

Economics & Politics, Inc.

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Scott Slater
CEO & President
Cadiz Inc.
550 S Hope Street, Suite 2850
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September 27, 2016

Dear Mr. Slater,

I write today following a review of my May 23, 2011 report, "Economic Impact of the Proposed Cadiz Valley Groundwater Conservation, Recovery, and Imported Water Storage Project," ("the Cadiz Water Project"). The 2011 report evaluated job creation, overall economic impact and local property tax revenue increases attributable to the significant investments associated with construction and implementation of the Cadiz Water Project.

Based on estimates of construction cost of \$277 million for Phase 1 and \$259 million for Phase 2, and a 24 month timeline for construction and engineering of each phase, in 2011, I calculated that the Cadiz Water Project would generate nearly \$878 million in new economic activity in San Bernardino County, \$38 million in new state and local tax revenue, and create and support nearly 6,000 jobs over the two phases of project construction, or four years. The annual average employment over this period would be 1,497 full time equivalent jobs.

Also, I estimated that post-construction, the Cadiz Water Project would generate new annual property tax revenue of \$6.0 million, including \$5.4 million to San Bernardino County's government and approximately \$600,000 to the local Needles Unified School District. This estimate was based on the expected increase in property value directly as a result of the improvements attributable to Phase 1 and 2 infrastructure costs.

Because Cadiz Inc. assumptions related to project construction and implementation have not changed since my report was completed, my estimates described above remain the same today.

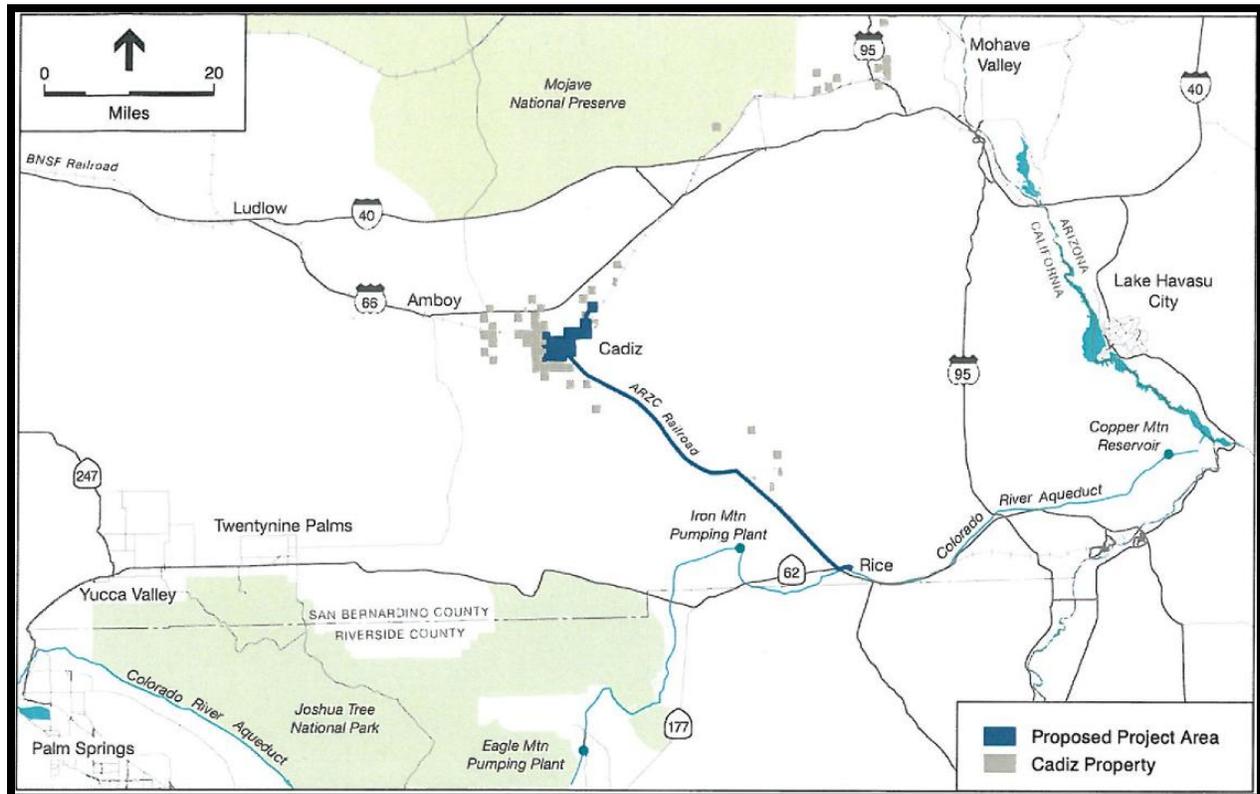
It should also be noted that the San Bernardino County area offers an extensive blue collar labor supply and is home to production facilities and leading manufactures of the materials that will be needed in constructing the Cadiz Water Project. These factors have also not changed. As a result, I remain confident that the Cadiz Water Project's investments will generate tremendous opportunities for the local labor force, as well as our area businesses and the overall economy.

Sincerely,



John Husing, Ph.D.

Economic Impact of the Proposed Cadiz Valley Groundwater Conservation, Recovery, and Imported Water Storage Project



Final Report

May 23, 2011

John E. Husing, Ph.D.

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Executive Summary

Looking at the year by year results, the economic impact of the full Cadiz Groundwater Conservation, Recovery, and Imported Water Storage Project yields the following results over its four year period of design and construction:

Summary of Economic Impacts of Construction Activity, Cadiz Water Project						
Type of Impact	Phase 1 Year 1	Phase 1 Year 2	Phase 2 Year 1	Phase 2 Year 2	4-Year Total	Annual Avg.
Job Creation (<i>man-years</i>)	1,011	2,090	940	1,945	5,986	1,497
Labor & Proprietorship Income	\$53,416,010	\$115,788,200	\$49,713,909	\$107,763,274	\$326,681,393	\$81,670,348
Economic Activity Generated	\$138,561,306	\$316,207,131	\$128,958,046	\$294,291,784	\$878,018,267	\$219,504,567
State & Local Taxes Generated	\$6,113,696	\$13,537,310	\$5,689,975	\$12,599,082	\$37,940,063	\$9,485,016

Longer term, assuming that the increase in the property valuation equals the construction cost of the Cadiz Water Project's facilities, the increase would be \$536,250,000. This property is inside the Needles Unified School District where the tax rate is \$1.00 per \$100 of valuation for San Bernardino County's government and \$0.1143 for the Needles Unified School District. If the assessed valuation is not increased by an inflation factor, the annual property tax revenue generated in San Bernardino County would total \$6.0 million, including \$5,362,500 to San Bernardino County's government and \$612,934 to the Needles Unified School District.

Permanent Property Tax Revenue Increase			
	San Bdno Co.	Needles Unified	Total
Assumed Property Valuation	\$536,250,000	\$536,250,000	\$536,250,000
\$100 of Assessed Valuation	\$5,362,500	\$5,362,500	\$5,362,500
Tax Rates Per \$100 of AV	\$1.000	\$0.1143	\$1.1143
Annual Tax Revenue	\$5,362,500	\$612,934	\$5,975,434

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Economic Impact of the Proposed Cadiz Valley Groundwater Conservation, Recovery, and Imported Water Storage Project

John E. Husing, Ph.D.

Project. The project's northern end is located at Cadiz, California, just south of the SR-66 in northeastern San Bernardino County. Its southern end is at Rice, California located along the SR-62 next to the Colorado River Aqueduct. Underlying Cadiz is an aquifer system that lies at the base of the Fenner Valley and Orange Blossom watersheds. This underground "lake" is naturally recharged by rain and snow in the nearby mountains that over time flows underground into it. The aquifer is roughly equivalent in capacity to Lake Mead, the nation's largest surface reservoir. Ultimately, a good deal of water that reaches the aquifer ends up just below ground at Cadiz Dry Lake and Bristol Dry Lake (*below*) where it converges with saline water and evaporates through the surface.



Phase I. Conservation and Recovery. In Phase I of the project, facilities would be built near Cadiz to capture and conserve the average annual natural recharge into the aquifer that would otherwise reach the Cadiz Dry Lake and the Bristol Dry Lake and evaporate. Phase I would include the construction of extraction wells that would be used to extract the amount of water that would otherwise flow to the Dry Lakes plus the amount needed to maintain hydraulic control in the well field area.

Phase I would also include the building of a 42-mile underground water pipeline that would transmit water southeast to the Colorado River Aqueduct near Rice. The pipeline would be

buried along the already disturbed railroad right-of-way along which the Arizona-California Railroad (ARZC) currently operates (*see photograph*). It would be sized to allow the conveyance of an annual average of 50,000 acre-feet of water. Once the water reaches the Colorado River Aqueduct, it would be conveyed down it into Southern California where it would be made available to the Santa Margarita Water District and other participating water districts.



Phase I: Timing & Budget. Once environmental approvals are finalized, Phase I of the project is slated to begin. Planning, design and engineering will occur over a six month period. Construction of the well field, pipeline and power facility is anticipated to take an additional 18 months. The construction budget is estimated as:

- Well Field (20-32 wells) \$23,500,000
- Pipeline \$211,500,000
- Power Facilities \$17,500,000
- Planning, engineering, other overhead \$25,250,000
- Total Phase I Budget **\$277,750,000**

Phase I: Economic Impact. The primary impact of a project like the Cadiz Valley Groundwater Conservation & Recovery effort would occur during its construction, not its operational phase. As the project will be built in San Bernardino County, this will be the location of all of the activity. In part, this is because the county has an extensive blue collar labor supply that can build the project. It is also because San Bernardino County is home to production facilities like Ameron International Water Transmission Group and Northwest Pipe Company, leading manufacturers of the materials used in construction wells, pipelines and power plants.

- It is therefore assumed that 100% of the construction expenditures will be made to workers and suppliers located within San Bernardino County.

Phase I, Year 1. In Year 1 of the project, it is assumed that 80% of the planning, engineering and management work on Phase I of the project is completed. Also in Year 1, 25% of construction and the purchase of materials required for it occurs. In addition, it is assumed that 75% of the construction budget for each activity represents construction, while 25% represents materials and supplies. Combined, this places \$83,325,000 of activity into Year 1 (*Exhibit 1*).

Exhibit 1.-Assumptions, Phase I Year 1			
	Period	Share	Year 1
Engineering & Related	80.0%		\$20,200,000
Pipeline Construction	25.0%	75.0%	\$39,656,250
Pipeline Supplies	25.0%	25.0%	\$13,218,750
Power Plant	25.0%	75.0%	\$3,281,250
Power Plant Supplies	25.0%	25.0%	\$1,093,750
Well Field	25.0%	75.0%	\$4,406,250
Well Field Supplies	25.0%	25.0%	\$1,468,750
Total Expenditures			\$83,325,000
Impact Sectors			
Construction			\$47,343,750
Materials & Supplies			\$15,781,250
Engineering & Related			\$20,200,000
Total Expenditures			\$83,325,000

These expenditures are recombined into three broad sectors used by the IMPLAN model to estimate the economic impact on San Bernardino County’s economy of these Year 1 expenditures. The IMPLAN model is the standard one used by economists in determining the economic impact of funds coming from the outside world, in this case, the nation’s money markets and hitting the local economy through specific types of activities.¹ The model assumes the economy is not operating at full capacity, a realistic assumption given the February 2011 unemployment rate of 13.7% in the county. Those sectors include:

- Construction of other non-residential structures (*Implan Sector #36*)
- Fabricated pipe and pipe fitting manufacturing (*Implan Sector #201*)
- Management, scientific and technical consulting (*Implan Sector #374*)

¹ Minnesota IMPLAN Group, Inc, IMpacts For PLANning, model version 3. 0. 5. 2

Essentially, what the IMPLAN model does is provide analysts with three types of estimates:

- **Direct.** This is an estimate of the direct effect impact on the local economy of the activity being studied that brings money to the market from the outside world. To use an analogy, this is akin to the money coming to gold miners in the old west who find gold, send it away and bring money to an area that heretofore had no economy.
- **Indirect.** This is made up of activities in local sectors that receive expenditures from the activity being studied in support of it. In the analogy, this would be the general store which sells supplies to the miners. Without the miners, it would not exist. With them, it becomes a viable business.
- **Induced.** This is made up of activities in the local economy that occur simply because money is flowing through it. These activities are not directly or indirectly related to the initial cause of the money coming to the local economy. In the analogy, this would be the saloon that exists because money is being re-spent in the local area by miners and general store workers. The beneficiaries of the induced effects may not even be aware that their success is being caused by the activity being studied.

Note: During and after World War II, the navy let local tradesman understand how much sailors meant to them by paying them in \$2.00 bills. As these bills changed hands through the local economy, merchants became aware of the induced effect that occurred because a fleet had showed up.

In Year 1, the activities associated with planning and starting construction on the Conservation and Recovery phase of the Cadiz project will have the impacts shown in Exhibit 2:

Exhibit 2.-Economic Impact of Construction Activity, Phase I, Year 1			
Impact Type	Employment	Labor Income	Output
Direct Effect	593	\$34,328,422	\$83,325,000
Indirect Effect	152	\$7,654,712	\$21,284,424
Induced Effect	266	\$11,432,875	\$33,951,882
Total Effect	1,011	\$53,416,010	\$138,561,306

Source: Output from IMPLAN model for San Bernardino County, 2011

- 1,011 full time equivalent jobs would be created in San Bernardino County. Of those, 593 would be working directly on the project either in construction, construction material production or planning and engineering. Another 152 jobs would be created in firms assisting those operations. Firms having essentially no ties to the project would add 266 jobs due to monies flowing generally through the economy.
- \$53.4 million in wages and salaries to workers as well as income to proprietorships in San Bernardino County. \$34.3 million would be to workers or proprietorships working directly on some phase of the project; \$7.7 million would go to workers in firms assisting

these operations. \$11.4 million would go to workers in unrelated firms benefiting from the general increase in economic activity in the county.

- \$138.6 million in economic activity would be added into San Bernardino County's economy.

In addition, in Year 1 of the project, \$6.1 million in tax revenues that currently do not exist would be created for the state of California and local governments in San Bernardino County (*Exhibit 3*).

Exhibit 3.-California & Local Taxes Generated, Phase I, Year 1	
Type of Tax	Amount
Dividends	\$ 573,600
Social Ins Tax- Employee Contribution	\$ 75,645
Social Ins Tax- Employer Contribution	\$ 187,893
Indirect Bus Tax: Sales Tax	\$ 1,360,016
Indirect Bus Tax: Property Tax	\$ 1,524,190
Indirect Bus Tax: Motor Vehicle Licenses	\$ 31,206
Indirect Bus Tax: Severance Tax	\$ 524
Indirect Bus Tax: Other Taxes	\$ 267,511
Indirect Bus Tax: State & Local Non-Taxes	\$ 143,364
Corporate Profits Tax	\$ 285,191
Personal Tax: Income Tax	\$ 1,206,212
Personal Tax: Non-Taxes (Fines- Fees)	\$ 363,468
Personal Tax: Motor Vehicle License	\$ 55,826
Personal Tax: Property Taxes	\$ 28,388
Personal Tax: Other Tax	\$ 10,662
Total State and Local Tax	\$ 6,113,696

Source: Output from IMPLAN model for San Bernardino County, 2011

Phase I, Year 2. In Year 2 of the project, it is assumed that 20% of the planning, engineering and management work on Phase I of the project is completed. Also in Year 2, 75% of construction and the purchase of materials required for it occurs. In addition, it is again assumed that 75% of the construction budget for each activity represents construction, while 25% represents materials and supplies. Combined, this places \$194,425,000 of activity into Year 2 (*Exhibit 4*).

Exhibit 4.-Assumptions, Phase I, Year 2			
	Period	Share	Year 2
Engineering & Related	80.0%		\$5,050,000
Pipeline Construction	25.0%	75.0%	\$118,968,750
Pipeline Supplies	25.0%	25.0%	\$39,656,250
Power Plant	25.0%	75.0%	\$9,843,750
Power Plant Supplies	25.0%	25.0%	\$3,281,250
Well Field	25.0%	75.0%	\$13,218,750
Well Field Supplies	25.0%	25.0%	\$4,406,250
Total Expenditures			\$194,425,000
Impact Sectors			
Construction			\$142,031,250
Materials & Supplies			\$47,343,750
Engineering & Related			\$5,050,000
Total Expenditures			\$194,425,000

As before, these expenditures are recombined into three broad sectors used by the IMPLAN model to estimate the economic impact on San Bernardino County's economy of these Year 2 expenditures. It is further assumed that the county's economy will not have fully overcome its 13.7% unemployment rate by Year 2 and be will still be operating at below full capacity:

- Construction of other non-residential structures (*Implan Sector #36*)
- Fabricated pipe and pipe fitting manufacturing (*Implan Sector #201*)
- Management, scientific and technical consulting (*Implan Sector #374*)

Using the IMPLAN model to calculate the direct, indirect and induced impacts of these expenditure yields the following estimates for Year 2 (*Exhibit 5*):

Exhibit 5.-Economic Impact of Phase I, Year 2 ,Construction Activity			
Impact Type	Employment	Labor Income	Output
Direct Effect	1,197	\$73,830,338	\$194,425,000
Indirect Effect	316	\$17,164,297	\$48,151,836
Induced Effect	577	\$24,793,566	\$73,630,295
Total Effect	2,090	\$115,788,200	\$316,207,131

Source: Output from IMPLAN model for San Bernardino County, 2011

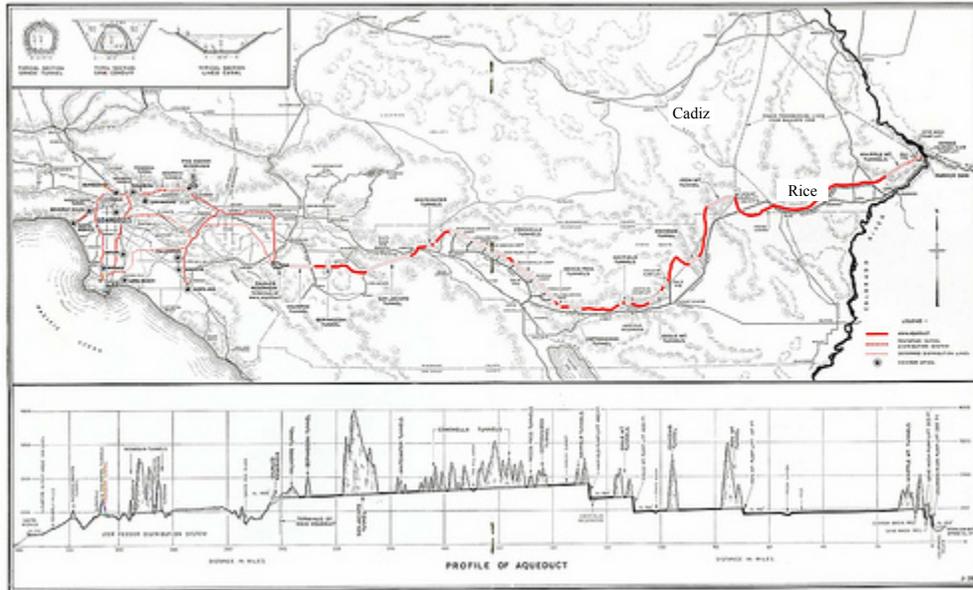
- 2,090 full time equivalent jobs would be created in San Bernardino County. Of those, 1,197 would be working directly on the project either in construction, construction material production or planning and engineering. Another 316 jobs would be created in firms assisting those operations. Firms having essentially no ties to the project would add 577 jobs due to monies flowing generally through the economy.
- \$115.8 million in wages and salaries to workers, as well as income to proprietorships in San Bernardino County. \$73.8 million would be to workers or proprietorships working directly on some phase of the project; \$17.2 million would go to workers in firms assisting these operations. \$24.8 million would go to workers in unrelated firms benefiting from the general increase in economic activity in the county.
- \$316.2 million in economic activity would be added into San Bernardino County's economy.

In addition, the project would create \$13.5 million in tax revenues that currently do not exist for California and San Bernardino County's local governments (*Exhibit 6*):

Exhibit 6.-California & Local Taxes Generated, Phase I, Year 2	
Type of Tax	Amount
CA Dividend Taxes	\$ 1,331,795
Social Ins Tax- Employee Contribution	\$ 162,113
Social Ins Tax- Employer Contribution	\$ 402,667
Indirect Bus Tax: Sales Tax	\$ 3,012,145
Indirect Bus Tax: Property Tax	\$ 3,375,756
Indirect Bus Tax: Motor Vehicle Licenses	\$ 69,114
Indirect Bus Tax: Severance Tax	\$ 1,161
Indirect Bus Tax: Other Taxes	\$ 592,481
Indirect Bus Tax: State & Local Non-Taxes	\$ 317,520
Corporate Profits Tax	\$ 662,162
Personal Tax: Income Tax	\$ 2,616,256
Personal Tax: Non-Taxes (Fines- Fees)	\$ 788,356
Personal Tax: Motor Vehicle License	\$ 121,086
Personal Tax: Property Taxes	\$ 61,573
Personal Tax: Other Tax	\$ 23,125
Total State and Local Tax	\$ 13,537,310

Source: Output from IMPLAN model for San Bernardino County, 2011

Phase II. Imported Water Storage. In Phase II of the project, imported water from the Colorado River would be sent down the Colorado River Aqueduct (*see map*) to its junction with the Arizona-California Railroad near Rice. There the water would be pump up through a 44 mile pipeline parallel to the pipeline built in Phase I, terminating in recharge basins in the Fenner Valley above Cadiz. There, the water would then be allowed to percolate into the ground and be stored in the underground aquifer until it is needed as a dry-year supply. The total capacity of the storage system is anticipated to be one million acre feet of ground water storage.



Phase II would also include the building of a 42-mile underground water pipeline that would transmit water southeast to the Colorado River Aqueduct near Rice. The pipeline would be buried along the already disturbed railroad right-of-way along which the Arizona-California Railroad (ARZC) currently operates (*see photograph*). It would be sized to allow the conveyance of an annual average of 50,000 acre-feet of water. Once the water reaches the Colorado River Aqueduct, it would be conveyed down it into Southern California where it would be made available to the parties responsible for storing it.

Phase II: Timing & Budget. Once environmental approvals are finalized, Phase II of the project is slated to begin. Planning, design and engineering will occur over a six month period. Construction of the second well field and pipeline is anticipated to take an additional 18 months. The power plant needed to raise the water will be the same one constructed in Phase I. The construction budget is estimated as:

- Well Field \$23,500,000
- Pipeline \$211,500,000
- Planning, engineering, other overhead \$25,250,000
- Total Phase II Budget **\$258,500,000**

Phase II: Economic Impact. Again, the primary impact of a project like the Cadiz Valley Imported Water Storage effort would occur during its construction, not its operational phase. As the project will be built in San Bernardino County, this will be the location of all of its activity. Again, this is because the county has an extensive blue collar labor supply that can build the project. It is also because San Bernardino County is home to the production facilities of leading manufacturers of the materials used in construction wells and pipelines.

- It is therefore assumed that 100% of the construction expenditures will be made to workers and suppliers located within San Bernardino County.

Phase II Year 1. In Year 1 of Phase II of the project, it is assumed that 80% of the planning, engineering and management work on Phase II of the project is completed. Also in Year 1 of Phase II, 25% of construction and the purchase of materials required for it occurs. In addition, it is assumed that 75% of the construction budget for each activity represents construction, while 25% represents materials and supplies. Combined, this places \$77,550,000 of activity into Phase II Year 1 (*Exhibit 7*).

Exhibit 7.-Assumptions, Phase II, Year 1			
	Period	Share	Phase II Year 2
Engineering & Related	80.0%		\$18,800,000
Pipeline Construction	25.0%	75.0%	\$39,656,250
Pipeline Supplies	25.0%	25.0%	\$13,218,750
Well Field	25.0%	75.0%	\$4,406,250
Well Field Supplies	25.0%	25.0%	\$1,468,750
Total Expenditures			\$77,550,000
Impact Sectors			
Construction			\$44,062,500
Materials & Supplies			\$14,687,500
Engineering & Related			\$18,800,000
Total Expenditures			\$77,550,000

These expenditures are recombined into three broad sectors used by the IMPLAN model to estimate the economic impact on San Bernardino County’s economy of these Phase II Year 1 expenditures. Again, the model assumes the economy continues to not be operating at full capacity given the deep hole from which it must recover, due to the county’s February 2011 unemployment rate of 13.7%. Those sectors include:

- Construction of other non-residential structures (*Implan Sector #36*)
- Fabricated pipe and pipe fitting manufacturing (*Implan Sector #201*)
- Management, scientific and technical consulting (*Implan Sector #374*)

In Phase II Year 1, the activities associated with planning and starting construction on the Imported Water Storage phase of the Cadiz project will have the impacts shown in Exhibit 8:

Exhibit 8.-Economic Impact of Construction Activity, Phase II, Year 1			
Impact Type	Employment	Labor Income	Output
Direct Effect	552	\$31,949,224	\$77,550,000
Indirect Effect	141	\$7,124,188	\$19,809,266
Induced Effect	248	\$10,640,497	\$31,598,780
Total Effect	940	\$49,713,909	\$128,958,046

Source: Output from IMPLAN model for San Bernardino County, 2011

- 940 full time equivalent jobs would be created in San Bernardino County. Of those, 552 would be working directly on the project either in construction, construction material production or planning and engineering. Another 141 jobs would be created in firms assisting those operations. Firms having essentially no ties to the project would add 248 jobs due to monies flowing generally through the economy.
- \$49.7 million in wages and salaries to workers, as well as income to proprietorships in San Bernardino County. \$31.9 million would be to workers or proprietorships working directly on some phase of the project; \$7.1 million would go to workers in firms assisting these operations. \$10.6 million would go to workers in unrelated firms benefiting from the general increase in economic activity in the county.
- \$129.0 million in economic activity would be added into San Bernardino County's economy.

In addition, in Phase II Year 1 of the project, \$5.7 million in tax revenues that currently do not exist would be created for the state of California and local governments in San Bernardino County (*Exhibit 9*).

Exhibit 9.-California & Local Taxes Generated, Phase II, Year 1	
Type of Tax	Amount
Dividends	\$ 533,845
Social Ins Tax- Employee Contribution	\$ 70,403
Social Ins Tax- Employer Contribution	\$ 174,871
Indirect Bus Tax: Sales Tax	\$1,265,757
Indirect Bus Tax: Property Tax	\$1,418,553
Indirect Bus Tax: Motor Vehicle Lic	\$ 29,043
Indirect Bus Tax: Severance Tax	\$ 488
Indirect Bus Tax: Other Taxes	\$ 248,971
Indirect Bus Tax: State & Local NonTaxes	\$ 133,428

Corporate Profits Tax	\$ 265,425
Personal Tax: Income Tax	\$1,122,613
Personal Tax: Non-Taxes (Fines- Fees)	\$ 338,277
Personal Tax: Motor Vehicle License	\$ 51,957
Personal Tax: Property Taxes	\$ 26,421
Personal Tax: Other Tax	\$ 9,923
Total State and Local Tax	\$5,689,975

Source: Output from IMPLAN model for San Bernardino County, 2011

Phase II, Year 2. In Year 2 of Phase II of the project, it is assumed that 20% of the planning, engineering and management work on Phase II of the project is completed. Also in Year 2, 75% of construction and the purchase of materials required for it occurs. In addition, it is again assumed that 75% of the construction budget for each activity represents construction, while 25% represents materials and supplies. Combined, this places \$180,950,000 of activity into Phase II Year 2 (*Exhibit 10*).

Exhibit 10.-Assumptions, Phase II, Year 2			
	Period	Share	Phase II Year 2
Engineering & Related	80.0%		\$4,700,000
Pipeline Construction	25.0%	75.0%	\$118,968,750
Pipeline Supplies	25.0%	25.0%	\$39,656,250
Well Field	25.0%	75.0%	\$13,218,750
Well Field Supplies	25.0%	25.0%	\$4,406,250
Total Expenditures			\$180,950,000
Impact Sectors			
Construction			\$132,187,500
Materials & Supplies			\$44,062,500
Engineering & Related			\$4,700,000
Total Expenditures			\$180,950,000

As before, these expenditures are recombined into three broad sectors used by the IMPLAN model to estimate the economic impact on San Bernardino County's economy of these Phase II Year 2 expenditures. It is further assumed that the county's economy will still not have fully overcome its 13.7% unemployment rate by this time and will be operating at below full capacity:

- Construction of other non-residential structures (*Implan Sector #36*)
- Fabricated pipe and pipe fitting manufacturing (*Implan Sector #201*)

- Management, scientific and technical consulting (*Implan Sector #374*)

Using the IMPLAN model to calculate the direct, indirect and induced impacts of these expenditure yields the following estimates for Phase II, Year 2 (*Exhibit 11*):

Exhibit 11.-Economic Impact of Phase II Year 2 Construction Activity			
Impact Type	Employment	Labor Income	Output
Direct Effect	1,114	\$68,713,383	\$180,950,000
Indirect Effect	294	\$15,974,692	\$44,814,580
Induced Effect	537	\$23,075,199	\$68,527,204
Total Effect	1,945	\$107,763,274	\$294,291,784

Source: Output from IMPLAN model for San Bernardino County, 2011

- 1,945 full time equivalent jobs would be created in San Bernardino County. Of those, 1,114 would be working directly on the project either in construction, construction material production or planning and engineering. Another 294 jobs would be created in firms assisting those operations. Firms having essentially no ties to the project would add 537 jobs due to monies flowing generally through the economy.
- \$107.8 million in wages and salaries to workers, as well as income to proprietorships in San Bernardino County. \$68.7 million would be to workers or proprietorships working directly on some phase of the project; \$16.0 million would go to workers in firms assisting these operations. \$23.1 million would go to workers in unrelated firms benefiting from the general increase in economic activity in the county.
- \$294.3 million in economic activity would be added into San Bernardino County's economy.

In addition, the project would create \$12.6 million in tax revenues that currently do not exist for California and San Bernardino County's local governments (*Exhibit 12*):

Exhibit 12.-California & Local Taxes Generated, Phase II, Year 2	
Type of Tax	Amount
Dividends	\$ 1,239,492
Social Ins Tax- Employee Contribution	\$ 150,877
Social Ins Tax- Employer Contribution	\$ 374,759
Indirect Bus Tax: Sales Tax	\$ 2,803,383
Indirect Bus Tax: Property Tax	\$ 3,141,793
Indirect Bus Tax: Motor Vehicle Lic	\$ 64,324
Indirect Bus Tax: Severance Tax	\$ 1,080
Indirect Bus Tax: Other Taxes	\$ 551,418
Indirect Bus Tax: S/L NonTaxes	\$ 295,514
Corporate Profits Tax	\$ 616,270
Personal Tax: Income Tax	\$ 2,434,931
Personal Tax: Non-Taxes (Fines- Fees)	\$ 733,718
Personal Tax: Motor Vehicle License	\$ 112,694

Personal Tax: Property Taxes	\$ 57,306
Personal Tax: Other Tax (like Fish/Hunt)	\$ 21,523
Total State and Local Tax	\$12,599,082

Source: Output from IMPLAN model for San Bernardino County, 2011

Summary. Looking at the year by year results, the economic impact of the full Cadiz Groundwater Conservation, Recovery, and Imported Water Storage Project yields the following results over its four year period:

Exhibit 13.-Summary of Economic Impacts of Construction Activity, Cadiz Water Project						
Type of Impact	Phase I, Year 1	Phase I, Year 2	Phase II, Year 1	Phase II, Year 2	4-Year Total	Annual Avg.
Job Creation (<i>man-years</i>)	1,011	2,090	940	1,945	5,986	1,497
Labor & Proprietorship Income	\$53,416,010	\$115,788,200	\$49,713,909	\$107,763,274	\$326,681,393	\$81,670,348
Economic Activity Generated	\$138,561,306	\$316,207,131	\$128,958,046	\$294,291,784	\$878,018,267	\$219,504,567
State & Local Taxes Generated	\$6,113,696	\$13,537,310	\$5,689,975	\$12,599,082	\$37,940,063	\$9,485,016

Note that the annual average employment over this period would be 1,497 full time equivalent jobs. Altogether, the project would generate \$326.7 million in income to workers and single proprietors, an average of \$81.7 million per year. The economic activity added into San Bernardino County's economy over the four years would total \$878.0 million, or \$219.5 million per year. State and local taxes generated would total \$37.9 million, or \$9.5 million per year.

Looking longer term, the result of construction of the full Cadiz Water Project would be to increase the assessed valuation of property in the Cadiz area, as well as along the Arizona-California Railroad right of way and in the area where the pipelines would interact with the Colorado River Aqueduct near Rice. If it is assumed that the increase in the property valuation would be equal to the construction cost of the facilities, the increase would be \$536,250,000. All of this property is in unincorporated areas of the Needles Unified School District, where the tax rate is \$1.00 per \$100 of valuation for San Bernardino County's government and \$0.1143 for the Needles Unified School District.

If assessed valuation is not increased by an inflation factor, the annual property tax revenue generated by the Cadiz Water Project within San Bernardino County would total \$6.0 million. This would include \$5,362,000 to San Bernardino County and \$612,934 to Needles Unified School District (*Exhibit 14*).

Exhibit 14.-Permanent Property Tax Increase, San Bernardino County			
	San Bernardino Co.	Needles Unified	Total
Assumed Property Valuation	\$536,250,000	\$536,250,000	\$536,250,000
\$100 of Assessed Valuation	\$5,362,500	\$5,362,500	\$5,362,500
Tax Rates Per \$100 of AV	\$1	\$0.1143	\$1.1143
Annual Tax Revenue	\$5,362,500	\$612,934	\$5,975,434

Source: San Bernardino County Auditor Controllers Office, Tax Rates June 30, 2010