



# Stakeholder Workshop #4

October 26, 2016



# One Water LA Decision Time

## Series of 3 Workshops

### Part 1 (Today)

- Projects & Criteria
- Criteria Exercise
- Portfolio Themes

### Part 2 (Early December)

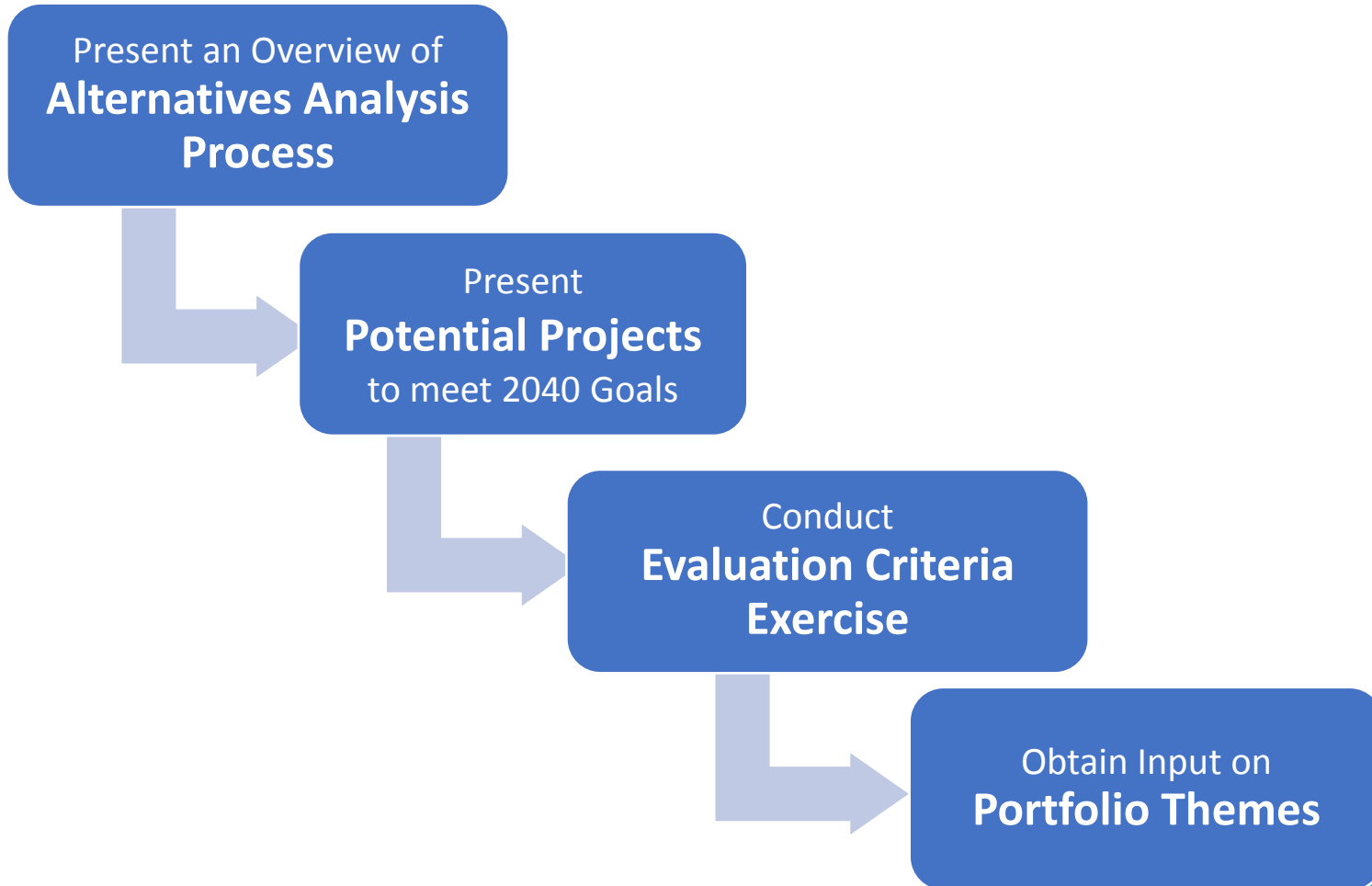
- Long-term Policies  
Brainstorm
- Project Scoring Update
- Portfolio Evaluation Update

### Part 3 (Early 2017)

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



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





# 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



# 1a. Progress Update





# 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

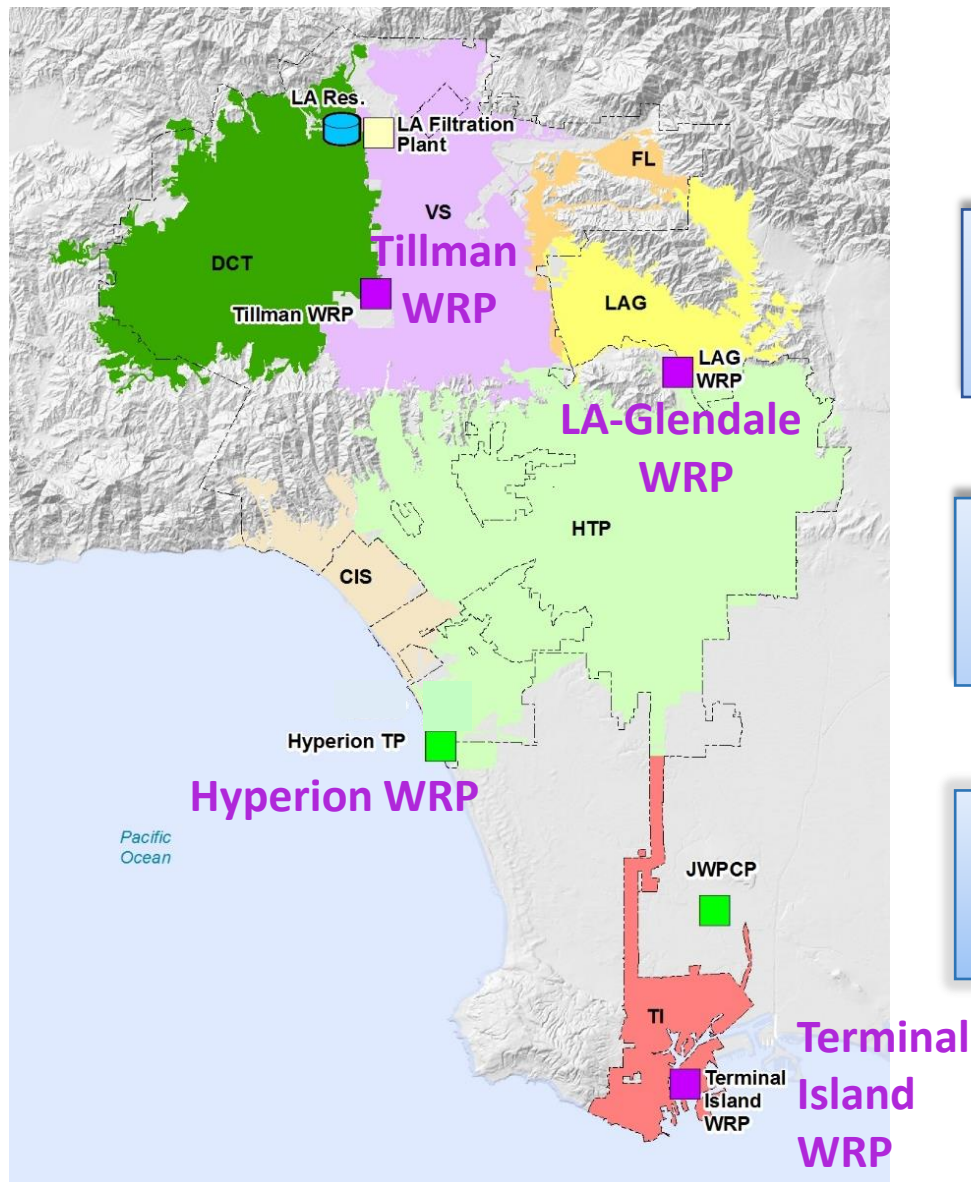
## Foundational Work Completed to-date:

- 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

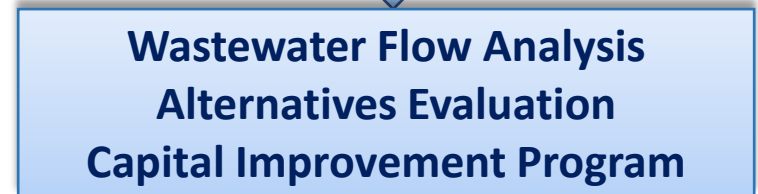




# Wastewater Facilities Plans - Status

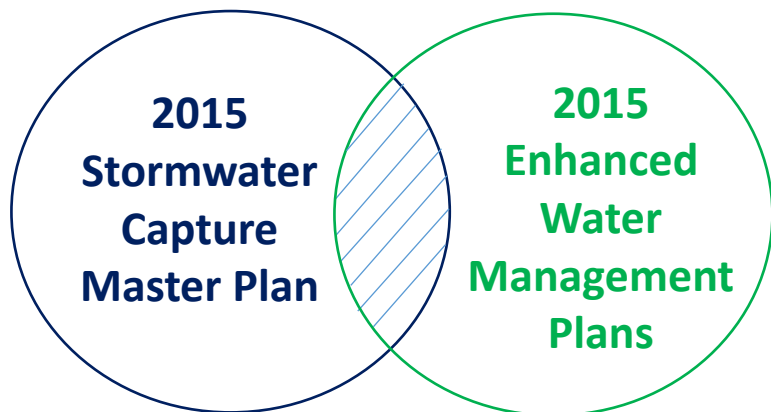


## PLAN DEVELOPMENT PROCESS

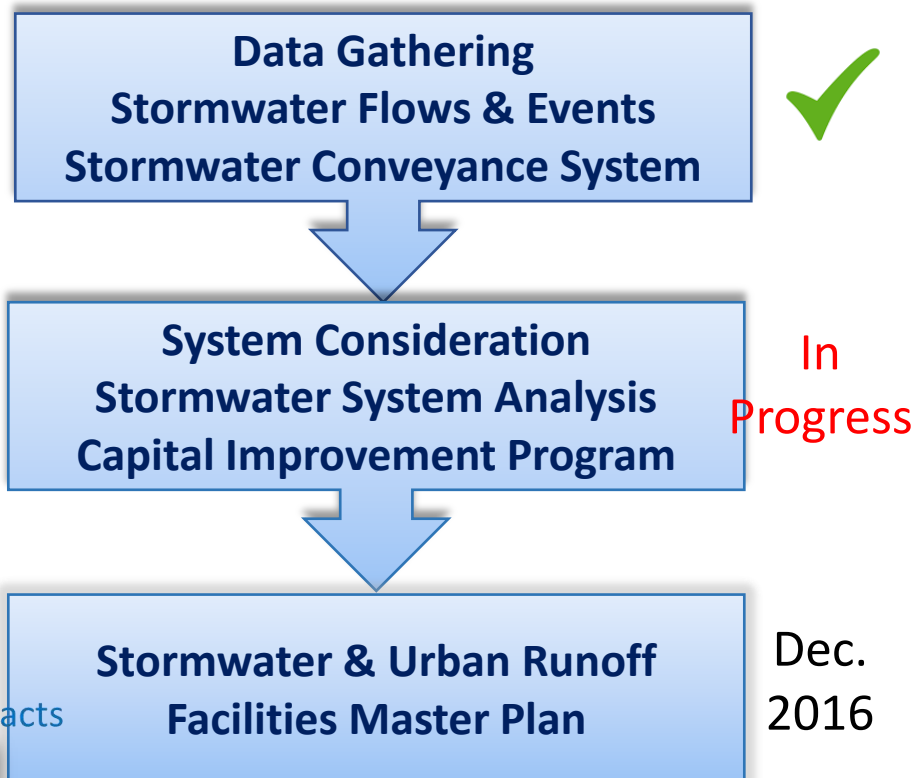




# Stormwater Facility Plan - Status



## PLAN DEVELOPMENT PROCESS

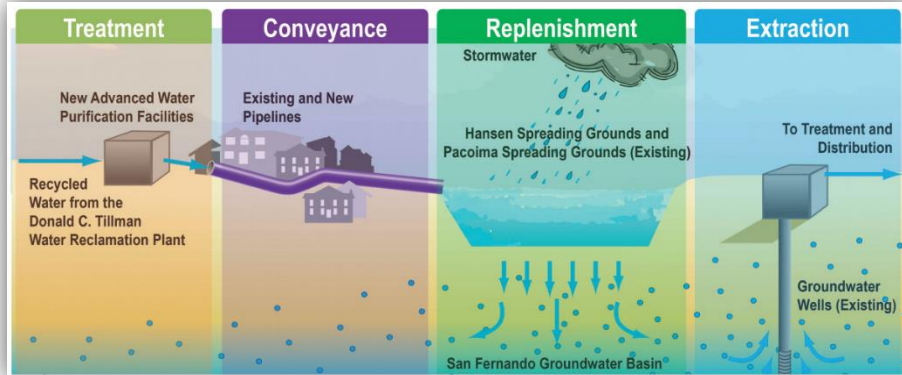






# Other Related Projects & Activities

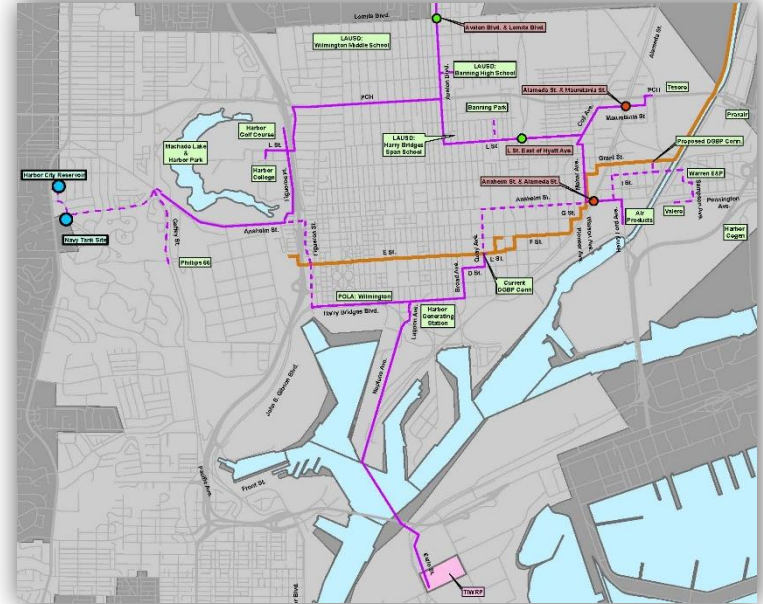
## San Fernando Basin Groundwater Replenishment Project



## 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)



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





# 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)



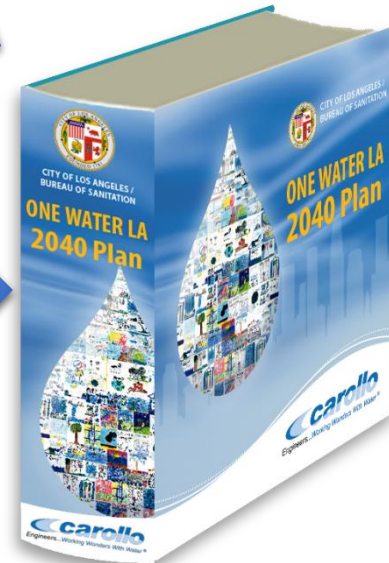
**World Café**, input on:

- Evaluation Criteria
- Project Concepts & Policies

Input on **Climate Change**  
Vulnerabilities & Approach

**Special Topic Groups**, input on:

- Funding
- Outreach & Communication
- Stormwater







# World Café

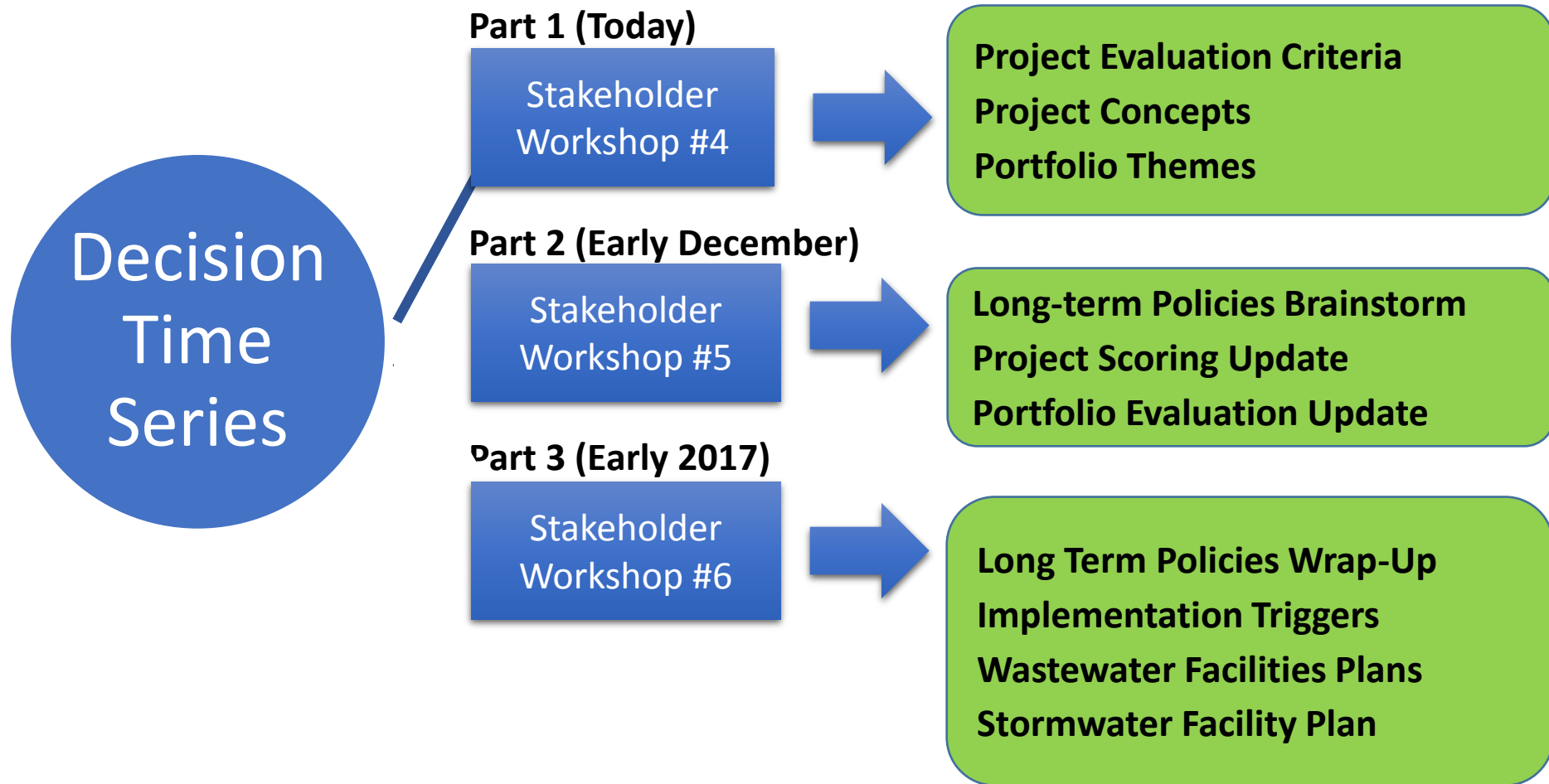


## Input on Project Evaluation Criteria, Project Concepts, and Policies





# Stakeholder Input Look-Ahead







## 2a. Alternatives Analysis





# 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.



# 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

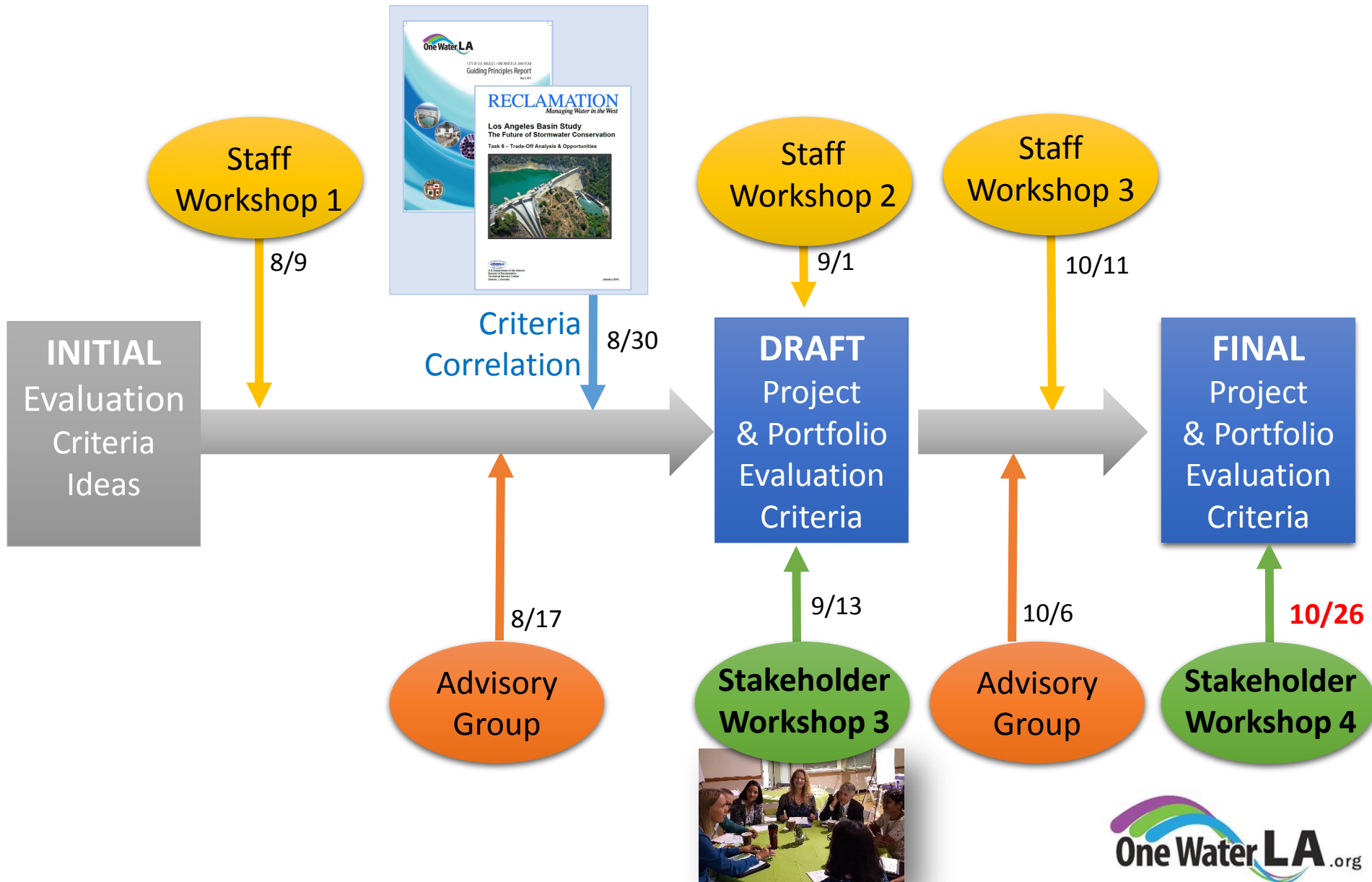
## 6 Evaluate Portfolios using MBM, CBA & \$

## 7 Define Recommended Strategy & Roadmap

B or  $B''$



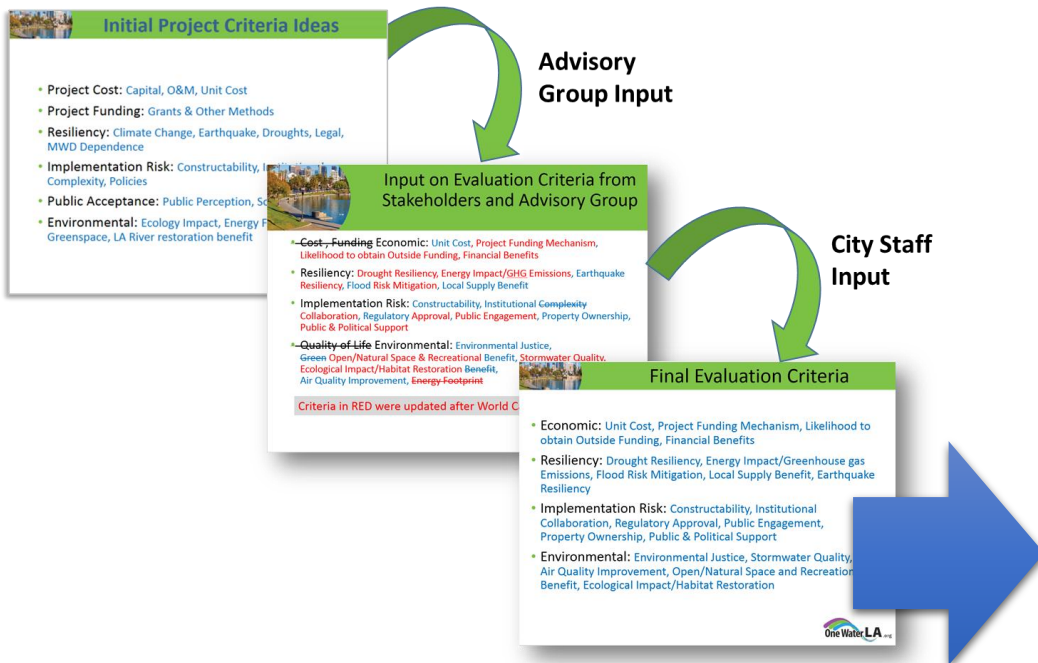
# Step 1 - Criteria Development







# Step 1 – Develop Evaluation Criteria



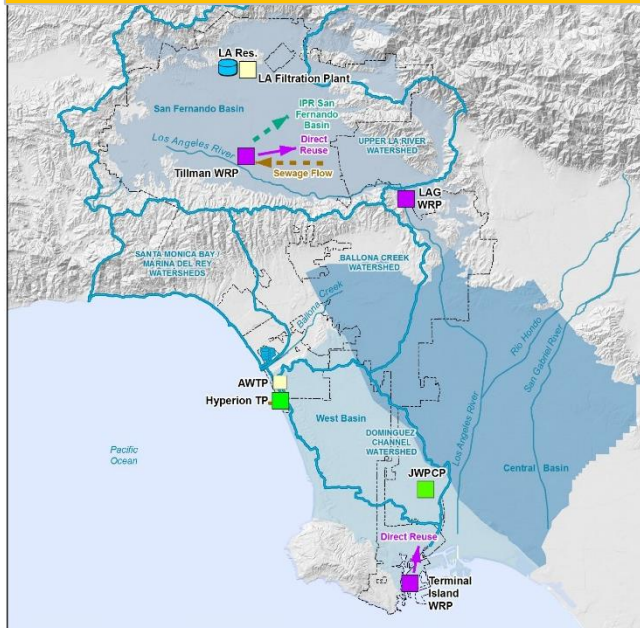
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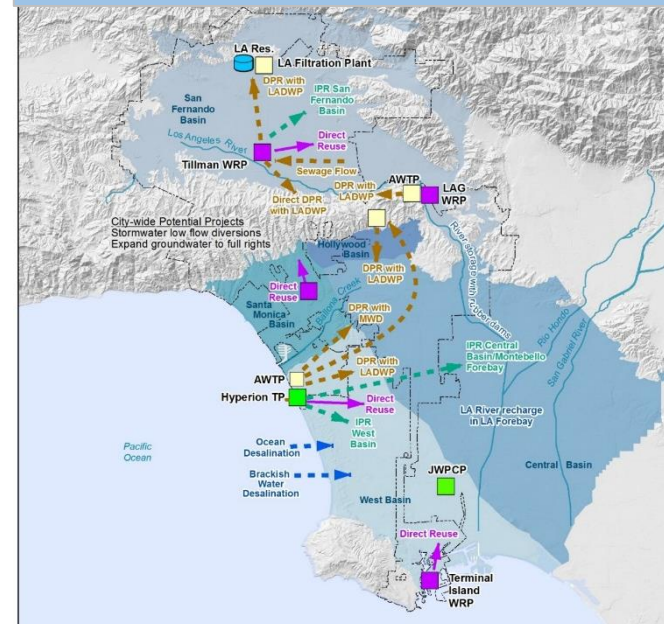


# Step 2 – Define Projects

## Foundational Projects



## Potential Projects





# Step 3 – Develop Project Descriptions

## Regional Stormwater BMPs



## Distributed Stormwater BMPs



## Groundwater Recharge (IPR)



The Hansen Spreading Grounds  
to recharge the San Fernando Groundwater

## Advanced Treatment (IPR/DPR)



## LA River Storage & Reuse



## Ocean Desalination



<b>PROJECT NAME</b>		<input type="checkbox"/> Groundwater <input type="checkbox"/> Stormwater <input type="checkbox"/> Wastewater <input type="checkbox"/> Non-potable Reuse (NPR)	
<b>SUPPLY SOURCE</b>		<input type="checkbox"/> Indirect Potable Reuse (IPR) <input type="checkbox"/> Direct Potable Reuse (DPR) <input type="checkbox"/> Ocean Water	
<b>NET YIELD (AFY)</b>		<input type="checkbox"/> Brackish Groundwater <input type="checkbox"/> Greywater	
		Total Yield - Additional Demand = Net Yield (AFY)	
<b>LEAD AGENCY</b>		Wet Year: _____ Dry Year: _____	
<b>WATERSHED</b> (per LADWP characterization)		<b>KEY PARTNERS</b>	
<b>AERIAL MAP</b> <Insert aerial map>		<b>SEWERSHED</b> (per LASAN & Mass Balance Model)	
		<b>PROCESS FLOW DIAGRAM</b> <Insert process flow diagram>	

1. PROJECT COST		EVALUATION CRITERIA	
Capital Cost (\$)			
Unit Cost (\$/AF)		O&M (\$/year)	
2. PROJECT FUNDING RISK		Energy Cost (\$/year)	
<ul style="list-style-type: none"> <li>What is the project funding mechanism?</li> <li>Eligible for outside funding?</li> </ul>			
3. RESILIENCY			
<ul style="list-style-type: none"> <li>Contribute to drought proofing?</li> <li>Level of impact by earthquakes?</li> <li>Flood protection?</li> <li>Local supply benefits?</li> </ul>			
4. IMPLEMENTATION RISK			
<ul style="list-style-type: none"> <li>Constructability?</li> <li>Institutional acceptance?</li> <li>Regulatory acceptance?</li> <li>Public acceptance?</li> </ul>			
5. QUALITY OF LIFE			
<ul style="list-style-type: none"> <li>Environmental justice?</li> </ul>			
6. ENVIRONMENTAL			
<ul style="list-style-type: none"> <li>Recreational Benefit/Green Space</li> <li>Quality of Life (# of acres created/reduced)</li> <li>Air quality improvement?</li> <li>Ecological benefit? Habitat restoration?</li> </ul>			
Power Requirement (kWh/AF)			
Energy Footprint (\$/metric ton per CO <sub>2</sub> )			





# Step 4 - Project Benefits Scoring

**PROJECT NAME**

**SUPPLY SOURCE** ☐ Groundwater ☐ Stormwater ☐ Wastewater ☐ Non-potable Reuse (NPR) ☐ Indirect Potable Reuse (IPR) ☐ Direct Potable Reuse (DPR) ☐ Ocean Water

**NET YIELD (AFY)** Normal Year:  Wet Year:  Dry Year:   
Total Yield - Additional Demand = Net Yield (AFY)

**LEAD AGENCY**

**WATERSHED** (per LADBP characterization)

**AERIAL MAP** (insert aerial map)

**KEY PARTNERS**

**SEVERSHED** (per LADBP & Mass Balance Model)

**PROCESS FLOW DIAGRAM** (insert process flow diagram)

**PROJECT PURPOSE/DRIVERS** (Big picture project purpose in context of One Water LA)

**GENERAL DESCRIPTION** (Provide a high level project description)

**FUNDING HISTORY** (Has this project been funded before?)

**POTENTIAL** (What happens?)

**DESIR**

**1. PROJECT COST**  
Capital Cost (\$):   
Unit Cost (\$/AF):

**2. PROJECT FUNDING RISK**  
• What is the project funding mechanism?  
• Eligible for outside funding?

**3. RESILIENCY**  
• Contribute to drought proofing?  
• Level of impact by earthquakes?  
• Flood protection?  
• Local supply benefits?

**4. IMPLEMENTATION RISK**  
• Construction delay?  
• Institutional acceptance?  
• Regulatory acceptance?  
• Public acceptance?

**5. QUALITY OF LIFE**  
• Environmental justice?

**6. ENVIRONMENTAL**  
• Air quality improvement?  
• Ecological benefit? Habitat restoration?

**Power Requirement (kW/AF)**

**Energy Footprint (Metric ton per CO2)**



Category	Criteria
Economic	Unit Cost
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Economic	Project Funding Mechanism
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Resiliency	Drought Resiliency
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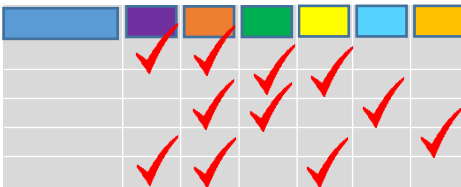
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1. Review Project Description
2. Assign Score 1-5 for each criteria
3. Calculate Total Benefit Score per Project



# Step 5 – Define Project Portfolios

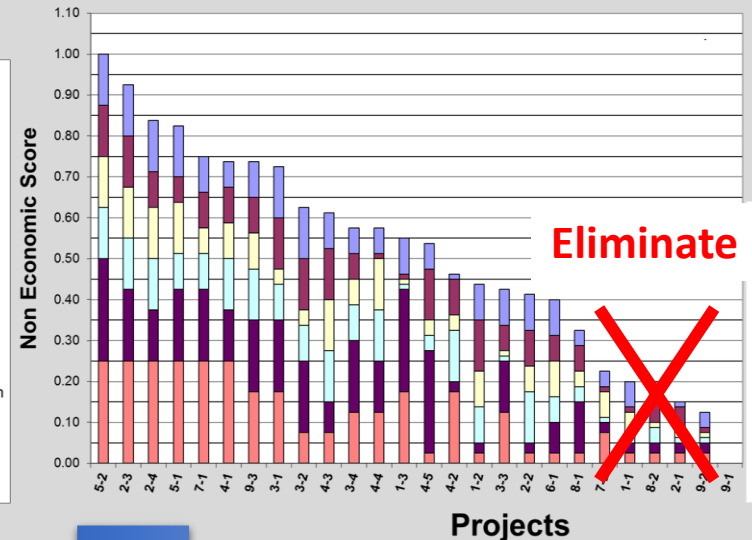
## Project Scoring



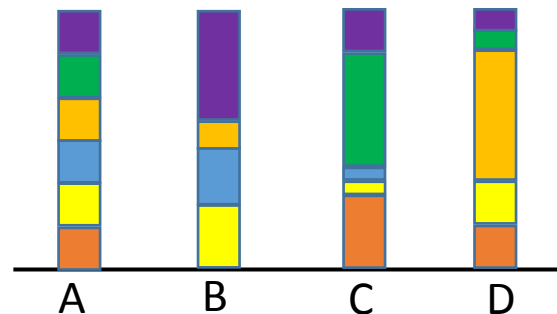
## Project Ranking

### Evaluation Criteria

- Public Acceptance
- Operational and Technology
- Ecological Footprint
- Return on R&D Investment
- Public & Environmental Health



## Themed Portfolios



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

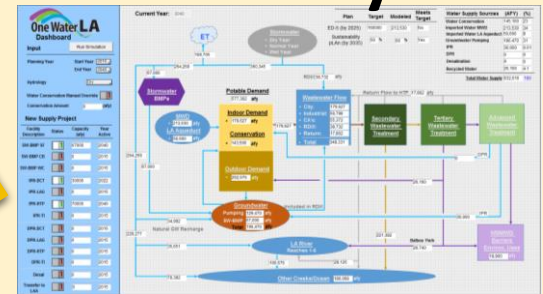


# Step 6 – Evaluate Portfolios

## Total Portfolio Benefit Scores



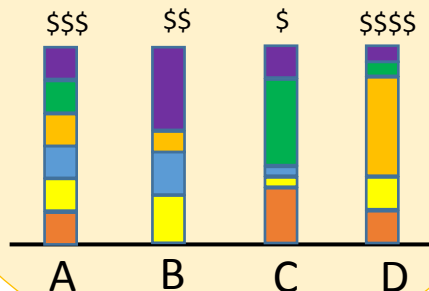
## Mass Balance Tool Analysis



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

## Define Preferred Portfolio

## Portfolio Cost

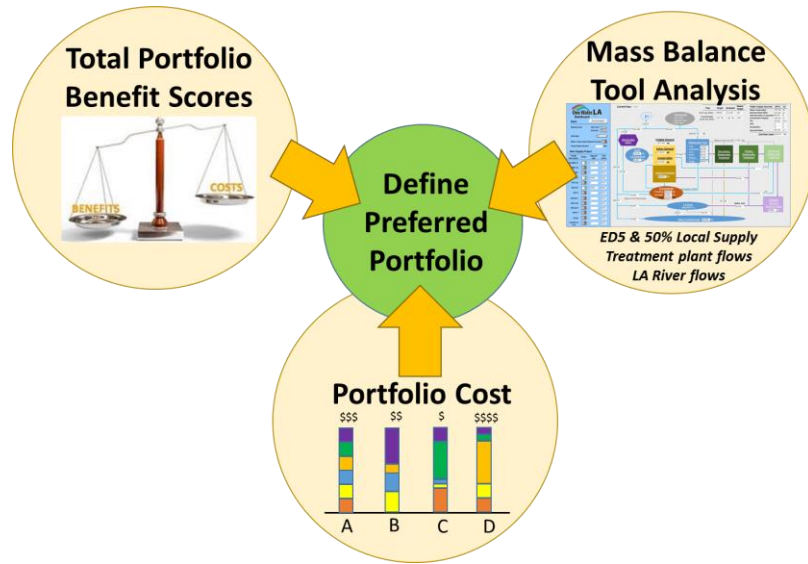




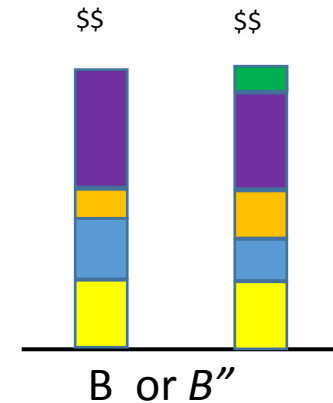


# Step 7 – Define Long-Term Strategy

## Portfolio Evaluation

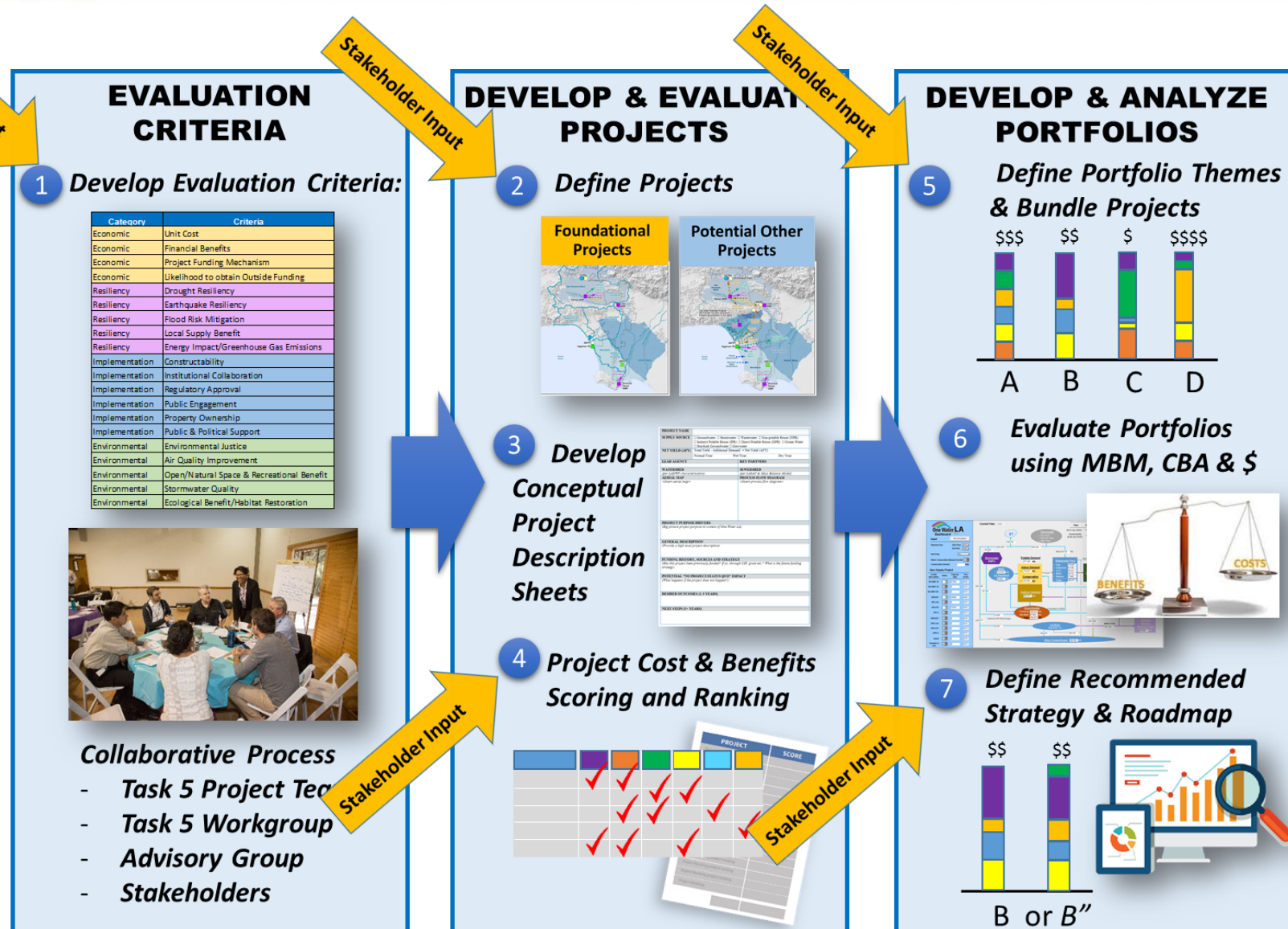


## Recommended Portfolio





# Alternatives Analysis - Stakeholder Input





# Alternatives Analysis Process – Q&A

## EVALUATION CRITERIA

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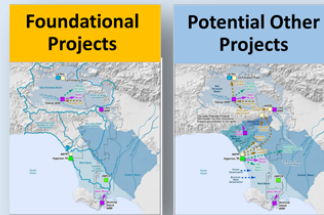


### Collaborative Process

- Task 5 Project Team
- Task 5 Workgroup
- Advisory Group
- Stakeholders

## DEVELOP & EVALUATE PROJECTS

### 2 Define Projects



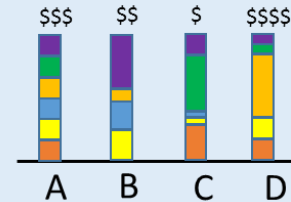
### 3 Develop Conceptual Project Description Sheets

### 4 Project Cost & Benefits Scoring and Ranking

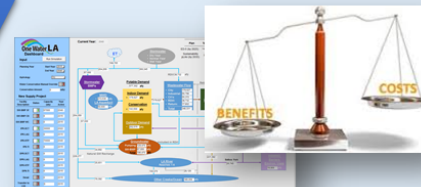


## DEVELOP & ANALYZE PORTFOLIOS

### 5 Define Portfolio Themes & Bundle Projects



### 6 Evaluate Portfolios using MBM, CBA & \$



### 7 Define Recommended Strategy & Roadmap





## 2b. Projects Review







# 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

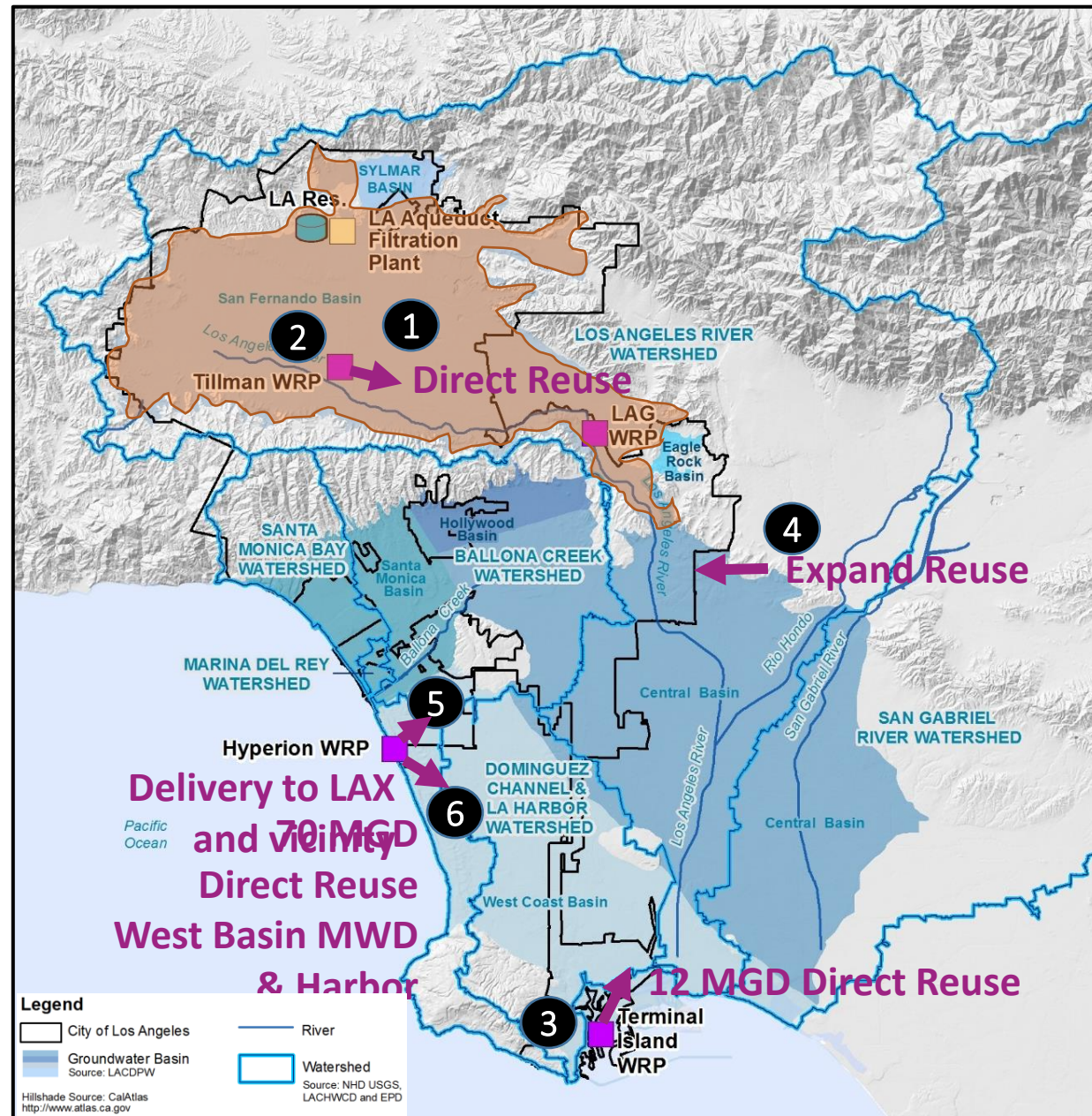
2. Groundwater Replenishment Project with AWP at Tillman WRP (up to 30,000 afy in San Fernando Basin)

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

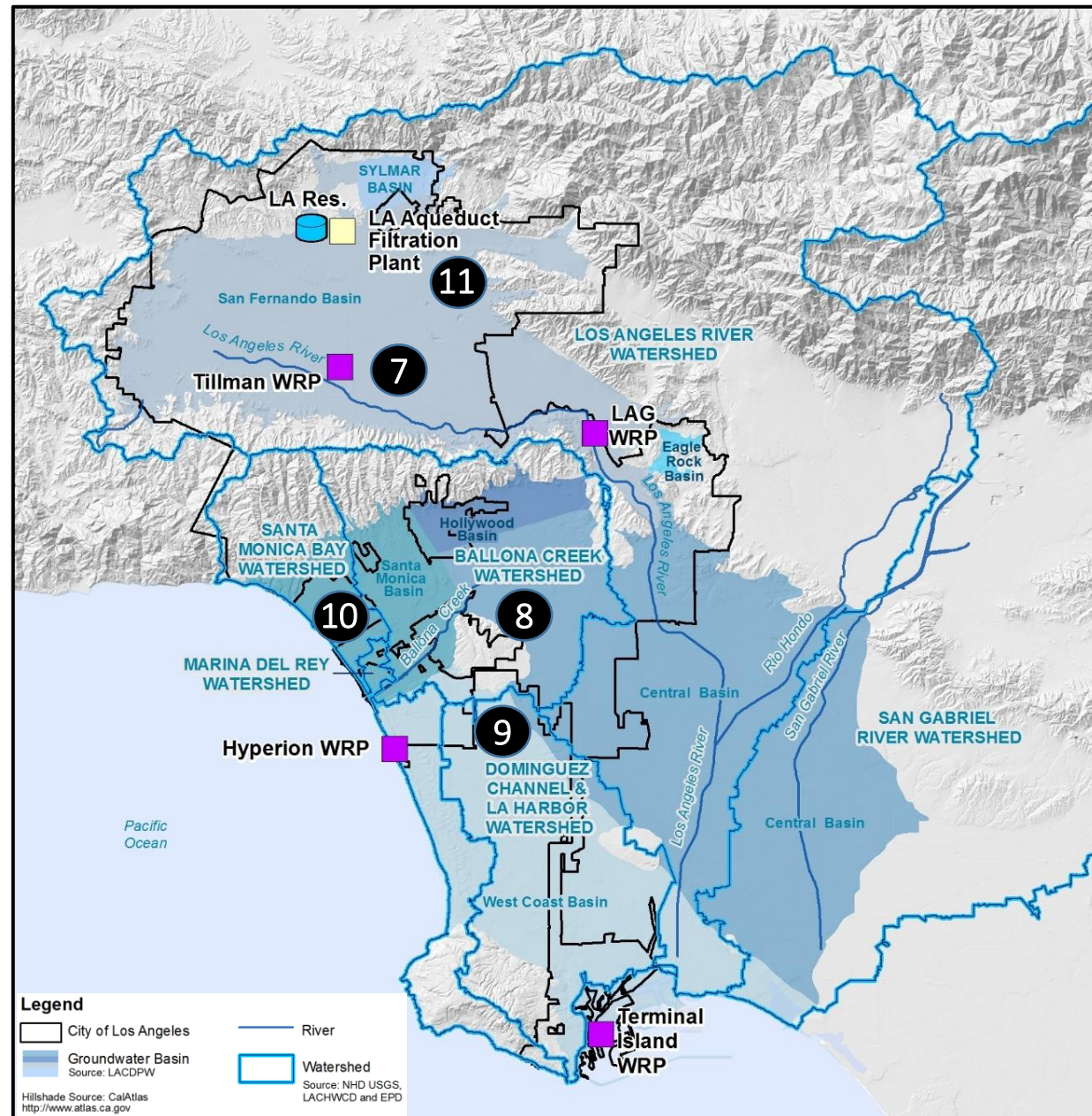
6. Recycled Water - Hyperion WRP Delivery expansion to 70 mgd for West Basin MWD and Harbor







# Foundational Project Locations



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)



# 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
4. Recycled Water – Expansion of NPR per 2015 Urban Water Management Plan
5. Recycled Water - Hyperion WRP Demonstration Plant & delivery to LAX and vicinity
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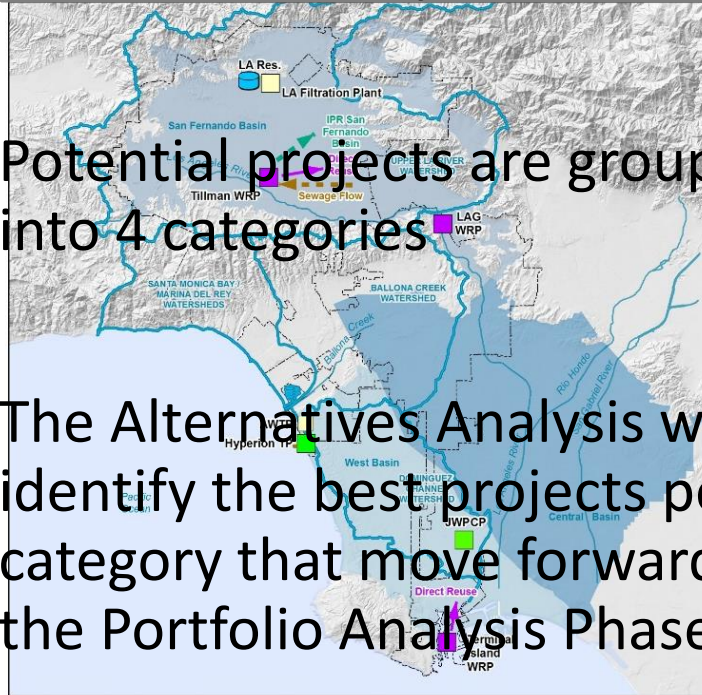
# Draft Potential Projects

## Foundational Projects

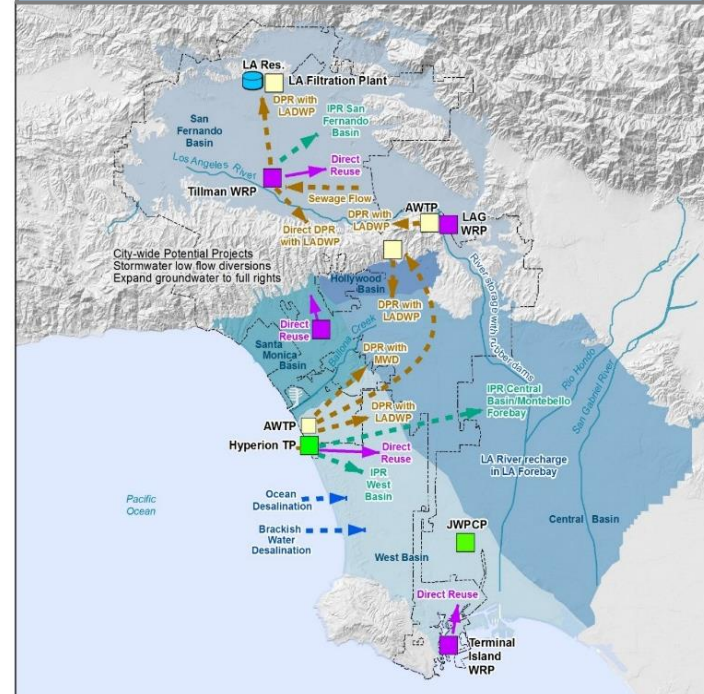
- Not all potential projects can be implemented together due to water availability constraints

- 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



## Potential Projects







# 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**

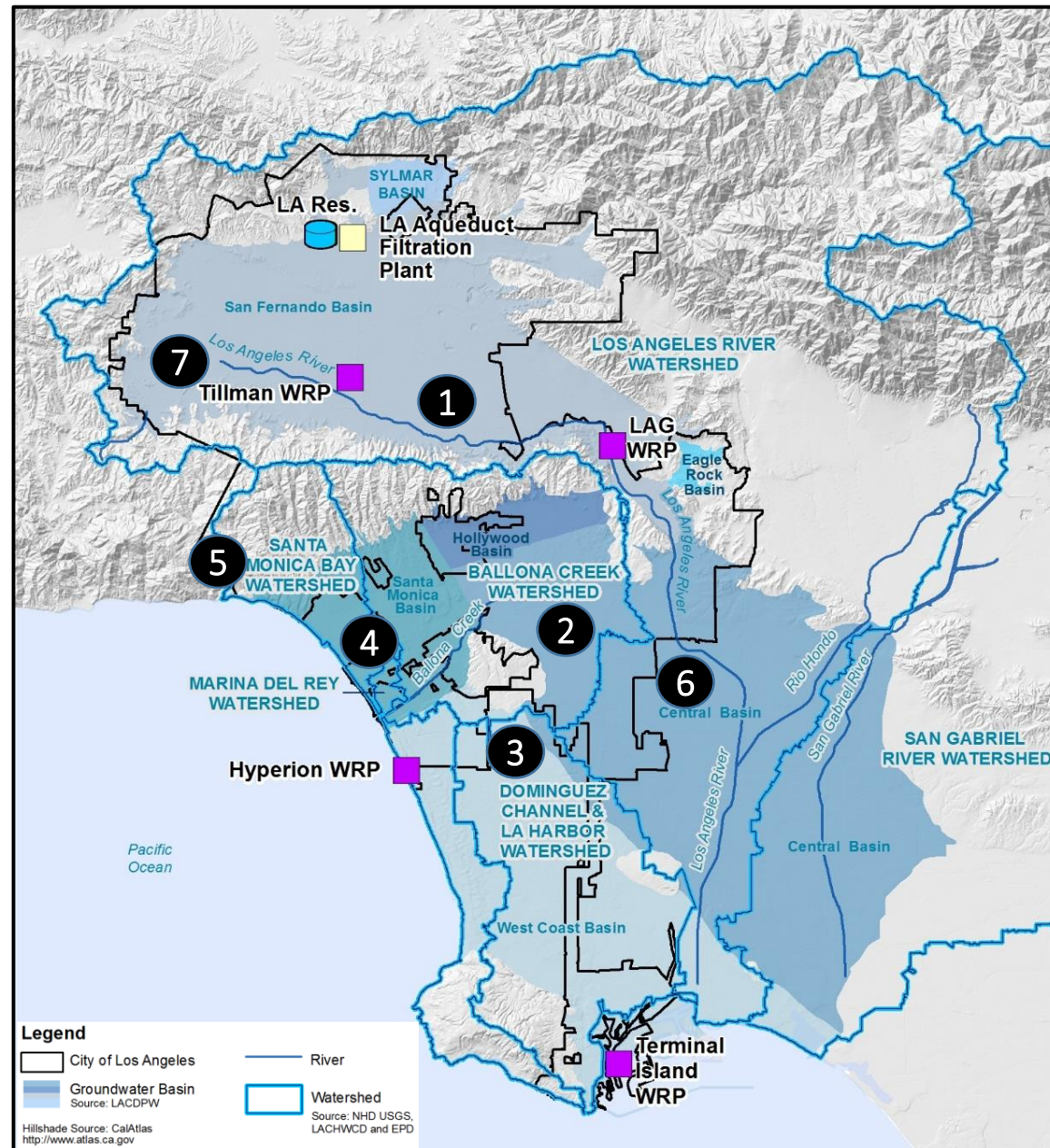
19. Groundwater expansion to full water rights outside the San Fernando Basin
20. East-West Valley Interceptor Sewer
21. Increase Recycled Water demand beyond 2015 UWMP
22. Rancho Park Recycled Water Satellite Plant
23. Ocean desalination
24. Brackish groundwater desalination

## **Other Projects**



# Potential Projects - Stormwater

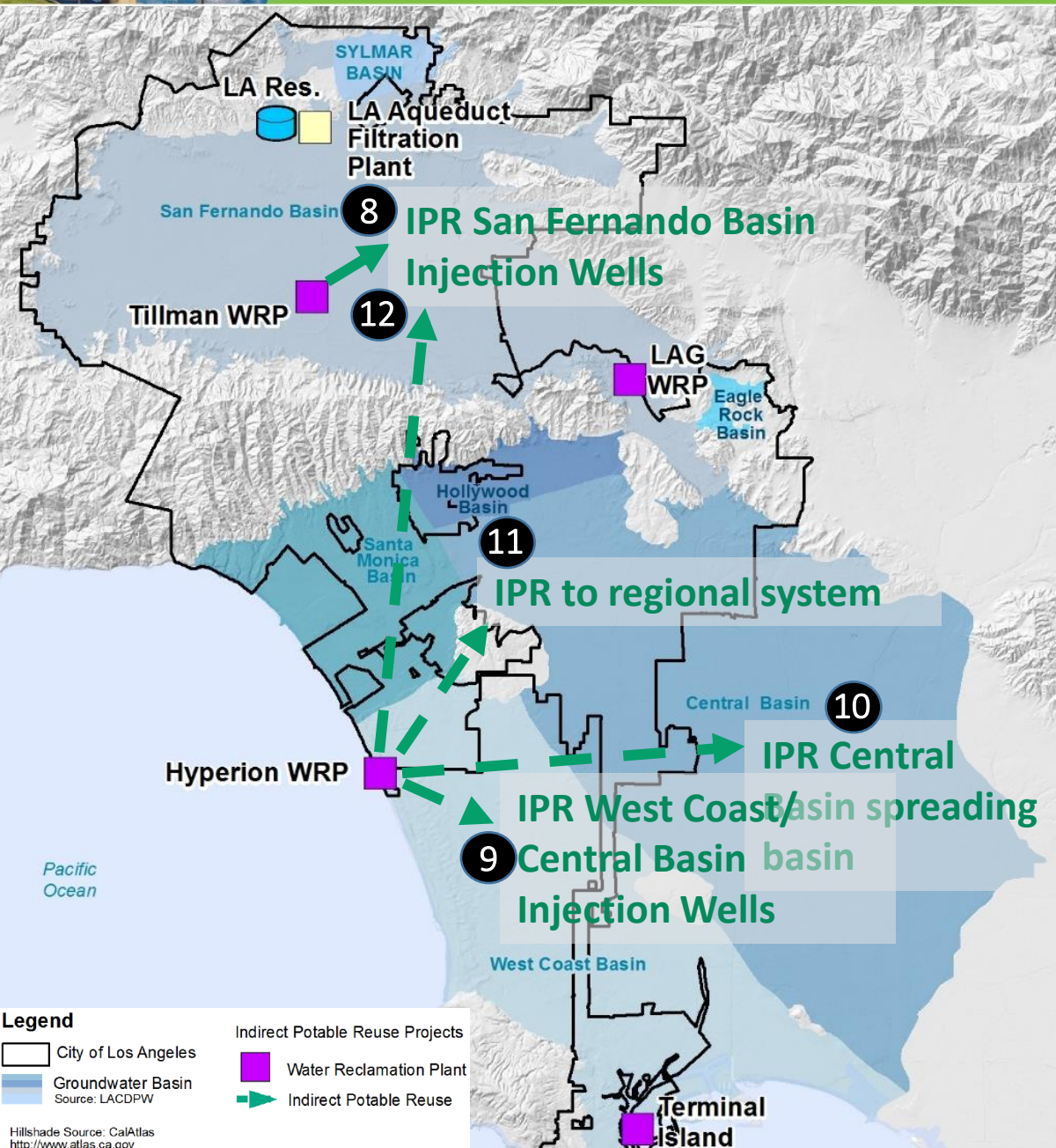
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5. Distributed Stormwater – Low Flow Diversions
6. LA River storage with recharge in LA Forebay
7. LA River storage with rubber dams







# Potential Projects - IPR



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

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

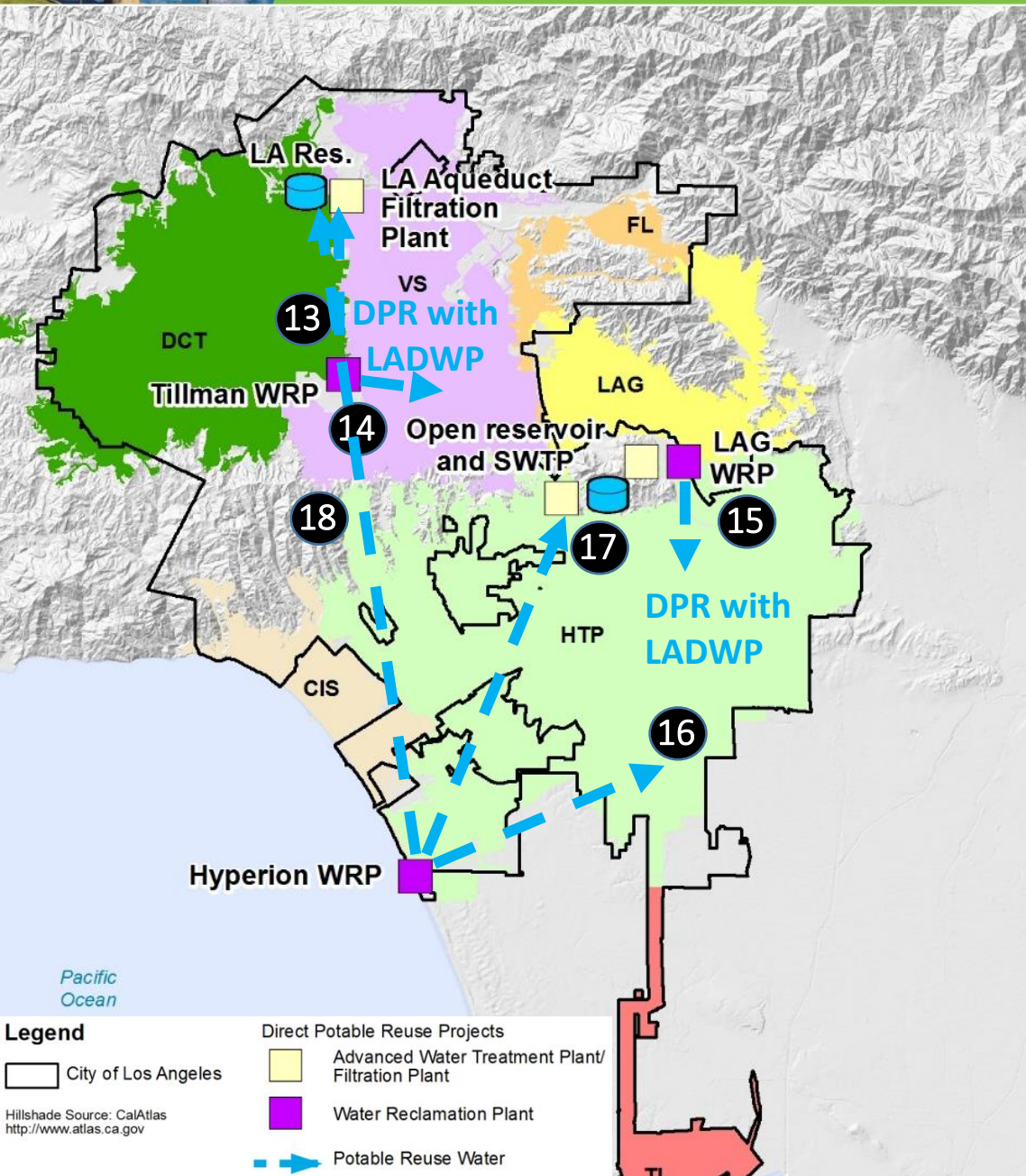
10. Hyperion WRP to Central Basin/Spreading Basins

11. Hyperion WRP to other regional system

12. Hyperion WRP to San Fernando Basin



# Potential Projects - 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

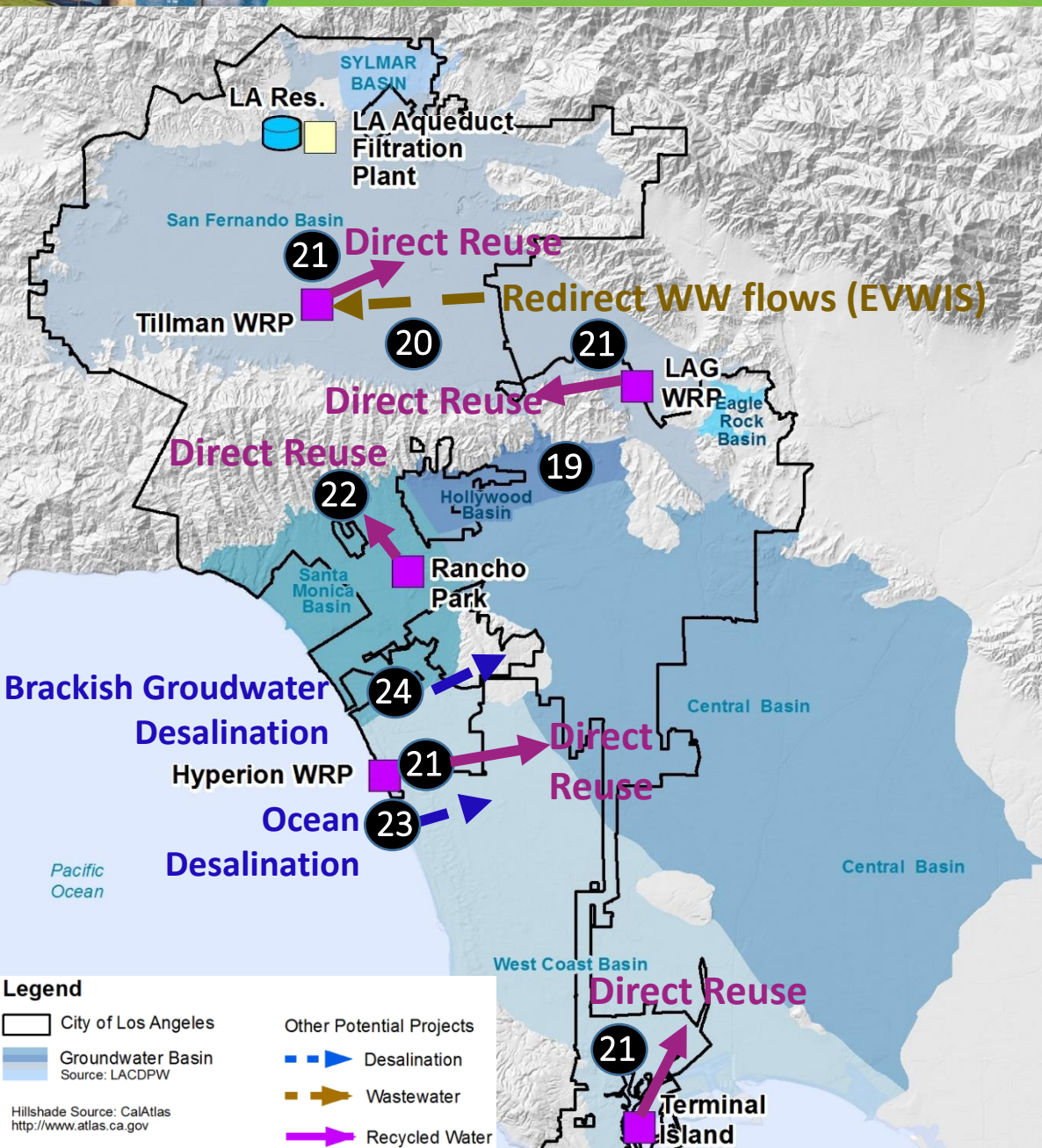
17. Hyperion WRP to an open reservoir + SWTP

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

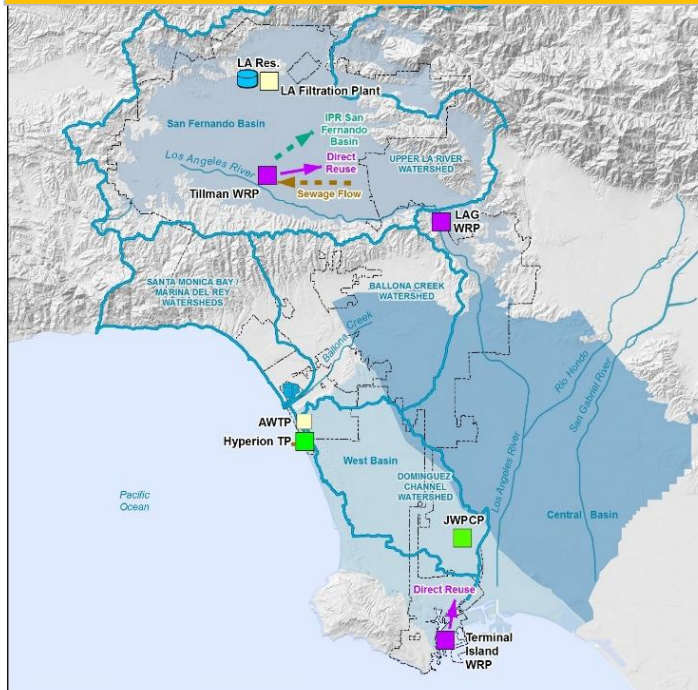
23. Ocean desalination

24. Brackish groundwater desalination

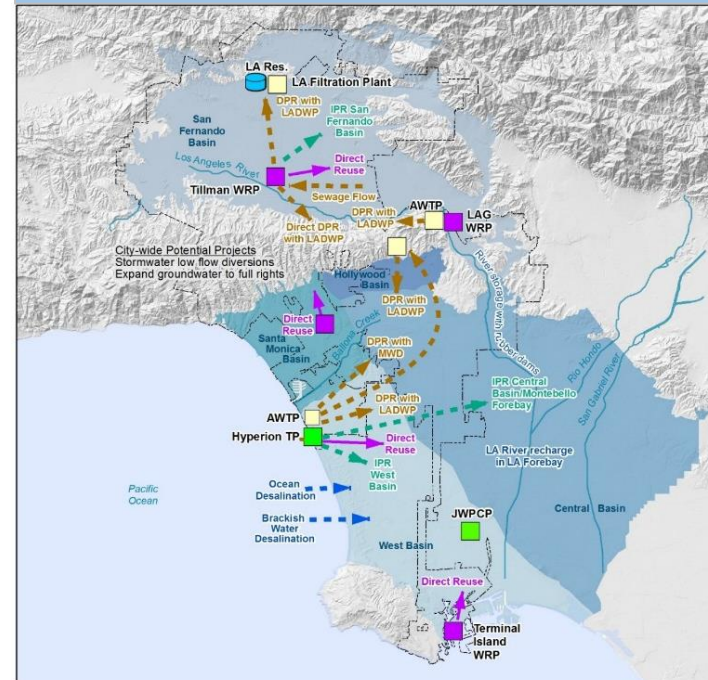


# Q&A: Project List

## Foundational Projects



## Potential Projects







### 3. Evaluation Criteria





# 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

Criteria Category: ECONOMIC

Criteria	Definition
Unit Cost	Evaluate the unit cost of water supply for the project. It is calculated as: $\text{Unit Cost} = \frac{\text{Annual Capital Cost} + \text{Annual O\&M Cost}}{\text{Annual Net Yield}}$ where: $\text{Annual Net Yield} = \text{Total Annual Yield} - \text{Annual Demand Created}$ The calculation assumes inflation rates, interest rates, and life expectancies as listed in Table G.21 of TMS 1. 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 fines, avoidance of major repairs/damage. Evaluate the opportunity for inter-departmental cost-sharing based on benefits that can be realized with departmental missions and the ability for the Project to be funded through mechanisms or structures, the ease of creating the new funding mechanisms and the ability to gain sufficient revenue from those mechanisms. New funding mechanisms would include items such as a stormwater fee, where this is not one of the existing rates or fees. Evaluate outside project funding and the portion of funding is defined as funds from programs.

Criteria Category: RESILIENCY

Criteria	Definition
Drought Resiliency	Evaluate the ability for a project to provide water during a drought. It is calculated by a ratio between normal and dry year supplies as follows: $\text{Drought resiliency ratio} = \frac{\text{Volume of water available during drought}}{\text{Volume of water available during normal year}}$
Earthquake Resiliency	Evaluate the ability for the project to deliver water after a major earthquake would still operate after a major earthquake.
Flood Risk Mitigation	Evaluate the ability for the project to withstand and gain from existing flood risk.
Local Supply Benefit	Evaluate the ability for the project to provide water during a drought.
Energy Impact/Greenhouse Gas Emissions	Evaluate the ability for the project to provide water during a drought.

Criteria Category: IMPLEMENTATION

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. 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. Opportunity for inter-departmental collaboration on the Project based on benefits that can be realized with departmental missions and the ability for the Project to be funded through mechanisms or structures, the ease of creating the new funding mechanisms and the ability to gain sufficient revenue from those mechanisms. New funding mechanisms would include items such as a stormwater fee, where this is not one of the existing rates or fees. Evaluate outside project funding and the portion of funding is defined as funds from programs.

Criteria Category: ENVIRONMENTAL

Criteria	Definition
Environmental Justice	Evaluate 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. However, 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.





# Project Evaluation Criteria

## ECONOMIC CATEGORY

Criteria	Definition
<b>Unit cost</b>	Evaluate the unit cost of water supply for the project. It is calculated as: $\text{Unit Cost} = \frac{\text{Annualized Capital Cost} + \text{Annual O\&M Cost}}{\text{Annual Net Yield}}$ , where $\text{Annual Net Yield} = \text{Total Annual Yield} - \text{Annual Demand Created}.$ The calculation assumes inflation rates, interest rates, and life expectancies.
<b>Financial Benefits</b>	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 fines, avoidance of major repairs/damage.
<b>Project Funding Mechanism</b>	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.
<b>Likelihood to obtain Outside Funding</b>	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

## RESILIENCY CATEGORY

Criteria	Definition
<b>Drought Resiliency</b>	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: $\text{Drought resiliency ratio} = \frac{\text{Volume of water available in a dry year}}{\text{Volume of water available in a normal year}}$
<b>Earthquake Resiliency</b>	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.
<b>Flood Risk Mitigation</b>	Evaluate the ability for the project to bring flood protection benefits and/or reduce existing flood risk.
<b>Local supply benefit</b>	Evaluate the ability for the project to deliver local supplies to the City.
<b>Energy Impact/Greenhouse Gas Emissions</b>	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

## IMPLEMENTATION CATEGORY

Criteria	Definition
<b>Constructability</b>	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).
<b>Institutional Collaboration</b>	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).
<b>Regulatory Approval</b>	Evaluate the ease of obtaining regulatory approval for the project. Considers whether existing regulatory framework exists for approving the project.
<b>Public Engagement</b>	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.
<b>Property Ownership</b>	Evaluate the ease to acquire necessary parcels/easements, focusing on large project components that do not include assets in public right-of-way.
<b>Public &amp; Political Support</b>	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

## ENVIRONMENTAL CATEGORY

Criteria	Definition
<b>Environmental Justice</b>	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.
<b>Air Quality Improvement</b>	Degree of potential benefit or damage to air quality.
<b>Open/Natural Space and Recreational Benefit</b>	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.
<b>Stormwater Quality</b>	The goal is assessing the quality of stormwater reaching rivers and oceans. This will be calculated by stormwater volume reduction.
<b>Ecological Benefit/Habitat Restoration</b>	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 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:

$$\text{Unit Cost} = \frac{\text{Annualized Capital Cost} + \text{Annual O\&M Cost}}{\text{Annual Net Yield}}, \text{ where}$$

$$\text{Annual Net Yield} = \text{Total Annual Yield} - \text{Annual Demand Created}.$$

The calculation assumes inflation rates, interest rates, and life expectancies as listed in Table G.21 of TM5.1.

## What You'll Need:

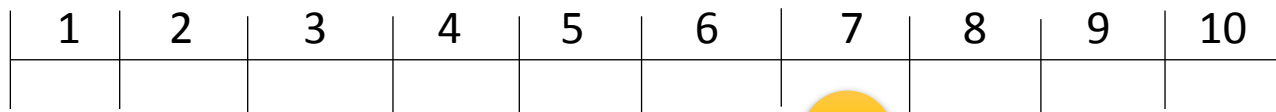
- Stickers
- Handout of Criteria Definitions

*...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)?

Least important

Most important



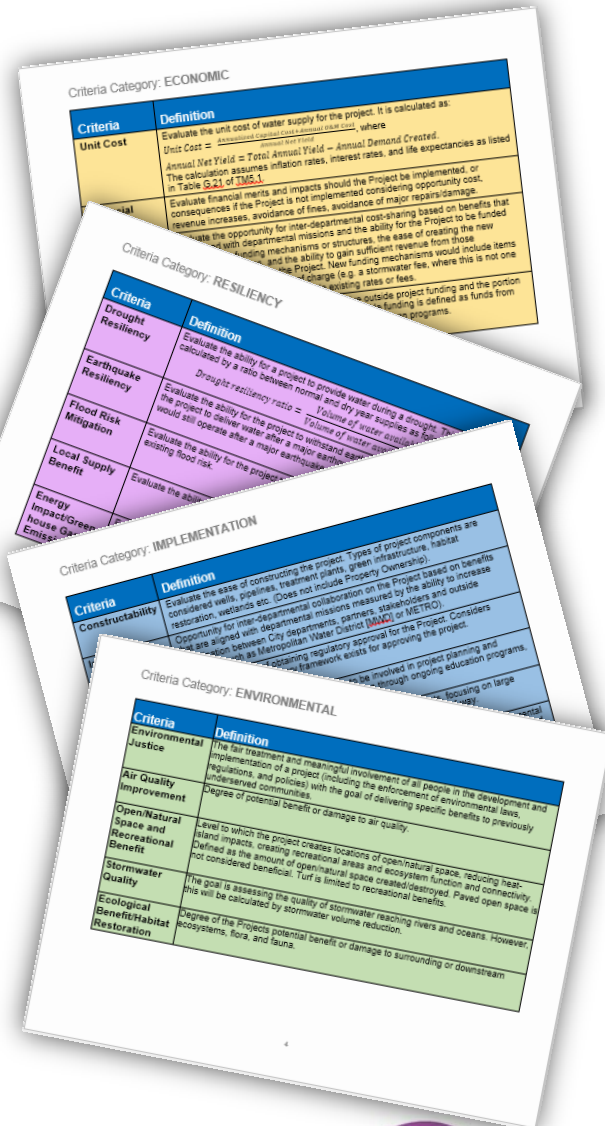
**Score of 7**

*Score with your dot*



# 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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Environmental	Ecological Benefit/Habitat Restoration







## 4. Project Portfolio Themes





# 4a. Portfolio Goals & Objectives

## Goals

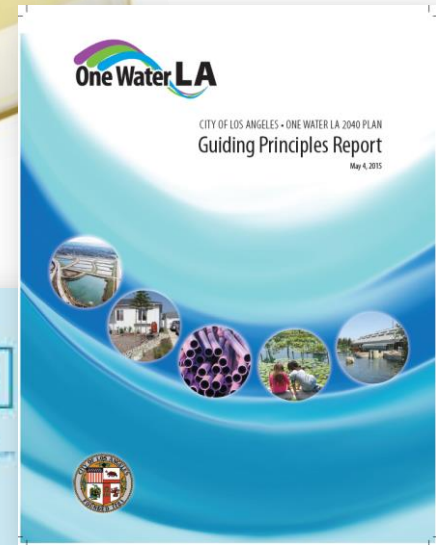
Identify the preferred portfolio/implementation strategy to achieve the One Water LA Objectives coupled with the Sustainability Plan targets

## Objective

Define portfolio themes to test the sensitivity of projects and programs

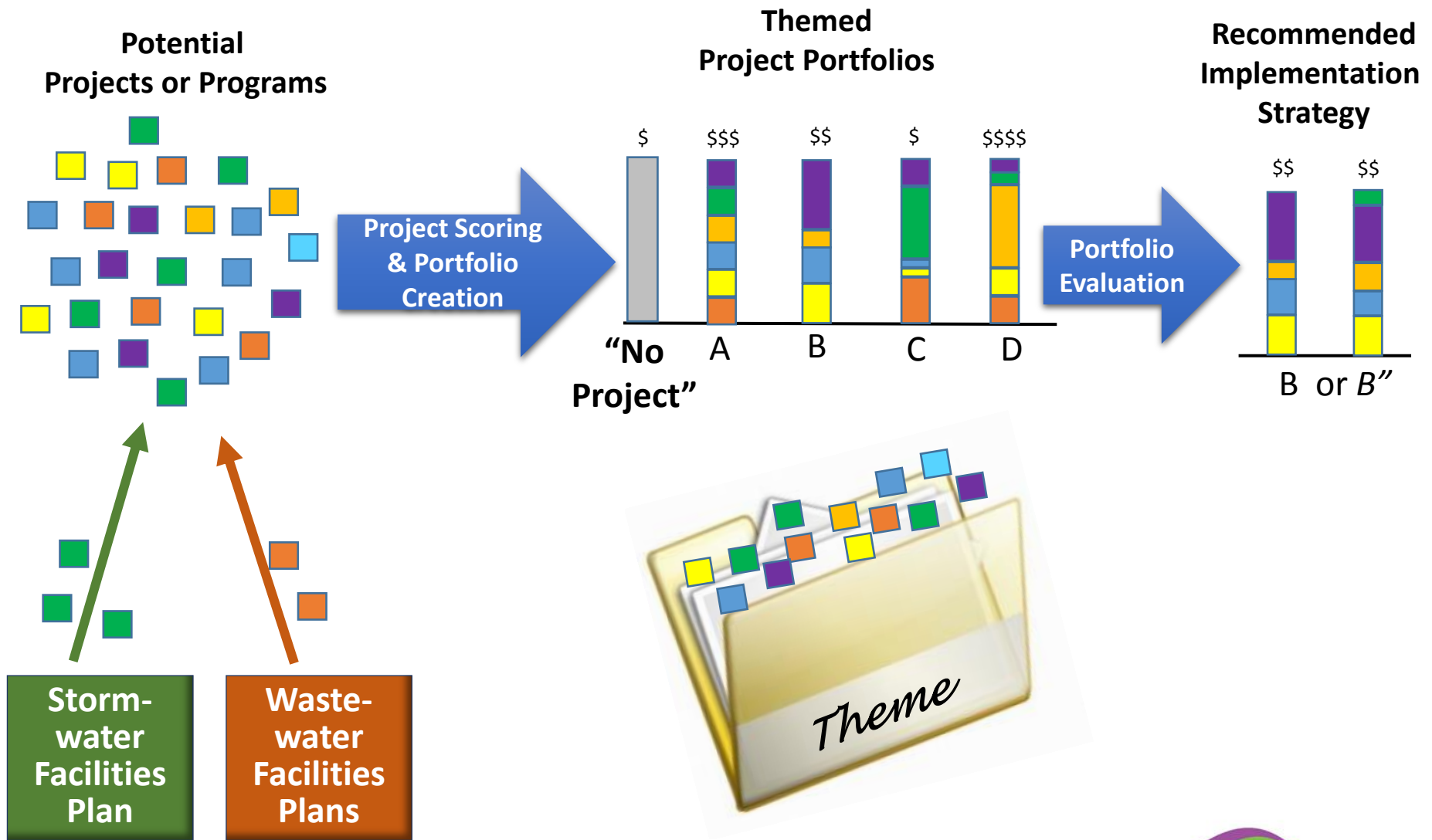
## Desired Outcome

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





# Portfolio Development & Evaluation







# Portfolio Theme Brainstorm

Maximize  
Distributed  
Projects  
(SW & RW)

Maximize  
Stormwater  
Capture & Use

Maximize  
Recycled  
Water  
(NPR/  
IPR/DPR)

Maximize  
Resiliency  
Benefits

**What Portfolio Theme  
Ideas do you have?**

Maximize  
Environmental  
Benefits

Minimize  
Imported Water  
(= Max. Local  
Supplies)

Minimize  
Unit Cost

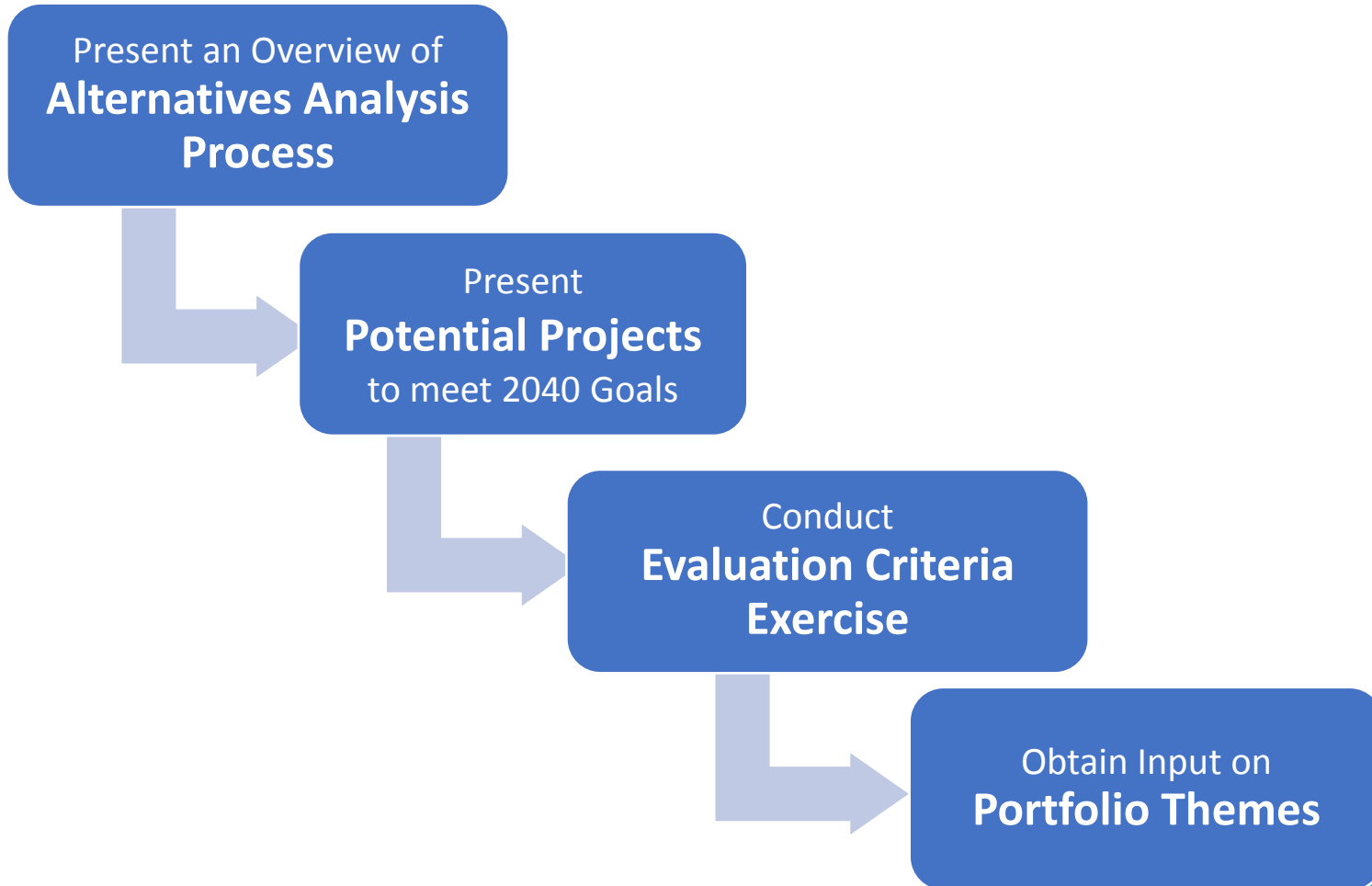


## 5. Closing





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







# 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



# 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



# Decision Time Part 2 - Policy Brainstorm

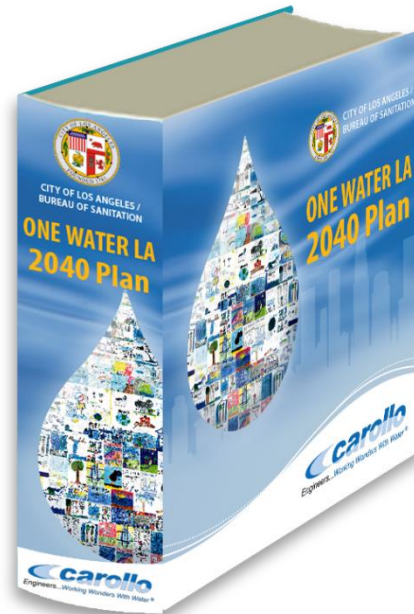
**Foundational  
Projects**

**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



# Dec 1<sup>st</sup> 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**





Meeting Close

