



Regional Economic Impacts
of the Proposed
Huntington Beach Desalination Project

Prepared for
Poseidon Water
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1. Summary of Findings

The proposed Poseidon Seawater Desalination Project at Huntington Beach consists of the construction and operation of a 50 million gallon per day (MGD) reverse osmosis seawater desalination plant and distribution system improvements. The desalination plant would produce high-quality potable drinking water for use by residents and businesses in Orange County, providing enough water for approximately 400,000 existing residents.

The plant would be located on an approximately 12-acre site adjacent to the AES Huntington Beach Power Plant. The desalination plant would utilize approximately 106 MGD of seawater withdrawn from the Pacific Ocean through a 1-mm wedgewire screen as source water for the reverse osmosis process. Brine water from the reverse osmosis process would be returned to the Pacific Ocean via the existing offshore AES discharge pipeline modified with a new multiport linear diffuser.

The Engineering, Procurement, Construction, Start-Up, and Commissioning (EPC) period is anticipated to last 48 months, including approximately 24 months of civil construction activities. The project is expected to cost \$1.4 billion to construct. Preliminary EPC cost estimates indicate that 61% of the project construction cost, approximately \$844 million, would consist of goods and services procured within Orange County. Once constructed, the facility would operate 24-hours per day, seven days per week, with annual operating and maintenance expenditures of \$59 million and facility staffing level of 30 full-time equivalent positions.

A regional economic impact analysis using the IMPLAN input-output modeling system was conducted to evaluate regional income and employment impacts associated with project construction and operations. The impact analysis is divided into two phases: (1) the construction phase and (2) the operations phase. Income and employment impacts are assessed for three regions: (1) Orange County; (2) elsewhere in California; and (3) elsewhere in the United States.

1.1 Summary of Findings: Project Construction Phase

The principal findings from the impact analysis during the construction phase of the project are summarized in Table 1 and Figures 1-4 and include the following:

- Direct, indirect, and induced economic activity stemming from the project would support, on average, 3,061 jobs annually during the four-year construction phase.¹ Approximately 59% of these jobs would be located in Orange County; 17% would be located elsewhere in California, and 24% would be located elsewhere in the United States (see Figure 1).
- The jobs supported during the construction phase would be relatively high-paying. The average labor compensation per job is approximately \$77,000/year for jobs located in California and \$68,000/year for jobs located elsewhere in the United States (see Figure 2).
- The project would generate approximately \$1.4 billion in regional value added during the construction phase.² Approximately 59% of regional value added would accrue within Orange County; 19% would accrue elsewhere in California; and 23% would accrue elsewhere in the United States (see Figure 3).
- The project would generate approximately \$70 million in indirect business tax revenue primarily in the form of property and sales tax receipts during the construction phase. Approximately 55% of these tax receipts would be paid within Orange County; 21% elsewhere in California; and 25% elsewhere in the United States (see Figure 4).
- Almost all of the \$15.9 million in Orange County property tax payments generated by the project during the construction phase would originate in the City of Huntington Beach. This revenue is expected to be allocated to the Huntington Beach Elementary General Fund (22.3%), Huntington Beach Union High General Fund (22%), Educational Revenue

¹ Or a total of 12,244 job-years, where a job-year is one job with a duration of one year.

² Value added represents the total income generated by economic activity stemming from construction of the desalination project and is the sum of income earned by labor, income earned by capital, and income paid to property, sales, and other indirect business taxes. At the state and national levels, value added is synonymous with gross domestic product.

Augmentation Fund (16.5%), Huntington Beach General Fund (15.6%), Coast Community College General Fund (9.3%), Orange County General Fund (5.9%), and other Orange County Special Purpose Funds (8.4%) (See Figure 5).³

- Approximately 23% of the \$14.6 million of sales tax revenue generated in Orange County during the construction phase would be distributed to local and county governments in Orange County. The remaining 77% would go to the state general fund.

Table 1.
Summary of Construction Phase Economic Impacts
of Huntington Beach Desalination Project

Regional Impacts^{1/}	Orange County	Elsewhere in California	Elsewhere in United States	Total Impact
Employment (Job-Year) ^{2/}	7,248	2,048	2,948	12,244
Average Labor Compensation (\$/Job-Year) ^{3/}	\$77,482	\$76,873	\$68,066	\$75,113
Regional Value Added (million \$)	\$817	\$259	\$313	\$1,389
Indirect Business Tax Receipts (million \$)	\$38	\$14	\$17	\$70
1/ All dollar amounts are in 2020 constant dollars.				
2/ A Job-Year is one job with a duration of one year.				
3/ Labor compensation is the sum of wages and benefits.				

³ Based on annual tax increment ratios for Tax Rate Area 04001, excluding redevelopment factors and additional debt service, per Orange County Assessor 2019/20 Annual Tax Increment Tables.

Figure 1. Total Job-Years during Construction Phase

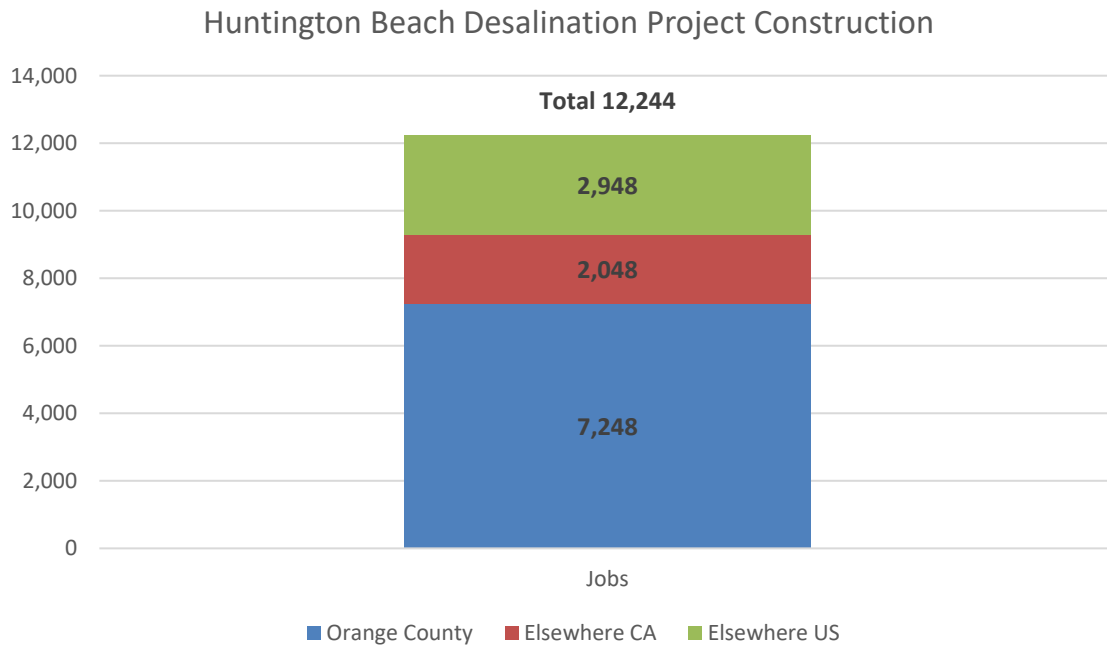


Figure 2. Average Labor Compensation during Construction Phase

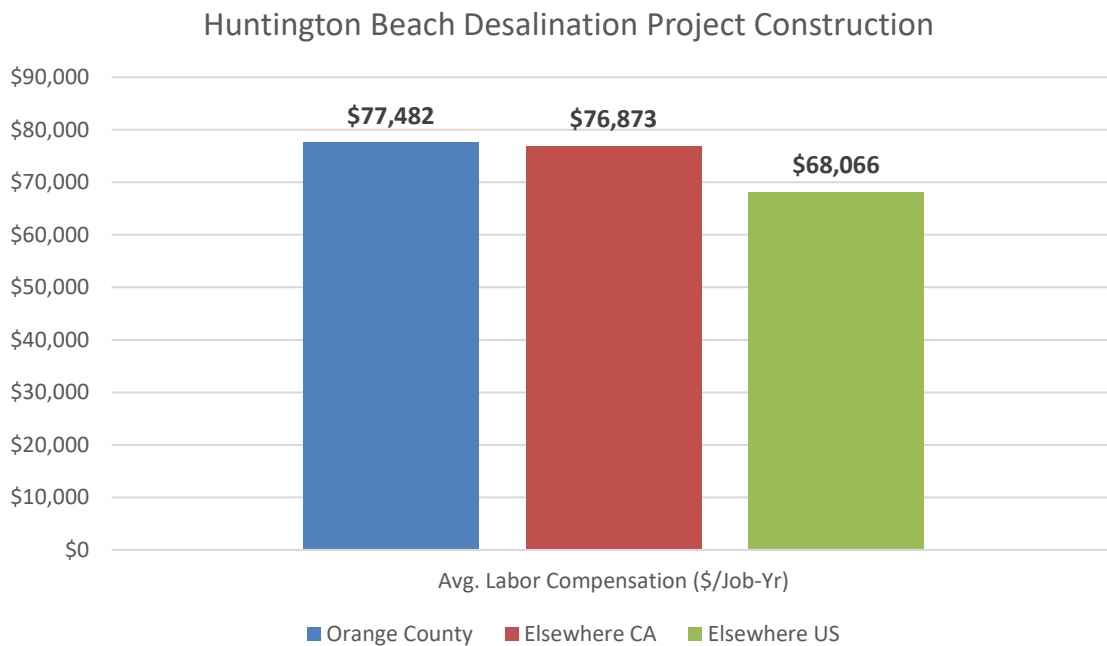


Figure 3. Regional Value Added during Construction Phase

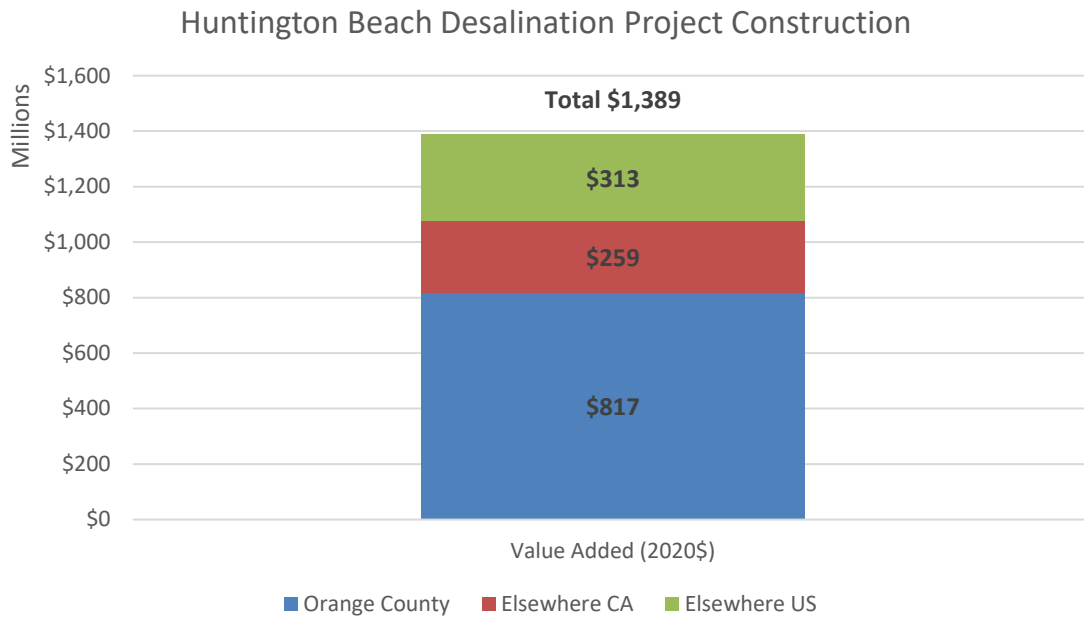


Figure 4. Indirect Business Tax Revenue during Construction Phase

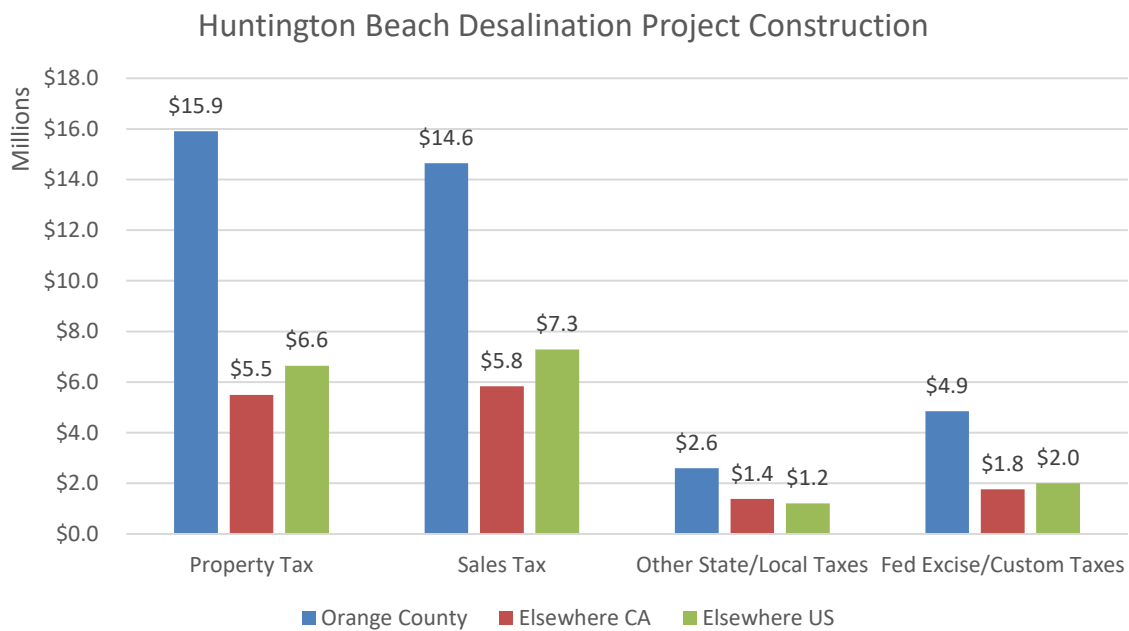
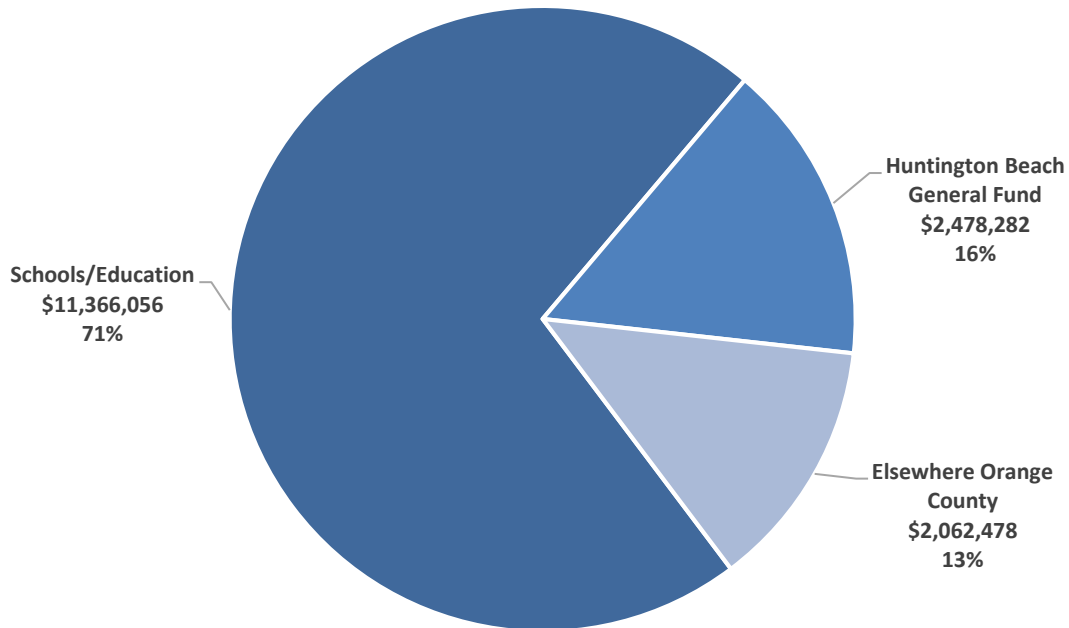


Figure 5. Construction Phase Orange County Property Tax Revenue Breakdown



1.2 Summary of Findings: Project Operations Phase

While the regional economic stimulus from construction spending would persist only during the period of construction, impacts associated with the project’s operations would be of a more permanent nature. These impacts are summarized in Table 2 and Figures 5-8 and include the following:

- Direct, indirect, and induced economic activity stemming from project operations would support a total of 282 jobs annually. Approximately 79% of these jobs would be located in Orange County; 12% would be located elsewhere in California; and 9% would be located elsewhere in the United States (see Figure 6).
- Jobs supported during project operations would be high paying, with annual wages and benefits averaging \$130,000 in Orange County, \$76,000 elsewhere in California, and \$66,000 elsewhere in the United States (see Figure 7). The higher Orange County labor

compensation reflects both the county's higher cost of living and the fact that many of the jobs would be drawn from the engineering and other professional services sectors.

- Direct, indirect, and induced economic activity stemming from project operation would generate \$59 million in value added annually, of which 88% would accrue in Orange County, 7% would accrue elsewhere in California, and 5% would accrue elsewhere in the United States (see Figure 8).
- Direct, indirect, and induced economic activity stemming from project operation would generate approximately \$11.4 million in indirect business tax revenue annually, primarily from property and sales taxes. Most of this tax revenue (96%) would be generated in Orange County (see Figure 9).
- Almost all of the \$8.6 million in annual Orange County property tax payments would originate in the City of Huntington Beach. This revenue is expected to be allocated to the Huntington Beach Elementary General Fund (22.3%), Huntington Beach Union High General Fund (22%), Educational Revenue Augmentation Fund (16.5%), Huntington Beach General Fund (15.6%), Coast Community College General Fund (9.3%), Orange County General Fund (5.9%), and other Orange County Special Purpose Funds (8.4%) (see Figure 10).
- Once the Huntington Beach Desalination Project is fully constructed and enters the operations phase, it is expected to be the single largest taxpayer in the City of Huntington Beach with a taxable assessed value of over \$800 million, more than double the second largest property taxpayer in the city which had a taxable assessed value of \$374 million in FY 2019.⁴ The \$8.6 million in property taxes paid by the project within Orange County would represent an approximately 9.7% increase in the City of Huntington Beach property

⁴ Analysis based on the *City of Huntington Beach Top Ten Property Taxpayers* reported in the city's Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2019 (p. 179).

taxes and a 3.7% increase in the city’s total General Fund revenue.⁵ The project is also expected to be the eighth largest property taxpayer in Orange County once it enters the operations phase.⁶

- Approximately 23% of the \$1.8 million of sales tax revenue generated annually in Orange County during the operations phase would be distributed to local and county governments in Orange County. The remaining 77% would go to the state general fund.

Table 2.
Summary of Annual Impacts from Project Operations

Regional Impacts^{1/}	Orange County	Elsewhere in California	Elsewhere in United States	Total Impact
Annual Employment (Jobs)	225	33	25	282
Average Labor Compensation (\$/Job) ^{2/}	\$129,889	\$75,658	\$65,830	\$117,926
Regional Value Added (million \$)	\$52.1	\$4.4	\$2.8	\$59.3
Indirect Business Tax Receipts (million \$)	\$11.4	\$0.3	\$0.2	\$11.9
1/ All dollar amounts are in 2020 constant dollars.				
2/ Labor compensation is the sum of wages and benefits.				

⁵ Based on the General Fund revenue in the city’s FY 2019/2020 Adopted Budget. This assumes all \$8.6 million collected by Orange County is sent to the Huntington Beach General Fund before being apportioned in accordance with footnote 3 above.

⁶ Analysis based on the *Principal Property Taxpayers* reported in the county’s Comprehensive Annual Financial Report for the Year Ended June 30, 2019 (p. 212).

Figure 6. Annual Employment during Operations Phase

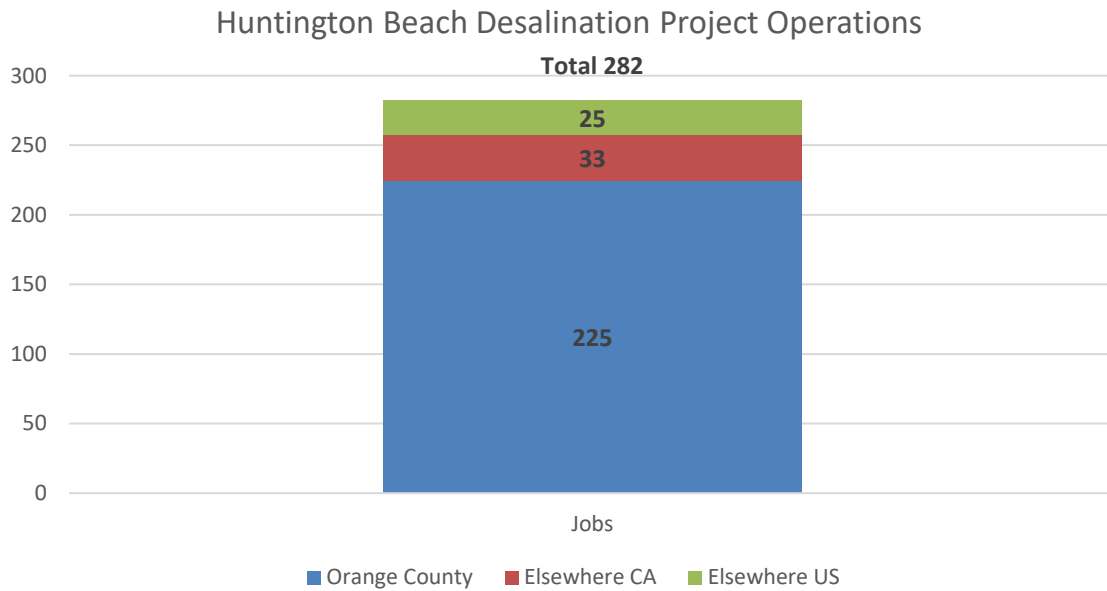


Figure 7. Average Labor Compensation during Operations Phase

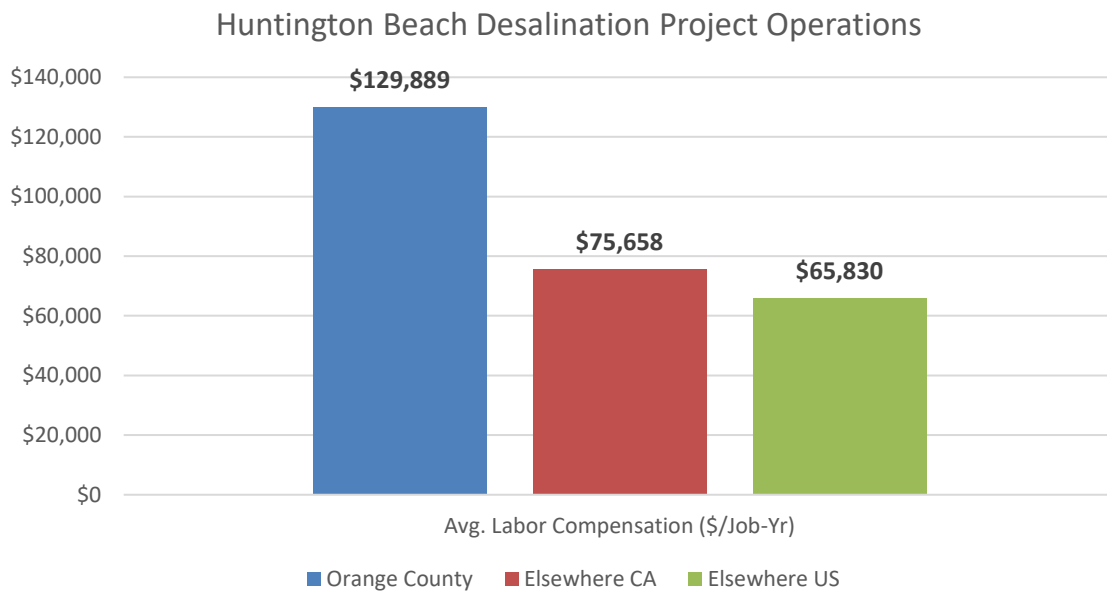


Figure 8. Annual Regional Value Added during Operations Phase

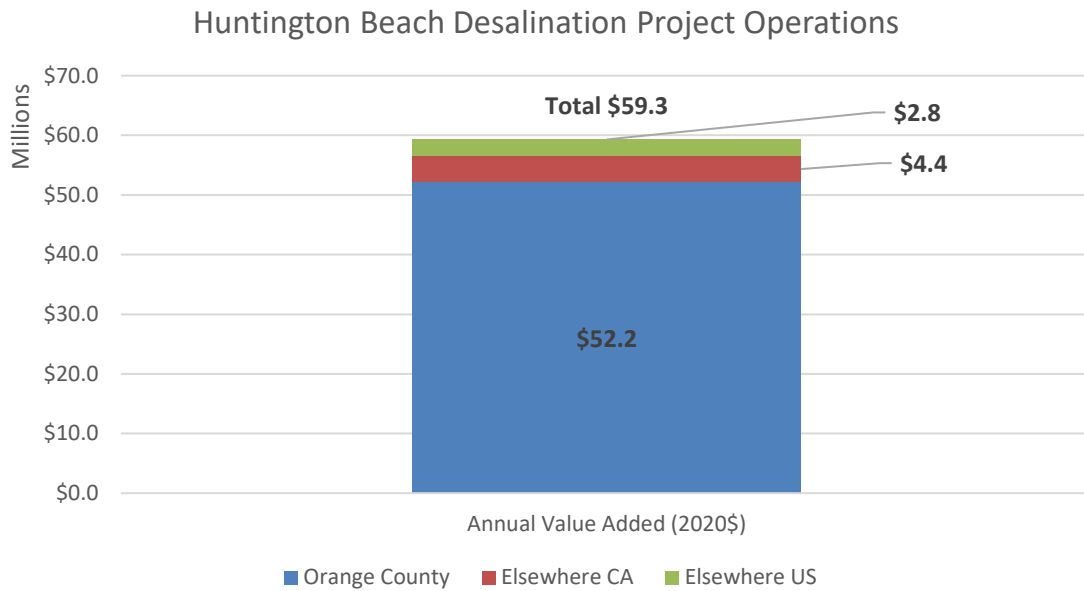


Figure 9. Annual Indirect Business Tax Revenue during Operations Phase

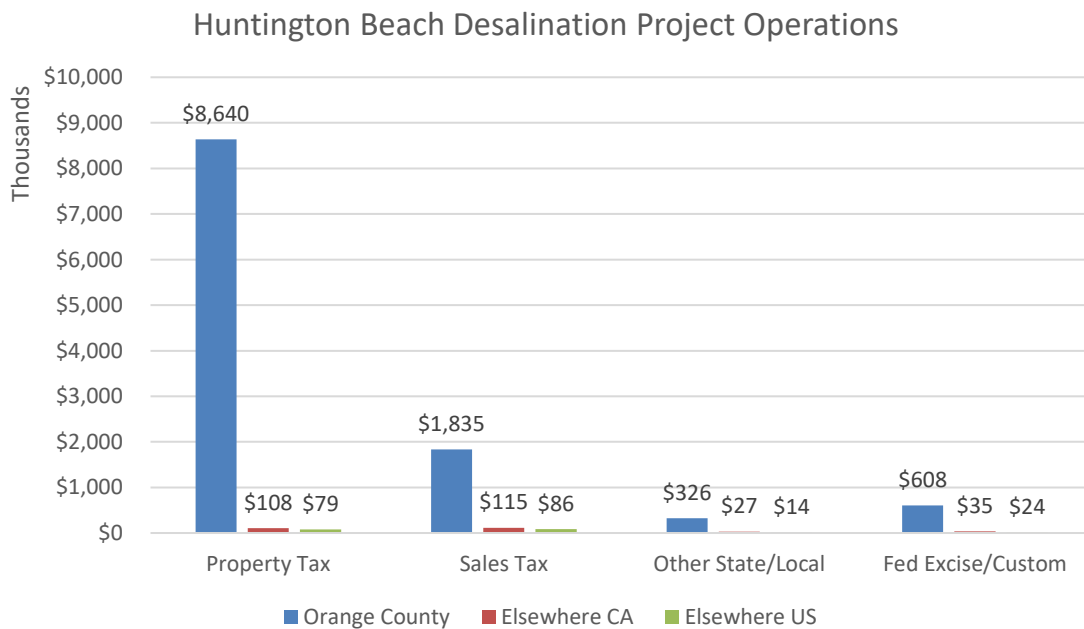
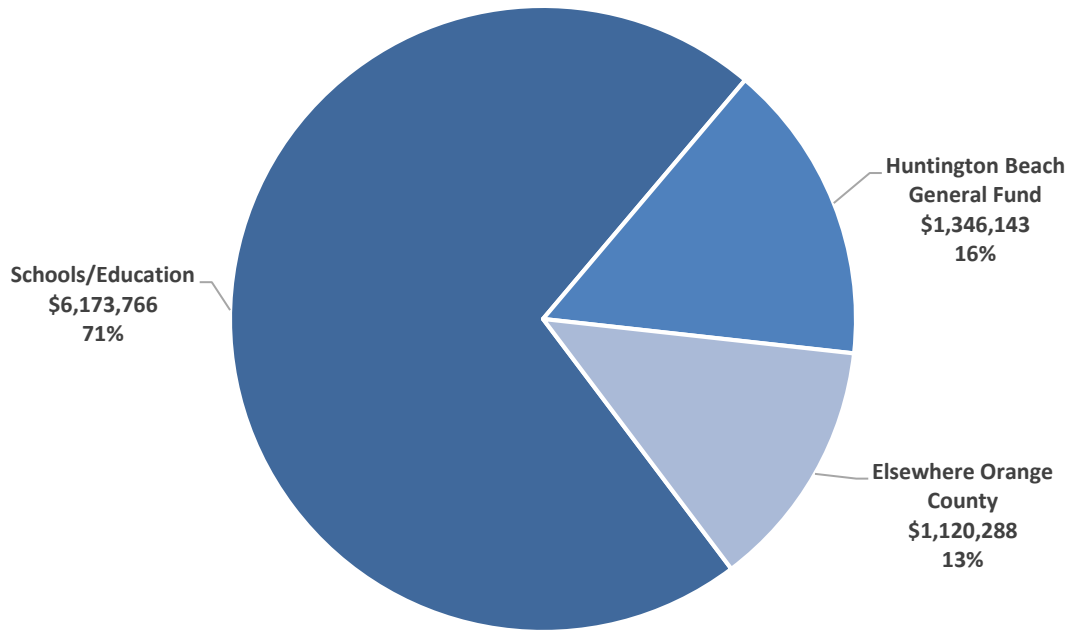


Figure 10. Operations Phase Orange County Property Tax Annual Revenue Breakdown



2. Procurement of Equipment and Services

Construction and operation of the proposed desalination project would result in significant investment and expenditure at the local, state, and national level. Because of the depth and breadth of the Orange County's economy, a sizeable proportion of materials, equipment, and services required for construction and operations would be procured locally. Consequently, the project would provide significant support for local employment and income.

2.1 Procurement during Construction Phase of Project

Table 3 shows the estimated construction expenditures for the proposed desalination project that would occur within Orange County, elsewhere in California, and elsewhere outside of California. Approximately 61% of total construction spending is expected to occur within Orange County. This amounts to approximately \$844 million in local expenditure over the four-year construction period. Approximately 10% of total construction spending is expected to occur elsewhere in California. This amounts to an additional \$140 million in construction spending that would directly benefit California's economy over the four-year construction period. The remaining 29% of construction spending is expected to occur outside of California. The majority of this expenditure would occur within the continental United States thereby benefitting the national economy. The regional expenditures shown in Table 3 were used to calculate the employment, income, and fiscal impacts during the construction phase summarized in Table 1.

2.2 Procurement during Operations Phase of Project

Table 4 shows a breakdown of annual operating costs for the proposed project. Expected annual operations and maintenance costs would be about \$59 million. The desalination plant would employ approximately 30 full-time equivalent positions. Approximately 83% of annual operating expenditures are expected to occur within Orange County; 4% would occur elsewhere in California; 8% would occur elsewhere in the United States; and 5% would occur outside of the United States. The cost and employment estimates in Table 4 were used to calculate the

employment, income, and fiscal impacts during the plant operations phase summarized in Table 2.

**Table 3.
Construction Cost Breakdown for Proposed Huntington Beach Desalination Project**

Project Capital Cost Breakdown									
Activity	Project Estimated Cost (2020\$)	Orange County		Elsewhere in California		Elsewhere in the United States		International	
		Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars
Engineering	\$79,257,460	79%	\$62,898,444	2%	\$1,614,848	15%	\$12,068,134	3%	\$2,676,034
Materials & Equipment	\$355,126,214	15%	\$53,068,335	25%	\$88,343,183	21%	\$75,441,408	39%	\$138,273,287
Construction	\$870,146,565	77%	\$666,729,218	5%	\$43,507,328	14%	\$119,966,783	5%	\$39,943,236
Financing Fees	\$19,987,877	15%	\$2,998,182	35%	\$6,995,757	50%	\$9,993,939	0%	\$0
Other Costs	\$68,303,409	85%	\$58,057,897	0%	\$0	15%	\$10,245,511	0%	\$0
Total	\$1,392,821,524	61%	\$843,752,077	10%	\$140,461,116	16%	\$227,715,774	13%	\$180,892,557

Table 4.
Annual Operating Costs of Proposed Huntington Beach Desalination Project

Operating Category	Est. Annual Cost (\$'000s 2020\$)	Expenditure Allocation (estimate)			
		Orange County	Elsewhere in California	Elsewhere in the United States	International
Power	\$21,136	100%	0%	0%	0%
3rd Party Operator	\$19,531	80%	0%	5%	15%
Other Site Costs ^{1/}	\$14,808	60%	15%	25%	0%
Mitigation & Other	\$2,942	100%	0%	0%	0%
Total	\$58,416	\$48,586	\$2,221	\$4,678	\$2,930
Number of Plant Employees	30				
1/Site management, insurance, property taxes, and other fixed site costs					

3. Regional Economic Impact Analysis

Regional economic impacts were estimated using the IMPLAN⁷ input-output models for (1) Orange County, (2) elsewhere in California, and (3) elsewhere in the United States. The Orange County and elsewhere in California models were linked into a multi-regional input-output (MRIO) model so that economic flows between Orange County and the rest of California could be modeled explicitly. Ideally, the California MRIO model would be linked to the elsewhere in the United States model as well, but doing so was cost prohibitive and beyond the scope of this analysis.⁸ By not linking the elsewhere in the United States model to the California MRIO model, the indirect expenditure flows out of California to the rest of the U.S. economy are not captured. Consequently, the economic impacts for elsewhere in the United States are somewhat understated in this analysis.

Economists typically organize regional economic impacts into three categories: (1) direct impacts, (2) indirect impacts, and (3) induced impacts. Direct impacts refer to the values of income and employment generated by the sectors (e.g., the construction and utility industries) involved in construction and operation of the project. Indirect impacts refer to income and employment associated with purchases of goods and services from support industries by the direct activity -- for example, building materials supplied by a local construction supply house. Induced impacts refer to economic activity generated by expenditure of income earned in the direct and indirect rounds of spending -- for example, the purchase of food and other household goods by employees of the desalination plant and its suppliers.

The IMPLAN modeling system uses data from the national benchmark input-output (I-O) tables and combines this with county-level wage and employment estimates developed from ES202 and County Business Patterns 4-digit data. Bureau of Economic Analysis Regional Economic Information System (REIS) 2-digit employment and income data are used to

⁷ <https://www.implan.com/>

⁸ Doing so requires constructing the national model from individual state data files. This would require purchasing all of the IMPLAN state data files which is cost prohibitive.

distribute county-level self-employment to industry sectors. Regional purchase coefficients and regional value-added/output ratios are used to localize the national absorption and by-product matrices from the benchmark I-O tables. All final demand and value-added components in the IMPLAN model are region specific.

The construction and operations expenditure estimates summarized in Tables 3 and 4 were used in conjunction with the IMPLAN software to calculate the results summarized in Tables 1 and 2. The tables that follow provide a more detailed view of the IMPLAN analysis results, showing the employment, income, and fiscal impacts for eight aggregate economic sectors.⁹

3.1 Project Construction Phase IMPLAN Detail Tables

Tables 5, 6, and 7 show changes in regional employment, labor income, and value added, respectively, by economic sector during the construction phase of the project. Regional value added, the sum of labor and other income and indirect business tax revenue, is synonymous with gross domestic product. The values in these tables are totals over the length of the construction period. Economic impacts would phase out upon completion of construction. All dollar amounts are in 2020 constant dollars.

⁹ The IMPLAN model has a total of 546 economic sectors. Model results can be aggregated or disaggregated according to user needs. By default, IMPLAN software aggregates results into eight categories: (1) Agriculture, (2) Mining, (3) Construction, (4) Manufacturing, (5) TIPU, (6) Trade (retail and wholesale), (7) Service, and (8) Government (local, state, and federal). TIPU is an acronym for Transportation, Information, and Public Utilities.

Table 5.
Project Construction Phase: Job-Year Impacts

Orange County

Sector	Direct	Indirect	Induced	Total
Agriculture	0	0	1	1
Mining	0	6	0	6
Construction	3,689	5	15	3,709
Manufacturing	106	39	8	153
TIPU	0	92	89	180
Trade	0	177	336	513
Service	370	737	1,557	2,664
Government	1	8	13	22
Total	4,166	1,064	2,018	7,248

Elsewhere California

Sector	Direct	Indirect	Induced	Total
Agriculture	0	5	6	10
Mining	0	21	2	22
Construction	260	5	5	269
Manufacturing	179	366	33	579
TIPU	0	125	62	186
Trade	0	86	99	184
Service	35	282	460	777
Government	0	11	10	21
Total	474	898	676	2,048

Elsewhere United States

Sector	Direct	Indirect	Induced	Total
Agriculture	0	4	21	25
Mining	0	11	3	14
Construction	766	4	9	779
Manufacturing	162	165	49	376
TIPU	0	73	69	141
Trade	0	95	175	270
Service	150	371	800	1,320
Government	0	9	13	22
Total	1,077	733	1,138	2,948

TIPU = Transportation, Information, and Public Utilities

Table 6.
Project Construction Phase: Labor Income Impacts

Orange County

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$9,128	\$25,979	\$35,107
Mining	\$0	\$62,482	\$1,739	\$64,221
Construction	\$312,401,393	\$419,301	\$1,201,722	\$314,022,415
Manufacturing	\$10,416,208	\$3,337,478	\$624,431	\$14,378,116
TIPU	\$0	\$6,140,680	\$6,012,366	\$12,153,047
Trade	\$0	\$18,827,791	\$17,918,971	\$36,746,762
Service	\$38,135,535	\$53,319,212	\$89,866,784	\$181,321,530
Government	\$136,938	\$936,845	\$1,776,389	\$2,850,173
Total	\$361,090,073	\$83,052,918	\$117,428,382	\$561,571,372

Elsewhere California

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$270,371	\$337,920	\$608,291
Mining	\$0	\$1,415,068	\$75,870	\$1,490,937
Construction	\$19,284,166	\$335,804	\$336,287	\$19,956,256
Manufacturing	\$17,222,666	\$29,477,073	\$2,418,914	\$49,118,654
TIPU	\$0	\$11,424,187	\$5,892,510	\$17,316,696
Trade	\$0	\$7,337,323	\$5,226,821	\$12,564,144
Service	\$4,180,123	\$22,063,376	\$27,904,971	\$54,148,468
Government	\$0	\$1,161,138	\$1,095,380	\$2,256,518
Total	\$40,686,955	\$73,484,340	\$43,288,670	\$157,459,965

Elsewhere United States

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$173,841	\$634,085	\$807,927
Mining	\$0	\$769,132	\$217,329	\$986,461
Construction	\$51,083,060	\$292,488	\$553,604	\$51,929,151
Manufacturing	\$15,062,764	\$13,417,924	\$3,718,268	\$32,198,957
TIPU	\$0	\$6,313,418	\$6,059,945	\$12,373,362
Trade	\$0	\$8,021,006	\$8,200,486	\$16,221,492
Service	\$14,641,722	\$25,546,017	\$43,864,199	\$84,051,939
Government	\$0	\$885,490	\$1,190,325	\$2,075,815
Total	\$80,787,546	\$55,419,316	\$64,438,242	\$200,645,104

TIPU = Transportation, Information, and Public Utilities

Table 7.
Project Construction Phase: Value Added Impacts

Orange County

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$9,253	\$20,380	\$29,633
Mining	\$0	\$242,728	\$18,120	\$260,847
Construction	\$395,538,183	\$600,828	\$1,850,965	\$397,989,975
Manufacturing	\$21,774,238	\$5,414,144	\$1,130,252	\$28,318,634
TIPU	\$0	\$11,423,591	\$14,051,921	\$25,475,512
Trade	\$0	\$34,813,008	\$31,143,225	\$65,956,234
Service	\$47,605,635	\$78,720,266	\$169,842,610	\$296,168,512
Government	\$150,000	\$952,506	\$1,910,719	\$3,013,225
Total	\$465,068,056	\$132,176,324	\$219,968,193	\$817,212,572

Elsewhere California

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$314,481	\$542,576	\$857,057
Mining	\$0	\$3,115,358	\$355,953	\$3,471,311
Construction	\$24,152,640	\$473,955	\$501,679	\$25,128,275
Manufacturing	\$35,347,991	\$47,285,412	\$4,549,044	\$87,182,447
TIPU	\$0	\$17,582,379	\$11,182,536	\$28,764,915
Trade	\$0	\$14,459,940	\$9,404,924	\$23,864,865
Service	\$5,852,323	\$30,609,514	\$50,493,683	\$86,955,520
Government	\$0	\$1,247,364	\$1,189,997	\$2,437,361
Total	\$65,352,953	\$115,088,404	\$78,220,393	\$258,661,751

Elsewhere United States

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$200,476	\$958,913	\$1,159,389
Mining	\$0	\$2,112,539	\$708,718	\$2,821,256
Construction	\$62,974,266	\$395,291	\$781,738	\$64,151,295
Manufacturing	\$27,701,364	\$22,846,557	\$7,928,973	\$58,476,893
TIPU	\$0	\$11,127,448	\$12,236,720	\$23,364,168
Trade	\$0	\$15,563,251	\$14,456,061	\$30,019,313
Service	\$18,975,305	\$36,100,010	\$75,200,846	\$130,276,161
Government	\$0	\$1,028,612	\$1,542,172	\$2,570,785
Total	\$109,650,935	\$89,374,184	\$113,814,141	\$312,839,260

TIPU = Transportation, Information, and Public Utilities

3.2 Project Operations Phase IMPLAN Detail Tables

Tables 8, 9, and 10 show changes in regional employment, labor income, and value added, respectively, by economic sector during the operations phase of the project. Regional value added, defined as the sum of labor and other income and indirect business tax revenue, is synonymous with gross domestic product. The values in these tables are annual and would persist for as long as the plant remains in operation. Thus, these changes represent a more permanent increase in economic activity for the region. All dollar amounts are in 2020 constant dollars.

Table 8.
Project Operations Phase: Job Impacts

Orange County

Sector	Direct	Indirect	Induced	Total
Agriculture	0	0	0	0
Mining	0	0	0	0
Construction	0	1	1	2
Manufacturing	0	0	0	1
TIPU	34	9	5	47
Trade	0	2	17	19
Service	23	36	81	140
Government	14	2	1	16
Total	71	50	105	225

Elsewhere California

Sector	Direct	Indirect	Induced	Total
Agriculture	0	0	0	0
Mining	0	2	0	2
Construction	0	0	0	0
Manufacturing	0	1	1	3
TIPU	0	5	2	7
Trade	0	0	2	2
Service	3	7	9	18
Government	0	1	0	1
Total	3	16	14	33

Elsewhere United States

Sector	Direct	Indirect	Induced	Total
Agriculture	0	0	0	0
Mining	0	0	0	0
Construction	0	0	0	0
Manufacturing	0	0	0	1
TIPU	3	1	1	5
Trade	0	0	1	2
Service	4	6	7	17
Government	0	0	0	0
Total	8	8	9	25

TIPU = Transportation, Information, and Public Utilities

Table 9.
Project Operations Phase: Labor Income Impacts

Orange County

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$127	\$1,326	\$1,454
Mining	\$0	\$494	\$80	\$575
Construction	\$0	\$64,402	\$62,001	\$126,404
Manufacturing	\$0	\$22,458	\$29,841	\$52,299
TIPU	\$14,525,827	\$1,324,095	\$308,370	\$16,158,292
Trade	\$0	\$191,531	\$917,872	\$1,109,403
Service	\$2,227,557	\$2,521,087	\$4,672,793	\$9,421,437
Government	\$1,973,755	\$238,447	\$90,958	\$2,303,160
Total	\$18,727,139	\$4,362,644	\$6,083,241	\$29,173,023

Elsewhere California

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$2,357	\$10,348	\$12,706
Mining	\$0	\$86,043	\$3,327	\$89,371
Construction	\$0	\$20,592	\$6,655	\$27,247
Manufacturing	\$0	\$124,551	\$94,069	\$218,620
TIPU	\$0	\$437,900	\$183,948	\$621,848
Trade	\$0	\$38,727	\$94,043	\$132,770
Service	\$193,411	\$518,864	\$556,635	\$1,268,909
Government	\$0	\$99,178	\$26,062	\$125,240
Total	\$193,411	\$1,328,211	\$975,087	\$2,496,710

Elsewhere United States

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$756	\$5,150	\$5,906
Mining	\$0	\$7,204	\$1,766	\$8,970
Construction	\$0	\$13,884	\$4,502	\$18,386
Manufacturing	\$0	\$19,905	\$30,215	\$50,121
TIPU	\$293,835	\$75,535	\$49,264	\$418,634
Trade	\$0	\$21,502	\$66,635	\$88,137
Service	\$286,673	\$373,866	\$356,907	\$1,017,446
Government	\$0	\$15,320	\$9,675	\$24,995
Total	\$580,508	\$527,971	\$524,115	\$1,632,594

TIPU = Transportation, Information, and Public Utilities

Table 10.
Project Operations Phase: Value Added Impacts

Orange County

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$129	\$1,075	\$1,205
Mining	\$0	\$8,075	\$1,514	\$9,591
Construction	\$0	\$94,817	\$99,862	\$194,678
Manufacturing	\$0	\$60,667	\$58,844	\$119,510
TIPU	\$23,303,195	\$3,853,590	\$767,803	\$27,924,589
Trade	\$0	\$683,337	\$2,131,236	\$2,814,573
Service	\$3,158,074	\$3,807,904	\$9,767,090	\$16,733,067
Government	\$3,904,275	\$376,073	\$87,004	\$4,367,351
Total	\$30,365,543	\$8,884,593	\$12,914,428	\$52,164,562

Elsewhere California

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$3,540	\$18,014	\$21,553
Mining	\$0	\$337,710	\$15,634	\$353,344
Construction	\$0	\$29,140	\$9,839	\$38,979
Manufacturing	\$0	\$330,996	\$169,962	\$500,957
TIPU	\$0	\$679,952	\$335,066	\$1,015,017
Trade	\$0	\$115,903	\$172,132	\$288,035
Service	\$305,017	\$714,469	\$958,293	\$1,977,778
Government	\$0	\$141,580	\$26,287	\$167,867
Total	\$305,017	\$2,353,289	\$1,705,226	\$4,363,533

Elsewhere United States

Sector	Direct	Indirect	Induced	Total
Agriculture	\$0	\$1,011	\$7,788	\$8,800
Mining	\$0	\$17,479	\$5,758	\$23,238
Construction	\$0	\$18,765	\$6,357	\$25,122
Manufacturing	\$0	\$42,815	\$64,417	\$107,232
TIPU	\$559,762	\$134,282	\$99,468	\$793,512
Trade	\$0	\$47,005	\$117,466	\$164,471
Service	\$459,798	\$548,962	\$611,738	\$1,620,498
Government	\$0	\$23,143	\$12,530	\$35,673
Total	\$1,019,559	\$833,463	\$925,523	\$2,778,545

TIPU = Transportation, Information, and Public Utilities

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