

Chapter 5B: Alternative Water Supply Annual Report

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INTRODUCTION

Due to the limitations that exist on development of traditional freshwater sources within the South Florida Water Management District (SFWMD or District), most future increases in water needs will be met primarily through development of alternative water sources. Alternative water sources include nontraditional water supplies such as brackish groundwater, surface water captured during wet weather, and expansion of reclaimed water systems. The District has had a very successful grant program to support development of Alternative Water Supply (AWS) projects for more than a decade. This program has invested close to \$170 million since 1996 for the construction of almost 400 AWS projects.

In 2005, the Florida legislature revised state law and created the Water Protection and Sustainability Program (WPSP), or Senate Bill 444, that established annually recurring state funding (that must be matched by the water management districts) to support AWS development. The new legislation requires each water management district to submit an annual report to the Florida legislature and governor on AWS funding efforts (373.1961(2), Florida Statutes (F.S.)). State and matching funds are administered through the District's Alternative Water Supply Funding Program and are only available for construction.

Prior to the 2005, the District had provided annual grants to entities pursuant to Chapter 373.1961, F.S., which directed the water management districts to share their *ad valorem* tax revenues with public and private entities willing to develop suitable alternative water resources. During the three years preceding the new legislation, Fiscal Years 2003 through 2005 (FY2003–FY2005), the District funded 79 projects with \$15 million that created 70 million gallons per day (mgd) of additional alternative water capacity. In FY2006 and FY2007, the District approved \$85 million in funding (including WPSP funds) for 142 projects that created 196 mgd of additional alternative water capacity.

FISCAL YEAR 2008 PROJECT FUNDING

During the FY2008 solicitation process, the District received 79 funding applications. In September 2007, the District Governing Board approved \$45.9 million to fund 72 projects for FY2008, which are expected to create an additional 81 mgd and bring the anticipated total water made available under the new program to 277 mgd (for FY2006–FY2008). This includes three Big Cypress Basin Board projects. **Figure 5B-1** illustrates the geographical distribution of AWS projects funded in FY2008 and **Table 5B-1** summarizes project details. Funding was awarded for construction that occurs between October 1, 2007 and August 29, 2008. The \$45.9 million total funding includes \$15.6 million in FY2008 state funding, which represents a \$2.4 million

reduction of the anticipated \$18 million from the WSPSP, \$18 million of matching District *ad valorem* funds, and unspent funds from the prior two years.

Because many projects are constructed over a number of years, water made available was reported in two parts: the quantity of water to be made available during this phase (by August 29, 2008) and the total water made available upon project completion. Of the 72 projects funded, 26 are multiyear projects. Eight of the multiyear projects will be completed in FY2008, while it is expected that the remaining 18 projects will require reapplication for funding in FY2009. Additionally, distribution/transmission capacity made available by reclaimed water pipelines and pump stations is not included in the water made available, as this water would have been counted during the treatment plant construction (see footnotes of **Table 5B-1**).

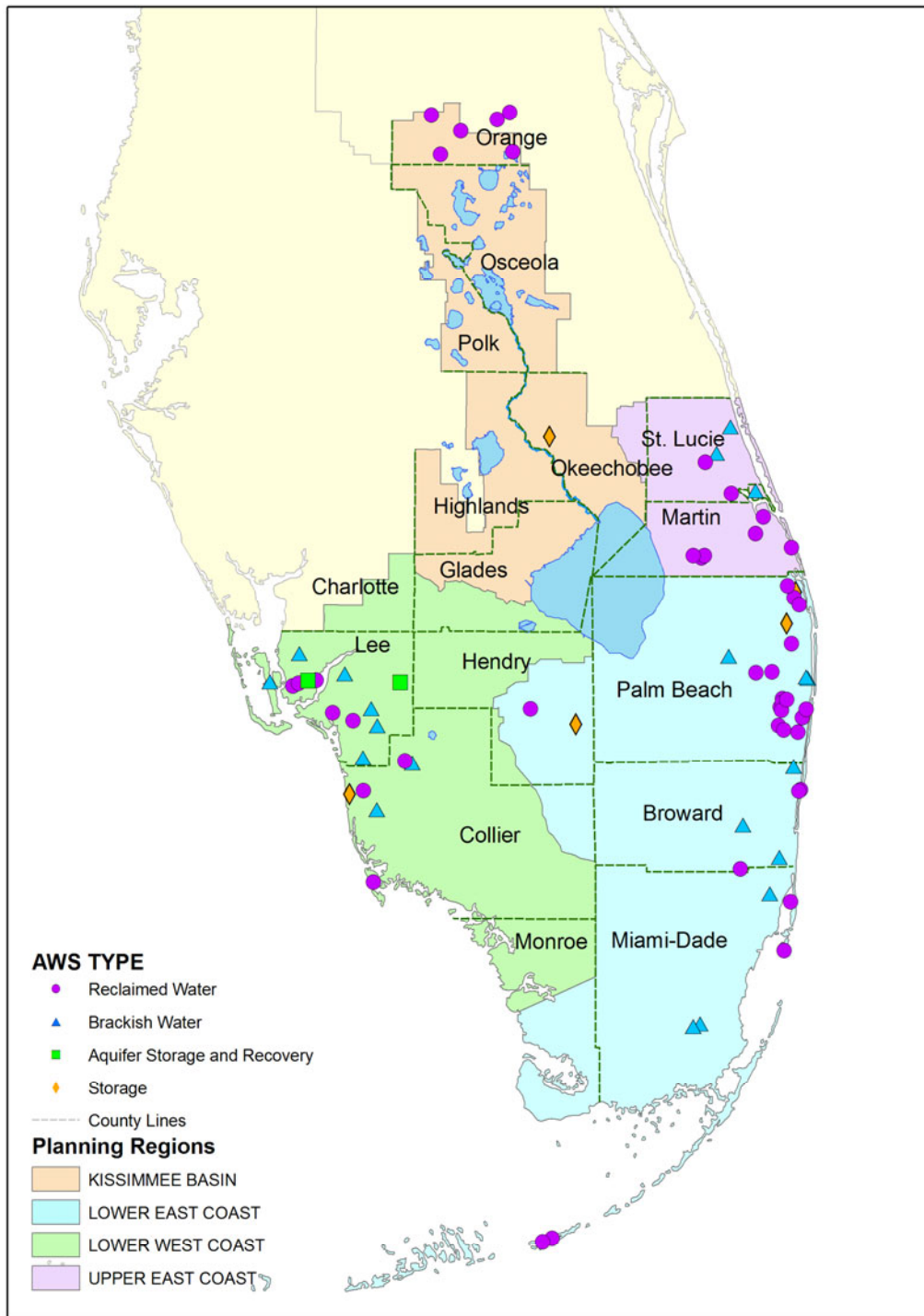


Figure 5B-1. Location of Alternative Water Supply (AWS) projects funded for Fiscal Year 2008 (FY2008).

Table 5B-1. Alternative Water Supply projects for FY2008.

Proposal Number	Project Name	Entity Name	AWS Source	Region	County	FY2008 Start Date	Phase Water Made Available (mgd)	Total Water Made Available (mgd)	FY2008 Construction Cost	State and SFWMD Funding
KB-9	Resubmission of Hidden Springs Reclaimed Water Storage and Re-pump Facility	Orange County Utilities	Reclaimed	KB	Orange	10/07	3.00 [a]	3.00 [a]	\$700,000	\$210,000
KB-10	Eastern Regional Reclaimed Water Distribution System	Orange County Utilities	Reclaimed	KB	Orange	10/07	0.00	2.31 [a]	\$501,189	\$185,900
KB-11	Resubmission of South Service Area Reuse System Expansion - International Drive, Phase 2 - Sewer Pipeline Conversion to Reclaimed Water Main	Orange County Utilities	Reclaimed	KB	Orange	10/07	1.00 [a]	1.00 [a]	\$1,552,500	\$420,800
KB-12	SE Water Supply Augmentation Project	Orange County Utilities	Surface/Stormwater	KB	Orange	10/07	0.00	5.14 [a]	\$2,220,000	\$823,800
KB-13	Resubmission of Universal South Reuse Transmission Main (Canadian Court Reuse Transmission Main, Phase 2)	Orange County Utilities	Reclaimed	KB	Orange	10/07	3.00 [a]	12.00 [a]	\$1,500,000	\$299,200
KB-14	Eastern Regional Reclaimed Water Distribution System	Orlando Utility Commission	Reclaimed	KB	Orange	10/07	10.30 [a]	32.80 [a]	\$9,408,000	\$3,491,300
Total for Orange County							0.00	0.00	\$15,881,689	\$5,431,000
KB-16	Resubmission of Four K Ranch - Lippincott Farm Stormwater Recycling System	Four K Ranch, Inc.	Surface/Stormwater	KB	Okeechobee	10/07	1.20	1.20	\$272,520	\$81,700

[a] Distribution type project, water counted in plant capacity, not added to the table total

[b] Support facility/phased project; water previously counted or in future years, not added to the table total

Note: Resubmissions – a 25% funding reduction was applied to previously funded work that was not completed and is being resubmitted for funding.

Table 5B-1. Continued.

Proposal Number	Project Name	Entity Name	AWS Source	Region	County	FY2008 Start Date	Phase Water Made Available (mgd)	Total Water Made Available (mgd)	FY2008 Construction Cost	State and SFWMD Funding
Total for Okeechobee County							1.20	1.20	\$272,520	\$81,700
Kissimmee Basin Total							1.20	1.20	\$16,154,209	\$5,512,700
UEC-14	Willoughby Golf Club Reclaimed Water Main	Willoughby Golf Club	Reclaimed	UEC	Martin	10/07	0.25 [a]	0.25 [a]	\$192,466	\$71,400
UEC-16	Irrigation Quality Water System Improvements Program, Phase 3	South Martin Regional Utility	Reclaimed	UEC	Martin	10/07	1.40 [a]	1.40 [a]	\$665,000	\$246,700
UEC-21	WWTP Reuse Upgrades, Phase 2	Indiantown Company	Reclaimed	UEC	Martin	10/07	1.00	1.00	\$3,425,000	\$246,200
UEC-22	Heritage Preserve Offsite Reclaimed Water Main, Indiantown	Centex Corp., Indiantown Company	Reclaimed	UEC	Martin	10/07	0.18 [a]	0.18 [a]	\$452,612	\$167,900
UEC-23	Reclaimed Water Main to the Cogeneration Power Plant	Indiantown Company	Reclaimed	UEC	Martin	10/07	2.00 [a]	2.00 [a]	\$1,440,800	\$534,600
UEC-25	Conversion of 12" by 7,500 LF Force Main to Irrigation Quality Main	Martin County Utilities	Reclaimed	UEC	Martin	10/07	2.36 [a]	2.36 [a]	\$133,000	\$49,300
Total for Martin County							1.00	1.00	\$6,308,878	\$1,316,100
UEC-18	James E. Anderson Water Treatment Plant Expansion from 6 to 22.5 mgd	Port St. Lucie	Brackish	UEC	St. Lucie	10/07	12.00	16.50	\$9,701,000	\$3,187,500
UEC-19	Glades WWTF Water Reclamation Facility Expansion to 12.0 mgd	Port St. Lucie	Reclaimed	UEC	St. Lucie	10/07	6.00	6.00	\$3,590,000	\$1,436,000
UEC-20	Westport WWTF Water Reclamation Facility Expansion from 2 mgd to 6 mgd (Phase 3)	Port St. Lucie	Reclaimed	UEC	St. Lucie	10/07	4.00	4.00	\$6,275,640	\$1,500,000

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Table 5B-1. Continued.

Proposal Number	Project Name	Entity Name	AWS Source	Region	County	FY2008 Start Date	Phase Water Made Available (mgd)	Total Water Made Available (mgd)	FY2008 Construction Cost	State and SFWMD Funding
UEC-24	FPUA FA-7 and FA-9 Floridan Aquifer Wellheads	Ft. Pierce Utilities Authority	Brackish	UEC	St. Lucie	10/07	2.88 [b]	6.12	\$600,000	\$240,000
Total for St. Lucie County							22.00	32.62	\$20,166,640	\$6,363,500
Upper East Coast Total							23.00	33.62	\$26,475,518	\$7,679,600
LEC-38	Reuse Distribution System Expansion, Service Area II	Pompano Beach	Reclaimed	LEC	Broward	10/07	0.11 [a]	0.11 [a]	\$345,592	\$128,200
LEC-39	Reuse Distribution System Expansion with Atlantic Boulevard Crossing	Pompano Beach	Reclaimed	LEC	Broward	10/07	0.082 [a]	0.082 [a]	\$1,575,840	\$584,700
LEC-55	Water Treatment Plant Expansion, Phase 1 (Construction of 2 Floridan Wells)	Miramar	Brackish	LEC	Broward	10/07	0.00	2.00	\$2,000,000	\$336,000
LEC-58	Resubmission of 4.0 mgd Floridan Reverse Osmosis System Exp., Phase 2	Hollywood	Brackish	LEC	Broward	10/07	4.00	4.00	\$4,615,615	\$1,224,200
LEC-59	West Water Treatment Plant 3 mgd Low Pressure RO Expansio - Phase 1	Deerfield Beach	Brackish	LEC	Broward	10/07	0.00	3.00	\$2,067,251	\$418,000
LEC-60	Sawgrass Floridan Reverse Osmosis Water Treatment Plant (Melaleuca Site)	Sunrise	Brackish	LEC	Broward	10/07	1.00	1.00	\$3,680,000	\$513,500
Total for projects in Broward County							5.00	10.00	\$14,284,298	\$3,204,600
LEC-30	Test/Production Wells and Test/Production R.O. Water Treatment Plant, Phase I	North Miami	Brackish	LEC	Miami-Dade	10/07	0.10	13.00	\$1,840,000	\$97,600

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Table 5B-1. Continued.

Proposal Number	Project Name	Entity Name	AWS Source	Region	County	FY2008 Start Date	Phase Water Made Available (mgd)	Total Water Made Available (mgd)	FY2008 Construction Cost	State and SFWMD Funding
LEC-31	The Aberdeen Reclaim Pipeline Project No. 06-183 - Palm Isles West	Palm Isles West Association	Reclaimed	LEC	Palm Beach	10/07	0.30 [a]	0.30 [a]	\$314,200	\$116,500
LEC-33	West County Energy Center, Phase 2	Florida Power & Light	Brackish	LEC	Palm Beach	10/07	0.00	15.20	\$4,600,000	\$600,000
LEC-34	Ironhorse Stormwater Reuse Project	West Palm Beach	Surface/Stormwater	LEC	Palm Beach	10/07	1.00	1.00	\$1,400,000	\$519,500
LEC-35	Recharge System Improvement	Jupiter	Surface/Stormwater	LEC	Palm Beach	10/07	5.00	10.00	\$1,420,000	\$526,900
LEC-36	3 mgd Pipeline to Transfer Concentrate from Nanofiltration WTP for Blending with Reclaimed Water	Loxahatchee River Env. Control District	Brackish	LEC	Palm Beach	10/07	3.00	3.00	\$550,000	\$204,100
LEC-37	Resubmission of Pump Station Installation/Reclaimed Water Connection	Addison Reserve Country Club	Reclaimed	LEC	Palm Beach	10/07	1.45 [a]	1.45 [a]	\$520,000	\$180,000
LEC-40	Reclaimed Water Treatment and Delivery System Expansion to 24 mgd	So. Central Regional WWT and Disposal Board	Reclaimed	LEC	Palm Beach	10/07	14.00	14.00	\$8,500,000	\$3,400,000
LEC-41	Area 4 Reclaimed Water Distrib. System, Part 2 of 3	Delray Beach	Reclaimed	LEC	Palm Beach	10/07	1.163 [a]	1.163 [a]	\$1,670,000	\$619,700
LEC-42	Phase 1, Reclaimed Water Distribution and Recharge System	Boynton Beach	Reclaimed	LEC	Palm Beach	10/07	0.45 [a]	0.45 [a]	\$4,058,000	\$1,505,900

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LEC-44	Extension of Reclaimed Water to Residential Lots in Plat 1	Valencia Lakes HOA	Reclaimed	LEC	Palm Beach	10/07	0.35 [a]	0.35 [a]	\$536,400	\$199,000
LEC-45	2 mgd Reclaimed Water Pump Station	Jupiter Country Club HOA	Reclaimed	LEC	Palm Beach	10/07	2.00 [a]	2.00 [a]	\$750,000	\$278,300
LEC-46 and 47	4.5 mgd RO Water Treatment Plant and Wellhead Equipment for FAW F-3 (two proposals combined)	Lake Worth	Brackish	LEC	Palm Beach	10/07	0.00	4.50	\$3,264,000	\$1,190,800
LEC-52	Floridan Production Well, #F-2 (Hood RO Plant)	Seacoast Utility Authority	Brackish	LEC	Palm Beach	10/07	0.00	4.30	\$1,200,000	\$104,600
LEC-53	Ponte Vecchio Reclaimed Water Pipeline	Ponte Vecchio HOA	Reclaimed	LEC	Palm Beach	10/07	0.60 [a]	4.50 [a]	\$781,860	\$290,100
LEC-56	Olympia Park Reuse Water System	Wellington	Reclaimed	LEC	Palm Beach	10/07	1.00 [a]	1.00 [a]	\$1,845,000	\$684,600
LEC-57	Boys and Girls Club, Tiger Shark Cove Park Reuse Water System	Wellington	Reclaimed	LEC	Palm Beach	10/07	1.00 [a]	1.00 [a]	\$2,860,000	\$1,061,300
Total for projects in Palm Beach County							23.00	52.00	\$36,619,460	\$12,353,300
LEC-54	Devils Garden Golden Ox Aboveground Storage (4,000,000 gallon storage)	James D. Hull	Surface/Stormwater	LEC	Hendry (C-139 Basin)	10/07	1.01	1.01	\$400,000	\$148,400
Total for projects in Hendry County							1.01	1.01	\$400,000	\$148,400
Lower East Coast Total							30.32	84.12	\$77,583,899	\$19,585,100

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LWC-27	Golden Gate 0.23 mgd RO Expansion - Concentrate Disposal	Fla. Gov. Utility Association	Brackish	LWC	Collier	10/07	0.00	0.23	\$265,190	\$106,000
LWC-29	Resubmission of Club Pelican Bay 1.0 mgd Reuse ASR System	Club Pelican Bay	ASR	LWC	Collier	10/07	1.00	1.00	\$624,090	\$171,000
LWC- 42	Reuse System Expansion - Main on So. Collier Blvd. and Conversion of Storage Tank to Reclaimed Water Storage and Pump Station at Marco Shores WTP	Marco Island	Reclaimed	LWC	Collier	10/07	0.50 [a]	0.50 [a]	\$1,709,000	\$434,200
LWC- 44	Resubmission of Northeast Regional Water Treatment Plant Wellfield, PH2, Test Program	Collier County Utilities	Brackish	LWC	Collier	10/07	0.00	2.00	\$600,000	\$141,100
LWC- 45	Reclaimed Transmission Main, Immokalee Road, Phase 1	Collier County Utilities	Reclaimed	LWC	Collier	10/07	0.00	4.00 [a]	\$1,350,000	\$500,900
LWC- 46	Reclaimed Water Booster Pump Station, Phase 2	Collier County Utilities	Reclaimed	LWC	Collier	10/07	5.00 [a]	5.00 [a]	\$915,000	\$339,500
Total for Projects in Collier County							1.00	3.23	\$5,463,280	\$1,692,700
LWC-28	Reverse Osmosis Water Plant Capacity Upgrade - Phase 1	Greater Pine Island Water Association	Brackish	LWC	Lee	10/07	0.56	1.50	\$300,000	\$120,000
LWC-30	8.4 mgd Southwest Water Reclamation Facility Expansion, Phase II	Cape Coral	Reclaimed	LWC	Lee	10/07	0.00	8.40	\$15,032,499	\$1,350,000

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LWC-31	4.8 mgd Everest Water Reclamation Facility Expansion, Phase II	Cape Coral	Reclaimed	LWC	Lee	10/07	0.00	4.80	\$13,300,000	\$1,242,000
LWC-32	Reclaimed Water Utility Extension, Southwest 5 Area, Phase I	Cape Coral	Reclaimed	LWC	Lee	10/07	5.60 [a]	5.60 [a]	\$5,780,000	\$2,144,900
LWC-34	Resubmission of Aquifer Storage and Recovery Wells, Phase I	Cape Coral	ASR	LWC	Lee	10/07	1.80	1.80	\$2,490,000	\$84,000
LWC-35	12 mgd North RO Water Treatment Plant, Phase I	Cape Coral	Brackish	LWC	Lee	10/07	0.00	12.00	\$21,780,000	\$1,734,200
LWC-37	RO Water Treatment Facility - Brackish Wellfield and RO Building Expansion, Phase II	Bonita Springs Utilities, Inc	Brackish	LWC	Lee	10/07	0.00	3.30	\$2,279,017	\$221,400
LWC-38	Three Oaks Reclaimed Water Transmission System Improvements	Lee County Utilities	Reclaimed	LWC	Lee	10/07	3.00 [a]	3.00 [a]	\$1,576,452	\$585,000
LWC-39	Green Meadows Lower Hawthorne Wells Phase I Pilot/Production Well	Lee County Utilities	Brackish	LWC	Lee	10/07	0.00	3.00	\$500,000	\$200,000
LWC-40	Corkscrew Lower Hawthorne Wells Phase II	Lee County Utilities	Brackish	LWC	Lee	10/07	2.00 [b]	2.00 [b]	\$956,505	\$382,600
LWC-48	East County Aquifer Recharge Project, Phase 2.4	East County Water Control District	Surface/Stormwater	LWC	Lee	10/07	0.45	0.52	\$412,230	\$152,900
LWC-49	Floridan Aquifer Wellfield Expansion Project	Fort Myers	Brackish	LWC	Lee	10/07	2.00	5.00	\$5,377,530	\$700,000

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Table 5B-1. Continued.

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LWC-52	Wastewater Treatment Reuse Facility Expansion from 0.5 to 0.8 mgd, Phase 3	Forest Utilities	Reclaimed	LWC	Lee	10/07	0.30	0.30	\$693,140	\$267,300
Total for Projects in Lee County							5.11	40.62	\$70,477,373	\$9,184,300
LWC- 51	Little Cypress Tail Water Recovery Project	C&B Farms	Surface/ Stormwater	LWC	Hendry	10/07	21.60	21.60	\$726,704	\$269,600
Total for Projects in Hendry County							21.60	21.60	\$726,704	\$269,600
Lower West Coast Total							27.71	65.45	\$76,667,357	\$11,146,600
SUBTOTAL							82.23	184.39	\$196,880,983	\$43,924,000
-	South County Regional Water Treatment Plant (SCRWTP) 20 mgd Wellfield Expansion	Collier County Utilities - BCBB	Hawthorn Aquifer	BCBB	Collier - BCBB	10/07	12.00 [b]	20.00 [b]	\$6,000,000	\$1,200,000
-	Reclaimed Water - ASR Wells	Naples - BCBB	Reclaimed	BCBB	Collier - BCBB	10/07	0.00 *	0.00 *	\$1,200,000	\$561,650
-	Reuse Water System Expansion	Marco Island - BCBB	Reclaimed	BCBB	Collier - BCBB	10/07	0.50 [a]	0.50 [a]	\$400,000	\$200,000
Big Cypress Basin Total							0.00	0.00	\$7,600,000	\$1,961,650
GRAND TOTAL							82.23	184.39	\$204,480,983	\$45,885,650

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* Exploratory well under construction; quantity of water to be made available undeterminable until well construction and related final report complete