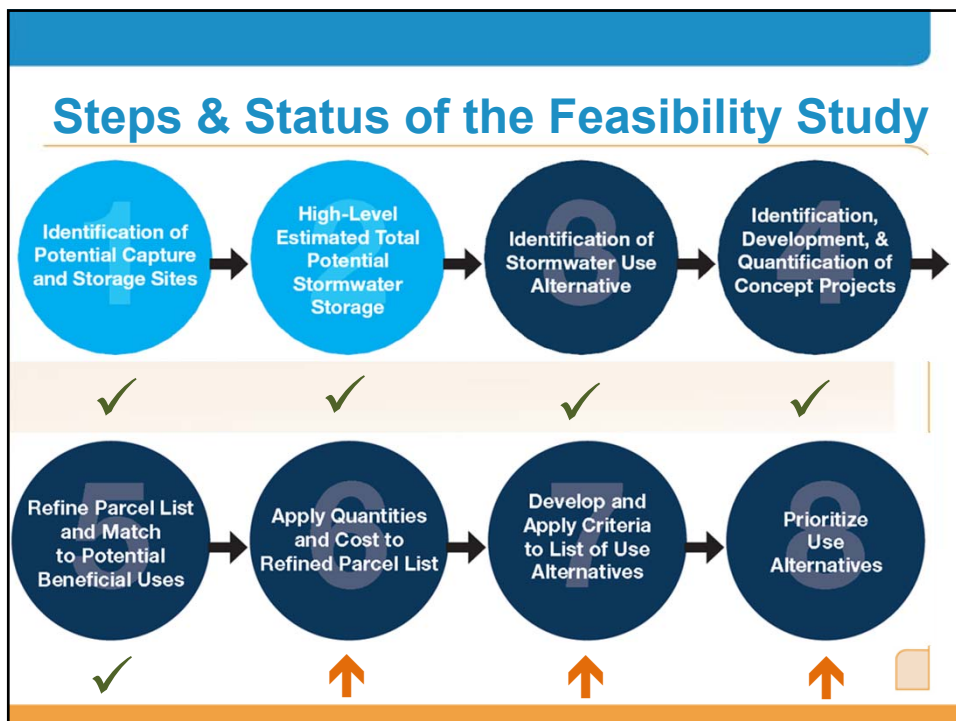


San Diego Region Stormwater Capture & Use Feasibility Study (SWCFS)

IRWM RAC Update
TAC Meeting #4: Cost and Implementation (Prioritization) Approach
June 6, 2018

Presented by Stephanie Gaines, County of San Diego



Cost Analysis Results









- Assumptions & concept costs presented in Tech Memo
- Conceptual costs developed for “modeled” parcels for Use Alternatives
- Costs per volume basis - wide range
 - Dry weather flows increase total annual volume
 - More effective drainage area vs. capture design
 - Matching demand/discharge restrictions with storage
 - Pre-treatment requirements

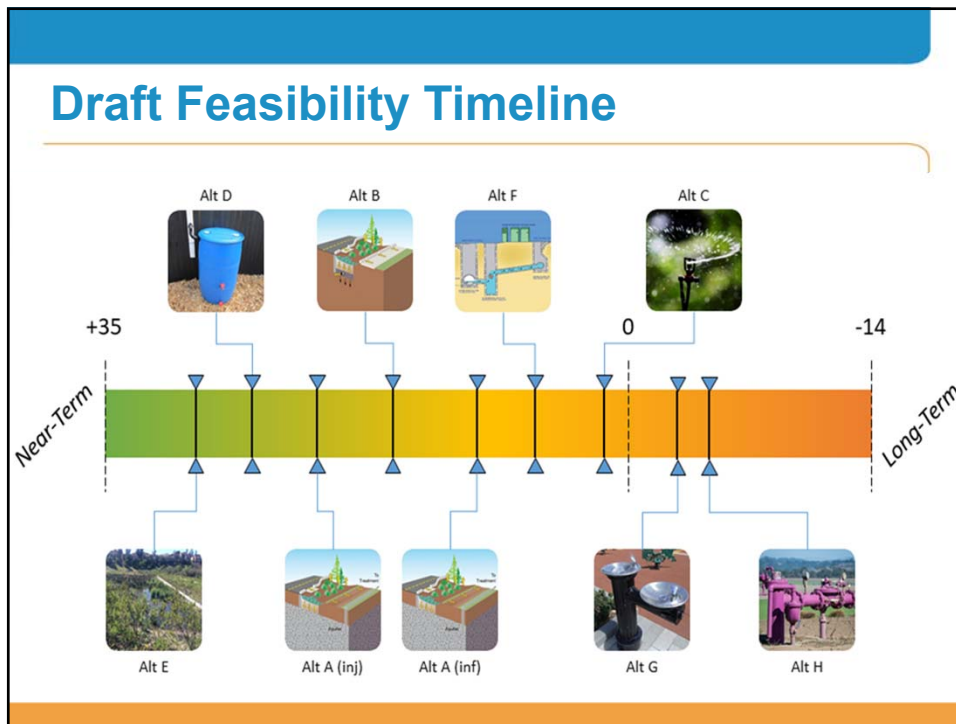
Unit Cost Analysis Results

Alternative	Project Type	Cost per Volume (Average of low & high cost range \$ / ac-ft)
Alternative A	Infiltration	\$20,000- \$33,000
	Injection	\$3,600 - \$9,800
Alternative B	Infiltration	\$17,000 - \$20,300
	Bio-Infiltration	\$29,300 - \$37,000
Alternative C	Irrigation	\$118,700 - \$186,100
Alternative D	Rain Barrels	\$2,500
Alternative E	Restoration and Treatment Wetlands	\$740 - \$990
Alternative F	Dry-Weather Diversion	\$9,600 - \$21,400
Alternative G	Treatment for Recycled Water	\$99,300 – \$173,000
Alternative H	Treatment for Potable Water	\$101,244 – \$172,500
	Desalination	\$2,131 - \$2,397

Alternative Prioritization

1. Potential Volume: acre-feet/year
2. Unit Cost: \$/acre-foot (annual volume)
3. Additional Benefits (number of benefits)
4. Constraints and Opportunities
(qualitative assessment of constraints and opportunities developed by TAC)

Eight Stormwater Use Alternatives	
	Direct discharge to groundwater aquifers for potable use
	Discharge to groundwater to reestablish natural hydrology, to restore biological uses
	Irrigation to be used on-site on public parcels
	Small scale, private on-site use for irrigation and other private use
	Natural treatment system (wetland treatment) and/or restoration sites
	Next 3 - Controlled discharge to waste water treatment plants: Solids management during low flows
	Indirect potable use
	Recycled water use



Next Steps

- Draft Feasibility Study: **End-August 2018**
- Final TAC Meeting #5: **Mid-September 2018**
- Presentation of Final Study: **Late-October 2018**

The diagram illustrates the water cycle and treatment process. It shows 'MOUNTAIN RUNOFF' and 'RAIN' entering a 'SPREADING GROUNDS' area. 'URBAN RUNOFF' also enters the spreading grounds. The water then flows into a 'GROUNDWATER BASIN'. A 'GROUNDWATER WELL' is shown extracting water from the basin, which is then sent 'TO TREATMENT & DISTRIBUTION'.

Thank you!



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<http://www.projectcleanwater.org/stormwater-capture-and-use-feasibility-study/>