

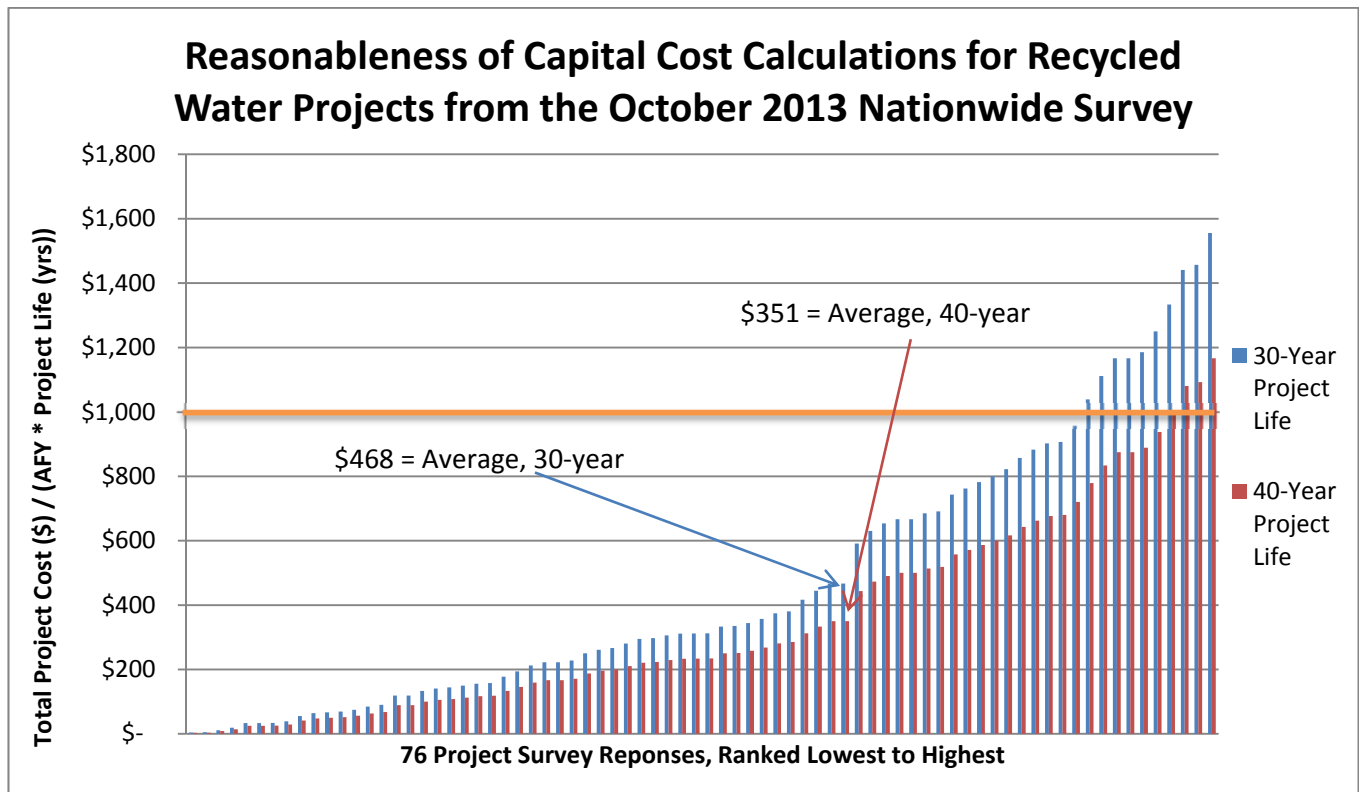


Western Recycled Water Coalition

New Recycled Water Supplies are Economically Viable and Desirable

Of interest to many State and Federal officials and funding agencies is the cost per acre-foot of recycled water projects. This can vary greatly, depending on the project (treatment, pipelines, storage, pump stations, etc.), location, and anticipated life of the project. In October 2013, a nationwide survey was sent out requesting response by agencies currently investing in recycled water projects. Survey respondents were asked to provide total cost of their projects - including planning, design and construction in 2013 costs - and the planned capacity (acre-feet per year, AFY) of those projects. Of the 92 responding agencies located in 14 states who are investing in recycled water projects, 77 of these provided both cost and AFY data. Providing a very accurate recycled water cost per acre-foot would require additional data and entail greater analysis than can be conducted with the limited data from this survey¹. However, an idea of relative costs can be estimated using a “reasonableness of cost” calculation, which the Bureau of Reclamation uses in some WaterSMART competitive grant programs. This calculation is the total cost of the project divided by the acre-feet (AF) produced multiplied by the project life.

Performing this simplified calculation on survey results showed that 85% to 95% of recycled water projects had total capital costs less than \$1,000 per AF annually, based on 30 and 40-year project life, respectively. The survey showed that these new recycled water supplies averaged \$351 and \$468 in capital project costs² per AF based on 40 and 30-year project life, respectively (Figure 1).



¹ A WaterReuse Research Foundation study is underway which will provide an in-depth look at recycled water project costs.

² Operation and Maintenance costs were not available from survey data and are not included in these cost calculations.

The total capital project cost reported by these 77 agencies was \$6.39 billion, with estimated recycled water capacity of 858,554 AF annually. These agencies reported developing a variety of recycled water projects, which include: 15 advanced treatment facilities (MF/RO, etc.); 13 tertiary treatment facilities; 66 pump stations; 37 storage facilities; 10 groundwater recharge facilities; over 755 miles of pipeline; 5 scalping plants; and various miscellaneous projects involving treatment expansion, connections and site retrofits, dual plumbing, and property acquisition.

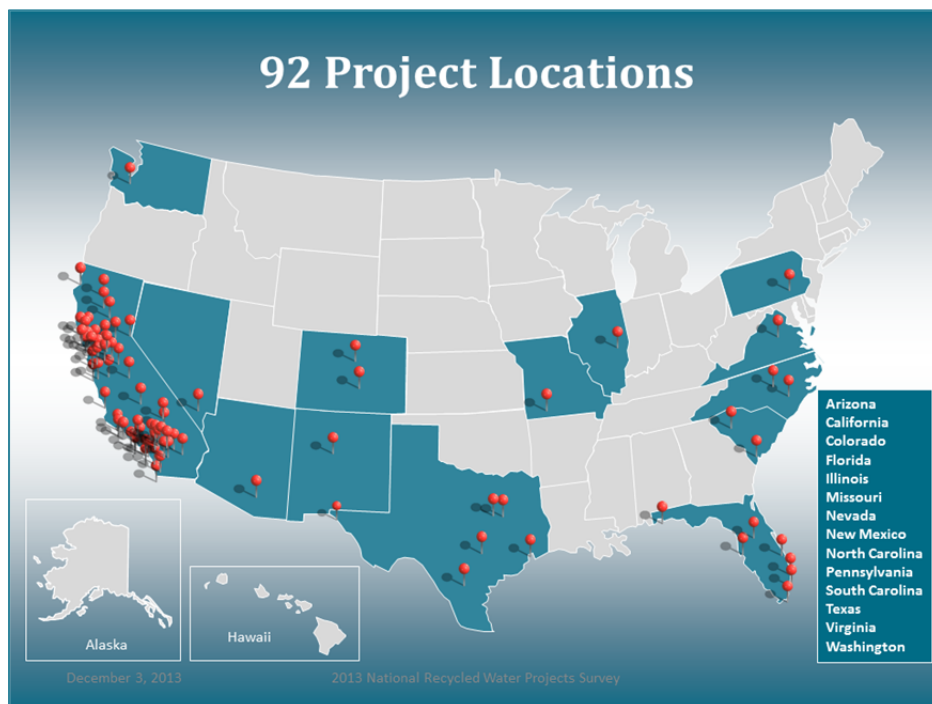
If the Federal government were to provide grant funding to cover 25% of the project cost for these recycled water projects, it would be comparable to providing 1% interest loans for 30-years.

Federal Funding Share Options

	Option 1 Federal Title XVI Grant - 25% Capital Costs	Option 2 1%, 30-Year Federal Loans - 100% Capital Costs
Total Capital	\$6.39 Billion	\$6.39 Billion
Federal \$ Share	\$1.60 Billion	\$1.64 Billion
Federal % Share	25.0%	25.6%

Note: Federal Loan Share represents present value of incremental interest on 3.5% 30-Year Treasury Notes discounted at 4.5%

October 2013 Survey Responses – Planned Recycled Water Projects



Survey results represent responses gathered from October 8 – November 4, 2013. It is not the universe of recycled water projects in development across the United States, as no survey can be all inclusive. It is a snapshot in time showing active recycled water project development, estimated costs, and funding needs of the responding agencies.