

Comments on “Big Chino Water Ranch Project Impact Analysis, Prescott & Prescott Valley,
Arizona”

By

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On Thursday, August 21, the front page of the Daily Courier featured an article headlined “Area could lose billions without pipeline.” That headline definitely grabbed my attention, and I decided to read the August 2008 study entitled “Big Chino Water Ranch Project Impact Analysis, Prescott & Prescott Valley, Arizona” prepared by Elliott D. Pollack & Company (“The Pollack Report” or “the Report”) discussed in the article. I was sorely disappointed.

The Report, commissioned by the Central Arizona Partnership, presents a methodology to illustrate the costs of not completing the Big Chino Water Ranch pipeline project and applies that methodology to quantify the fiscal and economic impacts of that project. As suggested in the Courier headline, it comes up with some whopping numbers. Unfortunately, however, the Report incorporates a large number of major analytical shortcomings that result in estimates of fiscal and economic impacts which I believe are grossly overstated and largely irrelevant to the current citizens of Prescott and Prescott Valley.

Because my comments address the appropriateness of the analytical methods used in the Report, I believe it is important to provide you with a brief summary of my qualifications to express opinions on such matters. I am an economist by training and profession. I hold Masters and Ph.D. degrees in economics from Northwestern University. I have been a member of the Senior Faculty of the Economics Department at the University of Minnesota. I have served as Senior Vice President and Director of Research at the Federal Reserve Bank of Minneapolis, as Associate Economist of the Federal Open Market Committee, and as Chairman of the Federal Reserve System’s Financial Analysis Committee. I have been a partner at two different Washington, DC-based economic consulting firms. And I have lived and operated a business in Prescott, Danforth & Company, Consulting Economists, for over 10 years. In general, my clients are financial institutions for whom I provide market, financial and strategic analyses. During the past decade I have been engaged by dozens of banking organizations, including six of the ten largest banking organizations in the United States and two of the five largest banks in Canada. I am not being compensated for reviewing and commenting on this Report, and I have no personal interest in whether the Big Chino pipeline is constructed other than as a Prescott resident who plans to continue to reside in Prescott into the indefinite future.

¹ Sidney Moglewer, Leslie Hoy and Ken Janeczek generously agreed to review an earlier draft of this document and a number of their suggestions are incorporated herein. Of course, none of these individuals bears any responsibility for any errors or omissions in this comment.

What the Study Does

The Pollack Report purports to compare future economic activity and government revenues in the Prescott-Prescott Valley area under two alternative assumptions regarding water availability in those cities. The first assumption is that both cities are limited to current water supplies and that as soon as the current unallocated amount of water is allocated to new residential and commercial development, all further development will cease. The second assumption is that the cities construct the Big Chino Water Ranch Project and commence importing 8,717 acre-feet of water annually. This additional water (or a portion of it²) is assumed to be added to the supply of unallocated water, which permits the cities to continue new residential and commercial development until that imported water is fully allocated.

The pace of new residential and commercial development prior to the exhaustion of unallocated water rights is derived from population projections produced by the Arizona Department of Commerce, Research Administration. Specifically, the number of new homes associated with the projected increase in population is calculated using current ratios of persons per household for the two cities.

Each year the water used by the projected new homes is subtracted from each city's unallocated water supply. Once the unallocated water supply is exhausted, new residential and commercial development ceases. The Report projects that, without the specified importation of water from the Big Chino Water Ranch, the City of Prescott will run out of unallocated water supply in 2014 and Prescott Valley will run out of unallocated water in 2031. In each city, once unallocated water is gone, the Report assumes new residential and commercial development ceases.

The constraint on new development is relaxed with the importation of water from the Big Chino Ranch. The Report considers three scenarios regarding the percentage of imported water used to support new growth rather than for achieving safe yield. Scenario 1 assumes all imported water supports new growth, while Scenarios 2 and 3 assume only 80% or 50%, respectively, of that water is available for new development. Based on current Arizona Department of Commerce population projections, at a minimum (under Scenario 3), importation of water would permit Prescott to continue residential and commercial development for 15 years, after which development would cease without importation, and Prescott Valley would be able to postpone the need to constrain development for a much longer period of time. Under either Scenario 1 or 2, Prescott would be able to postpone water-based constraints on development for at least 30 years, and Prescott Valley would be able to postpone such constraints into the indefinite future.

The Report focuses on two categories of economic and fiscal impacts from the Big Chino Pipeline Project. First is the impact on economic activity and fiscal receipts resulting from the pipeline construction itself. Second is the additional "economic activity" and government

² The study examines alternative assumptions regarding the amount of imported water used for new development versus the amount allocated to achieve safe yield.

revenues that would be generated in the period following the projected exhaustion of currently available unallocated water if water importation were undertaken and residential and commercial development could be continued until imported water supplies were fully allocated.

Why the Study Results are Misleading and Largely Irrelevant

The problems with this study are legion. Among the more significant shortcomings are the following:

- The Pollack Report's analysis of the impact of pipeline construction ignores completely the economic impact of the reduction in disposable income available to Prescott and Prescott Valley residents resulting from the need to pay for the Big Chino Pipeline Project. Incredibly, using the Report's methodology, the positive economic impact of the pipeline project would be dramatically increased if the pipeline ended up costing us \$500 million to build rather than the currently projected \$175 million! The analysis ignores the fact that Prescott and Prescott Valley citizens must pay for the cost of pipeline construction, and those payments reduce the amount they spend elsewhere in the local economy. Measuring only the increased economic activity resulting from construction expenditures is only half the story. The other half is the adjustment needed to account for the monies withdrawn from the economy to pay for that construction, monies that could have been spent elsewhere had this project not been undertaken. For those paying taxes and elevated water rates, less money is available to be spent at the clothing retailer for a new suit or at the local restaurant for a special dinner. And those reduced expenditures will have subsequent ripple effects in the form of reductions in spending by the clothing retailer or restaurant owner and staff. These effects should be subtracted from the additional economic growth created by the pipeline construction project to determine its net impacts.
- The Report's fiscal impact analysis focuses solely on government tax and fee revenues and ignores completely the fact that these receipts are used to offset the cost of government services required to support the population growth and commercial activity from which they are generated. The Report acknowledges this shortcoming in its "Limiting Conditions" discussion, but it fails to highlight what a huge limitation this is. I am familiar with many studies that have found increases in local government revenues stemming from residential development typically are more than offset by increases in government costs necessitated by that development. Sure, population growth and commercial growth increase Prescott and Prescott Valley municipal revenues, but municipal expenses increase in tandem. In addition to ongoing public services necessitated by the expansion, infrastructure costs are necessitated by the projected residential and commercial development. These include things like roads, fire and police stations and equipment, additional jail capacity and schools. If one omits all of these costs from the analysis, of course the gross fiscal impacts will be positive, and they will be even more positive if the need to provide public services to support the new development forces Prescott and Prescott Valley to raise taxes and fees. Presenting the finding that completion of the Big Chino Water Ranch Project will have positive revenue

impacts and failing to note that increases in municipal costs may well exceed those increased revenues is simply misleading.

- By measuring economic impacts in terms of sales of goods and services rather than income received locally, the Pollack Report substantially overstates local and regional economic impacts. Sales comprise the total dollar amount collected in return for goods and services, while income refers to total wages, salaries, and benefits of a given locality or region, as well as profits, rents, and transfer payments. At the local Prescott-Prescott Valley level, sales figures tend to be substantially larger than income, thereby making impacts appear to be greater than they really are. Consider the purchase of a new automobile. Of the \$40,000 spent for the automobile, perhaps \$3,000 remains in the region as salesperson commissions and auto dealer income, while the other \$37,000 leaves the area for Detroit or Tokyo as wholesale payment for the new automobile. As a true evaluation of local or regional impact, therefore, the use of income rather than sales is a far more accurate measure.
- Although the Report recognizes that constraints on population growth in Prescott are likely to shift growth to Prescott Valley, it ignores the fact that constraints on population growth in Prescott and/or Prescott Valley are likely to shift growth to Chino Valley, Dewey-Humboldt and unincorporated Yavapai County. Increased population growth in these areas that otherwise would have occurred in Prescott or Prescott Valley doubtless would be accompanied by increased commercial activity in Prescott and Prescott Valley and increased employment opportunities for residents of these communities. By assuming all growth in commercial activity would cease when these communities exhaust their respective supplies of unallocated water, the Report is overstating the gains in commercial activity from relaxing water-related constraints on residential development in Prescott and Prescott Valley.
- The Report provides no support for the conclusion that current Prescott and Prescott Valley residents and business owners will benefit from the increase in economic activity resulting from water importation. For instance, doubling Prescott's size certainly would result in a substantial increase in economic activity. Yet there is absolutely no reason to believe the typical Prescott resident would benefit from that population influx. Sure, some local residents will benefit from that growth, but others will be made worse off as a result of increased population density and congestion or competition from new entrants into the market, and there is no evidence in this study that the gainers would outnumber the losers. This is especially true in light of the fact, acknowledged by the study authors, that a cessation of new residential construction would lead to an escalation in the value of Prescott and Prescott Valley homes and other developed property. Perhaps unintentionally, we believe the Report clearly conveys the misleading impression that Prescott's and Prescott Valley's current residents and business owners would necessarily benefit from the increased economic activity discussed therein.
- The Pollack Report fails to take account of the time value of money. It assumes that \$176 million spent next year to build a pipeline is offset by \$176 million of income earned in 20 or 30 years. In fact, however, a dollar payment in thirty years is worth less than

twenty five cents today. The Report completely ignores this absolutely basic economic reality and thereby substantially overstates the present value of the increased economic activity resulting from completion of the pipeline project.

- The Report completely ignores significant risks associated with the project. For instance, if the public were to expend the monies needed to construct the pipeline and then SRP or the Center for Biological Diversity or the US Fish and Wildlife Service brought suit and substantially delayed or prevented water importation at the projected levels, what would the economic and fiscal impacts be? If evidence emerges that pumping is damaging the Verde River, what would be the cost of mitigating those damages? If history is any guide, is it not highly likely that the actual cost of the pipeline will far exceed current cost projections?³ The Limiting Conditions section of the Report expressly acknowledges that matters of a legal nature and environmental and engineering issues are not considered. Yet by focusing solely on one rosy projection of how the pipeline project would evolve and development would flourish, the study fails to take account of the very substantial future uncertainties and risks associated with the project.
- The Report fails to recognize the existence of alternative sources of water to support a continuation of residential and commercial development in Prescott and Prescott Valley after their respective existing supplies of unallocated water are exhausted. For example, the study ignores efforts currently underway to identify alternative sources of water for Yavapai County. Most observers view water importation from the Big Chino as a way to postpone but not to resolve our area's water shortage. The Bureau of Reclamation is currently working with Yavapai County decision makers to identify alternative, truly long-term solutions. Included among the alternatives is importation of water from the Colorado River. This solution would definitely be more expensive than the Big Chino Water Ranch Project, but that additional expense would yield additional economic and fiscal impacts and avoid the prospect of mitigation expenses in connection with operation of the Big Chino Water Ranch. Indeed, if one were to apply the methods used in the Pollack Report to assess economic and fiscal impacts, it appears fairly certain that the Big Chino Water Ranch Project would have negative economic and fiscal impacts if the alternative being considered were importation of water from the Colorado River rather than the alternative considered in the Pollack Report, namely, no water importation whatsoever.

Summary and Conclusion

To summarize, the Pollack Report's estimates of fiscal impacts consider only government revenues and ignore the costs of providing government services; the Report's estimates of the economic impacts of pipeline construction ignore the negative impacts resulting from the fact that local citizens must pay for the project and this will reduce their spending on other goods and

³ Interestingly, as noted above, according to Pollack's analytical methods, if the project's costs doubled, the positive economic impact of the pipeline would be substantially increased. This bizarre result follows from the fact that the impact of having to pay for the pipeline construction project is completely omitted from the analysis presented in the Report.

services; the Report's estimates of local and regional economic impacts include expenditures on goods and services obtained from outside the local region; the Report ignores the positive impacts on Prescott and Prescott Valley commercial activity resulting from accelerating growth in surrounding areas; the Report ignores the extent to which the estimated economic impacts of the Pipeline Project would be realized by new arrivals to our area and provides no evidence that current Prescott or Prescott Valley citizens will, on balance, benefit from this activity; the Report's estimates of economic impacts assume that the prospect of a million dollars of sales in 2050 offsets a million-dollar cost incurred today; the Report ignores significant uncertainties, such as the possibility legal action could impede or delay operation of the pipeline; and the Report fails to consider the existence of alternative strategies for augmenting local water supplies.

Before someone jumps to the wrong conclusions, I am not denying that the population of Prescott and Prescott Valley would grow more rapidly with abundant water supplies than it would with limited water supplies. Also, I am not denying that a substantial increase in the Prescott/Prescott Valley area population would be associated with similarly substantial increases in economic activity and tax revenues for local governments in our area. However, based on the major shortcomings discussed above, it is my opinion that the Pollack Report gives a misleading impression of the magnitudes of the economic and fiscal impacts of the Big Chino Water Ranch pipeline in our area, and it provides virtually no useful insights on the question of whether the citizens of Prescott and Prescott Valley would, on balance, benefit from completion of that project.

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