



Cary / Apex Water Treatment Facility Advisory
Committee

Thursday, March 16, 2017

6:00 PM

Conference Room 10035

316 N. Academy Street, Cary Town Hall, Cary, NC 27513

1. CALL TO ORDER
2. APPROVAL OF MINUTES

Cary Apex Water Treatment Advisory Committee - Regular - Mar 24, 2016
5:45 PM

3. FOR DISCUSSION

3.1 Report to the Cary/Apex Water Treatment Facility Advisory Committee:
Proposed FY 2018 Budget

Speaker: Steve Brown, Water Resources Department

Recommendation: *That the Advisory Committee accepts the proposed FY18 Capital and Operating Budgets for the Cary/Apex Water Treatment Facility.*

Executive Summary: The *Cary Community Plan* underscores the Town's commitment to plan for and provide essential public services to its growing residential and employment base, including water service, balancing high-quality and service affordability. To ensure high-quality and reliable water services are available to meet the needs of our citizens and support continued growth, the Town of Cary works cooperatively and proactively to find regional solutions. Cary's nearly 30-year partnership with Apex to construct, operate and expand the Cary/Apex Water Treatment Facility (CAWTF) exemplifies this commitment.

One of the features of this partnership is an annual Advisory Committee meeting, where Cary's and Apex's Mayors and Town Managers meet to address capital and operating budget proposals for the following fiscal year, as well as other business relating to our joint CAWTF



Figure 1-Rendering of Cary/Apex Water Treatment Facility
Expansion to 56 MGD



ownership.

Cary and Apex staff have negotiated a new Agreement to update and enhance the original 1988 Cary/Apex Water Treatment Facility Agreement. The new 2017 Cary/Apex Water Treatment Facility Agreement is expected to be submitted to Apex's and Cary's Councils for approval this spring.

4. OTHER BUSINESS
5. CLOSED SESSION WILL BE CALLED IF NECESSARY
6. ADJOURNMENT

Please contact Town Clerk Virginia Johnson with any questions about this agenda or to request an auxiliary aid or service to participate in the meeting:
virginia.johnson@townofcary.org, 919-469-4011, TDD 919-469-4012.



**Cary / Apex Water Treatment Facility Advisory Committee
Minutes
March 24, 2016; 5:45 p.m.
Cary Town Hall, Conference Room 10035**

Attending Members: Cary Mayor Harold Weinbrecht and Apex Mayor Lance Olive

Various members from Apex and Cary were in attendance.

A. Call to Order (Mayor Weinbrecht)

Weinbrecht called the meeting to order at 5:45 p.m.

B. Approval of December 28, 2015 Minutes

Mayor Olive moved to approve the December 28, 2015 minutes. Mayor Weinbrecht provided the second. The committee approved the minutes unanimously.

C. Cary/Apex Water Treatment Facility Proposed FY17 Budget (CAWTF16-01)

Speaker: Steve Brown

Brown presented the staff's report.

Mayor Olive moved to approve the Cary/Apex Water Treatment Facility Proposed FY17 Budget. Mayor Weinbrecht provided the second. The committee approved the motion unanimously.

D. Other Business

None.

E. Closed session will be called if necessary

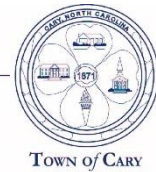
None.

F. Adjournment

Mayor Olive moved to adjourn at 5:50 p.m. Mayor Weinbrecht provided the second. The committee approved the motion unanimously.

Minutes Acceptance: Minutes of Mar 24, 2016 5:45 PM (Approval of Minutes)

Staff Report for Cary Apex Water Treatment Advisory Committee



Meeting Date: March 16, 2017

Report to the Cary/Apex Water Treatment Facility Advisory Committee: Proposed FY 2018 Budget

Purpose: Consideration of the proposed FY2018 Capital and Operating Budgets for the Cary/Apex Water Treatment Facility

Prepared by: Jeff Adkins, Water Resources

Speaker: Steve Brown, Water Resources Department

Recommendation: *That the Advisory Committee accepts the proposed FY18 Capital and Operating Budgets for the Cary/Apex Water Treatment Facility.*

Executive Summary: The *Cary Community Plan* underscores the Town's commitment to plan for and provide essential public services to its growing residential and employment base, including water service, balancing high-quality and service affordability. To ensure high-quality and reliable water services are available to meet the needs of our citizens and support continued growth, the Town of Cary works cooperatively and proactively to find regional solutions. Cary's nearly 30-year partnership with Apex to construct, operate and expand the Cary/Apex Water Treatment Facility (CAWTF) exemplifies this commitment.

One of the features of this partnership is an annual Advisory Committee meeting, where Cary's and Apex's Mayors and Town Managers meet to address capital and operating budget proposals for the following fiscal year, as well as other business relating to our joint CAWTF ownership.

Cary and Apex staff have negotiated a new Agreement to update and enhance the original 1988 Cary/Apex Water Treatment Facility Agreement. The new 2017 Cary/Apex Water Treatment Facility Agreement is expected to be submitted to Apex's and Cary's Councils for approval this spring.



Figure 1-Rendering of Cary/Apex Water Treatment Facility Expansion to 56 MGD

Background: Cary and Apex have worked cooperatively and proactively to find regional solutions for our utilities. For nearly 30 years, Cary and Apex have been partners in building, operating and maintaining the Cary-Apex Water Treatment Facility (CAWTF) to ensure a reliable water supply of high-quality water is available to serve the needs of our citizens, and for continued growth.

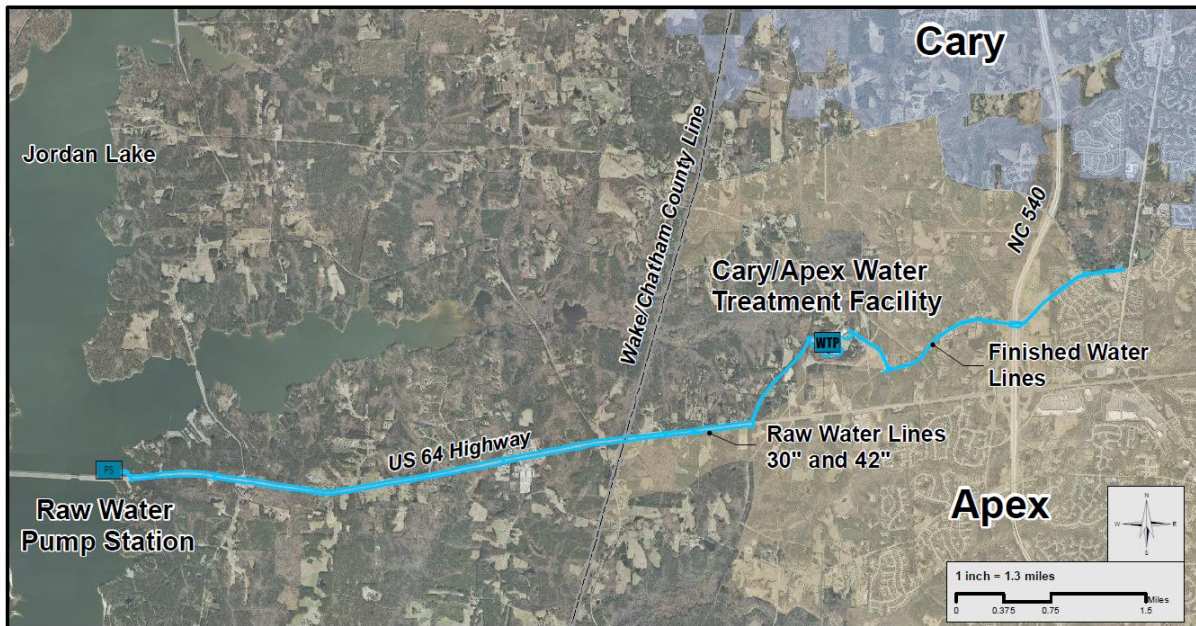


Figure 2-Cary and Apex Shared Water Facilities, including CAWTF, Intake Structure and Pipelines

The Towns of Cary and Apex initiated this partnership in 1988, sharing responsibility for constructing and operating a Jordan Lake intake facility and water treatment plant which began operating in 1993. Accessing Jordan Lake for water supply allowed the towns to become self-reliant for their long-term water supply needs. The facility was expanded from its original 16 MGD capacity to 40 million gallons per day (MGD) capacity in 2002, and an expansion to 56 MGD capacity is underway.

Ownership in the CAWTF intake and treatment facilities is allocated 77% to Cary and 23% to Apex. Shared ownership is accompanied by shared responsibility for the costs of operating the facilities and making capital improvements. Each year, an Advisory Committee comprised of Cary’s and Apex’s Mayors and Town Managers meets to address capital and operating budget proposals for the following fiscal year, as well as other business relating to their joint ownership of the facility. The next annual Advisory Committee meeting is scheduled for March 16, 2017.

Discussion:

Operating Budget Discussion: Through the FY 2018 budget process, staff is requesting a total operating budget of \$8,748,114 for the Jordan Lake raw water intake/pump station, CAWTF and associated facilities (allocated \$2,012,066 to Apex and \$6,736,048 to Cary) as shown in Appendix A. Some expenses such as scheduled maintenance activities are billed to Apex as Fixed Current Expenses, and other expenses such as electricity and chemical needs are billed as Variable Current Expenses, in accordance with the terms of the current agreement between the towns. Billing for Variable Current Expenses is based on the proportion of actual water use, while Fixed Current Expenses are billed based on ownership shares.



Figure 3- Jordan Lake Intake Pump Station

Capital Budget Discussion: Staff has requested \$2,095,000 of CAWTF capital projects in FY 2018 and has identified another \$110,346,108 of maintenance, replacement and Phase IV expansion projects across the FYs 2019 – 2028 ten year planning horizon. Cost shares for the proposed CAWTF capital improvements budget and plan are allocated 77% to Cary and 23% to Apex. Appendix B shows projects forming the FY 2018 capital request, along with those in the ten year planning period.

New CAWTF Agreement Discussion: Town staff have negotiated a new Agreement to update and enhance the original 1988 Cary-Apex Water Treatment Facility agreement. This Agreement is expected to be submitted to Apex's and Cary's Councils for approval this year. The new Agreement clarifies the ongoing rights and responsibilities for each town with regard to CAWTF capacity, operation and expansion, including the categories of Fixed Current Expenses and Variable Current Expenses, but the capacity allocation remains 77% Cary and 23% Apex.

Fiscal Impact:

Operating:

Short Term: Funding for personnel, supplies and materials, contracted services and other operating expenses for the Cary-Apex Water Treatment Facility, raw water intake pump station, and associated facilities will be requested through the Town of Cary's budgeting process.

Long Term: Town of Cary Utilities Department staff will maintain the Cary-Apex Water Treatment Facility, raw water intake pump station, and associated facilities. Funding for future maintenance and repairs will be requested through the Town of Cary's budgeting process.

Funding:

There are no funding impacts directly associated with the updates presented in this staff report. The Capital Budget Discussion above clearly details the FY 2018 requested Capital Improvements Budget/Plan for the CAWTF while also communicating partner funding expectations.

#2321

Table A-1. Proposed FY 2018 Operating Budget

Facilities	Ownership Share		Estimated FY 2018 Operating Budget			Comments
	Apex	Cary	Total	Apex ¹	Cary ¹	
Cary/Apex Water Treatment Facility, Raw Water Pump Station, and associated facilities	23%	77%	\$8,748,114	\$2,012,066	\$6,736,048	Includes all treatment plant and finished water pumping operation, maintenance and management costs
¹ Billing of Variable Current Expenses will be based on the proportion of actual water use, not ownership shares. Both Cary and Apex should take into consideration that if their actual portion of water use is consistently greater than their ownership share, costs will be higher than the share shown here.						

Cost Share %

Cost Share %		Project	Cary Project No.	Project Total	Appropriated Through FY2017	Actual Expenditures & Remaining Encumbrances Thru 2/23/17	Project Balance through FY2017 (as of 2/27/17)	FY2018 Requested	FY2019 Requested	FY2020 Requested	FY2021 Requested	FY2022 Requested	FY2023 Requested	FY2024 Requested	FY2025 Requested	FY2026 Requested	FY2027 Requested	FY2028 Requested
Town of Apex	Town of Cary																	
23%	77%	CAWTF Phase 3 Expansion & Improvements-56 MGD	WT1148	\$ 77,500,000	\$ 77,500,000	\$ 75,105,030	\$ 2,394,970	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Lake Aeration Mixing System	WT1163	\$ 4,876,000	\$ 4,876,000	\$ 4,846,577	\$ 29,423	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-NC 540 Water Conflicts	WT1171	\$ 4,606,460	\$ 4,606,460	\$ 4,139,085	\$ 467,375	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF Laboratory Equipment-Atomic Adsorption Unit Replcmt	WT1192	\$ 468,608	\$ 175,000	\$ -	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ 293,608	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Raw Water Pipeline	WT1194	\$ 22,250,000	\$ 22,250,000	\$ 2,602,977	\$ 19,647,023	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Air Release Valve-42-in WL	WT1206	\$ 1,075,000	\$ 1,075,000	\$ 110,318	\$ 964,682	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF Laboratory Equipment-Total Organic Analyzer Replcmt	WT1208	\$ 127,500	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 77,500	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Raw Water Line Cleaning	WT1209	\$ 1,800,000	\$ 200,000	\$ 104,388	\$ 95,612	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ 550,000
23%	77%	Residual Transfer Pump Replacement	WT1221	\$ 400,000	\$ 250,000	\$ -	\$ 250,000	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF Improvements FY2015	WT1230	\$ 105,000	\$ 105,000	\$ 48,515	\$ 56,485	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Clearwell Repainting	WT1231	\$ 175,000	\$ 175,000	\$ 4,200	\$ 170,800	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Ozone Generator Reconditioning	WT1232	\$ 200,000	\$ 200,000	\$ 191,209	\$ 8,791	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Equipment Storage Building	WT1236	\$ 50,000	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Gas Spectrometer	WT1237	\$ 175,000	\$ 175,000	\$ 171,274	\$ 3,726	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Improvement Project FY16	WT1238	\$ 30,000	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Jordan Lake Capacity Allocation	WT1239	\$ 655,743	\$ 655,743	\$ -	\$ 655,743	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	New Clearwell Site	WT1240	\$ 5,400,000	\$ 5,400,000	\$ -	\$ 5,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Process Basin Rehabilitation	WT1241	\$ 5,000,000	\$ 4,000,000	\$ 1,088,000	\$ 2,912,000	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF Sodium Hypochlorite Tank Replacement	New	\$ 1,175,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 175,000	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF Phase 4 Expansion & Improvements-64 MGD	New	\$ 92,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 20,000,000	\$ 70,000,000
23%	77%	CAWTF Caustic Tank Replcmts	New	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Centrifuge Rebuild & Repair	New	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Chemical Feed System Upgrades of Aging Equipment	New	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Clearwell Baffle Replcmt	New	\$ 750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 750,000	\$ -
23%	77%	CAWTF-Filter Pipe Gallery Piping Removal	New	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Finished Water & Backwash Pump Replacements	New	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -
23%	77%	CAWTF-Generator Switchgear Upgrades	New	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Laboratory Information Management System	New	\$ 175,000	\$ -	\$ -	\$ -	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Ozone Generator Replc	New	\$ 5,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ 5,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Process Conversion to Ozone/Biofiltration	New	\$ 4,500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Raw Water Pump Replc	New	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 350,000	\$ -	\$ -
23%	77%	CAWTF-Raw Water PS Powder Activated Carbon Feed Pump Replc	New	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Residuals Facility Polymer System	New	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Residuals Facility Pump Replc	New	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000
23%	77%	CAWTF-Surge Tanks	New	\$ 720,000	\$ -	\$ -	\$ -	\$ 720,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	CAWTF-Water System Radio Software & Antennas	New	\$ 400,000	\$ -	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	77%	Raw Water Pump Station Surge Tanks	New	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Total		\$ 234,214,311	\$ 121,773,203	\$ 88,411,573	\$ 33,361,630	\$ 2,095,000	\$ 5,450,000	\$ 1,400,000	\$ 800,000	\$ 793,608	\$ 5,252,500	\$ 2,250,000	\$ 250,000	\$ 2,350,000	\$ 20,750,000	\$ 71,050,000

Attachment: Appendix B-CAWTF FY2018-FY2028 Capital Budget [Revision 1] (2321 : Report to the Cary Apex Water Treatment Advisory

Table B-2. Proposed FY2018-FY2028 CAWTF Capital Improvements Budget (Apex Share)

Cost Share %	Project	Cary Project No.	Project Total	Appropriated Through FY2017	Actual Expenditures & Remaining Encumbrances Thru 2/23/17	Project Balance through FY2017 (as of 2/27/17)	FY2018 Requested	FY2019 Requested	FY2020 Requested	FY2021 Requested	FY2022 Requested	FY2023 Requested	FY2024 Requested	FY2025 Requested	FY2026 Requested	FY2027 Requested	FY2028 Requested
23%	CAWTF Phase 3 Expansion & Improvements-56 MGD	WT1148	\$ 17,825,000	\$ 17,825,000	\$ 17,274,157	\$ 550,843	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Lake Aeration Mixing System	WT1163	\$ 1,121,480	\$ 1,121,480	\$ 1,114,713	\$ 6,767	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-NC 540 Water Conflicts	WT1171	\$ 1,059,486	\$ 1,059,486	\$ 951,990	\$ 107,496	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF Laboratory Equipment-Atomic Adsorption Unit Replcmt	WT1192	\$ 107,780	\$ 40,250	\$ -	\$ 40,250	\$ -	\$ -	\$ -	\$ -	\$ 67,530	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Raw Water Pipeline	WT1194	\$ 5,117,500	\$ 5,117,500	\$ 598,685	\$ 4,518,815	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Air Release Valve-42-in WL	WT1206	\$ 247,250	\$ 247,250	\$ 25,373	\$ 221,877	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF Laboratory Equipment-Total Organic Analyzer Replcmt	WT1208	\$ 29,325	\$ 11,500	\$ -	\$ 11,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,825	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Raw Water Line Cleaning	WT1209	\$ 414,000	\$ 46,000	\$ 24,009	\$ 21,991	\$ -	\$ -	\$ 115,000	\$ -	\$ -	\$ -	\$ 126,500	\$ -	\$ -	\$ -	\$ 126,500
23%	Residual Transfer Pump Replacement	WT1221	\$ 92,000	\$ 57,500	\$ -	\$ 57,500	\$ 34,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF Improvements FY2015	WT1230	\$ 24,150	\$ 24,150	\$ 11,158	\$ 12,992	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Clearwell Repainting	WT1231	\$ 40,250	\$ 40,250	\$ 966	\$ 39,284	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Ozone Generator Reconditioning	WT1232	\$ 46,000	\$ 46,000	\$ 43,978	\$ 2,022	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Equipment Storage Building	WT1236	\$ 11,500	\$ 11,500	\$ -	\$ 11,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Gas Spectrometer	WT1237	\$ 40,250	\$ 40,250	\$ 39,393	\$ 857	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Improvement Project FY16	WT1238	\$ 6,900	\$ 6,900	\$ -	\$ 6,900	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Jordan Lake Capacity Allocation	WT1239	\$ 150,821	\$ 150,821	\$ -	\$ 150,821	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	New Clearwell Site	WT1240	\$ 1,242,000	\$ 1,242,000	\$ -	\$ 1,242,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Process Basin Rehabilitation	WT1241	\$ 1,150,000	\$ 920,000	\$ 250,240	\$ 669,760	\$ -	\$ 230,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF Sodium Hypochlorite Tank Replacement	New	\$ 270,250	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,250	\$ 230,000	\$ -	\$ -	\$ -	\$ -
23%	CAWTF Phase 4 Expansion & Improvements-64 MGD	New	\$ 21,160,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 460,000	\$ 4,600,000	\$ 16,100,000
23%	CAWTF Caustic Tank Replcmts	New	\$ 138,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 138,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Centrifuge Rebuild & Repair	New	\$ 46,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 46,000	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Chemical Feed System Upgrades of Aging Equipment	New	\$ 46,000	\$ -	\$ -	\$ -	\$ -	\$ 46,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Clearwell Baffle Replcmt	New	\$ 172,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 172,500	\$ -
23%	CAWTF-Filter Pipe Gallery Piping Removal	New	\$ 34,500	\$ -	\$ -	\$ -	\$ 34,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Finished Water & Backwash Pump Replacements	New	\$ 115,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 57,500	\$ 57,500	\$ -	\$ -	\$ -
23%	CAWTF-Generator Switchgear Upgrades	New	\$ 57,500	\$ -	\$ -	\$ -	\$ -	\$ 57,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Laboratory Information Management System	New	\$ 40,250	\$ -	\$ -	\$ -	\$ 40,250	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Ozone Generator Replc	New	\$ 1,265,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 115,000	\$ 1,150,000	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Process Conversion to Ozone/Biofiltration	New	\$ 1,035,000	\$ -	\$ -	\$ -	\$ 115,000	\$ 920,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Raw Water Pump Replc	New	\$ 80,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80,500	\$ -	\$ -
23%	CAWTF-Raw Water PS Powder Activated Carbon Feed Pump Replc	New	\$ 57,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 57,500	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Residuals Facility Polymer System	New	\$ 69,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 69,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Residuals Facility Pump Replc	New	\$ 115,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 115,000
23%	CAWTF-Surge Tanks	New	\$ 165,600	\$ -	\$ -	\$ -	\$ 165,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	CAWTF-Water System Radio Software & Antennas	New	\$ 92,000	\$ -	\$ -	\$ -	\$ 92,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23%	Raw Water Pump Station Surge Tanks	New	\$ 184,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 184,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total		\$ 53,869,292	\$ 28,007,837	\$ 20,334,662	\$ 7,673,175	\$ 481,850	\$ 1,253,500	\$ 322,000	\$ 184,000	\$ 182,530	\$ 1,208,075	\$ 517,500	\$ 57,500	\$ 540,500	\$ 4,772,500	\$ 16,341,500

Attachment: Appendix B-CAWTF FY2018-FY2028 Capital Budget [Revision 1] (2321 : Report to the Cary Apex Water Treatment Advisory

Table B-3. Proposed FY2018-FY2028 CAWTF Capital Improvements Budget (Cary Share)

Cost Share %	Project	Cary Project No.	Project Total	Appropriated Through FY2017	Actual Expenditures & Remaining Encumbrances Thru 2/23/17	Project Balance through FY2017 (as of 2/27/17)	FY2018 Requested	FY2019 Requested	FY2020 Requested	FY2021 Requested	FY2022 Requested	FY2023 Requested	FY2024 Requested	FY2025 Requested	FY2026 Requested	FY2027 Requested	FY2028 Requested
77%	CAWTF Phase 3 Expansion & Improvements-56 MGD	WT1148	\$ 59,675,000	\$ 59,675,000	\$ 57,830,873.10	\$ 1,844,127	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Lake Aeration Mixing System	WT1163	\$ 3,754,520	\$ 3,754,520	\$ 3,731,864.29	\$ 22,656	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-NC 540 Water Conflicts	WT1171	\$ 3,546,974	\$ 3,546,974	\$ 3,187,095.45	\$ 359,879	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF Laboratory Equipment-Atomic Adsorption Unit Replcmt	WT1192	\$ 360,828	\$ 134,750	\$ -	\$ 134,750	\$ -	\$ -	\$ -	\$ -	\$ 226,078	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Raw Water Pipeline	WT1194	\$ 17,132,500	\$ 17,132,500	\$ 2,004,292.29	\$ 15,128,208	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Air Release Valve-42-in WL	WT1206	\$ 827,750	\$ 827,750	\$ 84,944.86	\$ 742,805	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF Laboratory Equipment-Total Organic Analyzer Replcmt	WT1208	\$ 98,175	\$ 38,500	\$ -	\$ 38,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59,675	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Raw Water Line Cleaning	WT1209	\$ 1,386,000	\$ 154,000	\$ 80,378.76	\$ 73,621	\$ -	\$ -	\$ 385,000	\$ -	\$ -	\$ -	\$ 423,500	\$ -	\$ -	\$ -	\$ 423,500
77%	Residual Transfer Pump Replacement	WT1221	\$ 308,000	\$ 192,500	\$ -	\$ 192,500	\$ 115,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF Improvements FY2015	WT1230	\$ 80,850	\$ 80,850	\$ 37,356.55	\$ 43,493	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Clearwell Repainting	WT1231	\$ 134,750	\$ 134,750	\$ 3,234.00	\$ 131,516	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Ozone Generator Reconditioning	WT1232	\$ 154,000	\$ 154,000	\$ 147,230.93	\$ 6,769	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Equipment Storage Building	WT1236	\$ 38,500	\$ 38,500	\$ -	\$ 38,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Gas Spectrometer	WT1237	\$ 134,750	\$ 134,750	\$ 131,880.98	\$ 2,869	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Improvement Project FY16	WT1238	\$ 23,100	\$ 23,100	\$ -	\$ 23,100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Jordan Lake Capacity Allocation	WT1239	\$ 504,922	\$ 504,922	\$ -	\$ 504,922	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	New Clearwell Site	WT1240	\$ 4,158,000	\$ 4,158,000	\$ -	\$ 4,158,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Process Basin Rehabilitation	WT1241	\$ 3,850,000	\$ 3,080,000	\$ 837,760.00	\$ 2,242,240	\$ -	\$ 770,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF Sodium Hypochlorite Tank Replacement	New	\$ 904,750	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 134,750	\$ 770,000	\$ -	\$ -	\$ -	\$ -
77%	CAWTF Phase 4 Expansion & Improvements-64 MGD	New	\$ 70,840,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,540,000	\$ 15,400,000	\$ 53,900,000
77%	CAWTF Caustic Tank Replcmts	New	\$ 462,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 462,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Centrifuge Rebuild & Repair	New	\$ 154,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 154,000	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Chemical Feed System Upgrades of Aging Equipment	New	\$ 154,000	\$ -	\$ -	\$ -	\$ -	\$ 154,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Clearwell Baffle Replcmt	New	\$ 577,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 577,500	\$ -
77%	CAWTF-Filter Pipe Gallery Piping Removal	New	\$ 115,500	\$ -	\$ -	\$ -	\$ 115,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Finished Water & Backwash Pump Replacements	New	\$ 385,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 192,500	\$ 192,500	\$ -	\$ -	\$ -
77%	CAWTF-Generator Switchgear Upgrades	New	\$ 192,500	\$ -	\$ -	\$ -	\$ -	\$ 192,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Laboratory Information Management System	New	\$ 134,750	\$ -	\$ -	\$ -	\$ 134,750	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Ozone Generator Replc	New	\$ 4,235,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 385,000	\$ 3,850,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Process Conversion to Ozone/Biofiltration	New	\$ 3,465,000	\$ -	\$ -	\$ -	\$ 385,000	\$ 3,080,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Raw Water Pump Replc	New	\$ 269,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 269,500	\$ -	\$ -
77%	CAWTF-Raw Water PS Powder Activated Carbon Feed Pump Replc	New	\$ 192,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 192,500	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Residuals Facility Polymer System	New	\$ 231,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 231,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Residuals Facility Pump Replc	New	\$ 385,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 385,000
77%	CAWTF-Surge Tanks	New	\$ 554,400	\$ -	\$ -	\$ -	\$ 554,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	CAWTF-Water System Radio Software & Antennas	New	\$ 308,000	\$ -	\$ -	\$ -	\$ 308,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
77%	Raw Water Pump Station Surge Tanks	New	\$ 616,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 616,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total		\$ 180,345,019	\$ 93,765,366	\$ 68,076,911	\$ 25,688,455	\$ 1,613,150	\$ 4,196,500	\$ 1,078,000	\$ 616,000	\$ 611,078	\$ 4,044,425	\$ 1,732,500	\$ 192,500	\$ 1,809,500	\$ 15,977,500	\$ 54,708,500

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