



# **COST OF VARIOUS WATER SUPPLY ALTERNATIVES**

**November, 16, 2009**

**Item 6.A**

**Addendum to General Manager's Report  
District Engineer's Report**

# OUTLINE

- Life-cycle economics summary
- Summary of past master plan supply alternatives
- Life-cycle/present worth comparison
- Questions



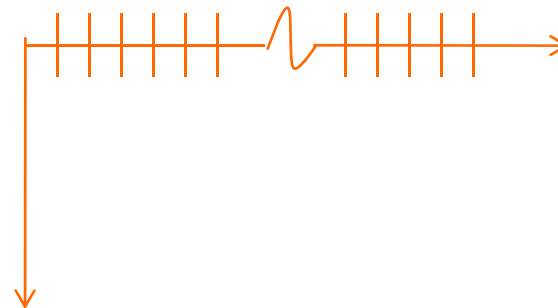
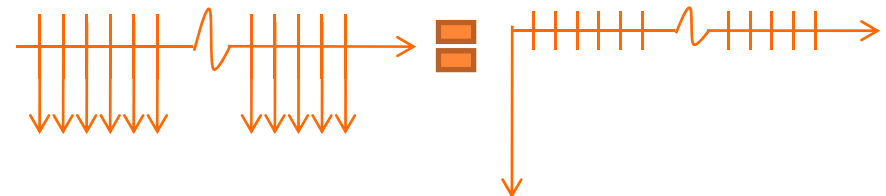
# PROJECT PRESENT WORTH COSTS

- Project costs are reviewed over an extended time period and compared on the same basis, typically on a present worth (value) based on today's dollars.
- Types of costs:
  - Initial project costs (typically construction)
  - Annual costs (typically operation and maintenance costs)



# TYPICAL PRESENT WORTH (VALUE) ANALYSIS

- Costs analyzed over the life of the project, typically 20 to 30 years is the time horizon used.
- Initial project costs are typically for construction, design engineering, etc.
- Annual operation and maintenance costs occur over the life of the project. These are typically converted to an initial cost, similar to how loans are computed.
- Costs are then added to compute the total costs in current dollars.



# SCREENED WATER MASTER PLAN ALTERNATIVES

- Independent Nacimiento Pipeline Water
- Whale Rock Reservoir Water Exchanged for Nacimiento Water
- Seawater Desalination
- Recycled Water
- San Simeon Creek Dam & Reservoir
- Jack Creek Dam and Reservoir



# PRESENT WORTH COST SUMMARY OF POTABLE WATER SUPPLY ALTERNATIVES

Alternative	Initial Cost	30 yr Present Worth	Present Worth \$/AF
Independent Nacimiento Pipeline	\$22 to \$23 million	\$31 to \$32 million	\$1400 to \$1430
Whale Rock Exchange	\$19 million	\$25 million	\$1400
Seawater Desalination with Solar Power System	\$17.2 million	\$22.3 million	\$1230
San Simeon Creek Dam & Reservoir	\$10.7 million	\$12.8 million	\$610
Jack Creek Dam & Reservoir	\$10.3 million	\$14.2 million	\$680

- Notes:
- \* No outside grant funds were assumed for any of the above project costs.
  - \* Based on earlier 2008 cost-basis comparison with inflation rate at 4% per year.
  - \* Dams not recommended in WMP due to location within critical steelhead habitat.
  - \* Current non-surcharged CCSD residential water rate ~ \$1764/af, for 0 to 6 units
  - \* Current overall CCSD water costs ~ \$1.8 million water budget/800 af/yr ~ \$2250/af

QUESTIONS?

