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Turf Replacement:

Not Sufficient Condition to Save Water

WaterSmart Innovations Oct 3, 2012

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Saltworks Proposed Development



- 1,436 acre site
- 12,000 residential units
- 1. 2 million ft2 of office/retail space
- 5 schools
- Water Supply Assessment
- 3.5 feet per year





Empirical Data

- Landscape Water Use Reports
- Irrigation Only Sites
- 2003 Start

- Detailed Site Maps
- Field Surveys
- Linked to Water Rates

$$BUDGET = AREA * \begin{bmatrix} ----- \end{bmatrix} * C$$



Turf = Shrub Water Application









Waterfluence Program







Depth of Water Applied (1771 Sites)





Overwatering by Turf Percent





Possible Explanations

• Field Survey Observations from 308 Sites





Misaligned and Broken Heads







Water Pressure





Scheduling and Mixed Hydrozones





Plant Selection & Multiple Canopies





Interception and Hidden Leaks





Policy Ramifications With Turf Replacement Programs (CII)

- Will replacing 1 ft2 of turf with 1 ft2 of irrigated nonturf plants reduce water applied?
 - Theoretically? Yes
 - In practice? Not so sure







Plant Choices?







Irrigation System Choices?









Include Non-Turf Replacement?





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