# OVERVIEW OF STORMWATER CAPTURE AND USE FEASIBILITY STUDY

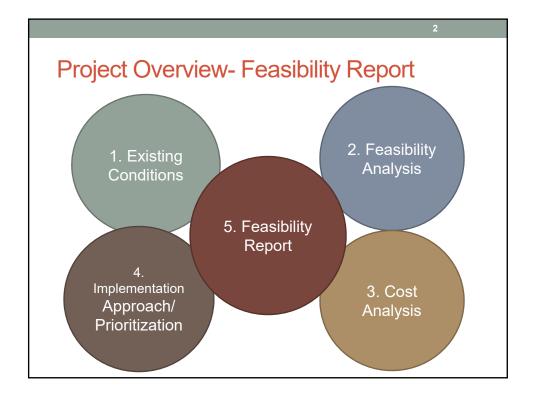
**TAC MEETING #1, JULY 18, 2017** 

# PRESENTED TO SAN DIEGO IRWM RAC AUGUST 2, 2017





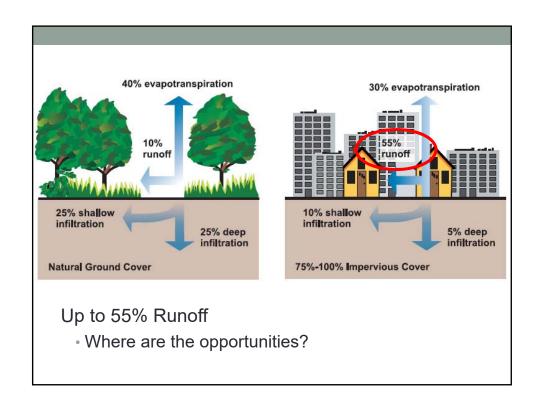


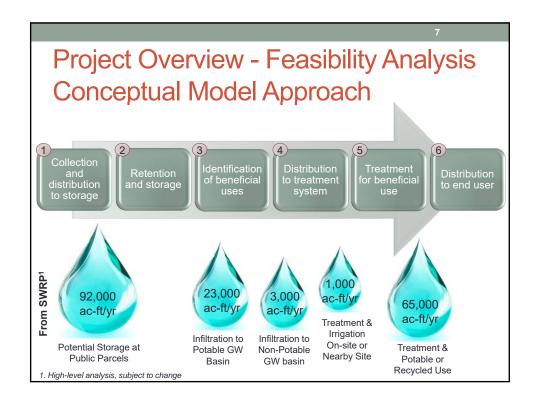


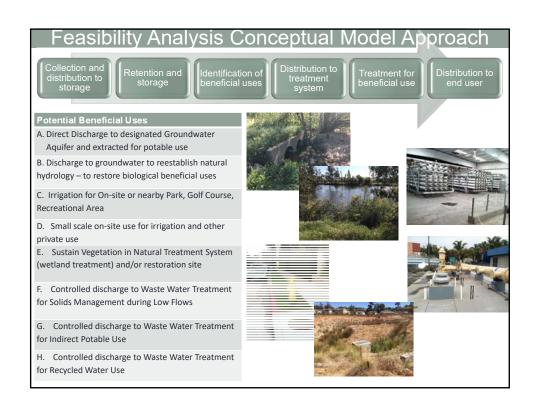
			3
TAC Meeting Summary			
TAC Representation Invited to Participate			
Academia	BIA*	Tribal*	Copermittees*
Department of Navy	Water Agencies*	NGO's*	Construction
Legal Counsel	Hydrologists	IRWM*	Regional Board
Taxpayer's Association	Public Utilities* (POTWs)	Floodplain Management*	Resource Agencies*
Farm Bureau*	NRCS	Caltrans	School Districts
ASLA	UCSD*	IEA	CWEA
Wastewater JPA			
* Indicates representation on the RAC			

# Project Overview - Data Collection & Existing Conditions Analysis Existing watershed conditions Inventory of stormwater capture facilities Current plans & studies Regulatory framework Streams, Rivers and Creeks Groundwater Basins Suitable for Domestic Use Groundwater Basins Not Suitable for Domestic Use San Diego Bay WMA

# Project Overview - Feasibility Analysis Technical Feasibility Analysis Stormwater Capture & Use Memo Description & rationale for modeling approach Model results & analyses Conclusions on opportunities & constraints Collection and distribution to storage Retention of beneficial uses Distribution to treatment for beneficial uses Distribution to treatment system Distribution to treatment system







9

# Project Overview - Cost Analysis

- Cost of Concept / Actual Projects
  - · Capital, O&M, rehabilitation & replacement costs
- Use select concepts as basis for compiling cost for similar projects & sites
- Develop unit costs \$/volume
- · Identify potential funding



10

# Project Overview - Implementation Approach - Prioritization

Implementation Approach for Capture & Use

- Description of implementation approach & classification scheme
- Implementation analysis of specific projects, areas or alternatives for increasing stormwater capture & use
- A summary table of ranking or priority for each area, project or alternative

11

# Project Overview - Implementation Approach - Prioritization

### Develop Criteria

- Volume of local water supply augmented
- Multi-Benefits (Stormwater Resource Plan Scoring)
- Feasibility
  - · Sources vs. Needs
  - · Constructability Level of new infrastructure needed
  - Cost Funding
  - Short & Long-Term Implementation Time Line
- Prioritize projects
- Identify short-, mid- & long-term projects

Short Term Mid-Term Long-Term

1

## **TAC Meeting Summary**

### Considerations recommended by TAC:

- Maximum storage times for Vector Control (72 hrs.)
- Projects on private property no regional quantification
- Variability of the runoff capture volumes to understand range
- Base line flow needs for ecological benefits
- Capturing dry weather flows for diversion to the sanitary sewer
- Account for increased population/wastewater generation rates
- Incorporating current studies to look at stormwater diversion to wastewater plants
- Real-time monitoring & controls for conveyance of stormwater to treatment

13

# **TAC Meeting Summary**

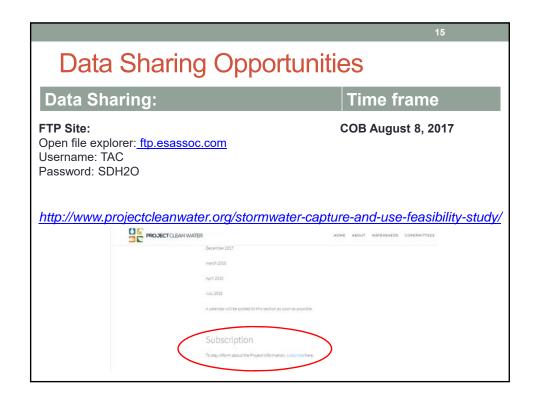
Considerations recommended by TAC, continued:

- Flood mapping & effects on flood areas
- Cost analysis use a triple bottom line approach
- Depth to groundwater needed to assess recharge capacity & treatment of stormwater infiltration
- Present study as a living document that can be used by others for future planning
- Investigate including federal lands
- Include studies by Caltrans looking at storage projects in right of ways

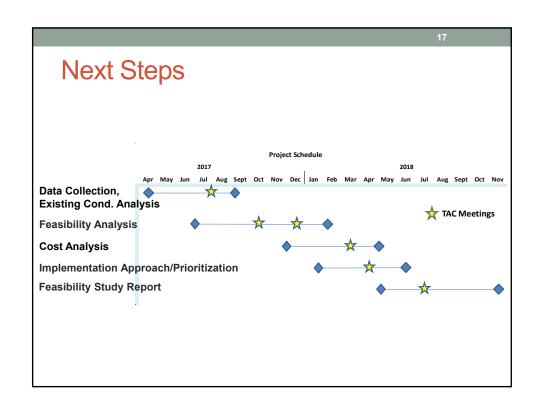
14

## How the Basin Plan may inform the SWCFS

- Improve the efficiency & effective use of existing structural systems, including reservoirs, & conveyance, treatment & reclamation facilities.
- Increase water supply reliability & resilience.
- Increase accessibility of locally developed, advanced treated purified water.
- Take advantage of potential energy management opportunities.
- Address anticipated climate change impacts.
- Determine how climate change will impact the current & future water supply portfolio of the San Diego region.



# Next Steps Milestone Time frame Task 1: Data Collection & Existing Conditions Technical Memo Task 2: Technical Feasibility Analysis, Model Approach – Draft Memo TAC Meeting #2: Model Approach Webinar Late October







Stephanie Gaines

Watershed Protection Program

stephanie.gaines@sdcounty.ca.gov

858-694-3493



David Pohl
<a href="mailto:DPohl@esassoc.com">DPohl@esassoc.com</a>
760-497-3318