street, Glenoaks Blvd, Workman Street, San Fernando Mission Blvd, Brand Blvd, Harding Street, assumed 36' width throughout (curb to curb) • Pocket Park: Exact location TBD, size calculated based on nearby Tuxford Green pocket park • City Park: Cesar Chavez Recreation Park

ONE WATER LA GUIDING PRINCIPLES - MAIN OBJECTIVES	PROJECT CONCEPT PARTNERS *Limited to Planning, Cost-sharing, O&M	
☒ Integrate management of water resources & policies	☐ LASAN	☐ Caltrans
☒ Balance environmental, economic & societal goals	☐ LADWP	☐ LADOT
☒ Improve health of local watersheds	☐ BOE	☐ METRO
☒ Improve local water supply reliability	☐ RAP	☐ LA RiverWorks
☐ Implement, monitor, & maintain a reliable wastewater system	☐ LA County Flood Control District	☐ HSR
☒ Increase climate resilience	☐ LAWA	☐ LAUSD
☒ Increase community awareness & advocacy for sustainable water	☒ Other City of San Fernando	

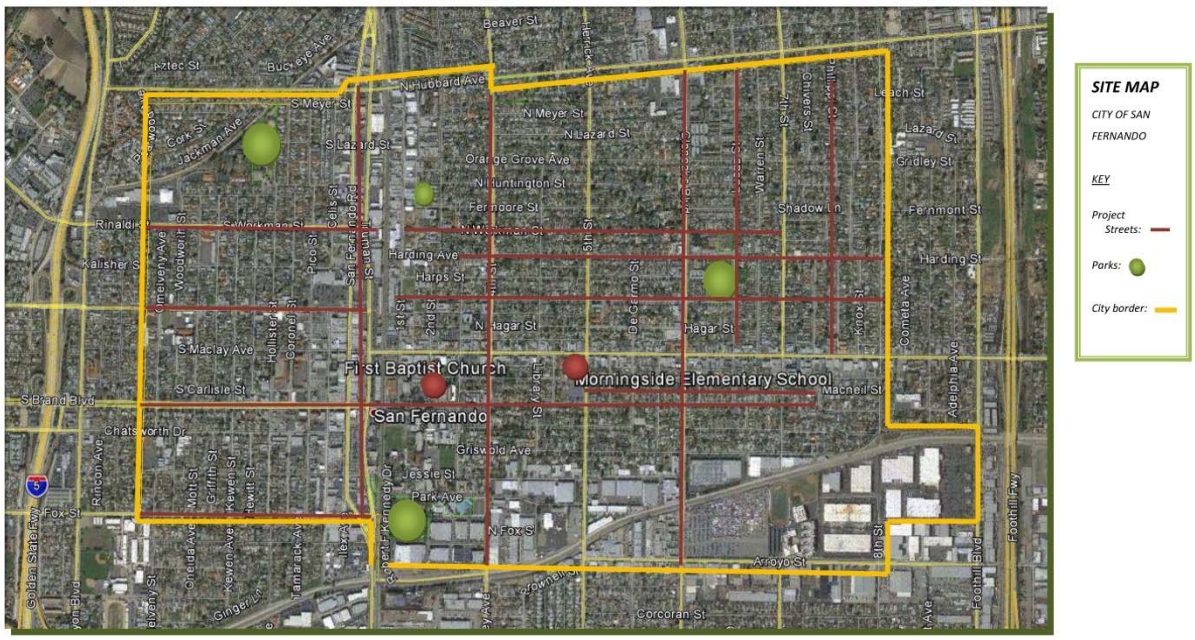
San Fernando Green Streets – Calle Verdes
DRAFT Potential Project/Program Concept Description

PROJECT CONCEPT FLOW SCHEMATIC



Example of potential green street infrastructure improvements. Subject to revision pending additional analysis.
CREDIT: Tetra Tech, Inc.

PROJECT CONCEPT MAP



Potential project location. Subject to revision pending additional analysis.

TREEPEOPLE

GENERAL BACKGROUND/PURPOSE

The City of San Fernando is a tight-knit 2.4 square mile working-class California Mission town with Latinos accounting for 93% of the total population and at least 18% living below the federal poverty level, exceeding the state average. The California Environmental Protection Agency's CalEnviroScreen has determined that the City of San Fernando is located in one of the most disadvantaged areas in the state. The City is in the 91st-95th percentile for poverty, unemployment, exposure to environmental health hazards such as toxic sites, poor air quality, groundwater contamination threats and other pollution burdens.

Unlike most cities in the Los Angeles region, San Fernando has its own water supply, sourced from groundwater. It imports from the Colorado River via Metropolitan Water District when dilution blending is needed to improve quality. Five years of drought has taken a heavy toll on the City's water supply, and there is an urgent need to implement solutions, such as stormwater capture, that will advance local water-reliability in the face of mounting climate pressures. The City has a high level of impermeable surfaces (72.73%), mostly from asphalt and roofs, and would greatly benefit from increased permeability. With a total tree canopy (private and public space) of 17.6% (which is 6,500 trees), the area falls short of the recommended 25% canopy level for cities in the Western United States.

The City of San Fernando though landlocked by the City of Los Angeles contains or is critical to natural treasures that can provide greater eco-system services to the area with mitigation and restoration efforts. As part of the Upper LA River Watershed, the City is downstream from the San Gabriel Mountains, which is full of recreational trails, and adjacent to a portion of the Pacoima Wash, which eventually joins the Tujunga Wash, leading to the LA River and ultimately to the Pacific Ocean. Steady weathering and erosion over time has resulted in the formation of a 14,000 ft. thick alluvial deposit in the area, which makes the soil gravelly and very porous and, therefore, highly receptive to water percolation and infiltration. Industry and urbanization has caused the decline of several wildlife species in the area and has changed the behavioral patterns of others, but the surrounding wash and mountains still have significant populations of many wildlife species. Increasing biodiversity, and creating a corridor of native habitat from the mountains, through the wash, and into the City has the potential for increasing the numbers of a variety of species. Plant species native to the area that are considered rare or endangered by the California Native Plant Society include: Davidson's Bushmallow *(Malacothamus davidsonii)*; Tehachapi Ragwort *(Packera ionophylla)*; Mount Gleason Indian Paintbrush *(Castilleja gleasoni)*; Green Gentian *(Frasera neglecta)*; and the San Fernando Spineflower *(Chorizanthe parryi var. fernandina)*, and several others. Threatened or endangered wildlife species (both federal and state) in the area include: Bell's vireo *(Vireo bellii)*; California gnatcatcher *(Polioptila californica)*; Cassin's finch *(Carpodacus cassinii)*; Olive-sided flycatcher *(Contopus cooperi)*; Southwestern willow flycatcher *(Empindonax traillii extimus)*; and Tri-colored blackbird *(Agelaius tricolor)*.

For many years, the Northeast San Fernando Valley failed to receive adequate social, economic, environmental health and human investments to properly address the needs of a working-class community. The County of Los Angeles ranked the City of San Fernando 90th out of 103 cities for life expectancy as cited in the last "Life Expectancy and Economic Hardship" study conducted by the County. The City is confronting a number of environmental health challenges, including respiratory illness, cancer and rising rates of obesity among San Fernando families which has led to an increase in diabetes and other chronic illnesses, especially among school-age Latino kids. The City of San Fernando has established strategic partnerships with TreePeople, local health providers, community-based organizations and other stakeholders in a concerted effort to make the City greener, healthier, and more climate-resilient and water-secure.

KEY CONCEPT COMPONENTS

This project concept consists of the following key components:

- Establish task force
- Finalize site selection
- Engineering/Technical Analysis
- Environmental Review (CEQA)
- Project design
- Community engagement & training
- Asphalt removal
- Tree planting (750)
- Curb cuts/inlets (7 – 42)
- Bioswale installations (7-42) & native vegetation
- Final reports
- Maintenance (5 yr project from start to finish), 20+ years maintenance by City and community members

POTENTIAL CHALLENGES

- Community engagement
- Permitting and regulations
- Maintenance commitment
- Establishing trees and plantings

EXPECTED PROJECT CONCEPT TIMELINE

Year 1, 2017 – Planning, design, initial community engagement (then ongoing), initial corporate cultivation (then ongoing)
Year 2, 2018 – Implementation at project sites – plant 250 trees, construct water capture features
Year 3, 2019 – Continue implementation – plant 250 trees, construct water capture features, parking lot project
Year 4, 2020 – Continue implementation – plant 250 trees, construct water capture features, pocket parks and park
Year 5, 2021 – Ensure ongoing maintenance and community stewardship, conduct final analysis and reporting

Year 2022-2040 – City of San Fernando will maintain trees, bioswales and vegetation.

TRIGGERS

- Funding approval
- CEQA completion

MAR VISTA WATER - UNTAPPED BY LADWP

presented by Christopher McKinnon to One Water November 18th, 2016

1 Kuruvungna Springs ancient and sacred to the Gabrielino - Tongva Native Americans

spring water now goes into a storm drain which may end up in the Sawtelle Flood Control Channel branch

is it potable as is - has it been tested - other capped springs on site

tribe is looking for help to use it to irrigate surrounding grounds but maybe potable

located adjacent and maybe owned by LAUSD University High School

2 Sepulveda - Sawtelle County Flood Control Channels built by the Army Corps of Engineers

was probably the original route of streams fed by rain and Kuruvungna and other springs to Ballona

Mar Vista Culver City use to flood in large rain events

now wet and dry weather runoff flows thru channnels to Ballona Creek

3 Charnock Wells in Mar Vista are owned and pumped by Santa Monica City

potable water is pumped north to a mixing (with MWD water) facility in Santa Monica

westside of Los Angeles not adjudicated for water rights? Should be

was contaminated by MTBE and closed for several years, now mitigated and filtered for potable use

4 Golden State Water Company on Charnock in Mar Vista if pumping goes to supply Culver City

was also probably MTBE contaminated, has it been pumping?

in 1900's was owned by a public private partnership which supplied Venice City

5 Ballona Creek and its watershed

flows to Santa Monica Bay in ancient history is reported to be

the route to the sea of the original LA river cleanup ongoing

Talking points - There is ancient potable or near potable water in the Mar Vista aquifer

potential water source for west Los Angeles by LADWP

Bureau of Sanitation could capture clean and filter Flood Control water for purple pipe to Venice Boulevard Great Street

two Prop O stormwater projects currently exist in Mar Vista and Penmar parks -is it being utilized for irrigation?

other area non-profits and interested individuals are aware and have knowledge pertinent to all of the above elements

City, County, and Federal agencies are also aware of all these disparate elements

Will this watershed and all the above elements be fully integrated into a plan and into One Water LA?

STAKEHOLDER WORKSHOP #5 (12/13/16)

The following pages present the meeting agenda, summary of the discussion, and the presentation given at the Stakeholder Workshop #5, held on December 13, 2016.

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One Water LA Plan Phase 2

Stakeholder Workshop #5

Agenda

Tuesday, December 13, 2016, 1:00 pm-4:00 pm

Location: Media Center, 2714 Media Center Drive, Los Angeles, 90065

Objectives:

- Provide Overview of Policy Ideas Development Process
- Familiarization with current Policy Ideas List
- Review and Discuss Policy Ideas
- Explain Next Steps

Agenda

1. **Welcome and Progress Update (10 minutes)** **1:00 - 1:10 pm**
    a. One Water LA Progress Update

2. **Policy Ideas Development Overview (20 minutes)** **1:10 - 1:30 pm**
    a. Policy Development Process Overview & Objective
    b. Purpose of today's breakout sessions

3. **Policy Ideas Discussion (Breakout Sessions)** **1:30 - 3:45 pm**
    a. Rotation 1 (30 mins)
    b. Rotation 2 (30 mins)
    c. Rotation 3 (30 mins)
    d. Rotation 4 (30 mins)

4. **Closing (15 minutes)** **3:45 - 4:00 pm**
    a. Policy Ideas Wrap-up & Next Steps

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CITY OF LOS ANGELES
One Water LA
Stakeholder Workshop #5 (Phase 2)
Tuesday, December 13th, 2016 1:00 pm -4:00 pm

Meeting Summary

This summary is not intended to be a transcription of the fifth One Water LA Workshop. This summary generally expresses the sentiment and information provided by those that attended.

Please refer to attachments for additional information regarding this summary.

INTRODUCTIONS:

Attendees were welcomed with opening remarks by Adel Hagekhalil from Los Angeles Sanitation (LASAN) and Serge Haddad from the Los Angeles Department of Water and Power (LADWP). Adel Hagekhalil mentioned that the City is looking to change our relationship *(with stakeholders)* on how we work together for the better. The goal for One Water LA is to develop projects and programs to leverage resources that would address flooding, water quality and water supply. We need to make sure that by us leveraging resources, we are getting the most benefit.

Serge Haddad mentioned that LADWP has a new Senior Water System Assistant General Manager – Rich Harasick. Marty Adams is now the Chief Operating Officer for LADWP. The Groundwater Replenishment Project EIR was adopted on December 6th by the Board of Water and Power and the next step is the NEPA Process. Due to rain, the Recycled Water Fill Station Pilot Program is suspended until further notice. The pilot is receiving a lot of attention through social media and approximately 11,000 gallons of recycled water has been dispensed thus far.

Hampik Dekermenjian (CDM Smith) was the meeting facilitator and he reviewed the agenda and meeting objectives. The workshop agenda was organized as follows:

1. One Water LA Progress Update
2. Policy Ideas Development Overview
3. Policy Ideas Discussion (Breakout Sessions)
4. Next Steps & Closing

1. One Water LA Progress Update

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 3-7)

One Water LA Progress Updates are summarized:

- A key task currently in progress for the One Water LA Plan is the development of long-term policies and ordinances.

- The series of workshops currently taking place all connect to Long-Term Analysis Process.
- The Project Evaluation Criteria has been revised. The One Water LA team hopes to finalize the criteria within the next few weeks. An online criteria weighting exercise will be sent out to stakeholders in the near future that will inform the City's weighting of the evaluation criteria.
- The One Water LA team conducted a *Project Ideas Workshop* on November 18th to provide a forum for site specific project ideas. During the workshop many policy ideas were also suggested. The project ideas being evaluated and the policy ideas suggested have been added to the Policy Ideas and Suggested Actions lists.
- LADWP is looking for two volunteers to help judge the Recycled Water Customer of the Year Award nominees.

2. Policy Ideas Development Overview

Please refer to the One Water LA Workshop PowerPoint Presentation (Slides 8-17)

An overview of the Policy Ideas Development was presented. The objectives were to 1) Develop shared understanding of content, 2) Answer questions related to Policy Ideas List and 3) Identify missing ideas. It was stated that the ultimate goal is to narrow down the list of 84 Policies and send policy recommendations to the Water Cabinet to consider for inclusion in the Final Plan.

3. Policy Ideas Discussion (Breakout Sessions)

There were four rounds of breakout sessions to review the list of policy ideas. Each breakout session group was focused on specific topics.

It was emphasized that the purpose of the breakout sessions was not to wordsmith but to capture policy ideas and familiarize stakeholder attendees with the policy ideas on the list. Stakeholders were also encouraged to ask questions to receive clarification from the One Water LA team on policy ideas and suggest additional policy ideas for consideration.

Participating stakeholders reviewed the list of policy ideas, requested clarification on some of the ideas, and provided the One Water LA team with additional policy ideas.

Note: We have attached all of the policy clarifications and new ideas collected in the breakout sessions in the attached document. The ideas and suggestions will be incorporated into a revised policy list that will be shared in the future.

4. Next Steps & Closing – Lenise Marrero (LASAN), Hampik Dekermenjian (CDM Smith)

Please refer to One Water LA Workshop PowerPoint Presentation (Slides 19-21)

Next steps for the One Water LA Plan:

- Compile input received from breakout sessions to polish policy idea language.
- Solicit input on policy priorities from stakeholders and City staff.
- Develop list of recommended policies for the One Water LA plan (Note: All policy ideas will be documented even though they may not be recommended as a priority).
- Finalize project evaluation criteria and invite stakeholders to participate in a new weighting exercise.
- Conduct an One Water LA 2040 Plan Overview meeting in February

ADDITIONAL ATTACHMENTS

- Revised Potential Policies List
- One Water LA Workshop 5 PowerPoint Presentation

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Stakeholder Workshop Policy Discussion

December 13, 2016

All Water is One Water

Progress Update

All Water is One Water

Agenda

1. Welcome and Progress Update 1:00 – 1:10 p.m.
2. Policy Ideas Development 1:10 – 1:30 p.m.
   a) Meeting Objectives
   b) Development Overview
3. Policy ideas Discussion (Breakouts) 1:30 – 3:45 p.m.
   a) Rotations 1 through 4
4. Next Steps and Meeting Close 3:45 – 4:00 p.m.

Progress Update - Overview

2017

Final Steps:

- Project Timeline & Triggers
- Short- & Long-Term Policies
- One Water LA 2040 Plan
- Programmatic EIR

Q4 2016

Key Tasks Currently In-Progress:

- Wastewater Facilities Plan
- Stormwater Facility Plan
- Long-Term Alternatives Analysis
- Funding Strategies
- Climate Change Adaptation & Mitigation Plan
- LA River Flow Study
- Long-Term Policies & Ordinances

Foundational Work Completed to-date:

- Existing & Future Conditions
- Mass Balance Model
- Description of Existing Wastewater & Stormwater Facilities
- Climate Change Vulnerability Assessment
- Near-Term Integration Opportunities/Case Studies
- Long-Term Integration Opportunities/Basis of Planning
- Several Special Studies

Progress Update - Overview

Final Steps:

2017

- Project Timeline & Triggers
- Short- & Long-Term Policies
- One Water LA 2040 Plan
- Programmatic EIR

Key Tasks Currently In-Progress:

Q4 2016

- Wastewater Facilities Plan
- Stormwater Facility Plan
- Long-Term Alternatives Analysis
- Funding Strategies
- Climate Change Adaptation & Mitigation Plan
- LA River Flow Study
- Long-Term Policies & Ordinances

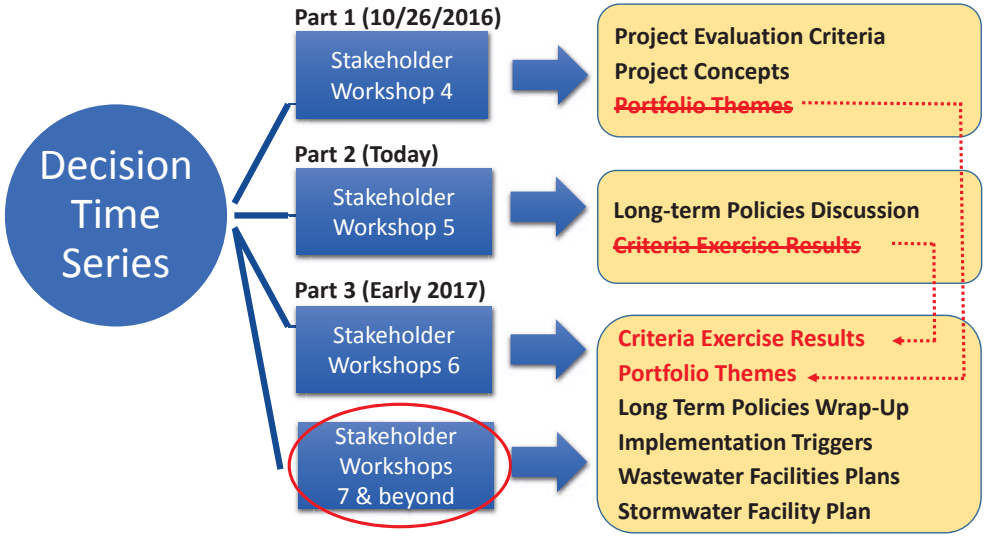
Foundational Work Completed to-date:

- Existing & Future Conditions
- Mass Balance Model
- Description of Existing Wastewater & Stormwater Facilities
- Climate Change Vulnerability Assessment
- Near-Term Integration Opportunities/Case Studies
- Long-Term Integration Opportunities/Basis of Planning
- Several Special Studies

Project Manager's Update

1. Criteria Weighting Update
2. Project Ideas Workshop
   - Meeting Summary in progress
   - Project Ideas
   - Policy Ideas and Actions
3. One Water LA Overview & Update (January 2017)
4. Judges Needed for the Recycled Water Customer of the Year Award

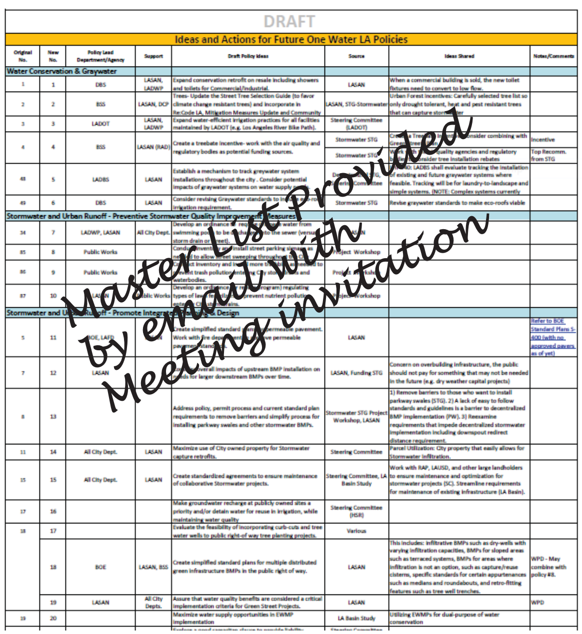
Purpose of Stakeholder Workshops



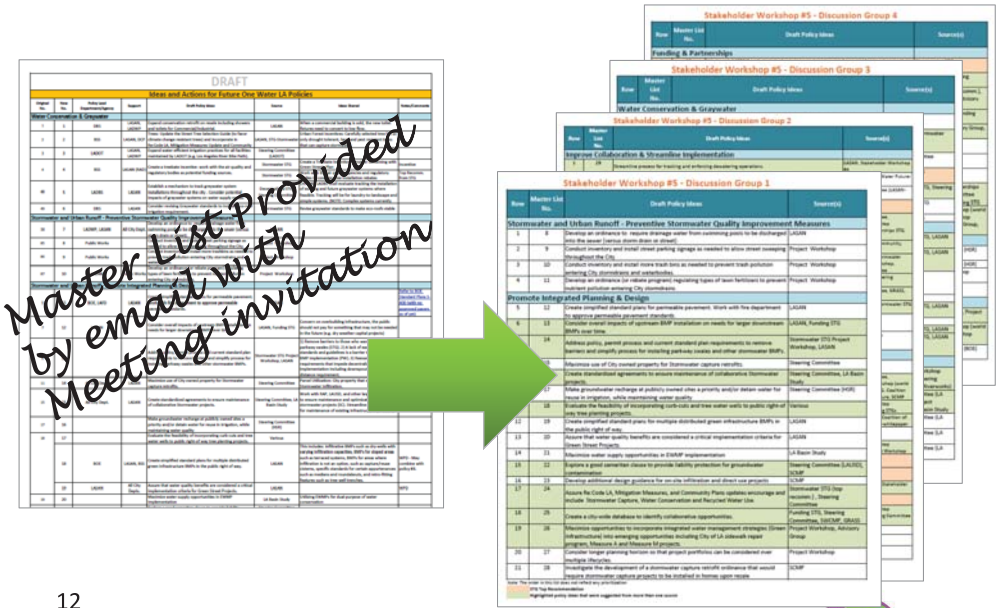
Key Meeting Objectives

1. Provide Overview of Policy Ideas Development Process
2. Familiarize you with Draft Policy Ideas List
3. Review & Discuss Policy Ideas
4. Explain Next Steps

Emailed Master Policy Ideas List



Policy Ideas Organized into 4 Groups



Policy Ideas Discussion Objectives

Todays' Workshop

- Develop shared understanding of content
- Answer questions related to Policy Ideas List
- Identify missing Ideas

Next Steps

- Share Complete List of Ideas
- Solicit feedback on priorities

Background: Policy Development Process

2006 Water IRP

Go-Policies Developed

- Some Completed
- Some In-Progress
- Some to be Considered for Modification

One Water LA Phase 1

Low Hanging Fruit Policies

- *Stormwater Capture MP*
- *LA Basin Conservation Study*
- *EWMPs*
- *Living Streets*
- *GRASS*
- *Coalition of the Future*

One Water LA Phase 2

Nearly 130 Ideas gathered to-date

- 84 Policy Ideas
- 11 Research Ideas
- 31 Suggested Actions

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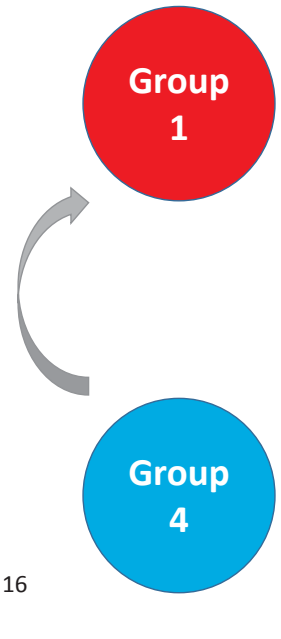
One Water LA Phase 2 Meetings & Workshops

Policy Discussion with 4 Rotations



Purpose
- What needs clarification?
- What is missing?

Structure
- 5 mins review of List
- 20 mins discussion
- 5 mins wrap-up

Ground Rules
- Review Policy Ideas
- Avoid wordsmithing
- Avoid Judging/Justifications
- Avoid Prioritization
- Clarification Questions encouraged!

Policy Ideas Development Goals

Goal of One Water LA 2040 Plan

Nearly 130 Ideas gathered to-date
- 84 Policy Ideas
- 11 Research Ideas
- 31 Suggested Actions

PLAN GOAL:
Recommend Policies to Water Cabinet

Document full list in Plan & make recommendations for further development

Goal of Today's Workshop

Master List Provided by email with Meeting invitation

WORKSHOP GOAL:

1) Familiarize Stakeholder Group with List Ideas

2) Obtain Missing Ideas before Prioritization

Policy Discussion Groups

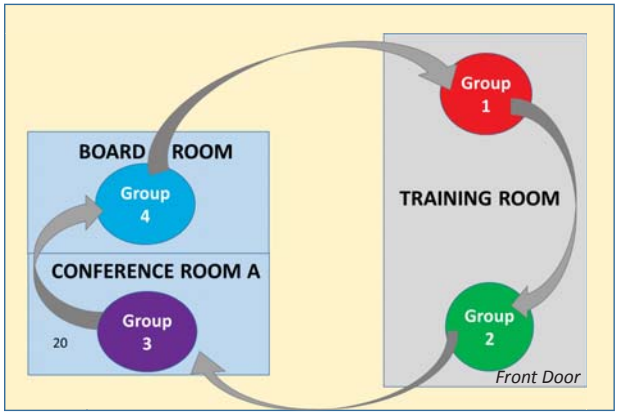
Group 1
- Stormwater – Preventive Measures
- Integrated Planning

Group 2
- Stormwater – Streamline Implementation
- Stormwater – Incentive Programs

Group 3
- Water Conservation & Graywater
- Onsite Recycled Wastewater Treatment Facilities
- LA River Revitalization

Group 4
- Funding, Cost-Sharing, and Partnerships
- Sustainability & Climate Change Resiliency
- Training

Room Locations by Group



Rotation Schedule

Discussion 1: 1:30-2:00 PM
Rotation Break (5 mins)
Discussion 2: 2:05-2:35 PM
Rotation Break (5 mins)
Discussion 3: 2:40-3:10 PM
Rotation Break (5 mins)
Discussion 4: 3:10-3:40 PM
Regroup in Training Room

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Next Steps

All Water is One Water

One Water LA

Policy Ideas Discussion/ Exercise (4 x 30 mins)

All Water is One Water

Next Steps

- **Todays' Policies Workshop**
  - Update Policy Ideas List with stakeholder input
  - Combine & Polish Ideas Language
  - Solicit input on priorities from Stakeholders & City staff
  - Develop List of Recommended Policies
- **Long-Term Alternatives Analysis**
  - Solicit input on Weighting of Final Evaluation Criteria (SurveyMonkey)
- **One Water LA Project Update Meeting (Jan 2017)**
- **Future Stakeholder Meetings (TBD)**

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INFORMATIONAL STAKEHOLDER MEETING #1 (02/16/17)

The following pages present the meeting agenda, summary of the discussion, and the presentation given at the Informational Stakeholder Meeting #1, held on February 16,2017.

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One Water LA Plan Phase 2 - Stakeholder Meeting

Informational One Water LA Overview

Agenda

Thursday, February 16, 2017, 1:00 pm-3:30 pm

Location: 2714 Media Center Drive, Los Angeles

Objectives:

- Purpose & Overview of One Water LA 2040 Plan
- Share Plan Partnerships
- Timeline and Upcoming Events

Agenda

1. **Welcome, Introductions & General Updates (15 minutes)** **1:00 - 1:15 pm**
2. **Purpose of One Water LA (10 minutes)** **1:15 - 1:25 pm**
    a. Phase 1 Objectives & Guiding Principles
    b. Phase 2 Plan
3. **Who's Involved: A Collaborative Effort (20 minutes)** **1:25 - 1:45 pm**
    a. Stakeholder Engagement
        i. Stakeholder Workshops
        ii. Special Topic Groups
    b. Advisory Group
    c. City Departments and Regional Agencies
        i. Focus Meetings
        ii. Steering Committee
    d. Additional Stakeholder Engagement Efforts
    e. How to be involved and/or share One Water LA
4. **One Water LA 2040 Plan Elements (1 hour 30 minutes)** **1:45 - 3:15 pm**
    a. Basis of Planning
    b. Mass Balance Tool
    c. Climate Resilient Infrastructure
    d. Near-Term Integration Opportunities/Case Studies
    e. Long-Term Integration Opportunities
        i. Evaluation Criteria
        ii. Concept Options
    f. Wastewater Facilities Plan
    g. Stormwater Facilities Plan
    h. Additional Studies
        i. LA River Flow Study
        ii. On-Site Treatment
    i. Policies
    j. Funding Strategies
    k. Implementation Strategy
5. **Next Steps & Upcoming Events (15 minutes)** **3:15 - 3:30 pm**
    a. The One Water LA Progress Report
    b. Upcoming Workshops & Meetings
    c. Other Upcoming Events

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CITY OF LOS ANGELES
One Water LA
Stakeholder Meeting (Phase 2)
Thursday, February 16th, 2017 1:00 pm -3:30 pm

Meeting Summary

This summary is not intended to be a transcription of the One Water LA Stakeholder Meeting. This summary generally expresses the sentiment and information provided by those that attended.

Please refer to attachments for additional information regarding this summary.

INTRODUCTIONS:

Attendees were welcomed with opening remarks by Ali Poosti from Los Angeles Sanitation (LASAN) and Bill Van Wagoner from the Los Angeles Department of Water and Power (LADWP). Ali Poosti mentioned that the City is proud to have stakeholders as part of the process to develop projects, programs and policies to ultimately make the City resilient. The One Water LA Journey is coming to an end and participation from stakeholders now is essential for finalizing the Plan which is anticipated to be complete by July.

Bill Van Wagoner mentioned that Penny Falcon has returned to the Water Sector for LADWP and she is now in charge of the Water Conservation and Water Recycling Policy Program. As of the end of January approximately 60% of state is still in some sort of drought condition. Despite all of the rain, one wet year does not restore groundwater basins and snow pack. This shows why long range planning is so important.

Hampik Dekermenjian (CDM Smith) was the meeting facilitator and he reviewed the agenda and meeting objectives. The Stakeholder Meeting agenda was organized as follows:

1. Purpose of One Water LA
2. Who's Involved: A Collaboration Effort
3. Presentation of One Water LA 2040 Plan Elements
4. Next Steps & Upcoming Events

1. Purpose of One Water LA

Please refer to Informational One Water LA Overview PowerPoint Presentation (Slides 11- 21)

The purpose of One Water LA was presented to attendees. Key items presented regarding purpose of One Water LA are summarized:

- Addressing the City's water management challenges including: recurring drought, dependence on imported water, increasing water demand.

- Meeting goals set forth in the Mayor's Sustainable City pLAn including: sourcing 50% of water locally by 2035.
- Incorporating integration, collaboration and innovation into the City's planning efforts to result in smarter land use, healthier watersheds, enhanced communities, climate change resilience, and greater protection of public health.

2. Who's Involved: A Collaborative Effort

Please refer to Informational One Water LA Overview PowerPoint Presentation (Slides 22-32)

The One Water Team presented on multiple engagement efforts involved in developing the One Water LA Plan summarized below:

- City Departments & Regional Agencies
    - Steering Committee – Meet quarterly to discuss how to leverage resources to collaborate on projects.
    - Focus Meetings – Individual meetings held to discuss opportunities for integration – e.g. (Re:Code LA, Changing Engineering Specs to allow recycled water for concrete mixing)
- Stakeholder Engagement
    - Total of 8 workshops held to date to obtain input from the public at large on the One Water LA Plan.
    - Special meetings held throughout the One Water LA planning process to discuss specific topics in greater detail (e.g. Project Ideas Workshop, Stormwater Fee Dialogue - for Stormwater Funding).
- Advisory Group
    - 10 Stakeholder Advisors, representing a diversity of groups and interests who provide advice on the direction of One Water LA.
- Special Topic Groups
    - Held meeting discussions focused on 5 key topics: 1) Funding, 2) Outreach & Communication, 3) Stormwater and Urban Runoff, 4) Partnerships & Innovation and 5) Decentralized/Onsite Treatment.
- Additional Stakeholder Engagement Efforts
    - Youth Education – Challenging students to come up with ideas for capture, conserve and reuse at their schools and home.
    - Academia – Collaborated with Pepperdine University to obtain creative ideas for Marketing One Water LA and collaborating with UCLA
- How to be involved and/or share One Water LA
    - Request presentations for your organization
    - Take tours – including of the City's Water Reclamation Plants.
    - Share the One Water LA message with constituents in your organization.

3. Presentation of One Water LA 2040 Plan Elements

Please refer to Informational One Water LA Overview PowerPoint Presentation (Slides 33-83)

The One Water LA Team provided a comprehensive overview of all of the Plan's elements to describe how they fit together to form the One Water LA 2040 Plan. Questions and comments received during and after the overview are summarized:

MASS BALANCE TOOL

Question: What if academic analysis comes up with a consensus that 50% locally sourced water is not an achievable objective? Do we still march forward with this whole plan?
Response: The tool will help determine what the most efficient strategy would be looking at different project options to achieve the goal of 50% locally sourced water. Each strategy would have a different price tag and different pros and cons.
Response: The goals that the City hopes to achieve are critical because as we look at our imported water supply it is getting more and more unreliable.

Question: Does the project incorporate other water efforts such as the California Water Fix?
Response: We are focusing on getting the City off of imported water. The water fix in the Delta has to do with imported water as well as other aspects up to the North. What this is all about is becoming less dependent on things like the water fix.

Question: What is the model's name? Who is charge of it? Where is the link to modeling report? Where are assumptions?
Response: The name of the model is Blue Plan-it and it is being used to aid the One Water LA planning process. Documentation regarding the tool will be part of final One Water LA Plan and all of the data input has been tabulated. Information going into the model comes from other documents and modeling efforts conducted prior to One Water LA. All assumptions are documented in terms of percentages. The tool is not available for review and there is currently no link available. The model requires a special software license that the City will have once the final Plan is complete.

Comment: For an example on resiliency, one of the things we are looking is what happens if there is an earthquake break in our water supply. We are talking about storage in the San Fernando Valley Groundwater Basin. In general we don't have much storage in the City. One of the items that is possible is buying and banking City owned water in MWD's Lake Castaic. That is the example of approaches to water resiliency that I hope would be included as opposed to looking only at the reservoir for the San Fernando Valley.

Question: Does the model include multi-year water storage issues?
Response: The tool is a one year time step model.

CLIMATE RESILIENT INFRASTRUCTURE

Question: Is there a link to the Climate Models that are being used?
Response: We are using an EPA online tool (CREAT) that is widely available. The data that we are using can be made available and a summary of the most relevant data will be summarized in the One Water LA Plan.

Question: Do you consider the watershed part of the conveyance system when determining climate risk?
Response: We consider storm drains, all sewers and pump stations. Distributed green infrastructure is not included in the current analysis.

NEAR-TERM INTEGRATION OPPORTUNITIES

Comment: LAUSD has been really hesitant about stormwater capture because of liability of bringing off-site pollutants onto their site. I hope the City does not proceed with that until all of their concerns are addressed.
Response: We have been working very closely with LAUSD over a series of months going over what their concerns are and what One Water LA can do to address their concerns and we are getting closer to implementing a pilot project. All of the concerns are being addressed during the process in a manner that benefits both sides.

LONG-TERM INTEGRATION OPPORTUNITIES

Question: Assuming you are using rates of imported water, when you project out to long-term that is a slippery slope of what that gallon is going to cost depending on who you ask.
Response: We have developed ranges of cost for each option all expressed in dollar per acre-foot. We can compare them to both existing as well as projected out costs. We haven't made a decision yet on what the threshold is. We need to look at this comprehensively. Need to balance cost and other benefits.

Question: Why is Groundwater Remediation not being considered as an option?
Response: In addition to 25 potential project concepts, there are in progress projects. The Groundwater Remediation project is a prerequisite for a lot of the potential project concepts and LADWP is moving forward with it.

Question: LA County Sanitation Districts has some long-term aspirational projects analysis on their way. How do you propose to include them in the collaboration so that you don't overlook opportunities for the Greater LA Basin?

Response: A lot of the project concept options include partnering with other agencies (e.g. MWD). We are looking at project timeline in addition to looking at other things going on in the area so we can know about other major projects/efforts going on that may be related to what we are doing.

Question: How far in the future is Direct Potable Reuse (DPR)?
Response: It comes down to if it is feasible and if regulators will allow it. Direct Potable Reuse is being considered as we look into the future because there will be less infrastructure required for DPR then Indirect Potable Reuse.
Response: It boils down to the regulatory regime. We may not have regulations anytime soon so we have to look at what is realistic. One option that might be more realistic is to get advanced treated effluent to the Los Angeles Aqueduct Filtration Plant, blend it with other raw sources (e.g. LA Aqueduct or State Water Project), run it through a water treatment plant and then put it into the distribution system.

Comment: I am really interesting in seeing more recycled wastewater than what we are doing now. The City should implement a case by case section as opposed to waiting for regulations for DPR.

STORMWATER FACILITIES PLAN

Question: Is there any science related to the "$22M in added benefits or avoided costs" for Stormwater Projects (slide 65)?
Response: The slide is from the Stormwater Fee Dialogue Meeting. LA Sanitation's Watershed Protection Division has a source that equates $1M in Water Quality investments to $22M in added benefits/avoided costs. The One Water LA Team has requested the source and will provide it once it has been received.

Question: What is holding up Rory Shaw Wetlands project? I have been waiting on the project for 5 years.
Response: (Provided by LA County DPW) While completing geotechnical investigations at the project site, an unexpected organic landfill material (Class III Municipal Landfill) was found on the northern portion of the property, which prompted a re-design of the project. The project will keep the same amenities, but project elements will be shifted to avoid placing a water feature above the Class III Municipal landfill material. The discovery also made it so the project could not be completed in phases as originally planned. Additionally, a lessee is still on site and won't be vacating the property until March 2017 which has pushed back the project schedule. Updated 90% design plans should be ready by this summer, and a community meeting and Technical Advisory Committee meeting will be held at that time.

ADDITIONAL STUDIES: LA RIVER

Question: There was a reference to Low Flow Diversion (LFD) to the sewer systems. Does that include LA River flows?

Response: Low Flow Diversions are mostly dry weather runoff. Dry weather runoff is caused by over watering plants and washing cars so it does include water that would ultimately enter the LA River. All of the practices (e.g. LFDs, Low Impact Development, etc.) that happen upstream have an impact on the LA River.

Question: The same can be said for Ballona Creek since so much of the top of Ballona Creek Watershed is in the City of Los Angeles. Where is Ballona in all of this?
Response: For the Stormwater Facilities plan we are looking at all 5 watersheds that have Enhanced Watershed Management Program Plans which include: Ballona Creek, Dominguez Channel, Upper LA River, Santa Monica Bay and Marina Del Rey.

Question: For low flow conditions, what is the effluent discharge rate from Glendale? How much water is actually coming from natural sources in your low flow conditions rather than effluent discharges and others percentage-wise? What is the effect of climate change on the extremes of low flow?
Response: As part of the Stormwater Facilities Plan we are looking at all water that would come into the City from other sources (e.g. City of Glendale). For climate change there is a separate part of the One Water LA Plan that addresses climate change for all stormwater and wastewater facilities. Those elements of the City infrastructure that are impacted by climate change are being incorporated into the Stormwater Facilities plan for near-term and future conditions.

FUNDING STRATEGIES

Question: On one of the slides you mentioned sidewalk repair. With regard to short-term solutions and opportunities we are really looking for curb cuts and being able to integrate stormwater collection in parkways. Is One Water LA helping to get that through by the Bureau of Engineering?
Response: One of the One Water LA policy recommendations is to leverage opportunities like the sidewalk repair program. We are working with the Bureau of Engineering on how to incorporate stormwater collection.

Question: Does this mean that the proposed property tax is taken off the table?
Response: No it does not.

Question: Are the One Water LA funding strategies separate from existing funding strategies (e.g. LADWP's Rebate Program) or is it a combination where both strategies could complement each other?
Response: It is complimentary. One Water LA's Funding Strategies are looking to integrate and work together with Departments/Agencies to fund projects that are water-related.

IMPLEMENTATION STRATEGY

Question: What do you think the biggest challenge is going to be for implementing One Water LA? Is it Engineering? Economic? Regulatory? Public Support?

Response: Policy needs to be addressed and not just within the City. Some changes in Statewide Policy need to happen for projects like DPR to occur. Policies are one of the biggest challenges and the second would be cost.

4. Next Steps & Upcoming Events – Lenise Marrero (LASAN), Hampik Dekermenjian (CDM Smith)

Please refer to Informational One Water LA Overview PowerPoint Presentation (Slides 84-87)

Next Steps for the One Water LA Plan:

- Publish a high-level "Progress Report" (anticipated for early April)
    - Report consists of approximately 50 pages of highlights explaining what the Plan is.

Upcoming Events

- Steering Committee Meeting 3/1/17
- Advisory Group Meeting to discuss Draft Progress Report (Early March)
- Special Meeting for Wastewater and Stormwater Facilities Plan (Mid-March)
- One Water LA Day, April 11th
- Earth Day, April 22nd
- Young Citizens Artist Project – Presentation to Schools (To Be Determined)

ADDITIONAL ATTACHMENTS

- Attendee List
- Informational One Water LA PowerPoint Presentation

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Stakeholder Informational Meeting

One Water LA Overview

February 16, 2017

All Water is One Water

Agenda

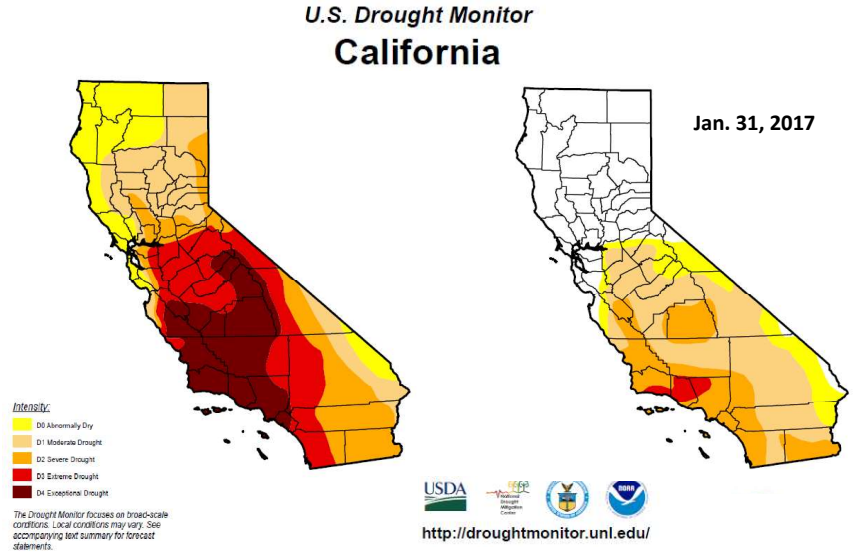
1. Welcome, Introductions & General Updates 1:00 – 1:15 p.m.
2. Purpose of One Water LA 1:15 – 1:25 p.m.
3. Who's Involved: A Collaborative Effort 1:25 – 1:45 p.m.
4. One Water LA 2040 Plan Elements 1:45 – 3:15 p.m.
5. Next Steps & Upcoming Events 3:15 – 3:30 p.m.

Meeting Close 3:30 p.m.

General Updates

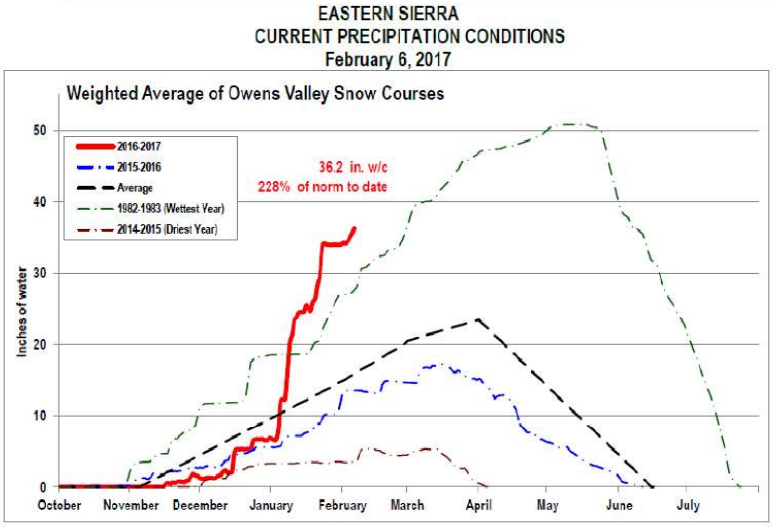
All Water is One Water

Recent Storms and Drought Conditions

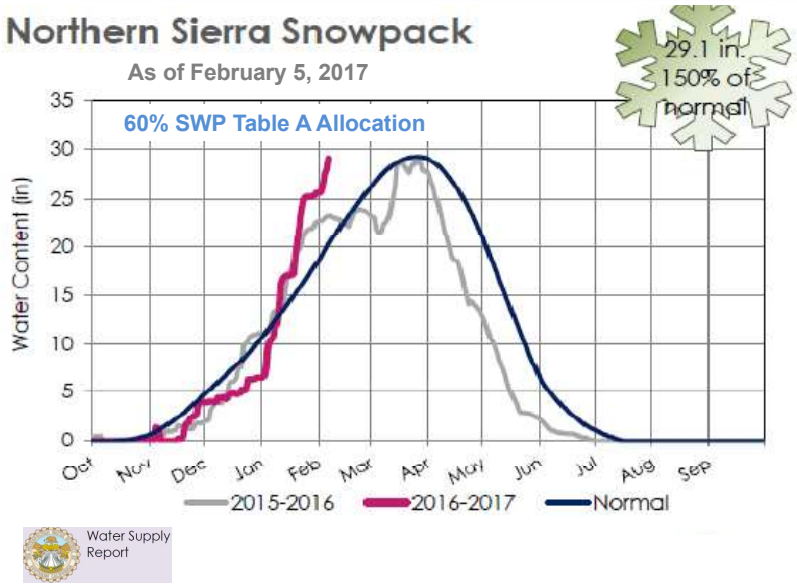


LA's Water Supplies

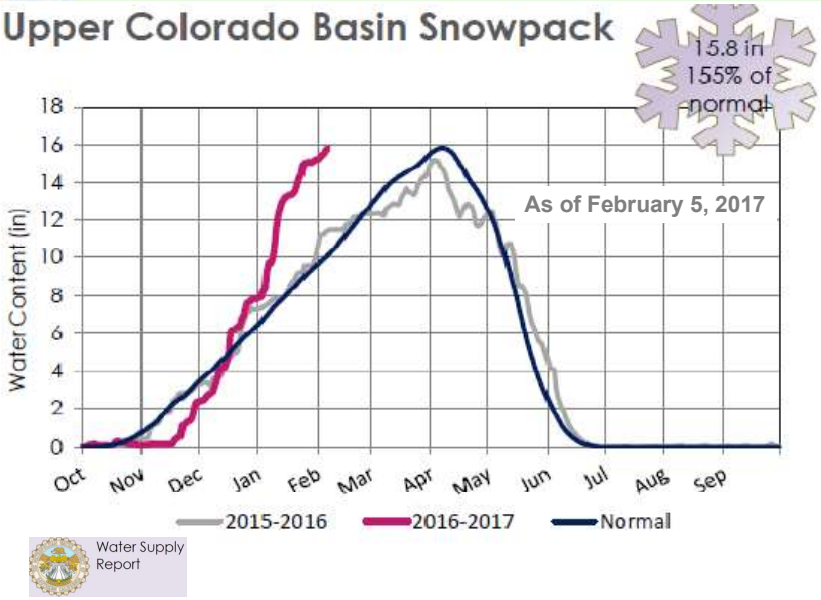
Eastern Sierra Snowpack Conditions



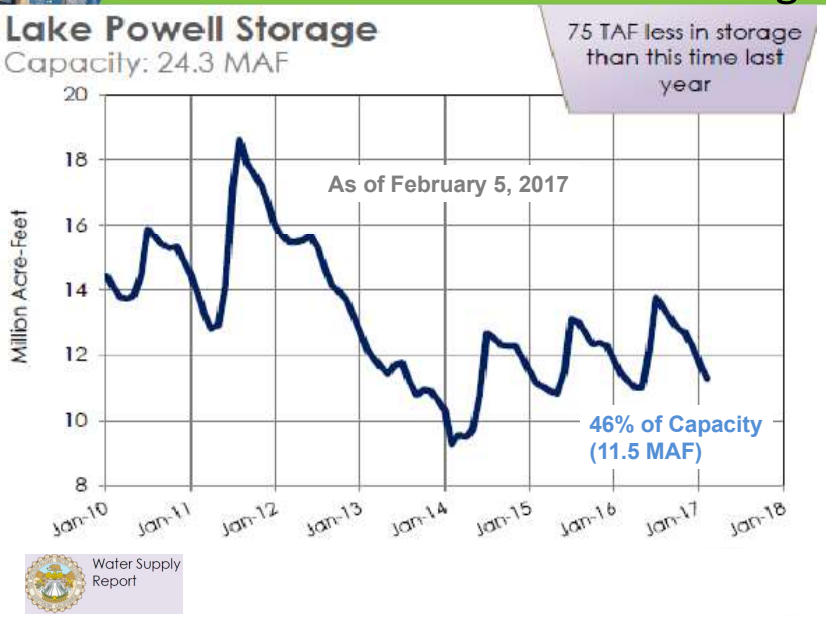
Northern Sierra Snowpack



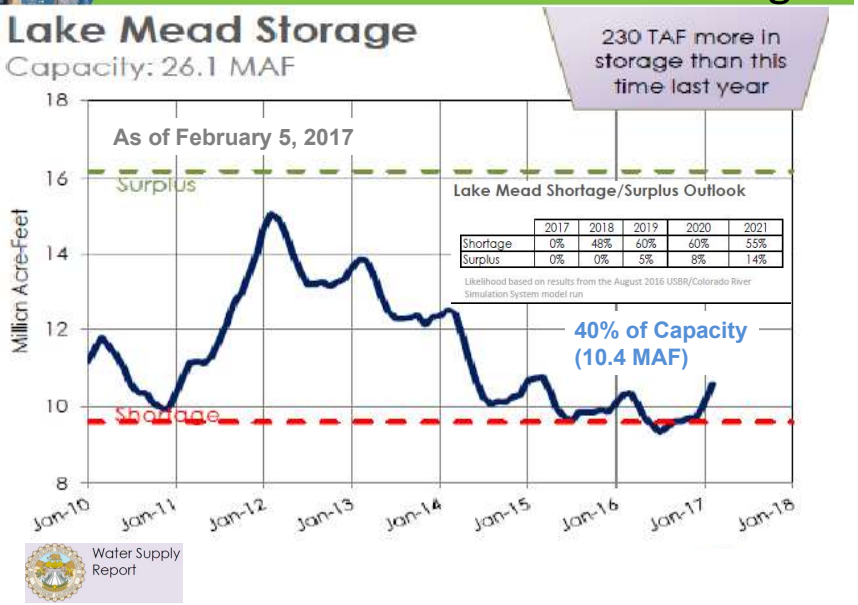
Upper Colorado Basin Snowpack

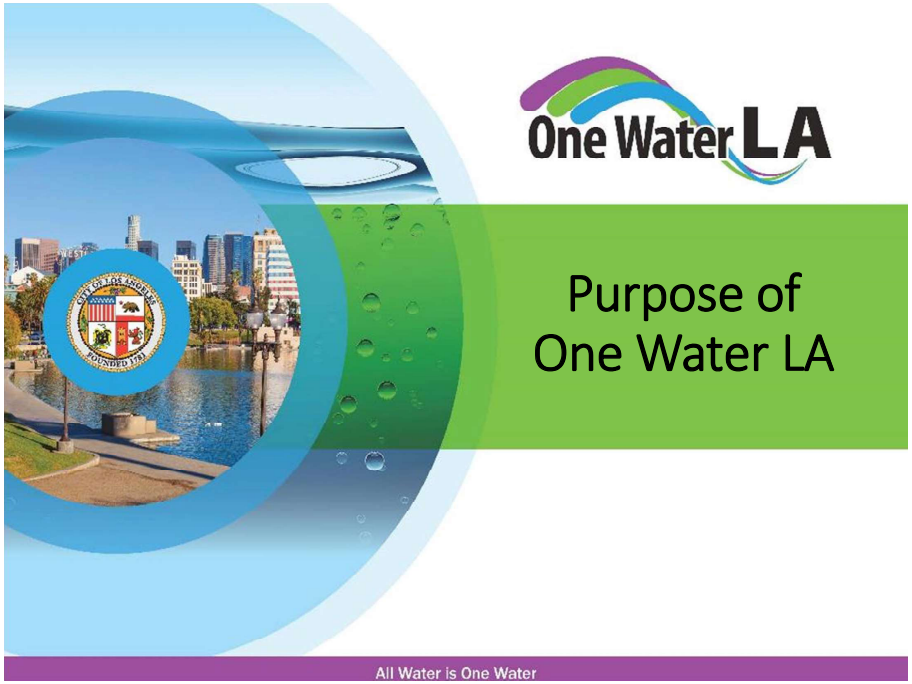


Lake Powell Storage



Lake Mead Storage





LA's Current Water Picture

Approximately 90% of L.A. water supplies are imported

Challenges

- Recurring Drought
- Flooding
- Increasing demand
- Aging infrastructure
- More stringent regulations
- Limited funding
- Dependence on imported water
- Climate change

Sustainable City p**LA**n

- Reduce water use by 20% by 2017
- Reduce purchased imported water by 50% by 2025
- Reduce per capita potable water use by 25% by 2035
- Source 50% of water locally by 2035
- Create Integrated Local One Water Strategy

One Water LA: A central part of LA's efforts to reduce reliance on imported water by increasing local water supply

One Water LA Vision

Collaborative approach to develop an integrated framework for managing the City's watersheds, water resources, and water facilities in an **environmentally**, **economically**, and **socially** beneficial manner.

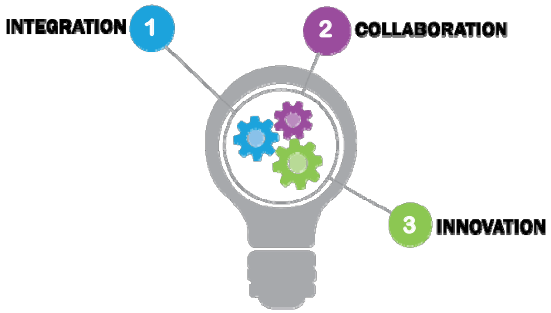
One Water LA

- **Phase 1:** Lay the groundwork *(Completed 2015)*
- **Phase 2:** Develop One Water LA 2040 Plan *(To be completed 2017)*

Phase 1: Objectives

- Integrate **management of water resources** and policies
- Balance **environmental, economic, and societal** goals
- Improve health of local **watersheds**
- Improve local water **supply reliability**
- Implement, monitor, and maintain a **reliable wastewater** system
- Increase **climate resilience**
- Increase **community awareness** and advocacy for sustainable water

Phase 2: Key Considerations



- Water supplies
- Declining sewer flows
- Water quality
- Climate change impacts
- Potable reuse

- Funding
- Regional collaboration
- Implementation of short- and long- term policies
- Balancing LA River and water supply needs

1) Integration

Conserve	Reuse	Capture
Reduce demand and make supply last longer	Non-Potable	Centralized
	Potable	Distributed

2) Collaboration

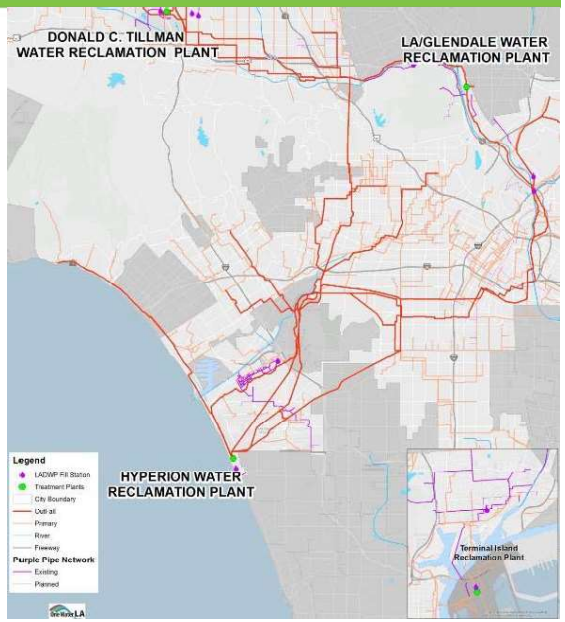
Working Together to Address Complex Issues

- Alternatives Analysis
- Project and Policy Identification
- Funding Strategies
- Partnerships

3) Innovation

Creative Water Management:

- Maximize recycled water production and use from existing water reclamation plants (WRPs)
- Augment sewer flows with runoff to increase water recycling
- Reconfigure sewer alignment(s) to increase flows to WRPs
- New strategically located City-owned satellite water reclamation plant(s)



Benefits

One Water LA: Smarter land use, healthier watersheds, increased efficiency, enhanced communities, climate change resilience, and greater protection of public health.

LIVABLE COMMUNITIES

- Green Streets
- Parks & Open Space

ENVIRONMENT

- Ecosystem Restoration
- Reduced Carbon Emissions

ECONOMIC BENEFITS

- Local Job Creation
- Utility Efficiencies

ENERGY MANAGEMENT

- Lower Energy Needs
- Greener Energy

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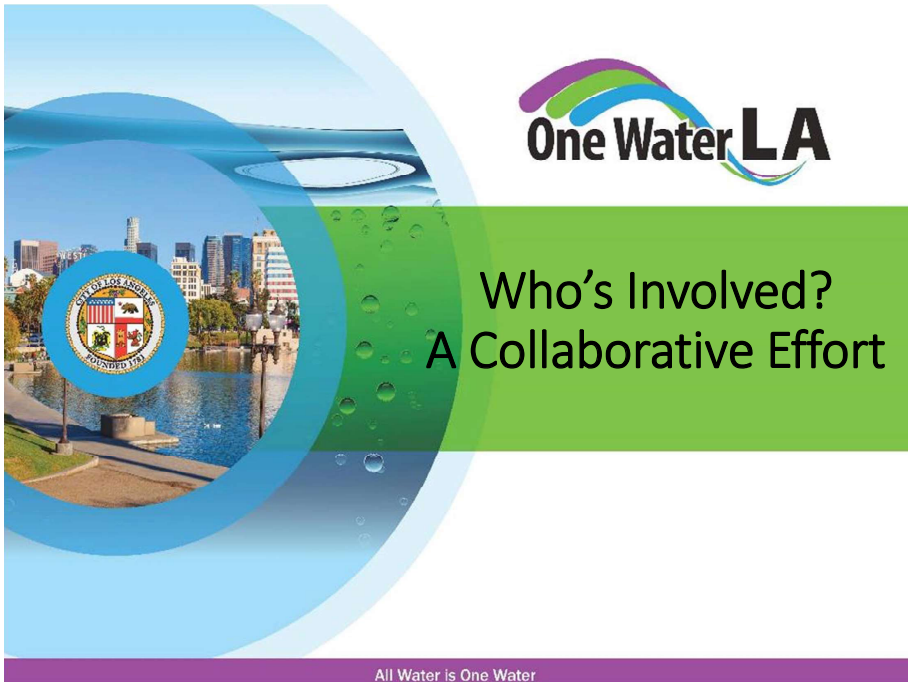
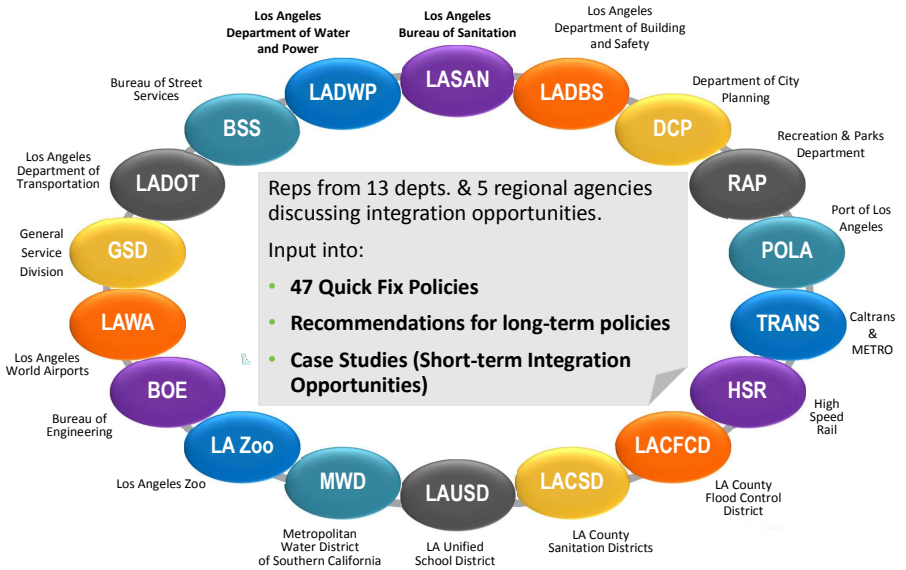


Who's Involved?

Steering Committee



Advisory Group

10 Stakeholder Advisors representing a diversity of groups & interests

Carolyn Casavan *(Sherman Oaks Neighborhood Council)*

Brad Cox *(LA Business Council Institute)*

Ken Murray *(Wilderness Corps)*

David Nahai *(David Nahai Companies)*

Melanie Winter *(The River Project)*

Jack Humphreville *(Greater Wilshire Neighborhood Council)*

Mike O'Gara *(Sun Valley Area Neighborhood Council)*

Veronica Padilla *(Pacoima Beautiful)*

Kelly Sanders *(USC)*

Louise McCarthy *(Community Clinic Association of LA County)*

Receive advice on direction and next steps.

Input into:

- **Vision, Objectives, Guiding Principles**
- **Process and expansion of stakeholder engagement**
- **Policies**
- **Integration Opportunities**
- **Evaluation Criteria**
- **Project Ideas**
- **Progress Report**

Stakeholder Workshops

Forum for stakeholder engagement & involvement to brainstorm ideas, share progress, receive feedback.

Input into:

- **Vision & Objectives,**
- **Guiding Principles,**
- **Water Balance Tool,**
- **Climate Change Polling,**
- **Evaluation Criteria,**
- **Project Ideas, and**
- **Policies,**
- **Creation of Special Topic Groups**

Special Topic Groups

Groups of stakeholders discussing 5 key topics:

1. **Funding**
2. **Outreach & Communications**
3. **Stormwater**
4. **Partnerships & Innovation**
5. **Decentralized/ Onsite Treatment**

Focused Meetings

MAYOR'S REQUEST: "INCLUDE AND ENGAGE ALL CITY DEPARTMENTS"

20+ Departments and Agencies Engaged:

- Water Departments and Agencies
- Transportation
- Construction and Code Enforcement
- Open Space Recreation Education
- Land Use Planning and Community

Already Producing Results:

- **City Engineering Specs allowing recycled water in concrete**
- **Working with Planning on ReCode:LA**
- **Working with LAUSD to increase stormwater capture**
- **Increasing uses for recycled water (LA Zoo)**
- **Leveraging resources among partners**

Special Meetings

Organized to discuss various topics in greater detail.

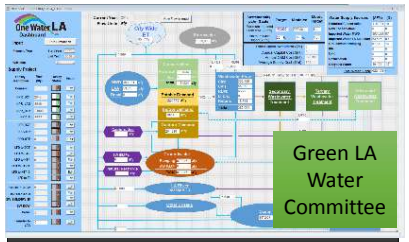
Input Into:

- **Project Ideas Workshop (Nov. 2016)**
- **Stormwater Fee Dialogue (Jan. 2017)**
- **Info/Overview Meeting (today)**

Other Engagement Highlights

Academia

Youth Education – LA Charter School



Non-profits

Business Community

Get Involved

All of us can take action to capture, conserve and reuse water – *Success relies on everyone!*

- Get Involved
- Request a Presentation
- Take Tours
- Share your ideas
- Share with others
- Become a partner

Questions

Do you have any questions

One Water LA 2040 Plan Elements

All Water is One Water

Plan Elements

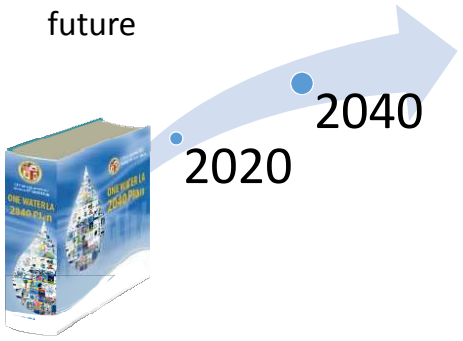
Basis of Planning

Planning Process

- Start with Previous Studies
- Develop actionable plans to implement Objectives & Guiding Principles

Horizon

- **Long-Term Program:** To ensure LA's water future



Mass Balance Tool

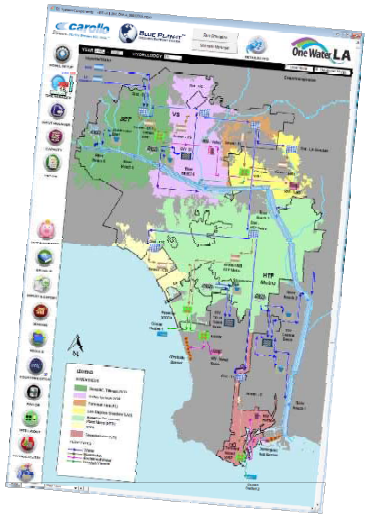
Mass Balance Tool

Purpose

The Tool was developed to support integrated "One Water" planning by quickly calculating the city-wide flow changes for a variety of future conditions.

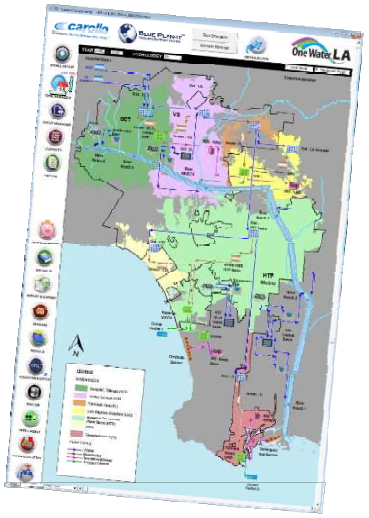
Key Components

- First-ever flow balance of LA's entire Water Cycle
- Collaborative data effort of multiple departments
- Annual flow projections from 2015 to 2040
- Normal, wet, and dry year hydrology
- Potential Future Facilities/Concept Ideas
- High Level Unit Costs



Mass Balance Tool – Flow Components

Water Type	Flow Components
Water Supply	LA Aqueduct Deliveries, MWD Purchases, Groundwater Pumping, Water Conservation
Potable Water	Indoor demands Outdoor demands
Wastewater	City wastewater flows, Contract Agencies flows, RDII, Treatment Plant flows
Recycled Water	NPR (Purple Pipe use), Environmental Use, RW flows by treatment plant Future IPR & DPR
Stormwater	Rainfall, Runoff, Natural Infiltration, Stormwater Recharge via BMPs
LA River Flows	Stormwater, WRP discharges, Flows by Reach
Groundwater	Groundwater pumping, Stormwater recharge by Basin



Status & Next Steps

Model Development
Existing Flows (2015)
Future Flows (2015 UWMP)

✓

Model Validation
Wet Year (2001)
Normal Year (2005)
Dry Year (2007)

✓

Model Future Concept Ideas
Model New Routing Options
Input Flows & Cost

In Progress

Long-Term Strategies Portfolio Evaluation

What-if Analysis Dashboard

Collaborative Development

Climate Resilient Infrastructure

What are Climate-based Infrastructure Risks?

Basic Climate Conditions

- Temperature Increase
- High Winds
- Precipitation
- Sea Level Rise
- Earthquake
- Tsunami

Threats To Assets

- Power Outages During Peak Demand
- Severe Drought/ Water Rationing
- More Frequent & Intense Wild Fires
- Mudslides / Landslides
- Localized Flooding/ Erosion
- Coastal Flooding/High Tides/ Storm Surges
- Prolonged Power Outage/ Lack of Fuel

Risks to Assets

- Property/Structural/ Equipment Damage
- Loss of Power
- Interrupted Service and Process Operations
- Emergency Fuel Depletion
- Inundation/Loss of Access
- Regulatory Non-Compliance
- Loss of Revenue

Determining Climate Risk

How do future climate conditions impact the City's wastewater and stormwater assets through 2040?

Site visits

↓

Review ex. climate impact assessments

↓

Climate science modeling (EPA's CREAT model)

↓

Identify Vulnerability: WW & SW infrastructure and systems

Site visits conducted to assess vulnerable facilities & identify practical, cost-effective measures to mitigate climate threats.

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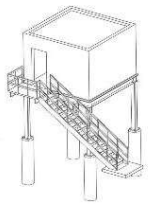
Status & Next Steps

Analysis at Terminal Island and LA Glendale Reclamation Plants



Conveyance system Analysis – Various pump stations

Climate Evaluations, Risk, Impacts, & Assessments ✓

↓

WW, SW, & Conveyance Evaluations & Analysis ✓

↓

Infrastructure Options, Strategies, Funding & Recommendations — **85% Complete**

↓

Present recommendations to Management & Mayor's office

Near-Term Integration Opportunities

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Near-Term Opportunities

Near-term Integration Opportunities are within the next **1 to 5 years.**
For the purpose of:

- Demonstrating the **advantages of collaboration** and
- Developing an **institutional framework** to **streamline collaboration** among departments & agencies.
- Iterative process that **selected top 4 case studies from 44 initial ideas**

Top Four Case Studies

Recycled Water and Stormwater for the LA ZOO

Distribution of Advanced Treated Recycled Water to LAX & Vicinity

Capture of Off-site Stormwater at a School Site

LOS ANGELES UNIFIED SCHOOL DISTRICT · BOARD OF EDUCATION ·

Rancho Park

Four Near-Term Case Study Projects

Rancho Park
- On-Site WRP
- Recycled Water & Stormwater for irrigation
- Agencies: LASAN, LADWP, RAP

Recycled Water & Stormwater for the LA Zoo
- Recycled Water for irrigation, exhibits & restrooms
- Stormwater capture opportunities within Zoo
- Agencies: LA Zoo, LADWP, LASAN

Distribution of Advanced Treated Recycled Water to LAX & Vicinity
- Advanced Treated Recycled water for Terminals and Cooling Towers
- Agencies: LAWA, LADWP, LASAN

Capture of Off-Site Stormwater at a School Site
- Stormwater capture for infiltration on School Site
- Agencies: LAUSD, LASAN
- Location: TBD

Status & Next Steps

For each Case Study documented:
- Objectives & Benefits
- Implementation Considerations
- Agreements & Policies
- Cost Considerations
- Schedule

Case Study Development Process & Descriptions ✓

Task 3 Technical Memorandum (Draft) ✓

Input from Steering Committee

Task 3 Technical Memorandum (Final) — **In Progress**

Part of One Water LA 2040 Plan, Further Studies TBD

Mayor's Office & Water Cabinet Support

Implementation & Replication

Long-Term Integration Opportunities

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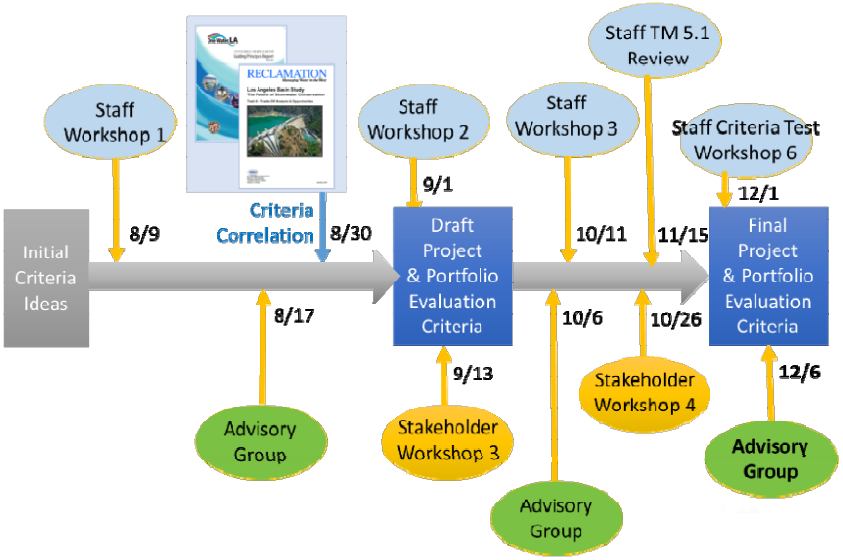
Evaluation Criteria

Evaluation Criteria are used to **balance environmental, economic, and societal goals** when comparing future project concept options

4 Categories and 18 Criteria

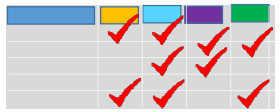
Economic Criteria	Resiliency Criteria	Implementation Criteria	Environmental Criteria
• Unit cost • Financial benefits • Funding mechanism • Likelihood to obtain outside funding	• Drought resiliency • Earthquake resiliency • Flood risk mitigation • Local supply benefit • Energy Impact/ GHG Emissions	• **Constructability** • **Institutional collaboration** • **Regulatory approval** • **Public engagement** • **Public and political support**	• Environmental justice • Open/natural space and recreational benefit • Stormwater quality • Ecological benefit

Rigorous Criteria Development Process



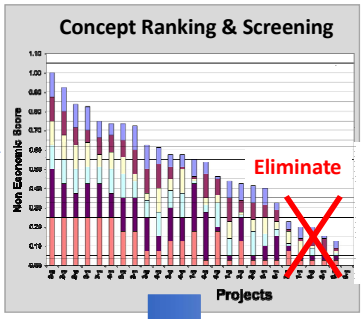
Evaluation Criteria Screen Concepts

Concept Scoring

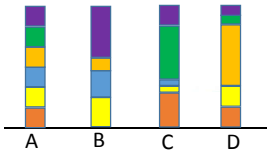


1. Calculate Total Benefit Score per concept
2. Rank concepts based on Total Score
3. Select concepts for Portfolio Evaluation

Concept Ranking & Screening



Themed Portfolios



Types of Concept Options

Regional Stormwater BMPs

Distributed Stormwater BMPs

Groundwater Replenishment (IPR)

Non-Potable Reuse (NPR)

Stormwater to Sewer (LFDs)

Advanced Treatment (IPR/DPR)

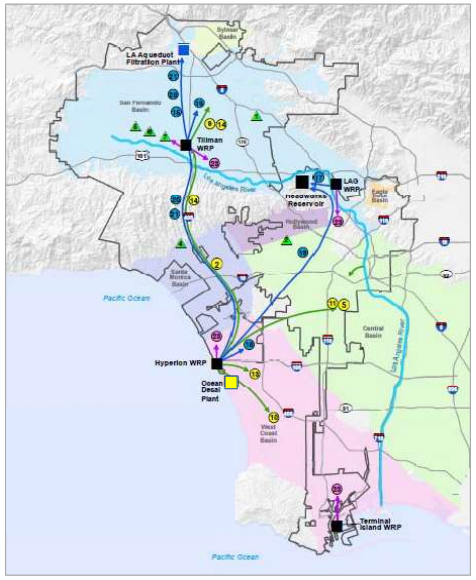
LA River Storage & Reuse

Ocean Desalination

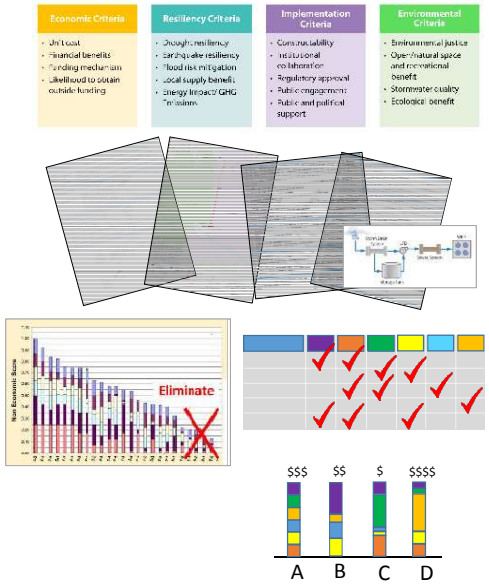
Concept Options Evaluation

Types of Concepts	No.
Stormwater	8
IPR	6
DPR	7
Other	4
Total	**25**

Evaluation process will identify the most beneficial strategies (i.e. projects & programs) to achieve long-term goals



Status & Next Steps



Criteria Development; Identify Concept Options ✓

Concept Options Development: Descriptions, Schematics & Maps, Cost Estimates ✓

Concept Option Evaluation: Use of Criteria to Compare Benefits of Concept Options — **In Progress**

Long-Term Strategies Portfolio Evaluation

One Water LA

Wastewater Facilities Plan

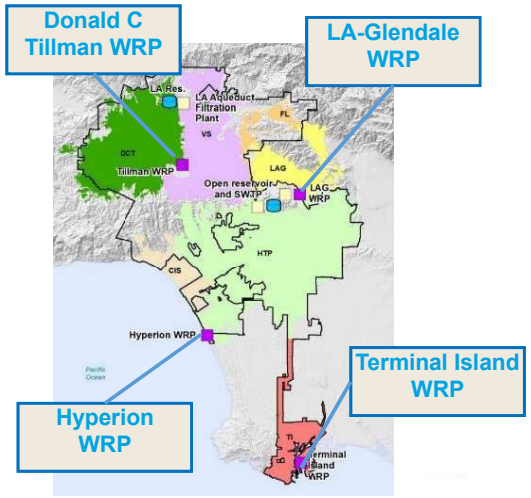
Wastewater Facilities Plan

Purpose

Develop facility plans for the 4 reclamation plants to address future system needs through 2040

Why are we doing it?

Implement, monitor, and maintain a reliable wastewater system that safely conveys, treats and reuses wastewater while also reducing sewer overflows and odors

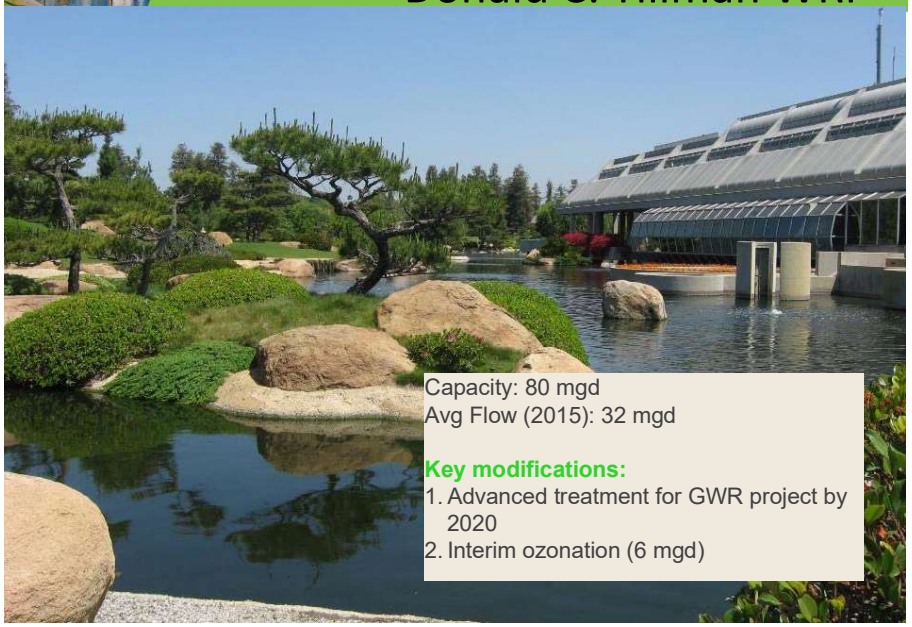


Hyperion WRP

Capacity: 450 mgd
Avg Flow (2015): 240 mgd

Key modifications:
1. Increase delivery to West Basin (70 mgd)
2. AWPF by 2019 (2-5 mgd)
3. Change NDN treatment process to Tertiary Plus or Advanced for IPR/DPR in the future

Donald C. Tillman WRP



Capacity: 80 mgd
Avg Flow (2015): 32 mgd

Key modifications:
1. Advanced treatment for GWR project by 2020
2. Interim ozonation (6 mgd)

LA-Glendale WRP

Capacity: 20 mgd
Avg Flow (2015): 19 mgd

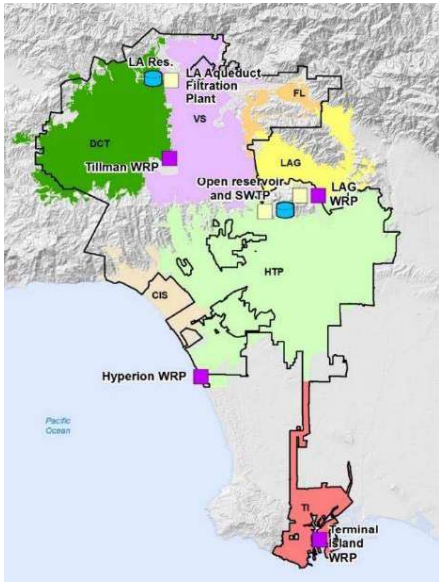
Key modifications:
1. 5 MG equalization tank to increase water recycling
2. Recycled water expansion to Elysian Park and Downtown LA

Terminal Island WRP

Capacity: 30 mgd
Avg Flow (2015): 14 mgd

Key modifications:
1. Expansion to 12 mgd of Advanced Treatment
2. Full Advanced Treatment
3. 100% Reuse with Harbor and Intrusion Barrier

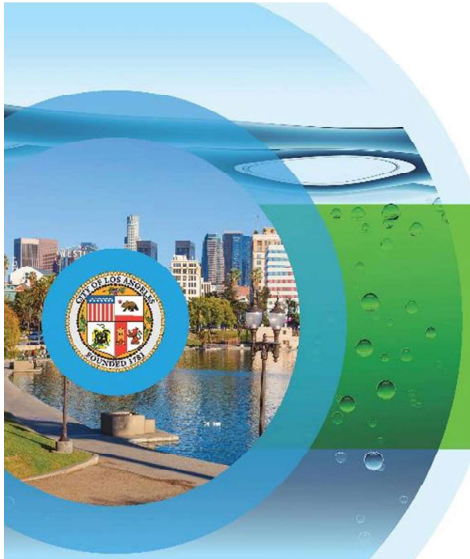
Status & Next Steps



Facilities Plan Technical Memorandums: Discuss specific processes, identify issues and needs ✓

Future System Needs Technical Memorandums: Identify upgrades & additions — **In Progress**

CIP Prioritization Technical Memorandum: Develop short, mid & long term CIPs

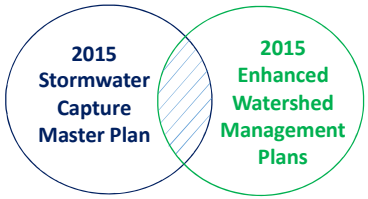


One Water LA

Stormwater Facilities Plan

All Water is One Water

Plan Status & Next Steps



Data Gathering
Stormwater Flows & Events
Stormwater Conveyance System ✓

System Consideration
Stormwater System Analysis
Capital Improvement Program — **In Progress**

Stormwater & Urban Runoff Facilities Plan — **In Progress**

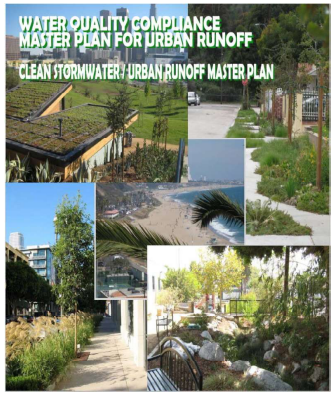
3-Legged Stool Approach

A Stormwater and Urban Runoff Facilities Plan integrates previous planning efforts and utilizes a 3-legged stool approach to prioritize over 1,000 projects (consisting of both centralized and distributed stormwater projects) based on flood protection, water supply and water quality benefits.

What is the 3-Legged-Stool Approach?

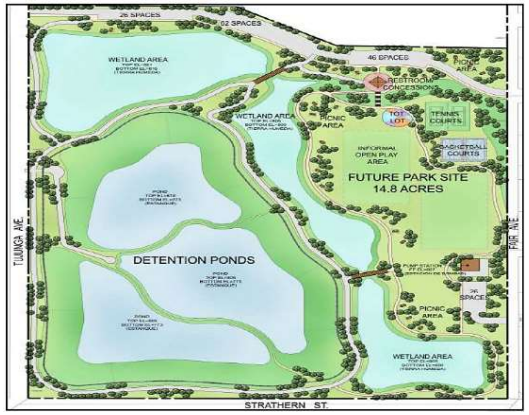
Stormwater Management

For every $1 Million in Water Quality investments, there is up to $22 Million in added benefits or avoided costs.



Example of Regional Integrated Project

Rory Shaw Wetlands Park – *A collaborative project led by LA County in collaboration with City of LA and other partners*



Project area:
46 acres
Upstream drainage area:
929 acres
Expected water capture & use:
900 ac-ft

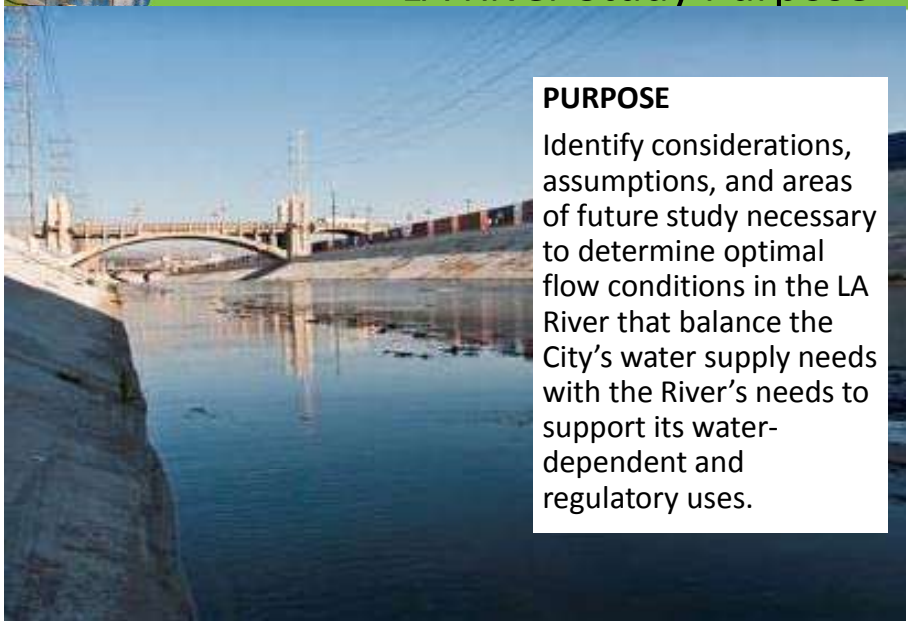
Example of Distributed Project

Riverdale Green Street

- Infiltration units capture runoff from 14 acres of residential land
- Parkway landscaping features drought-tolerant native plants

Additional Studies: LA River

LA River Study Purpose



PURPOSE

Identify considerations, assumptions, and areas of future study necessary to determine optimal flow conditions in the LA River that balance the City's water supply needs with the River's needs to support its water-dependent and regulatory uses.

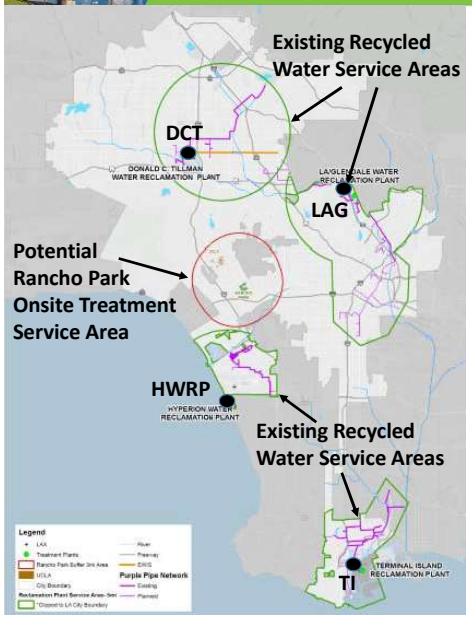
Additional Studies: On-Site Treatment

LA River Flow Study Outcomes

The key study outcomes are:

- **Understand existing low flow conditions** in the LA River over the last 3 years.
- **Estimate the potential range of low flow conditions** – considers projected changes in runoff management and wastewater flows through 2040.
- **Gain understanding of water budget assumptions in the ARBOR Study** (Area with Restoration Benefits and Opportunities for Revitalization)
- **Develop conceptual adaptive water management alternatives** that provide flexibility in the management of river flows and allow water supply opportunities.
- **Identification of future study needs** to determine optimal flow conditions that balance needs

On-Site Treatment



Objectives:

- Mayor's Executive Directive No. 5
- Significant non-potable water demand identified (2012 Recycled Water Master Planning [RWMP]documents)
- Ballona Creek EWMP and TMDL compliance

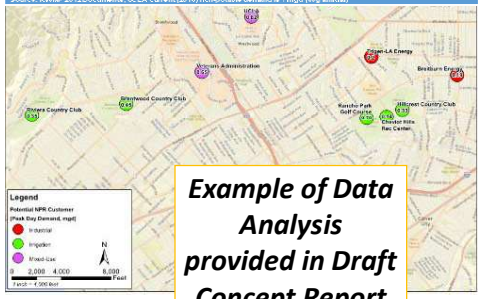
Concept Components:

- Stormwater capture and treatment concept
- Satellite water reclamation facility (WRF) concept
- Concept Nexus

Status & Next Steps

Customers	Type of Use	Annual Demand (AFY)	Annual Demand (mgd)	Peak Day Demand (mgd)
UCLA*	Mixed-Use	540	0.48*	0.82
Veterans Administration	Mixed-Use	490	0.58	0.85
Rancho Park Golf Course	Irrigation	400	0.36	0.75
Brentwood Country Club	Irrigation	230	0.21	0.45
Rivera Country Club	Irrigation	180	0.16	0.35
Trigen-LA Energy	Industrial	170	0.15	0.30
Hillcrest Country Club	Irrigation	170	0.15	0.33
Braitburn Energy	Industrial	165	0.15	0.32
Los Angeles Country Club	Irrigation	140	0.12	0.27
Chevlet Hills Rec Center	Irrigation	70	0.06	0.14
Non-Anchor Customers (30)		341	0.30	0.60
Total		2,836	2.53	4.80

*Source: RWMP 2012Documents; UCLA current (2016) non-potable demand is 1 mgd (avg annual)



Example of Data Analysis provided in Draft Concept Report

High-Level Draft Concept Report (Input from UCLA, LASAN, LADWP, and Rec & Parks) ✓

Request for Information; Alternatives Analysis — **In Progress**

Refinement of Concepts; Data gaps; Needs for further Investigation — **In Progress**

Opportunities for Collaboration

Policies

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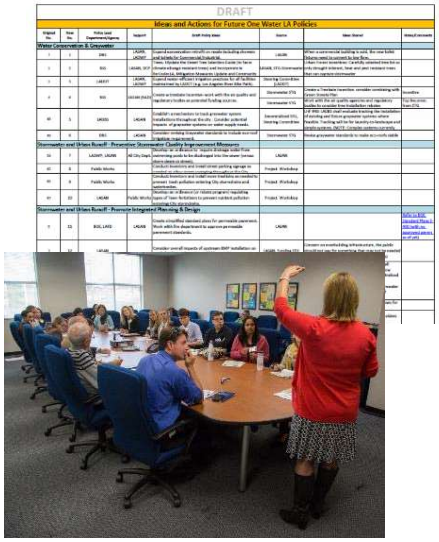
One Water LA Policies

- Purpose – Develop Policies that increase collaboration and help implement the One Water LA vision and objectives
- Ideas have been collected from many sources
- 84 Policy ideas presented and discussed in breakout sessions at December 13 Workshop


DRAFT

Ideas and Actions for Future One Water LA Policies

Types of Policy Ideas Suggested

- Promote Integrated Planning and Design
- Stormwater and Urban Runoff
- Training and Education
- Improve Collaboration and Streamline Implementation
- Funding and Partnerships
- Sustainability and Climate Change Resiliency
- Water Conservation, Recycled Water
- LA River Revitalization

Status & Next Steps

Review and Refine Ideas Gathering & Polishing ✓

Policy Development: Connect ideas to guiding principles, sort policies from programs — **In Progress**

Determine where ideas best fit in the One Water LA Plan

Discuss ideas with Steering Committee and Water Cabinet

Funding Strategies

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Funding Opportunities

Opportunities include: Federal, State, Local, and Private in the form of Grants, loans, & partnerships

Such as…

- Water Infrastructure Improvements for the Nation Act (2016)
- Measure M
- City of LA's sidewalk repair program
- LA County's Park Bond
- State of California's Proposition 1
- EPA Loan Program - Water Infrastructure Finance and Innovation Act (WIFIA)

YES ON M

YES ON A FOR LOCAL PARKS

U.S. DEPARTMENT OF HOMELAND SECURITY FEMA

PROP 1 GOVERNOR EDMUND G. BROWN, JR. WATER BOND 2014 RELIABILITY | RESTORATION | RESILIENCE

Collaborative Funding Approach

- Seek outside funding for the City of LA's water projects
- Potential water-focused Funding Office
  - Enhance water resiliency and economic security
  - Build off of existing City- department projects lists
  - Explore City-focused public-private partnerships
  - Verify funding application viability, resources, development and submittal

Status & Next Steps

STG Funding Strategy ideas, recommendations and input ✓

Funding Strategies Development and Recommendations — 75% Complete

Water Funding Office Recommendations — 75% Complete

Internal & expert review

Present recommendations to Management & Mayor's office

Implementation Strategy

Implementation Strategy

RECOMMENDATIONS

- Near-Term Integration Opportunities
- Long-Term Concept Option Recommendations
- Wastewater Facilities Plans Recommendations
- Stormwater Facilities Plan Recommendations

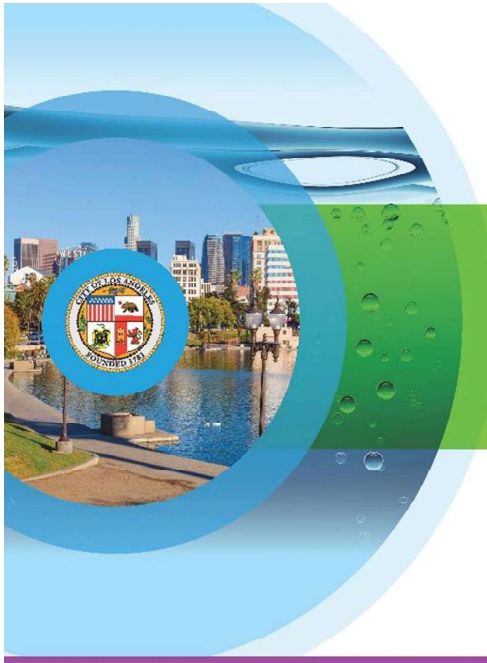
TRIGGERS

Growth; Flows & Demands; TMDL Deadlines

One Water Plan Recommendations
- Projects
- Programs
- Policies

IMPLEMENTATION STRATEGY

Sustainability pLAn Targets; DPR Regulations; Funding & Other



One Water LA

Next Steps & Upcoming Events

The "One Water LA Progress Report"

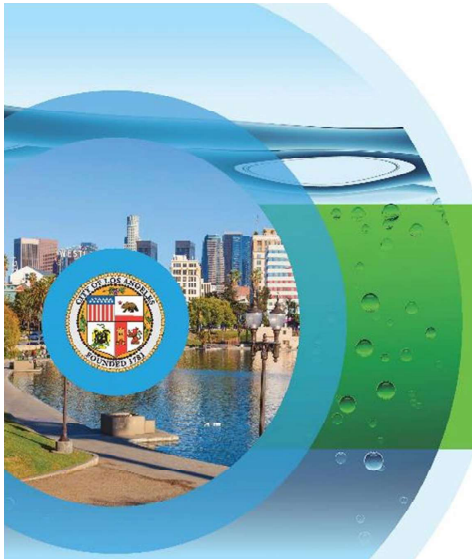
- High-level overview
- Purpose of One Water
- Progress since 2014
- Serve as a communication tool
- Approx. 50 pages of highlights

Upcoming Workshops & Meetings

- 3/1 - Steering Committee Meeting
- Early March - Advisory Group Meeting to discuss Draft Progress Report
- Mid March - Wastewater & Stormwater Facilities Plans Special Meeting

Other Upcoming Events

- One Water LA Day, April 11th
- Earth Day, April 22nd
- Young Citizen Artists Project (tbd)



One Water LA

Meeting Close

Additional Information:
www.onewaterla.org
onewaterla@lacity.org

INFORMATIONAL STAKEHOLDER MEETING #2 (05/11/17)

The following pages present the summary of the meeting discussion, and the presentation given at the Informational Stakeholder Meeting #2, held on May 11, 2017.

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CITY OF LOS ANGELES
One Water LA
Stakeholder Informational Meeting (Phase 2)
Thursday, May 11th, 2017 1:00 pm -3:30 pm
Media Center (Training Room)
Meeting Summary

This summary is not intended to be a transcription of the One Water LA Stakeholder Meeting. This summary generally expresses the sentiment and information provided by those that attended.

Please refer to attachments for additional information regarding this summary.

INTRODUCTIONS:

Hampik Dekermenjian (CDM Smith) was the meeting facilitator and he reviewed the agenda and meeting objectives. The Stakeholder Meeting agenda was organized as follows:

1. Wastewater Facilities Plan
    - Overview
    - Existing and Future Conditions
    - Q&A
2. Stormwater and Urban Runoff Facilities Plan
    - Overview
    - Existing and Future Conditions
    - Q&A

1. Wastewater Facilities Plan

Please refer to Informational One Water LA Overview PowerPoint Presentation (Slides 22-32)

The One Water LA Wastewater Facilities Plan approach was presented to attendees. Key items presented regarding each of the City's Water Reclamation Plants are summarized below:

- The Wastewater Facilities Plan is looking at the needs through 2040 and how to optimize the use of the City's water assets, specifically recycled water.
- The Wastewater Facilities Plan is being developed by leveraging previous plans, including:
    - 2016 Water Integrated Resource Plan
    - 2012 Recycled Water Master Plan
    - 2015 Urban Water Management Plan
    - FY 2015/16 Recycled Water Annual Report
- The Facilities Plan Table of Contents was presented (Slide 6)
- *Characterization of the Collection system is a significant technical memorandum being completed.*
- Background – City's four water reclamation plants and 7 sewersheds

    - Hyperion Sewershed *(includes DCT and LAG due to by-passing option)* has 6,000 miles of sewers
    - Terminal Island Sewershed has 240 miles of sewers
- Wastewater flows, existing and projected were presented (Slide 9)
- Climate resilient infrastructure – field visits to all four water reclamation plants were done to access the vulnerability of the City's infrastructure due to Climate Change. The research findings were presented (Slide 11).
- The City's Wastewater Reclamation Facilities (WRFs) will help the off-set the purchased water demand by supplying recycled water to industrial users and for irrigation water demand. The estimated reductions in MWD purchases (pie charts) was presented (slide 13)
- Key drivers of Wastewater Reclamation Plant decisions: regulations, triggers, Mayor's directives, climate resiliency.

Q&A

Question: How was the vulnerability of the treatment plants located in the coastal area addressed?

Response: The team used the EPA CREATE tool to evaluate City's stormwater and wastewater infrastructures over the next 50 years to determine what upgrades are needed for climate resilience. Through the One Water LA Climate Resiliency study, the team looked at a number of measures including elevating the electrical systems and pump stations to make sure the infrastructure is protected against flooding and sea level rise.

Question: How is the Los Angeles County involved in this effort?

Response: The City of LA has 29 contracting agencies, which include the County, that discharge their wastewater to Hyperion WRF. The wastewater flows are accounted for in the Wastewater Facilities Plan.

Question: Is the EPA CREATE pilot still ongoing?

Response: The pilot was initially for Terminal Island and it concluded last year. One Water LA expanded the research to all of the City's stormwater and wastewater facilities and we are expecting the final report sometime next month.

Question: Due to water conservation, how are you able to project the increased capacity when in fact you don't have enough water in the system? You don't need to expand facilities so much rather upgrade to meet future treatment requirements, more focus on upgrades.

Response: The recommended upgrades are mostly due to repairs, facility needs and future recycled water demands. The facilities plan also considers SCAG population projections to determine future needs and necessary upgrades.

Question: LA River needs a certain amount of water to maintain its viability for wildlife habitat and to keep Waters of the United States status. How far along is anyone in terms of modeling the LA River in

terms of what is a viable flow rate? Most of the water comes from the LAG and DCTWRP plant. Is anyone looking at the necessary flows to maintain the LA River?

Response: Several studies have been done including the ARBOR study by US Army Corp of Engineers, a UCLA Study, and a Nature Conservancy study. The One Water LA Flow Study is evaluating the historical low flows of the LA River and adaptive management strategies to balance water supply and river needs for the future. There is no comprehensive study that tells us how much water the river needs, that would need to be an extensive future biological study. We recognize that more studies are required.

Question: Where is the involvement of the EWMP partners? You are not addressing your partners.
Response: The EWMP partners are involved through the One Water LA Steering Committee (City Departments and Regional Agencies.

Question: It is not clear looking at 2040 horizon, how much water is still leaving Hyperion and going into the ocean? Have you looked at the feasibility of capturing all of the water and pumping higher in the watershed using alternative sources of energy?

Response: This is included in our One Water LA Long-term alternative analysis. In our Long-term alternative analysis we are looking at maximizing Recycled Water, IPR, DPR, Stormwater Capture and other types of concepts for the future. All are invited to attend the next stakeholder workshop where we will be discussing the alternatives in more detail.

Question: Why are only the four treatment plants shown in the plan? Is this plan only for the existing plants?

Response: Other concepts are considered in the long-term analysis.

- The goal of today is to review the Wastewater and Stormwater Facilities Plan.
- This presentation is in the context of the existing wastewater facilities and what needs to be done to plan for the future.

Question: Where are you getting the wastewater flow projections?

Response: Estimates on 2040 wastewater flows are based on future population projections. Water conservation is also being considered. The water conservation projections are from the 2015 Urban Water Management Plan (UWMP).

The Water Balance Tool is also being used to consider wastewater flow projections. The tool uses existing and projected input data to see the flow balance in the future.

Question: For facility upgrades, will there be an increase in the quality of the water that is being treated?

Response: Terminal Island WRP already treats to advanced treatment. Donald C. Tillman WRP will move to advance treatment due to the Groundwater Replenishment Project. The two remaining plants, Los

Angeles-Glendale and Hyperion currently treat to a tertiary level and secondary level, but we looking for additional future opportunities. This will depend on the future regulations for what are the allowed uses of advanced treated recycled water. Pollutants of concern would be treated by using advanced treatment.

There is a small scale demonstration project that will take place at Hyperion that will treat 1-2 MGD and deliver advanced treated water to Los Angeles Airport and Scattergood. We are looking into other opportunities for the future for Hyperion WRP.

West Basin also does advanced treatment using Hyperion flows.

Question: How is Funding a Trigger?
Response: Funding is shown as a trigger because we are looking at outside funding opportunities to trigger some projects.

Question: If we are expecting additional flows into the system, how much of that water will be recycled?
Response: The UWMP goal is to recycle approximately 70 mgd for 2040. This is for non-potable uses and other environmental uses, but there may be other types of uses in the future.

Question: What's missing in the map is the projection of how much water goes into groundwater. This needs to be shown as part of your future flow projections.

Response: One Water LA is considering the GWR project and other planned projects as part of the long-term alternative analysis and the flow impacts of those projects.

Recommendation: It would be great to see the breakdown of the effluent flows from Hyperion, and as you evaluate the future conditions, showcase what the options are for the remaining effluent.

2. Stormwater and Urban Runoff Facilities Plan

Please refer to Informational One Water LA Overview PowerPoint Presentation (Slides 33-83)

The One Water LA Stormwater and Urban Runoff Facilities Plan approach was presented to attendees. Key items presented are summarized below:

- Purpose: To address future Stormwater system needs for 2040. This includes Grey and Green Infrastructure.
- Stormwater Facilities Plan looks to address water supply, water quality, flood protection, and sustainability. This includes stormwater flows from outside the City's boundary.
- The plan is leveraging existing efforts, which include:
    - Stormwater Capture Master Plan
    - Enhanced watershed Management Plans
    - LA Basin Stormwater Conservation Study
    - LA River Ecosystem Restoration Integrated Feasibility Report
    - And More (slide 37)

- Presented examples of both grey and green infrastructure
- The results presented in today's meeting are still draft and are in the process of being finalized.
- Established a Dynamic 5, 10, and 25 year Stormwater Improvement program by using 1,201 planned/potential projects from other CIPs. 308 projects out of the 1,201 meet the "three-legged stool" criteria (water quality, water supply, flood risk mitigation)
- Project Cost and Operation and Maintenance Cost were presented (Slides 48 and 49)
- Funding Assumptions were also presented; projected funding sources may include:
    - $28M/YR SPAF - Stormwater Pollution Abatement Fee
    - $2M/YR in grant funding
    - $1.2M/YR developer plan review fees
    - Upcoming LA County funding measure - LA County Fee $54/parcel/year, 1.4M parcels (escalated with inflation)
    - Measure A for parks, G.O. general obligation bond for open space projects
    - Measure M
    - Other: Taxes (sales, Gas, etc.), Volunteerism, Private Property Participation and more.

Q&A

Question: How many of the Stormwater Facilities Plan projects are associated with the LA River revitalization program? Some of the Army Corp grants or other federal grants can help fund those types of projects.
Response: Many of the projects impact the LA River because of the tributary component. The projects listed are primarily from LADWP, LASAN, BOE, and LA County. Some of the projects from BOE are from the LA River Revitalization Plan.

State government could help fund some LA River related projects. One Water LA will add other federal funding opportunities as a potential funding source.

Question: Has there been a study that looks at what the needs are for the LA River, besides TMDL water quality requirements, to help sustain the wildlife in the LA River.
Response: There are actual targets for the LA River's water quality, but habitat and recreational targets need to be more defined. More research needs to occur to properly define those targets and goals.
Question: Is the City planning to take advantage of the local return funds from Measure M for green street projects and to what degree?
Response: Yes, the City will continue the conversation and increase those negotiations. The numbers presented today are still in draft form, but the final document will clarify the percentage of funds that will be spent for regional, local, and green infrastructure make sure to clarify how we arrived at $20 Million.

Question: Why is the funding amount for Measure M a fixed amount? As the City grows, transportation efforts will also expand, the amount funds for Measure M should not be fixed.

Response: The numbers will most likely be revised to provide a range of funding instead of a fixed amount. The assumptions will be clearly defined in the final document. We will take your input from today and return the information to those working on this section of the Stormwater Facilities Plan.

Question: Are all the projects that were presented needed to meet compliance requirements or just potential projects? Are you looking alternative scenarios? Will you also look at how the cost will end up when you look at the different scenarios?
Response: Not all projects are for compliance. Some also achieve multi-benefits including water supply.

Projects will have varying alternatives, and as plan evolves, it will be revisited every 5 years. The cost will change as the plan gets revisited.

Question: Please clarify your statement on Measure A and Measure M. Will you be tracking the location, benefits, design, objectives, etc. so that we are maximizing the benefits of the park bond (Measure A)? The park bond is a big opportunity to help meet the City's objectives but it will require cross-sector collaboration.
Response: Measure A is for parks and parks can help meet water quality and water supply needs. We anticipate that about $5M/year could go into these projects and help meet the obligations of the projects.

Measure M will also help decrease the overall obligations. As these transportation projects are constructed they will be required to add LID or greenstreet to capture stormwater under the upcoming public right-of-way LID Ordinance. We are collaborating with other agencies related to Measure M, Measure A or any other effort, to identify opportunities for stormwater capture in the public right of way and develop new standard plans. If there is opportunity to add green elements, then we will work with them to have an integrated approach.

Comment – It is hard to make comments without seeing the project details. Measure A has great potential but it needs time and attention from the City to make sure it happens.

Response: Most of the projects have been seen before as they are part of the EWMPs or the Stormwater Capture Master Plan.

Question: Will there be a live map of all of the projects for the public to see the location, type and impacts of the projects?
Response: Yes, we are looking into the feasibility of having an online interface with all of the projects. One of the recommendations is to add performance metrics so you can see the amount of acres captured, location, sub- watershed, progress, and more of each project. This will be for the public to see where green street projects are needed and we can approach it as a City effort all together.

Question: Operations and Maintenance looks like a constant amount, why is that bar not increasing?
Response: O&M should be increasing with time. The graph will be updated to display that more clearly.

Question: Interest rates are still at historic lows, you are currently using 4.5% - 5% as the assumption, is there any option to frontload the debt to take advantage of the current interest rate climate?
Response: That is a good point. We will take your input and bring it up with the economist working on the plan.

Comment: EWMPs are voluntary programs that cost over $7B dollars for beneficial uses; Regional Board; modeling poor, data is incomplete, legal quagmire, will be shot down by the end of the year; let's spend our money, MICLA, O&M costs except for special parcel tax will come out of the general fund. Where is the analysis of the budget? We really can't afford this. Most of it isn't necessary. We can just pick up trash. Our City doesn't manage itself well. We need infrastructure that works.

Question: How is sustainability playing into the Stormwater Facilities Plan? Will you be ranking the projects based on the carbon footprint (Neutral/positive/negative)?
Response: We are evaluating potential policies in the overall plan that considers the types of materials used for construction.

We are considering the projects energy use in the long-term alternatives analysis of One Water LA.

Question: Appreciated financing discussion. There are only 800, 000 parcels in the City of Los Angeles and there are 2.3 million in the County per the County Assessors report. Where is the $7.3 Billion number coming from? And where is the O&M coming from?
Response: Not all of the $7.3 Billion is in the stormwater facilities plan. The EWMPs are being included in the One Water LA long-term analysis, but the $5.6 Billion ($5.6 out of the $7.3 Billion) is in the Stormwater Facilities Plan.

We are currently in the phase of optimization, and by definition that is the capital expenditure coming from Prop O. The general fund pays for cost recovery associated with Operations and Maintenance, it is a non-accessible fund.

Question: How are public-private partnerships going to be structured to support this program? Which contractors? What is the structure for public bidding process?
Response: One of the One Water LA's potential policy recommendations is to develop a framework for public-private partnerships.

Question: Does the Operations and Maintenance budget include money for training and design development support? Also, will the funding strategies actually include strategies or will you just identify them as funding options?
Response: Operations and Maintenance considerations are part of the design development process. Workforce training is also one of One Water LA's potential policy recommendations. There are several policy ideas recommending an increase in training and education programs for green infrastructure.

Question: Education and Outreach should be included as part of the O&M cost. In regards to volunteerism, is there any basic data on how much has been contributed now due to volunteerism with corporations or non-profits?
Response: We are not aware of any studies that qualify the value of volunteerism in Los Angeles.

Question: How are the policy changes in the upcoming General Plan and Zoning Code update being considered in the One Water LA plan?
Response: The Re:Code LA team is orchestrating departmental workflow changes to frontload the design of LID requirements into a project. One Water LA Team working with Re:Code and General Plan Team to incorporate water resiliency elements into the update.

3. Next Steps & Upcoming Events

Next Steps for the One Water LA Plan:

- Publish a high-level "Progress Report"
    - Report consists of approximately 50 pages of highlights explaining what the Plan is.

Upcoming Events

- Stakeholder Workshop – Implementation Strategy (June 19, 2017)
- Young Citizens Artist Project – Presentation to Schools (June 1, 2017)
- LA River Informational Meeting (July 2017)

ADDITIONAL ATTACHMENTS

- Informational One Water LA PowerPoint Presentation

Stakeholder Information Meeting

Wastewater And Stormwater Facilities Plans

May 11, 2017

All Water is One Water

Agenda

- Introduction — Lenise Marrero
- Wastewater Facilities Plan — Eliza Jane Whitman & Sarah Munger
  - Overview
  - Existing and Future Conditions
  - Q&A
- Stormwater Facilities Plan — Azya Jackson & Mark Hanna
  - Overview
  - Existing and Future Conditions
  - Q&A

Wastewater Facilities Plan

All Water is One Water

Wastewater Facilities Plan

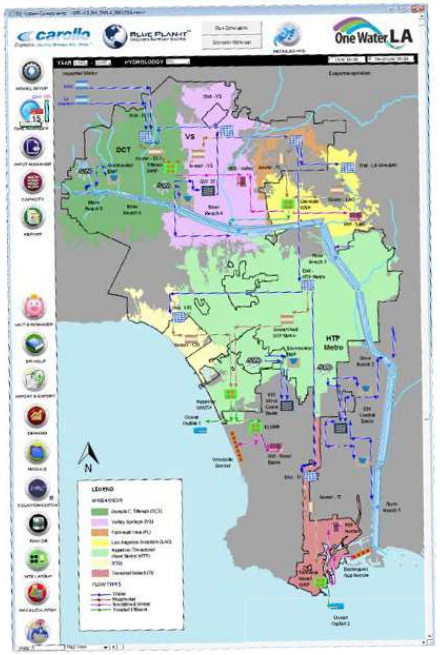
Purpose

To address future system needs through 2040

Why are we doing it?

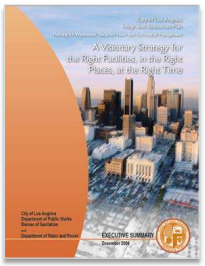
To optimize the use of the City's water assets

- Recycled water
- Advanced treated water
- Evaluate conservation impacts
- Meet permit requirements
- Sustainability

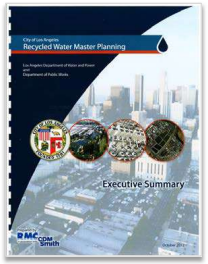


Leveraging Previous Plans

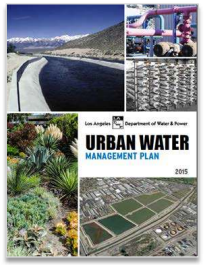
2006 Water IRP



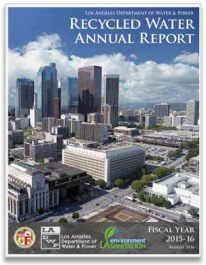
2012 Recycled Water Master Plan



2015 Urban Water Management Plan



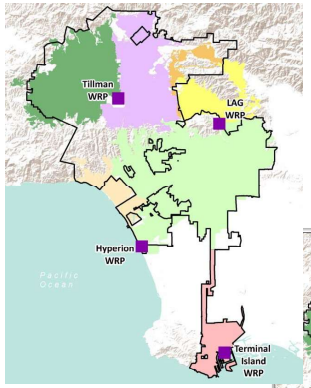
FY 2015/16 Recycled Water Annual Report

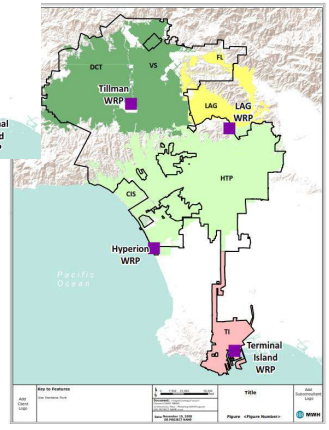


Facilities Plan Overview

1. Summary
2. Introduction
3. Regulatory Background
4. Conveyance System
5. Treatment Analysis & Process
6. Flow Analysis
   1. Existing Conditions
   2. Future Conditions
7. In Progress Projects
8. Future Condition Concepts
9. Wastewater Improvement Program

Wastewater Infrastructure





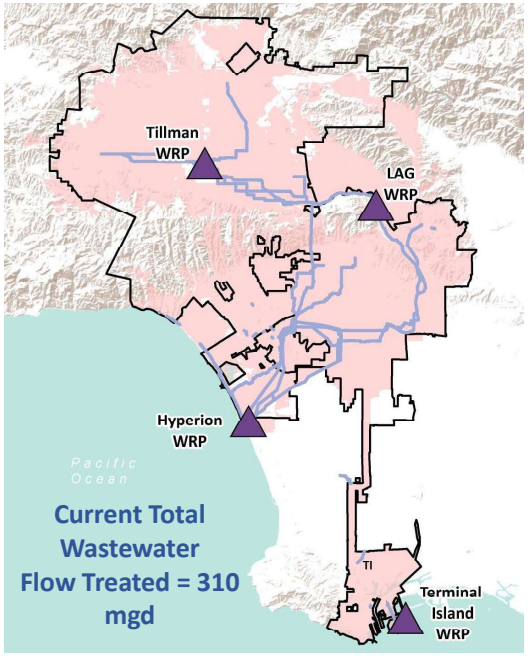
- Four water reclamation plants
- Seven sewersheds
  - Hyperion Sewershed *(includes DCT and LAG due to by-passing option)* has 6,000 miles of sewers
  - Terminal Island Sewershed has 240 miles of sewers

Initial Activities

- Site visits at each plant
- Review existing conditions
  - Identify and locate new facilities since 2006 IRP
  - Note modifications to existing equipment
  - Document changes in O&M activities
- Update regulatory requirements
- Evaluated flows

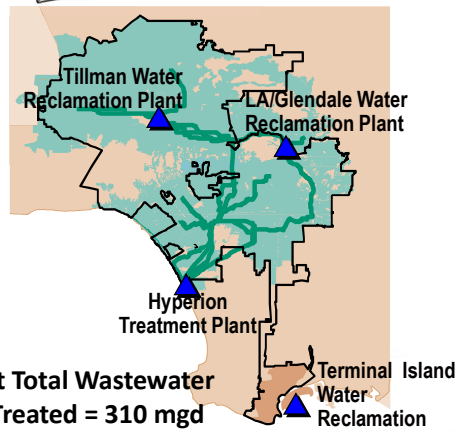
Wastewater Flows

- **Donald C Tillman WRP**
  - Existing = 32 mgd
  - Projected Flow in Year 2040 = 71-90 mgd
- **LA/Glendale WRP**
  - Existing = 14 mgd
  - Projected Flow in Year 2040 = 24 mgd
- **Hyperion WRP**
  - Existing = 250 mgd
  - Projected Flow in Year 2040 = 284 mgd
- **Terminal Island WRP**
  - Existing = 14 mgd
  - Projected Flow in Year 2040 = 18 mgd



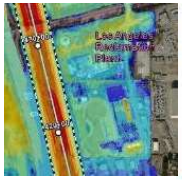
Wastewater Facilities Plan

- Existing conditions
- Repairs, rehabilitation & upgrades required
- Projected flows
  - Existing and future flows (conservation, population growth)
  - Future system needs through 2040
- Regulatory requirements
- Triggers – *when should a project be initiated?*
- Future alternatives & concepts
  - Scope
  - Estimated costs
- Capital Improvement Program



Climate Resilient Infrastructure

- **DCTWRP**
  - Raising flood protection level
  - Backup power generation analysis
- **LAGWRP**
  - Flood wall and gates
  - Backup power generation
  - Backflow prevention gates on outfall to LA River
  - Submarine door evaluation and maintenance
- **HWRP**
  - Lining of Coastal Interceptor
  - Vista Del Mar evaluation structural stability
  - Enhance slope stabilization and length retaining wall
  - Evaluate impacts of a tsunami on outfalls
- **TIWRP**
  - Flood wall and gates
  - Backup power generation analysis



WRPs: Solution to Water Resiliency

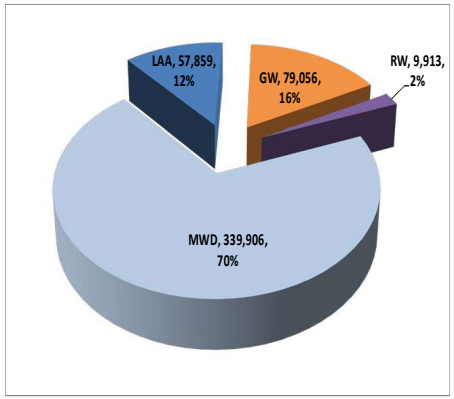
LA's Water Reclamation Plants are essential to the success in meeting the Mayor's goals for local water supply

- Off-setting purchased water demand
  - Advanced treated water – potable reuse
  - Recycled water addressing industrial users
  - Recycled water for irrigation water demand
- There will always be a need to purchase
  - Based on demand in the City
  - Infrastructure

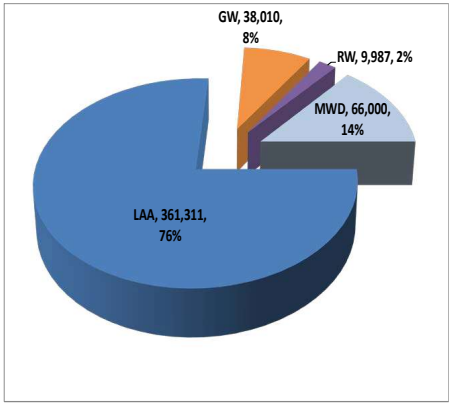
One Water LA .org

LA's Estimated Reductions in MWD Purchases

FY 2015-16 Actual
Total Demand: 486,734 AF*



FY 2017-18 Projected
Total Demand: 475,300 AF (155 MG)



*Not including storage change of -3,509 AF

Key Impacts to WRP Facility Decisions

- Potable Reuse Future Regulations
  - Indirect Potable Reuse (IPR)
  - Direct Potable Reuse (DPR)
- Triggers
  - IPR/DPR Regulations
  - Additional flow to Donald C Tillman WRP
  - Minimum Flow Requirements with LA River
  - Sustainable City plan yield requirement
  - Stormwater quality compliance
  - Funding
  - New regulations on wastewater treatment discharge
- Policy Directives set by the Mayor
- Climate Resiliency

Water Reclamation Plants

All Water is One Water

Donald C. Tillman Water Reclamation Plant (DCTWRP)

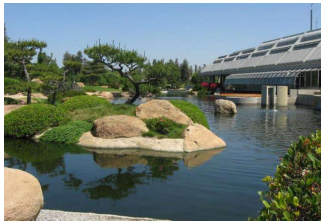
Current Conditions

- Plant Capacity: 80 mgd
- Sewershed: San Fernando Valley/ NW section of LA
- Average treated flow (2016): 32 mgd
- Pilot to test advanced technologies for Groundwater Replenishment Project

DCTWRP Effluent Flows

Treated Water Uses (tertiary):

- Balboa and Wildlife lakes
- Japanese garden
- Irrigation
- In-Plant Use



Recycled Water use		Total Recycled Water (Potable Offset)		Additional Water Beneficially Reused (Weir, Lakes, In-plant)	
Customer	mgd	mgd	AFY (x 1000)	mgd	AFY (x 1000)
DWP: Irrigation & Cooling Towers	2.9	2.9	3.2	29.0	32.5
Lakes	23				
In-Plant Use	2.4				
Operational Safety Weir	3.6				

DCTWRP: Near-Term

Near-Term

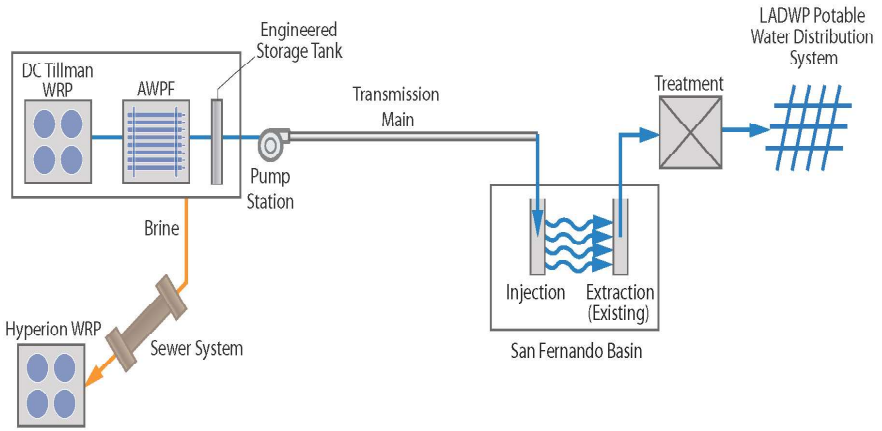
- Add facilities and modify treatment to produce up to 30 MGD Advanced Water Treatment (AWT)
- Interim ozonation pilot plant (6 mgd)
- LASAN/LADWP completing the Groundwater Replenishment project
  - Recharging San Fernando Valley aquifer (City Water Rights)
  - Advanced Water Treatment Facility by 2022

DCTWRP: Future

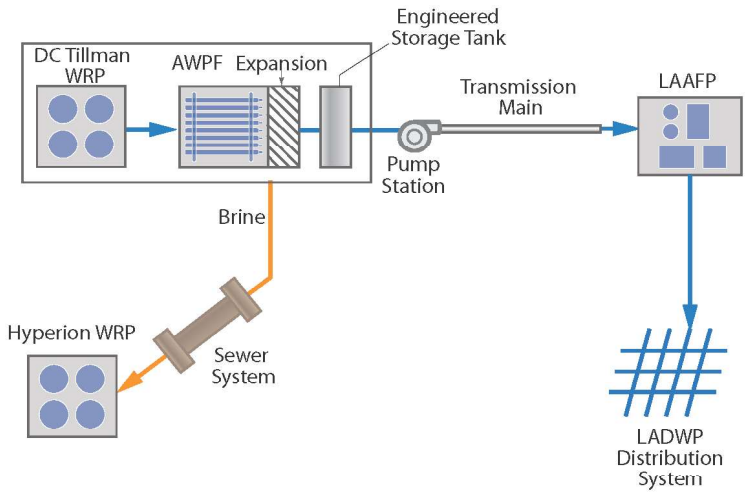
Considerations For the Future (2040)

- Re-route 12-15 mgd of sewer flows
- Build new sewers and pump stations (EWVIS)
- Divert stormwater into the sewers using:
  - Low Flow Diversions (LFD) structures
  - Wet Weather Divisions (where practical)
- Accept new housing development flows
- Additional water reclamation facilities
- Recirculating lake flows
- Groundwater injection
- Los Angeles Aqueduct Filtration Plant

DCTWRP: Indirect Potable Reuse



DCTWRP: Direct Potable Reuse



LA-Glendale Water Reclamation Plant (LAGWRP)

Current Conditions

- Plant Capacity: 20 mgd
- Sewershed: NE section of LA
- Average treated flow (2016): 14 mgd
- Water reuse for Glendale (50%) and LA (50%)
- LA River flows - City water rights
- Delivery of tertiary treated water for:
  - Glendale irrigation
  - Irrigation in Griffith Park
  - In-Plant Use

LAGWRP: Near-Term

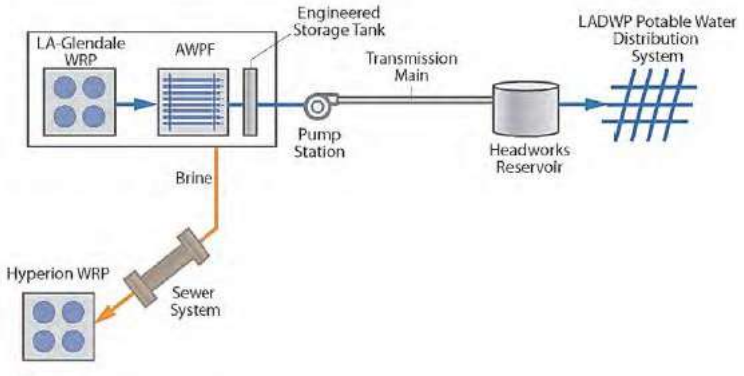
Near-Term

- 5 MG primary effluent flow equalization tank
- Increase of recycled water use for irrigation by:
  - Proposed - City of Glendale expansion
  - City of LA with expansions including Elysian Park and Downtown LA

LAGWRP: Future

Considerations For the Future (2040)

- Evaluating small scale DPR option to LADWP Headwork's Reservoir (near LA Zoo)



Hyperion Water Reclamation Plant (HWRP)

Current Conditions

- Plant Capacity: 450 mgd
  - Average Treated Flow (2016): 250 mgd
  - 47 mgd of water recycling
    - 40 mgd for West Basin for water reuse NPR and IPR (both WB and City of LA customers)
    - 7 mgd for in-plant use, off-setting potable water
- Sewershed: Central and West LA
- Digester Gas Utilization Project

HWRP: Near-Term

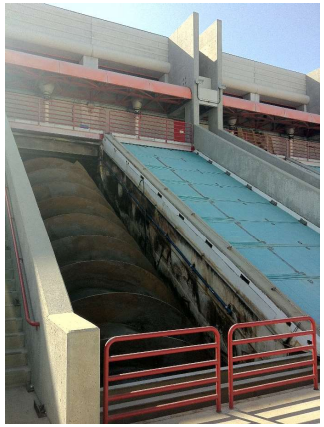
Near-Term

- Increase delivery to West Basin MWD up to 70 mgd:
  - 16 mgd for protection of water supply at sea water barrier, irrigation, industrial (City of LA customers)
  - 54 mgd for sea water barrier, irrigation & industrial use (West Basin customers)
- Route treated flows to Terminal Island WRP (approx. 30 MGD)
- In-plant uses (35 MGD) – DGUP cooling, Cryo, cleaning and washdowns
- Approx. 2 mgd small scale advanced water treatment facility for LAX & Scattergood Power Generating Station (by 2019)
- Pilot testing of advanced treatment processes

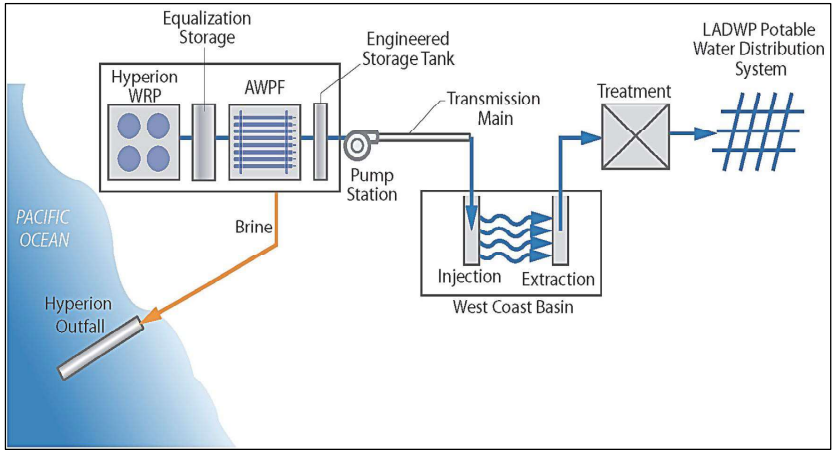
HWRP: Future

Considerations For the Future (2040)

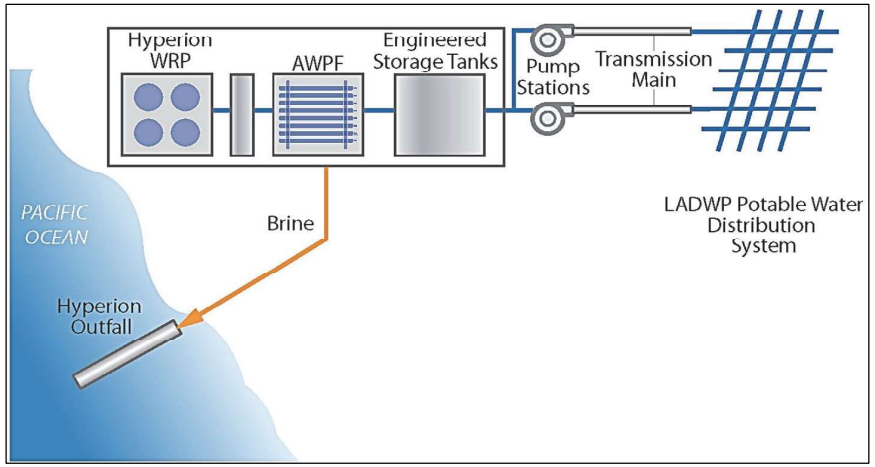
- Evaluating large scale IPR/DPR options (up to 100 mgd)
  - Groundwater recharge
  - Exchanges/ Agreements with Local water agencies such as Central Basin



HWRP: Indirect Potable Reuse



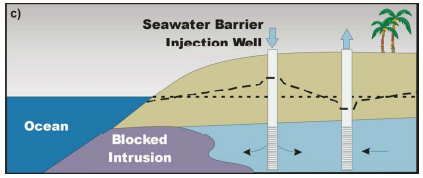
HWRP: Direct Potable Reuse



Terminal Island Water Reclamation Plant (TIWRP)

Current Conditions

- Plant Capacity: 30 mgd
- Average Treated Flow (2016): 14 mgd
- Sewershed: Harbor Area
- Delivers Advanced treated Recycled Water for:
  - Use in Dominguez Gap Barrier injection wells to block sea water intrusion
  - Harbor area refineries & industries
  - In-Plant Use



TIWRP: Near-Term

Near-Term

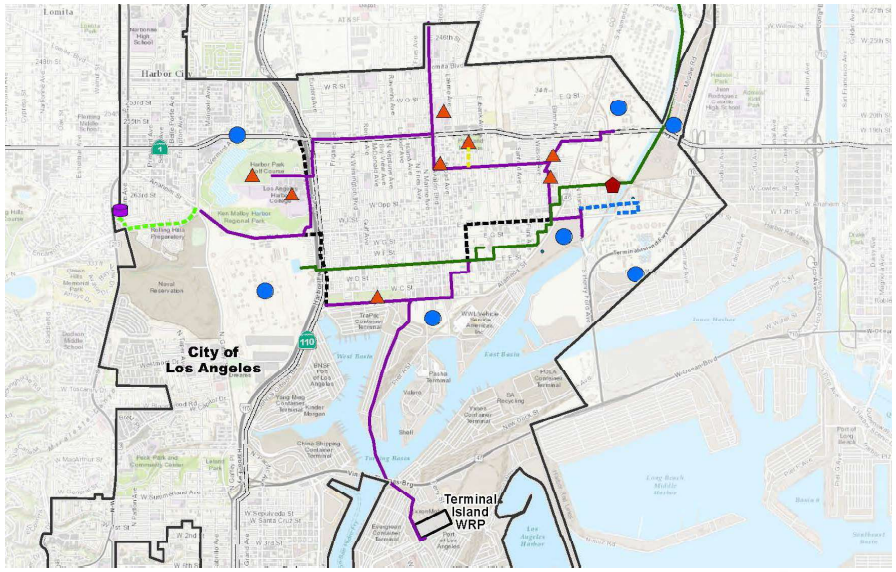
- Deliver advanced treated water to Machado Lake Recreational Area (0.2 MGD)
- Expand use of Advanced treated Recycled Water for:
  - Industrial Customers in the Harbor
  - 100% recycled water use for Seawater Barrier

TIWRP: Future

Considerations For the Future (2040)

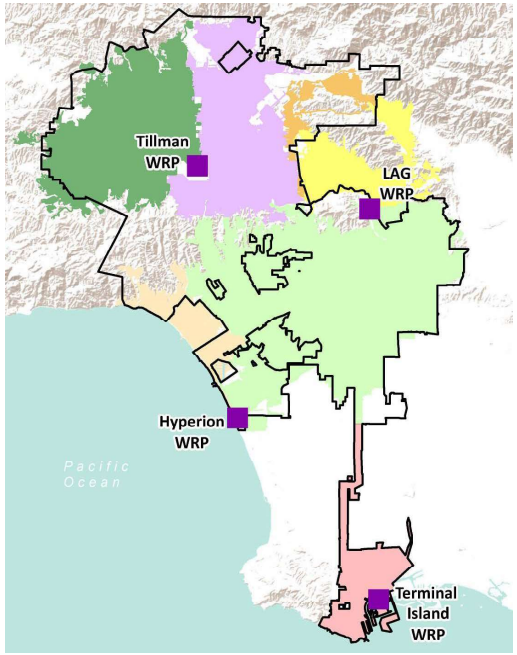
- Increase plant flows from Hyperion WRP (approx. 30 MGD), stormwater, and other agencies
- Potential changes to solids handling and renewable energy
  - Renewal of Terminal Island Renewable Energy
  - Digester gas

TIWRP: Future



One Water LA .org

Status & Next Steps



Facilities Plan Technical Memorandums: Discuss specific processes, identify issues and needs ✓

Future System Needs Technical Memorandums: Identify upgrades & additions — **In Progress**

CIP Prioritization Technical Memorandum: Develop short, mid & long term CIPs

One Water LA

Stormwater & Urban Runoff Facilities Plan

All Water is One Water

Stormwater & Urban Runoff Facilities Plan

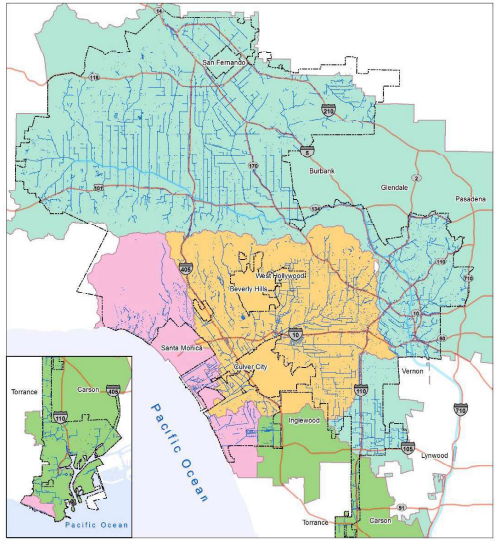
Purpose

To address future system needs through 2040

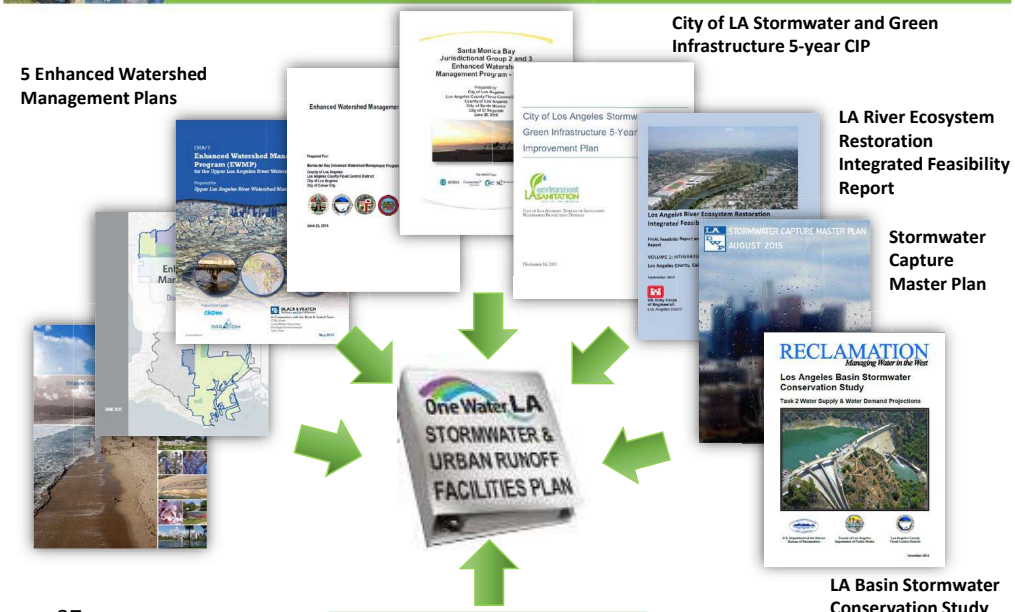
Why are we doing it?

To develop a more coordinated and comprehensive approach

- Water quality
- Water supply
- Flood protection
- Sustainability



Leveraging Previous Stormwater Plans



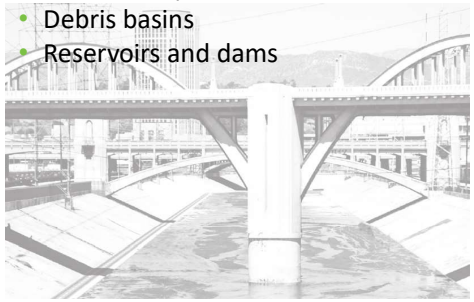
Facilities Plan Overview

1. Introduction
2. Regulatory Background
3. Stormwater and Dry Weather Runoff Flows
4. Existing Stormwater System
5. Integrated Stormwater Management
6. Operations and Maintenance
7. Stormwater Improvement Program
8. Financing Strategy

Stormwater System Infrastructure

Grey Infrastructure

- Storm drains and open channels
- Outfalls
- Road curbs, gutters, and catch basins
- Pump stations
- Low flow diversions that divert to the sewer system
- Debris basins
- Reservoirs and dams

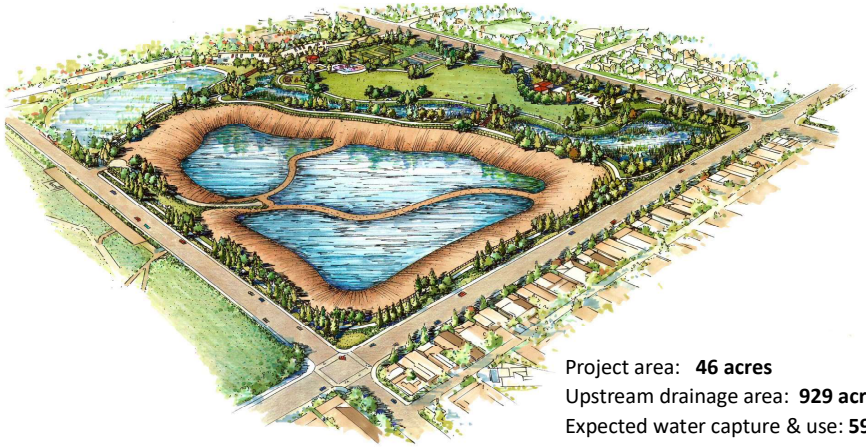


Green Infrastructure

- Large scale, regional projects:
  - Underground infiltration/retention basins
  - Wetland parks
  - Urban runoff diversion, treatment and storage systems
- Small scale, distributed projects
  - Road curb swales
  - Dry wells
  - Porous pavement
  - Rain gardens
  - Rain barrels

Example of Regional Green Infrastructure

Rory Shaw Wetlands Park – *A collaborative project led by LA County in collaboration with City of LA and other partners*



Project area: **46 acres**
Upstream drainage area: **929 acres**
Expected water capture & use: **590 ac-ft/yr**

Example of Distributed Green Infrastructure

University Park Neighborhood Rain Garden Pilot Study

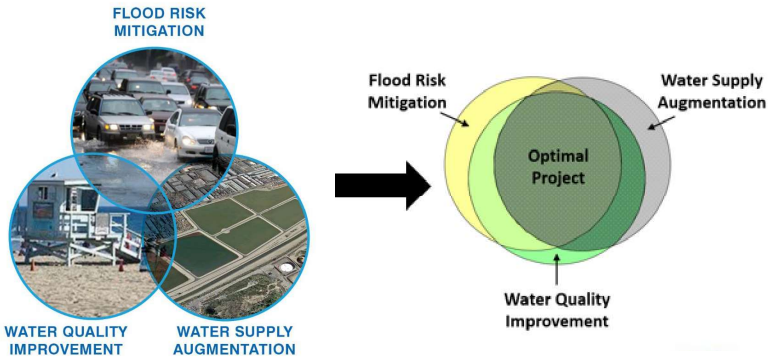
- 35 rain gardens (e.g., parkway bioswales) designed and built to capture residential and commercial roadway runoff
- Landscaping features three drought-tolerant plant palettes
- Community engaged and involved during design and construction

Integrated Stormwater Planning

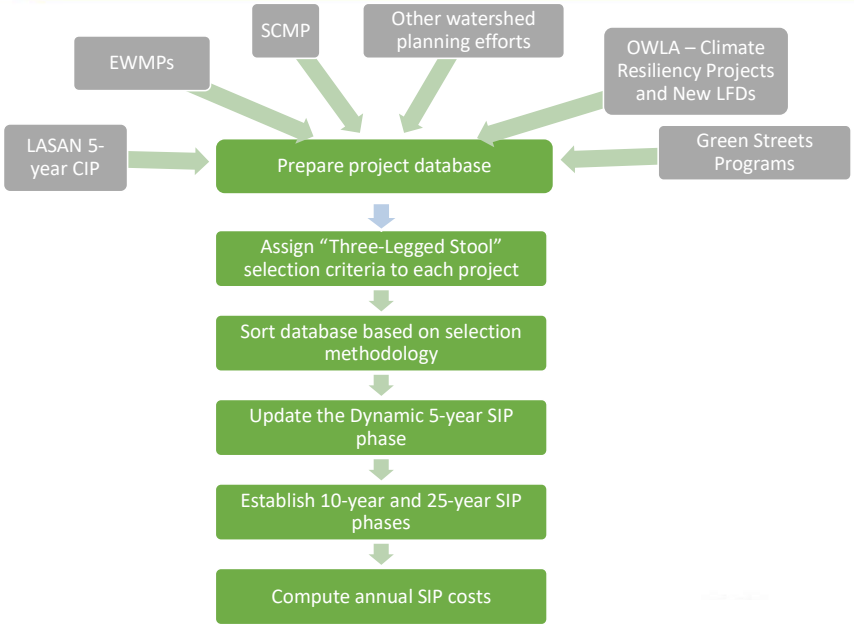
What is the 3-Legged-Stool Approach?

An integrated stormwater management planning approach that considers:

- Flood risk mitigation
- Water supply benefit
- Water quality improvement

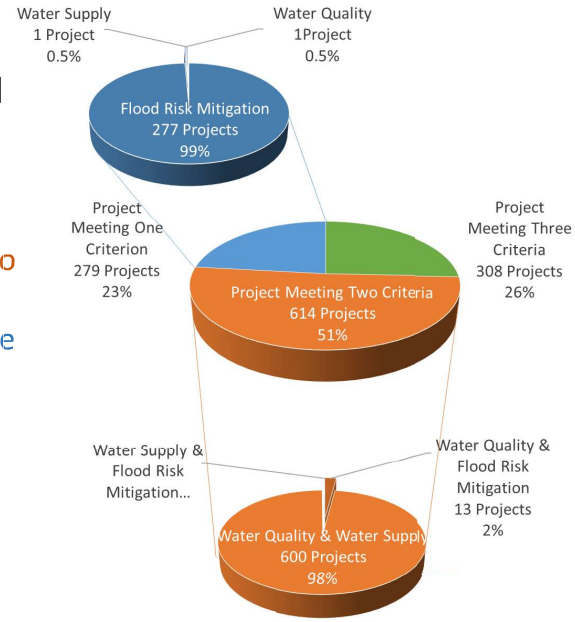


Stormwater Improvement Program (SIP)



Project Distribution by Three-Legged Stool

- 1,201 planned/potential projects identified:
  - 308 projects meeting all criteria
  - 614 projects meeting two criteria
  - 279 projects meeting one criteria

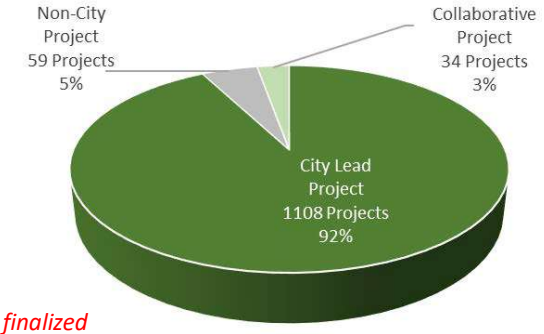


Results draft, to be finalized

Project Distribution By Ownership

- **City Lead Projects:** Projects proposed by a City agency (LASAN, LABOE, LADWP, etc.)
- **Collaborative Projects**: Projects proposed by a non-City agency or entity (LACFCD, ACOE, NGOs, etc.) with City agency or funding
- **Non-City Projects**: Projects identified without current participation from any City agency

Only City-led and collaborative projects (1,142 out of the 1,201 projects) were included in the City's Stormwater Improvement Program



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Stormwater Improvement Program (SIP)

SIP Phase	Implementation Period	Number of Projects	Estimated Capital Cost ($M)	Estimated O&M Cost ($M/year)
5-year SIP phase	2017 - 2022	390	$2,350	$140
10-year SIP phase	2022 - 2027	206	$800	$40
25-year SIP phase	2027 – 2042	546	$2,450	$70

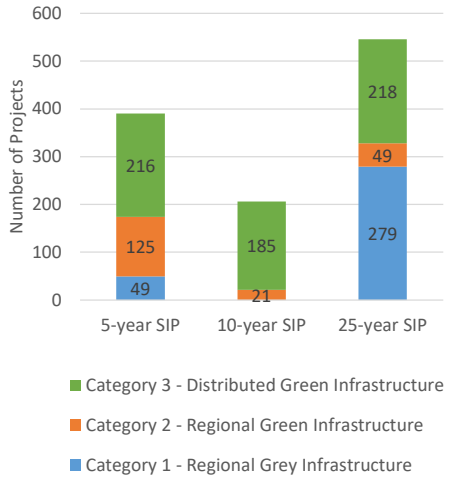
$5.6B TOTAL

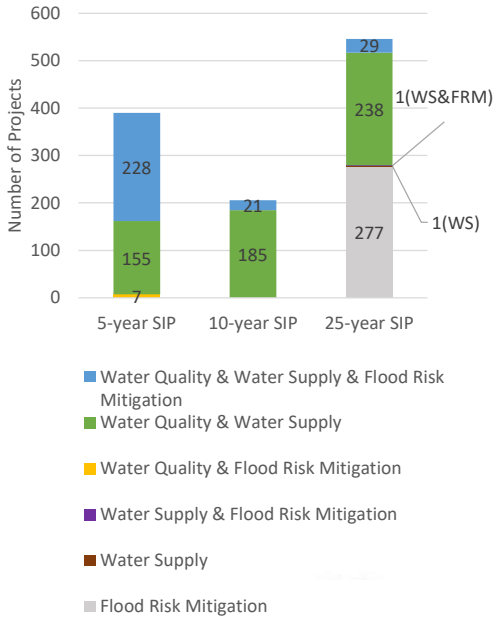
$250M PER YEAR

*Costs are initial estimates. The EWMPs report a $7.3B and concepts are in process to allow for capitalization. Previously planned projects are included in the task 5 In-progress projects section.

Results draft, to be finalized

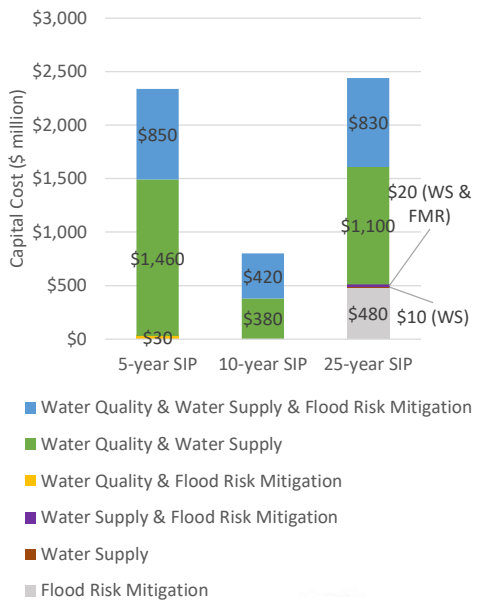
Project Type Breakdown





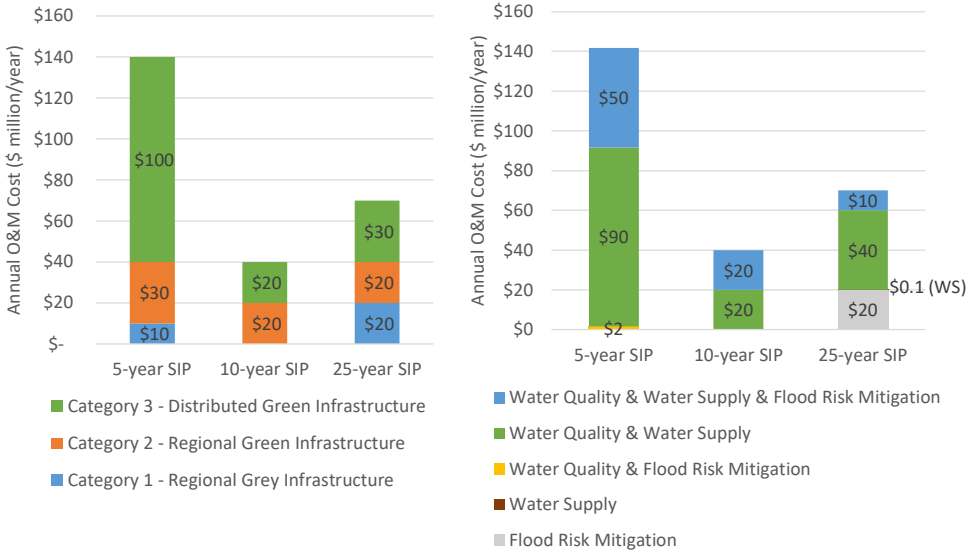
Results draft, to be finalized

Project Cost Breakdown



Results draft, to be finalized

O&M Cost Breakdown



Results draft, to be finalized

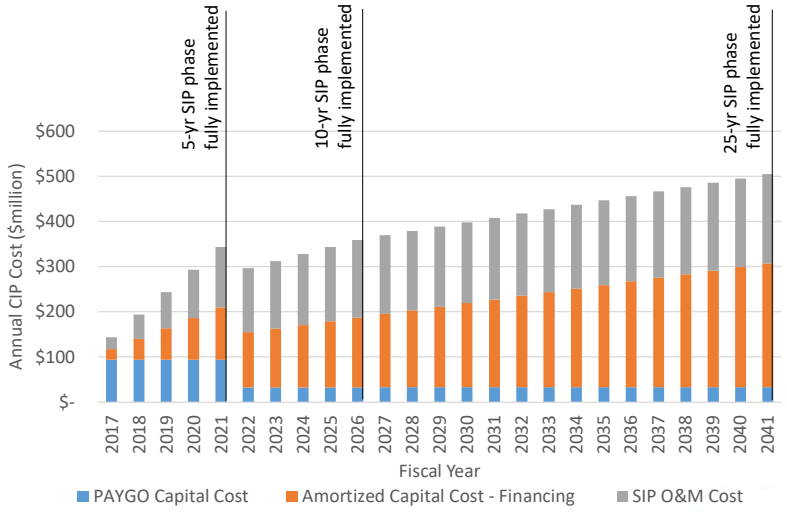
Annual SIP Calculation

- Capital Cost is amortized by:
  - 20% Pay-As-You-Go (PAYGO)
  - 80% Financing
  - 4.5% Interest Rate
  - 30 Years Borrowing Period
  - 1-Year Debt Issuance
- O&M Cost is assumed to cumulatively increase until all SIP projects are implemented

Results draft, to be finalized

Annual SIP Cost Projection

- Annual SIP Cost Overview – Constant Dollar Value
  - Neglect Inflation Factor



Results draft, to be finalized

Funding Assumptions

Projected Sources of Funding built from:

- Existing Revenue Sources
  - $28M/YR SPAF - $23 per parcel per year, 1.2M parcels
  - $2M/YR in grant funding
  - $1.2M/YR from developer plan review fees
  - Future projections do not rely on the General Fund ($13 Million Recent)
    - Used as cost recovery and this is not an accessible fund
- Additional Potential Revenues
  - ~$72M/YR from LA County Fee - $54 per parcel per year, 1.4M parcels (escalates with inflation).
  - ~$Variable LADWP Water Supply (continuous)
- Potential Partnerships and Offsets
  - ~$5M/YR from Measure A
    - G.O. bond proceeds assumed to be used cooperatively. Examples include Albion Riverside Park, Aliso Creek Confluence Park, etc
  - ~$20M from Measure M
    - Funding derived from transportation sales tax – reduces City costs to address transportation related water quality impacts

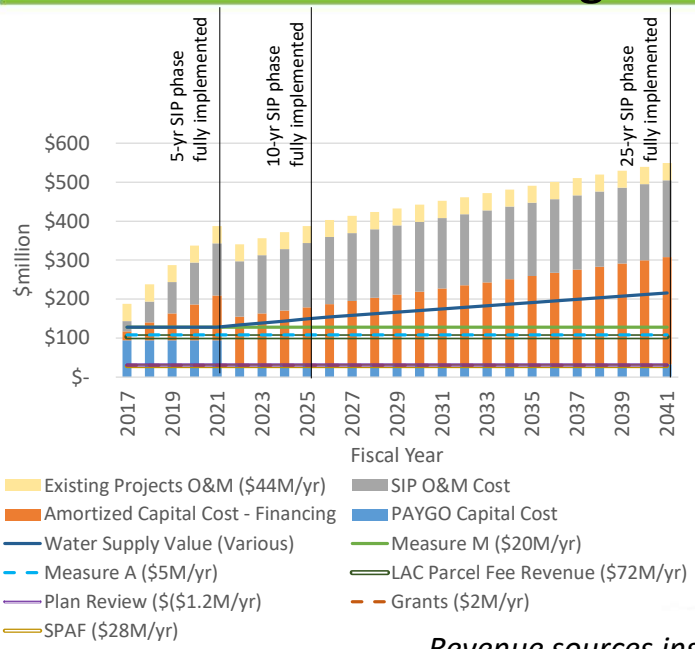
Results draft, to be finalized

Projected Revenue Requirements

- O&M obligations = $44 million, plus O&M from CIP
  - Recent Capital Projects O&M increases not shown
  - Inflation of O&M = assumed inflation rate for all costs (2%)
- Assumed debt financing used to smooth revenue requirements from Capital Projects
  - Historic inability to issue debt due to insufficient revenues and reliance on General Fund
  - Prop O has been principal source of capital funds helping City meet trash and bacteria TMDLs
  - LADWP has translated anticipated annual funding into capital subvention
- Debt Assumptions
  - 20% of Capital Funded PAYGO
  - 80% of Capital Funded from 30-yr Bonds (5%)

Results draft, to be finalized

Funding Strategy



Results draft, to be finalized

Revenue sources insufficient

Other Funding Strategies

- Other Potential Strategies Under Consideration
  - New Revenues (Taxes)
    - Property Tax
    - Sales tax
    - Gas tax
    - Transient occupancy tax
    - Other
  - Financing options
    - Bonds associated with new taxes above
    - Clean Water State Revolving Fund
    - Water Infrastructure Finance Innovation Act
    - Public-private partnership Financing
    - Other
  - Volunteerism
  - Additional Policies and Programs
    - Source Control
    - Private Property Participation

Results draft, to be finalized

Additional Benefits

- LASAN has identified:
  - Avoided fines of thousands of dollars per day per pollutant
  - Habitat and open space
  - Local green jobs
  - Climate resiliency and adaptation
  - Public health improvements

STAKEHOLDER WORKSHOP #6 (06/19/17)

The following pages present the meeting agenda, summary of the discussion, and the presentation given at the Stakeholder Workshop #6, held on June 19, 2017.

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One Water LA Plan Phase 2
Stakeholder Workshop 6
Agenda

Monday, June 19, 2017
10:00 a.m. – 1:00 p.m.
Grace E. Simons Lodge, 1025 Elysian Park Dr, Los Angeles, CA 90012

Meeting Objectives:

- Share recent publications
- Review objectives & goals
- Present long-term concepts
- Discuss implementation strategy

Agenda

1.	Welcome and Introductions (5 mins)	10:00-10:05 am
2.	Recent Publications (5 mins)	10:05-10:10 am
3.	Orange County Water District - Bottled Water (5 mins)	10:10-10:15 am
4.	Long-Term Concepts & Implementation Strategy (45 mins)	10:15-11:00 am
	a. What are the One Water LA Vision and Objectives?	
	b. What are the elements of the One Water LA 2040 Plan?	
	c. What are the Long-Term Integration Strategies to achieve the Objectives?	
	d. How are we going to develop the Implementation Strategy?	
5.	Rotation & Dialogue (80 mins, approx 20 mins per Rotation)	11:00-12:20 pm
	a. Station 1 - Water Reuse	
	b. Station 2 - Stormwater Management	
	c. Station 3 - Policies & Programs	
	d. Station 4 - Implementation Strategy	
6.	Next Steps & Meeting Close (5 mins)	12:20-12:25 pm
	a. Programmatic Environmental Impact Report (PEIR)	
	b. Continued Stakeholder Engagement	
7.	Photo of Stakeholder Group (15 mins)	12:25-12:40 pm
8.	Lunch (20 mins)	12:40-1:00 pm

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One Water LA-Stakeholder Meeting Notes
Monday, June 19th, 2017- 10:00AM –1:00PM
Grace E. Simons Lodge, 1025 Elysian Park Dr, Los Angeles, CA 90012

The purpose of these notes is to provide an overview of the meeting. They are not intended as a transcript or as minutes. Major points are summarized herein, primarily for context.

INTRODUCTION & MEETING OBJECTIVES

Attendees were welcomed with opening remarks by Adel Hagekhalil from Los Angeles Sanitation (LASAN) and Penny Falcon from the Los Angeles Department of Water and Power (LADWP). Penny Falcon provided the following LADWP updates: 1) Marty Adams is now Chief Operating Officer for LADWP and Richard Harasick is now the Senior Assistant General Manager for the Water System. Richard will stop by later during the meeting.

Adel mentioned the ribbon cutting event for the Machado Lake project and the One Water LA elements associated to the project. Adel thanked the stakeholders for their engagement and emphasized that One Water LA is an ongoing collaboration effort with LADWP, all City Departments, LA County, School Districts, Communities, and more. The goal for the ongoing One Water LA program is to make Los Angeles more resilient and sustainable with clean water and clean communities.

Hampik Dekermenjian (CDM Smith) was the meeting facilitator and he reviewed the agenda and meeting objectives. The primary objectives of the meeting were as follows:

- Share recent publications
- Review One Water LA goals and objectives
- Present long-term project concepts
- Discuss implementation strategy

ONE WATER LA – RECENT PUBLICATIONS

One Water LA's four- page Progress Summary was distributed at the workshop. The four- page summary is a high level update on the One Water LA plan. A more detailed 51-page Progress Report is posted on the One Water LA website (www.onewaterla.org).

LONG-TERM CONCEPTS AND IMPLEMENTATION STRATEGY

The team presented the following four questions to the stakeholders:

1. What are the One Water LA Vision and Objectives?
2. What are the elements of the One Water LA 2040 Plan?
3. What are the Long-Term Integration Strategies to achieve the Objectives?
4. How are we going to develop the Implementation Strategy?

The goal of the meeting is for everyone to be able to answer the questions by the end of the meeting.

Question 1: What are the One Water LA Vision and Objectives?

One Water LA is a collaborative approach to develop an integrated framework for managing the City's water resources, watersheds, and water facilities in an environmentally, economically and socially beneficial manner.

One Water LA supports many of the Mayor's Sustainability PLAn goals. The following examples were presented:

- Stormwater Quality – improve beach water quality grade-point average (GPA).

- Capture 150,000 acre-feet per year of stormwater by 2035.
- Reduce the purchase of imported water by 50% by 2025.
- Source 50% of water locally by 2035.

Question 2: What are the elements of the One Water LA 2040 Plan?
One Water LA is composed of eight primary elements (slide 13 and 14). The team highlighted the points of engagement and the workshops held for each element.

Question 3: What are the Long-Term Integration Strategies to achieve the Objectives?
The eight concept categories for the long-term integration strategies were presented (slide 17). Stakeholders were sent a survey to rank the relative desirability of the long-term concept categories from most to least favorable. The survey results were presented (slide 18).

From the eight concept categories, 25 preliminary project concepts were developed and evaluated as part of the Long-Term Alternatives Analysis (slide 20).

18 individual criteria, developed with Stakeholders and City Staff over 4 months, was used to evaluate the 25 long-term concepts options. The City assessed the 25 concepts looking into each of the following four extreme scenarios:

- Minimize Cost
- Maximize Institutional Collaboration
- Maximize Local Supply
- Maximize Environmental Benefits

To arrive at a balanced long-term strategy, project concepts drawn from each of the four extreme scenarios are the seven recommended project concepts for the Long-term Alternative Analysis (slide 23).

Many of the project concepts presented today are dependent on triggers. A trigger is defined as an internal or external force that causes (an event or situation) to happen or exist. Some concepts can also have multiple triggers. The One Water LA Plan will include a dynamic strategy for a trigger based implementation roadmap for the City to follow.

The team presented the following project concepts and an example trigger associated with the concept (slides 27-32).

- Stormwater Facilities Plan including over 2,000 projects from the 5-year CIP, Enhanced Watershed Management Program (EWMPs), Stormwater Capture Master Plan (SCMP) and others.
- LA River Recharge into LA Forebay
- Dry Weather Low Flow Diversions
- Indirect Potable Reuse: Hyperion to Regional System
- Direct Potable Reuse:
    - Tillman Water Reclamation Plant to LA Aqueduct Filtration Plant
    - LA-Glendale Water Reclamation Plant to Headworks Reservoir
- Non-Potable Reuse: Increase Non-Potable Reuse Demand beyond 2015 UWMP, focusing on Terminal Island and Hyperion Water Reclamation Plants

An example of a trigger-based implementation approach was presented (Slide 33). A dynamic strategy will allow projects to be implemented only if and when they are needed.

An overview of the cost range(s) for the seven project concepts was presented (slide 34).

The following questions and comments were received from the stakeholders:

- Where are the statistics, data, and science behind the analysis? What else was done for the evaluation besides taking surveys?
    - **Response**: What was presented today is a high level overview of the process. We will have four information stations, after the presentations, where you will be able to ask more detailed questions on the process and the analysis.
- For the "minimize cost" scenario, are those the direct or net costs? What are the differential costs and benefits for DPR vs. IPR? Are those cost estimate spreadsheets available online?
    - **Response**: When the cost comparison was done, the team looked at the capital cost and the operations and maintenance cost. We did not look at the retail value. A relative cost comparison was done to compare the unit cost (dollar per acre foot). The benefits were more qualitatively compared. The cost estimates of the 25 concepts will be available in the final plan.
- Under the economics, we have discussed benefit-based funding in the past. That is not included here. We have also discussed the return on investment, which is also not listed here.
    - **Response**: This is still at a high conceptual planning level. Once the projects get developed further, more analysis will have to be done.
- You noted that most of the criteria are qualitative. If the criteria are not very well defined, it tends to be very subjective. If you have a subjective ranking of non-rigorous criteria, on qualitative metrics, expect that you need a very diverse group of stakeholders to do the ranking to make the ranking transparent, or strengthen the criteria.
    - **Response**: The team did look at other studies, such as the LA Basin Stormwater Conservation Study, to develop the criteria. There are still some criteria that are qualitative, and that will have a subjective process. It will always be subjective regardless of how many people you involve in the ranking. You will see the results of the ranking today, and you will be able to provide your input on the results during today's meeting.
- Thank you for the survey and for the notion that we need to invest and prioritize in resources where they are best fitted. With regards to the survey results (Slide 18), I would also look into the average score and consider where drawing the line to see which ones we should not pursue. For example, the NPR, LFD's, and LA River Storage had about the same average score of 3.
    - **Response**: Noted. Given that current recommended concepts in the One Water LA 2040 Plan are a snapshot in time and will need to be evaluated further in a periodic manner to account for future conditions, the cutoff line can be adjusted if needed.
- This all occurred when there was a drought and the Mayor's Directive is based on that. Since we are no longer in a drought, and we have excess water from the North, when will this be updated to our current needs?
    - **Response:** As far as the Mayor's Executive Directive, what we are doing is preparing for unpredictable climate. Just because the official drought is over, it does not mean that we don't need to prepare for extreme weather conditions.

      This particular rain year was not a drought year, but we were in drought for the 5 years prior to that. The Department of Water and Power has invested heavily in storage to help the City get through the drought.

- Should we be using the 8574 definitions of DRP, IRP, groundwater augmentation, etc.?
    - **Response:** Yes, we are in the process of making the change to make all the definitions consistent in all future documents.
- How does the yield presented on slide 34 compare to the goal of having 50% local water supply?
    - **Response:** There is not one stand-alone project will meet the City's goals, which is why the One Water LA strategy includes the project portfolios. The portfolios include a group of projects that collectively help achieve the City's goals.
- The last meeting I raised the issue of the desirable water flow for the LA River to support the existing wildlife. I have not heard a response to my question since the last meeting. Also, can you explain Low Flow Diversions and what that means?
    - **Response:** Low Flow Diversions are designed structures to route urban runoff and stormwater from the stormdrain into the sewer collection system. The City has about a dozen or so LFD's locations already in place. One Water LA has looked into other potential LFD locations where large storm drains are closely located to sewer collection pipes that have excess capacity and that can take the extra flow.

      Regarding the flows in the LA River, the City recognizes the need for a collaborative regional environmental study on the LA River with the goal of balancing water supply needs with the River's water-dependent uses and regulatory requirements.
- There are water issues with IPR. I understand you will have a water sharing agreement, but you never explained what goes on currently with West Basin. You do send water there, treat it, and then they sell it. I don't understand the currently financial exchange at all. Why do you think you can do a water agreement without a court action and can West Basin handle it? West Basin is looking into investing in a Desalination Plant. This looks one-sided. Where are your partners in this?
    - **Response:** In light of the huge statewide drought, there are partnerships that are being developed even further. LADWP and LASAN have always had a great partnership. West Basin, Metropolitan Water Districts, and the State Water Board are also engaged. One Water LA is a long term strategy on how we are going to manage the City's water.

      There are contacts and agreements that are drafted and approved by all of our various boards that allow for these partnerships to move forward for water supply projects. If you are interested in these reports, you can attend the LADWP, MWD or West Basin's Board Meetings.
- Since we are sending Tillman flows to the spreading grounds, does that cancel the project of sending the Tillman flows to the LA Aqueduct? Does that assume significant flows to the centralized treatment plant? It gets confusing when you mention the immediate needs for augmenting flows to Tillman and the project of LFDs. If we become better at conservation, which I hope that we do, we will decrease the flows at Tillman. There are locations in Victory and other locations in the valley that have massive parkway widths, and those can easily be used to augment our groundwater supply without significant infrastructure and costs. There is a concern on the criteria, triggers and everything that has been presented.
    - **Response:** This content was based on the assumption that the project will be in addition to, or after the ongoing Groundwater Replenishment Project. The LFD's will help bring additional flows to Tillman and will help make the Tillman project concepts more feasible. There is also the future potential East West

Valley Interceptor Sewer project that will help bring flows from the East valley into the West valley to increase the flows at Tillman.

One Water LA is not looking at projects that will increase the carbon footprint and that will not be cost effective. As far as water efficiency, our indoor residential sector is pretty saturated with efficient plumbing. There are still some things we can do with high efficient washers, but it is the outdoor sector where we need improvement. Becoming more efficient with our outdoor irrigation use does not impact our sewer flows. As we move to the sustainable landscaping, we decrease the amount of dry weather runoff that goes into the storm drain system.

- The Nature Conservancy recently completed an LA River Flow Study that determined that lower flows to the LA River will support the more native habitat in the river. This is based on historical ecology and current conditions. UCLA also has a study that is consistent from a habitat species perspective.

  With regards to the evaluation criteria (Slide 20), was there an overlap in the projects? Are we getting multi-benefit projects that minimize cost, maximize multi-benefits, etc. I would like to see projects that will have all of those components.
    - **Response:** There were multiple concepts in multiple categories. Some concepts were in two or three of those extreme scenarios, some only came up once. There were different types of groups of projects.

      One Water LA will have an upcoming Informational meeting on the LA River and how the UCLA and TNC study was incorporated in the One Water LA- LA River Study.

- Similar to the triggers, are you also doing a what-if analysis? What if new technologies come along that will increase water use efficiency in a home? Have you looked into that? For example, I heard that they are looking into a waterless washing machine.
    - **Response:** We have not looked into that specifically, but we are using our water balance tool and our scenario portfolio analysis to look at different what-if scenarios and different extremes.

      Also, keep in mind that One Water LA is a program and a continuing effort. Project recommendations will be revised every few years based on what is available and on new technologies that may emerge.
- With regards to all the options related to Hyperion (Slide 33), the treatment will have to be at an advanced level. Hyperion is still discharging hundreds of thousands of gallons into the ocean. That is really where our concentration should be. No matter which of the choices we end up with, treating at an advanced level is still going to be more cost effective than doing nothing. How long are we going to wait until the State makes up its mind with the regulations? At some point you have to make the commitment and move forward with one of these choices.

- I have spent many years on the Direct Potable Reuse Advisory Committee and I would say, with all due respect to the regional board, do not wait for the state. We really need to motivate and move forward with these projects.

  Also, I appreciate that this is dynamic, but please make sure that you decentralize decentralize decentralize. Please look at that more in the future.

- If the cost only includes advanced treatment for Hyperion, please clarify that. If the other options for Hyperion also include advanced treatment, then the costs don't vary per option except for additional costs based on where the water goes to, so we need to clarify this.

Question 4: How are we going to develop the Implementation Strategy?
The implementation strategy will include recommendations from the following elements:

1. Wastewater Facilities Plan
2. Stormwater and Urban Runoff Facilities Plan
3. Near-Term Integration Opportunities
4. Long-Term Integration Strategies
5. Long-Term Policies and Programs

Examples of recommendations for each element were presented (slides 38-42) along with the One Water LA Objective the recommendation(s) supports. Examples of the potential funding opportunities was presented (slide 44).

BREAKOUT GROUPS
Stakeholders broke out into four different groups focused on:
1) Water Reuse
2) Stormwater Management
3) Policies and Programs
4) Implementation Strategy

Each station had its own purpose and function. Some stations were meant for informational purposes, while others were more suited for comments and feedback. Rotations between each station occurred three times (every 15 minutes) so that participants could visit all four stations. Scribes at each station recorded comments and questions. Stakeholders were also asked to write their detailed questions in 3x5 cards and submit them at the end of the workshop. Each station is summarized below (based on its individual function).

STATION 1: WATER REUSE

LADWP and LASAN staff first presented two maps to stakeholders that laid out the locations of the four water reclamation facilities plants and conceptual water reuse projects. This These visual aids assisted the stakeholders understand which concepts were preferred and how they would assist the City continue to improve environmental water quality and increase local water supplies. Each stakeholder was given an opportunity to ask at least one question. Questions ranged from potable reuse regulations to LA River impacts to regional partnership opportunities.

STATION 2: STORMWATER MANAGEMENT

The One Water LA team displayed two stormwater posters. Each poster is described below:

1. Poster 1: Stormwater Pollution Abatement Charge- the poster demonstrated how the fee does not adjust and how it loses its value overtime.
2. Poster 2: Stormwater Improvement Program (SIP)-Displayed the types of stormwater projects selected for the project database. This includes water quality, water supply and flood mitigation projects. The poster also presented the potential cost associated with the SIP and the funding gaps from the different funding sources.

Each stakeholder was given an opportunity to ask a question or provide input on the One Water LA's SIP. Below are the recurring questions received during the workshop.

- Are there Low Flow Diversions (LFDs) that direct flow to Hyperion?
    - **Response:** There are some LFDs in the Hyperion Service Area.
- If the LA County stormwater charge passes, will it replace the City of LA's SPAC?
    - **Response:** No, it will not.
- How does One Water LA planning process relate to other planning efforts?
    - **Response:** The One Water LA planning process incorporates recent planning efforts of others. In the case of stormwater, One Water LA incorporates the efforts of LADWP Stormwater Capture Master Plan, LA Sanitations Enhanced Watershed Management Programs (EWMPs), LA Basin study, and others.
- 10-year SIP should be as large as 5-year SIP because of how long it takes for projects to be implemented in the City.
    - **Response:** The 5-year SIP is front loaded because of TMDL compliance.

GROUP 3: POLICIES AND PROGRAMS

Three poster boards were shown displaying the consolidated draft policies and programs. Policy suggestions that did not necessarily fit into a policy or program category were also displayed in the following categories: Research, Actions, Accomplished or In-progress, Additional Recommendations and Beyond Scope. The policy list presented during the workshop is included as an attachment.

Stakeholders provided the following questions and comments:

- Are these polices to help move the project concepts forward?
    - **Response**: Yes, but they will also help meet other One Water LA goals and objectives.
- Additional policy recommendation: Develop a public outreach program for landscape architects to know the difference between CA native and CA friendly landscape so they incorporate the right landscape in their plans.
- Evaluate recycled water programs to adoptive policy (to help move HTP to advanced treatment).

The policies and programs list was revised based on the stakeholder's input during the workshop.

GROUP 4: IMPLEMENTATION STRATEGY

LADWP and LASAN staff first referenced two posters. The first poster referenced the individual components of the One Water LA 2040 Plan (Plan) that will contribute to the Implementation Strategy (Near and Long Term Integration Strategies, Wastewater Facilities Plan, Stormwater and Urban Runoff Facilities Plan, and Policies and Programs) and the second poster presented some of the funding options to be covered in the Plan's funding strategies. The City team asked from stakeholders if there were any questions or additional input for the City to consider in developing the Plan's Implementation Strategy. Several stakeholders recommended that the group's discussion focus on the funding strategies. Each stakeholder was given an opportunity to pose at least one question or comment. Topics covered by stakeholders included:

- Translation of project costs into costs per person or rates
- Determination of cost of water lost (discharged) at Hyperion and the storm drain systems by taking no action
- Search for innovative funding sources such as Public Private Partnerships (P3s):

- Looking to other Cities/agencies for models
- Opportunities for stormwater
- Clearly defining City's goals in terms of potential P3s
- Concerns with privatization of water

- Social justice for sources of water
- Funding for Operations and Maintenance and accounting for existing obligations
- Challenges for NGOs to implement projects
- Streamlining of permits for multi-benefit projects
- for The need to ensure stormwater funding under Measure M
- Both consideration of credits and consideration of developer fees for stormwater (credit exchanges, etc.)
- Increasing stakeholder involvement in LID and public right of way improvements, ordinances, and requirements
- Concerns about lack of water experts in the Measure A committee
- Monetizing the value of stormwater infiltration into groundwater supplies
- Potential for incentives for source control strategies and Recovering costs from polluters
- Stormwater funding collaboration with LA County projects

COMMENTS CARDS

1. Can One Water LA as a group send a letter to the state agency that is holding up DPR Regulations? Who should encourage stakeholders to contact about above? We want to move this forward.
2. If tertiary treated or advanced water is treated at Hyperion, where will it go and will it be used in Los Angeles or outside to another basin? If distributed outside the City of LA, will it be sold for a profit?
3. Where can we find the list of projects that contribute to the Stormwater Improvement Program (5, 10, and 25 year)?
    - **Response**: These project lists will be publicly available at a later time.
4. What is the role of the EWMP MOU partners?
    - **Response**: Strictly speaking, we do not have "EWMP MOU" partners yet. The City was the lead agency for its four EWMPs, and we worked together with about 30 agencies in our watersheds. The EWMPs define the total cost of EWMP implementation, as well as for each agency individually. For example, the total cost of the four City EWMPs is about $11B, and the City of LA cost is about $7.3B. The EWMPs do not provide for cost sharing and MOUs for implementation of the EWMPs. In the end, compliance with the MS4 Permit is on individual agency basis. The EWMPs define regional projects with drainage areas that sometimes cross jurisdictional boundaries. We now have discussions with other cities on cost-sharing of those projects, which are likely to result in MOUs. We do have other MOUs in place for cost sharing with other cities, but those relate to water quality monitoring, special studies, and plan development. The role of EWMP MOU partners is to establish a regional watershed-wide approach as the most cost-effective compliance strategy. Working together is more cost-effective than each by itself. Those regional projects are a good example.
5. Why are unfunded State mandates not discussed as a funding source?
6. Why do you say "TMDL triggers"? Do you mean EWMP instead? TMDLs are related to Industrial Permits /Public treatment Plants in relationship to impaired water bodies. Why are you making this a public responsibility – taxes/fees?
    - **Response:** TMDL triggers are the regulatory limits that have been put on the city. TMDLs are related to stormwater Municipal Separate storm Sewer (MS4).

These permits are issued under the National Pollutant Discharge Elimination System (NPDES) Program. Enhanced Watershed Management Programs (EWMPS) were developed to implement the requirements of the MS4 permit on a watershed scale that include meeting the Receiving water limitations, TMDLs, and other control measures. As EWMPS are developed for watershed scale everyone has a part to play in meeting these limits from: commercial, industrial, homeowner, business.

7. It is too difficult to hear in breakout sessions.
8. Not enough time.
9. Show me the money.
10. Each speaker needs to identify themselves at the beginning. Previously, the MC was identified on the agenda. Practice at microphone. I do not know his name because I could not hear him.
11. One Water LA presentations at every Neighborhood Council general board meeting should be done (within one year). There are 97 NC's now. You will need several teams presenting.

<u>Group 3 -Policy Station Comment Cards:</u>

12. Please contact us regarding ideas around public-private financing structures.
13. Street cleaning before anticipated rainfall.
    - **Response:** BSS follows the posted street cleaning schedules, weekly on residential streets and monthly on arterial ways. LASAN is also aware of several studies (white papers) on the impact on the water quality due to increased street sweeping frequency, targeted sweeping areas. More street sweeping activities before rainfall events have been considered as one of the options in the TMDL Implementation plans as a part of institutional BMPs.
14. Create rain gardens on-site at LAUSD properties. Reduce impermeable areas.
    - Response: This is one of One Water LA's objective and goal. One Water LA will continuously work with LAUSD to help incorporate this recommendation.
15. Re-define "outdoor space" – outdoor space for a developer should not be a balcony. Outdoor space should be an area of permeability where water can enter the soil.
    - **Response:** One Water LA is working closely with Dept. of Planning's Re:Code LA team to incorporate water sustainability in the new zoning code. We will bring up the recommendation at our next discussion.
16. Include re-training for operations and maintenance. Examples: Design engineers need re-training for grading, watershed landscaping. Gardeners need retraining for watering, maintaining new landscaping. Business owners need training to offer these new services.
    - **Response:** Noted. Training programs related to green infrastructure and stormwater BMPs are included to some extent in the policy and program recommendations.
17. #39- Training. Please include sufficient funding for re-training the existing workforce, managers, and business owners. These are the people that implement. This is the implementation network.
    - **Response:** The following Consideration has been added to Policy 39 to address this comment and the comment above: Evaluate target audiences including landscape design, and landscape maintenance sectors for both workforce development and re-training of existing workforce.
18. R18 – Where are the multiple benefits of graywater and water supply potential includes laborers union interest, maintaining trees during drought and climate change, giving customers rate relief, etc.?
19. A9 and A13 – Metro is already backing down from LID.
20. A10- Where is this? How are you working with the County Water Resiliency?

- **Response:** The City is actively engaged with LA County on a regional approach for stormwater funding. Over the next 6 months or so, as the regional program continues to be developed, the City will continue to take part in the discussions related to the Water Resiliency Plan providing input to arrive at a regional program that works for everyone.

21. Lots of policies- how do they help get something done? For example, policy #34 uses the word "balance". That may actually lead to zero progress depending on who gets to decide what balance means when doing projects to increase storage and water quality.
22. AC1- Street sweeping. Evaluation of actual need should be determined (i.e. clean residential streets vs. littered commercial street). Cost/Benefit.
    - **Response:** The first consideration of this Action has been modified as follows: Conduct inventory to determine additional areas of need and install street parking signage as needed.
23. #35- Consider the building codes also implemented by the state.
    - **Response:** We have added California Building Codes to consideration 3.
24. R15- Look into the existing state program by the Department of Public Health. The program may be called Distribution operation program. Look at existing state data.
25. #20- All City streets program should be required to retrofit for stormwater. There was a great streets improvement done in Venice beach that did not have any stormwater management elements incorporated in the design.
    - **Response:** LASAN, Mayor's Office, and LADWP are working on the development of a Public ROW LID Handbook, which provides guidelines for inclusion of Green Stormwater Infrastructure LID components in City's projects. The LID requirements will be based on the location, scale of project, and a few other factors.
26. How will LADBS' new Existing Buildings Energy & Water Efficiency Program (EBEWE) impact the existing draft policies on display?
27. B8- Do not like the response "Beyond Scope". Instead you should mention examples of the effort (like the swimming pool policy). Seems cooperative instead of standoffish to collaboration.
28. If credit is given to developers to us on other developments, it should be within a very small geographical location and within a certain time limit. The cost of keeping track of these credits is something to be concerned about.
29. Multiple requests were received to email the draft "Policies and Programs, Actions, etc. to the entire group.

NEXT STEPS

- Future Meeting Topics:
    - LA River Flow Study Informational Meeting
    - Event to launch One Water LA 2040 Plan
    - Programmatic EIR
    - Future Focus Meetings
    - Annual One Water LA Updates

ADDITIONAL ATTACHMENTS

- One Water LA Implementation Strategy PowerPoint Presentation
- One Water LA list of draft Policies and Programs

Stakeholder Workshop
One Water LA Implementation Strategy

June 19, 2017

Agenda

1.	Welcome & Introductions	10:00 – 10:10 a.m.
2.	Recent Publications	10:10 – 10:15 a.m.
3.	Long-Term Concepts & Implementation Strategy	10:15 – 11:00 a.m.
4.	Rotation & Dialogue	11:00 – 12:20 p.m.
5.	Next Steps & Meeting Close	12:20 – 12:25 p.m.
6.	Group Photo	12:25 – 12:40 p.m.
7.	Lunch	12:40 – 1:00 p.m.

Welcome & Introductions

Recent Publications (5 minutes)

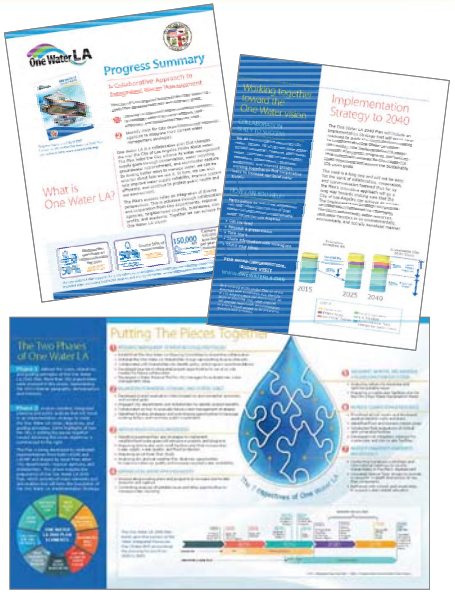
One Water LA Progress Summary

Purpose

- Communication tool for community outreach

Content

- High-level overview
- Purpose of One Water LA
- Overview of Progress to-date



One Water LA Progress Report

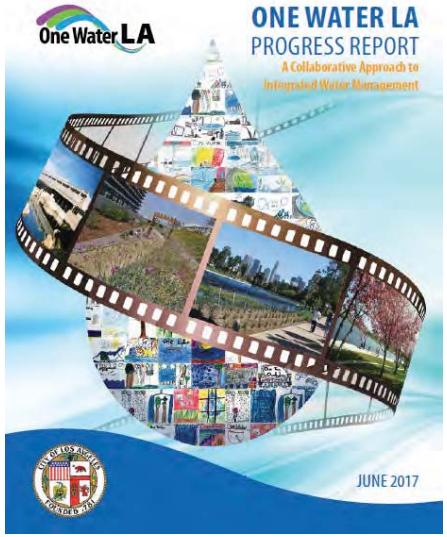
Purpose

- Report progress since 2015

Content

- High-level overview
- Purpose of One Water LA
- Highlight Progress to-date

Available for download at
www.onewaterla.org



All Water is One Water

Meeting Goals

1. What are the One Water LA Vision and Objectives?
2. What are the elements of the One Water LA 2040 Plan?
3. What are the Long-Term Integration Strategies to achieve the Objectives?
4. How are we going to develop the Implementation Strategy?

Meeting Goals

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One Water LA Vision

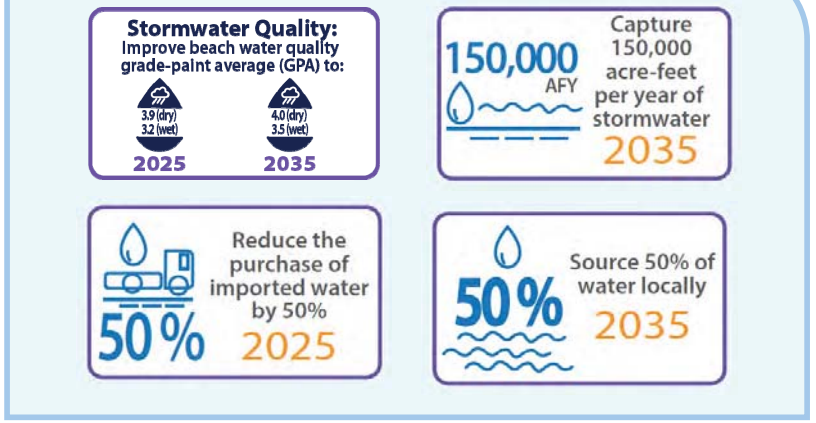
> ***One Water LA Vision***
>
> One Water LA is a collaborative approach to develop an integrated framework for managing the City's water resources, watersheds, and water facilities in an environmentally, economically and socially beneficial manner.

- Collaborative Approach
- Integrated framework
- Manage the cities resources
- Environmental, economic, and social benefits

One Water LA Objectives

1. Integrate **management of water resources** and policies
2. Balance **environmental, economic, and societal** goals
3. Improve health of local **watersheds**
4. Improve local water **supply reliability**
5. Implement, monitor, and maintain a **reliable wastewater** system
6. Increase **climate resilience**
7. Increase **community awareness** and advocacy for sustainable water

Examples of Sustainable City pLAn goals One Water LA supports



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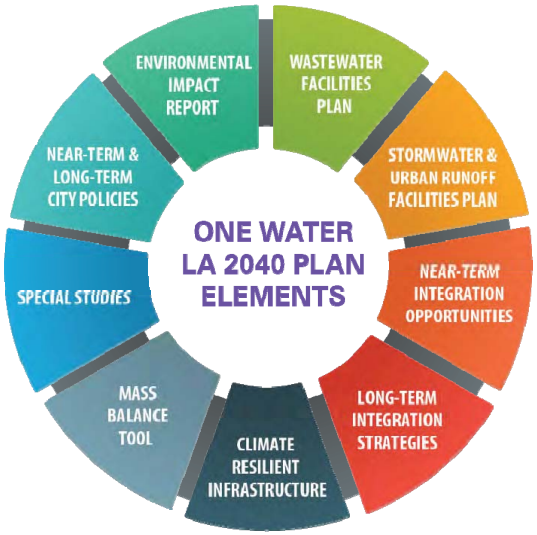
Engagement Overview

One Water LA 2040 Plan Elements



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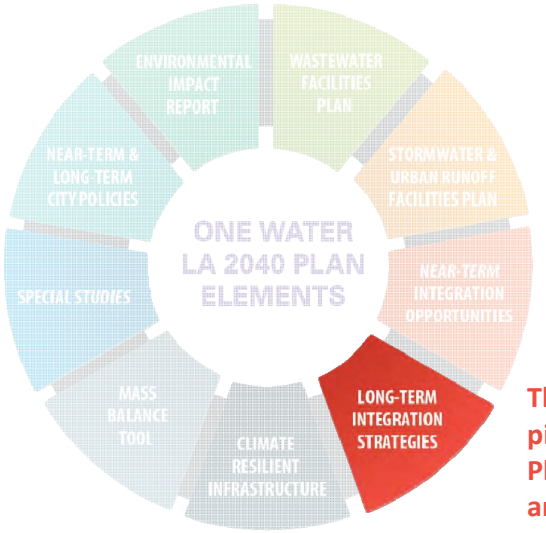
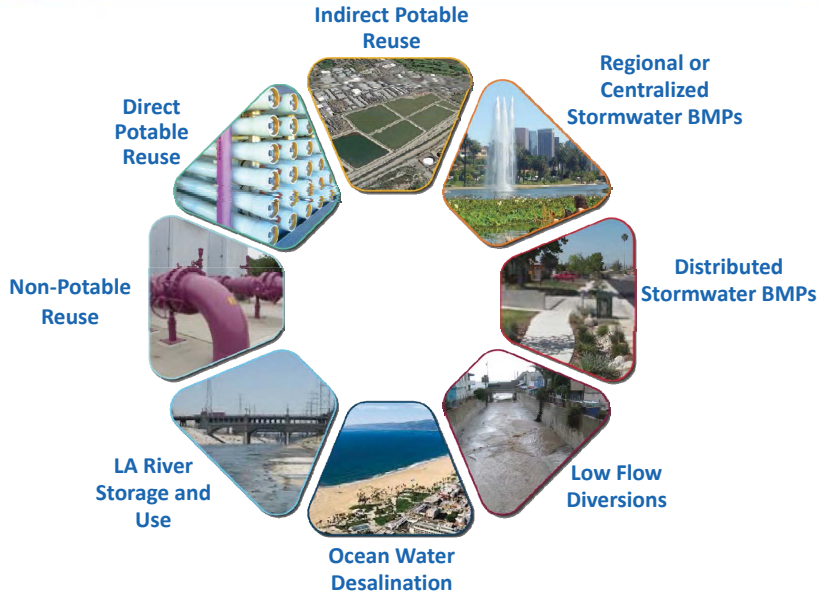
One Water LA 2040 Plan Elements



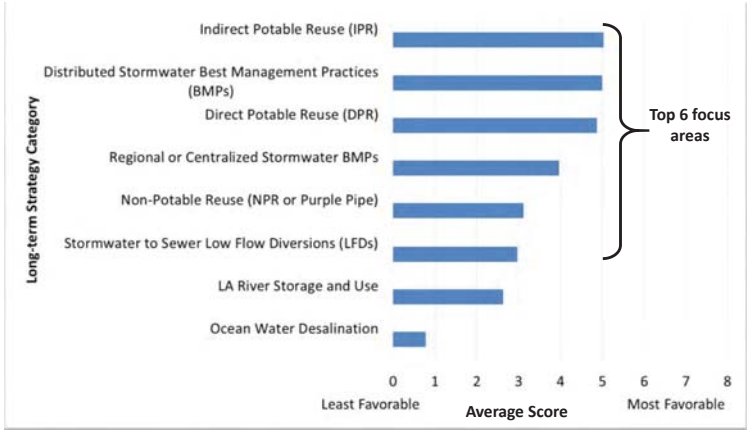
This is the piece of the Plan that we are focusing on today

Long-Term Integration Strategies Assessed



Stakeholder Survey Results

Surveyed 300+ stakeholders and received 54 responses



We will continue to focus on the topics we've collectively identified as important

From Strategies to 25 Concepts

Asked "What could LA's urban water cycle look like in 2040?"

Brainstormed 25 Long-Term Concepts

Strategy	Concept Name
Regional, Centralized & Distributed Stormwater BMPs (Stormwater Management)	Stormwater Facilities Plan LA River Recharge into the LA Forebay
Low Flow Diversions	Dry Weather Low Flow Diversions Wet Weather High Flow Diversions
Indirect Potable Reuse	Tillman Water Reclamation Plant (WRP) to San Fernando Basin Hyperion WRP to West Coast Basin Hyperion WRP to Central Basin w/ Injection Hyperion WRP to Regional System Hyperion WRP to San Fernando Basin
Direct Potable Reuse	Tillman WRP to LA Aqueduct Filtration Plant (LAAFP) Tillman WRP to Distribution System LA-Glendale WRP to Headworks Reservoir Hyperion WRP to Distribution System Hyperion WRP to Headworks Reservoir Hyperion WRP to LAAFP Central LA Satellite WRP to LAAFP
Non-Potable Reuse	Non-Potable Reuse Demand beyond 2015 UWMP
LA River Storage & Use	Upper LA River to Tillman WRP
Ocean Water Desalination	Ocean Desalination at Scattergood

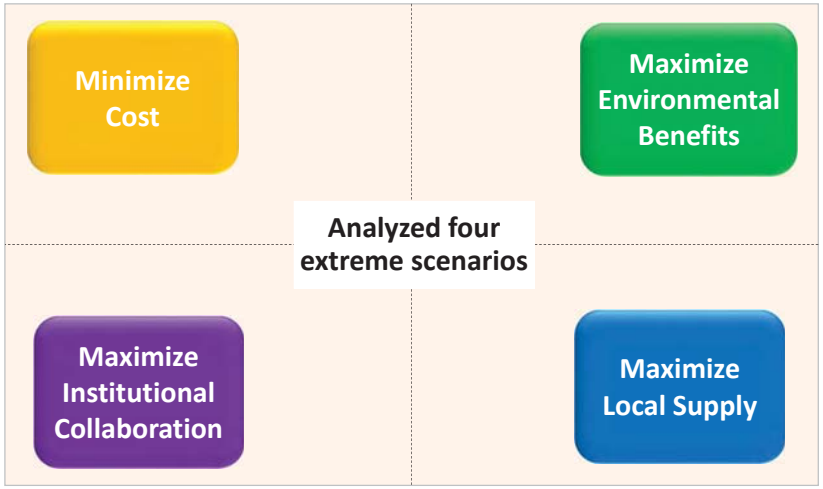
Developed Criteria to Evaluate Concepts

- Used to compare the 25 Long-Term Concepts
- To balance environmental, economic, and societal goals
- 4 criteria categories, totaling 18 individual criteria developed with Stakeholders and City staff over 4 months

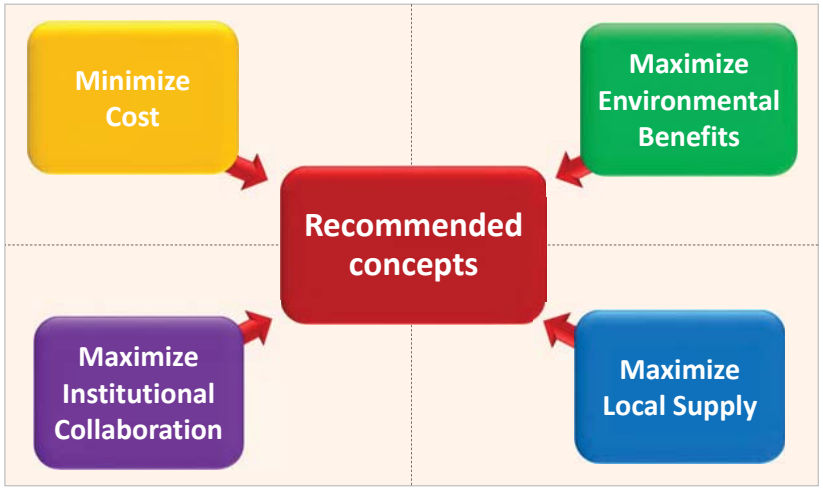
Economic Criteria	Resiliency Criteria	Implementation Criteria	Environmental Criteria
• Unit cost • Financial benefits • Funding mechanism • Likelihood to obtain outside funding	• Drought resiliency • Earthquake resiliency • Flood risk mitigation • Local supply benefit • Energy Impact/ Green-House Gas Emissions	• Constructability • Institutional collaboration • Regulatory approval • Public engagement • Public and political support	• Environmental justice • Open/natural space and recreational benefit • Stormwater quality • Ecological benefit

The combined Stakeholders and City Staff criteria weighting was used to analyze each long-term concept

City assessed the 25 long-term concepts



City assessed the 25 future concepts



Overview Strategies to Concepts

Asked "What could LA's urban water cycle look like in 2040?" and developed 25 future concepts

Recommend concepts based on Stakeholder input & assessing extremes

Started with 8 long-term integration strategy categories

Are there any questions about the process?

Recommended Long-Term Concepts

Strategy	Concept Name
Regional, Centralized & Distributed Stormwater BMPs (Stormwater Management)	**Stormwater Facilities Plan**
	LA River Recharge into the LA Forebay
Low Flow Diversions	**Dry Weather Low Flow Diversions**
Indirect Potable Reuse	**Hyperion Water Reclamation Plant to Regional System**
Direct Potable Reuse	**Donald C. Tillman Water Reclamation Plant to LA Aqueduct Filtration Plant**
	LA-Glendale Water Reclamation Plant to Headworks Reservoir
Non-Potable Reuse	**Increase Non-Potable Reuse Demand beyond 2015 UWMP**

Defining Triggers

Trigger – Internal or External force that causes (an event or situation) to happen or exist.

Example: Direct Potable Reuse regulations are approved

- Some concepts are dependent on certain triggers occurring
- Dynamic strategy allows projects to be implemented only if and when needed

Stormwater Management

Recommended Long-Term Program

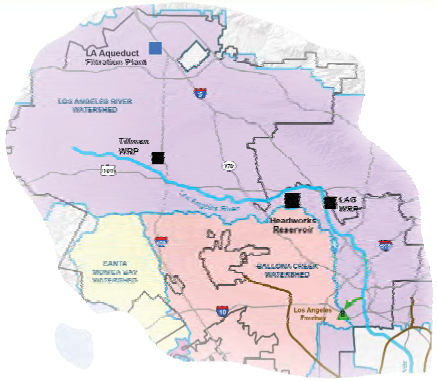
- Stormwater Facilities Plan includes 1,200 projects from the 5-year CIP, EWMPs, SCMP, and Prop O
- Recommend implementing projects that achieve multiple benefits using the "three-legged stool" approach

Trigger: TMDL regulations have already triggered stormwater projects

LA River Recharge into LA Forebay

Recommended Long-Term Concept

- LA River Recharge into LA Forebay



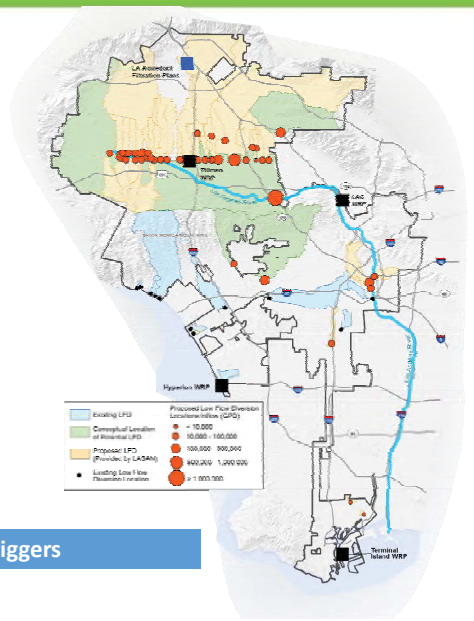
Trigger: A decision to submit a 1211 petition

Trigger: Agreement with the Water Replenishment District to utilize the storage space in the Central Basin

Dry Weather Low Flow Diversions

Recommended Long-Term Program

- Best opportunities exist in the San Fernando Valley
- Increase recycling from Donald C. Tillman and LA-Glendale Water Reclamation Plants
- Improves water quality to help comply with TMDLs

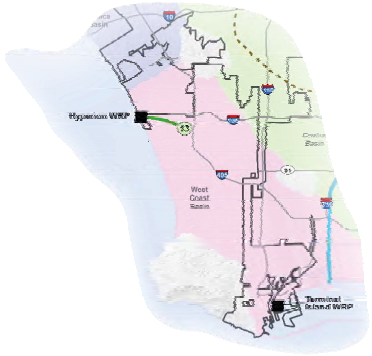


Trigger: No major triggers

Indirect Potable Reuse

Recommended Long-Term Concepts

- Hyperion to Regional System

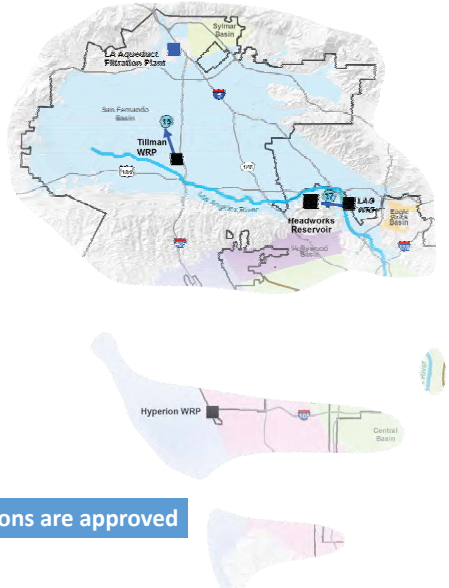


Trigger: City and Regional partners agree to a water exchange agreement to transfer water from Hyperion Water Reclamation Plant to a regional system

Direct Potable Reuse

Recommended Long-Term Concepts

- Donald C. Tillman Water Reclamation Plant to LA Aqueduct Filtration Plant
- LA-Glendale Water Reclamation Plant to Headworks Reservoir



Trigger: Direct Potable Reuse regulations are approved

Non-Potable Reuse

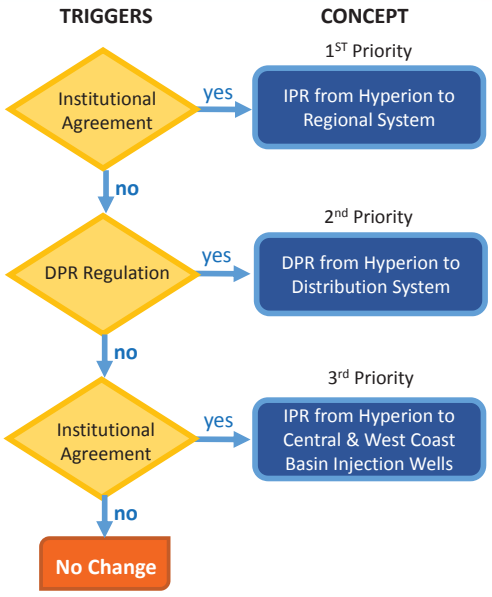
Recommended Long-Term Concepts

- Increase Non-Potable Reuse Demand beyond 2015 UWMP, focusing on:
  - Terminal Island Water Reclamation Plant
  - Hyperon Water Reclamation Plant

Trigger: No major triggers

Example of Trigger-based Implementation

- Some concepts are dependent on certain triggers occurring
- Dynamic strategy allows projects to be implemented only if and when needed



Estimated Concept Cost

Strategy	Concept Name	Yield (AFY)	Capacity (mgd)	Capital Cost Range ($M)	Unit Cost Range ($/AF)
Stormwater Management	Distributed and Centralized Stormwater Projects (per Stormwater Facilities Plan)	TBD	TBD	$5.0-$6.6 billion*	n/a**
	LA River Recharge into LA Forebay	25,000	22	$900-$1,200	$1,900-$2,500
Low Flow Diversions	Dry Weather Low Flow Diversions	n/a	5.5	$100-$130	$900-$1,200
Indirect Potable Reuse	IPR - Hyperion to Regional System	95,000	85	$1,400-$1,800	$600-$800
Direct Potable Reuse	DPR - Tillman WRP to LA Aqueduct Filtration Plant***	15,000	14	$365-$465	$1,660-$2,150
	DPR - LA/Glendale WRP to Headworks Reservoir	6,000	5	$130-$170	$1,400-$1,800
Non-Potable Reuse	Increase Recycled Water Demand beyond 2015 UWMP	16,400	15	$600-$800	$1,900-$2,500

* Stormwater management cost are obtained from the DRAFT Stormwater Facilities Plan with a range of -10% t0 +20%.
** Stormwater management includes both water quality and water supply benefits. Cost shall not be expressed in $/AF to avoid invalid comparison.
*** Requires a flow management concept. East-West Valley Interceptor Sewer Concept included (Concept #22, 16 mgd, $85M, $260-$350/AF)

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5 Elements of the Implementation Strategy

Implementation Strategy Development Process

RECOMMENDATIONS FROM:

- (1) Wastewater Facilities Plan
- (2) Stormwater & Urban Runoff Facilities Plan
- (3) Near-Term Integration Opportunities
- (4) Long-Term Integration Strategies
- (5) Long-Term Policies & Programs

One Water LA 2040 Plan Recommendations
- Projects
- Programs
- Policies

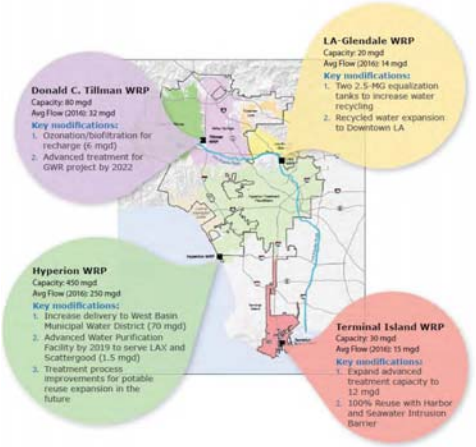
IMPLEMENTATION STRATEGY THROUGH 2040

- Projects Timeline
- Trigger-based Scenarios
- Funding Opportunities

(1) Wastewater Facilities Plan

EXAMPLE

- Strategies for treatment options to meet future water demands.
- Climate resilient infrastructure recommendations to minimize risk and mitigate impacts.
- Phased Capital Improvement Plan including future system considerations



Supports One Water LA Objective 5 – Implement, monitor and maintain a reliable wastewater system and Objective 6 – Increase climate resilience

(2) Stormwater & Urban Runoff Facilities Plan

EXAMPLE

University Park Neighborhood Rain Garden Pilot Study

- 35 rain gardens (e.g., parkway bioswales) designed and built to capture residential and commercial roadway runoff
- Landscaping features three drought-tolerant plant palettes
- Community engaged and involved during design and construction

Supports One Water LA Objective 3 - Improve health of local watersheds

(3) Near-Term Integration Opportunities

EXAMPLE

Capture of stormwater at LAUSD schools

- Assess the feasibility of a pilot project for a LAUSD site to capture off-site stormwater.
- Potential school sites are grouped by watershed
- Focus on areas where regional stormwater facilities could optimize infiltration and on-site use meeting multiple objectives and benefits

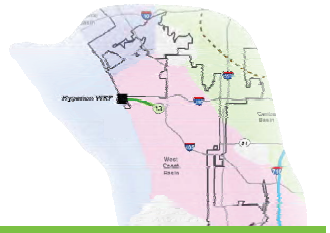
Supports One Water LA Objective 2 – Balance environmental, economic and societal goals and Objective 7 – Increase community awareness and advocacy for sustainable water

(4) Long-Term Integration Strategies

EXAMPLE

Recommended Long-Term Concepts

Strategy	Concept Name
Regional, Centralized & Distributed Stormwater BMPs (Stormwater Management)	Stormwater Facilities Plan
	LA River Recharge into the LA Forebay
Low Flow Diversions	Dry Weather Low Flow Diversions
Indirect Potable Reuse	Hyperion Water Reclamation Plant to Regional System
Direct Potable Reuse	Donald C. Tillman Water Reclamation Plant to LA Aqueduct Filtration Plant
	LA-Glendale Water Reclamation Plant to Headworks Reservoir
Non-Potable Reuse	Increase Non-Potable Reuse Demand beyond 2015 UWMP



Supports One Water LA Objective 2 – Balance environmental, economic and societal goals and One Water LA Objective 4 – Improve local water supply reliability

(5) Near- & Long-Term Policies & Programs

EXAMPLE

Policy Topics	Example Policies
• Integrated Planning and Design • Stormwater and Urban Runoff • Training and Education • Improve Collaboration and Streamline Implementation • Funding and Partnerships • Sustainability and Climate Change Resiliency • Conservation • Recycled Water • LA River Revitalization	Simplify Process and remove barriers to installing parkway swales and other distributed green infrastructure BMPs in the public right-of-way. Create a program to evaluate and facilitate public-private partnerships for water-related projects.

Supports One Water LA Objective 1 – Integrate management of water resources and policies

What are the Cost Components?

- **(1) Wastewater Facilities Plan** → Capital Improvement Plan
- **(2) Stormwater & Urban Runoff Facilities Plan** → Stormwater Improvement Program
- **(3) Near-Term Integration Opportunities** → Cost estimates from Case Studies
- **(4) Long-Term Integration Strategies** → Recommended Long-Term Concepts
- **(5) Long-Term Policies & Programs** → Separate study to estimate cost implications for recommended policies & programs

→ **Identify Funding Opportunities**

Funding Opportunities

The City is working closely with the County to develop a regional revenue source for stormwater management.

Federal, State, Local, and Private funding options have been identified, such as:

- Cost-Sharing Frameworks
- Grant Funding
- Loan Programs
- Public-Private Partnerships
- State & Federal Tax Credit Programs
- Tax Measures
- Traditional Municipal Funding

One Water LA Collaboration

Meeting Goals

1. What are the One Water LA Vision and Objectives?
2. What are the elements of the One Water LA 2040 Plan?
3. What are the Long-Term Integration Strategies to achieve the Objectives?
4. How are we going to develop the Implementation Strategy?

One Water LA

Rotation & Dialogue (80 minutes)

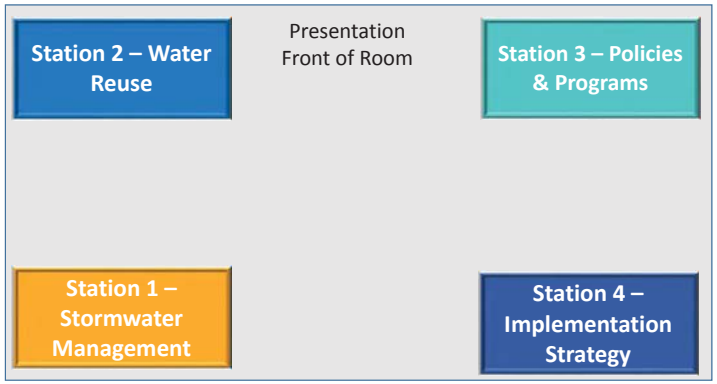
Dialogue Topics

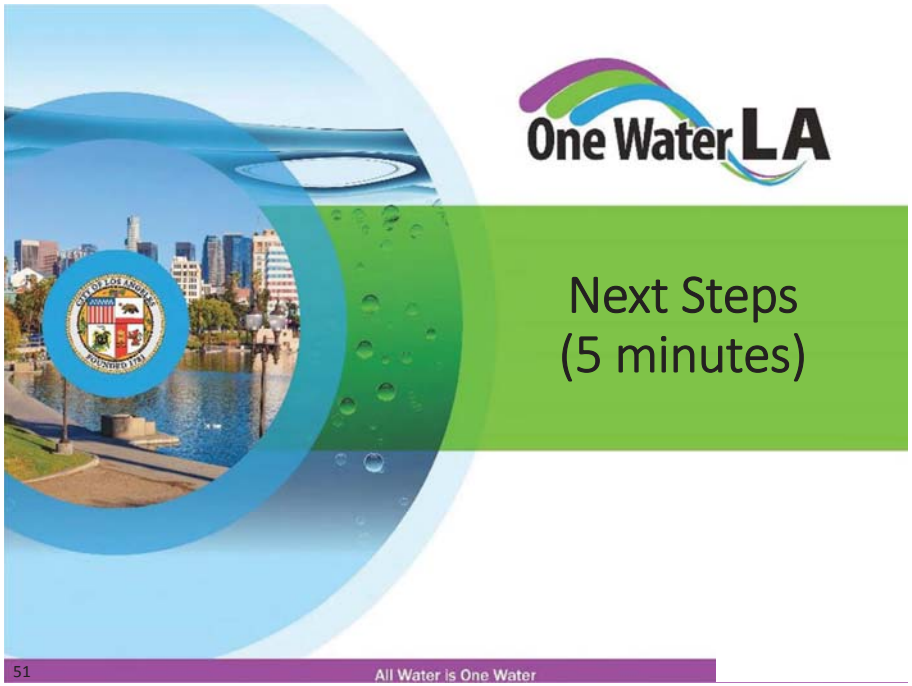
Purpose: To answer any additional questions you may have.

Station Number	Station Topic
1	Water Reuse
2	Stormwater Management
3	Policies & Programs
4	Implementation Strategy

Rotation Logistics

- Approximately 20 minute rotation to each station (80 minutes total)
- Documentation of discussion at each station
- Buckets and 3x5 cards to capture detailed questions





Programmatic Environmental Impact Report

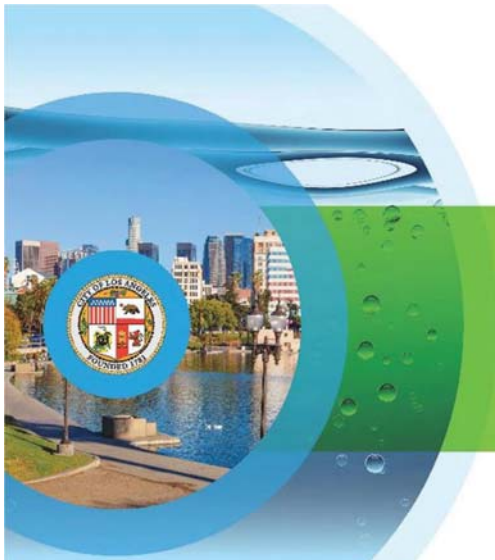
Continued Stakeholder Engagement

One Water LA 2040 Plan

One Water LA Testimonials

Future Meeting Topics

- LA River Flow Study Informational Meeting
- Event to launch One Water LA 2040 Plan
- Programmatic EIR
- Future Focus Meetings
- Annual One Water LA Updates



One Water LA

Meeting Close & Group Photo

Additional Information:

www.onewaterla.org

onewaterla@lacity.org

INFORMATIONAL STAKEHOLDER MEETING #3 (10/16/17)

The following pages present the meeting agenda, summary of the discussion, and the three presentation given by the One Water LA team, UCLA, and TNC at the Informational Stakeholder Meeting #3, held on October 16, 2017.

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One Water LA Plan Phase 2
Informational Stakeholder Meeting
Topic: Los Angeles River Studies
Agenda

Wednesday, October 16, 2017
1:00 p.m. – 3:00 p.m.
Friendship Auditorium, 3201 Riverside Drive, L.A. 90027

Meeting Objectives:

- Information sharing on various recent LA River studies
- Open Discussion

Agenda:

1. Introductions/Welcome 1:00-1:10 pm
2. Sharing Recent Efforts 1:10-1:20 pm
3. Presentation by UCLA 1:20-1:50 pm
    a. 20 minute presentation
    b. 10 minute Q&A
4. Presentation by City of LA 1:50-2:20 pm
    a. 20 minute presentation
    b. 10 minute Q&A
5. Presentation by The Nature Conservancy 2:20-2:50 pm
    a. 20 minute presentation
    b. 10 minute Q&A
6. Meeting Close 2:50-3:00 pm
    a. Next Steps
    b. Closing Remarks
    c. Next Meeting: One Water LA 2040 Plan presentation (early December)

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One Water LA-Stakeholder Meeting Summary
LA River Informational Meeting
Monday, October 16th, 2017- 1:00PM – 3:00PM
Friendship Auditorium, 3201 Riverside Drive, Los Angeles, CA 90027

The purpose of these notes is to provide an overview of the meeting. They are not intended as a transcript or as minutes. Major points are summarized herein, primarily for context.

INTRODUCTION & MEETING OBJECTIVES

Attendees were welcomed with opening remarks by Adel Hagekhalil from Los Angeles Sanitation (LASAN) and Bill Van Wagoner from the Los Angeles Department of Water and Power (LADWP). Adel acknowledged the tragic loss of an LASAN employee, Vijay Desai, and his passion for improving the quality of life and watershed protection. Both Adel and Bill mentioned the importance of working together to help balance the LA River's Revitalization and the City's Water needs, and also thanked the stakeholders for their attendance and continued participation.

Miguel Luna was the meeting facilitator and he reviewed the agenda, meeting objectives, and introduced each of the presenters. The following presentations were given:

1. **One Water LA** – LA River Low Flow Study & Storage Potential
2. **University of California, Los Angeles (UCLA)** – LA River Watershed Integrated Water Management
3. **The Nature Conservancy** – Ecological Baseline and Flow Scenarios

ONE WATER LA'S LA RIVER FLOWS STUDY

The One Water LA team presented the purpose, objective, study areas, assumptions, and findings of the LA River Flow Study. The objective of the study is to identify considerations, assumptions, and areas of future study necessary to determine optimal flow conditions in the LA River. These conditions would balance the City's water supply needs with the River's water-dependent uses and regulatory requirements. It was mentioned that there is some difference between the numbers in the One Water Study and the other studies being presented today as the studies analyzed different river reaches.

A brief overview on two previous ecological surveys was presented:

- City of Los Angeles Water Integrated Resources Plan (2006); and
- Bureau of Reclamation (USBR) evaluation (2004).

The previous studies indicate that 70% of the current vegetation is invasive and/or non-native and that water demands are impacted by current vegetation. An invasive plant removal program has begun and there is mapping, surveying, and analysis being conducted to further determine the extent of vegetative intrusion.

Hydrologic mile-by-mile modeling along the entire LA River was completed. The three following sites were modeled in more detail due to channel complexity, sufficient bathymetric data, and other available data:

- Los Feliz;
- Taylor Yard; and

- Willow Street

Results of the low-flow hydraulic modeling were presented (slides 14-22)

The Los Angeles River Ecosystem Restoration Feasibility Report (USACE 2015) was briefly discussed. The following assumptions need re-evaluation to assure the most recent data is available: future water demand; infiltration rates; types of habitat; invasive species; and plant palettes (slide 23).

Potential storage options for the LA River and possible locations were also presented to the stakeholders (slides 24-26).

Recommendations based on this study include (slides 28-29):
- Consider the existing data gaps for future studies;
- Establish a realistic water budget under existing and revised habitat conditions (due to stormwater capture, infiltration, evapotranspiration, and more);
- Type and quantity of the habitat of the River and the flow demands;
- Future available flows versus flows for existing conditions and uses for the entire LA River;
- Creation of a predictive, dynamic modeling tool. Includes the spatial and temporal variability of flow;
- Continued Integration of City Departments and outside agencies regarding LA River Studies; and
- Conduct a Collaborative Regional Environmental Study of cumulative impacts for the River. The study would need to take into account the regional efforts along the LA River.

Stakeholder questions and comments:
- Are there any plans to restore native vegetation?
  - Response: LADWP is currently partnering with two other agencies for the invasive species removal program. One with the National Forrest Foundation and one with the Council for Watershed Health. We have secured Proposition 84 funding to develop a sustained eradication effort year round, and replanting efforts are also taking place. Self-restoration is also expected in some areas.

- How is this integrated into the LA County Plan?
  - Response: There needs to be a larger collaborative effort with the County and all groups involved in the river. This will help incorporate all of the separate studies related to the river, and will eventually lead to a more integrated framework.

- How are you addressing public access and recreational usage of the river?
  - Response: The approach discussed today is conceptual. Public access and recreational use will need to be taken into account as decisions are ready to be made. We also need to fill in the data gaps that were discussed today before decisions are made.

- As far as the current uses of the River, such as fishing and kayaking, are those activities specifically incorporated into your work?
  - Response: The specific uses are not, but the purpose of these engineering solutions is to have flows where you would want it in the river. A decision needs to be made regarding the location of the devices and where the flows are needed

to help these types of activities. We need future studies to fill in the data gaps, such as who will maintain improvements, locations for access, plant palettes, and more.

- Will the LADWP San Fernando Valley ground water basin remediation for potable water change the flows in the river from infiltration?
    - Response: We are currently in the process of remediating ground-water in the San Fernando Valley. The process started in the northern well field, since they are the biggest producers. The next frontier is to characterize the groundwater quality of the southern part of the basin and to restore our ability to fully utilize our southern well fields. This part connects to the LA River. Once we have the southern well fields back online, it could reduce or eliminate upwelling in the groundwater portion.
- How do we define planning from an integrated perspective? The solutions and long-term projects still rely on a lot of concrete.
    - Response: The One Water LA flow study was done from a water supply perspective to determine the options and recognize an increase of stormwater capture. We wanted to determine future flow impacts to the river from dry weather runoff and stormwater capture. This is just the beginning and we recognize there needs to be a larger cumulative impact study done which needs to take into account all future project plans.

UCLA'S LA SUSTAINABLE WATER PROJECT: LOS ANGELES RIVER WATERSHED REPORT

UCLA presented the approach, scenarios and conclusion of their LA River Study. The study was a three year effort, in partnership with Colorado School of Mines. LASAN has been involved from the beginning and both LASAN and LADWP have been helpful in providing data and making sure UCLA has the correct information.

The purpose of the study was to accomplish the following:

- Identify opportunities to implement integrated water management;
- Meet Water Quality Standards;
- Maximize reuse, stormwater capture, and local water supply;
- Analyze policy and regulatory challenges and opportunities; and
- Analyze economics, costs, and benefits.

The study areas included:

- Ballona Creek / Hyperion Water Reclamation Plant (WRP) / West Coast, Central, Santa Monica, And Hollywood Groundwater Basins;
- Dominguez Channel and Machado Lake / Terminal Island WRP / West Coast And Central Groundwater Basins; and
- Los Angeles River / Donald C. Tillman, LA Glendale, Burbank WRPs / Upper LA River Area Groundwater Basins.

Meeting the water quality standards and requirements is what remained as a constant throughout the study. EPA's watershed model SUSTAIN (System for Urban Stormwater Treatment and Analysis Integration) was used to input different scenarios, and evaluate the implementation of different structures, such as Best Management Practices (BMPs), to treat runoff (slide 5).

Thousands of scenarios were looked at to determine what the future of the watershed can look like.

Stormwater runoff impacts due to the City's Low Impact (LID) ordinance was also presented (slide 6). By 2028, there could be a 20.95% reduction due to LID implementation across the LA River watershed. That is an example of a policy that did not involve a high cost to the City for implementation, but provides a large benefit. Different scenarios were also evaluated to determine what the impact of flows along the LA River could be. The flows of the river will be reduced as watershed scale BMP programs (e.g. EWMPS) are implemented and more LID practices are more broadly installed (slide 8). Reductions could increase greatly by adding a retrofit on resale program and increasing incentives for voluntary installation of BMPs. Runoff ratios post implementation of BMPs are similar to those in the 1950s and 1960s (slide 9).

The modeling software also showed the extreme scenario, where the city has full BMP implantation and recycles 100% of the Water Reclamation Plant's recycled water. In this scenario, modeled annual minimum flows in the river were reduced to zero, which is definitely a concern and needs to be considered as we move forward in planning for the LA River.

The LA River Study reached the following conclusions (Slide 13):

- Changes to the current sources of the flow can reduce channel flows to zero, in particular during minimum flows;
- Low flows near the outlet were much lower in the early to mid-20th Century than they are currently;
- Current flow volumes may not be necessary to sustain all beneficial uses and should not be assumed necessary in planning studies; and
- A study need to be conducted to quantify the true minimum flow requirements to support uses and needs including flood control, water supply, habitat, recreation. A habitat study is especially necessary.

Future study needs were also presented to the stakeholders (slides 14-15).

Stakeholder questions and comments:

- Is there a study that shows what the natural flows were with no development?
    - Response: We looked at the rain gauges and we went back as far as the 1950's. There are no studies that show what the natural flows were over much of the LA River's history as there was not much data before the flow gages were installed. We do know that the flows have increased by a large magnitude due to human inputs over the last 50-60 years. That order of magnitude is important to consider in terms of managing our expectations on what the flows should be during the dry season (Ex. what we have now is about 10 times what we had before). Seasonal discharge is something we need to consider moving forward.

- How are these methods going to impact the developments in the City of LA and surrounding areas?
    - Response: This study touched on the impacts to the flows due to enforcement and implementation of LID. There will be another study out in December 2017 that includes overarching policy recommendations for the City, such as a water

neutrality ordinance (all new or redevelopment wouldn't add any additional water consumption burden to the city as a whole). The intention is not to stop new development, but if we are adding new development, it's being done in a way that's not increasing water demand.

- Water neutrality is great from a water supply standpoint, but it still does not address what that does in terms of altering the hydrology of the River. Is there enough information to recommend this policy?
    - Response: Yes, but there is a need for another study. Today we presented the extreme, where we maximized stormwater capture and recycled water use. The extreme scenario was presented so that we understand the impacts to the river. Different scenarios can be looked at to determine how to optimize flows among the various uses and needs on the river.

- There is an issue with water neutrality. It is a State constitutional law that allows water for property owner's right to water. There are many decisions and lawsuits that would play into this recommendation. Water is also LADWP controlled through the charter. We need to consider the water that has already been established for many years now.
    - Response: Santa Monica passed a neutrality law about four months ago. The issue was not that the development would not be allowed to use water; it was that they were not allowed to use water more than the pre-existing development. If they did use more water, they would have to pay for retrofit elsewhere in the City. Other places in the State are also doing something similar.

THE NATURE CONSERVANCY'S LA RIVER HABITAT ENHANCEMENT AND OPPORTUNITIES ASSESSMENT STUDY

The Nature Conservancy (TNC) presented their LA River Habitat Enhancement and Opportunities Assessment Study. The study focuses on opportunities for habitat enhancement along two reaches of the soft bottom portion the river. The goals of the study were to:

- Provide an ecological baseline;
- Document historical ecological conditions;
- Complete biological surveys over the course of a year;
- Describe the hydrology and flow scenarios ; and
- Present for opportunities for enhancing habitat.within this section of the rive

The study area is a 2.5-mile stretch in the Glendale narrows portion of the river. It runs from the Los Feliz Blvd Bridge to the G2 parcel.

TNC looked at historical maps to determine what the river was like before there was channelization and development of the flood plain of the Glendale Narrows (Slide 5). TNC presented the historical flow patterns and the historical vegetation of the LA River. A year-long assessment of the plants and animals along the study area of the River was also presented (Slide 12). There is a great number and diversity of plants and animals along the 2.5 mile stretch. Habitat enhancement options were presented (Slide 17-20).

The dry season surface flow over the course of 1932 to 2015 was presented (Slide 13). The hydrology analysis shows the peak flows and the changes that have occurred along the river. These changes included channel deepening and increases in discharge when different water reclamation plants came online. Historically, the amount of flow along the river was much less

than what it is today. The variability in flow was also much greater than what we have today. Flow scenarios for potential future conditions for wet weather and dry weather flow was also presented (slide 16).

Summary:

- Dry weather flow was ephemeral and much lower than today;
- Hydrology drives biology: high dry weather flow and channelization support novel vegetation assemblages;
- The existing river features, vegetation assemblages, and concrete mimic some important features of native habitat;
- Many native habitat specialists that historically occurred in the Los Angeles River have been extirpated;
- Generalist species thrive on the river; and
- Habitat enhancement or creation could allow populations of native animals to disperse from adjacent upland and riparian areas (e.g. Sepulveda Dam).

Stakeholder questions and comments:

- Has there been a study done that shows the relationship between increased flows and driving the animals into the residential communities? We are seeing a huge growth in the number of coyotes on the west side.
    - Response: Most of the focus has been on the relationship between having higher flow and what plant species that supports. For example, there are species of willow that have moved to parts of the river where they were not historically found once the hydrology shifted to providing year-round wet conditions,. This species is now found in this section of the river due to the increased flow.

- What is the connection with your work and other upstream water capture and how that would reduce pressure downstream to allow more intensive restoration? Has there been any modeling used that has looked at that?
    - Response: That is not something that we looked at, but what needs to be looked at systemically is the tradeoff between capturing water in one section of the river, and what happens elsewhere. Being very explicit about what we expect to see and how we expect the habitat to change is something important to be considered.

- Has there been a study done or planning to be done on the steelhead salmon?
    - Response: If the funding and the will are there then it could be done. From what we currently know we are unable to use the river for those uses. It all depends on what we prioritize and what we want to see.

- How broad of an area does your study look at? Your study might have underestimated the value of the LA River habitat, including the Sepulveda Basin where we find upwards of 80 native bird species during our annual counts.
    - Response: This study goes into great depth and detail with year-long surveys to determine what species are present. The size of the study area is what was feasible with available funding. For a more comprehensive study to be done on the entire river or watershed with the same amount of detail would be a much more expensive endeavor, and would give a lot more information. Everything presented today was for the 2.5 mile stretch of the study area. There are more

species of birds that we didn't find that are located in the Sepulveda basin and further down the river.

- Is the diversity associated with proximity to the Glendale Narrows?
    - Response: The fact that part of the river is adjacent to a national park brings in more species of animals to certain parts of the river. The 5 Freeway is a major barrier, and certain birds can cross it, but many species of animals have a hard time crossing it.

CLOSING REMARKS

- There needs to be a continuing collaborative approach to the river to balance the different needs in the LA River;
- The city is working collaboratively with state, regional board, and other agencies on the LA River. There will be larger studies done on the river in the future; and
- Next One Water LA Stakeholder Meeting: Anticipated late January 2018

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Information Stakeholder Meeting #3

Los Angeles River Studies

October 16, 2017
LA River Stakeholder Workshop

Agenda

- Intro/Welcome
- Presentation – One Water LA
- Presentation – UCLA
- Presentation – The Nature Conservancy
- Discussion
- Closing Remarks

Recent LA River Studies

- Recent LA River studies conducted by:
  - **One Water LA** – Low Flows & Storage Potential from water supply perspective
  - **UCLA** – LAR Watershed integrated water management
  - **The Nature Conservancy** – Ecological baseline and flow scenarios
- Data may differ due to different study areas and time periods
- All studies have a flow component

LA River Low Flow Study & Storage Potential

October 16, 2017

One Water LA Vision

Collaborative approach to develop an integrated framework for managing the City's watersheds, water resources, and water facilities in an **environmentally**, **economically**, and **socially** beneficial manner.

One Water LA 2040 Plan

- Expected Completion in Nov 2017
- Outlook to 2040
- Multiple tasks/initiatives
- PEIR to immediately follow

Today's Agenda: One Water's LA River Flow Study

- Overview of One Water LA
- LA River Flow Study Purpose and Objectives
- LA River Tasks, Assumptions, Criteria
- LA River Flow Study findings, including gaps and additional studies needed
- Next Steps

Purpose

To identify considerations, assumptions, and areas of future study necessary to determine optimal flow conditions in the LA River.

These conditions would **balance** the City's water supply needs with the River's water-dependent uses and regulatory requirements.

One Water Flow Study Areas

Existing LA River Ecological Studies Review

Existing low flow conditions and potential future range of low flow conditions in the LA River

Gain understanding of the **water budget** assumptions in the USACE's ARBOR study.

Develop conceptual **adaptive water management** alternatives

Process For LA River Tasks

1 Review of historical LA river Ecological surveys — CDM Smith, ch2m

2 Low Flow Analysis — Geosyntec consultants

3 ARBOR Project Flow Evaluation — TETRA TECH

4 LA River Water Storage Potential — SEITec

Reviews, Study evaluations, → Modeling Results, & Outcomes

carollo
One Water LA 2040 Plan

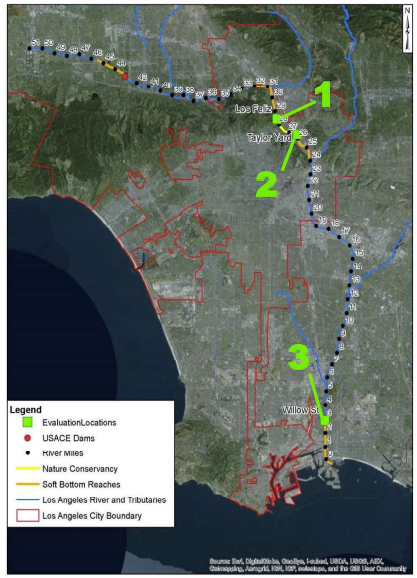
LA River Historical Ecological Surveys

- City of Los Angeles Water Integrated Resources Plan (2006)
- Bureau of Reclamation (USBR) evaluation (2004)

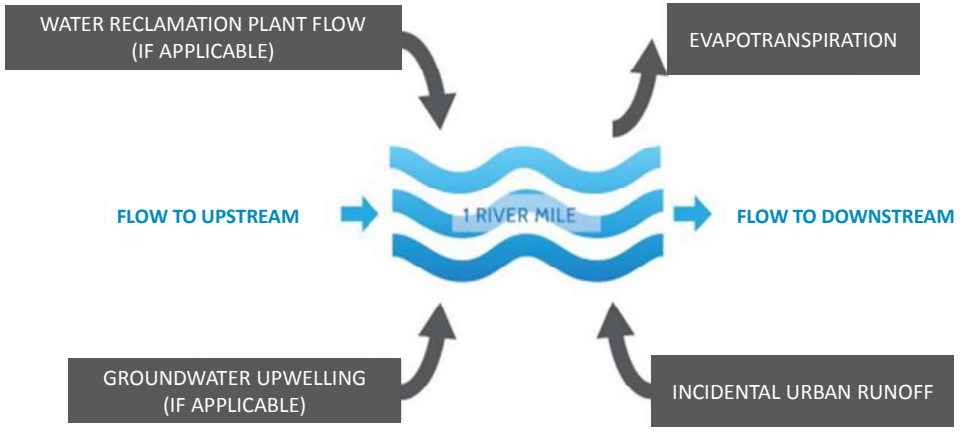
- **70%** current vegetation invasive and/or non-native
- Water demands **impacted** by current vegetation
- **Invasive removal program started**: Mapping, Survey, & Analysis for extent of vegetative intrusion

Dry Weather Flow Analysis

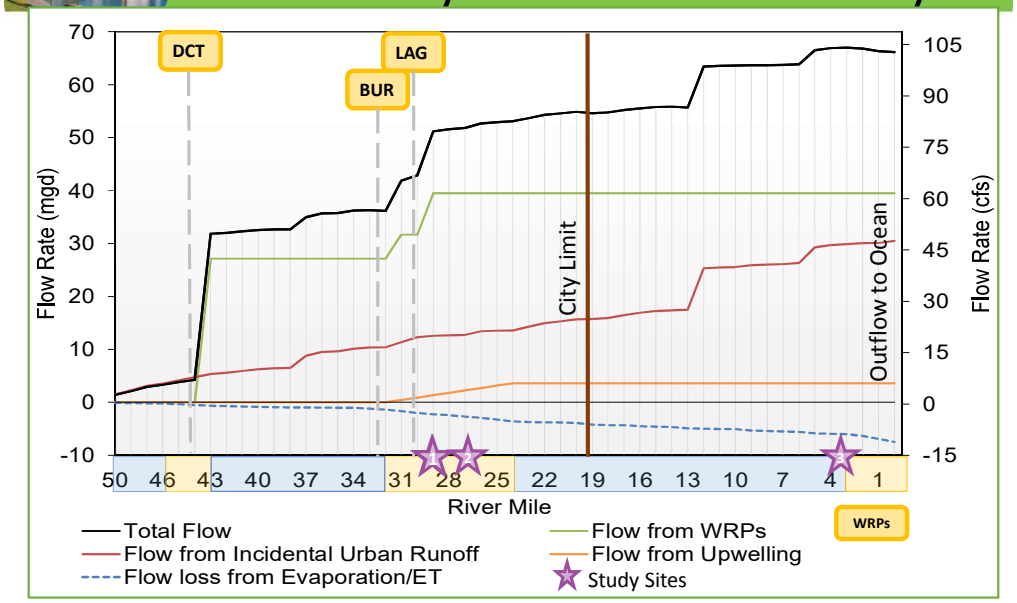
- Hydrologic mile-by-mile modeling along entire LA River
- Three sites modeled in more detail due to **channel complexity**, sufficient **bathymetric data**, and other available data:
  1. Los Feliz
  2. Taylor Yard
  3. Willow St.



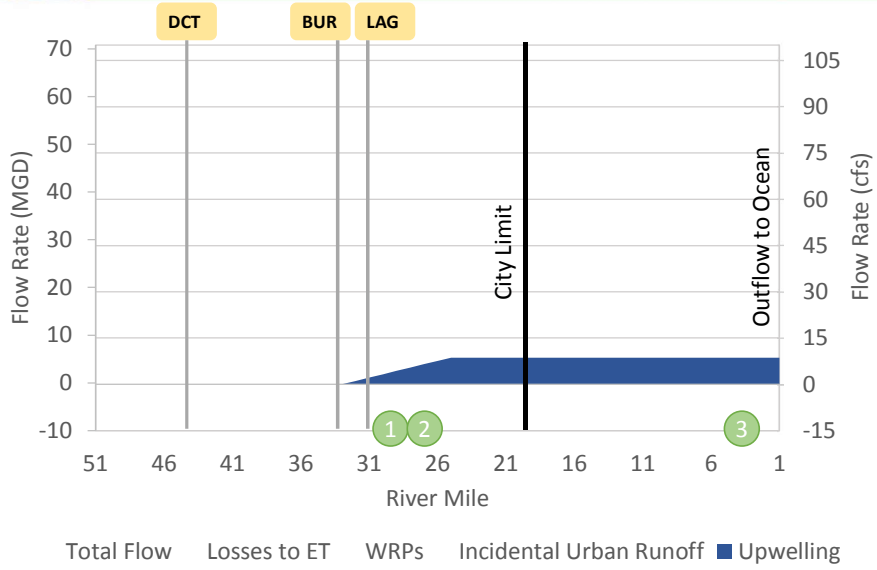
Mass Balance for Each River Mile



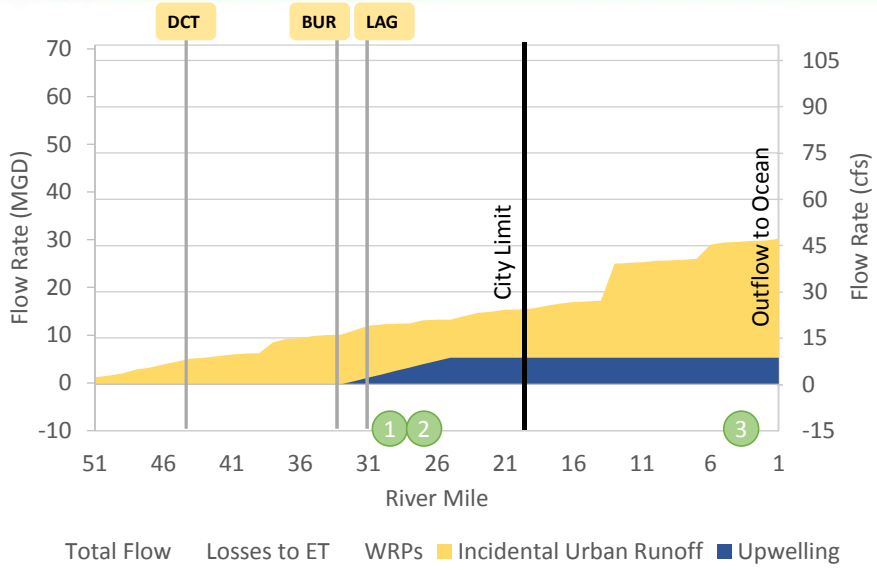
LA River Dry Weather Flow Analysis



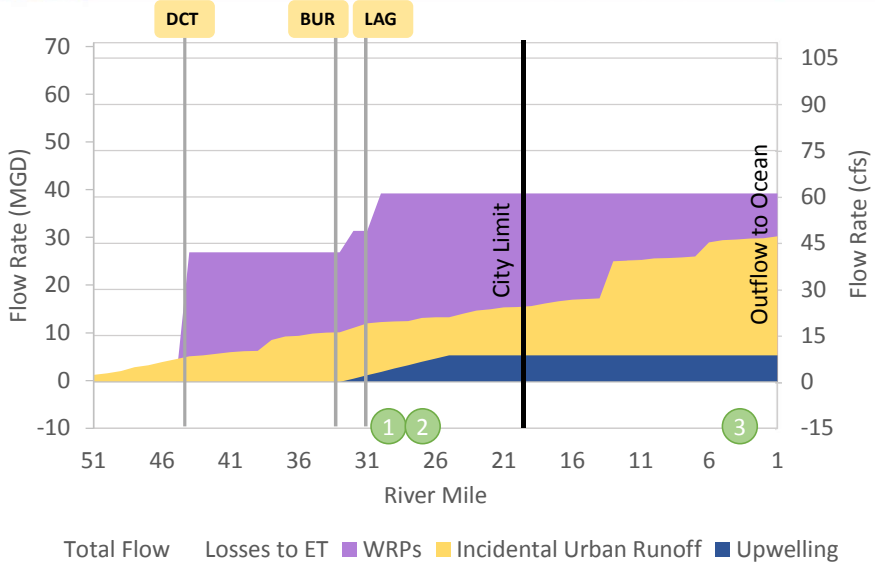
LA River Dry Weather Flow Analysis



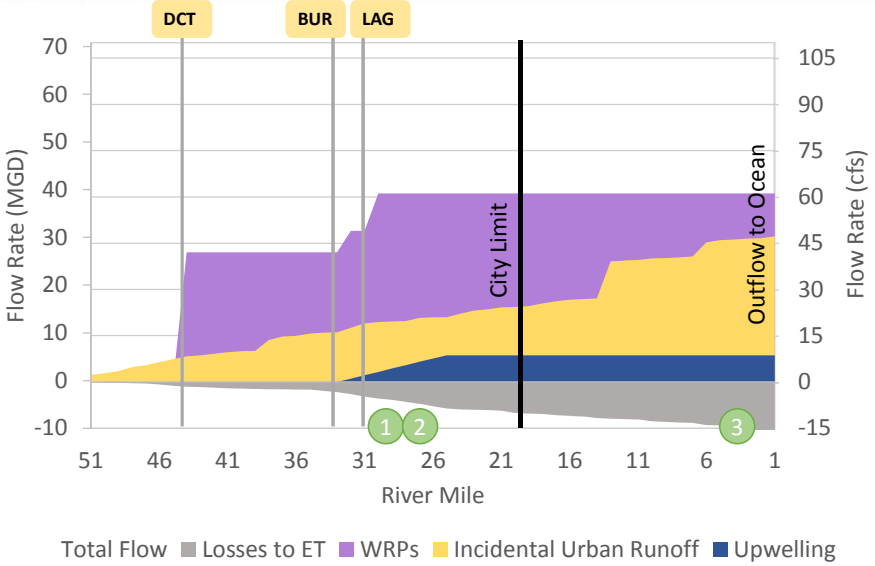
LA River Dry Weather Flow Analysis



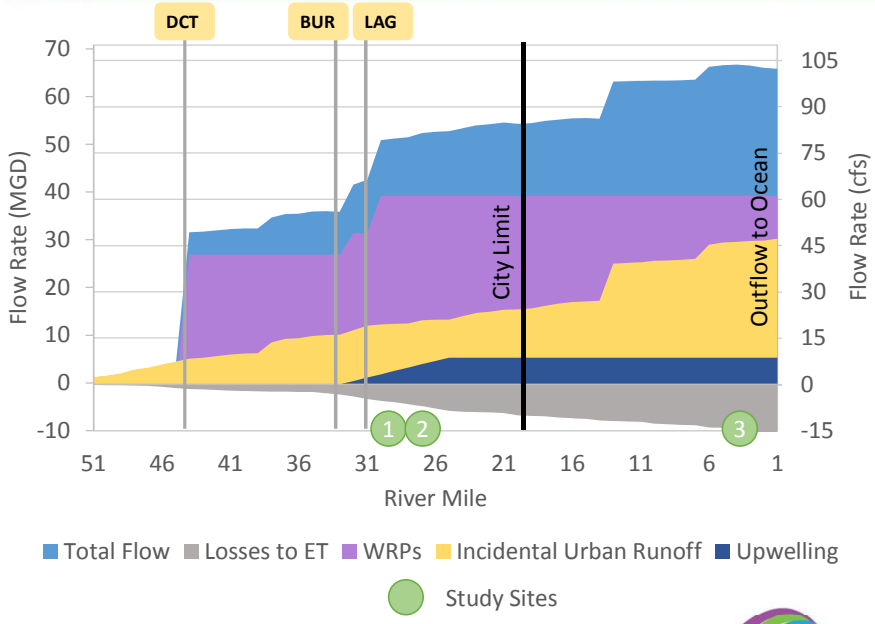
LA River Dry Weather Flow Analysis



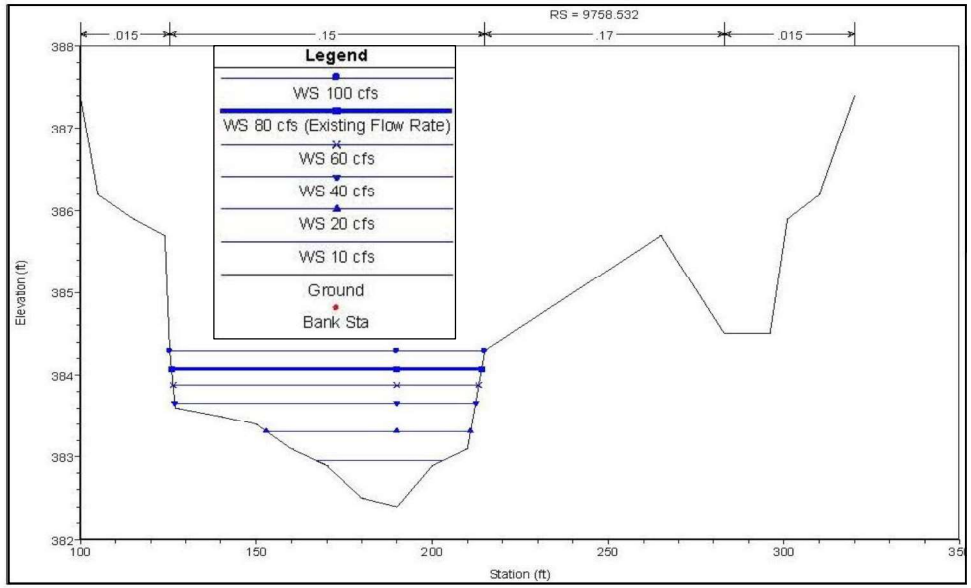
LA River Dry Weather Flow Analysis



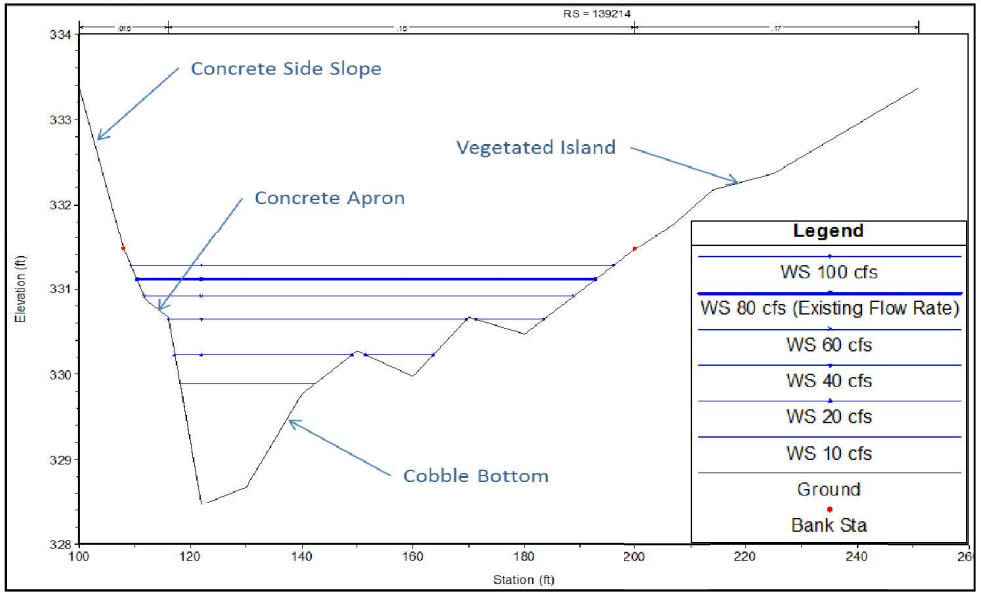
LA River Dry Weather Flow Analysis



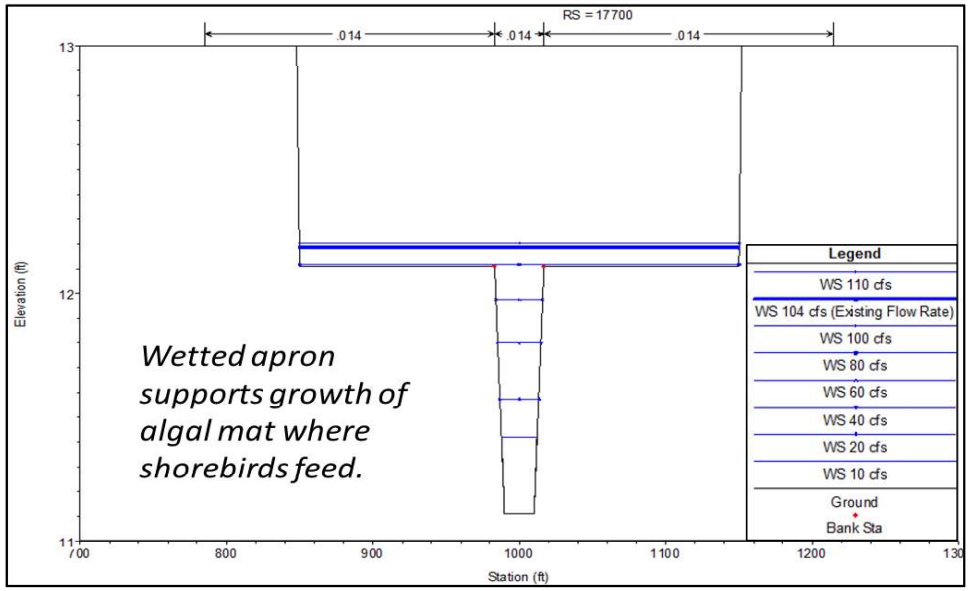
Los Feliz Low Flow Hydraulic Modeling



Taylor Yard Low Flow Hydraulic Modeling

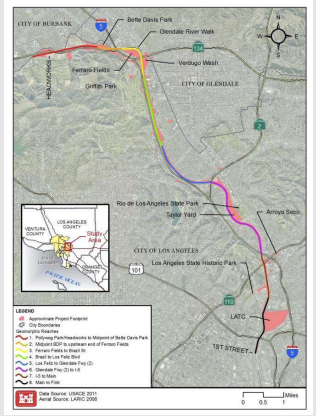


Willow Street Low Flow Hydraulic Modeling



One Water LA -ARBOR Evaluation

- Los Angeles River Ecosystem Restoration Feasibility Report (USACE 2015)
- Assumptions needing re-evaluation:
  - **Future water demand**
  - **Infiltration rates**
  - **Types of habitat**
  - **Invasive species**
  - **Plant palettes**



Storage Potential Evaluation Focus

- Reviewed Balboa study site (USBR 2004)
- Analyzed LA River reaches and flows
  - Dry
  - Wet
- Explored **storage techniques**
  - Rubber dams
  - Small water level devices/check dams

1. Upstream of Sepulveda Dam
2. Sepulveda Dam
3. Upstream of Glendale Narrows (to Sepulveda Dam)
4. ARBOR
5. Upstream of City Limits (to ARBOR Reach)

Benefit Up to **11,000 MG/year (34,000 AFY)** as potential supply

Potential LA River Storage: Wet Weather

- Potential In-channel storage: Use of rubber dams in river
  - Four locations evaluated
  - Volume of stormwater –up to **1,200 million gallons (MG) (3,700 AF)**
  - Stormwater stored behind rubber dams could be conveyed to DCT and LAG for treatment and beneficial use.
  - Controlled releases - SW to provide a continuous flow in to the LA River

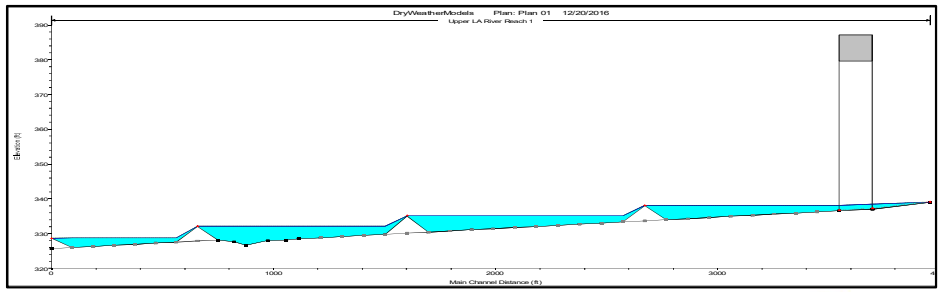
- Rubber dam height max - **18 ft**
- Bank height varies and are adjustable
- Dam location based on **slope** and **depth** of impoundment
- Overflow and/or outlet components assumptions

Potential Off-Channel Storage: Wet Weather

- Potential Off-channel storage: Dams plus piping, pumps, and facility modifications
  - Two locations: Silver Lake & Sepulveda Dam Recreational Area
  - SW volume estimated to be **1,500 MG (4,600 AF)** per event

Water Level Control: Dry Weather

- Potential water level control: Check dams/water leveling devices
  - 3 ft high
  - 1 foot water depth behind dam
  - Ranges of Water Reclamation Plant reductions and/or use of water leveling devices



Recommended Future Studies and Evaluations

- Establishing realistic water budgets under existing and revised habitat conditions
  - infiltration
  - groundwater upwelling
  - evapotranspiration rates
- Flows required to support habitat:
  - Determine habitat– type and quantity
  - Arundo and invasive removal
- Future available flows vs. flows for existing conditions and uses for the entire LA River
- Creation of a predictive, dynamic modeling tool. Includes the spatial and temporal variability of flow

Next Steps

- Integrating City Departments re: LAR studies
- Collaborative regional environmental study of cumulative impacts
- Balancing water supply needs with water-dependent activities and habitat
- Planned and/or potential projects
- The future 'look' of the river

Thank you

Questions?

UCLA
LA Sustainable Water Project: Los Angeles River Watershed Report

Thank you

Questions?

The Nature Conservancy
LA River Habitat
Enhancement and
Opportunities Assessment Study

Thank you

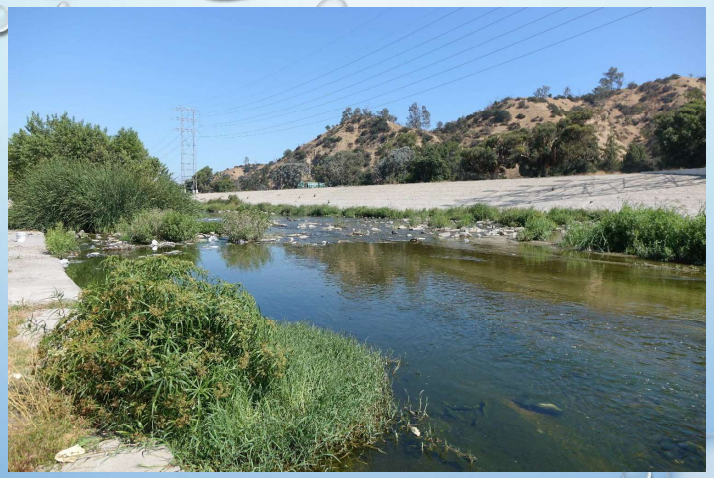
Questions?

Closing Remarks

One Water LA Plan Presentation

Early December

LA SUSTAINABLE WATER PROJECT:
LA RIVER WATERSHED

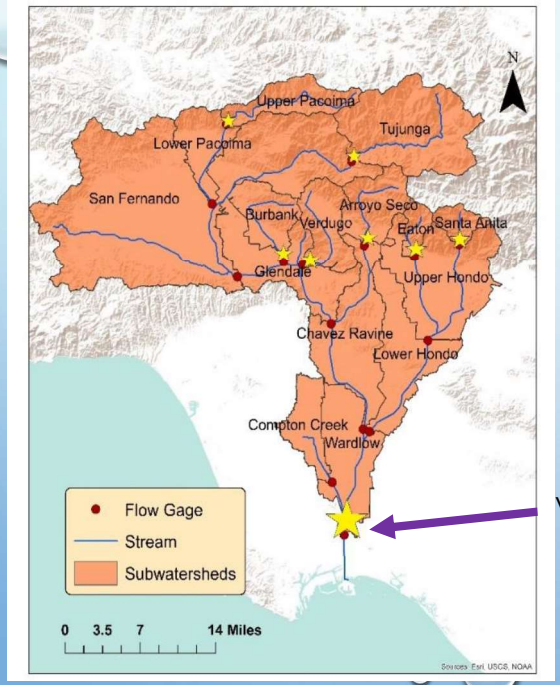


MARK GOLD, KATIE MIKA, TERRI HOGUE
LA RIVER WORKSHOP
10/16/17

UCLA Institute of the Environment and Sustainability

LA SUSTAINABLE WATER PROJECT OVERVIEW

- CITY OF LA
  - OPPORTUNITIES TO IMPLEMENT INTEGRATED WATER MANAGEMENT
  - MEET WATER QUALITY STANDARDS
    - MAXIMIZE REUSE, MAXIMIZE STORMWATER CAPTURE, MAXIMIZE LOCAL WATER SUPPLY
  - ANALYSIS OF POLICY AND REGULATORY CHALLENGES AND OPPORTUNITIES
  - ANALYSIS OF ECONOMICS COSTS AND BENEFITS
- STUDY AREAS
  - BALLONA CREEK / HYPERION WATER RECLAMATION PLANT (WRP) / WEST COAST, CENTRAL, SANTA MONICA, AND HOLLYWOOD GROUNDWATER BASINS
  - DOMINGUEZ CHANNEL & MACHADO LAKE / TERMINAL ISLAND WRP / WEST COAST AND CENTRAL GROUNDWATER BASINS
  - LOS ANGELES RIVER / DONALD C. TILLMAN, LA GLENDALE, BURBANK WRPS / UPPER LA RIVER AREA GROUNDWATER BASINS



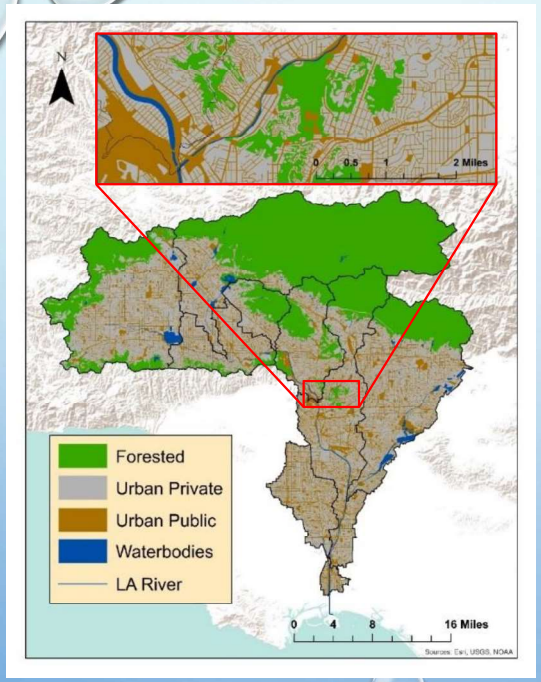
LA RIVER WATERSHED STUDY AREA

825 square mile watershed

Approximately 35% of watershed within LA City boundary

Measured flows at Wardlow Gage: 274,000 AFY (2004-2013)

Wardlow Gage



LA RIVER WATERSHED LAND USES

Highly developed, lots of undeveloped forested land at top of watershed

WATER QUALITY MODELING DECISION MATRIX

		Los Angeles River Scenarios / BMPs	Baseline No BMPs	1a BR	1b PP + BR	2a VS + DP	2b PP + VS + DP	3a VS + IT	3b PP + VS + IT
		Volume Capture	0	10,396	10,396	10,396	10,396	10,396	10,396
		Storm Capture %	0	85th %	85th %	85th %	85th %	85th %	85th %
Ancillary Criteria		Cost (Billions)	-	6.60	6.80	3.80	5.20	3.80	5.20
		BMP area (mi^2)	-	10.8	5.8	14.4	9.6	14.4	9.6
		Infiltration (% of Precip)	-	20.8%	22.0%	16.4%	20.4%	22.6%	22.9%
		Infiltration (Million AFY)	-	0.16	0.17	0.13	0.16	0.17	0.17
		Peak Flow Reduction	-	47.0%	53.0%	29.0%	46.0%	55.0%	57.0%
Water Quality Criteria		Dry Weather Days/yr	333	358	360	350	358	361	361
		DW Total Possible Exceedances/yr (Cu, Pb)	2997	3222	3240	3150	3222	3249	3249
		DW Total Possible Exceedances/yr (Zn)	333	358	360	350	358	361	361
	Dry Weather Exceedances/yr	Concentration Based TMDL (Cu)	13	47	49	35	39	43	44
		Concentration Based TMDL (Pb)	0	12	13	7	10	16	14
		Concentration Based TMDL (Zn)	3	8	8	3	7	9	9
		Load Based TMDL (Cu)	307	68	71	62	69	75	75
		Load Based TMDL (Pb)	127	51	53	47	52	57	57
		Load Based TMDL (Zn)	214	18	18	15	18	19	19
		Wet Weather Days/yr	32	7	5	15	7	4	4
		WW Total Possible Exceedances/yr (Cu, Pb, Zn	32	7	5	15	7	4	4
	Wet Weather Exceedances/yr	Concentration Based TMDL (Cu)	5	1	2	1	1	0	2
		Concentration Based TMDL (Pb)	2	0	0	0	0	0	0
		Concentration Based TMDL (Zn)	14	5	5	2	5	2	4
		Load Based TMDL (Cu)	6	1	2	0	1	0	2
		Load Based TMDL (Pb)	2	0	0	0	0	0	0
		Load Based TMDL (Zn)	14	6	5	3	6	2	4
		Cu Average Annual Load % Reduction	-	71.0%	60.8%	58.6%	55.6%	77.2%	61.2%
		Pb Average Annual Load % Reduction	-	83.1%	62.9%	59.7%	53.9%	79.4%	59.7%
		Zn Average Annual Load % Reduction	-	83.6%	63.1%	62.4%	59.4%	80.1%	59.9%

LOW IMPACT DEVELOPMENT EFFECTS

Los Angeles River	% Redeveloped (2028)	Redeveloped Area (mi^2)	Volume Captured (AF)
Residential	12%	35.9	1,436
Commercial	10%	5.9	235
Industrial	22%	10.9	437
Educational	10%	1.8	70
	Pre - redevelopment	Post - redevelopment	% Reduction
Volume Captured (AF)	10,396	8,218	20.95%

City of LA-type LID ordinance implemented across the watershed. These numbers could be greatly expanded by expanding ordinance to include resale, and by establishing partnerships with NGOs to increase voluntary implementation.

WHAT MAKES UP THE LA RIVER FLOWS?

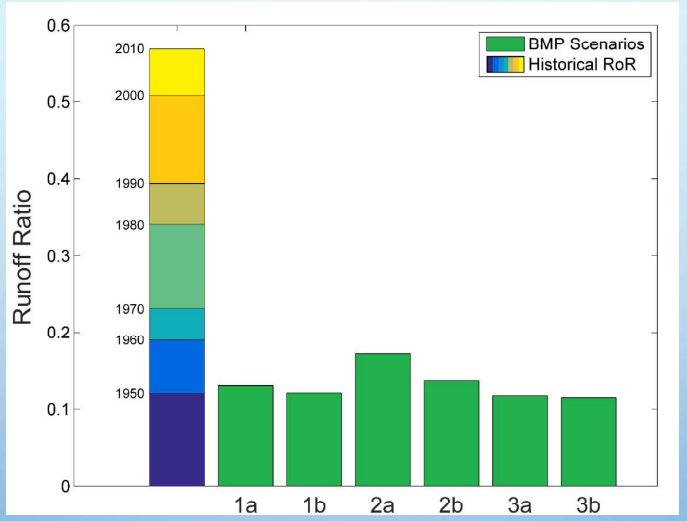
- CURRENT STATE:
  - WATER RECLAMATION PLANT (WRP) EFFLUENT DISCHARGE
  - URBAN RUNOFF
  - RISING / UPWELLING GROUNDWATER
- BUT FLOWS ARE CHANGING –
  - MORE RUNOFF WILL BE CAPTURED AS WATERSHED SCALE BMP PROGRAMS (E.G., EWMPS) ARE IMPLEMENTED & LID PRACTICES MORE BROADLY INSTALLED
  - INCREASED FOCUS ON LOCAL WATER SUPPLY MAY LEAD TO REUSE OF ADDITIONAL WRP EFFLUENT (CURRENTLY DISCHARGED INTO LAR)
  - INCREASED USE OF ULARA GROUNDWATER BASINS MAY LEAD TO LESS OR NO RISING GROUNDWATER.

BMPS REDUCE LAR FLOWS

Season	Modeling Flow (2004-2013), no BMPs			Flow with BMPs		
	CFS	MGD	AFY	CFS	MGD	AFY
Fall	134	87	97,000	91	59	66,000
Winter	188	122	136,000	100	65	72,000
Spring	178	115	129,000	89	58	64,000
Summer	142	92	103,000	87	56	63,000

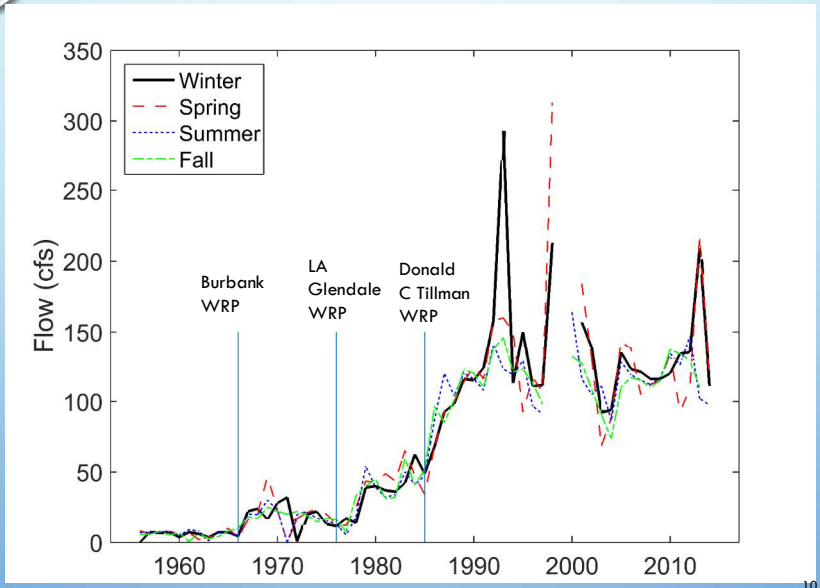
Modeled median seasonal flows at Wardlow Gage with and without BMPs.

RUNOFF RATIOS



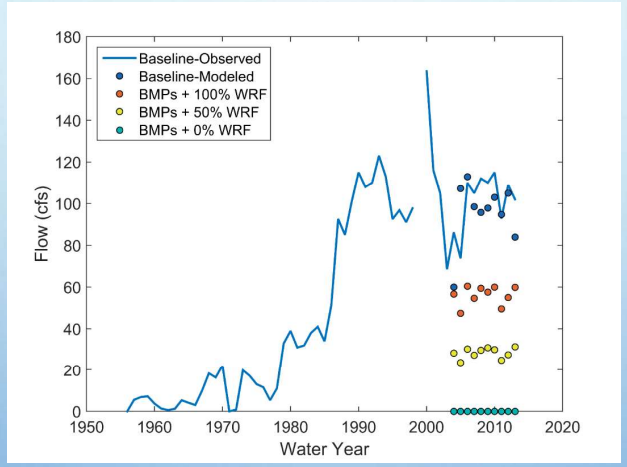
- BMPs also influence the volumes of water that run off the watershed
- Historical (1940 – 2010 data) runoff ratios and runoff ratios after implementing BMPs (2004-2013 data)
- Runoff ratios post BMPs are similar to those in the 1950s and 1960s

HISTORIC SEASONAL ANNUAL MINIMUM FLOWS IN THE LAR



Historic seasonal annual minimum flows in the LAR, measured at the Wardlow gage; blue vertical lines represent Water Reclamation Plants coming online

MODELED ANNUAL MINIMUM FLOWS CHANGE AT WARDLOW GAGE



Annual minimum flows at the Wardlow gage (blue line) compared with modeled flow before BMPs (blue points, 2004-2013 data), and post-BMP flows with varying amounts of WRP flow (0% - aqua, 50% - yellow, 100% - orange points)

In modeled scenarios with no water reclamation plant effluent flows discharged to LAR and implementation of BMPs to manage 85th percentile storm, annual minimum flows go to zero at Wardlow Gage

LOW FLOWS (7Q10)

Gage	Time Period	Years	7Q10 (cfs)
Wardlow	1956-1985	30	42.2
Wardlow	1986-2014	29	157
Arroyo Seco	1917-2014	98	1.7

7Q10 flow volumes (defined as the lowest average discharge over a period of one week with a recurrence interval of 10 years) shift in 1986 when DCTWRP comes online

No 7Q10 flow change was observed at Arroyo Seco, a less developed watershed (gage just below forested area), from 1917-2014 (~2 cfs over entire period).

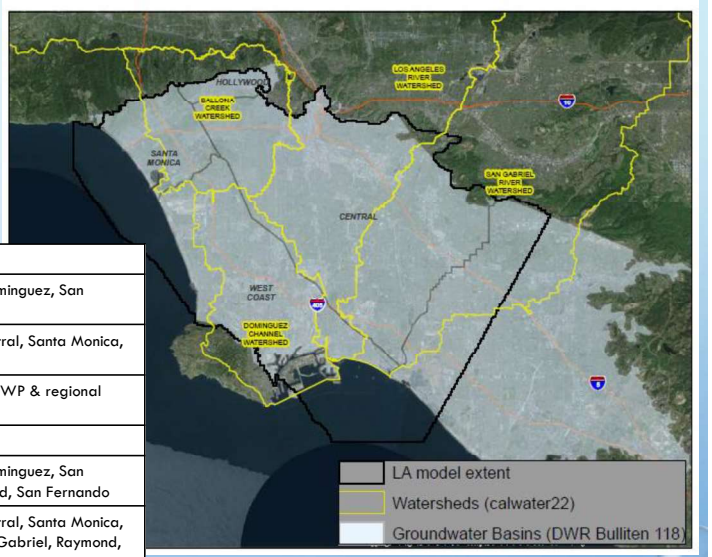
CONCLUSIONS

- CHANGES TO THE CURRENT SOURCES OF FLOW TO THE LA RIVER CAN REDUCE FLOWS IN THE CHANNEL TO ZERO, IN PARTICULAR DURING MINIMUM FLOWS
- LOW FLOWS NEAR THE OUTLET OF THE LA RIVER WERE MUCH LOWER IN THE EARLY- TO MID- 20TH CENTURY THAN CURRENTLY.
- CURRENT FLOW VOLUMES IN LA RIVER MAY NOT BE NECESSARY IN ORDER TO SUSTAIN ALL BENEFICIAL USES AND SHOULD NOT BE ASSUMED NECESSARY IN PLANNING STUDIES FOR THE LA RIVER.
- STUDY NEEDS TO BE DONE TO QUANTIFY TRUE MINIMUM FLOW REQUIREMENT TO SUPPORT USES AND NEEDS (FLOOD CONTROL, WATER SUPPLY, ENHANCED HABITATS, RECREATION, ETC) AND DETERMINE IF THIS FLOW IS CLOSER TO HISTORICAL 10-15 CFS THAN CURRENT ~90-100 CFS

FUTURE RESEARCH: LA RIVER STUDY

- MULTIPLE NEEDS AND USES IN THE LA RIVER
  - HABITAT
  - RECREATION
  - MUNICIPAL WATER SUPPLY
  - FLOOD CONTROL
- STUDY TO ASSESS APPROPRIATE FLOWS TO SUPPORT ALL NEEDS AND USES MUST BE CONDUCTED
  - BENCHMARKS
  - METRICS
  - MONITORING
  - CLEAR VISION OF WHAT FUTURE LAR SHOULD LOOK LIKE

FUTURE RESEARCH - SURFACE / GROUNDWATER



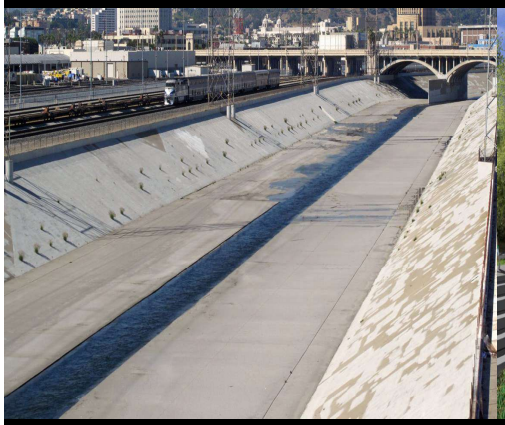
Phase 1	
Surface Model Watersheds	Ballona, LAR, Dominguez, San Gabriel
Groundwater Model Basins	West Coast, Central, Santa Monica, Hollywood
Climate Data	Historic from LADWP & regional CIMIS stations
Phase 2	
Surface Model Watersheds	Ballona, LAR, Dominguez, San Gabriel, Raymond, San Fernando
Groundwater Model Basins	West Coast, Central, Santa Monica, Hollywood, San Gabriel, Raymond, San Fernando
Climate Data	2041-2060 projections accounting for likely changes in precipitation extremes, from future Alex Hall project

PUBLICATIONS

SUSTAINABLE LA WATER PROJECT REPORTS:

- LA RIVER WATERSHED, SEPTEMBER 2017
  HTTPS://GRANDCHALLENGES.UCLA.EDU/HAPPENINGS/2017/09/19/LOS-ANGELES-SUSTAINABLE-WATER-PROJECT-LOS-ANGELES-RIVER-WATERSHED/
- DOMINGUEZ CHANNEL AND MACHADO LAKE WATERSHEDS, AUG 2017.
  HTTPS://GRANDCHALLENGES.UCLA.EDU/HAPPENINGS/2017/08/03/NEW-UCLA-REPORT-LOOKS-AT-IMPROVING-WATER-QUALITY-AND-SUPPLY-IN-L-A-S-DOMINGUEZ-CHANNEL-AND-MACHADO-LAKE-WATERSHEDS/
- BALLONA CREEK WATERSHED, NOVEMBER 2015
  HTTPS://GRANDCHALLENGES.UCLA.EDU/HAPPENINGS/2015/11/13/100-LOCAL-WATER-FOR-LA-COUNTY/
- OVERALL CITY-WIDE REPORT, LATE 2017

Los Angeles River
Habitat Enhancement Study & Opportunities Assessment



Presentation to One Water
October 16, 2017
Jill Sourial, Sophie Parker, John Randall, Shona Ganguly

The Nature Conservancy
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Scope of Work

- Ecological Baseline for the Los Angeles River
- Historic Ecological Conditions
- Biological Survey
- Hydrology and Flow Scenarios
- Habitat Enhancement Opportunities

Study Area

2.5 miles from Griffith Park to Taylor Yard

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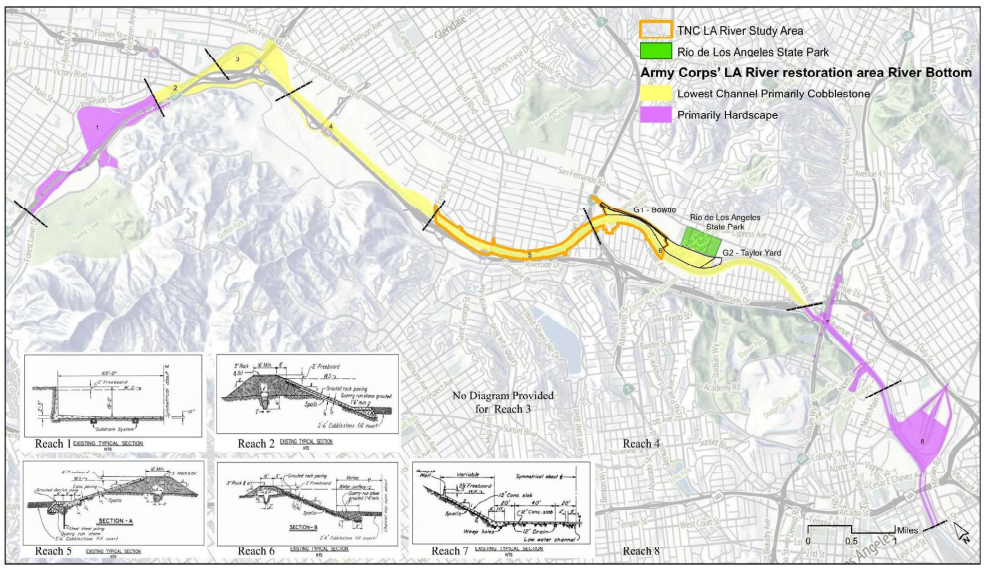
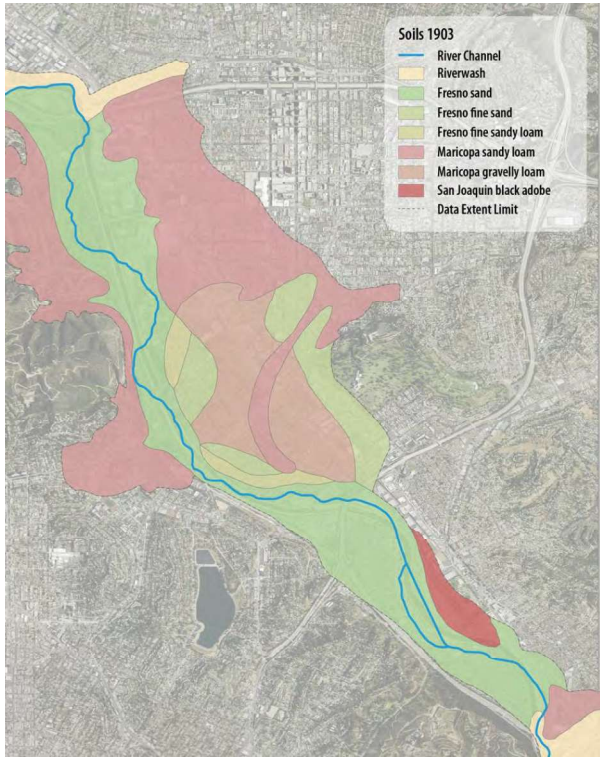
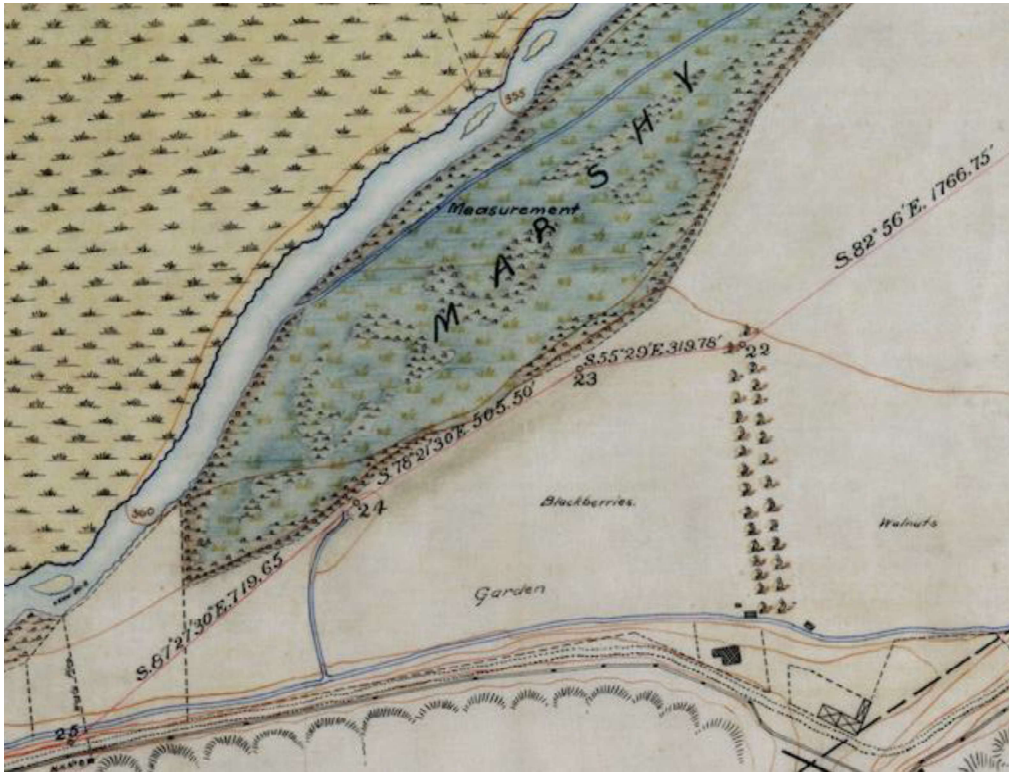
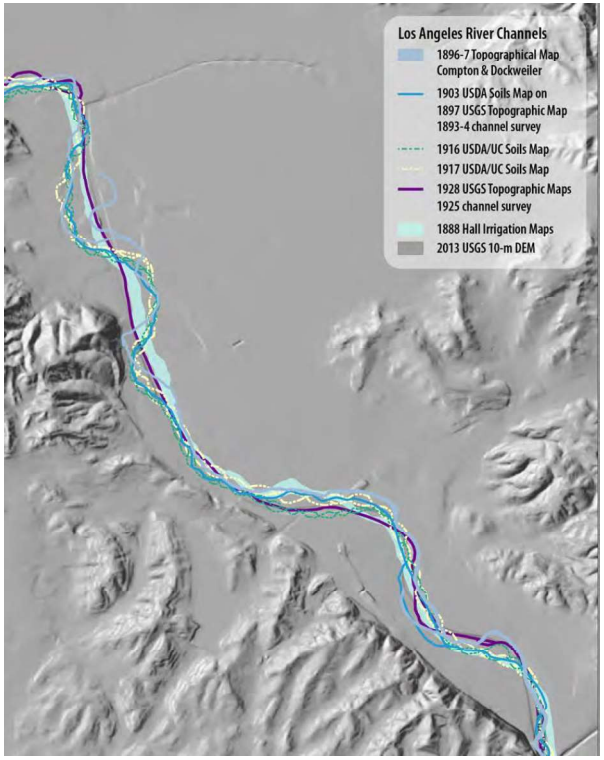
LA River Plant Propagation, Invasive Species Removal, & Revegetation
LA River Study Area and Project Area

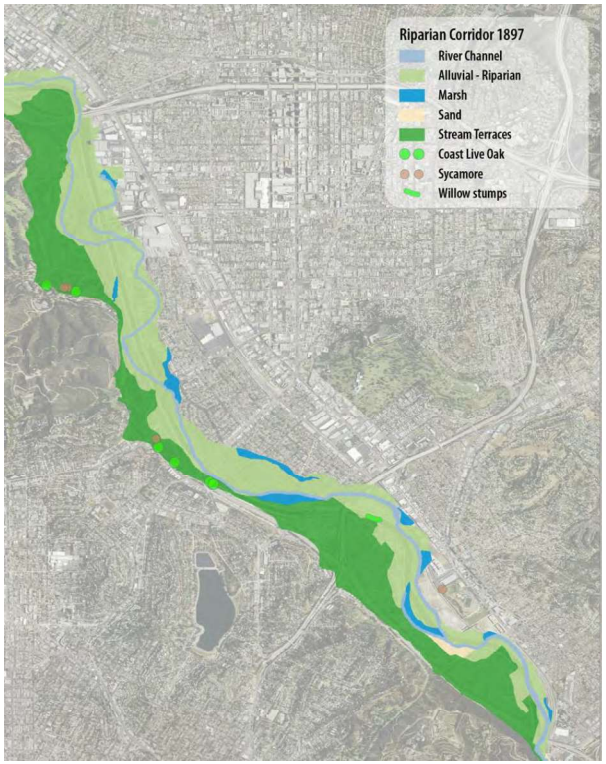






UCLA Department of Geography, Benjamin and Gladys Thomas Air Photo Archives, Spence Air Photo Collection





Summary of Biotic Conditions (Survey Period: Oct 2014 to Sep 2015)

Plants

- 76 native species
- 167 total species
- Invasive plants, like arundo & castor bean
- 4 vegetation communities
- Native willow, oak and sycamore trees

Reptiles & Amphibians

- 5 natives, incl. western toad & Pacific chorus frog
- 7 total species
- 2 invasive species
- Lizards, like western fence lizard use river pocket parks

Birds

- 89 native species
- 106 total species
- Birds use in-stream & adjacent upland habitat
- Breeding documented or inferred for 33 bird species

Insects

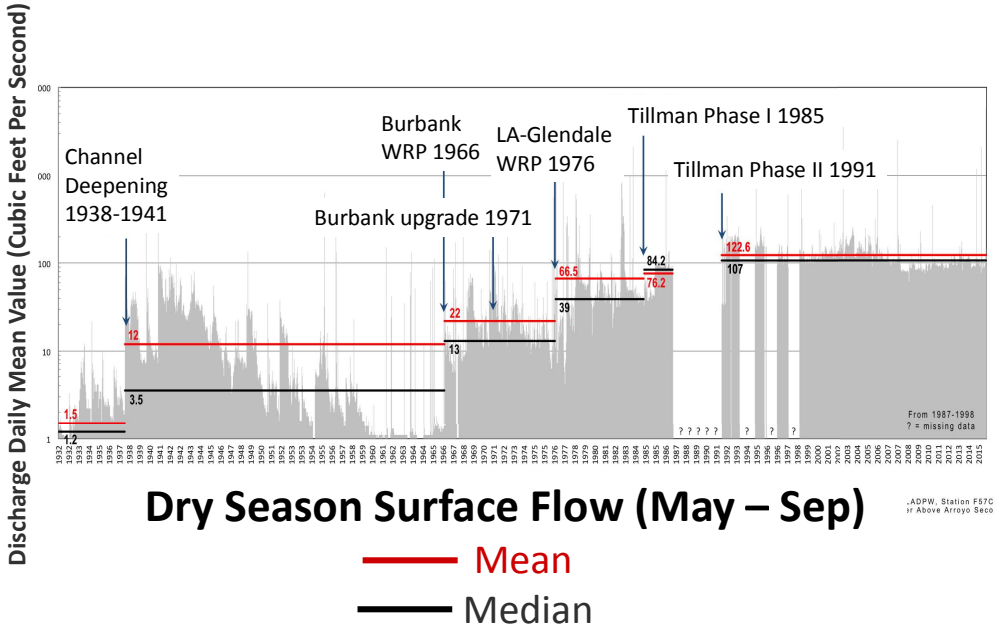
- 102 taxonomic families
- Native plants are diversity hotspots
- Low diversity of aquatic insects
- Invasive Argentine ants

Mammals

- 10 native species
- 17 total species, like coyote, desert cottontail, California ground squirrels
- 5 bat species, like Yuma myotis and big brown bat

Fish

- No native fish
- 1992 & 2007 surveys found 5 non-native fish, like carp and mosquito fish
- Lack of hydrological connections and refugia for natives



Components of Dry Season Flow (acre feet)

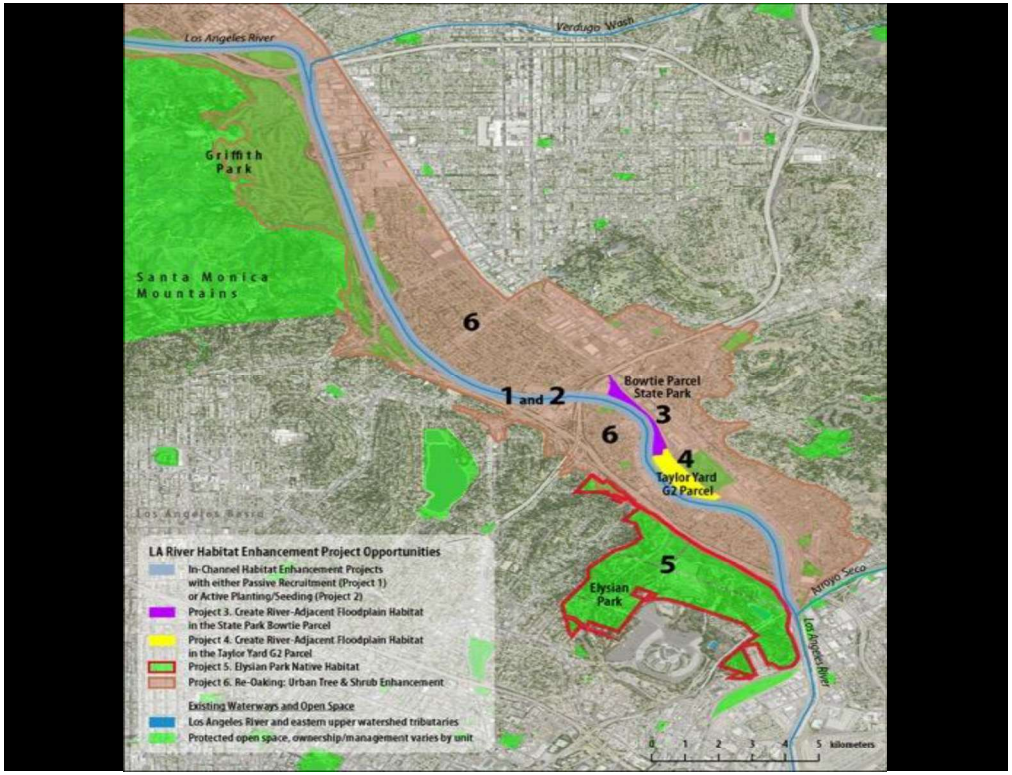
Year	Total	Rising Ground water	Owens River Discharge	Runoff	Burbank WRP	LA-Glendale WRP	Tilman WRP
1928	650	--	650	--	NA	NA	NA
1951	6,290	3,110	1,430	1,750	NA	NA	NA
1971	11,821	3,602	--	5,126	3,093	NA	NA
1982	21,070	3,460	--	9,922	4,670	3,018	NA
1993	91,083	2,952	--	7,071	5,320	12,576	63,164
2004	77,137	6,309	--	9,186	8,119	11,378	42,145
2012	69,619	1,754	--	11,584	7,422	12,898	35,961

Summary

- Dry weather flow was ephemeral and much lower than today.
- Hydrology drives biology: high dry weather flow and channelization support novel vegetation assemblages.
- The existing river features, vegetation assemblages, and concrete mimic some important features of native habitat.
- Many native habitat specialists that historically occurred in the Los Angeles River have been extirpated.
- Generalist species thrive on the river.
- Habitat enhancement or creation could allow populations of native animals to disperse from adjacent upland and riparian areas (e.g. Sepulveda Dam).

Flow Scenarios (compared to existing condition)

Scenario	Dry Weather Flow	Wet Weather Flow
Existing Condition	High	Very High
Stormwater Capture	Slightly Lower	Lower
Effluent Recycling	Much Lower	Slightly Lower
Water Supply & Habitat Resiliency	Much Lower	Lower



Next Steps and Questions

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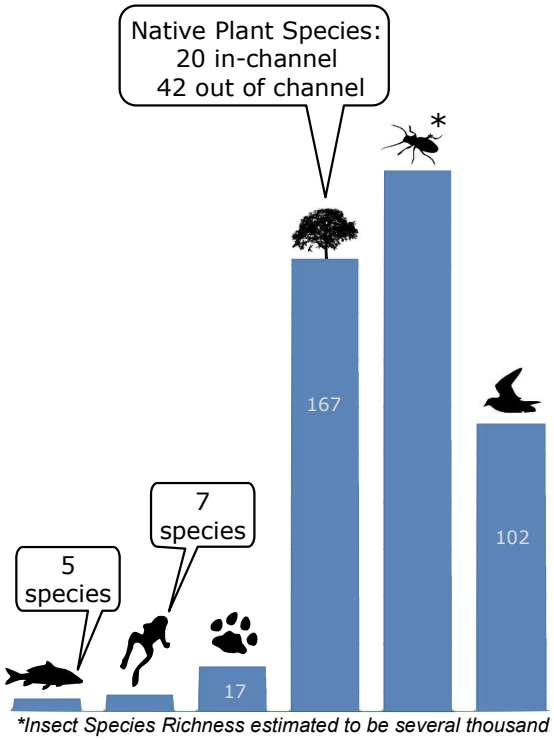
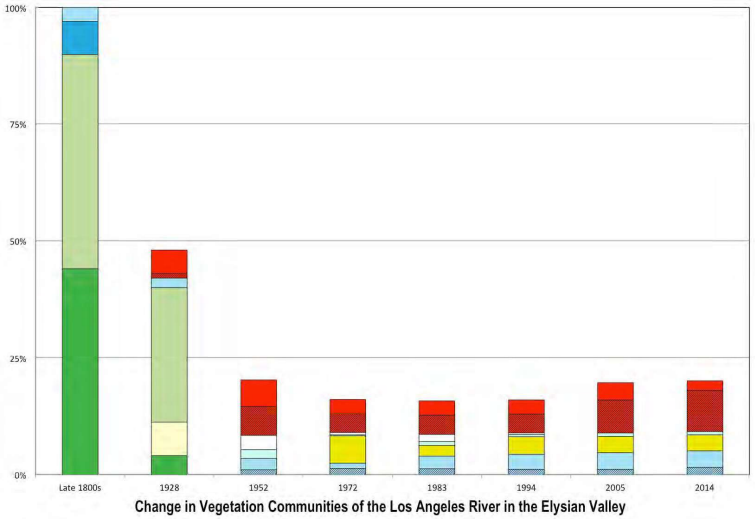
Habitat Enhancement Project Opportunities In-Channel

In-Channel Result Compared to Historic Condition	Scenario 1 Existing Condition (1991–Present)	Scenario 2 Stormwater Capture Focus	Scenario 3 Effluent Recycling Focus	Scenario 4 Water Supply & Habitat Resiliency Focus
1. In-Channel Habitat Enhancement with Passive Recruitment	5–10 years to control giant reed; passive increases over 3–5 years in quality of existing riparian habitat	Same as Scenario 1, but possibility of cleaner urban runoff inputs leading to higher quality aquatic habitat	3–5 years to control giant reed; passive increases over 3–5 years in quality of existing riparian habitat	Same as Scenario 3, but likely faster giant reed control, & reduced threat of scouring flows during plant establishment period
2. In-Channel Habitat Enhancement with Active Planting/ Seeding	5–10 years to control giant reed; increases in quality of existing riparian habitat in 1–3 years	Same as Scenario 1, but possibility of higher quality aquatic habitat; & reduced risk of scouring flows during plant establishment period from large storm	3–5 years to control giant reed; increases in quality of existing riparian habitat in 1–3 years	Same as Scenario 3, but likely faster giant reed control, & reduced threat of scouring flows during plant establishment period

Habitat Enhancement Project Opportunities Out-of-Channel

Out-of-Channel Result Compared to Historic Condition	Scenario 1 Existing Condition (1991–Present)	Scenario 2 Stormwater Capture Focus	Scenario 3 Effluent Recycling Focus	Scenario 4 Water Supply & Habitat Resiliency Focus
3. Create River-Adjacent Floodplain Habitat in the State Park Bowtie Parcel	1–3 years of weed control; over 3–5 years increases in quality of adjacent in-channel riparian habitat and creation of high quality floodplain scrub habitat	Same as Scenario 1, but more funding opportunities for creating ephemeral wetland habitat on-site that also provides stormwater capture	Similar to Scenario 1	Same as Scenario 2, with higher biodiversity supported by higher quality, complementary in-stream habitat
4. Create River-Adjacent Floodplain Habitat in the G2 Taylor Yard Parcel	1–3 years of weed control; over 3–5 years increases in quality of adjacent in-channel riparian habitat and creation of high quality floodplain scrub habitat	Same as Scenario 1, but more funding opportunities for creating ephemeral wetland habitat on-site that also provides stormwater capture	Similar to Scenario 1	Same as Scenario 2, with higher biodiversity supported by higher quality, complementary in-stream habitat
5. Elysian Park Native Habitat Enhancement	Higher quality upper terrace and upland habitat, providing complementary ecosystem services and habitat for riparian wildlife in 3–5 years, & engage local community	Same as Scenario 1, but more funding opportunities related to stormwater capture projects	Same as Scenario 1	Same as Scenario 2
6. Re-Oaking: Urban Tree & Shrub Enhancement	Increase oak woodland canopy for benefit of wildlife over 1–10 years Public engagement	Same as Scenario 1, but more funding opportunities related to stormwater capture projects	Same as Scenario 1	Same as Scenario 2





Change in Vegetation Communities of the Los Angeles River in the Elysian Valley

Historic Vegetation (Late 1800s to Early 1900s)
- River Channel (Intermittent Surface Water Flow)
- Perennial Freshwater Wetland
- Willow Woodlands
- River Wash (Unvegetated Sand/Mulefat Thickets)
- California Sycamore - Coast Live Oak Woodland

In Flood Control Channel (1938 to Present)
- Water (Non-Flood Condition)
- Water Over Concrete Apron or Slope Bank
- Channel Bar: Bare (<1% vegetated cover)
- Channel Bar: Semi-Vegetated (1-25% cover)
- Channel Bar: Vegetated (>25% cover)

Outside Flood Control Channel (Early 1900s to Present)
- Urban: Open Space
- Urban: Park
- Urban: Residential, Commercial, Industrial, City Infrastructure

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STAKEHOLDER MEETING/CELEBRATION (03/05/18)

The following pages present the meeting agenda, summary of the discussion, and the presentation given at the Stakeholder Meeting/Celebration held on March 5, 2018.

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One Water LA 2040 Plan Phase 2
Stakeholder Meeting & Celebration
Agenda

Monday, March 5, 2018
12:30 p.m. – 3:00 p.m.
Friendship Auditorium, 3201 Riverside Drive, L.A. 90027

Meeting Objectives:

- Present key recommendations of One Water LA 2040 Plan
- Explain next steps and future engagement opportunities
- Acknowledge and thank Plan contributors

Networking Lunch (30 mins) **12:30-1:00 pm**

Meeting Agenda

1. **Welcome and Introductions (10 mins)** **1:00-1:10 pm**
   a. Adel Hagekhalil, Assistant Director LASAN
   b. Rich Harasick, Assistant General Manager LADWP

2. **Guest Speaker (5 mins)** **1:10-1:15 pm**
   a. Mark Pestrella, Director LA County DPW

3. **One Water LA 2040 Plan Overview (35 mins)** **1:15-1:50 pm**
   a. Plan recommendations
   b. Q&A

4. **Future Engagement Opportunities (35 mins)** **1:50-2:25 pm**
   a. Next Steps
   b. Plan Implementation
   c. Continued Stakeholder Engagement
   d. Future Collaboration Activities Committees
   e. Claire Bowin, Department of City Planning

5. **Acknowledgments (20 mins)** **2:25-2:45 pm**

6. **Group Photo (15 mins)** **2:45-3:00 pm**

Adjourn 3:00 pm

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One Water LA-Stakeholder Meeting Notes
Monday, March 5th, 2018- 12:30PM – 3:30PM
Friendship Auditorium, 3201 Riverside Drive, Los Angeles, CA 90027

The purpose of these notes is to provide an overview of the meeting. They are not intended as a transcript or as minutes. Major points are summarized herein, primarily for context.

INTRODUCTION
Attendees were welcomed with opening remarks from City Commissioners, and Los Angeles Sanitation (LASAN) and Los Angeles Department of Water and Power (LADWP) Management.

Los Angeles Department of Public Works Commissioner Heather Repenning thanked the stakeholders for their attendance and continued participation. The commissioner also touched on the importance of a reliable water source and the need to look at the water we currently have today including recycled water and stormwater. A recent article in the Daily News from Mayor Garcetti highlighted the Mayor's goals and what he calls our "Mulholland Moment" for safe and reliable water. Unlike Mulholland, the City is conducting the One Water planning process with the public, with full transparency and collaboration and that is what so great about the process. There is hard work ahead to implement the key recommendations of the Plan and the commissioner encouraged the stakeholders to help identify funding opportunities for the One Water LA plan, such as upcoming state measures. She encouraged the stakeholders to help educate others about the need for a local funding source to help meet our goals and objectives. The Commissioner also thanked all of those from the City who helped lead the effort.

Board of Water and Power Commissioner William W. Funderburk, Jr. welcomed stakeholders and thanked those that have been involved in the process. The Commissioner has always been a strong proponent of stormwater capture, water recycling, and taking the measures necessary to deploy our assets in the best way to build resilience that the Mayor has been talking about. The commissioner also thanked the City's County partners and Commissioner Repenning for their work and support. He indicated that together we can accomplish a lot more than independently and separately. We can show Washington and the rest of the country how it is done through our collaboration. The Commissioner also mentioned LADWP's upcoming commercial level stormwater capture incentive program that is market-based and relies on market capital, and the Equity Metrics Data Initiative which is a tool to make sure our resources are spent by City grounded in equity. For more information on the Equity Metrics Data Initiative visit www.ladwp.com/equitymetrics.

LA Sanitation's Chief Operating Officer, Traci Minamide also thanked the stakeholders for attending this milestone day for One Water LA. It is great to look back at all the progress that has been made. There is a lot going on in the world of recycled water with the City and all of the City's partners. Ms. Minamide mentioned last year's ribbon cutting at the City's Terminal Island Water Reclamation Plant (WRP), which is the one of the few WRP's in the country that is treating raw wastewater through the entire spectrum of advanced treatment. The high purified water is being used for a sea water intrusion barrier, and the City is also bringing in new customers to use of the water. LASAN is also working with LADWP and West Basin on a pilot project at Hyperion WRP, to improve the treatment of the water by adding membrane bio reactors. We are also working on an advanced water purification facility at Hyperion to deliver water to LAWA and a few other customers on the Westside. There is another project at the Donald C. Tillman WRP to add new innovative water technologies with a smaller carbon footprint at a lower cost. There is a lot going on today based on the work done with the IRP and

now moving forward with the One Water LA Plan. Ms. Minamide thanked the stakeholders for their input and shared her appreciation for their dedication to the City's efforts to develop local water resources.

Rich Harasick, Senior Assistant General Manager of the Water System for LADWP, and Adel Hagekhalil, LASAN's Assistant Director, were also invited to say a few words.

Mr. Harasick mentioned the Mayor's term "Mulholland Moment" on developing local water resources. Mulholland certainly had his challenges and the City has its challenges too such as increasing water demand, aging infrastructure, regulations, flood control and decreasing our dependence on purchased imported water. The City was built on meeting its water challenges and we will continue to do that with our plans. The Mayor's Sustainable City plan lays out the foundation by setting goals to reduce our per capita use of water in the City, reducing the amount of purchased imported water by 50 percent, and sourcing 50 percent of our water supply by 2035. LADWP also has its Stormwater Capture Master Plan, Urban Water Management Plan, Water Recycling Master Plan and our new award winning Water Conservation Potential Study. All of that combined will provide a clear path to the future. The City is expected to grow by four hundred thousand people by 2040, and the City will be able to meet that demand through water conservation. We will also increase our stormwater capture efforts; maximize the use of recycled water; and increase groundwater production in the San Fernando Valley. The Mayor also had a significant initiative to develop an integrated strategy to help increase local water supply, which is One Water LA. It is a collaborative effort that brings forth a sustainable plan for the entire City, leverages all of the City's plans and brings together all of City Departments and other regional entities. Mr. Harasick thanked all of the stakeholders that have been involved, especially those that began participating many years ago. Stakeholder's input is valuable, it's needed, and the City relies on it. Mr. Harasick also thanked Adel Hagekhalil and his team, David Pettijohn (LADWP) and his team, and the City's regional partners.

Adel Hagekhalil welcomed all of the attendees. Mr. Hagekhalil stated that One Water LA is all about connecting the dots, drops and hearts. We can connect the supply and demand by working with the people. It is all about partnerships and collaboration. The City staff, stakeholders, consultants, and our partners are all here because we want to be part of this process and to make a difference in this great City. The City is proud of what we have done today, but it will be an on-going process. We need to continue to working and continue to be innovative across the board. To echo what LADWP mentioned regarding the great things we are doing with recycled water and stormwater capture, we are breaking the silos and working together to look for new opportunities. For example, we are working with the airport to bring recycled water to LAWA; we are looking to increase our recycled water use at Hyperion; working with the Harbor; Low Impact Development at the Public Right-of-way; and more. Stormwater is one of our biggest challenges and also our biggest opportunity. By working with our regional partners we will make a difference to improve our water quality, local water supplies, and quality of life. Mr. Hagekhalil thanked the stakeholders for their continued participation.

GUEST SPEAKER

Hampik Dekermenjian, meeting facilitator, introduced Mark Pestrella the Director of Los Angeles County of Public Works.

Mr. Pestrella thanked the City of Los Angeles and its residents for their partnership with the County. Despite of what others might say, it has been a great relationship. We have been working together and getting along for a long time and we are happy to be coming out with this

partnership and being open about how strongly we work together. There is no other more important natural resource than water. We don't have life unless we have water. Our wins and our losses have been about how well we manage our natural resources. "We" includes everyone in the room, the public, NGOs, community groups, consultants and public servants in the government service. Mr. Pestrella congratulated the City on a great Plan and everyone who helped develop the Plan. You are forming and informing the policy moving forward. The hard part is now implementing and putting the ideas on the ground and working. Water has historically been managed in silos and that has been a problem. The Plan attempts to break down those silos.

LA County's Current Efforts:

- The County's Water Resiliency Plan -The County is working on a plan that breaks down silos throughout Los Angeles County, not just the City of Los Angeles. The County's Water Resiliency Plan will be informed by One Water LA and the other plans in the county. There are at least 200 water retailers that handle water in Los Angeles with their own boards and strategies on how to best manage the water resources in Los Angeles. The County's plan seeks to inform our board and community on where our water comes from, how it is used, and seeks to provide policies and incentives that would push for a more united use of the water in Los Angeles County. We will include all of the 200 retailers and the citizens of Los Angeles County. The plan is called *H2O for LA*, and it will be a document that can be referred to throughout LA County as an education tool for policy development, legislation, and for investment.
- Safe Clean Water Program - One important investment, identified in One Water LA, is stormwater capture. Local water, such and stormwater, is something to be cherished and used for its highest and best use. Stormwater capture has played a major role in LA County for many years. The LA County Flood Control District, one of the biggest in the nation, is contemplating a program that will capture more stormwater for water supply and will improve the water quality and the surface water throughout LA County. The program is called the Safe Clean Water Program. The program will be presented to the Board of Supervisors in April. The Board will make a decision sometime in June whether or not introduce it as a ballot measure in November 6, 2018. For more information and to provide input, visit www.safecleanwaterla.org.

ONE WATER LA PLAN OVERVIEW

Lenise Marrero (LASAN) and Serge Haddad (LADWP) from the One Water LA team presented the presented the accomplishments and overview of the One Water LA Plan. The objective of the meeting was to present the key recommendations of the plan and the next steps.

Please refer to Informational One Water LA Overview PowerPoint Presentation (Slides 6-41). Key Items Presented Include:

- The City's current water challenges include new regulations, recurring droughts, climate change, and more.
- The success of the Plan was mainly due to the collaboration and participation of the following groups: Advisory Group, Steering Committee, Strategic Planning Group, and the Stakeholders.
- The Plan's development also helped create water awareness. It has helped others think about water and multi-benefits including when building a new park or a new school.
- The One Water LA 2040 plan consists of many elements & recommendations (slide 12). An outline of each plan element is summarized below.

- The Stormwater Facilities Plan (SWFP) – leverages and looks at other existing City documents through an integrated lens. The SWFP looks to maximize the benefits of recommended projects through a three-legged stool approach (slide 15). The projects with the maximum benefits were at the top of the list. The plan also includes funding strategies for the projects, and recommended policies and programs.
- Wastewater Facilities Plan – the types of recommended projects includes: projects to maximize potable reuse, capital improvement projects, rehab and rehabilitation projects, wastewater conveyance projects, and climate resiliency projects. The wastewater plan outcome was also presented (slide 20).
- The Climate Resilient Infrastructure- the approach was to identify stormwater and wastewater infrastructure at risk for future extreme weather conditions, not just sea level rise. The recommendations are relatively low cost and what the City can do now to be more climate change resilient.
- Current Integration Opportunities – projects currently planned for the next 5 years. From the One Water LA Steering Committee meetings, the team identified 44 current water related integration opportunities. The top 10 opportunities were presented (slide 27).
- Future Integration Opportunities –27 concept opportunities were identified. There was an entire stakeholder workshop dedicated to the presentation of the criteria for the future concepts. The six preferred future concept projects and anticipated outcomes were presented (slides 30-31).
- Policies and Programs – the initial process included ideas from the different groups (advisory group, stakeholders, city staff, etc.) on potential policies and programs. There was also a stakeholder workshop dedicated to policies and programs.

  An initial list of 200 ideas was consolidated and organized into common themes (slide 34). The next step is to develop a feasibility analysis to determine the cost, benefits, and other impacts of each recommendation. The policies and programs are crucial to move forward and to help reduce existing roadblocks for multi-benefit projects.

- The potential fiscal impacts of the plan were presented (slide 38). A total of $13.3 billion has been identified as the plan's potential fiscal impact. However, $8.8 out of the 13.3 billion is from currently planned projects from other City plans.
- Funding Strategies – key highlights of the plan's funding strategies was presented (slide 39). Investment is needed to meet the City's water challenges and can be done through collaboration and by leveraging resources.

Stakeholders provided the following questions and comments:

- Related to the reference on habitat restoration (slide 15), aside from the LA River, what are some plans or programs that are currently underway or planned for the future? There are some opportunities that are being missed.
  - **Response:** In general, habitat restoration is mentioned in the plan due to all of the stormwater projects. Many of the stormwater projects do include habitat restoration benefits, including the South LA wetlands and the Rory Shaw Project.

- How severe will the cutbacks be from the recycled water program due to the future potable reuse projects? Are there any plans to implement a satellite plant to serve the west side of town?
    - **Response:** We are currently looking at a potential site in the Rancho Park Area. We are currently doing a feasibility analysis to have one, or multiple facilities to meet the recycled water demands in the area.

- Most of the future integration opportunities presented seemed to be up north. There are a lot of challenges with water capture in the San Pedro and Harbor area. Are you still looking for feedback and stakeholder ideas for projects?
    - **Response:** Yes we are always looking for feedback. That will be what we will discuss next, and that is the future engagement opportunities. Also, the opportunities for stormwater capture are better in the valley due to the soil conditions.

FUTURE ENGAGEMENT OPPORTUNITIES

The One Water LA team presented a timeline that includes the upcoming efforts for One Water LA (slide 43). Future City Activities for Plan Implementation include: prepare programmatic EIR; continued technical analysis; create supporting databases; work with other departments & agencies on current and future integration opportunities; conduct policy & program feasibility analysis; pursue funding opportunities; develop interagency agreements.

Future engagement opportunities for stakeholders included the One Water LA implementation committees. Future potential implementation committees include:

- Policy & Program Feasibility Analysis
- Funding, O&M, and Cost-sharing
- Partnership Strategies
- Climate Change & Resiliency Expert Panel

Stakeholders were asked to provide any other areas of interest and to indicate which of the existing potential implementation committees they may be interested in. Future collaboration activities with other City departments, regional entities, and academia was also presented (slide 46).

DEPARTMENT OF CITY PLANNING

Claire Bowin, from the Department of City Planning, presented on their planning initiatives and results of collaboration efforts with the One Water LA team. The following key accomplishments were presented:

- Informed developers that they need to comply with the LID Ordinance at the early stage of the application process. It is critical to incorporate LID at the early stage of the design.
- On-going collaboration with One Water LA as we continue to update our zoning code (Re:Code LA) to look for other opportunities to incorporate One Water LA goals and elements.
- On-going collaboration as the City updates the General Plan. Water is a big part and the City plans to build on the One Water LA effort and refer to the policies and programs in the plan. The City will look to invite the One Water LA stakeholders to be part of that process as well.

ACKNOWLEDGEMENTS

Liz Crossen, the City's Deputy Chief Sustainability Officer and Director of Infrastructure, thanked the guests and those groups that have been part of the entire process. One Water LA Stakeholder process has been unprecedented and the amount of involvement is certainty appreciated by the Mayor and the Mayor's office. The One Water LA Plan is a key initiative in the Mayor's Sustainable City Plan. The plan could not have come at a better time as we wait for the snow pack survey to be released on April 1st, and the best we can hope for is 50 percent of normal. Having the City and all of the stakeholders come together and plan how to integrate our water and help build a more resilient future is great.

The following groups were thanked for their input and for identifying their priority throughout the One Water LA planning process:

- Stakeholders - were thanked and asked to stand up for acknowledgements.
- Special Topics Groups – were thanked and asked to stand up for acknowledgements.
- Advisory Group – this group represented a diverse set of interest and really helped shape the plan and the stakeholder engagement efforts. Advisory Group members were presented certificates as a thank you for their involvement.
- Steering Committee
- Management was also thanked for their leadership
- City Staff and Consultants

CLOSING

The group assembled for a photo and refreshments were served.

NETWORKING LUNCH & VIDEO INTERVIEWS

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One Water LA

STAKEHOLDER MEETING & CELEBRATION

March 5, 2018

MEETING AGENDA

1. Welcome and Introductions	1:00 pm
2. Guest Speaker	1:10 pm
3. One Water LA Plan Overview	1:15 pm
4. Future Engagement Opportunities	1:50 pm
5. Acknowledgements	2:25 pm
6. Group Photo	2:45 pm
Adjourn	3:00 pm

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WELCOME AND INTRODUCTIONS

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One Water LA

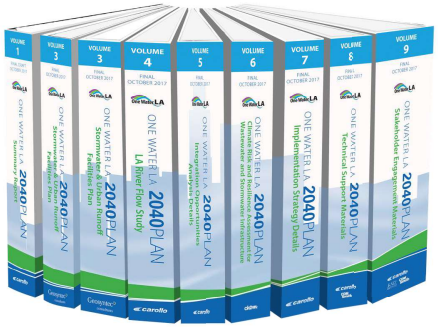
MARK PESTRELLA
DIRECTOR LA COUNTY DPW

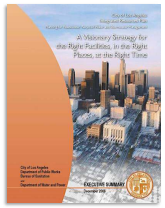
ONE WATER LA 2040 PLAN OVERVIEW

One Water LA .org

THE CITY OF LA IS COMMITTED TO A COLLABORATIVE APPROACH TO INTEGRATED WATER MANAGEMENT

One Water LA 2040 Plan
Planning Horizon: 2040





Updates the 2006 Water Integrated Resources Plan
Planning Horizon: 2020

Supports LA's 2015 Sustainable City pLAn Goals

INCORPORATING CHANGES IN THE WATER LANDSCAPE

THE PLAN WAS DEVELOPED THROUGH EXTENSIVE COLLABORATION FROM A VARIETY OF GROUPS

THE STEERING COMMITTEE FOSTERED INTEGRATION

Steering Committee Members

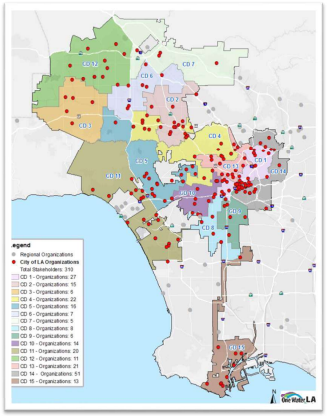
- 14 City Departments
- 6 Regional Agencies

Key Accomplishments

- Developed Vision, Objectives, & Guiding Principles
- Identified existing integration opportunities
- Identified policies to streamline integration between departments & agencies
- Created awareness to integrate water elements in projects & programs

A STAKEHOLDER DRIVEN PLANNING APPROACH WITH BROAD INVOLVEMENT

250+ Stakeholders | **150+** Organizations



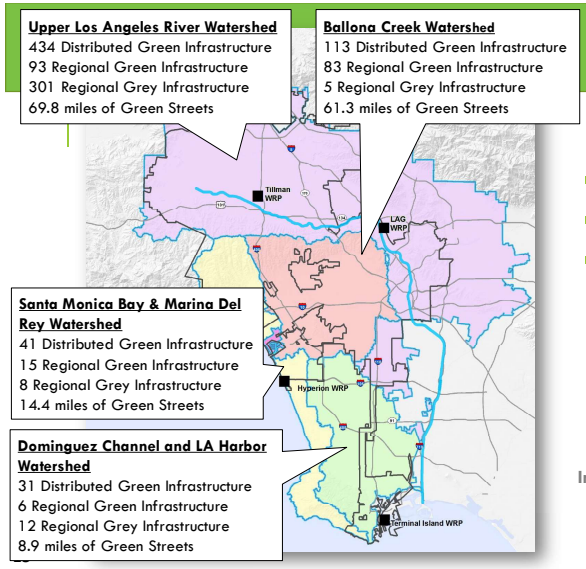
THE ONE WATER LA 2040 PLAN CONSISTS OF MANY ELEMENTS & RECOMMENDATIONS

PLAN ELEMENT – STORMWATER & URBAN RUNOFF FACILITIES PLAN

STORMWATER & URBAN RUNOFF FACILITIES PLAN

Planning Approach

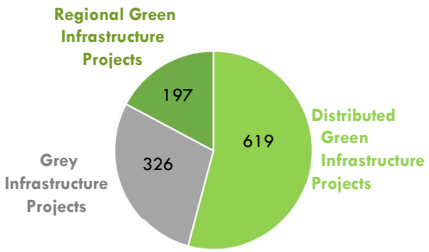
- The **Three-legged Stool** approach integrates water quality, water supply and flood risk mitigation benefits
- **Project Prioritization** is based on these 3 benefits & TMDL compliance deadlines



STORMWATER & URBAN RUNOFF FACILITIES PLAN

Recommendations

- 1,142 Projects Total
- 71% Green Infrastructure Projects
- 155 miles of Green Streets



STORMWATER & URBAN RUNOFF FACILITIES PLAN

Outcomes

- Refined Green Streets opportunity areas from EWMPs
- Projects with a wide range of benefits to improve the City's resiliency
- Policies and Programs to help reduce roadblocks and incentivize distributed and other solutions
- Funding strategies to help close the gap

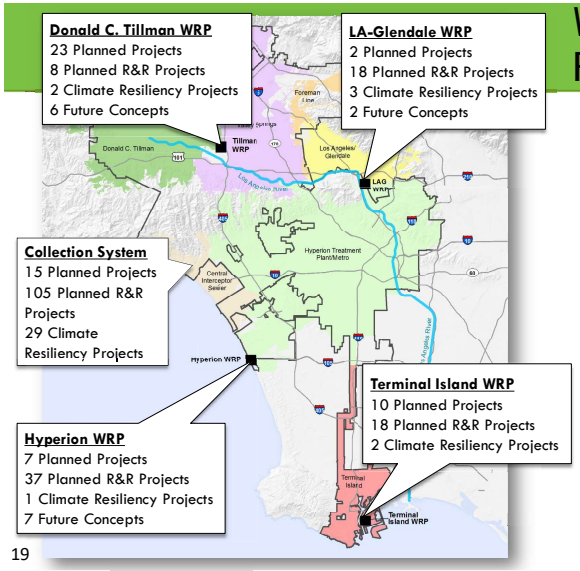
PLAN ELEMENT – WASTEWATER FACILITIES PLAN

WASTEWATER FACILITIES PLAN

Planning Approach

- Potable Reuse Treatment Upgrades for Future Concepts
- Capital Improvement projects for all 4 reclamation plants
- Rehabilitation and Replacement (R&R) projects for all 4 reclamation plants
- Wastewater conveyance projects
- Climate resiliency projects

WASTEWATER FACILITIES PLAN RECOMMENDATIONS



Water Reclamation Plants & Collection System Projects

- 57 Planned Projects
- 186 Planned Rehabilitation and Replacement (R&R) Projects
- 37 Climate Resiliency Projects
- 15 Future Concepts
- Future Projects (2025-2040)
- Future R&R Projects (2025-2040)

WASTEWATER FACILITIES PLAN

Outcomes

- Protect our facilities and assets from climate related risks
- Prepare Water Reclamation Plants to maximize potable reuse
- Implement, monitor, and maintain a reliable wastewater system

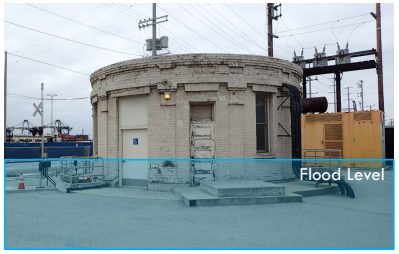
- Hyperion WRP: 95 mgd MBR/advanced treatment
- Tillman WRP: 15 mgd advanced treatment
- LA-Glendale WRP: 5 mgd advanced treatment

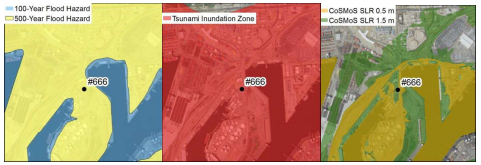
PLAN ELEMENT – CLIMATE RESILIENT INFRASTRUCTURE

CLIMATE RESILIENCY ASSESSMENTS OF CRITICAL WASTEWATER AND STORMWATER INFRASTRUCTURE

Planning Approach

- Multi-Disciplinary Field Visits
- EPA Climate Modeling (CREAT)
- Flood & Tsunami Zone Modeling
- Review of Facility Designs
- Identify Adaptation and Mitigation Strategies





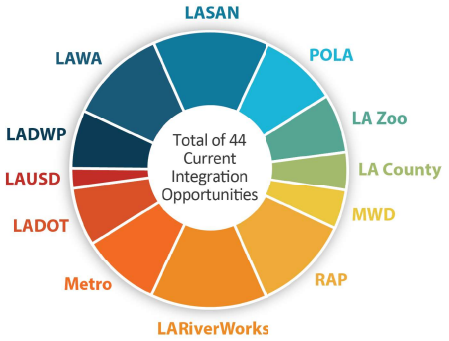
CLIMATE RESILIENCY ASSESSMENTS OF CRITICAL WASTEWATER AND STORMWATER INFRASTRUCTURE

Plan Recommendations

- Waterproof Structures
- Perimeter Walls around facilities
- Slope stabilization
- BMPs for stormwater management
- Waterproof protection of electrical equipment
- Below-ground pump station modifications

PLAN ELEMENT – CURRENT INTEGRATION OPPORTUNITIES

CURRENT INTEGRATION OPPORTUNITIES IDENTIFIED WITH THE STEERING COMMITTEE MEMBERS



- 44 water-related integration opportunities
- Fact Sheets were developed for the Top 10 opportunities
- The top 5 opportunities were further developed as case study examples
- Periodic updates to identify new integration opportunities with other City Departments & Regional Agencies

TOP 10 CURRENT INTEGRATION OPPORTUNITIES


Caballero Creek Park

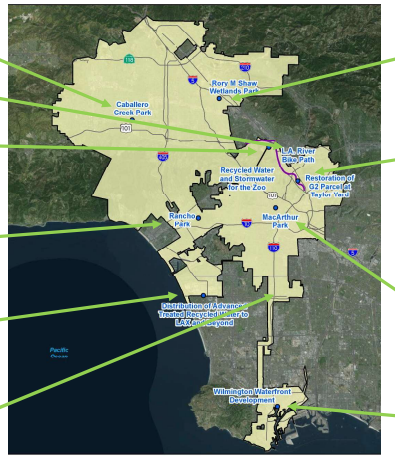
LA River Bike Path


Water Management Strategies for the LA Zoo Master Plan


Rancho Park Water Reclamation Facility

Advanced Treated Recycled Water Delivery to LAX and Scattergood

Capture of Off-Site Stormwater at LAUSD Schools (location TBD)



Rory M. Shaw Wetlands Park


Restoration of G2 Parcel at Taylor Yard


MacArthur Park

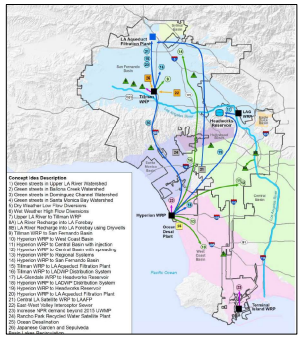

Wilmington Waterfront Development

PLAN ELEMENT – FUTURE INTEGRATION OPPORTUNITIES

FUTURE INTEGRATION OPPORTUNITIES

8 Recommended Strategies

27 Concept Options



6 Preferred Concepts

THE 6 PREFERRED CONCEPTS ADD TO THE BENCHMARK PORTFOLIO COMPONENTS

Projects or Programs that are expected to occur independent of the One Water LA Plan

1. *San Fernando Groundwater Basin Cleanup & Remediation*
2. *Expand Pumping in West Coast Basin to Maximum Water Right*
3. *Expand Pumping in Central Basin to Maximum Water Right*
4. *Expand Pumping in Sylmar Basin to Maximum Water Right*
5. *Develop Groundwater Management Strategy for the Santa Monica Basin*
6. *Develop Groundwater Management Strategy for the Hollywood Basin*
7. Groundwater Replenishment Project with Advanced Water Purification Facility (AWPF) at DCTWRP (up to 30,000 AFY in San Fernando Basin)
8. Terminal Island Expansion to 12 mgd
9. Expansion of Non-Potable Reuse (NPR) per 2015 UWMP
10. Hyperion WRP Demonstration Plant & Delivery to LAWA and Vicinity
11. Hyperion WRP Delivery Expansion to 70 mgd for West Basin & LA Harbor

Benchmark

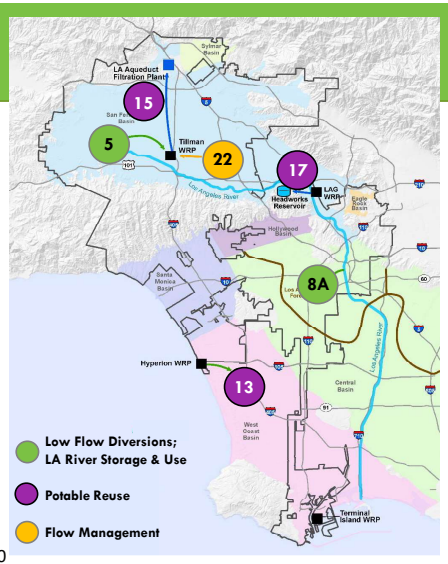
Planned Stormwater & Wastewater Projects

- All EWMP projects
- Prop. O. projects
- SCMP projects
- Other 5-year CIP projects
- Existing Wastewater CIP
- Wastewater R&R Projects

In-Progress Projects & Programs

Existing Supply Sources

- Groundwater
- Stormwater
- Recycled Water
- Water Conservation
- LA Aqueduct
- Purchased Imported Water from MWD



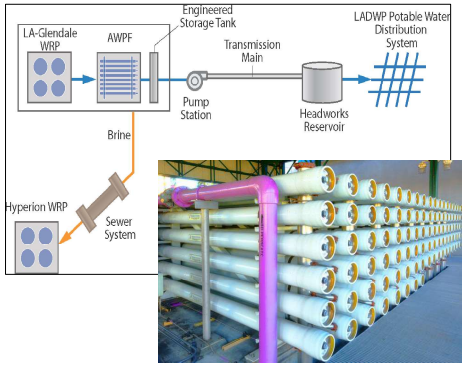
6 PREFERRED FUTURE CONCEPTS

#5: Dry Weather Low Flow Diversions	6,200 afy
#8A: LA River recharge into LA Forebay with injection wells	25,000 afy
#13: MBR at Hyperion WRP to Regional System	95,000 afy
#15: Potable Reuse with raw water augmentation from Tillman to LAAFP	15,000 afy
#17: Potable Reuse with treated water augmentation from LAG to Headworks Reservoir	6,000 afy
#22: East-West Valley Interceptor Sewer	0 afy
	Total: 147,200 afy

FUTURE INTEGRATION OPPORTUNITIES BENEFITS

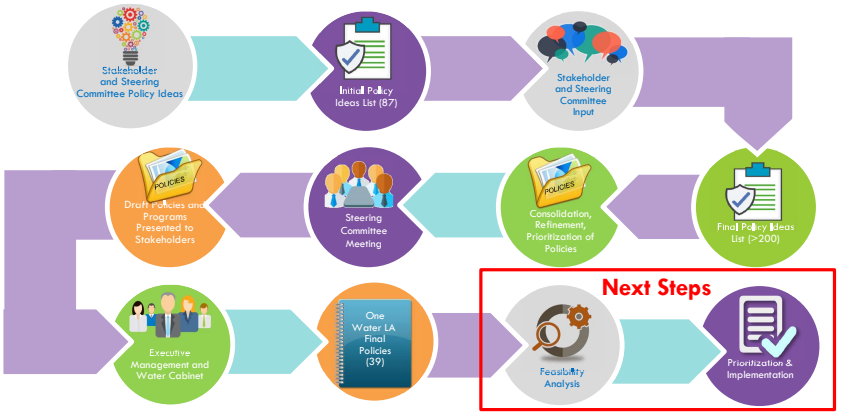
Anticipated Outcomes

- Improve local water supply reliability
- Maximize potable reuse to minimize discharge to the ocean
- Minimize dry-weather runoff to receiving waters
- Increase climate resilience



PLAN ELEMENT – POLICIES AND PROGRAMS

POLICIES AND PROGRAM IDEAS



POLICIES AND PROGRAM RECOMMENDATIONS

39 Policy & Program Recommendations

9 Categories

- Integrated Planning and Design
- Stormwater and Urban Runoff Management
- Training and Education
- Streamlining Collaboration and Implementation
- Funding and Partnerships
- Sustainability and Climate Change
- Water Conservation
- Recrecycled Water
- LA River Revitalization

Moving these policies forward is critical to the implementation of the Plan's recommendations

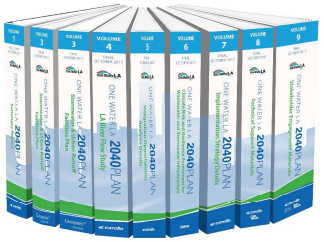
EXAMPLES OF POLICIES AND PROGRAM RECOMMENDATIONS

39 Policy & Program Recommendations

Lead Agencies	Policy or Program Idea
LASAN, LADWP, BOE	Create a city-wide database to identify collaborative opportunities for water-related multi-benefit projects.
LASAN, LADWP	Expand education and engagement programs for Potable Reuse.
LASAN, BOE, DCP	Simplify the process and remove barriers to installing distributed green infrastructure BMPs on private properties in the City.
LASAN	Maximize opportunities to incorporate integrated water management strategies, including Green Infrastructure, into on-going and emerging opportunities.

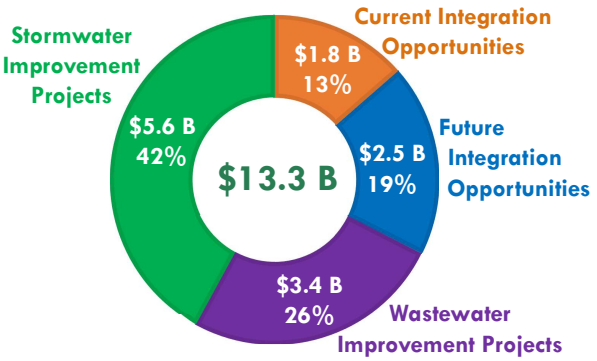
THE ONE WATER LA 2040 PLAN CONSISTS OF MANY ELEMENTS ORGANIZED IN 10 VOLUMES

ONE WATER LA 2040 PLAN



POTENTIAL FISCAL IMPACTS OF ONE WATER LA PLAN RECOMMENDATIONS

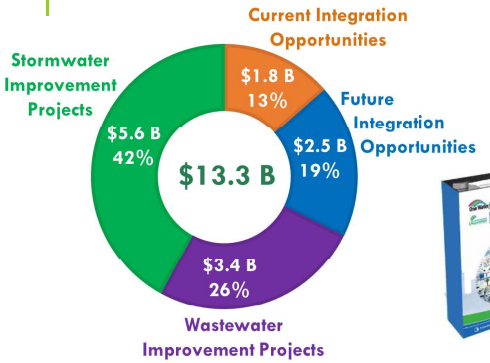
- Stormwater & Urban Runoff Facilities Plan Projects
- Wastewater Facilities Plan Projects
- Current Integration Opportunities
- Future Integration Opportunities
- Policies & Programs



Cost Impacts TBD

The feasibility and financial impacts of the proposed Policy and Program ideas will be further analyzed as part of the next steps.

THE ONE WATER LA PLAN ALSO COMBINES MANY RECOMMENDATIONS OF OTHER PLANS



FUNDING IDEAS AND RECOMMENDATIONS GATHERED FROM CITY STAFF AND STAKEHOLDERS

Develop a One Water LA Funding Plan

- Explore stormwater tax or fee options
- Review and streamline grant management process
- Understand how multiple agencies could identify benefit-based costs for water-related projects
- Increase use of State Revolving Funds for multi-benefit projects
- Develop partnerships to reduce costs and maximize upstream solutions

PROP 1 WATER BOND 2014

YES ON M

YES ON A FOR LOCAL PARKS

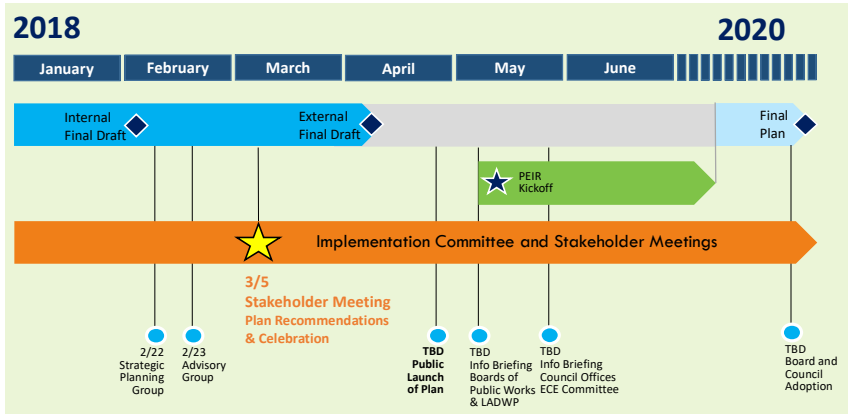
FEMA

INVESTMENT IS NEEDED TO PLAN FOR A MORE RESILIENT FUTURE

Q&A

FUTURE ENGAGEMENT OPPORTUNITIES

NEXT STEPS



PLAN IMPLEMENTATION FOCUS AREAS

Future City Activities for Plan Implementation:

- Prepare Programmatic EIR
- Conduct Continued Technical Analysis
- Create Supporting Databases
- Work with other Departments & Agencies on Current and Future Integration Opportunities
- Conduct Policy & Program Feasibility Analysis
- Pursue Funding Opportunities
- Develop Interagency Agreements

CONTINUED STAKEHOLDER ENGAGEMENT THROUGH IMPLEMENTATION COMMITTEES

Potential Implementation Committees

- Policy & Program Feasibility Analysis
- Funding, O&M, and Cost-sharing
- Partnership Strategies
- Climate Change & Resiliency Expert Panel
- Other?

Additionally, Stakeholder Workshops will continue through Plan Implementation

FUTURE COLLABORATION ACTIVITIES

COLLABORATION WITH:	EXAMPLE(S)
Mayor's Water Cabinet	• Accelerate Select Policy Ideas
City Departments	• LA Zoo Master Plan • Recycled Water to LAX & Scattergood
Regional Agencies	• Off-site Stormwater at LAUSD Schools • High Speed Rail stormwater capture
Academic Partnerships	• Research partnerships with UCLA, CSUN, & others
School Education Programs	• Continue Young Citizen Artists school program • Refine One Water LA curriculum to meet state standards

The City is committed to a Collaborative Approach to Integrated Water Management

One Water LA

CLAIRE BOWIN
DEPARTMENT OF CITY PLANNING

ACKNOWLEDGEMENTS

THANK YOU TO OUR STAKEHOLDERS

We appreciate your involvement!

THANK YOU TO THE PARTICIPANTS OF THE SPECIAL TOPIC GROUP: PARTNERSHIP, COLLABORATION, AND INNOVATION

Partnership, Collaboration & Innovation	
Facilitator(s)	Glen Dake
Technical Lead	Miguel Luna
LASAN reps	Eliza Jane Whitman Troy Ezeh
LADWP reps	Serge Haddad Anthony Tew Bob Sun
Participants	Clint Granath David Nahai Deborah Bloome Ghina Yamout Nurit Katz Bonny Bentzin Guangyu Wang Grant Jean Melanie Winter Anthea Raymond Meredith McCarthy Tom Williams

THANK YOU TO THE PARTICIPANTS OF THE SPECIAL TOPIC GROUP: FUNDING & COST BENEFIT ANALYSIS

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Facilitator(s)	Jack Baylis
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THANK YOU TO THE PARTICIPANTS OF THE SPECIAL TOPIC GROUP: STORMWATER & RUNOFF MANAGEMENT

Stormwater & Runoff Management	
Facilitator(s)	Rebecca Drayse Stephen Groner
Technical Lead	Mark Hanna
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LADWP reps	Rafael Villegas Art Castro
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THANK YOU TO THE PARTICIPANTS OF THE SPECIAL TOPIC GROUP: OUTREACH & COMMUNICATION

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THANK YOU TO THE PARTICIPANTS OF THE SPECIAL TOPIC GROUP: DECENTRALIZED USE & ONSITE TREATMENT

Decentralized Use & Onsite Treatment	
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LADWP reps	Penny Falcon Mario Acevedo Serge Haddad
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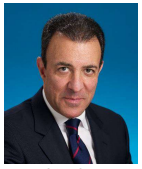
THE ONE WATER LA ADVISORY GROUP DEDICATED FOUR YEARS TO THE DEVELOPMENT OF THE PLAN

Carolyn Cassavan
Sherman Oaks Neighborhood Council

Jack Humphreville
Greater Wilshire Neighborhood Council

Ken Murray
Wilderness Corps



David Nahai
David Nahai Companies

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The River Project

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Los Angeles Business Council

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Sun Valley Neighborhood Council

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Pacoima Beautiful

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WE WANT TO THANK OUR STEERING COMMITTEE MEMBERS AND OTHER REGIONAL PARTNERS

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Port of LA
Chris Brown

Recreation and Parks Dept.
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Stephen Patchan

U.S Army Corp.
Ed De Mesa

LADWP & LASAN
Multiple team members
(see subsequent slides)

OUR CITY'S COLLABORATION LEADERS

Mayor's Office
Eric Garcetti – Mayor of Los Angeles
Liz Crosson - Deputy Chief Sustainability Officer

Executive Management LASAN
Enrique Zaldivar – Director
Traci Minamide – Chief Operating Officer
Adel Hagekhalil – Assistant Director
Ali Poosti – Division Manager Wastewater Engineering Services Division
Shahram Kharaghani – Division Manager Watershed Protection Division

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Marty Adams – Chief Operating Officer
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Evelyn Cortez-Davis – Assistant Director of Water Resources
William Van Wagoner – Assistant Director of Water Engineering & Technical Services

OUR CITY'S ONE WATER LA PROJECT TEAM

City's Project Managers
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Penny Falcon – LADWP

LASAN's Project Team
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Flor Burrola
Denise Chow
Troy Ezeh
Ani Abassian
Aron Sordan
Andre Goodridge
Rafael Rincon
Cesar Cortes
Rowena Lau
Manik Mahandas
Oscar Figueroa
Wing Tam
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Yoshi Tsunehara
Terry Nguyen
Stephanie Spicer

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Arcadis
Venu Kolli

DakeLuna
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SEITec
Shariar Eftekharzadeh

SGA
Stephen Groner

Tetra Tech
Ira Artz

The Morcos Group
Sherif Morcos

A TOKEN OF OUR APPRECIATION FOR THE ONE WATER LA STAKEHOLDER GROUP

Thank You!

GROUP PHOTO

MEETING CLOSE

SPECIAL TOPIC GROUPS MEETINGS

Special Topic Groups were created to discuss specific subject areas of the One Water LA Plan, and were asked to provide input on relevant documents, discuss strategies and tactics, and make recommendation that would inform development of the Plan. These groups included: Stormwater and Runoff Management; Funding and Cost-Benefit Analysis; Outreach and Communication; Partnerships, Collaboration & Innovation; and Decentralized Use and On-Site Treatment. Table 5.1 is a list of Special Topic Group meetings by date, and includes the purpose of the meeting and topics discussed.

Table 5 Summary of Special Topic Groups Meetings
Summary Report
One Water LA 2040 Plan

Special Topic Group	No. of Stakeholders	Meeting No.	Meeting Date	Topics/Discussion Items
Stormwater and Runoff Management	21	1	3/24/2016	Share information and resources. Ideas on opportunities, priorities, and solutions.
		2	4/30/2016	Refine and prioritize stormwater policy and program recommendations.
		3	6/23/2016	Draft presentation for stakeholder workshop - STG report.
Funding and Cost-Benefit Analysis	13	1	3/29/2016	Share information and resources, and begin to discuss opportunities, priorities, and solutions.
		2	4/29/2016	Continue discussion of opportunities and solutions, and identify action steps.
		3	6/3/2016	1. Funding Survey Results. 2. Benefit-Based-Cost Breakout Session.
		4	8/18/2016	Review draft summary of outcomes and fine-tune in preparation for presentation at the stakeholders workshop.
Outreach and Communication	7	1	3/18/2016	Share information and resources, begin to discuss opportunities, priorities and solution, and determine STG deliverables.
		2	5/3/2016	Continue discussion of opportunities and solutions, and identify action steps.
		3	6/15/2016	Review draft summary of outcomes and fine-tune in preparation for presentation at the stakeholders workshop.
Partnership, Collaboration, and Innovation	15	1	3/16/2016	Share information and resources, and begin to discuss opportunities, priorities, and solutions.
		2	5/5/2016	Continue discussion of opportunities and solutions, and identify action steps.

Special Topic Group	No. of Stakeholders	Meeting No.	Meeting Date	Topics/Discussion Items
		3	6/16/2016	Review draft summary of outcomes and fine-tune in preparation for presentation at the stakeholders workshop.
Decentralized Use and On-Site Treatment	12	1	3/24/2016	On-Site-Treatment Facilities - gain input for content of future policies.
		2	5/9/2016	Graywater - gain input for content of future policies.
		2	6/14/2016	Review draft summary of outcomes and fine-tune in preparation for presentation at the stakeholders workshop.

STORMWATER & RUNOFF MANAGEMENT SPECIAL TOPIC GROUP

Stormwater and Runoff Management Special Topic Group will meet with the purpose of

- Receiving input and providing updates on stormwater and runoff management projects and programs involving non-City entities such as NGOs and private development,
- Helping meet EWMP goals not under City jurisdiction,
- Identifying opportunities to partner with the City to implement stormwater projects and programs.

The following pages present the meeting materials from the Stormwater and Runoff Management Special Topic Group meetings.

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Stormwater & Runoff Management STG Meeting #1 (03/24/16)

The following pages present the meeting agenda, summary of the discussion, and the presentation given at the Stormwater and Runoff Management Meeting #1, held on March 24, 2016.

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STORMWATER & RUNOFF MANAGEMENT
Special Topic Group

DATE	TIME	LOCATION
March 24, 2016	1:00pm - 3:00pm	2714 Media Center Drive Los Angeles, CA 90065

Staff:

Facilitator	Rebecca Drayse	LASAN
Facilitator 2	Stephen Groner	SGA
Technical Lead	Mark Hanna	Geosyntec
One Water LA Team	Wing Tam, Steven Nikaido (Alt.), Kosta Kaporis, (Alt.)	LASAN
One Water LA Team	Azya Jackson	LASAN
One Water LA Team	Rafael Villegas	LADWP
One Water LA Team	Art Castro	LADWP

I. Welcome and Introductions (5 Minutes)

II. Overview and Process
   a. Agenda Review
   b. Overview of One Water LA Plan Phase 2
   c. Purpose of Special Topic Groups Process, Objectives, and Relationship to Phase 2
   d. Meeting Process
      i. Meeting #1: Share information and resources, and begin to discuss opportunities, priorities and solutions
      ii. Meeting #2: Continue discussion of opportunities and solutions, and identify action steps
      iii. Meeting #3: Review draft summary of outcomes, and fine-tune in preparation for presentation at the stakeholders workshop
   e. Discussion Guides

III. Road Map for the Stormwater & Runoff Management Special Topic Group
   a. Overall Focus and objectives of this special topic group
      i. Help meet Mayor's Executive Directive 5 and EWMP goals from areas not under City jurisdiction.
      ii. Receive input and provide updates on stormwater and runoff management projects and programs involving non-City entities such as NGOs and private development.
      iii. Identify opportunities and constraints to partnering with the City to implement stormwater projects and programs.

iv. Discuss multi-benefit approaches, prioritization process, and future program possibilities.

b. Outcomes Documentation

IV. Background Presentation
   a. Overview of Phase 2 Scope for Stormwater and Runoff Facilities Plan
      i. EWMP relationship
      ii. Stormwater Capture Master Plan relationship
      iii. Public and private contribution to compliance
      iv. Additional Considerations

V. Discussion Topics
   a. Brief review of revised topic summary
   b. Today's topics
      i. Programs, policies, and/or research that One Water LA should consider during the Plan's Development
      ii. Private property role in meeting ED 5 and EWMP Goals
         - How can we better manage urban dry-weather runoff?
         - What can be done to make decentralized strategies cost effective?
         - How can NGO's and the general populace play a larger role?
      iii. Integrated Project and partnership examples
         - What processes have worked well and what have not?
         - What are the known obstacles and constraints to partnering with the City on stormwater projects and programs and possible solutions?

VI. Next Meeting
   a. Timing of meetings
   b. Meeting location poll
   c. Number of meetings

VII. Next Steps
   a. Homework Assignment(s)
   b. Follow-on Action items

Stormwater and Runoff Management
Special Topic Group
Meeting #1

2714 Media Center Drive, Los Angeles, 90065
Thursday, March 24th, 2016
1:00-3:00pm

"This summary reflects the opinions of stakeholders and may not necessarily be those of the City of Los Angeles."

Meeting Summary

The purpose of this summary is to provide an overview of the discussion topics, including ideas, solutions and issues. It is not intended as a transcript or as minutes.

Meeting Attendees:

Participants

Liz Crosson	LA Mayor's Office of Sustainability
Arthur Pugsley	LA Waterkeeper
Shawn Warren	FOLAR
Jack Humphreville	GWNC
Kevin Fellows	PB
Guangyu Wang	SMBRC
Daniel Berger	TreePeople
Katie Mika	UCLA
Steve Johnson	Heal the Bay
Melanie Winter	The River Project
Rita Kampalath	Heal the Bay
Natalia Gaerlan	The Trust for Public Land
Johanna Dyer	NRDC

Meeting Team

Facilitator	Rebecca Drayse	LASAN
Scribe	Stephen Groner	SGA
Technical Lead	Mark Hanna	Geosyntec
One Water LA Team	Wing Tam	LASAN
One Water LA Team	Steven Nikaido	LASAN
One Water LA Team	Azya Jackson	LASAN
One Water LA Team	Rafael Villegas	LADWP
One Water LA Team	Art Castro	LADWP
Note Taker	Julia Kingsley	CORO / Carollo

Welcome & Introductions
Introduction of LASAN and LADWP staff, consultant staff, and lead team took place. Participants also introduced themselves to the group.

Overview of the One Water LA Plan 2040 (OWLA):
The purpose of One Water LA is to integrate and implement within the City water projects, policies, and programs that support the Mayor's Sustainability Plan and Executive Directive #5. A key to doing that includes a Stormwater facilities plan that will pull together information based on new climate studies and other work by various City departments including the EWMP and the LA River Master Plan. One Water LA will provide a roadmap for all types of water efforts that will lead us to 2040. The City has considered which elements of the plan could benefit from stakeholder input, hence the formation of the Special Topic Groups (STGs). All comments from these meetings are being collected and will be considered for incorporation in the One Water LA plan which includes future policies. The purpose of these meetings is to build relationships, solicit input and to have a two-way conversation between stakeholders and the City. The objective for the first meeting is to share/discuss information, ideas, resources, opportunities, and priorities.

Background Presentation - Specific Task of Storm water and Runoff Management STG:
The task for this Special Topic Group (STG) is to provide ideas and recommendations related to stormwater planning for the City. There is a need to prepare stormwater facility master plans every five years. The City will be creating a Stormwater facilities plan which will include a capital improvement program for the City. This Facilities plan will address three main components: water quality, water supply, and flood control to alleviate unmet drainage needs. The impacts of climate change will be incorporated with this effort. The three agencies that have been working together for years (LASAN, LADWP and LADPW) are doing so in a manner which leverages what the other agencies are doing, and to focus on flood risk management, water quality, and water supply in an integrated fashion. The intention is to use data that already exists; compile GIS, look at current and future system demands, identify where priority projects are needed, evaluate infrastructure repairs, upgrades and improvements, and to incorporate the GRASS (Greenways to River Arterial Stormwater System) concepts, where possible. local, state, and national goals are center to this work effort, as well as all of the regulatory requirements.

We are currently in the data gathering process of the master plan and are building the structure of the plan. The goal is to have a draft of the plan in early fall. These meetings are important as the One Water LA team will evaluate how the group's ideas and recommendations can be incorporated in the process and the plan.

Response to question about County involvement: The County is a key partner in the One Water LA Plan and has been attending the Steering Committee meetings. Senior managers are meeting on a regular basis. The County has already moved forward with the EWMP process.

Stormwater & Runoff Management Discussion Topics

Topic 1 -What are the programs, policies, and/or research that One Water LA should consider during the plan's development?

- The South LA Green Alley Master Plan should be considered in how to use stormwater efficiently as it identifies how alleys can capture stormwater. The plan was adopted by the City and was prepared with the Trust for Public Land. The data for the alleys has already been collected, some projects are underway, and additional projects are seeking grant funding.
- The City Sidewalks Policy should also be considered. As the City is working to upgrade its sidewalks, there are many runoff opportunities for stormwater capture.
- Another opportunity is Recode LA, looking to incorporate stormwater opportunities into the City's zoning code.
- We should consider areas with flood risk as a priority for stormwater capture projects.
- Look at best practices of transit and water. UCLA is looking at innovative water management.
- Incorporating the National Academy of Sciences report on Greywater and Stormwater.
- Prioritize sidewalks, parkways, medians, streets, road improvements, street ends and day-lighting.
- Approach this project with research first, and policy second. Look at the historical hydraulic study for the LA River: restoration and preservation.
- Consider all the different regulatory barriers associated with distributing, incentivizing, and the multi-benefits of parcel-based Residential Distributed Stormwater Capture.
- Look at the Los Angeles Basin Stormwater Conservation Study. We should also consider the green infrastructure benefits to flood reduction, as studied in Tucson, AZ. Reference back to studies and data that already exists.
- The Water LA program focuses on costs, social factors, rainwater harvesting, water reuse, flood reduction, water quality, and groundwater recharge. It should be a vital resource for with multi-agency support to meet the goals of the Sustainability pLAn, SCMP, the Upper LAR EWMP, and the Basin Study Plan.
- The plan should consider the new NRCS soil data anticipated to be released in summer of 2016. The study looks at the constraints to existing and future LID by the current state-derived definition of liquefaction zones. County geotech engineers acknowledge the problem. The data is old, out of date, created at a 3k ft. level and does not recognize the greater geologic hazards associated with groundwater depletion. This is a key issue that needs the state's attention.
- City of LA Watershed Motion
- Research on historical streams and other hydrology studies

Funding will be needed, and outreach is going to be incredibly important for this plan to work.

- Engage Metro, as they are rolling out Measure R2 and could incorporate stormwater capture into their capital projects. They are developing environmental and sustainable policy over the next few months.
- Reach out to schools districts and utilize bonds to retrofit schools for stormwater.
- Engage on the planned Parks Bond Measure to include stormwater capture

- Reach out to LAWA on their offsite planning projects and how the project may overlap with the City and the County. The Parks Measure should also be on our priority list.
- We should coordinate with the City Green Street Committee.
- We want to look at how we can better manage Urban dry-weather Runoff.

Topic 2 – Private Property role in meeting ED5 and EWMP Goals
How can we better manage dry-weather runoff?
What can be done to make decentralized strategies cost-effective?
How and NGO's, businesses and the general populace play a larger role?

Results of post-it note exercise
Incentives

- Education and incentives for residential storm water capture ('Stormwater Fee Credits and Incentives Whitepaper' is a resource).
- Focus on tracking and monitoring of BMP costs and effectiveness and sharing best performing applications with the community
- Incentivize residential rainwater capture systems. Potential through a rebate to cover a portion of the system cost or through a low-interest loan program
- Help fund projects
- Incentive and rebate for rain garden installation instead of simple turf removal
- Incentives for commercial/industrial distributed storm water capture
- Identify and incentivize private property parking lots for storm water recapture/infiltration
- Incentivize private property owners to put water use back into system
    - Reduced water rates
    - I.e. solar back into the grid
- Fund NGOs to do demonstration projects (rain barrel, rain garden, etc.) which are more effective than being done directly by city
- Increased incentives for homeowners and private businesses
- While the City may have all sorts of brilliant ideas, how does a private property owner implement these suggestions? Does the City have a list of qualified contractors? Will the City engage in cost sharing?
- Look at Water LA's strategies
- Tier-priced water bills
- The most important aspect is that private property owners trust the City
- Explore incentive program for residential cisterns

Voluntary

- Provide outside point of view and different perspective. Make sure we do not get stuck on a single track
- Large private property distributed opportunities
    - Churches or other places of worship throughout communities, usually some porous property
- Landscape alteration
    - Appropriate planting and maintenance
    - Micro-grating
- Education campaign for general public
    - Storm water/watershed literacy

- Spread the work…too much for the City to do on their own
- Before managing (especially if capturing) urban dry-weather look at potential uses or larger opportunities downstream
    - How is run off best used?
- Are these policies economic for the property owner?
- Water LA - Request to incorporate Water LA strategies and How-To documents into the City & County's LID guidance for voluntary adoption outside of the regulatory framework.
- Education/job training
- Partner with NGOs to provide education and outreach regarding the benefits and implementation of distributed rainwater capture
- Explore the potential for "big box" retail parking lots to be used for larger scale storm water capture projects
- Strong focus on meetings, collaboration, and education of business groups

Mandated

- Dry weather/decentralized/public curb cuts and parkway basins
- Cost effective? Water LA
    - Some codes/ordinance revisions
- Forming public/private partnerships, combining mandates with incentives
- Further development and refinement of landscape and irrigation ordinances
- Increased oversight of industrial facilities that discharge TMDL pollutants
- Provide/budget for partnerships with other agencies who could capture some of City of LA's runoff, even though projects lie outside of the City. (Some of these other agencies can move much faster to implement projects.) These partnerships can also allow City to share match requirements for grant funding and front-funding.
- Standardized plans
- Common water rights
    - Water should fall under one agency for rights to be distributed
- Decentralized on Private
    - Figure out how to make Operation and Maintenance of distributed infrastructure cheap and efficient and track performance as implemented to make sure expected water quality or water supply benefits are being achieved
- Distributed residential projects
    - Will require development of a more robust, more accessible mulch program
- Address City codes that limit residential retrofits to capture/infiltrate storm water
- Mandatory onsite water capture
- Remove regulatory barriers to distributed rainwater capture.
    - Streamline and clarify relevant processes

Topic 3 Integrated Project and Partnership Examples

What processes have worked and what have not?
What are the known obstacles and constraints to partnering with the City on Stormwater projects and programs and possible solutions?

- The outreach for DWP's toilet replacement program was extremely effective in terms of the City working with nonprofits to make sure everyone knew what was happening.

- Small grants for NGOs are effective in getting things done. Small projects make a difference because there can be greater distribution of smaller amounts of money and can use pilots to change standards for larger scale efforts.
- Whatever we fund should become a standard practice, not just a pilot program. The rain garden program, for example, did not tackle what it needed to because it was considered a pilot.
- There should be an online platform for everyone to stay more in touch. There is amazing research going on and it is difficult to stay in touch. The platform could focus on what more needs to be done across all aspects of water, not just at LASAN.
- LMU is creating a database on different NGOs and projects in the area. Once the database is done, we can use it as a resource for who is doing what.
- We should reach out to area law schools/clinics, as they can help with issues we did not realize were in building codes because it's not specific to water, but could still prove important.
    - UCLA Law School looking at ordinances/regulation roadblocks on climate change→similar for water
- Pilot or demonstration projects should be undertaken with a plan upfront to translate the results into a standard practice, not just a one-off project or program. Past rain garden and downspout disconnect programs did not address or resolve conflicting code issues because they were considered pilots. Establish a process at the outset to coordinate with relevant agencies on identifying and modifying code and ordinance conflicts to insure that beneficial practices can be replicated broadly, cost-effectively, and in a timely manner.
- If we are to change the codes, it would have to come from the Mayor. We should focus on code evolutions, such as gutter drainage and reverse engineering water. Anytime there is a code evolution, there is an innovation.
- Look to the County on what they are doing with stormwater. The County is willing to make changes faster than the City.
- Look at the differing perceptions of stormwater between different agencies. Need internal education program to make sure that stormwater is viewed as a resource not a liability.
- LASAN is currently working on a curriculum program with LAUSD, so the message is getting out there. Kids are starting to recognize purple pipes.
- There are major barriers in working with the City, as they do not hold NGOs in the same regard they hold private entities.
- Schools/parks liability issues
- Need modeling linkage between stormwater and groundwater

Parking Lot
Will the plan result in and open data source that can be accessed and used by non- City entities?
Elaborate on County of Los Angeles involvement in One Water LA

Homework
Identify additional obstacles to, and opportunities for partnerships with City of Los Angeles.

One Water LA

STORMWATER & RUNOFF MANAGEMENT
Special Study Group
Meeting #1

Innovation • Integration • Inclusion

Welcome!

Meeting Team for STORMWATER & RUNOFF MANAGEMENT

Facilitators:
- Rebecca Drayse, LASAN
- Stephen Groner, SGA

Technical Lead:
- Mark Hanna, Geosyntec

Note Taker:
- Julia Kingsley

City Reps:
- Azya Jackson, LASAN
- Wing Tam, LASAN
- Steven Nikaido, LASAN
- Kosta Kaporis, LASAN
- Rafael Villegas, LADWP
- Art Castro, LADWP

Agenda

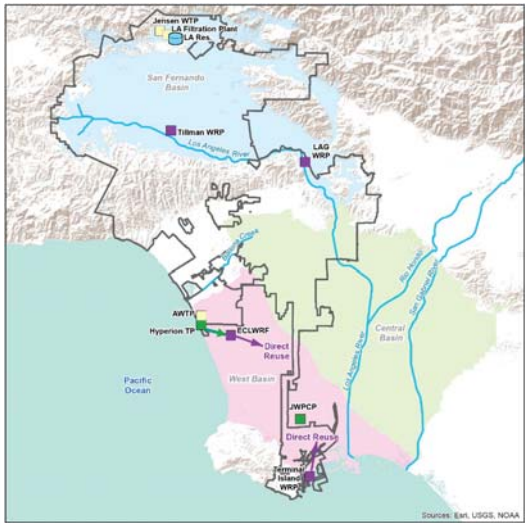
- Welcome and Introductions
- Overview and Process
- Road Map for the Stormwater & Runoff Management Special Topic Group
- Background Presentation
- Discussion Topics
- Next Steps/Follow-On Actions

One Water LA

One Water LA Plan Overview

Innovation • Integration • Inclusion

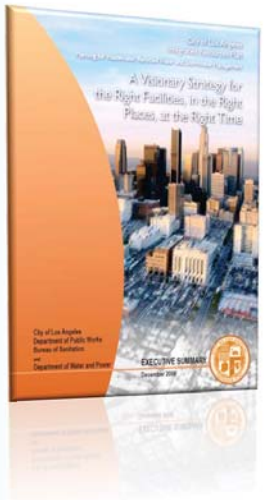
The Plan will provide a roadmap through 2040 to achieve ambitious water resource goals



The Plan will consider:

- Potable reuse
- Non-potable reuse
- Climate change
- Wastewater & stormwater infrastructure
- Stormwater capture & treatment
- Los Angeles River
- Water conservation
- Decentralized/on-site reuse
- City department collaboration & regional partnerships
- City policies

Simply put, the One Water LA 2040 Plan is the update of the 2006 IRP



New World

Declining wastewater flows
New Regulations
Climate Change
Integration of New Plans

One Water LA will help to. . .

1. Reduce imported water purchases by 50% by 2024.
2. Achieve 50% local water supply by 2035.
3. Improve wastewater facilities to meet regulatory and recycled water needs.
4. Manage runoff to meet water quality requirements AND increase water supply.
5. Identify water-related integration opportunities between City Departments and Regional Agencies.

Key One Water LA Plan Deliverables

- Wastewater facility plans
- Stormwater facility plan
- Climate Change report on water infrastructure
- New city policies and recommendations to enhance water management and integration
- Funding, Partnerships, and New Strategies
- Special Studies- LA River, on-site treatment plants, new technologies
- Strategic outreach approaches

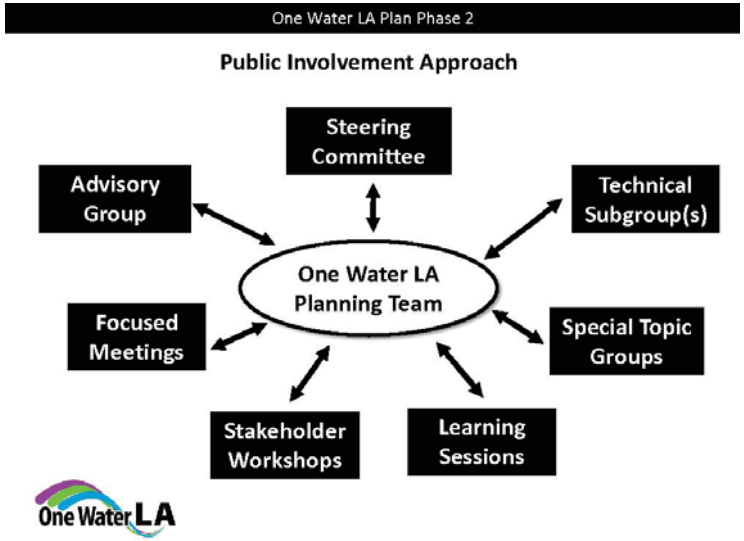
Plan completion scheduled for January 2017
EIR completion scheduled for 2018

One Water LA

Purpose of Special Topic Groups

Innovation • Integration • Inclusion

Public Outreach Plan

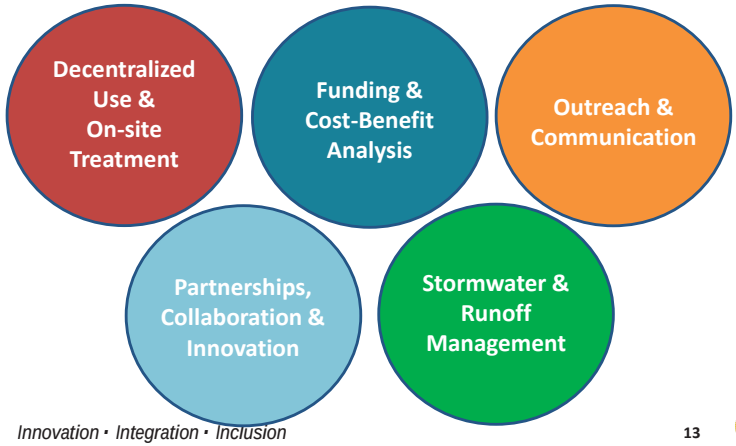


Purpose of the Special Topic Groups

- To build relationships with and solicit input from the diversity of stakeholders that will be involved in implementing programs prescribed in the One Water LA Plan.
- To use input and discussion outcomes to:
  - Shape the One Water LA Plan
  - Formulate implementation programs and priorities
  - Strengthen the needed public/private/NGO relationships for implementation.

Special Topic Groups

The 5 groups cover topics where stakeholder input can have the greatest influence.



Objectives for Our Meetings

- Meeting #1: Share information and resources
  - Expected Outcomes: Ideas on opportunities, priorities, and solutions
- Meeting #2: Refine ideas
  - Expected Outcomes: Actionable steps to take in preparation
- Meeting #3: Review and fine-tune ideas
  - Expected Outcomes: Draft presentation for stakeholder workshop

Discussion Guides

- Everyone gets equal time to contribute and participate.
- Listen for understanding.
- Be open to considering new ideas.
- Keep statements concise so that we can maximize the meeting time.
- Focus more on new ideas and solutions, and less on problems and issues.

One Water LA

STORMWATER & RUNOFF MANAGEMENT
Special Topic Overview

Innovation • Integration • Inclusion

Stormwater & Urban Runoff Facilities Master Plan

- Develop a Capital Improvement Program for the City of Los Angeles Bureau of Sanitation
- Provide context for the demands being placed on the City's stormwater system and how it will change over time
- Define the City of Los Angeles' stormwater goals for the One Water LA 2040 Plan

building on existing plans, system integration, and leveraging resources

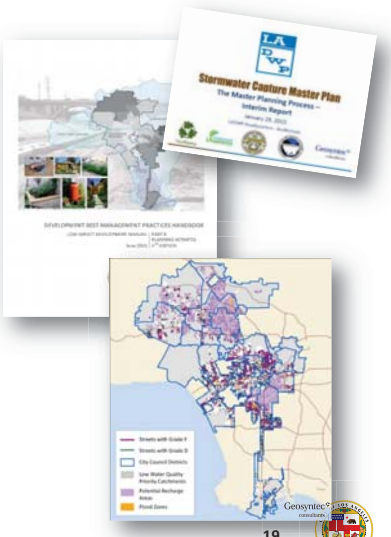
Stormwater & Urban Runoff Facilities Master Plan

This Plan will:

- Address the grey infrastructure including operations, capacity, and rehabilitation needs - this has not been done before.
- Identify gaps from the SCMP and EWMP and integration opportunities between the two plans.
- Incorporate drainage needs
- Create a One Water LA GIS system that includes layers gathered from the EWMPs, the SCMP, GRASS, IRWMP and Flood data

The approach combines local efforts with State and National knowledge base

- City of Los Angeles
  - Enhanced Watershed Management Plans
  - Stormwater Capture Master Plan
  - LA Basin Study
  - Prop O/LA SAN Project Optimization
  - LID Guidance/Council Motion 14-0748
  - Stormwater Projects (Concepts and Final)
- Statewide/National
  - So Cal Alternative Compliance Efforts
  - Watershed Management Area Analyses
  - Climate Change Impact Studies
  - Technologies/BMP Database/NCHRP



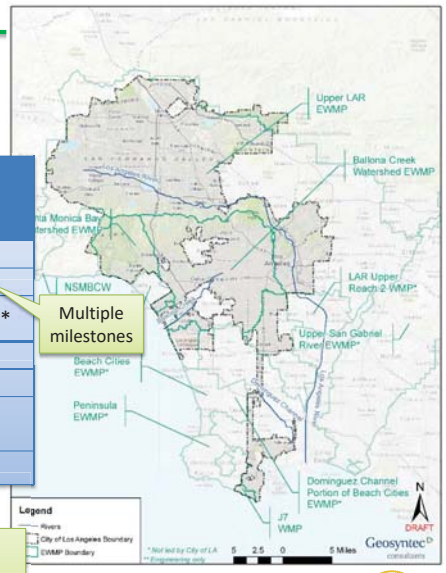
Planning will incorporate work from City EWMP watersheds

City-Led EWMPs – 4 Watersheds	
Metals	2037 – Upper LAR
	2021 – Ballona Creek
Toxics/ Metals	2032 – Dominguez Channel*
Bacteria	2021– SMB, Ballona Creek
	2037 – Upper LAR
Costs (Capital only):	$8B
Cost/Year:	Up to $820M/YR

* Multiple milestones

Multiple milestones

Hurdles to implementation



Planning will also incorporate Water Supply for all City watersheds

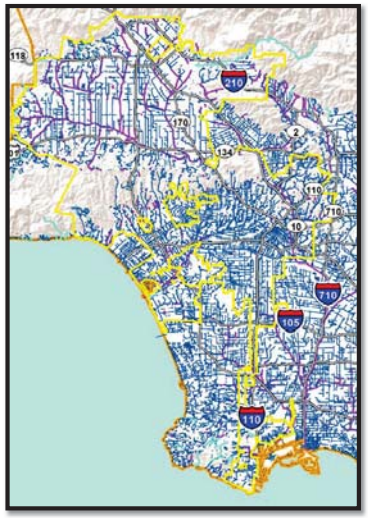
Stormwater Capture Master Plan	
Milestones:	2020, 2025, 2030, 2035
Addl Water Supply Opportunity (AF/YR)	68,000 – 114,000
Cost effectiveness (Capital + O/M)	$1,100/AF

20 year plan

Purchased Water Offset

Stormwater & Urban Runoff Facilities Master Plan

- Hydrology
- Infrastructure
  - Federal
  - County
  - City
  - Private
- Planned and Proposed Stormwater System Improvements



Stormwater & Urban Runoff Facilities Master Plan

- Future Considerations
  - Climate Change
  - Flood Risk Management
  - Water Quality Requirements & Limitations
  - Infrastructure Rehabilitation & Replacements
  - Local Water Supply Initiatives
  - Stormwater Capture and Use
  - River and Stream Restoration
  - Green Infrastructure and Natural Treatment Systems
- Stormwater Improvement Program (CIP → 2040)

Today's Discussion Topics

1. Programs, policies, and/or research that One Water LA should consider during the Plan's Development
2. Private property role in meeting ED 5 and EWMP Goals
3. Integrated Project and partnership examples

Wrap Up and Next Steps

Wrap up/summary of today's discussion:

- **Were objectives for the day met?**
- **Do we agree on next steps, and next meeting date/time?**
- **What are the outstanding issues/questions that weren't resolved or discussed during the meeting?**

Thank you!

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Stormwater & Runoff Management STG Meeting #2 (04/30/16)

The following pages present the meeting agenda, summary of the discussion, and the presentation given at the Stormwater and Runoff Management Meeting #2, held on April 30, 2016.

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STORMWATER & RUNOFF MANAGEMENT
Special Topic Group #2

DATE	TIME	LOCATION
Wednesday, April 27, 2016	**1:30 – 3:30 PM**	2714 Media Center Drive, Board Room Los Angeles, CA 90065

Staff:

Facilitator	Rebecca Drayse	LASAN
Facilitator 2	Stephen Groner	SGA
Technical Lead	Mark Hanna	Geosyntec
One Water LA Team	Wing Tam, Steven Nikaido, Kosta Kaporis (Alt.)	LASAN
One Water LA Team	Azya Jackson	LASAN
One Water LA Team	Rafael Villegas	LADWP
One Water LA Team	Art Castro	LADWP
One Water LA Team	Liz Crosson	Mayor's Office

DRAFT AGENDA

I. Welcome and Introductions

II. Agenda review and Meeting Logistics

III. Review Purpose of Stormwater Special Topic Group
   a. Receive input and providing updates on stormwater and runoff management projects and programs involving non-City entities such as NGOs and private development.
   b. Help meet EWMP goals not under City jurisdiction.
   c. Identify opportunities to partner with the City to implement stormwater projects and programs.

IV. Expected Outcomes of Stakeholder input

V. Questions

VI. Meeting One Summary Feedback and Discussion
   a. Highlights from Meeting 1
   b. Discussion of notes, and process for comments and finalization process

VII. Incentives
   a. Incentives Examples
   b. Discussion

i. What new incentive ideas from outside the region (or older ideas whose time has come) can be developed?
ii. What current incentives in LA are working and why? Which ones are not, and why? Can some be combined? Look to other industries (power, etc.).

VIII. Improving partnership opportunities with the City
a. Partnership Examples
b. Discussion
i. How can we better collaborate to improve the effectiveness and delivery of stormwater projects and projects and programs through partnerships?
ii. What integration and partnership opportunities have been missed, or less effective, than they could have been? What are some of our frustrations?
iii. How can we overcome some of the challenges with grant projects including payment delay and retention requirements?
iv. What forms of agreements exist and work well, do not, are needed?

IX. Meeting Recap

X. Next Steps

a. Next Meeting
b. Final Outcome

One Water Los Angeles
Stormwater and Runoff Management Special Topic Group – Meeting #2
Wednesday, April 27, 2016 1:30PM–3:30PM
2714 Media Center Drive, Los Angeles, CA 90065 (Board Room)

"This summary reflects the opinions of stakeholders and may not necessarily be those of the City of Los Angeles."

Meeting Summary

The purpose of this summary is to provide an overview of the discussion topics, including ideas, solutions and issues. It is not intended as a transcript or as minutes.

Meeting Attendees:

Participants

Liz Crosson	LA Mayor's Office of Sustainability
Bruce Reznik	LA Waterkeeper
Kevin Fellows	Parsons Brinkerhoff
Guangyu Wang	SMBRC
Daniel Berger	TreePeople
Katie Mika	UCLA
Rita Kampalath	Heal the Bay
Natalia Gaerlan	The Trust for Public Land
Lee Alexandreson	LA County Flood Control District
Claire Latane	Mia Lehrer & Ass.
Ghina Yamons	Alta Environmental

Meeting Team

Facilitator	Rebecca Drayse	LASAN
Scribe	Stephen Groner	SGA
Technical Lead	Mark Hanna	Geosyntec
One Water LA Team	Lenise Marrero	LASAN
One Water LA Team	Kosta Kaporis	LASAN
One Water LA Team	Azya Jackson	LASAN
One Water LA Team	Virginia Wei	LADWP
One Water LA Team	Art Castro	LADWP
Note Taker	Inge Wiersema	Carollo

Welcome and Introductions

Introduction of LASAN and LADWP staff, consultant staff, and lead team took place. Participants also introduced themselves to the group.

Agenda review and Meeting Logistics

The meeting agenda and meeting logistics were briefly discussed.

Review Purpose of Stormwater Special Topic Group

- Discuss stormwater projects and programs involving non-City entities
- Help meet EWMP and SCMP goals
- Identify opportunities to partner with the City to implement stormwater projects and programs
- Question: How can the City help non-city entities, such as private properties that are within the city boundary but not under the City's jurisdiction?
- The ultimate purpose of STG is to integrate ideas into the One Water LA 2040 Plan. Recommendations will ultimately be presented to the Mayor and his Water Cabinet.
- Example of process: Funding STG is developing a cost-sharing tool. This will be presented to the Mayor's Water Cabinet.
- Question: What is the Mayor's water Cabinet?
- Answer: The Mayor initiated his Water Cabinet in 2015 with the launch of Executive Directive No. 5 to achieve aggressive water conservation goals. The Water Cabinet consists of the Mayor and a number of key department heads, general managers and some outside advisors. The Water Cabinet's role is to promote vertical and inter-agency integration.

Expected Outcomes of Stakeholder Input

- Recommendations summarized and drafted for the One Water LA 2040 Plan
- Presentations to stakeholders and stormwater managers
- Present recommendations to key City leaders, the Mayor's Water Cabinet, and Mayor's office
- Incorporate elements into One Water LA 2040 Plan sections on Policies and Ordinances, Funding and Public Engagement

Questions/Feedback

- Is this STG a meaningful use of time?
- Appreciation was expressed for the clarification of expected outcomes.
- Is there is a guarantee that what is developed is taken into consideration?
- Answer: There are no guarantees, but that the One Water Team is committed to bringing up recommendations to decision makers.
- How will cross-connections be made between the ideas of the different STGs?
- Answer: Cross connections will happen in the Stakeholder Meetings & Plan
- Need to provide an example of IRP process and success story
- **ACTION ITEM:** Share IRP policy go policy document that communicates policies that were vetted and adopted during IRP process.

Meeting One Summary Feedback and Discussion

- A brief summary of the previous Meeting #1 discussions on the following topics were presented:

    - Research and policies to consider during development of Stormwater Facilities Plan
    - Menu of voluntary methods and incentive to help private property owners meet ED5 and EWMP Goals
    - Roadblocks to implement mandatory measures
    - Integrated projects and partnership ideas
- It was noted that more in-depth discussion would take place on incentives and partnerships during Meet #2.
- Discussion of notes, and process for comments and finalization process
    - Notes were distributed on April 21, 2016.
    - **ACTION ITEM** (all): Submit comments in track changes if possible by next Wednesday (5/4/2016)
    - **ACTION ITEM** (LASAN): Final notes of all five STGs will be posted on the OWLA website.

Incentives
A review of incentive ideas proposed by special topic group members in meeting #1 along with some new ideas presented by the One Water LA team were presented for feedback and discussion.

- Stormwater Fee Discount
    - Noted that current stormwater charge is not adequate to meet the City's needs and there is no room for discounts in the current fee.
    - How can we incentivize property owners to do something above & beyond? -> SW fee discount
        - Development Incentives
        - Grants/Ratepayer Incentives
        - Rebates, Tax Credits, and/or Installation Financing
        - Awards & Recognition Programs
- Suggested incentives from Meeting #1
    - Incentive and rebate for rain garden installation instead of simple turf removal
    - Incentives for commercial/industrial distributed storm water capture
    - Identify and incentivize private property parking lots for storm water recapture/infiltration
    - Incentivize private property owners to put water use back into system
    - Reduced water rates
    - Solar back into the grid
    - Fund NGOs on projects (rain barrel, rain garden, etc.)
    - Increased incentives for homeowners and private businesses
    - Tier-priced water bills
    - Explore incentive program for residential cisterns
- Additional ideas presented for discussion

- Portland Incentive example: Developed by Dean Marriott, a retiree from Portland Public Works
- Reward System – Project Spotlight
- Public Private Development – Buffers
- Development Bonus (FAR) and Grant Programs
- Ecoroof Incentive (grey to green)
- Treebate (Tree choice and design)
- "X"% for Green / Green Connectors for Schools / Zero Interest Loans

Discussion

- Reward Systems
  - Water Heroes, LASAN did a cross-promotion of LAWA's efforts at LAX on water conservation
  - Other reward system ideas are spotlight, social media, lawn signage, recognition of doing good work (from agency to property owner).
    - Are the rewards financial?
    - In the case of Portland, they were not financial
    - Another example: Clean Bay Restaurants provided an incentive to customers who made environmental choices.
    - These rewards can also provide an educational benefit
    - Yard signage can help overcome any negative impressions of neighbors and promote a positive image to promote turf replacements with California friendly landscaping.
    - Would be helpful to reward not just LAWA, but also its tenants.
    - Suggested the development of Awards (e.g. Silver, Gold, Platinum) to recognize land owners.
- Public/Private Development
  - Public/Private Development
    - Suggested metrics to with value increases with green infrastructure/landscaping/sustainability improvements. These metrics can also be used to encourage HOAs.
  - Development Bonus for Improved Floor to Area Ratio (FAR)
    - Concern with using FAR because extra area may create higher water demands. Particular details needed to ensure extra green space is created.
    - Incentive for developers is timely considering the Recode: LA effort
    - Would the use of a FAR metrics provide developers with an opportunity to work outside the property boundaries? It may or may not be desired to allow compensation for green space outside the development boundary.
    - Should consider if a bonus could be considered for building a park on an adjacent property.

        - Could consider treating neighborhood stormwater to receive the bonus.
        - Need to consider how this plays out with the City's Net Zero initiative
        - Look for opportunities to upgrade schools as well as other private parcels (e.g. parking lots)
        - Stormwater Trading System developed by The Nature Conservancy
        - Washington DC has a retention credit program.
        - City needs to make sure that low income housing/groups can also participate in the incentives
- Ecoroof Incentive Program
    - Ecoroof Incentive Program: owner gets a rebate per square foot towards the installation of ecoroofs.
    - Ex: Portland has a rebate of $5/sq. ft. for ecoroofs
        - LA's hydrology/climate may not be conducive for ecoroofs because the added water use offsets the benefits. There are also structural ramifications due to the need for a deep soil.
        - Necessary to bring in sufficient other benefits to make this beneficial.
        - One consideration is to revise graywater standards to make eco-roofs viable
        - New design concepts with stormwater capture including planters at drain areas could be developed and evaluated.
        - "Impervious buy-back program" alias a pervious incentive
        - Use of rebate for developers for pervious parking lots to promote non-asphalt covers, such as implemented by Watsonville, CA.
- Treebate Incentive
    - Portland Example: Plant a yard tree for clean rivers and earn a $50 rebate
        - Discussion whether it would be more cost-effective to use rebates or NGO's
        - Consider combining with Green Streets Standard Plan
        - Explore the option of creating "Adopt a Tree" programs
        - Urban Forest incentives: Carefully selected tree list so only drought tolerant, heat and pest resistant trees qualify
        - Need a tree pruning policy and public education program on who is allowed to prune trees on public lands.
        - The value of mature tree canopy and its water capture benefits is undervalued.
        - Explore research grant opportunities to evaluate benefit of different trees (shade reduces ET) and education and develop sustainable tree guidelines.
        - Metro has unsolicited grant program that could consider a rebate program.

        - Approach Air Quality Management District and Air Resources Board to consider rebates or cost sharing as they value trees to reduce air quality problems.
        - City could be a part of cost-sharing.
        - Consider "Adopt a Parkway Swale." It would be beneficial to have incentives that are flexible for parkways and swales too.
        - Removing barriers to those who want to install parkway swales is also important.
- One Percent for Green
        - Need to integrate the Complete Streets, Green Streets, Pedestrian Streets, Safe Routes to School and Vision Zero programs.
        - Should be an effort to put all these programs on one map.
    - Vision Zero Initiative
        - ACTION ITEM: Provide GIS layer of Vision Zero initiative.
        - ACTION ITEM: Add extra street program and Vision Zero initiative layers to the Stormwater Facilities Master Plan
- Other Incentives & Open Discussion
    - Develop a grand prize for innovation
    - Health concerns about standing water should be communicated with the public.
    - Work with stores like Home Depot & Lowes to promote rain barrels.
    - Identify and work with inspirational figures to promote plan.
    - Rebate programs need to consider educational needs.
    - City is currently modifying the turf removal rebate program to include stormwater capture.
    - The City's watershed motion will also support the effort.

Incentives are important because quantitative goals have practical metrics to communicate with the public and gets the media's attention. For example, with setting big goals like installing one million cisterns or retrofitting 100,000 properties allows the goals to be visualized, and can also create multiple jobs. We need to quantify the City's Sustainability pLAn stormwater capture goal into relatable metrics. This can be done using the number of cisterns, rain gardens, rain barrels, etc.
ACTION ITEM: Develop practical metrics to communicate stormwater goals with the public and media.

Improving partnership opportunities with the City
Summary from Meeting #1

- LADWP Toilet Replacement Program – Success!
- Small grants to NGOs
- Online platform for information transfer (Blog, LMU database…)
- Education and Outreach

- Standardized Agreements
- Schools and Parks
- LA County

Discussion

- More communication and partnership is needed with the Industrial community to implement the Industrial General Permit. The California Metals Association is one example.
- LA Chamber and BizFed are other avenues to promote One Water LA and make presentations.
- One Water LA Advisory Group recently expanded with the addition of representatives from the industrial sector.
- City partnership with the Trust of Public Land (TPL) helped secure funding for alley retrofits and similar NGO partnerships can increase funding opportunities.
- ACTION ITEM: Summarize lesson learned from NGOs working with the City and identify improvement of partnership agreements.
- Specification and policies and plan/project approvals need to be streamlined to avoid roadblock or implementation hurdles. Project templates need to be developed along with standardization
- Beneficial to have a one point of contact to get projects implemented
- Group would like more information on EWMP implementation

Meeting Recap

- ACTION ITEM: Develop poll to get input on prioritization of incentive ideas
- ACTION ITEM: Send out prioritization poll out via e-mail
- Provide input on "Non-Dean Marriott" presentation ideas (via email).
- Interest in repeating the OWLA and Water Cabinet goals
- ACTION ITEM: Provide a list of One Water GIS Layers (current and requested)

Next Steps

The next meeting will be scheduled shortly with the STG members. The meeting notes and action items will be sent out to STG members.

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One Water LA

STORMWATER Special Topic Group Meeting #2

Innovation • Integration • Inclusion

Meeting Team for Stormwater

Facilitator	Rebecca Drayse	LASAN
Facilitator 2	Stephen Groner	SGA
Technical Lead	Mark Hanna	Geosyntec
One Water LA Team	Wing Tam, Steven Nikaido, Kosta Kaporis (Alt.)	LASAN
One Water LA Team	Azya Jackson	LASAN
One Water LA Team	Rafael Villegas	LADWP
One Water LA Team	Art Castro	LADWP
One Water LA Team	Liz Crosson	LA Mayor's Office of Sustainability

Welcome!

Agenda

- Review Purpose of the Stormwater STG
- Expected Outcomes
- *Questions*
- Stormwater STG Workshop #1 Discussion
- Meeting #2- Purpose, Objectives
  - Incentives
  - Partnerships
- *Meeting Recap*
- Next Steps

Purpose, Objectives & Goals

- Discuss stormwater projects and programs involving non-City entities
- Help meet EWMP goals from contributions from land not under City jurisdiction
- Identify opportunities to partner with the City to implement stormwater projects and programs

Expected Outcomes of Stakeholder Input

- Recommendations summarized and drafted for the One Water LA 2040 Plan
- Presentations to stakeholders and stormwater managers
- Present recommendations for discussions with key City leaders, the Mayor's Water Cabinet, and the Mayor's office
- Incorporation of elements into the One Water LA 2040 Plan sections on Policies and Ordinances, Funding and Public Engagement

Stormwater STG Workshop #1 Summary

Participants	
Liz Crosson	LA Mayor's Office of Sustainability
Arthur Pugsley	LA Waterkeeper
Shawn Warren	FoLAR
Jack Humphreville	GWNC
Kevin Fellows	PB
Guangyu Wang	SMBRC
Daniel Berger	TreePeople
Katie Mika	UCLA
Steve Johnson	Heal the Bay
Melanie Winter	The River Project
Rita Kampalath	Heal the Bay
Natalia Gaerlan	The Trust for Public Land
Johanna Dyer	NRDC

Stormwater STG Workshop #1 Summary

- Draft Meeting Notes
  - Discussion of notes
  - Process for comments
  - Process for finalization