



# DuPage Water Commission

600 E. Butterfield Road, Elmhurst, IL 60126-4642  
(630)834-0100 Fax: (630)834-0120

## AGENDA

**ENGINEERING & CONSTRUCTION COMMITTEE**  
**THURSDAY, JUNE 16, 2022**  
**6:00 P.M.**

## COMMITTEE MEMBERS

J. Fennell, Chair  
D. Bouckaert  
D. Novotny  
F. Saverino  
J. Zay

- I. Roll Call
- II. Approval of Committee Meeting Minutes

**RECOMMENDED MOTION: To approve the Minutes of the May 19, 2022, Regular Engineering & Construction Committee Meeting of the DuPage Water Commission.**

- III. Report of Status of Construction/Operations
- IV. **R-41-22:** A Resolution Awarding a Contract for the DPPS Emergency Generation System Modifications (PSD-10/22) **(Joseph J. Henderson and Sons, Inc. – Net Lump Sum of \$4,149,000.00)**
- V. **R-42-22:** A Resolution Approving and Authorizing the Execution of a Master Agreement with Raftelis Consultants, Inc. for Professional Consulting Services **(No Cost This Action)**
- VI. **R-43-22:** A Resolution Authorizing Task Order #1 for Cost-of-Service model review under a Master Services Agreement for Professional Services with the firm Raftelis, Inc. **(Not-to-Exceed \$40,000.00)**
- VII. **R-44-22:** A Resolution Approving and Ratifying Certain Task Orders Under a Master Contract with Carollo Engineering, for an alternative source water study **(Not-to-Exceed \$300,000.00)**
- VIII. Old Business
- IX. Other
- X. Adjournment

**DRAFT**

**MINUTES OF THE MEETING OF THE  
ENGINEERING & CONSTRUCTION COMMITTEE  
OF THE DuPAGE WATER COMMISSION  
HELD ON THURSDAY, MAY 19, 2022  
600 EAST BUTTERFIELD ROAD  
ELMHURST, ILLINOIS**

Chairman Fennell called the meeting to order at 6:00 P.M.

Committee members in attendance: D. Bouckaert, J. Fennell, D. Novotny, F. Saverino, and J. Zay

Committee members absent: None

Also in attendance: C. Bostick, D. Cuvalo, J. Haney, D. Panaszek and M. Weed.

Commissioner Bouckaert moved to approve the Minutes of the April 21, 2022, Engineering & Construction Committee Meeting of the DuPage Water Commission. Motion seconded by Commissioner Novotny.

Ayes: D. Bouckaert, J. Fennell, F. Saverino, and D. Novotny

Nays: None

Absent: J. Zay

Facilities Construction Supervisor Bostick provided synopsis of the Status of Operations Report including all items listed on the Engineering & Construction Committee agenda.

Regarding R-22-22, Facilities Construction Supervisor Bostick advised the Committee the action seeks to award two (2) contracts for 36-Month Maintenance, Parts, and Repair Service for Large Electric Motors at the DuPage Pumping Station and the action will allow Staff flexibility to seek proposals for necessary work on the Commission's Large Electric Motors and ancillary equipment.

Regarding R-37-22, Facilities Construction Supervisor Bostick advised the Committee the action seeks suspension of the purchasing procedures and authorize the General Manager to purchase eighteen (18) replacement proprietary Rectifier Control Panels from Elecsys. Facilities Construction Supervisor Bostick advised the Committee that due to the sunsetting of the Verizon 3G cellular system, the new control panels are necessary to communicate the status of the rectifiers via the new 5G platform.

Regarding R-38-22, Facilities Construction Supervisor Bostick advised the Committee this action seeks ratification of Work Authorization Order 010 with Rossi Contractors for work previously performed to repair a steel roof drain assembly on Standpipe No. 2.

Regarding R-35-22, Facilities Construction Supervisor Bostick advised the Committee that this action seeks approval on the First Amendment to Work Authorization Order No. 006 Under Quick Response Contract QR-12/21 with John Neri Construction Co. Inc. and increase the amount not to exceed from \$97,400.00 to \$187,400.00 due to unforeseen circumstances found during the execution of the work.

Facilities Construction Supervisor advised the Committee that the Bidding Period for the DPSS Emergency Generator System Modifications (Contract PSD-10/22) is ongoing and the attendance at mandatory pre-bid conference indicates that the Commission will most likely receive two or three bids. Facilities Construction Supervisor advised the Committee Bid



## Engineering Committee Minutes 05/19/2022

Opening is scheduled for June 1<sup>st</sup> with the intent to award a contract for construction at the June 2022 Commission meeting.

Regarding R-31-22, Facilities Construction Supervisor Bostick advised the Committee that this action seeks authorization for the General Manager to enter into an agreement with Schneider Electric, via the Omnia Partners Public Sector Purchasing Cooperative Contract #R170602 for the Building Automation System (BAS) upgrades. Facilities Construction Supervisor Bostick advised this work consists of updating HVAC and Lighting Controls of which certain portions of the system date back to 1999.

Regarding R-32-22, Facilities Construction Supervisor Bostick advised the Committee that this action seeks authorization to seek bids for a Contract for Materials Testing Services (Contract MT-12/22) for a two-year period with the option of two additional one-year extensions. Facilities Construction Supervisor Bostick also advised the contract includes geotechnical services for the Emergency Generation System Modifications and other upcoming capital improvement projects.

Regarding R-33-22 Facilities Construction Supervisor Bostick advised the Committee that this action seeks ratification of the Second Amendment to Task Order No. 2 with DeLasCasas CP, LLC to add stray current mitigation on a 72" transmission main and to correct pipeline bonding issues.

Regarding R-36-22, Facilities Construction Supervisor Bostick advised the Committee that this action seeks authorization to seek bids for a Task Order Contract for Coatings Rehabilitation (Contract CR-1/22). The intent is to have several commercial coatings specialists under contract to perform pipe coating rehabilitation within pumping and metering stations which are showing signs of corrosion after thirty years of service.

Facilities Construction Supervisor Bostick advised the Committee that the SCADA Replacement project Contract Closing and Pre-Construction Conference is scheduled for June 1<sup>st</sup>.

Chairman Fennell inquired with the Committee if there were any further questions regarding the action items. Hearing none, Commissioner Bouckaert moved to recommend approval of items 2 through 9 of the Engineering and Construction Committee portion of the Commission Agenda. Seconded by Commissioner Saverino and unanimously approved by a roll call vote.

Ayes: D. Bouckaert, J. Fennell, F. Saverino, and D. Novotny

Nays: None

Absent: J. Zay

Chairman Fennell inquired the Committee if any other business or other items to be discussed.

With no other items coming before the Committee, Commissioner Bouckaert moved to adjourn the meeting at 6:10 P.M. Seconded by Commissioner Novotny and unanimously approved by a roll call vote.

Ayes: D. Bouckaert, J. Fennell, F. Saverino, and D. Novotny

Nays: None

Absent: J. Zay



# DuPage Water Commission

## MEMORANDUM

TO: Paul May  
General Manager

FROM: Mike Weed  
Operations Supervisor

*MW* *PPM*

Dariusz Panaszek	Pipeline Supervisor
Chris Bostick	Facilities Construction Supervisor
Jessica Haney	Construction / Corrosion Protection
Alan Stark	Instrumentation/Remote Facilities
Denis Cuvalo	SCADA / Information Technology

DATE: June 8, 2022

SUBJECT: Status of Operations

### Operations Overview

The Commission's sales for the month of May were a total of 2.28 billion gallons. This represents an average day demand of 73.7 million gallons per day (MGD), which is lower than the May 2021 average day demand of 75.6 MGD. The maximum day demand was 84.6 MGD recorded on May 31, 2022, which is lower than the May 2021 maximum day demand of 91.0 MGD. The minimum day flow was 63.2 MGD.

The Commission's recorded total precipitation for the month of May 2022 was 4.93 inches compared to 4.93 inches for May 2021. The level of Lake Michigan for May 2022 is 579.92 (Feet IGLD 1985) compared to 580.54 (Feet IGLD 1985) for May of 2021.

### Studies and Reports

R-42-22 appears on the agenda seeking authorization for the General Manager to enter into a Master Service / Task Order Agreement with Raftelis, Inc. to perform Professional Consulting Services on an as-needed basis. In a related matter, R-43-22 appears on the agenda to ratify and approve Task Order No. 01 with Raftelis, Inc. to perform a Cost-of-Service Study in advance of contract negotiations with the City of Chicago regarding the Water Purchase and Sale Agreements.

R-44-22 appears on the agenda to ratify and approve Task Order No. 02 with Carollo Engineers to investigate and report on various alternate sources of water for the Commission.

### **Instrumentation / Remote Facilities Overview**

Instrumentation staff continues with routine inspections, repairs of remote facilities, and continuing work with the meter test program.

Standpipe 2 was drained to determine a root cause of the non-working PAX mixing system. The non-working PAX mixer root cause was found to be a failure of the existing cathodic protection suspension system which found its way onto the mixing impeller and caused the PAX motor to fail. Corpro was called in to redesign and install a suspension system with less potential of similar failures. The PAX mixing system itself was then replaced using in-house staff. Dixon Engineering was also called in to take the opportunity to perform a cursory inspection of the standpipe coating system. Disinfection of the standpipe shall be performed prior to being placed back into service.

### **Pipeline Maintenance and Construction Overview**

Pipeline staff is performing annual air release exercising program and corrective work as needed.

Pipeline staff is inspecting and performing maintenance work on Cathodic Protection Test Stations.

Pipeline staff is monitoring construction work performed under WAO No. 6 by QR-12 contractor John Neri Co. at various locations.

### **Capital Improvement Program**

The bid opening for the Contract for the Construction of DPPS Emergency Generation System Modifications (Contract PSD-10/22) was held on June 1<sup>st</sup>. R-41-22 recommends the award of the contract to Joseph J. Henderson and Sons, Inc. in the Net Lump Sum amount of \$4,149,000.00.

Caterpillar/Altorfer Power Systems have delivered their 1<sup>st</sup> shop drawing submittal for the Generator Controls Upgrade project. Staff and the Engineer are concurrently reviewing and commenting on the documents.

Schneider Electric, the Building Automation System (BAS) upgrades contractor is compiling documentation for shop drawing submittals. This work consists of updating HVAC and Lighting Controls of which certain portions of the system date back to 1999. Schneider has indicated that the longest equipment lead item should be approximately five (5) months, therefore construction will tentatively commence in November 2022.



The advertisement for Bids on a Contract for Materials Testing Services (Contract MT-12/22) is ongoing. To date six (6) geotechnical firms has requested the bidding documents. Bid opening is scheduled for June 29<sup>th</sup>.

**Information Technology**

The Contract for Construction of the SCADA Replacement Project was awarded to Baxter & Woodman/Boller Construction at the April 21, 2022, Board meeting. The Contract Closing and Pre-Construction meeting took place on June 1, 2022. The Contract Period lasts 1460 calendar days.

**MAY 2022 COMMISSION AGENDA ITEMS:**

- R-41-22:** A Resolution Awarding a Contract for the DPPS Emergency Generation System Modifications (PSD-10/22) (**Joseph J. Henderson and Sons, Inc. – Net Lump Sum of \$4,149,000.00**)
  
- R-42-22:** A Resolution Approving and Authorizing the Execution of a Master Agreement with Raftelis Consultants, Inc. for Professional Consulting Services (**No Cost This Action**)
  
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- R-44-22:** A Resolution Approving and Ratifying Certain Task Orders Under a Master Contract with Carollo Engineering, for an alternative source water study (**Not-to-Exceed \$300,000.00**)


**Attachments**

1. DuPage Laboratory Bench Sheets for May 2022
2. Water Sales Analysis 01-May-2018 to 31-May 2022

<http://sp2013/Status%20of%20Operations/2022/220608.docx>

DUPAGE WATER COMMISSION  
PWS FACILITY ID# - IL435400  
MONTHLY OPERATIONS REPORT  
DUPAGE WATER COMMISSION LABORATORY BENCH SHEET RESULTS  
MAY 2022

DATE	LEXINGTON P.S. SUPPLY			DUPAGE P.S. DISCHARGE							ANALYST INT.
	FREE Cl2 (mg/L)	TURBIDITY (ntu)	O-PO4 (mg/L)	FREE Cl2 (mg/L)	TURBIDITY (ntu)	TEMP (°F)	pH	Fluoride (mg/L)	O-PO4 (mg/L)	P.A.C. (LBS/MG)	
1	1.38	0.06	0.61	1.34	0.06	54	7.8	0.9	0.61	0	KD
2	1.37	0.05	0.59	1.39	0.05	55	7.8	0.9	0.57	0	BM
3	1.41	0.06	0.57	1.37	0.05	55	7.7	0.9	0.60	0	BM
4	1.35	0.06	0.57	1.31	0.06	57	7.8	0.9	0.57	0	KD
5	1.41	0.05	0.65	1.32	0.06	56	7.8	0.9	0.64	0	KD
6	1.41	0.05	0.58	1.31	0.06	56	7.8	0.9	0.55	0	KD
7	1.34	0.05	0.58	1.35	0.06	56	7.7	0.8	0.59	0	BM
8	1.37	0.05	0.58	1.25	0.06	55	7.7	0.9	0.60	0	BM
9	1.34	0.05	0.66	1.27	0.07	58	7.7	1.1	0.63	0	CT
10	1.31	0.08	0.49	1.33	0.08	58	7.7	0.9	0.60	0	CT
11	1.42	0.06	0.61	1.34	0.07	57	7.7	0.8	0.62	0	BM
12	1.38	0.07	0.56	1.35	0.06	57	7.7	0.8	0.62	0	BM
13	1.50	0.06	0.61	1.30	0.07	58	7.7	0.9	0.58	0	BM
14	1.54	0.07	0.65	1.31	0.07	56	7.6	0.9	0.54	0	RC
15	1.44	0.10	0.52	1.30	0.10	56	7.7	0.9	0.49	0	RC
16	1.47	0.07	0.52	1.38	0.09	58	7.7	0.9	0.57	0	RC
17	1.38	0.07	0.57	1.35	0.06	56	7.8	0.9	0.58	0	BM
18	1.31	0.07	0.59	1.34	0.07	59	7.6	0.9	0.58	0	RC
19	1.40	0.07	0.52	1.30	0.08	59	7.7	1.0	0.55	0	RC
20	1.34	0.07	0.61	1.29	0.09	59	7.7	1.0	0.53	0	RC
21	1.33	0.07	0.61	1.26	0.07	58	7.7	0.9	0.59	0	BM
22	1.35	0.07	0.61	1.31	0.07	57	7.7	0.9	0.59	0	BM
23	1.51	0.06	0.60	1.35	0.09	57	7.7	0.9	0.57	0	RC
24	1.38	0.07	0.63	1.28	0.07	56	7.6	0.9	0.54	0	RC
25	1.42	0.06	0.60	1.28	0.07	56	7.6	0.9	0.60	0	BM
26	1.36	0.05	0.58	1.33	0.06	55	7.7	0.9	0.58	0	BM
27	1.39	0.06	0.60	1.27	0.07	56	7.8	0.9	0.58	0	BM
28	1.35	0.07	0.65	1.30	0.08	56	7.5	0.9	0.58	0	RC
29	1.45	0.07	0.55	1.51	0.08	56	7.6	0.8	0.61	0	RC
30	1.31	0.07	0.59	1.30	0.08	58	7.7	0.8	0.60	0	BM
31	1.28	0.07	0.58	1.29	0.08	58	7.7	0.9	0.60	0	BM
AVG.	1.39	0.06	0.59	1.32	0.07	57	7.7	0.9	0.58	0	
MAX.	1.54	0.10	0.66	1.51	0.10	59	7.8	1.1	0.64	0	
MIN.	1.28	0.05	0.49	1.25	0.05	54	7.5	0.8	0.49	0	

  
Alan E. Stark, Coordinating Engineer  
Illinois ROINC # 84789479

6/1/2022  
Date



DU PAGE WATER COMMISSION  
WATER SALES ANALYSIS

01-May-92 TO 31-May-22

PER DAY AVERAGE 78,186,290

MONTH	SALES TO CUSTOMERS (GALLONS)	PURCHASES FROM CHICAGO (GALLONS)	GALLONS BILLED %	BILLINGS TO CUSTOMERS	BILLINGS FROM CHICAGO	DOCUMENTED COMMISSION WATER USE (2)	DOCUMENTED COMMISSION WATER USE %	TOTAL ACCOUNTED FOR %	DWC OPER. & MAINT. RATE (3)	CHGO RATE
May-19	2,081,843,000	2,147,990,870	96.92%	\$10,346,759.71	\$8,469,528.00	6,561,100	0.31%	97.23%	\$4.97	\$3.943
Jun-19	2,176,802,000	2,246,817,638	96.88%	\$10,818,705.94	\$8,931,100.11	434,900	0.02%	96.90%	\$4.97	\$3.975
Jul-19	2,639,452,000	2,714,539,721	97.23%	\$13,118,076.44	\$10,790,295.39	649,900	0.02%	97.26%	\$4.97	\$3.975
Aug-19	2,649,696,000	2,735,242,272	96.87%	\$13,168,989.12	\$10,872,588.03	638,420	0.02%	96.90%	\$4.97	\$3.975
Sep-19	2,206,442,000	2,264,715,472	97.43%	\$10,966,016.74	\$9,002,244.00	617,581	0.03%	97.45%	\$4.97	\$3.975
Oct-19	2,016,445,000	2,084,749,872	96.72%	\$10,021,731.65	\$8,286,880.74	1,204,331	0.06%	96.78%	\$4.97	\$3.975
Nov-19	1,915,266,000	1,976,465,358	96.90%	\$9,518,872.02	\$7,856,449.80	8,679,153	0.44%	97.34%	\$4.97	\$3.975
Dec-19	1,990,807,000	2,061,549,253	96.57%	\$9,894,310.79	\$8,194,658.28	4,646,824	0.23%	96.79%	\$4.97	\$3.975
Jan-20	1,982,608,000	2,040,353,072	97.17%	\$9,853,561.76	\$8,110,403.46	789,652	0.04%	97.21%	\$4.97	\$3.975
Feb-20	1,871,298,000	1,913,980,302	97.77%	\$9,300,351.06	\$7,608,055.65	978,927	0.05%	97.82%	\$4.97	\$3.975
Mar-20	1,957,293,000	2,014,856,325	97.14%	\$9,727,746.21	\$8,009,053.89	697,896	0.03%	97.18%	\$4.97	\$3.975
Apr-20	1,863,825,000	1,911,777,366	97.49%	\$9,263,210.25	\$7,599,315.03	271,200	0.01%	97.51%	\$4.97	\$3.975
May-20	2,084,924,000	2,141,838,951	97.34%	\$10,362,072.28	\$8,513,809.83	376,100	0.02%	97.36%	\$4.97	\$3.975
Jun-20	2,522,634,000	2,596,146,493	97.17%	\$12,537,490.98	\$10,571,508.52	731,078	0.03%	97.20%	\$4.97	\$4.072
Jul-20	2,782,507,000	2,872,440,835	96.87%	\$13,829,059.79	\$11,696,579.08	647,000	0.02%	96.89%	\$4.97	\$4.072
Aug-20	3,078,522,000	3,180,137,701	96.80%	\$15,300,254.34	\$12,949,520.72	3,694,350	0.12%	96.92%	\$4.97	\$4.072
Sep-20	2,427,570,000	2,510,646,051	96.69%	\$12,065,022.90	\$10,223,350.72	1,148,848	0.05%	96.74%	\$4.97	\$4.072
Oct-20	2,143,671,000	2,203,255,879	97.30%	\$10,654,044.87	\$8,971,657.94	748,000	0.03%	97.33%	\$4.97	\$4.072
Nov-20	1,897,985,000	1,957,960,123	96.94%	\$9,432,985.45	\$7,972,813.62	200,026	0.01%	96.95%	\$4.97	\$4.072
Dec-20	1,955,711,000	2,027,160,874	96.48%	\$9,719,883.67	\$8,254,599.08	348,955	0.02%	96.49%	\$4.97	\$4.072
Jan-21	1,988,344,000	2,040,857,402	97.43%	\$9,882,069.68	\$8,310,371.34	205,828	0.01%	97.44%	\$4.97	\$4.072
Feb-21	1,915,366,000	1,971,858,620	97.14%	\$9,519,369.02	\$8,029,408.30	290,224	0.01%	97.15%	\$4.97	\$4.072
Mar-21	1,986,888,000	2,055,661,022	96.65%	\$9,874,833.36	\$8,370,651.68	512,237	0.02%	96.68%	\$4.97	\$4.072
Apr-21	1,959,759,000	2,010,756,459	97.46%	\$9,740,002.23	\$8,187,800.30	1,013,926	0.05%	97.51%	\$4.97	\$4.072
May-21	2,331,364,000	2,401,447,849	97.08%	\$11,586,879.08	\$9,778,695.64	1,625,835	0.07%	97.15%	\$4.97	\$4.072
Jun-21	2,646,312,000	2,727,518,236	97.02%	\$13,152,170.64	\$11,226,465.06	872,815	0.03%	97.05%	\$4.97	\$4.116
Jul-21	2,661,520,000	2,750,318,994	96.77%	\$13,227,754.40	\$11,320,312.98	772,815	0.03%	96.80%	\$4.97	\$4.116
Aug-21	2,736,795,000	2,818,422,046	97.10%	\$13,601,871.15	\$11,600,625.14	458,555	0.02%	97.12%	\$4.97	\$4.116
Sep-21	2,616,212,000	2,698,022,374	96.97%	\$13,002,573.64	\$11,105,060.09	1,237,080	0.05%	97.01%	\$4.97	\$4.116
Oct-21	2,128,141,000	2,179,013,387	97.67%	\$10,576,860.77	\$8,968,819.10	396,147	0.02%	97.68%	\$4.97	\$4.116
Nov-21	1,896,311,000	1,961,815,221	96.66%	\$9,424,665.67	\$8,074,831.45	462,613	0.02%	96.68%	\$4.97	\$4.116
Dec-21	1,950,793,000	2,010,917,641	97.01%	\$9,695,441.21	\$8,276,937.01	382,031	0.02%	97.03%	\$4.97	\$4.116
Jan-22	2,046,043,000	2,110,214,643	96.96%	\$10,168,833.71	\$8,685,674.26	621,078	0.03%	96.99%	\$4.97	\$4.116
Feb-22	1,879,376,000	1,935,513,559	97.10%	\$9,340,498.72	\$7,966,573.81	247,750	0.01%	97.11%	\$4.97	\$4.116
Mar-22	1,990,472,000	2,061,912,643	96.54%	\$9,892,645.84	\$8,486,832.44	459,838	0.02%	96.56%	\$4.97	\$4.116
Apr-22	1,935,992,000	1,981,414,298	97.71%	\$9,621,880.24	\$8,155,501.25	285,652	0.01%	97.72%	\$4.97	\$4.116
May-22	2,276,513,000	2,344,221,635	97.11%	\$11,792,337.34	\$9,648,816.25	5,698,667	0.24%	97.35%	\$5.18	\$4.116
TOTALS (1)	859,110,954,798	883,946,458,279	97.19%	\$2,015,379,866.53	\$1,786,450,734.20	852,094,306	0.10%	97.29%	\$2.35	\$2.021

(1) - SINCE MAY 1, 1992

(2) - REPRESENTS DU PAGE PUMP STATION, METER TESTING AND CONSTRUCTION PROJECT USAGE



(3) - DOES NOT INCLUDE FIXED COST PAYMENTS

YTD

May-21	2,331,364,000	2,401,447,849	97.08%	11,586,879	9,778,696			\$4.97	\$4.072
May-22	2,276,513,000	2,344,221,635	97.11%	11,792,337	9,648,816			\$5.18	\$4.116
	(54,851,000)	(57,226,214)		\$205,458	(\$129,879)				
	-2.4%	-2.4%		1.8%	-1.3%				
Month									
May-21	2,331,364,000	2,401,447,849	97.08%	11,586,879	9,778,696			\$4.97	\$4.072
May-22	2,276,513,000	2,344,221,635	97.11%	11,792,337	9,648,816			\$5.18	\$4.116
	(54,851,000)	(57,226,214)		\$205,458	(\$129,879)				
	-2.4%	-2.4%		1.8%	-1.3%				
May>April	340,521,000	362,807,337		2,170,457	1,493,315				

DATE: June 9, 2022

## REQUEST FOR BOARD ACTION

<b>AGENDA SECTION</b>	Omnibus Vote Requiring Super-Majority or Special Majority Vote	<b>ORIGINATING DEPARTMENT</b>	Facilities Construction				
<b>ITEM</b>	A Resolution Awarding a Contract for the DPPS Emergency Generation System Modifications (Contract PSD-10/22)  Resolution No. R-41-22	<b>APPROVAL</b>	 				
Account No.: 01-60-722300 - \$4,149,000.00							
<p>On March 30, 2022, the Commission solicited sealed proposals for the construction of the DPPS Emergency Generation System Modifications. As required by state statute, the Commission advertised for bids on two separate occasions in the <i>Chicago Tribune</i>, advertised for bids on two separate occasions in the <i>Daily Herald</i>, in addition to posting a notice of the solicitation on the Commission's web site and with various plan rooms. The Commission also held two (2) dedicated "open-house" site visits as well as a mandatory pre-bid meeting.</p> <p>Sealed bids were received until 1:00 p.m., local time, June 1, 2022, at which time all bids were publicly opened and read aloud. The bid results are as shown below:</p> <table><tr><td>Joseph J. Henderson &amp; Son, Inc.</td><td>\$4,149,000.00</td></tr><tr><td>Broadway Electric, Inc.</td><td>\$4,194,000.00</td></tr></table> <p>Of the two proposals received, the proposal of Joseph J. Henderson &amp; Son, Inc., was the most favorable to the interests of the Commission (see the attached bid evaluation and recommendation prepared by the Commission's consulting engineers). The engineer's pre-bid opinion of probable construction cost was \$4,208,686.00.</p> <p>The DPPS Emergency Generation System Modifications is included within the approved 5-Year Capital Improvement Plan as well as the Fiscal Year 2022/2023 Management Budget.</p> <p>Resolution No. R-41-22 would award the Contract for the Construction of the DPPS Emergency Generation System Modifications to Joseph J. Henderson &amp; Son, Inc., for the Total Contract Price of \$4,149,000.00.</p>				Joseph J. Henderson & Son, Inc.	\$4,149,000.00	Broadway Electric, Inc.	\$4,194,000.00
Joseph J. Henderson & Son, Inc.	\$4,149,000.00						
Broadway Electric, Inc.	\$4,194,000.00						
<b>MOTION:</b> To approve Resolution No. R-41-22.							



DuPAGE WATER COMMISSION

RESOLUTION NO. R-41-22

A RESOLUTION AWARDING A CONTRACT FOR THE  
CONSTRUCTION OF DPPS EMERGENCY GENERATION SYSTEM MODIFICATIONS  
(Contract PSD-10/22)

WHEREAS, bids for Contract PSD-10/22: Contract for the DPPS Emergency Generation System Modifications were received on June 1, 2022; and

WHEREAS, the DuPage Water Commission has reviewed the proposals received and determined that the proposal of Joseph J. Henderson & Son, Inc., was the most favorable to the interests of the Commission;

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the DuPage Water Commission as follows:

SECTION ONE: The foregoing recitals are hereby incorporated herein as findings of the DuPage Water Commission.

SECTION TWO: The DuPage Water Commission hereby awards Contract PSD-10/22: Contract for the DPPS Emergency Generation System Modifications to Joseph J. Henderson & Son, Inc., in the amount of \$4,149,000.00, conditioned upon the receipt of all contractually required documentation and such other additional information that may be requested by the General Manager of the Commission in accordance with the Bid Package that is acceptable to the DuPage Water Commission.

SECTION THREE: This Resolution shall be in full force and effect from and after its adoption.

	Aye	Nay	Absent	Abstain
Bouckaert, D.				
Broda, J.				
Fennell, J.				
Gans, R.				
Gustin, P.				
Healy, J.				
Novotny, D.				
Pruyn, J.				
Rush, K.				
Russo, D.				
Saverino, F.				
Suess, P.				
Zay, J.				

\_\_\_\_\_  
Chairman

ATTEST:

\_\_\_\_\_  
Clerk



**GREELEY AND HANSEN**

100 S. Wacker Drive, Suite 1400  
Chicago, Illinois 60606  
p 312 558 9000  
f 312 558 1986  
www.greeley-hansen.com

June 6, 2022

Mr. R. Christopher Bostick  
Facilities Construction Supervisor/Safety Coordinator  
DuPage Water Commission  
600 E. Butterfield Road  
Elmhurst, IL 60126

Subject: DPPS Emergency Generation System Modifications  
Contract PSD-10/22  
Recommendation for Award

Dear Mr. Bostick:

Bids for the DPPS Emergency Generation System Modifications project were opened on June 1<sup>st</sup>, 2022. We have received and reviewed the summary of bid(s) information provided by the DuPage Water Commission for the referenced project. Two bids were received for the project, as follow:

- 1) Joseph J. Henderson & Son, Inc., for the amount of \$4,149,000.
- 2) Broadway electric, Inc., for the amount of \$4,194,000.

The Engineer's Opinion of Probable Construction Cost (OPCC) of \$4,208,686 is based on the engineer's experience with prior projects and cost sources such as RS means. The OPCC was based on major equipment costs obtained from manufacturer input and material unit quantities in the design.

We recommend that the project be awarded to the low bidder, Joseph J. Henderson & Son, Inc. Our recommendation is based on the dollar value of the bid as well as the experience and reputation of Joseph J. Henderson & Son, Inc.

Yours very truly,

Greeley and Hansen LLC

Glen Johnson  
*Project Manager*

cc: Contract File

GDJ/mcm

Date June 9, 2022

## REQUEST FOR BOARD ACTION

<b>AGENDA SECTION</b>	Omnibus Vote Requiring Super-Majority or Special Majority Vote	<b>ORIGINATING DEPARTMENT</b>	General Manager's Office
<b>ITEM</b>	A Resolution Approving and Authorizing the Execution of a Master Agreement with Raftelis Consultants, Inc. for Professional Consulting Services  Resolution No. R-42-22	<b>APPROVAL</b>	PDM
Account Nos: As Assigned by Task Order			
As directed by the Board of Commissioners to engage additional consulting firms and update existing contract provisions.			
Resolution No. R-42-22 would authorize the General Manager to enter into a master agreement with Raftelis Consultants, Inc. for professional consultation services in connection with various projects as they arise. This master agreement would allow the Commission to obtain from time to time professional consultation services in connection with the study of projects as delineated by the Commission.			
This master agreement would allow for the ease of administration between the Commission and the consultant to work under pre-agreed upon terms, conditions, and rates for such discrete projects described in task orders to be approved by the Commission and Consultant.			
<b>MOTION:</b> To adopt Resolution No. R-42-22.			



DUPAGE WATER COMMISSION

RESOLUTION NO. R-42-22

A RESOLUTION APPROVING AND AUTHORIZING  
THE EXECUTION OF A MASTER AGREEMENT WITH RAFTELIS CONSULTANTS,  
INC. FOR PROFESSIONAL CONSULTING SERVICES

WHEREAS, the Commission was formed and exists pursuant to the Water Commission Act of 1985, 70 ILCS 3720/0.01 et seq., and Division 135 of Article 11 of the Illinois Municipal Code, 65 ILCS 5/11-135-1 et seq., for the purpose of securing an adequate source and supply of water for its customers; and

WHEREAS, the Commission desires to obtain from time to time, and Raftelis Consultants, Inc., desires to provide from time to time, professional consulting services in connection with the study of projects as delineated by the Commission; and

WHEREAS, for ease of administration, the Commission and Consultant desire to enter into a master contract setting forth the terms and conditions pursuant to which the Commission will obtain from time to time, and Consultant will provide from time to time, professional consulting services for such discrete projects as are delineated and described in Task Orders to be approved by the Commission and Consultant; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the DuPage Water Commission as follows:

SECTION ONE: The foregoing recitals are hereby incorporated herein and made a part hereof as findings of the Board of Commissioners of the DuPage Water Commission.

SECTION TWO: Master Agreements between the DuPage Water Commission and Raftelis Consultants, Inc. for Professional Services, in substantially the form attached hereto and by this reference incorporated herein and made a part hereof as Exhibit 1, with such modifications as may be required or approved by the General Manager of the

Resolution No. R-42-22

Commission, shall be and hereby is approved and the General Manager shall be and hereby is authorized and directed to execute the Master Agreement in substantially the form attached hereto as Exhibit 1 with such modifications as may be required or approved by the General Manager; provided, however, that the Master Agreements shall not be so executed on behalf of the Commission unless and until the General Manager shall have been presented with copies of the Master Agreements executed by Raftelis Consultants, Inc.

SECTION THREE: This Resolution shall be in full force and effect from and after its adoption.

	Aye	Nay	Absent	Abstain
Bouckaert, D.				
Broda, J.				
Fennell, J.				
Gans, R.				
Gustin, P.				
Healy, J.				
Novotny, D.				
Pruyn, J.				
Rush, K.				
Russo, D.				
Saverino, F.				
Suess, P.				
Zay, J.				

\_\_\_\_\_  
Chairman

ATTEST:

\_\_\_\_\_  
Clerk

EXHIBIT 1



**MASTER CONTRACT BETWEEN**  
**DUPAGE WATER COMMISSION**  
**AND**  
***RAFTELIS FINANCIAL CONSULTANTS, INC***  
**FOR**  
**PROFESSIONAL CONSULTING SERVICES**

**MASTER CONTRACT BETWEEN**  
**DuPAGE WATER COMMISSION**  
**AND**  
**RAFTELIS FINANCIAL CONSULTANTS, INC**  
**FOR**  
**PROFESSIONAL CONSULTING SERVICES**

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ATTACHMENT A – Description of Basic Services

ATTACHMENT B – Form of Task Order

**MASTER CONTRACT BETWEEN**  
**DUPAGE WATER COMMISSION**  
**AND**  
**RAFTELIS FINANCIAL CONSULTANTS, INC**  
**FOR**  
**PROFESSIONAL CONSULTING SERVICES**

In consideration of the mutual promises set forth below, the DuPage Water Commission, 600 East Butterfield Road, Elmhurst, Illinois 60126-4642, a unit of local government created and existing under the laws of the State of Illinois ("Owner"), and Raftelis Financial Consultants, Inc., a Subchapter S Corporation ("Consultant"), make this Contract as of the [ ] day of [MONTH], 20\_\_\_\_, and hereby agree as follows:

**ARTICLE I**  
**THE SERVICES**

**1.1 Performance of the Services**

A. Consultant's Services. For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall, at its sole cost and expense, provide, perform, and complete all of the following, all of which is herein referred to as the "Services":

1. Labor, Equipment, Materials, and Supplies. Provide, perform, and complete, in the manner described and specified in the Task Order for such Project and this Contract, all necessary work, labor, services, transportation, equipment, materials, apparatus, information, data, and other items necessary to accomplish such Project in accordance with such of the basic engineering services set forth in Attachment A to this Contract as may be specified or referred to in the Task Order for such Project and such other engineering services as may be specified or referred to in the Task Order for such Project and not set forth in Attachment A.
2. Approvals. Procure and furnish all approvals and authorizations specified in the Task Order for such Project.
3. Insurance. Procure and furnish all certificates of insurance specified in this Contract and such other certificates and policies of insurance as may be specified in the Task Order for such Project.



4. Quality. Provide, perform, and complete all of the foregoing in a proper and workmanlike manner, consistent with the recognized industry standards of professional practice and in full compliance with, and as required by or pursuant to, the Task Order for such Project and this Contract.

B. Task Orders. Consultant's Services shall be rendered in connection with such Projects as are delineated and described in Task Orders issued pursuant to this Contract. All Task Orders issued pursuant to this Contract shall be in the general form attached hereto as Attachment B, and all Services to be provided pursuant to any such Task Order shall be provided, performed, and completed in accordance with the terms and conditions contained in such Task Order and this Contract. Consultant and Owner shall agree on the scope of Services to be provided, the time for performance of the Services to be provided, and the cost or, if the Services are to be performed in separate phases with separate costs, the costs for each separate phase of Services to be provided under each Task Order. No Services shall be provided under this Contract without the issuance of a Task Order approved by Owner and Consultant.

The terms and conditions set forth in this Contract shall apply to each Task Order unless specifically modified in such Task Order. In the event of a conflict between this Contract and a Task Order, the conflicting provision of the Task Order shall take precedence for that Task Order. In the event this Contract is amended by Owner and Consultant, such amendment shall apply to all Tasks Orders issued after the effective date of the amendment and, unless otherwise specifically provided in such amendment, shall not apply to any Task Orders issued prior to the effective date of the amendment.

Owner reserves the right to employ other engineers on its projects and shall not be obligated to issue any Task Orders pursuant to this Contract.

## **1.2 Commencement and Completion Dates**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall commence the Services not later than the "Commencement Date" set forth in the Task Order for such Project, and shall diligently and continuously prosecute the Services at such a rate as will allow the Services to be fully provided, performed, and completed in full compliance with the Task Order for such Project and this Contract not later than the "Completion Date" or, if the Services are to be performed in separate phases with separate completion dates, the "Completion Dates" set forth in the Task Order for such Project. The time of commencement, rate of progress, and time of completion for each Task Order issued pursuant to this Contract are referred to in this Contract as the "Contract Time."

## **1.3 Required Submittals**

A. Submittals Required. For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall submit to Owner all reports,

documents, data, and information specifically set forth in the Task Order for such Project or otherwise required to be submitted by Consultant under this Contract and shall, in addition, submit to Owner all such reports, documents, data, and information as may be requested by Owner to fully document the Services for such Project ("Required Submittals").

B. Time of Submission and Owner's Review. For each Project delineated and described in a Task Order issued pursuant to this Contract, all Required Submittals shall be provided to Owner no later than the time, if any, specified in the Task Order for such Project or otherwise in this Contract. If no time for submission is specified for any Required Submittal, such Submittal shall be submitted within a reasonable time in light of its purpose and, in all events, in sufficient time, in Owner's reasonable opinion, to permit Owner to review the same prior to the commencement of any part of the Services to which such Required Submittal may relate. For each Project delineated and described in a Task Order issued pursuant to this Contract, Owner shall have the right to require such corrections as may be necessary to make any Required Submittal conform to the Task Order for such Project and this Contract. No Services related to any Required Submittal shall be performed by Consultant until Owner has completed review of such Required Submittal with no exception noted. Owner's review and stamping of any Required Submittal shall not relieve Consultant of the entire responsibility for the performance of the Services in full compliance with, and as required by or pursuant to the Task Order for such Project and this Contract, and shall not be regarded as any assumption of risk or liability by Owner.

C. Responsibility for Delay. For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall be responsible for any delay in the Services due to delay in providing Required Submittals conforming to the Task Order for such Project and this Contract.

#### **1.4 Review and Incorporation of Contract Provisions**

Consultant represents and warrants that it has carefully reviewed, and fully understood, this Contract, including all of its Attachments, and, by its approval of each Task Order issued pursuant to this Contract, that it has carefully reviewed, and fully understood, each such Task Order, all of which are by this reference incorporated into and made a part of this Contract.

#### **1.5 Financial and Technical Ability to Perform**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant represents and warrants, by its approval of such Task Order, that it is financially solvent, and has the financial resources necessary, and that it is sufficiently experienced and competent, and has the necessary capital, facilities, plant, organization, and staff necessary, to provide, perform, and complete the Services in full compliance with, and as required by or pursuant to, the Task Order for such Project and this Contract.



**1.6 Time**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant represents and warrants, by its approval of such Task Order, that it is ready, willing, able, and prepared to begin the Services on the Commencement Date set forth in the Task Order for such Project and that the Contract Time for such Task Order is sufficient time to permit completion of the Services in full compliance with, and as required by or pursuant to, the Task Order for such Project and this Contract for the Contract Price set forth in the Task Order for such Project.

**1.7 Consultant's Personnel and Subcontractors**

A. Consultant's Personnel. For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall provide all personnel necessary to complete the Services, including without limitation the "Key Project Personnel" identified in the Task Order for such Project. Consultant shall provide to Owner telephone numbers at which the Key Project Personnel for such Task Order can be reached on a 24 hour basis. Consultant and Owner may by mutual written agreement make changes and additions to the designations of Key Project Personnel in such Task Order. Prior to terminating the employment of any such designated Key Project Personnel, or reassigning any of such designated Key Project Personnel to other positions, or upon receiving notification of the resignation of any of such designated Key Project Personnel, Consultant shall notify Owner as soon as practicable in advance of such proposed termination, reassignment, or resignation. Consultant shall submit justification, including a description of proposed substitute personnel, in sufficient detail to permit evaluation by Owner of the impact of the proposed action on the Services to be provided, performed, and completed under such Task Order. No such termination, except for voluntary terminations by employees, and no such reassignment shall be made by Consultant without prior written approval of Owner. Consultant shall have no claim for damages, for compensation in excess of the Contract Price for such Task Order, or for a delay or extension of the Contract Time for such Task Order as a result of any such termination, reassignment, resignation, or substitution.

B. Approval and Use of Subcontractors. For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall perform the Services with its own personnel and under the management, supervision, and control of its own organization unless otherwise approved by Owner in writing. All subcontractors and subcontracts used by Consultant shall be acceptable to, and approved in advance by, Owner. Owner's approval of any subcontractor or subcontract shall not relieve Consultant of full responsibility and liability for the provision, performance, and completion of the Services in full compliance with, and as required by or pursuant to, the Task Order for such Project and this Contract. All Services performed under any subcontract shall be subject to all of the provisions of the Task Order for such Project and this Contract in the same manner as if performed by employees of Consultant. For each Project delineated and described in a Task Order issued pursuant to this Contract, every reference in the Task Order for such Project and in this Contract to "Consultant" shall be



deemed also to refer to all subcontractors of Consultant, and every subcontract shall include a provision binding the subcontractor to all provisions of the Task Order for such Project and this Contract.

C. Removal of Personnel and Subcontractors. For each Project delineated and described in a Task Order issued pursuant to this Contract, if any personnel or subcontractor fails to perform the part of the Services undertaken by it in a manner satisfactory to Owner, Consultant shall immediately upon notice from Owner remove and replace such personnel or subcontractor. Consultant shall have no claim for damages, for compensation in excess of the Contract Price for such Task Order, or for a delay or extension of the Contract Time for such Task Order as a result of any such removal or replacement.

D. Safety at the Work Sites. For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall be solely and completely responsible for providing and maintaining safe conditions at its workplace on or in the vicinity of Owner's facilities and appurtenances during performance of the Services. Consultant shall take all safety precautions as shall be necessary to comply with all applicable laws and to prevent injury to persons and damage to property. In addition:

1. It is expressly understood by the parties that Consultant's responsibility for safety conditions shall be strictly limited to its employees. It is expressly understood by the parties that Owner's responsibility for safety conditions shall be strictly limited to its employees.
2. Consultant is advised that potentially hazardous conditions described in the Illinois Health and Safety Act, federal OSHA Regulations and Guidelines, ANSI Standard B30.5-1968 as amended, ANSI Standard Z117.1-1995 as amended, and Illinois Department of Labor Rules and Regulations, could be encountered during the performance of the Services, including without limitation energized electrical facilities and overhead wires; cranes, derricks, and other hoisting machinery with operational and use limitations, special hazard warnings and instructions, and revolving superstructures requiring proper barricading; underground utility facilities requiring protection, support, or removal to safeguard employees; excavations requiring, among other things, safe means of egress and protection from cave-ins, fall-ins, hazardous atmospheres, hazardous substances, and other hazardous conditions; and confined or enclosed spaces that are subject to the accumulation of hazardous substances or toxic or flammable contaminants or that have oxygen deficient or other hazardous atmospheres, requiring, among other things, independent fall protection, respiratory equipment, ventilation, two-way communication with the outside, and safe means of egress.

Consultant should take special notice of the potentially hazardous conditions identified in this paragraph and take all necessary precautions to guard against such potential hazards, including without limitation conducting employee safety training and education, posting warnings and instructions, testing and inspecting, and utilizing adequate protective and emergency systems, equipment, and devices, in as much safety remains Consultant's sole responsibility under this Contract. Consultant is directed to the Illinois Health and Safety Act, federal OSHA Regulations and Guidelines, including without limitation Occupational Safety & Health Standards and Construction Industry Safety & Health Regulations as outlined in Parts 1910 and 1926 of US Dept. of Labor Chapter XVII - Occupational Safety and Health Administration, Title 29, and US Dept. of Labor Document OSHA 2202 "OSHA Safety and Health Standards Digest," ANSI Standard B30.5-1968 as amended, ANSI Standard Z117.1-1995 as amended, and Illinois Department of Labor Rules and Regulations for a further description of these potentially hazardous conditions and the regulations applicable thereto.

3. Consultant is being notified of these potentially hazardous conditions so that Consultant may independently assess the potentially hazardous conditions and take the necessary precautions to ensure a safe workplace pursuant to this Contract and Consultant's legal obligations. Owner's notification of these potentially hazardous conditions should not be construed to be, nor interpreted as, an exclusive listing of the potentially hazardous conditions that could be encountered during the performance of the Services but, rather, such notice shall be construed to be, and interpreted as, exemplary only. Owner's notification of these potentially hazardous conditions should not be construed or interpreted as waiving Consultant's sole and complete responsibility for its workplace conditions on or in the vicinity of Owner's facilities and appurtenances or for providing and maintaining safe conditions at its workplace on or in the vicinity of Owner's facilities and appurtenances, including the safety of all persons and property during performance of the Services. This notification of potentially hazardous conditions is provided solely to assist Consultant in the performance of these duties, in the interest of maximum safety.
4. Consultant shall not have control or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety measures and programs including enforcement of Federal and State safety requirements, in connection with construction work performed by Owner's construction contractors. Nor shall Consultant be responsible for the supervision of Owner's construction contractors, subcontractors or of



any of their employees, agents and representatives of such contractors, with respect to their construction means, methods, techniques, sequences or procedures, or for safety measures and programs including enforcement of Federal and State safety requirements, in connection with construction work; or for inspecting machinery, construction equipment and tools used and employed by contractors and subcontractors on Owner's construction projects and shall not have the right to stop or reject work without the thorough evaluation and approval of Owner. In no event shall Consultant be liable for the acts or omissions of Owner's construction contractors, subcontractors or any persons or entities performing any of the construction work, or for the failure of any of them to carry out construction work under contracts with Owner.

### **1.8 Owner's Responsibilities**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Owner shall, at its sole cost and expense and except as otherwise provided in the Task Order for such Project: (a) designate in writing a person with authority to act as Owner's representative and on Owner's behalf with respect to the Services except those matters that may require Board approval of Owner; (b) provide to Consultant all criteria and full information as to Owner's requirements for the Project or work to which the Services relate, including Owner's objectives and constraints, schedule, space, capacity and performance requirements, and budgetary limitations relevant to the Project; (c) provide to Consultant all existing studies, reports, and other available data relevant to the Project; (d) arrange for access to and make all provisions for Consultant to enter upon public and private property as reasonably required for Consultant to perform the Services; (e) provide surveys describing physical characteristics, legal limitations, and utility locations for the Project and the services of geotechnical engineers or other consultants when such services are reasonably requested by Consultant, are necessary for the performance of the Services, and are not already provided for in the Task Order for the Project; (f) provide structural, mechanical, chemical, air and water pollution tests, test for hazardous materials, and other laboratory and environmental tests, inspections, and reports required by law to be provided by Owner in connection with the Project; (g) review and comment on all Required Submittals and other reports, documents, data, and information presented by Consultant; (h) except as otherwise provided in the Task Order for the Project, provide approvals from all governmental authorities having jurisdiction over the Project when such services are reasonably requested by Consultant, are necessary for the performance of the Services, and are not already provided for in the Task Order for the Project; (i) except as provided in Article IV of this Contract, provide all accounting, insurance, and legal counseling services as may be necessary from time to time in the sole judgment of Owner to protect Owner's interests with respect to the Project; (j) attend Project related meetings; and (k) give prompt written notice to Consultant whenever Owner observes or otherwise becomes aware of any development that affects the scope or timing of the Services, provided, however, that failure to give such notice shall not relieve Consultant of any of its responsibilities under the Task Order for the



Project or this Contract. Information as to the location of Owner's existing facilities and data and recommendations received from other consultants have been indicated or provided solely for the convenience of Consultant. Owner assumes no responsibility whatever in respect to the sufficiency or accuracy of such information and such information is not guaranteed.

### **1.9 Owner's Right to Terminate or Suspend Services for Convenience**

A. Termination or Suspension for Convenience. Owner shall have the right, for its convenience, to terminate or suspend the Services under any Task Order in whole or in part at any time by written notice to Consultant. Every such notice shall state the extent and effective date of such termination or suspension. On such effective date, Consultant shall, as and to the extent directed, stop Services under such Task Order, cease all placement of further orders or subcontracts under such Task Order, terminate or suspend Services under existing orders and subcontracts for such Task Order, and cancel any outstanding orders or subcontracts under such Task Order that may be canceled. Consultant shall be entitled to additional compensation or the right to terminate such Task Order in the event of any suspension that exceeds a period of 90 days.

B. Payment for Completed Services. In the event of any termination pursuant to Subsection 1.9A above, Owner shall pay Consultant (1) such direct costs, including overhead, as Consultant shall have paid or incurred for all Services done in compliance with, and as required by or pursuant to, such Task Order and this Contract up to the effective date of termination; and (2) such other costs pertaining to the Services, exclusive of overhead and profit, as Consultant may have reasonably and necessarily incurred as the result of such termination. Any such payment shall be offset by any prior payment or payments under such Task Order and shall be subject to Owner's rights to withhold and deduct as provided in this Contract.

## **ARTICLE II CHANGES AND DELAYS**

### **2.1 Changes**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Owner shall have the right, by written order executed by Owner, to make changes in the Task Order, the Project, the Services and the Contract Time ("Change Order"). If any Change Order causes an increase or decrease in the amount of the Services, an equitable adjustment in the Contract Price or Contract Time for such Task Order may be made. No decrease in the amount of the Services caused by any Change Order shall entitle Consultant to make any claim for damages, anticipated profits, or other compensation.

## **2.2 Delays**

For any delay that may result from causes that could not be avoided or controlled by Consultant for each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall, upon timely written application, be entitled to issuance of a Change Order providing for an extension of the Contract Time for such Task Order for a period of time equal to the delay resulting from such unavoidable cause and an equitable adjustment in the Contract Price for such Task Order. No extension of the Contract Time for such Task Order shall be allowed for any other delay in completion of the Services.

## **2.3 No Constructive Change Orders**

For each Project delineated and described in a Task Order issued pursuant to this Contract, no claims for equitable adjustments in the Contract Price or Contract Time for such Task Order shall be made or allowed unless embodied in a Change Order. If Owner fails to issue a Change Order for such Task Order including, or fully including, an equitable adjustment in the Contract Price or Contract Time to which Consultant claims it is entitled, or, if Consultant believes that any requirement, direction, instruction, interpretation, determination, or decision of Owner entitles Consultant to an equitable adjustment in the Contract Price or Contract Time that has not been included, or fully included, in a Change Order for such Task Order, then Consultant shall submit to Owner a written request for the issuance of, or revision of, a Change Order for such Task Order, including the equitable adjustment, or the additional equitable adjustment, in the Contract Price or Contract Time that Consultant claims has not been included, or fully included, in a Change Order for such Task Order. Such request shall be submitted before Consultant proceeds with any Services for which Consultant claims an equitable adjustment is due and shall, in all events, be submitted no later than ten business days after receipt of such Change Order or receipt of notice of such requirement, direction, instruction, interpretation, determination, or decision. Unless Consultant submits such a request within ten business days after receipt of such Change Order or receipt of notice of such requirement, direction, instruction, interpretation, determination, or decision, Consultant shall be conclusively deemed (1) to have agreed that such Change Order, requirement, direction, instruction, interpretation, determination, or decision does not entitle Consultant to an equitable adjustment in the Contract Price or Contract Time for such Task Order and (2) to have waived all claims based on such Change Order, requirement, direction, instruction, interpretation, determination, or decision.

### **ARTICLE III CONSULTANT'S RESPONSIBILITY FOR DEFECTIVE SERVICES**

#### **3.1 Standard of Care**

A. Standard of Care. Consultant represents that the Services and all of its components shall be free from errors and omissions in design; shall conform to the requirements of this Contract; and shall be performed in accordance with recognized



industry standards of professional practice, care, and diligence practiced by reputable consulting firms in performing services of a similar nature in existence at the time of performance of the Services for a similar type of owner operating similar facilities. The representation herein expressed shall be in addition to any other representations expressed in this Contract, or expressed or implied by applicable law, which are hereby reserved unto Owner.

C. Defective Services. Whenever the term "defective" is used in the this Contract, the term shall mean professional services that fail to conform to this Section 3.1 and/or any specific terms and requirements contained in this Contract.

### **3.2 Corrections**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall be responsible for the quality, technical accuracy, completeness and coordination of all reports, documents, data, information and other items and services under the Task Order for such Project and this Contract. Consultant shall, promptly and without charge, provide, to the reasonable satisfaction of Owner, all corrective Services necessary as a result of Consultant's negligent errors or omissions, negligent acts, or failure to meet the requirements under the Task Order for such Project and this Contract..

### **3.3 Risk of Loss**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall be responsible for any and all damages to property or persons as a result of Consultant's negligent errors or omissions, negligent acts, or failure to meet warranty and for any losses or costs to repair or remedy any work undertaken by Owner based upon the Services as a result of any such negligent errors or omissions, negligent acts, or failure to meet the requirement of the Task Order for such Project and this Contract . Notwithstanding any other provision of this Contract, Consultant's obligations under this Section 3.3 shall exist without regard to, and shall not be construed to be waived by, the availability or unavailability of any insurance, either of Owner or Consultant, to indemnify, hold harmless or reimburse Consultant for such damages, losses or costs.

## **ARTICLE IV FINANCIAL ASSURANCES**

### **4.1 Insurance**

A. Insurance Required. Contemporaneous with Consultant's execution of this Contract, Consultant shall provide certificates of insurance evidencing at least the minimum insurance coverages and limits set forth below in a form acceptable to Owner and evidencing insurance coverages from companies with a general rating of A minus or better, and a financial size category of Class V or better, in Best's Insurance Guide and

otherwise acceptable to Owner. Such insurance shall provide that no cancellation of any insurance shall become effective until the expiration of 30 days after written notice thereof shall have been given by the insurance company to Consultant. Consultant shall notify Owner of any substantial changes or modification in such coverage within 30 days after Consultant becomes aware of same. Consultant shall immediately pass any such notice to Owner.

B. Minimum Coverages. Consultant shall, at all times while providing, performing, or completing the Services, including, without limitation, at all times while correcting any failure to meet the requirements of this Contract, maintain and keep in force, at Consultant's expense, at least the following minimum insurance coverages and limits:

1. Worker's Compensation and Employer's Liability with limits not less than:
  - (a) Worker's Compensation: Statutory;
  - (b) Employer's Liability:
    - \$500,000 injury-per occurrence
    - \$500,000 disease-per employee
    - \$500,000 disease-policy limit

Such insurance shall evidence that coverage applies in the State of Illinois and provide a waiver of subrogation in favor of Owner. By entering into this agreement, the parties acknowledge that this limitation of liability clause has been reviewed, understood, is a material part of this agreement, and each party has had the opportunity to seek legal advice regarding this provision.

2. Commercial Motor Vehicle Liability with a combined single limit of liability for bodily injury and property damage of not less than \$1,000,000 per occurrence for vehicles owned, non-owned, or rented.

All employees shall be included as insureds.

3. Commercial General Liability with coverage written on an "occurrence" basis and with limits no less than:
  - (a) Each Occurrence: \$1,000,000
  - (b) General Aggregate: \$2,000,000



- (c) Completed Operations Aggregate: \$2,000,000
- (d) Personal Injury: \$1,000,000

Coverages shall include:

- Broad Form Property Damage Endorsement
- Blanket Contractual Liability (must expressly cover the indemnity provisions of this Contract)

4. Professional Liability Insurance. With a limit of liability of not less than \$2,000,000 per claim and covering Consultant against all sums that Consultant may be obligated to pay on account of any liability arising out of Consultant's negligent acts, errors, and omissions under the Contract and each Task Order issued pursuant to this Contract. Such insurance, or such insurance as may then be commercially available in the marketplace, shall be maintained for a three year period from and after Final Payment.
5. Umbrella Policy. The required coverages may be in any combination of primary, excess, and umbrella policies. Any excess or umbrella policy must provide excess coverage over underlying insurance on a following-form basis such that when any loss covered by the primary policy exceeds the limits under the primary policy, the excess or umbrella policy becomes effective to cover such loss.
6. Owner as Additional Insured. Owner shall be named as an Additional Insured on the following policies:

Commercial Motor Vehicle Liability

Commercial General Liability

Each such additional Insured endorsement shall identify Owner as follows: The DuPage Water Commission, including its Board members and elected and appointed officials, its officers, employees, agents, attorneys, consultants, and representatives.

#### **4.2 Indemnification**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall, without regard to the availability or unavailability of any insurance, either of Owner or Consultant, indemnify, save harmless, and defend Owner against lawsuits, claims, demands, damages, liabilities, losses, and expenses, including reasonable attorneys' fees and administrative expenses, to the extent caused by any

negligent act, error, or omission in Consultant's performance of, or failure to perform, the Services or any part thereof, except to the extent caused by the negligence of Owner.

## **ARTICLE V PAYMENT**

### **5.1 Contract Price**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Owner shall pay to Consultant, in accordance with and subject to the terms and conditions set forth in this Article V and in such Task Order, and Consultant shall accept in full satisfaction for providing, performing, and completing the Services, the amount or amounts set forth in such Task Order (the "Contract Price"), subject to any additions, deductions, or withholdings provided for in this Contract.

### **5.2 Taxes, Benefits and Royalties**

For each Project delineated and described in a Task Order issued pursuant to this Contract, the Contract Price includes all applicable federal, state, and local taxes of every kind and nature applicable to the Services as well as all taxes, contributions, and premiums for unemployment insurance, old age or retirement benefits, pensions, annuities, or other similar benefits and all costs, royalties, and fees arising from the use on, or the incorporation into, the Services, of patented equipment, materials, supplies, tools, appliances, devices, processes, or inventions. All claim or right to claim additional compensation by reason of the payment of any such tax, contribution, premium, costs, royalties, or fees is hereby waived and released by Consultant.

### **5.3 Progress Payments**

A. Payment in Installments. For each Project delineated and described in a Task Order issued pursuant to this Contract, the Contract Price shall be paid in monthly installments in the manner set forth in the Task Order for such Project ("Progress Payments").

B. Pay Requests. Consultant shall, as a condition precedent to its right to receive each Progress Payment, submit to Owner an invoice accompanied by such receipts, vouchers, and other documents as may be necessary to establish Consultant's prior payment for all labor, material, and other things covered by the invoice and the absence of any interest, whether in the nature of a lien or otherwise, of any party in any property, work, or fund with respect to the Services performed under such Task Order. In addition to the foregoing, such invoice shall include (a) employee classifications, rates per hour, and hours worked by each classification, and, if the Services are to be performed in separate phases, for each phase; (b) total amount billed in the current period and total amount billed to date, and, if the Services are to be performed in separate phases, for each phase; (c) the estimated percent completion, and, if the Services are to be performed in separate phases, for each phase; and (d) Consultant's certification that



all prior Progress Payments have been properly applied to the Services with respect to which they were paid. Owner may, by written notice to Consultant, designate a specific day of each month on or before which pay requests must be submitted.

#### **5.4 Final Acceptance and Final Payment**

For each Project delineated and described in a Task Order issued pursuant to this Contract, the Services, or, if the Services are to be performed in separate phases, each phase of the Services, shall be considered complete on the date of final written acceptance by Owner of the Services or each phase of the Services, as the case may be, which acceptance shall not be unreasonably withheld or delayed. The Services or each phase of the Services, as the case may be, shall be deemed accepted by Owner if not objected to in writing within 30 days after submission by Consultant of the Services or such phase of Services for final acceptance and payment plus, if applicable, such additional time as may be considered reasonable for obtaining approval of governmental authorities having jurisdiction to approve the Services, or phase of Services, as the case may be. For each Project delineated and described in a Task Order issued pursuant to this Contract, Owner shall pay to Consultant, as soon as practicable after final acceptance, the balance of the Contract Price or, if the Services are to be performed in separate phases, the balance of that portion of the Contract Price with respect to such phase of the Services, after deducting therefrom all charges against Consultant as provided for in this Contract ("Final Payment"). For each Project delineated and described in a Task Order issued pursuant to this Contract, the acceptance by Consultant of Final Payment with respect to the Services or a particular phase of Services under such Task Order, as the case may be, shall operate as a full and complete release of Owner of and from any and all lawsuits, claims, demands, damages, liabilities, losses, and expenses of, by, or to Consultant for anything done, furnished for, arising out of, relating to, or in connection with the Services or a particular phase of Services under such Task Order, as the case may be, or for or on account of any act or neglect of Owner arising out of, relating to, or in connection with the Services or a particular phase of Services under such Task Order, as the case may be.

#### **5.5 Deductions**

A. Owner's Right to Withhold. Notwithstanding any other provision of this Contract and without prejudice to any of Owner's other rights or remedies, for each Project delineated and described in a Task Order issued pursuant to this Contract, Owner shall have the right at any time or times, whether before or after approval of any pay request, to deduct and withhold from any Progress or Final Payment that may be or become due under such Task Order such amount as may reasonably appear necessary to compensate Owner for any actual or prospective loss due to: (1) Services that are defective, damaged, flawed, unsuitable, nonconforming, or incomplete, or contain errors; (2) damage for which Consultant is liable under this Contract; (3) liens or claims of lien regardless of merit unless bonded over by Consultant or unless such liens were a result of Owner's failure to comply with its payment obligations in this Contract; (4) delay in the progress or completion of the Services unless due to causes that could not be avoided or



controlled by Consultant; (5) inability of Consultant to complete the Services; (6) failure of Consultant to properly complete or document any pay request; (7) any other failure of Consultant to perform any of its obligations under the Task Order for such Project and this Contract; or (8) the cost to Owner, including reasonable attorneys' fees and administrative costs, of correcting any of the aforesaid matters or exercising any one or more of Owner's remedies set forth in Section 6.1 of this Contract; provided, however, that Owner has provided Consultant with advance written notice of any such event, and Consultant has failed to cure or if efforts to cure with due diligence such matter within ten business days after receipt of such written notice.

B. Use of Withheld Funds. Owner shall be entitled to retain any and all amounts withheld pursuant to Subsection 5.5A above until Consultant shall have either performed the obligations in question or furnished security for such performance satisfactory to Owner. If such matter is not cured by Consultant within ten business days after receipt of written notice from Owner as provided herein, Owner shall be entitled to apply any money withheld or any other money due Consultant under this Contract to reimburse itself for any and all costs, expenses, losses, damages, liabilities, suits, judgments, awards, reasonable attorneys' fees, and reasonable administrative expenses incurred, suffered, or sustained by Owner and chargeable to Consultant under this Contract.

## **5.6 Accounting**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall keep accounts, books, and other records of all its billable charges and costs incurred in performing the Services in accordance with generally accepted accounting practices, consistently applied, and in such manner as to permit verification of all entries. Consultant shall make all such material available for inspection by Owner, at all reasonable times during this Contract and for a period of three years following termination of this Contract or any Task Order issued pursuant to this Contract. Copies of such material shall be furnished, at Owner's expense, upon request.

## **ARTICLE VI REMEDIES**

### **6.1 Owner's Remedies**

For each Project delineated and described in a Task Order issued pursuant to this Contract, if it should appear at any time prior to Final Payment for all work that Consultant has failed or refused to prosecute, or has delayed in the prosecution of, the Services with diligence at a rate that assures completion of the Services in full compliance with the requirements of the Task Order for such Project and this Contract, or has attempted to assign the Task Order for such Project or this Contract or Consultant's rights under the Task Order for such Project or this Contract, either in whole or in part, or has falsely made any representation or warranty in the Task Order for such Project or this Contract, or has otherwise failed, refused, or delayed to perform or satisfy any other requirement of the

Task Order for such Project or this Contract or has failed to pay its debts as they come due ("Event of Default"), and has failed to cure or start to cure with due diligence any such Event of Default within ten business days after Consultant's receipt of written notice of such Event of Default, then Owner shall have the right, at its election and without prejudice to any other remedies provided by law or equity, to pursue any one or more of the following remedies:

1. Owner may require Consultant, within such reasonable time as may be fixed by Owner, to complete or correct all or any part of the Services that are defective, nonconforming or incomplete, or contain errors; to accelerate all or any part of the Services; and to take any or all other action necessary to bring Consultant and the Services into compliance with this Contract.
2. Owner may accept the Services that are defective, nonconforming, incomplete, or dilatory, or contain errors, or part thereof, and make an equitable reduction in the Contract Price.
3. Owner may terminate this Contract without liability for further payment of amounts due or to become due under this Contract.
4. Owner may withhold from any Progress Payment or Final Payment, whether or not previously approved, or may recover from Consultant, any and all costs, including reasonable attorneys' fees and administrative expenses, incurred by Owner as the result of any Event of Default or as a result of actions taken by Owner in response to any Event of Default.
5. Owner may recover direct damages suffered by Owner.

## **6.2 Terminations and Suspensions Deemed for Convenience**

Any termination or suspension of Consultant's rights under a Task Order issued pursuant to this Contract for an alleged default that is ultimately held unjustified shall automatically be deemed to be a termination or suspension for the convenience of Owner under Section 1.9 of this Contract.

## **ARTICLE VII LEGAL RELATIONSHIPS AND REQUIREMENTS**

### **7.1 Binding Effect**

This Contract, and all Task Orders issued pursuant to this Contract, shall be binding upon Owner and Consultant and upon their respective heirs, executors, administrators, personal representatives, and permitted successors and assigns. Every reference in this Contract to a party shall also be deemed to be a reference to the authorized officers, employees, agents, and representatives of such party.



## **7.2 Relationship of the Parties**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall act as an independent contractor in providing and performing the Services. Nothing in, nor done pursuant to, this Contract or any Task Order issued pursuant to this Contract shall be construed (1) to create the relationship of principal and agent, partners, or joint venturers between Owner and Consultant or (2) to create any relationship between Owner and any subcontractor of Consultant.

## **7.3 No Collusion/Prohibited Interests**

Consultant hereby represents and certifies that Consultant is not barred from contracting with a unit of state or local government as a result of (i) a violation of either Section 33E-3 or Section 33E-4 of Article 33E of the Criminal Code of 1961, 720 ILCS 5/33E-1 et seq.; or (ii) a violation of the USA Patriot Act of 2001, 107 Public Law 56 (October 26, 2001) (the "Patriot Act") or other statutes, orders, rules, and regulations of the United States government and its various executive departments, agencies and offices related to the subject matter of the Patriot Act, including, but not limited to, Executive Order 13224 effective September 24, 2001.

Consultant hereby represents that the only persons, firms, or corporations interested in this Contract as principals are those disclosed to Owner prior to the execution of this Contract, and that this Contract is made without collusion with any other person, firm, or corporation. If at any time it shall be found that Consultant has, in procuring this Contract, colluded with any other person, firm, or corporation, then Consultant shall be liable to Owner for all loss or damage that Owner may suffer thereby, and this Contract shall, at Owner's option, be null and void.

Consultant hereby represents and warrants that neither Consultant nor any person affiliated with Consultant or that has an economic interest in Consultant or that has or will have an interest in the Services or will participate, in any manner whatsoever, in the Services is acting, directly or indirectly, for or on behalf of any person, group, entity or nation named by the United States Treasury Department as a Specially Designated National and Blocked Person, or for or on behalf of any person, group, entity or nation designated in Presidential Executive Order 13224 as a person who commits, threatens to commit, or supports terrorism, and neither Consultant nor any person affiliated with Consultant or that has an economic interest in Consultant or that has or will have an interest in the Services or will participate, in any manner whatsoever, in the Services is, directly or indirectly, engaged in, or facilitating, the Services on behalf of any such person, group, entity or nation.

## **7.4 Assignment**

Consultant shall not (1) assign this Contract or any Task Order issued pursuant to this Contract, in whole or in part, (2) assign any of Consultant's rights or obligations under this Contract or any Task Order issued pursuant to this Contract, or (3) assign any



payment due or to become due under this Contract or any Task Order issued pursuant to this Contract without the prior express written approval of Owner, which approval may be withheld in the sole and unfettered discretion of Owner; provided, however, that Owner's prior written approval shall not be required for assignments of accounts, as defined in the Illinois Commercial Code, if to do so would violate Section 9-318 of the Illinois Commercial Code, 810 ILCS 5/9-318. Owner may assign this Contract or any Task Order issued pursuant to this Contract, in whole or in part, or any or all of its rights or obligations under this Contract or any Task Order issued pursuant to this Contract, without the consent of Consultant.

#### **7.5 Confidential Information**

For each Project delineated and described in a Task Order issued pursuant to this Contract, all information supplied by Owner to Consultant for or in connection with the Task Order for such Project or the Services under such Task Order shall be held confidential by Consultant and shall not, without the prior express written consent of Owner, be used for any purpose other than performance of the Services under such Task Order. Confidential information shall not include any information of Owner that is required by law to be disclosed to any governmental agency, provided that before making such disclosure, Consultant shall give Owner a written notice and an opportunity to object to the disclosure or take action to assure confidential handling of the information.

#### **7.6 Security**

A. Description. For security purposes, Owner investigates the background of personnel at its facilities and personnel engaged to perform certain off-site services and implements other security measures as it determines are necessary from time to time ("Security Program"). To obtain authorization to work at Owner's facilities or to be engaged to perform Services under a Task Order issued pursuant to this Contract, Consultant and its subcontractors must comply with the requirements of Owner's Security Program. Consultant shall remain as fully responsible and liable for the acts and omissions of all subcontractors and their respective agents and employees in connection with Owner's Security Program as it is for its own acts and those of its agents and employees.

B. Background Investigations. Consultant personnel, including subcontractor personnel, that (i) will require access to Owner's facilities or (ii) will be engaged to perform Services under a Task Order issued pursuant to this Contract for which such Task Order requires the background of off-site personnel to be investigated shall submit all information requested by Owner in order to perform the necessary background investigations. Background information required by Owner may include:

1. Information needed to complete a Conviction Information Request Non-Fingerprint Form (for background checks, including conviction information, conducted by the Illinois State Police Bureau of Identification)

2. Education History
3. Military Service
4. Character and Reputation References
5. Verification of Identity
6. Fingerprints

No Consultant personnel, including subcontractor personnel, will be granted unescorted access to Owner's facilities, nor shall any Consultant personnel, including subcontractor personnel, be engaged to perform Services under a Task Order issued pursuant to this Contract for which such Task Order requires the background of off-site personnel to be investigated, until any background investigation required by Owner has been successfully completed. Owner reserves the right to order Consultant to remove from Owner's facilities any personnel, including subcontractor personnel, who Owner determines pose a threat to the security of Owner or its facilities. Any such person so removed shall not be engaged again on the Services.

C. Search. Consultant personnel and vehicles, including subcontractor personnel and vehicles, allowed on Owner's property shall be subject to search when entering and leaving the property. By entering the property, Consultant personnel, including subcontractor personnel, authorize Owner to perform or have performed such searches of their persons or vehicles.

D. Identification Badges. Owner shall issue identification badges to all Consultant personnel, including subcontractor personnel. All such personnel shall pick up their identification badges prior to entry onto Owner's property and shall return the badges at the end of each work day. All such personnel shall wear the identification badges in a prominent manner at all times when working on Owner property.

E. No Liability. Neither Owner, nor any official or employee of Owner, nor any authorized assistant or agent of any of them, shall be responsible for the adequacy of Owner's security precautions and programs or any liability arising therefrom.

#### **7.7 No Waiver**

For each Project delineated and described in a Task Order issued pursuant to this Contract, no examination, inspection, investigation, test, measurement, review, determination, decision, certificate, or approval by Owner, nor any order by Owner for the payment of money, nor any payment for, or use, occupancy, possession, or acceptance of, the whole or any part of the Services by Owner, nor any extension of time granted by Owner, nor any delay by Owner in exercising any right under the Task Order for such Project or this Contract, nor any other act or omission of Owner shall constitute or be deemed to be an acceptance of any Services which are defective, nonconforming, or incomplete or contain errors, nor operate to waive or otherwise diminish the effect of any



warranty or representation made by Consultant; or of any requirement or provision of the Task Order for such Project or this Contract; or of any remedy, power, or right of Owner.

**7.8 No Third Party Beneficiaries**

No claim as a third party beneficiary under this Contract or under any Task Order issued pursuant to this Contract by any person, firm, or corporation other than Consultant shall be made or be valid against Owner.

**7.9 Notices**

All notices required or permitted to be given under this Contract shall be in writing and shall be deemed received by the addressee thereof when delivered in person on a business day at the address set forth below or on the third business day after being deposited in any main or branch United States post office, for delivery at the address set forth below by properly addressed, postage prepaid, certified or registered mail, return receipt requested.

Notices and communications to Owner shall be addressed to, and delivered at, the following address:

DuPage Water Commission  
600 East Butterfield Road  
Elmhurst, Illinois 60126-4642  
Attention: Paul D. May, General Manager

Notices and communications to Consultant shall be addressed to, and delivered at, the following address:

Raftelis Financial Consultants, Inc  
40 British American Blvd  
Latham, NY 12110  
Attention: John M. Mastracchio, Executive Vice President

The foregoing shall not be deemed to preclude the use of other non-oral means of notification or to invalidate any notice properly given by any such other non-oral means.

By notice complying with the requirements of this Section 7.9 Owner and Consultant each shall have the right to change the address or addressee or both for all future notices to it, but no notice of a change of address or addressee shall be effective until actually received.

**7.10 Governing Laws**

This Contract and each Task Order issued pursuant to this Contract, and the rights of Owner and Consultant under this Contract and each Task Order issued pursuant to



this Contract, shall be interpreted according to the internal laws, but not the conflict of laws rules, of the State of Illinois.

**7.11 Changes in Laws**

Unless otherwise explicitly provided in this Contract or in a Task Order issued pursuant to this Contract, any reference to laws shall include such laws as they may be amended or modified from time to time.

**7.12 Compliance with Laws and Grants**

For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall give all notices, pay all fees, and take all other action that may be necessary to ensure that the Services are provided, performed, and completed in accordance with all required governmental permits, licenses, or other approvals and authorizations that may be required in connection with providing, performing, and completing the Services, and with all applicable statutes, ordinances, rules, and regulations, including without limitation the Fair Labor Standards Act; any statutes regarding qualification to do business; any statutes prohibiting discrimination because of, or requiring affirmative action based on, race, creed, color, national origin, age, sex, or other prohibited classification, including, without limitation, the Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12101 et seq., and the Illinois Human Rights Act, 775 ILCS 5/1-101 et seq. For each Project delineated and described in a Task Order issued pursuant to this Contract, Consultant shall also comply with all conditions of any federal, state, or local grant received by Owner or Consultant with respect to such Project or the Services under the Task Order for such Project.

Consultant shall be solely liable for any fines or civil penalties that are imposed by any governmental or quasi-governmental agency or body that may arise, or be alleged to have arisen, out of or in connection with Consultant's, or its subcontractors', performance of, or failure to perform, the Services under any Task Order issued pursuant to this Contract or any part thereof.

Every provision of law required by law to be inserted into this Contract or in a Task Order issued pursuant to this Contract shall be deemed to be inserted herein or therein.

**7.13 Documents**

For each Project delineated and described in a Task Order issued pursuant to this Contract, drawings, plans, specifications, photos, reports, information, observations, calculations, notes and any other reports, documents, data or information, in any form, prepared, collected, or received by Consultant in connection with any or all of the Services (the "Documents") shall, upon payment to Consultant of all amounts due under such Task Order, be and remain the property of Owner and shall not, without the prior express written consent of Owner, be used for any purpose other than performance of the Services; provided, however, that any use thereof by Owner for purposes other than

specifically anticipated in Consultant's scope of Services shall be at Owner's sole risk and cost. At Owner's request, or upon termination of this Contract or any Task Order issued pursuant to this Contract, the Documents shall be delivered promptly to Owner. Consultant shall have the right to retain copies of the Documents for its files. Consultant shall maintain files of all Documents unless Owner shall consent in writing to the destruction of the Documents. Consultant shall make, and shall cause all of its subcontractors to make, the Documents available for Owner's review, inspection and audit during the entire term of this Contract and for five years after termination of this Contract.

Nothing in this paragraph shall constitute or be constructed to be any representation by the Consultant that the work product is suitable in any way for any other project except the one detailed in this agreement. Any reuse by the Owner shall be at the Owners sole risk and without liability or legal exposure to Consultant.

#### **7.14 Time**

For each Project delineated and described in a Task Order issued pursuant to this Contract, the Contract Time is of the essence of the Task Order for such Project and this Contract. Except where otherwise stated, references in the Task Order for such Project or this Contract to days shall be construed to refer to calendar days.

#### **7.15 Severability**

The provisions of this Contract and each Task Order issued pursuant to this Contract shall be interpreted when possible to sustain their legality and enforceability as a whole. In the event any provision of this Contract or a Task Order issued pursuant to this Contract shall be held invalid, illegal, or unenforceable by a court of competent jurisdiction, in whole or in part, neither the validity of the remaining part of such provision, nor the validity of any other provisions of this Contract or such Task Order shall be in any way affected thereby.

#### **7.16 Entire Agreement**

For each Project delineated and described in a Task Order issued pursuant to this Contract, this Contract and the Task Order for such Project set forth the entire agreement of Owner and Consultant with respect to the accomplishment of the Services under such Task Order and the payment of the Contract Price therefor, and there are no other understandings or agreements, oral or written, between Owner and Consultant with respect to the Services under such Task Order and the compensation therefor.

#### **7.17 Amendments**

No modification, addition, deletion, revision, alteration, or other change to this Contract shall be effective unless and until such change is reduced to writing and executed and delivered by Owner and Consultant.



IN WITNESS WHEREOF, Owner and Consultant have caused this Contract to be executed in two original counterparts as of the day and year first written above.

(SEAL)

Attest/Witness:

**DuPAGE WATER COMMISSION**

By: \_\_\_\_\_

By: \_\_\_\_\_

Paul D. May, P.E.

Title: \_\_\_\_\_

Title: General Manager

Attest/Witness:

***RAFTELIS FINANCIAL CONSULTANTS***

By: \_\_\_\_\_

By: \_\_\_\_\_

John M. Mastracchio

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Executive Vice President



# Financial Feasibility and Cost of Service Support

## Statement of Qualifications

PREPARED FOR DUPAGE WATER COMMISSION / 2022







**Diversity and inclusion are an integral part of Raftelis' core values.**

We are committed to doing our part to fight prejudice, racism, and discrimination by becoming more informed, disengaging with business partners that do not share this commitment, and encouraging our employees to use their skills to work toward a more just society that has no barriers to opportunity.



**Raftelis is registered with the U.S. Securities and Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor.**

Registration as a Municipal Advisor is a requirement under the Dodd-Frank Wall Street Reform and Consumer Protection Act. All firms that provide financial forecasts that include assumptions about the size, timing, and terms for possible future debt issues, as well as debt issuance support services for specific proposed bond issues, including bond feasibility studies and coverage forecasts, must be registered with the SEC and MSRB to legally provide financial opinions and advice. Raftelis' registration as a Municipal Advisor means our clients can be confident that Raftelis is fully qualified and capable of providing financial advice related to all aspects of financial planning in compliance with the applicable regulations of the SEC and the MSRB.

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WHO IS

# Raftelis

## HELPING LOCAL GOVERNMENTS AND UTILITIES THRIVE

Local government and utility leaders partner with Raftelis to transform their organizations by enhancing performance, planning for the future, identifying top talent, improving their financial condition, and telling their story. We've helped more than 600 organizations in the last year alone. We provide trusted advice, and our experts include former municipal and utility leaders with decades of hands-on experience running successful organizations. People who lead local governments and utilities are innovators—constantly seeking ways to provide better service to the communities that rely on them. Raftelis provides management consulting expertise and insights that help bring about the change that our clients seek.

+ VISIT [RAFTELIS.COM](https://www.raftelis.com) TO LEARN MORE





# How We Can Help

At Raftelis, we focus on the people that make local governments and utilities successful, ensuring that those that lead these organizations in the areas of finance, management, communication, and technology have a trusted partner to help them achieve results. Look to us for financial and strategic planning, performance measurement, executive search and recruitment, rate studies and cost of service analysis, communications and stakeholder engagement, data and economic analytics, and more.



## Finance

Utilities and public-sector agencies all share a common requirement – to provide critical services on which their communities rely. At the core of providing these services is maintaining revenues that support sustainable operations and long-term planning.

Raftelis collaborates with organizations to identify the financial policies, business processes, and customer rates and charges that promote financial integrity and the equitable recovery of costs to achieve the objectives of the organization and community.

### Rate, Charge, and Fee Studies

Rates and fees for utility and local government services are set to provide the revenue needed to recover costs. Our expertly designed rates can also help accomplish your strategic objectives while maintaining equity among all customers. Our experience comes from the thousands of water, wastewater, stormwater, electric, gas, and solid waste rate studies and other types of fee studies that we've conducted for utilities and local governments across the country, using a variety of traditional and innovative rate structures to help you meet your specific goals.

### **Identification of Pricing Objectives**

Raftelis works with you to develop pricing objectives that deliver the rate structure that best meets your strategic and operational goals. These objectives range from promoting water conservation to addressing affordability concerns to promoting economic development and more.

### **Customized Rate/Fee Structures**

We have developed thousands of customized rate structures and fees to meet the specific needs and goals of our clients and their stakeholders. There is no one-size-fits-all solution, and we use our experience to help you determine the optimal rate structure for your agency.

### **Development of a Comprehensive Financial Plan**

Utility rates and municipal fees are set based on revenue requirements and the number of accounts from which these costs must be recovered. We have a proven, data-driven method of forecasting costs and customer data to inform the rate-setting process. We work with you to execute this within a comprehensive, reliable, and flexible financial plan. Our financial plans forecast system operations and maintenance (O&M) costs, capital needs, and customer use, and monitor your overall financial performance.

### **Model Development and Rate/Fee Alternatives**

Developing utility rates and municipal fees requires sophisticated models to project your organization’s revenue requirements and customer data, allocate costs appropriately, and allow for the evaluation of multiple rate structure alternatives. We develop customized, non-proprietary financial models that are user-friendly and flexible so you can use them for future financial planning and rate setting.

### **Gaining Buy-in and Adoption**

Your rate or fee structure must be approved by your governing body, so we don’t just design a sound rate, we bring you communication and outreach experts to help you build understanding and support for new rates and fees. We help you “show not tell” and demonstrate the true value of the services and the comprehensive analysis behind our recommended rates, to ensure broad stakeholder buy-in and adoption.

### **Additional Rate, Charge, and Fee Services**

We provide a variety of related rate, charge, and fee consulting services, including:

- Capacity, system development, and impact fees
- Rate case support
- Dispute resolution and litigation support related to rates and fees
- Wholesale service rates
- High-strength and industrial wastewater surcharges
- Outside-city rate differentials
- Late payment, penalty, account activation, and other customer service-related charges
- Administrative procedures and on-going implementation of rates/fees





# Raftelis develops customized financial models that incorporate a dashboard to allow you to easily run scenarios and see the impacts in real time.

Shown below is a sample dashboard that we developed for another project.





## Financial and Capital Planning

The need for critical infrastructure improvements continues to grow. Local governments and utilities have limited funds, and investments must be made to support growth, regulatory compliance, and capital renewal. We work with you to develop comprehensive, reliable, and flexible financial plans that forecast your operations and maintenance (O&M) costs, determine how necessary capital improvements will be financed, project customer account and usage information, and monitor the overall financial performance and health of the organization. We also develop capital planning strategies and tactics that manage risk and ensure you have the appropriate resources to meet your organization's needs.

### Managing Capital Spending

A key component of sound financial planning is careful management of capital spending. Whether your capital improvement program is driven by rehabilitation and replacement, or meeting a regulatory requirement, Raftelis has the industry experience and tools to help prioritize, schedule and identify funding for these projects. We offer robust capital financing planning models that enable scenario-based analysis, allowing you to quickly adjust funding options, easily vary cash and debt funding levels, and then see their impact on revenue requirements.

### Understanding and Predicting Customer Behavior

Hundreds of water agencies across the country are facing water supply shortfalls and must consider rate structures that promote conservation with clear price signals. These challenges require agencies to really understand their customers and their current behaviors, as well as how to anticipate their future behavior. Our team of strategic communication and engagement experts offer decades of experience and specialized skills to help you design and execute a communications and outreach program that complements conservation-based rate structures to help you get the behavioral results you need.

### Tools for Planning and Communicating

A successful financial plan is one that is clear, actionable, and shared beyond the chief financial officer to internal and external stakeholders. We develop custom financial planning models that are built around your organization's specific needs and use defensible and proven methods with the latest technology and graphic visualizations.

### Defensible Prioritization

Making choices about which capital investments to make and when to make them is difficult and often politically charged. Every organization needs a defensible system to share with stakeholders that clearly explains capital prioritization methods. Using stakeholder-supported and easy-to-understand rationale, we work with local governments and utilities to implement a system that stakeholders understand and embrace.

### An Implementation Focus

Even the best capital planning techniques are useless if they are not effectively implemented. We link the technical elements of capital planning with organizational changes and an engagement strategy to help you implement your capital plan. Using a defensible prioritization processes, new technologies, and asset management concepts like reliability-centered maintenance, we will help you implement streamlined practices that maximize your limited resources.

**We develop custom financial planning models that are built around your organization's specific needs and use defensible and proven methods with the latest technology and graphic visualizations.**



## Cost of Service and Cost Allocation

A cost-of-service study is the essential first step of determining whether rates charged for service are equitable because it determines what cost differences, if any, exist between serving various customer classes of service.

### Cost-of-service Study

To ensure appropriate recovery of costs from different customer classes, we review existing customer classifications to ensure proportionality. We consider historical customer class usage and peaking characteristics, along with emerging demographic and water demand trends, to determine the cost of service for each customer class. We employ methodologies and standards endorsed by the American Water Works Association (AWWA), Water Environment Federation (WEF), and the National Association of Regulatory Utility Commissioners (NARUC) to allocate costs that are robust enough to withstand scrutiny under regulated rate cases and interjurisdictional disputes.

## Customer Assistance Programs

Over the last decade, customers' water, wastewater, energy, and solid waste bills have increased significantly and consistently, outpacing the consumer price index (CPI). There are several drivers for these increases, including: need for infrastructure repair, replacement, and expansion and the lack of federal grant funding; lack of necessary rate increases in the past; cost of building resiliency and responding to increasing severe weather events; and the need for investments driven by regulation.

These challenges have forced utilities to increase rates by larger amounts and more frequently, leaving many customers struggling to pay their bill and utilities wrestling with their own long-term financial sustainability. As the focus on water affordability intensifies, utilities are looking for solutions for their customers while they continue to provide utility services that meet customer expectations while and maintaining financial sustainability.

In response to concerns about affordability, many utilities are seeking to enhance customer assistance programs, provide funding to customers to make utility bills more affordable, or build affordability measures directly into their rate structures. Reaching vulnerable customers and implementing effective programs requires a multi-faceted approach. Raftelis helps to develop and implement the following types of customer assistance programs that meet the needs of a utility's customers:

- **Customized affordability programs** can be developed for a utility's specific situation and customer base
- **Conservation assistance** such as water audits performed for high usage customers, fixes to fixtures and leaks, or loans to assist with repairs
- **Senior citizen discounts** for older customers at or below a minimum income level so they receive a discount on utility charges
- **Payment agreements** for customers with an overdue account balance can be offered payment agreements to avoid shutoff of services
- **Matching grants** can provide periodic funding to low-income customers to lower debt and reduce ongoing monthly bills
- **Emergency assistance** is a one-time assistance payment to help customers in times of financial emergencies
- **Debt forgiveness** can conditionally forgive all or a portion of past debt based on good payment history
- **Affordability-friendly rate structures** can enhance the utility's affordability message through variable charges that allow customers to reduce their bill through modifying how they use the service



## Utility Rate and Fee Affordability Analysis

Access to clean water and sanitation services is one of the most basic needs to ensure the health of any community. Costs to provide these services have steadily increased with aging infrastructure, increasing regulation, and the need for system reinvestment. When rates consistently increase at a pace that sometimes exceeds inflation and wage growth, affordability becomes a key concern. We can help you address affordability with effective solutions and the right communication to stakeholders to make the program successful.

### Defining What is Affordable

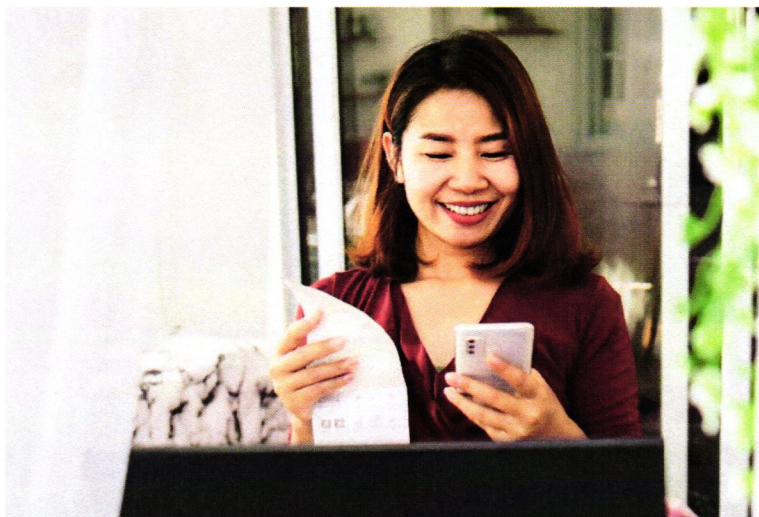
Affordability is commonly defined as the ability of individual customers to pay for services that are adequate to meet their basic needs, while maintaining the ability to pay for other essential costs. The key is that affordability must be evaluated at the individual customer level. Using the percent of median household income proxy to measure affordability has its shortcomings. Several other metrics have emerged that focus on individual customers, account for essential non-utility costs, and concentrate on low-income customers, utilities' most financially vulnerable customers. Raftelis understands the importance of selecting appropriate metrics for measuring affordability and for setting program-level policies. We are at the forefront of efforts to define and assess affordability and are working with utility industry leaders to develop new metrics to help utilities develop effective programs to meet their customers' household affordability challenges. We use industry-leading techniques that combine unique customer billing data with census block-level demographic information to create a comprehensive evaluation of the local affordability conditions that can be used for negotiation with regulators, assistance program development, and utility management decision making.

### Identifying Who is at Risk

The first step in assessing customer affordability is to fully understand the demographics and consumption characteristics of your customers. We do this by analyzing various data sets, such as census information and billing data, with the ultimate objective of identifying "at-risk" customer groups. Through this analysis, we are able to identify household income characteristics; consumption geocoded to address and by census tract; and, ultimately, we know who your "at-risk" customers are.

### Solutions that Fit Your Needs

We can help you develop and implement an affordability program that addresses the critical needs within your community, while minimizing any administrative and cost impacts. We conduct a financial capability assessment at the utility level, so you can assess your ability to address growing needs for capital investment. There are a number of ways to ensure customer affordability, including implementing bill assistance programs, water efficiency programs, or by incorporating affordability programs directly into your rate structure.



### Mitigating Impacts to the Utility

When considering affordability programs, it's important to understand the impact proposed programs can have on your overall performance. We can help you quantify these impacts to ensure you aren't taking on more than you can handle.





## Budget Development

Raftelis provides a wide variety of services to help local governments and utilities manage their operating and capital improvement plan budget development processes. Ultimately, a local government or utility's budget reflects policy goals, community or customer priorities, and daily service delivery requirements. Raftelis applies an approach that takes each of these important factors into account.

To do this we engage with the public, governing bodies, and organizational leadership teams to define policy goals and priorities for the budget process. We employ a variety of techniques, which can include facilitated community engagement sessions, focus groups, web-based public engagement, and one-on-one interviews to define policy and budget frameworks.

We then work closely with local government or utility staff to support the internal budget development process. We help frame and execute the budget development calendar and provide you with enhanced analytical capacity to help define the implications of budgeting decisions within the policy framework and community and customer service level expectations. We then help our clients manage the public engagement and communication process to validate budget priorities and generate support for organizational initiatives and, just as importantly, to prioritize these efforts within the context of available resources.



## Financial Condition Assessments

Raftelis has extensive experience helping local governments and utilities assess their short-term and long-term financial condition and prioritize the revenue, expense, and operational changes necessary to ensure financial and operational sustainability.

We apply detailed and customized financial modeling and econometric techniques to project financial condition based on known factors and available data, such as collective bargaining agreements, community and economic development trends, population dynamics, and applicable historical financial trends.

These projections assume continuation of present and obligated levels of operations and current revenue patterns and identify how the trends could change based on potential environmental and operational factors. In addition, our model dashboards give an immediate and interactive depiction of various scenarios and decisions your organization may face and provides improved clarity in a simple and unified picture that everyone can see. Our process provides you with the ability to make decisions with better perspective and to tell the story of your financial condition under various service level scenarios.

## Debt Issuance Support

Many local governments and utilities are leveraging their available funds by issuing tax-exempt revenue bonds and other types of debt financing to fund needed capital investment including repair and replacement of aging infrastructure and the addition of new assets. These funding sources are often a better alternative than using rates and can dramatically decrease the rate volatility that often accompanies pay-as-you-go funding. However, to fully realize the benefits of debt financing, your agency must take steps to reduce the cost of borrowing.

## Providing Investor Confidence

We prepare a financial feasibility report for the official statement clients need to help market and sell bonds. This report helps demonstrate to potential investors and rating agencies the relatively low level of risk associated with your borrowing, thereby reducing your cost of borrowing. Rating agencies, investors, and underwriters are familiar with Raftelis reports, and that provides them with confidence.

## Understanding the Impacts

We can explain how different financing options will impact customer rates. This will help you better communicate with your customers and governing body to build their understanding and support for revenue needs.

## We Are a Registered Municipal Advisor

We are registered with the U.S. Securities Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor. As a municipal advisor we have a fiduciary responsibility to the issuer. As registered municipal advisors we must always act in the best interests of the issuer, and we possess the expertise needed to execute a deal.

## Economic Feasibility and Analysis

Utilities and local governments use economic feasibility studies and analysis to determine the net benefit of a proposed project. It can be difficult to know if that \$10 million infrastructure investment to provide service to a new service area is a wise decision, or whether you should expand current facilities instead of increasing wholesale water purchases from an adjacent utility. Raftelis develops economic models that provide local government and utility managers with the data needed to make informed decisions about the best use of resources. Our analysis provides visibility into the future cost-benefit of any opportunity with the ability to measure outcome sensitivity based on changing input parameters.





RAFTELIS HAS PROVIDED FINANCIAL/  
ORGANIZATIONAL/TECHNOLOGY ASSISTANCE  
TO UTILITIES SERVING MORE THAN  
**25% OF THE U.S. POPULATION.**

# Experience

## RAFTELIS HAS THE MOST EXPERIENCED UTILITY FINANCIAL AND MANAGEMENT CONSULTING PRACTICE IN THE NATION.

Our staff has assisted more than 1,200 local government agencies and utilities across the U.S., including some of the largest and most complex agencies in the nation. In the past year alone, Raftelis worked on more than 1,000 financial, organizational, and/or technology consulting projects for over 600 agencies in 46 states, the District of Columbia, and Canada. Below, we have provided descriptions of projects that we have worked on that are similar in scope to DuPage Water Commission's project.

### City of Aurora and Village of Montgomery IL

#### Water Rate Study

Raftelis was jointly engaged by the City of Aurora (City) and Village of Montgomery (Village) in 2021 to provide a wholesale water rate study to support discussions between the City and Village over the potential supply of water to the Village. Raftelis worked with the City on an accelerated basis to quickly provide an analysis of the City's existing costs and assets and determine an appropriate wholesale rate to provide service. Raftelis worked with City staff to finalize the proposed pricing for the Village that was based on cost of service and met the City's financial objectives.

### Northwest Water Commission IL

#### Water Utility Rate Consulting

Raftelis has worked for the Northwest Water Commission for nearly two decades. The Northwest Water Commission (Commission) purchases treated water from the City of Evanston, IL (City). Raftelis provides water rate consulting services related to the City's water contract with its wholesale customers. Our services included review and evaluation of a water system valuation report prepared for the City, review and evaluation of the City's costs for providing water service to the Commission, review and evaluation of the City's proposed adjustments to its water rates for service to the

Commission, development of alternative rates and cost recovery levels, and collaboration with the Commission's contract negotiation team to develop a counter proposal to the City and assist with negotiating strategies. Raftelis staff continue to provide ongoing financial and analytical support to the Commission on an as needed basis.

## **Great Lakes Water Authority MI**

### **Wholesale User Charge Study**

Raftelis was engaged by the Great Lakes Water Authority (GLWA) to undertake a review of the utility's wholesale sewer charge methodology. The Great Lakes Water Authority provides wholesale sewer and water service throughout southeast Michigan, including to the City of Detroit. As part of this project, Raftelis worked closely with GLWA Staff as well as the Member Partners to review the existing charge methodology and propose updates to the methodology to meet the objectives of the Member Partner communities to simplify the methodology while ensuring it remained fair and equitable. Through the process we interacted with over a dozen of the Member Partners (including staff and consultants working for OMID and MID, which provide service to the City) and lead discussions in multiple workshops with the Member Partners and GLWA Staff. Based on the guidance provided by Raftelis the Authority and its Member Partners are now working towards an updated methodology that they expect to implement in the near future.

## **City of Bloomington IL**

### **Utility Financial Models**

The City of Bloomington (City) engaged Raftelis to develop financial plans and planning models for their utility enterprises. The financial plans included a forecast of water and stormwater revenue, the development of a capital financing plan to fund improvements to the wastewater and stormwater systems, and a detailed cash flow analysis for each utility indicating the rate adjustments necessary to ensure operational sustainability.

## **Detroit Water and Sewerage Department MI**

### **Financial Plan and Affordability Model**

The Detroit Water and Sewerage Department (DWSD) serves over 200,000 water, wastewater and stormwater customers in the City of Detroit. Until 2016, DWSD also provided wholesale service to the many of the outlying suburban communities in the Detroit metropolitan area. Following the creation of the Great Lakes Water Authority (GLWA), DWSD became responsible for potable water distribution and wastewater collection within the City, receiving water treatment and transmission and wastewater conveyance and treatment from GLWA. Raftelis was engaged to develop a financial planning model, perform affordability analyses of the Departments customers and evaluate alternative water rate structure options. A key aspect of this analysis has involved examining detailed customer information data, as well as census information, to determine the extent to which household income and water use are correlated. This analysis will inform the extent to which inclining block rates for water can play a role in the broader affordability initiatives DWSD is pursuing.

## **City of Dayton/Montgomery County OH**

### **Water Supply Contract Support**

The City of Dayton (Dayton Water) owns and operates water and wastewater system serving the City's retail customers and surrounding suburban communities through various contractual arrangements. Raftelis has assisted the City with water and sewer rate studies, cost of service evaluations, a benchmarking and competitiveness assessment, and water and wastewater inter-municipal agreement negotiations, and cost of service modeling.



Raftelis assisted the City in supporting negotiations for a long-term contract with Dayton's suburban customers. The work entailed developing a cost-of-service model to serve rate setting purposes and to develop a rate structure which would recover wholesale costs in an equitable manner consistent with industry practices and AWWA rate setting guidelines. Identifying the best rate setting approach required an in-depth review of how different rate structures handled the peaking factors, level of service, and usage patterns in the City-County supply relationship. Arriving at a final rate calculation methodology and contract rate required extensive rate sensitivity analysis and revisions of modeling assumptions based upon discussions with both parties. The outcome of the project was a conceptually sound and equitable cost allocation process and rate structure that was incorporated into the current wholesale water contract formed between the City and County.

## **Erie County Water Authority NY**

### **Water Cost of Service Study**

Raftelis assisted the Erie County Water Authority (Authority) in completing a water cost of service and rate structure review study to better understand the cost of serving the Authority's various customer classes and to determine the most appropriate and equitable way to recover those costs. The primary goal of the study was to maintain revenue sufficiency through rates that are equitable and reasonably recover costs for each service provided. Raftelis also recommended revised bulk water sales for the Authority's wholesale customers.

## **DC Water District of Columbia**

### **Financial and Rate Setting Support**

Raftelis is under a long-term contract to provide financial planning, rate sustainability consulting, and management consulting services for DC Water. Under this contract, Raftelis has conducted several cost of service studies. The most recent cost of service study included four major project deliverables: assuring the sufficiency of projected revenue to cover projected expenditures; calculating cost of service-based rates and comparing them to projected rates; reviewing miscellaneous fees and charges; and, recommending rate structure alternatives that enhance priority pricing objectives of DC Water.

Results of the cost of service studies, along with a comprehensive report and revenue sufficiency/cost of service models, were presented to the Retail Rates Committee of the Board.

## **Capital Region Water PA**

### **Water Financial Planning and Cost of Service Study**

Capital Region Water (CRW) is a municipal authority that owns and manages the greater Harrisburg area's water, wastewater, and stormwater systems and infrastructure. The systems serve customers in Harrisburg (City), as well as portions of surrounding municipalities, including Penbrook, Paxtang, and Steelton Boroughs and Susquehanna, Swatara, and Lower Paxton Townships. Raftelis has served as CRW's rate and financial consultant since 2017 and have completed water, wastewater, and stormwater financial plans, cost of service evaluations, and rate structure reviews. This has consisted of preparing financial plans to support the funding of CRW's capital improvement needs, assisting with rate setting, and supporting the issuance of revenue bonds. We prepared financial planning and rate models to analyze various capital funding and rate scenarios. The rate models were developed to be clear, concise, and user-friendly. The models document the calculations and methodologies utilized to forecast revenues and expenses and estimate the customer cost responsibility of the utility system.



## **New York City Department of Environmental Protection NY**

### **Water Rate Study**

The New York City Department of Environmental Protection (DEP) is responsible for distributing more than one billion gallons of clean drinking water each day to nine million New Yorkers and collecting and treating wastewater to protect the water quality of the New York Harbor. The NYC Water Board (Board) is responsible for setting water and wastewater rates sufficient to cover DEP's water and sewer system operating and capital needs. The Board engaged Raftelis to undertake a water rate study. As part of the rate study, Raftelis identified and evaluated alternative ways to assess the minimum charge. The intent was to develop a revenue neutral fixed fee, whereby the revenue loss from minimum charge customers migrating to volumetric metered billing would be replaced with a fixed fee, assessed to all customers (\$32.5 million annually). Based on the billing data analysis, Raftelis recommended replacing the minimum charge with a fixed asset recovery fee that is assessed by meter size would potentially best meet the Fixed Fee Study criteria. The proposed fixed asset recovery fee would be revenue neutral, but as asset recovery costs are identified, DEP could consider increasing the fee over several years through a phased approach, which could reduce customer impacts.

## **Louisville Water Company KY**

### **Water Cost of Service and Rate Study**

Raftelis was engaged by the Louisville Water Company to perform a comprehensive water cost of service evaluation, financial planning study, and rate design. During the first phase of work for this project, Raftelis developed a new cost of service model that allocates annual Louisville Water costs to customer classes and types. During this process, Raftelis also made recommendations to Louisville Water related to historical approaches used by staff in evaluating cost of service to promote continued consistency with industry practices and recommendations. The second phase of this engagement involved the development of a new financial planning and rate design model that is managed and used by staff. The new model was developed with interactive dashboards and reports to provide simplified ease-of-use and update by Louisville Water staff.

In addition, Raftelis was jointly engaged by Louisville Water and Louisville Metropolitan Sewer District (MSD) to develop a new cost allocation methodology and model for billing services that Louisville Water performs on behalf of MSD. Raftelis worked with representatives of both Louisville Water and MSD to develop a cost allocation framework that reflected current levels of service with allowances for future changes to those levels of services that would influence the cost share. Raftelis developed an Excel-based cost allocation model that can be used by Staff going forward to perform the annual cost allocations.

## **City of Columbus OH**

### **Water Cost of Service Evaluations**

Raftelis staff have provided rate and financial consulting services to the City of Columbus, Department of Public Utilities over the past 15 years. The City's water system serves the metropolitan area of Columbus including its suburbs, has 275,700 customer accounts, including residential, commercial, industrial, and master meter contracts, and produces approximately 133 million gallons of day of water to its customers. The rate consulting work completed for the Division of Water and the Division of Sewers and Drainage consisted of assisting the City pay for the cost of expanding the system to accommodate growth, implementing water system improvements to address regulatory requirements and aging infrastructure, and fund the implementation of \$2.5 billion of sewer system improvements to address Consent Orders that were imposed on the City by the EPA. Financial and rate consulting services have included assisting in the development of financial plans, customer account and demand forecasts, completing cost of service evaluations, affordability reviews, benchmarking surveys, implementing rate structure changes, completing capacity and miscellaneous fee analyses, performing cost-benefit analyses, facilitating stakeholder meetings, participating in Sewer and Water Rate Advisory



Board meetings, and providing workshops and informational sessions on cost of service and rate models, and rate-setting in general.

## **Onondaga County Water Authority NY**

### **Water Rate Study**

The Onondaga County Water Authority (OCWA) provides water service directly to approximately 101,300 residential, commercial, and industrial accounts, and 19 wholesale customers. Its service area includes all or parts of various municipalities in Onondaga County and in parts of Oswego, Madison, Oneida, and Cayuga Counties in the State of New York. Raftelis staff assisted OCWA complete a cost of service study and revised its water rate structure from one with a minimum bill tied to consumption and six rate steps for residential customers, to a new rate structure that rewards conservation. The new rate structure replaced the old minimum with a lower base service charge and just three rate blocks. Raftelis completed a proven five task engagement process to complete the project that covers 1) Project Initiation 2) Financial Plan Development 3) Cost of Service Evaluation 4) Rate Design and 5) Reporting and Presentation.

## **Pittsburgh Water and Sewer Authority PA**

### **Water Utility Financial Support**

PWSA provides water supply and distribution and wastewater conveyance services to more than 300,000 residents and businesses in the Pittsburgh metropolitan area. As a result of several decades of neglect, the water and wastewater conveyance systems need significant amount of repair and replacement, resulting in a current five-year capital improvement plan of more than \$1 billion. In the midst of this ramp up of capital and operations spending, PWSA has also become the only municipal water authority in Pennsylvania to be regulated by the Pennsylvania Public Utility Commission (PAPUC). To address this, PWSA has fostered significant management and culture changes, and are analyzing all aspects of their business to implement best practices. PWSA has engaged Raftelis for multiple projects since 2016. As part of this engagement, Raftelis developed a comprehensive long-term financial plan and supporting model. Additionally, Raftelis evaluated cost of service by class to determine equitable user rates and charges. In 2018, PWSA became the first municipal water authority to be regulated by the PAPUC and was directed by the PAPUC to file a rate case that year. Raftelis fulfilled most of the financial responsibilities for PWSA's rate filings since 2018. These combined efforts have put PWSA on a path to success, and PWSA is rapidly gaining the confidence of its customers.

## **Narragansett Bay Commission RI**

### **Cost Allocation Study**

Raftelis was engaged by the Narragansett Bay Commission (NBC) to perform a wastewater cost allocation and rate study. During the course of the engagement, Raftelis assisted NBC in analyzing the cost of servicing its diverse customer base, while recommending rate alternatives which were both cost justified while at the same time meeting the NBC's pricing objectives. Raftelis analyzed and recommended various rates and charges such as fixed charges by meter size, various methodologies for assessing volumetric rates, and new connection and capacity fees. Raftelis also prepared and assisted with NBC's most recent general rate filing before the Rhode Island Public Utilities Commission (PUC).

## **Erie Water Works PA**

### **Water Rate Study**

Erie Water Works (EWW) contracted with Raftelis to complete a water rate study. The project involved developing a five-year financial plan to determine the need for future rate revenue adjustments, completing a cost-of-service evaluation, and evaluating several rate structure alternatives. The cost-of-service evaluation was used to update EWW's bulk rate to its municipal customers and to determine if the existing rate structure was equitable recovering costs from EWW's major customer classes. To evaluate this, system costs were allocated to customer classes using average day, maximum day,



maximum hour, meters and services, and customer related cost categories and relevant customer data. Allocated costs were then compared to the estimated revenues to be generated from each class. The bulk rate was calculated by dividing allocated costs by the billed consumption of wholesale customers.

## **City of Topeka KS**

### **Cost of Service Studies**

Raftelis assisted the City of Topeka (the City) with a 10-year financial plan, a cost of service study, and rate design services for its water, wastewater, and stormwater utilities. The financial plan required forecasts of water, wastewater, and stormwater units of service, a projection of expected future revenue at existing rates, and a projection of future operating and capital expenditures. In addition to the 10-year financial plan, the scope of work also involved a cost of service study to determine how the total revenue requirement determined in the financial plan should be allocated among the City's customer classes to ensure fair and equitable rates which recover costs from each customer class in accordance with how they are incurred by the water, wastewater, and stormwater utilities.

## **City of Austin Water Utility TX**

### **Cost of Service Study**

Raftelis conducted a water and wastewater cost of service rate study for the City of Austin Water Utility (AW). The project included cost of service and rate studies for the water and wastewater utilities and development of cost of service and rate models. Raftelis led/facilitated 10 public meetings each to educate the Public Involvement Committee (PIC) and the Wholesale Involvement Committee (WIC) about issues relating to cost-of-service methodologies and rate design. Raftelis prepared and presented information on select topics to PIC, WIC, and the AWU Executive Committee. These topics included: utility versus cash basis revenue requirements, fire protection costs and allocation, water use costing, test year selection, wholesale versus retail cost assignments, etc. The final product included a cost-of-service rate model for future use by AW.

## **Oklahoma City Water Utilities Trust OK**

### **Water and Wastewater Rate Study**

Oklahoma City Water Utilities Trust (OCWUT) retained Raftelis to complete a Water, Wastewater, Reuse and Solid Waste Study. OCWUT updates their rate studies on a regular cycle, but since the last Cost of Service and Rate Design study, there has been significant capital additions and rehabilitations to the water and wastewater infrastructure and service to customers have also been enhanced. As part of this study, Raftelis developed a comprehensive cost of service and rate model that will consider multiple rate design alternatives and provide OCWUT with a 5-year rate plan for all of its customers. Raftelis was responsible for developing a detailed report with an executive summary and all details related to the rate recommendation. Raftelis will make presentations to the OCWUT Board of Directors and City Council for their consideration and adoption.

## **Denver Water CO**

### **Water Rate Study**

Raftelis assisted Denver Water in a facilitation and technical assistance capacity as the utility considered changes to its rate structure for its inside- and outside-city customers. Denver Water outside-city customers make up 50% of revenues and usage for the utility. It had been over 20 years since Denver Water last made significant changes to its rate structure. Working with Denver Water staff, the Raftelis team assisted Denver Water update its water rate structure. In addition, Raftelis staff led efforts to update the cost-of-service model used by Denver Water to charge its outside-city customers. The cost-of-service evaluation helped to ensure equitable recovery of costs.





Client	Finance				Organization				Technology							
	Affordability Analysis & Program Development	Capital Improvements Planning/Prioritization	Debt Issuance Support	Economic & Financial Evaluations	Financial Planning & Modeling	Rate, Charge, & Fee Studies	Stormwater Utility Development & Support	Organizational, Governance, & Operations Optimization	Performance Measurement & Benchmarking	Program Planning & Support	Stakeholder Engagement & Communication	Strategic Planning	Billing, Permitting, & Customer Information Audits	Business Process Development	Data Management, Analytics, & Visualization	Software Solutions
MI Marquette Township		●			●	●										
MI Oakland County						●										
MI Port Huron Township						●										
MI Rochester, City of		●			●	●										
MI Saginaw, City of		●			●	●										
MI State of Michigan Department of Treasury				●												
MI Sterling Heights, City of		●			●	●										
MI Warren, City of						●										
MI Wyoming, City of		●			●	●										
MO Columbia Department of Water and Light		●			●	●										
MO Jefferson City, City of		●			●	●										
MO Little Blue Valley Sewer District		●			●	●										
MO Metropolitan St. Louis Sewer District		●	●		●	●	●									
MO North Kansas City, City of		●			●	●										
MO Perryville, City of		●			●	●										
MO Silverleaf Resorts Litigation Support				●												
MO Smithville, City of		●			●	●										
MS Jackson, City of	●	●			●	●		●							●	
NC Charlotte Water	●	●			●	●										
NC Durham, City of		●	●		●	●										
NC Raleigh, City of		●	●		●	●			●							
OH Akron, City of		●			●	●				●						
OH Montgomery County Environmental Services		●			●	●		●	●		●		●	●	●	
OH Northeast Ohio Regional Sewer District	●	●			●	●	●	●						●	●	●
OK Chickasha, City of						●	●	●		●			●	●	●	
OK Stillwater Utilities Authority					●	●								●	●	●
PA Philadelphia Water Department	●	●	●		●	●		●	●	●			●	●	●	
PA Pittsburgh Water and Sewer Authority	●	●	●	●	●	●		●	●	●	●		●	●	●	
RI Newport, City of		●	●		●	●										
RI Providence Water Supply Board		●			●	●		●	●							
TN Clarksville, City of		●			●	●										
TN Cookeville, City of		●			●	●										
TN Metro Water Services of Nashville and Davidson County		●	●		●	●	●		●		●	●				
TX Austin, City of		●	●		●	●		●								
TX Dallas, City of		●			●	●	●			●				●	●	
TX El Paso Water Utilities		●	●		●	●				●				●	●	●
TX San Antonio Water System	●	●			●	●				●						
UT Salt Lake City					●	●				●						
VA Newport News Department of Public Utilities, City of		●	●		●	●				●	●			●	●	
VA Richmond Department of Public Utilities	●	●			●	●	●			●				●	●	
VA Suffolk, City of		●	●		●	●										
WA Tacoma, City of				●		●					●				●	
WI Franklin, City of				●												
WI Milwaukee Metropolitan Sewerage District		●			●	●										
WI Milwaukee Water Works		●			●	●										
WI Waukesha, City of						●										
Can Calgary, City of		●			●		●	●							●	
PR Puerto Rico Aqueduct and Sewer Authority		●	●		●			●	●	●						



## John Mastracchio ASA, CFA, PE

Executive Vice President

### PROFILE

John is an Executive Vice President with more than 27 years of experience as a financial and management consultant serving the utility, governmental, and private sectors. His extensive experience includes over 250 financial projects covering technical areas including financial planning and rate setting, capital financing, asset management, regionalization, valuation, litigation support, and transactional consulting, and spans several utility sectors including water, wastewater, electric, solid waste, and stormwater, along with consulting for federal and municipal general government, transportation, and ports.

John has authored manuals of practice and utility industry papers on infrastructure investment, capital financing, financial management practices, and rate-setting, including AWWA's *Manual of Practice M1, Principles of Water Rates, Fees, and Charges; Water Rates, Fees, and the Legal Environment; Manual of Practice M29, Water Capital Financing; and Financial Management for Water Utilities: Principles of Finance, Accounting, and Management Controls*, along with the textbook *The Effective Water Professional: Leadership, Communication, Management, Finance, and Governance*, published by the Water Environment Federation (WEF).

### REPRESENTATIVE PROJECT EXPERIENCE

#### Metropolitan Water Reclamation District of Greater Chicago

Served as the lead financial analyst in completing a comprehensive financial, economic, and environmental analyses of potential effluent disinfection at the District's three largest wastewater reclamation plants. Developed an economic and affordability model and completed an analysis of the impact of funding projects needed to meet the effluent disinfection requirements. Assessed the ability to fund and finance the District's entire capital program, assessed the impact on customer's cost of service, and assessed customers' ability to pay for the proposed improvements. Presented written and oral testimony of evaluation results before the Illinois Pollution Control Board.

#### City of Evanston (IL)

Completed water and sewer rate studies for the City, including financial plan, cost of service, and rate design elements. Developed customized water and sewer financial planning models, including functionality for specialized capital project funding and a dashboard featuring combined system financial data.

#### Northern Will County Water Agency (IL)

John provided expert testimony regarding the valuation of the American Lake Water Company, a subsidiary of the American Water Company to support condemnation proceedings. The valuation opinion was prepared including consideration of the asset, income, and market-based valuation methodologies.



### Specialties

- Financial analysis & modeling
- Financial planning, cost of service, rate design
- Bond feasibility studies
- Transactional due diligence support
- Government consolidation/regionalization
- Public-private partnerships
- Inter-municipal agreement support
- Valuation assessments
- Expert witness & litigation support
- Benchmarking
- Capital financing & project planning
- Business process improvement
- Asset management/business case evaluations

### Professional History

- Raftelis (2017-present)
- Arcadis, U.S., Inc. (2003-2017)
- Arthur Andersen (2001-2002)
- Parsons Corporation (1994-2000)

### Education

- Master of Business Administration, Finance - Cornell University (2001)
- Master of Science, Civil & Environmental Engineering - Clarkson University (1994)
- Bachelor of Arts - State University of New York, College at Geneseo (1993)

### Certifications

- Accredited Senior Appraiser (ASA)
- Chartered Financial Analyst (CFA)
- Professional Engineer (PA)
- Lean Six Sigma
- Series 50 Municipal Advisor Representative

### Professional Memberships

- American Society of Appraisers
- AWWA: Chair of Finance, Accounting, & Management Controls Committee
- CFA Institute
- Water Environment Federation



### **American Water Works Association, Association of Metropolitan Water Agencies**

John was the project manager and principal investigator in preparing the 2020 report titled "Financial Impact of COVID-19 on U.S. Drinking Water Utilities," which estimated the financial impact that COVID-19 would have on water utilities in the U.S. The intent of the report was to aid AWWA and AMWA in advocating for securing federal funding for the drinking water sector to help deal with the crisis and to provide their membership with information regarding the anticipated aggregate financial impact on the sector.

### **Capital Region Water (PA)**

John provided financial consulting services including preparation of affordability analyses, cost of service modeling to justify rates charged to outside jurisdictional customers, development of financial plans and rate projections, consisting of demand forecasts, projections of revenues and expenses, modelling fiscal requirements and targets, identification of rate revenue requirements, allocation of costs to both retail and wholesale customers, and calculation of utility rates. Involved in the planning and execution of the transfer of conveyance assets from the City of Harrisburg (City) to the client, involving asset valuation, revenue and expense projections, and analysis of shared services costs between the City and client. He completed a bond feasibility report for the water system consisting of asset condition assessment and the development and projection of capital improvement needs over a five-year forecast period to satisfy trust indenture requirements. He completed an affordability assessment to support EPA negotiations on implementation of a long-term control plan.

### **Charlotte Water (NC)**

John has served as project manager for numerous cost of service evaluations and rate studies for Charlotte Water. He completed studies to evaluate and update Charlotte Water's existing water and sewer rate structure, evaluate customer assistance and affordability programs, develop rate structure alternatives, and assist in rate adoption and implementation. He addressed pricing objectives including inter- and intra-class equity, water conservation, revenue stability, low income affordability, and economic development. Completed cost of service studies to determine the cost responsibility of customer classes. He evaluated customer affordability at various income levels and household sizes within the service area. He facilitated a public input process by forming a stakeholder advisory group that consisted of representatives of residential customers in various neighborhoods across the service areas, as well as business representatives from the community. He conducted more than 15 public and stakeholder meetings to obtain customer feedback pertaining to the rate structure. He assisted Charlotte Water obtain Council approval for a modified rate structure methodology that included an enhanced lifeline rate, water conservation incentives, and sewer billing based on average winter consumption.

### **City of Columbus (OH)**

John led the completion of cost-of-service evaluations and rate, fee, and charge assessments to assist the City generate sufficient revenues to pay for upcoming water and sewer capital improvement and operation and maintenance programs. The project included completing a cost-of-service evaluation to determine the cost responsibility of the City's customers, and a rate structure evaluation to identify water and sewer rate structures that were closely aligned with the cost of providing service and developing rate formulas for the city's future use. Provided input into the City's affordability analysis to support implementation of a long-term control plan. Based on the results of this study, assisted the City in implementing a customer assistance program to address affordability by changing its water rates from a declining block structure to a "lifeline" rate and an inclining block structure for residential customers. Also, assisted the city in implementing a separate charge to customers to pay for its upcoming \$2.5 billion wet weather capital program. This charge recovers the cost of the program based upon the impervious surface area of the City's customers. Presented study results to city staff, city council, and other stakeholders using interactive financial modeling tools that were developed for the client. Reviewed the City's low-income discount programs and evaluated the revenue and rate impacts associated with the enhancement of these programs.



### **City of Dayton (OH)**

John completed water and sewer rate studies for the City of Dayton (City), consisting of estimation of revenue requirements, development of financial models, facilitating workshops with the City, completion of cost of service evaluations, and developing projections of utility rates. Also, prepared utility surveys and benchmarking studies to assess competitiveness of existing and proposed rates, and presented results to City staff and officials. John assisted the City in negotiating a long-term water supply contract with a neighboring municipality, and acceptance of a “utility basis” cost of service model that serves as the basis for the cost of purchased water specified in the water supply contract. Completed water and sewer rate studies for the City, consisting of estimation of revenue requirements, development of financial models, facilitating workshops with the City, completion of cost of service evaluations, and developing projections of utility rates. Also, prepared utility surveys and benchmarking studies to assess competitiveness of existing and proposed rates, and presented results to City staff and officials.

### **DC Water (DC)**

John completed a cost of service study for DC Water customers that discharge to a large sewer interceptor, the Potomac Interceptor. The study consisted of evaluating the portion of DC Water’s costs associated with the Potomac Interceptor and the Blue Plains Wastewater Treatment Plant, developing a cost-based allocation to various municipal and federal customers that discharge to the interceptor, and establishing a multi-year sewer rate. Prepared a detailed sewer user charge report and presented the results to the DC Water board.

### **Onondaga County Water Authority (NY)**

John led the completion of a water rate study to assist the Onondaga County Water Authority (OCWA) generate sufficient revenues to pay for operating and capital needs and recover costs from customers in an equitable manner. Project included completing a water demand forecast, a financial plan, and a rate design model. Assisted in the design of water rates, and prepared and provided a rate model for OCWA’s future use.

### **Region of Peel (Canada)**

John served as the project director for a comprehensive long-term water and wastewater financial planning project for the Region of Peel. This project entailed (1) review of the Regions existing budgeting, capital planning, and financial planning processes to identify gaps and opportunities for improvement, (2) completion of an environmental scan to compare the Region to peer utilities across Canada and beyond from a financial perspective, (3) completing a cost of service evaluation, (4) preparation of rate structure alternatives, (5) the development of a long-term financial plan and model to assist the Region with long-term financial decision-making, and (6) facilitating an extensive stakeholder outreach effort to solicit feedback from customers. The project is ongoing and the results are anticipated to be the successful implementation of a new water and wastewater rate structure and financial plan for the Region..

### **Suffolk County Department of Environment and Planning (NY)**

John led a project to assist Suffolk County develop an implementation plan for the creation of a Water Quality Management District that will provide the administrative and legal structure and funding source to implement the County’s long-term plan to address nitrogen pollution throughout the County. This plan was prepared to address that nearly three quarters of the properties in the County are not connected to sewers and utilize on-site cesspools and septic systems, which has contributed to harmful algae blooms and fish kills, degraded marine habitat, and destroyed the coastal marshlands. The project consisted of completing a detailed assessment of recurring revenue alternatives, and developing a blueprint for an organizational structure and process for establishment and management of the district. The plan includes the development of a recurring revenue stream, governance structure, spatial tools, and legal pathways to success. The project also entailed significant stakeholder engagement across several County departments, as well as local environmental non-profits, the business community, and beyond. Following extensive data gathering and analysis, coupled with monthly workshops, Raftelis helped the County design and select a tailored revenue model and governance structure.



### **City of Virginia Beach (VA)**

John served as the project manager for a multi-year financial services contract for the City of Virginia Beach (City) that included completing an economic evaluation to support asset management and CIP plans, true-up evaluation, developing an interactive financial planning model, and completing a cost of service evaluation. The true-up evaluation consisted of reviewing the City of Norfolk's cost allocation model for allocating operation and maintenance expenses, reviewing the rate model for allocation of fixed assets, and the rate of return on rate base for reasonableness. This effort saved Virginia Beach more than \$1 million in payments to the City of Norfolk. The cost of service evaluation consisted of assessing future capital funding needs for the water and sewer utilities due to aging infrastructure, system expansion, and new regulations, determining revenue requirements over a five to ten year period, and developing rates, fees and charges to meet revenue requirements and other City rate-setting goals and objectives.

### **Water Research Foundation (CO)**

John was the principal investigator on a research project to identify and evaluate new and emerging capital financing alternatives and capital providers relevant to the water industry. Identified new and emerging capital providers and financing alternatives, evaluated their benefits and limitations. Prepared research report and capital financing evaluation toolkit consisting of a series of case studies and a decision support tool that can be used to evaluate the financing alternatives.

John was the principal investigator on a research project to identify and develop communication approaches, messages, and tools that water utilities can use to communicate water rate and pricing changes more effectively to governing board members, and gain support for needed utility rate adjustments. Through this research, identified the factors critical to successful rate case adoptions, identified factors that tend to inhibit successful rate adoption, developed a framework for effective rate communications, and prepared a rate communications toolkit that can be used by utilities to effectively communicate and garner support for rate adjustments.

## **PUBLICATIONS**

- Affordability of Wastewater Service, 2<sup>nd</sup> Edition, Water Environment Federation, 2022.
- "Thinking Outside the Bill: A Utility Manager's Guide to Assisting Low-Income Water Customers", A study sponsored by the AWWA Water Utility Council, Third Edition. 2022.
- "How Much Is It Worth? An Overview of Valuing Water Utilities", published in the Journal of the American Water Works Association, August 2020.
- "Affordability Assessments: Policy Recommendations for USEPA," published in the Journal of the American Water Works Association, June 2020.
- "The Financial Impact of the COVID-19 Crisis on U.S. Drinking Water Utilities," prepared for the American Water Works Association and the Association of Metropolitan Water Agencies, April 14, 2020.
- "Developing a New Framework for Household Affordability and Financial Capability Assessment in the Water Sector," prepared for the American Water Works Association, National Association of Clean Water Agencies, and the Water Environment Federation, April 17, 2020.
- "Principles of Water Rates, Fees, and Charges," Manual of Water Supply Practice M1, 7th Edition, 2017
- "Financing and Charges for Wastewater Systems," Manual of Practice M27, 4th Edition, 2017
- "New and Emerging Capital Providers for Infrastructure Funding, Project #4617," Water Research Foundation
- "Rate Approval Process Communication Strategy and Toolkit, Project #4455," Water Research Foundation, 2016
- "The Effective Water Professional: Leadership, Communication, Management, Finance, and Governance," Water Environment Federation, 2015



- "Water Capital Financing, Manual of Practice M29," Led the subcommittee involved in updating and publishing a new edition of the M29 Manual
- "Developing Rates for Small Systems M54," Chapter author involved in updating and publishing a new edition of the M54 Manual
- "Financial Management for Water Utilities: Principles of Finance, Accounting, and Management Controls," American Water Works Association, 2nd Edition, 2012
- "Water Rates, Fees, and the Legal Environment," American Water Works Association, 2nd Edition, 2010
- "Budgeting and Financial Planning," Wastewater Collection System Management, Manual of Practice No. 7, Chapter 8, Water Environment Federation 2009
- "Maintaining Long Term Financial Health," Talk of the Towns, Association of Towns of the State of New York, 2007

## PRESENTATIONS

- "Review of EPA Proposed 2022 Financial Capability Assessment Guidance, presented at the Utility CFO Forum, April 2022.
- "Financial Planning and Using ARPA and ILJA Funds for a Transformative Future," AWWA Webinar, March 16, 2022.
- "Evaluating Revenue and Financing Considerations. Developing a Financing Strategy in Uncertain Times," the Utility Management Conference. February 22, 2022.
- "Covid-19's Financial Impact on Water Utilities," Webinar Sponsored by American Water Works Association, May 2020.
- "A Path Forward on Affordability," Utility Leaders Plenary Session at WEFTEC, 2019
- "The Nuts and Bolts of the New Affordability Proposal," River Rally Conference, 2019
- "Evaluating if Water Service is Affordable – Integrated Planning and Beyond," American Water Works Association Annual Conference, 2019
- "Strategies and Approaches that Small Utilities Can Use to Improve Success in Funding Deferred Capital Needs," Utility Management Conference, 2019
- "Asset Bundling, Alternative Financing, and Cold Hard Cash," American Water Works Association Annual Conference, 2018
- "Sustainability and Implications for Utility Management and Financing," P3 Water Summit, 2018
- "Innovations in Water Infrastructure Financing – Getting the Right Fit, Water Infrastructure Conference, 2017
- "Rate Approval Process Communication Strategy and Toolkit: Results from WRF 4455," American Water Works Association Annual Conference, 2017
- "New and Emerging Capital Providers for Infrastructure Funding – Addressing the Infrastructure Gap," American Water Works Association Annual Conference, 2017
- "Rate Approval Process Communication Strategy and Toolkit: Results from WRF 4455," American Water Works Association Annual Conference, 2017
- "New and Emerging Capital Providers for Infrastructure Funding," NACWA Conference, 2017
- "Innovations in Water Infrastructure Financing: Addressing the Infrastructure Gap," Utility Management Conference, 2017
- "New Capital Providers for Water Infrastructure Funding – Overview," webinar sponsored by the American Water Works Association, 2016.

# Tom Beckley

Vice President

## PROFILE

Tom has 22 years of experience with Raftelis conducting financial and rate consulting related projects. He has assisted a wide range of municipal water, wastewater, and stormwater utilities in conducting cost-of-service, rate setting, financial feasibility, privatization, system development fees, and other finance-related studies. Tom authored a chapter entitled, "Designing Water and Wastewater Rate Structures," for the Fourth Edition of the industry guidebook, *Water and Wastewater Finance and Pricing: The Changing Landscape*. He is also an active member of AWWA and WEF, as well as ICMA, and has presented at various national and state conferences.

## KEY PROJECT EXPERIENCE

### Northwest Water Commission (IL)

Tom has served as project manager for Raftelis' engagements with the Northwest Water Commission (Commission), a wholesale water provider located in the northwest Chicago suburbs. The Commission engaged Raftelis to review its assets and determine a valuation for use in potentially providing service to additional customers. Raftelis also assisted the Commission with determining wholesale rates for a new non-member customer, the City of Des Plaines, which replaced a majority of its water supply from the City of Chicago with Commission water.

### Burr Ridge (IL)

Tom is the Project Manager on an engagement with the Village of Burr Ridge (Village) and is completing a water cost of service study for the Village as a subcontractor to Crawford, Murphy, and Tilly Engineers (CMT). Raftelis evaluated the Village's costs, including a capital improvement plan developed by CMT, and proposed rate structure changes based on cost of service that would recover the necessary costs while better addressing the Village's pricing objectives.

### City of Naperville (IL)

Tom served as project manager for Raftelis' engagement with the City of Naperville (City). The City has engaged Raftelis to provide a comprehensive cost-of-service study for their water and wastewater utility and propose updated rates to meet the City's pricing objectives. Raftelis worked with City staff to determine their pricing objectives in a workshop setting and then used the results of that exercise to propose cost-of-service-based rates that met those objectives. The City has also engaged Raftelis to provide assistance in updating their contract for wholesale wastewater service with the City of Warren. Raftelis is working with the City to ensure that the contract is recovering the appropriate costs related to their service to the City of Warren.

### Des Moines Water Works (IA)

Tom has served as project manager on a cost of service study for the Des Moines Water Works (DMWW). DMWW provides retail service to the City of Des Moines and several other suburbs in addition to wholesale water service



## Specialties

- Utility cost-of-service & rate structure studies
- Conservation rate studies
- Bond forecasts & feasibility studies
- Economic feasibility studies
- Industrial waste charge studies
- Capital recovery fee studies

## Professional History

- Raftelis: Vice President (2020-present); Senior Manager (2014-2019); Manager (2000-2013)

## Education

- Master of Public Administration - University of Kansas (2008)
- Master of Business Administration (Concentration in Finance) - A.B. Freeman School of Business, Tulane University (2000)
- Bachelor of Science in Naval Architecture & Marine Engineering - Webb Institute (1995)

## Certifications

- Series 50 Municipal Advisor Representative
- Series 54 Municipal Advisor Principal

## Professional Memberships

- AWWA
- WEF
- ICMA



throughout the Des Moines metropolitan area. Raftelis was engaged to assist DMWW in performing a cost of service analysis to address concerns over the equity of their existing rate structure. Since completing the initial analysis the DMWW has engaged Raftelis in additional projects to support proposed regionalization of water supply and production assets in the region.

### **City of Fort Worth (TX)**

Tom served as project manager for a review of the cost-of-service and rates of the wholesale wastewater service for the Water Department for the City of Fort Worth (City). The City owns, manages and operates a water supply, treatment, transmission and distribution system, and a wastewater collection, treatment and disposal system serving residents and businesses within and outside the City. Service to areas outside the City is provided through 28 wholesale water agreements and 23 wholesale wastewater agreements. The Water Department uses four separate computer models to assist in the cost-of-service and rate setting process. Wholesale water and wastewater rates are determined in accordance with specific revenue requirements and cost allocation methodologies contained in the wholesale water and wastewater contracts.

The City's practice has been to retain the services of an expert financial and rate consultant to update the wholesale rates on a three-year cycle. Tom is currently working with the City to review and evaluate the cost-of-service methodology, make recommendations on changes or improvements to the methodology, and determine and verify the resulting rates. He will also participate in several workshops presenting the methodology and results to a Wholesale Customers Advisory Committee (WCAC) and sub-committee, and the final results will be presented to the City Council for adoption for fiscal year 2014.

### **City of Saginaw (MI)**

Tom has served as project manager for cost-of-service studies for the City of Saginaw (City) water utility since 2005. The City provides retail service in the City and wholesale service to eighteen other utilities in their region, and Raftelis was first engaged by the City to assist in repairing their relationship with the wholesale customers. Since 2005 Raftelis has worked with the City and the wholesale to develop a positive relationship through transparency in the rate-setting process.

### **City of Wichita (KS)**

Tom served as project manager for cost-of-service studies for the City of Wichita's (City) water and wastewater utility. Raftelis was engaged by the City to perform a comprehensive cost-of-service study in 2010 and in 2015. Raftelis worked with the City to allocate costs between the water and wastewater utilities and to functions in each utility to determine cost-of-service for each of the City's customer classes. Raftelis then worked with the City to determine appropriate rates that not only recovered the City's cost-of-service, but also addressed their concerns related to revenue stability.

In another engagement with the City, Tom served as lead consultant and assisted the City in performing an analysis of wholesale water rates by evaluating billing data for the past three years for all of the City's wholesale customers and provided recommendations to improve the recovery of revenue requirements from these customers. Raftelis has also performed a rate study to determine a raw water rate for a proposed new industrial customer seeking service from the City. Raftelis also analyzed the City's rate structure to determine its effectiveness for providing stable revenues during varying weather conditions.

### **City of Wyoming (MI)**

Tom has served as lead consultant and project manager for several engagements with the City of Wyoming (City). Raftelis' largest engagement was to perform a water cost-of-service study and to provide assistance in the negotiation of new wholesale contracts for water and wastewater service. The City engaged Raftelis to perform a water cost-of-service

study to support the negotiation of new wholesale water contracts. Raftelis has also provided expertise in areas including rate of return, cost-of-service allocations, industrial surcharges, and rate design across several engagements with the City.

## PROJECT LIST

- Allegheny County Sanitary Authority (PA) - Industrial surcharge review and rate study
- Arlington County (VA) - Cost-of-service study and system development charge update
- Birmingham Water Works Board (AL) - Bond feasibility study
- City of Baltimore (MD) - Cost model, wastewater rate study, and water rate arbitration assistance
- City of Denton (TX) - Water and wastewater cost-of-service and rate study
- Fort Gratiot Township (MI) - Port Huron study
- City of Fort Worth (TX) - Cost-of-service and rates of the wholesale wastewater service
- City of Gladstone (MO) - Wholesale rate review
- Town of Grand Lakes (CO) - Water rate study
- City of Grosse Pointe (MI) - Water and wastewater rate study
- Harlingen Water Works System (TX) - Water and wastewater rate study
- City of Hobbs (NM) - Financial planning and water and sewer rate study
- City of Kansas City (MO) - Sewer cost-of-service analysis
- City of Lee's Summit (MO) - Water and wastewater rate study
- City of Liberty (MO) - Wholesale rate review
- Little Rock Wastewater Utility (AR) - Cost-of-service study and model, Rate Advisory Committee assistance, rate review, system growth charge study, and valuation study
- Loudon County Sanitation Authority (VA) - Bond issuance assistance and cost-of-service study
- City of Macomb (MI) - Feasibility analysis for acquisition and wastewater rate litigation assistance
- City of Naperville (IL) - Water and wastewater cost-of-service study
- Metropolitan Government of Nashville and Davidson County Water Services (TN) - Budget review
- Northwest Water Commission (IL) - Wholesale valuation and rate analysis
- Oakland County (MI) - Water and wastewater master plan study
- City of Olathe (KS) - Impact fee study, rate model update, system development charge study, and system development charge update
- Peace River Manasota Regional Water Authority (FL) - Feasibility study
- City of Peoria (AZ) - Sanitation fees study and water and wastewater impact fee study
- City of Phoenix (AZ) - Bond feasibility study (multiple)
- City of Providence (RI) - Rate filings (multiple)
- City of Saginaw (MI) - Water cost-of-service study, water rate study, and wholesale water contract negotiations
- Saginaw-Midland Municipal Water Supply Corporation (MI) - Feasibility study
- City of San Francisco (CA) - Wholesale water contract negotiations
- St. Louis Metropolitan Sewer District (MO) - Rate change review (multiple)
- City of Suffolk (VA) - Water and wastewater rate studies (multiple)
- United States Navy - Rate review and negotiations
- City of Wichita (KS) - Water and wastewater cost-of-service study and wholesale water rate analysis
- City of Wyoming (MI) - Water and wastewater wholesale contract negotiations and water rate study
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# Collin Drat

Manager

## PROFILE

Collin has a background in public finance and statistical modeling. Since joining Raftelis, he has had the opportunity to participate in an array of utility financial and rate consulting engagements involving water and wastewater demand analysis, financial planning, cost-of-service analysis, cost-of-service review and rate design.

## KEY PROJECT EXPERIENCE

### Village of Northfield (IL)

Collin currently serves as the project manager for Raftelis' engagement with the Village of Northfield (Village). The Village engaged Raftelis to perform a financial planning, cost of service and rate study for the Village's water and sewer fund. This engagement involves the development of a rate plan which will fund ongoing operations and maintenance, capital reinvestment and prudent reserve balances. A key aspect of this engagement involves appropriately allocating costs between the water and sewer funds individually (they are currently combined) in order to understand the current financial position of each.

### City of Bentonville (AR)

Collin served as the lead consultant for Raftelis' engagement with the City of Bentonville (City), which included the development of a comprehensive financial plan, cost of service analysis and rate recommendations, which included retail rate structure modifications and wholesale rates developed in accordance with each customer's unique service agreement. Collin is the project manager for the City's wastewater rate study, which is ongoing.

### City of Sterling Heights (MI)

Collin serves as project manager for Raftelis' engagement with the City of Sterling Heights (City). Raftelis has been engaged to perform a financial planning, cost of service and rate study for the City. The study will identify the level of revenue needed for ongoing financial sustainability and determine how it should be recovered from the City's customer classes. A key aspect of this engagement involves the determination of appropriate capital charges which will ensure that new customers pay for their share of capacity in the City's water and sewer system.

### City of Saginaw (MI)

Collin has served as the lead consultant for multiple engagements with the City of Saginaw (City). A key aspect of these engagements involved the development of water service rates for the City's 18 wholesale customers. This required the development of a five-year financial plan and an allocation of operations and maintenance, depreciation and return on rate base to each of the City's wholesale customers, based on that customer's unique contribution to the City's operating and capital costs. The City's wholesale customers currently pay a commodity charge which recovers the cost of providing water service based on their current demand and a capacity charge which recovers costs on the basis for their contracted average and maximum day demand.



## Specialties

- Utility strategic financial planning
- Cost-of-service analysis
- Water, wastewater, & stormwater rate design
- Conservation rate design
- Statistical analysis

## Professional History

- Raftelis: Manager (2019-present); Senior Consultant (2016-2018); Consultant (2014-2015); Associate Consultant (2012-2013)

## Education

- Master of Public Affairs (Public Finance) - Indiana University (2012)
- Bachelor of Arts in International Relations - Wheaton College (2010)

## Professional Memberships

- AWWA
- WEF

### **City of Suffolk (VA)**

Collin currently serves as the project manager for Raftelis' multi-year engagement with the City of Suffolk (City). Collin has worked with the Raftelis project team advising the City on an ongoing basis since 2012. The scope of services includes an annual update of the 10-year comprehensive financial plan, determination of water and sewer costs of service, and development of proposed rates for the City's retail customers and wholesale customer, Isle of Wight County (the County). The County's wholesale rates are established on a utility basis, based on a 25% "take or pay" capacity arrangement and are reviewed each year by an independent third party consultant.

### **City of Lawrence (KS)**

Collin serves as the project manager for Raftelis' ongoing engagement with the City of Lawrence (City). The City serves 35,000 retail customers (including the University of Kansas) and 7 wholesale customers. Raftelis completed its initial rate study for the City in 2017. That engagement involved the development of a comprehensive 10-year financial plan, water and wastewater cost-of-service studies, conservation rate designs and system development charges. Since the initial study, Raftelis has been retained to update analysis for the 2018, 2019 and 2020 budget years. Collin led each of these analyses is currently engaged updating the analysis for the 2021 budget year.

### **Providence Water Supply Board (RI)**

Collin served as the lead consultant for the Providence Water Supply Board (PWSB) since 2013, preparing testimony in PWSB's last 5 rate filings (Dk. 4571, Dk. 4406, Dk. 4618 and Dk. 4994) before the Rhode Island Public Utilities Commission (RIPUC). PWSB provides retail service to 78,000 retail and 8 wholesale customers in the region. These filings involve the development of detailed rate year revenue requirements, updating cost-of-service allocations and rate design. A key component of the current filing has involved the development of completely new base-extra capacity methodology to allocate costs to between PWSB retail and wholesale customers.

## **SELECTED PROJECT LIST**

- Bloomfield Township (MI) – Water and sewer rate study
- Capital Regional Parkland Water Services Commission (AB) – Wholesale water rate study
- City of Alexandria (VA) - Water rate litigation support
- City of Alpena (MI) - Wholesale water and sewer rate litigation support
- City of Atchison (KS) – Water and wastewater rate study
- City of Aztec (NM) – Electric, water and wastewater rate study
- City of Bentonville (AR) – Water rate study
- City of Bloomington (IL) – Sewer and Stormwater Rate Study
- City of Boulder City (NV) – Electric, Water, Wastewater and Solid Waste Rate Study
- City of Calgary (AB) – Water and Wastewater Cost of Service and Rate Study
- City of Cookeville (TN) – Water and sewer rate study, Gas rate study
- City of Flint (MI) – Water and sewer rate studies (multiple)
- City of Junction City (KS) - Water and sewer financial planning and cost-of-service studies (multiple)
- City of Marquette (MI) – Water and sewer rate studies (multiple)
- City of Marquette and Marquette Township – Joint Water Rate Study (multiple)
- City of Rochester (MI) – Water and sewer rate studies (multiple)
- City of Round Rock (TX) – Water and wastewater rate studies (multiple)
- City of Saginaw (MI) – Water rate studies (Multiple)
- City of Topeka (KS) – Water, wastewater and stormwater rate study
- Detroit Water and Sewerage Department (MI) – Affordability study, Fireline charges
- Franklin Water Utility (WI) – Water Supply Alternatives Analysis



- Gran Melia (PR) - Water rate litigation support
- Marana Water (AZ) – Water and wastewater rate study, Impact Fee Study
- Marquette Charter Township (MI) – Fire Protection Study
- Masonic Villages at Sewickley (PA) - Sewer rate litigation support
- Northwest Water Commission (IL) - Utility system valuation, wholesale rate methodology
- Orangeburg Department of Public Utilities (SC) - Water, wastewater, nat. Gas, electric rate study
- Pennichuck East Utility (NH) - Water cost-of-service study
- Port Huron Township (MI) – wheeling rate study
- Regional Water Customers Group (AB) – Wholesale rate reviews (multiple), Demand forecasting
- Silverleaf Resorts, Inc (MO, IL, TX) - Water and sewer rate litigation support
- St. Louis Metropolitan Sewer District (MO) - Rate analysis support
- State of Michigan Department of Treasury (MI) - Various financial analysis for City of Flint utilities
- Strathcona County Utilities (AB) – Wastewater rate study
- Tacoma Public Utilities (WA) - Econometric water demand modeling
- Town of Stony Plain (AB) – Stormwater Financial Plan
- Village of Northfield (IL) – Water and Sewer Rate Study
- Waukesha Water Utility (WI) – Wholesale water contract evaluation

## **PRESENTATIONS AND PUBLICATIONS**

- Making Cents of Affordability: How to Assess, and Address, Challenges in Your Community, KWEA/MO-AWWA Joint Annual Meeting (2022)
- Smaller Utilities, Bigger Challenges: Small Utilities Gain the Most from Financial Planning and Stakeholder Outreach, NACWA Clean Water Advocate (2020)
- "Financial Breakdown in the Vehicle City: Finding a Way Forward for Flint Finances in the Wake of the Water Crisis," AWWA/WEF Utility Management Conference (2017)
- "Ratemaking 101: Best Practices for the Financially Sustainable Utility," KWEA and KSAWWA Joint Annual Conference (2016)

## REQUEST FOR BOARD ACTION

<b>AGENDA SECTION</b> Omnibus Vote Requiring Super-Majority or Special Majority Vote	<b>ORIGINATING DEPARTMENT</b> General Manager's Office
<b>ITEM</b> A Resolution Authorizing Task Order #1 for Cost-of-Service model review under a Master Services Agreement for Professional Services with the firm Raftelis, Inc.  Resolution R-43-22	<b>APPROVAL</b> <span style="float: right;">PDM</span>  <span style="float: right;">CAP</span>

Account Number: 01-60-628000, Not-to-Exceed \$40,000

The DuPage Water Commission has been presented with a draft "cost-of-service" rate proposal from the City of Chicago. The proposed cost-of-service rate is a departure from the historical practice of utilizing an established "base water rate" for all drinking water from the Chicago/Lake Michigan source. The cost-of-service proposal is based upon the AWWA best management practice as defined in the AWWA M1 manual which prescribes computation of associated costs from the supply chain assets: life cycle cost, depreciation, and replacement costs. Under this scenario, all water wholesalers and municipal direct connections served by the City of Chicago would receive a separate rate based upon the assets in their respective service chain.

The cost-of-service model, if implemented, would present a significant improvement from the current flat rate of \$4.33/thousand gallons, as the COS model computes a DWC cost of \$2.02 for 2019 (the benchmark study year), and a forecast rate for 2030 of \$2.50 - \$2.75. It should be noted for the record, that although Chicago has proposed a reduced cost-of-serve rate and acknowledged the COS procedure as the most appropriate means of computing a wholesale water rate, no commitment has been provided from Chicago as to a schedule for implementing the change. This matter will be an important consideration during the negotiation of any extension to the Chicago Water Purchase contract, which expires in December, 2023. As such, it is particularly important that the COS model be reviewed, refined, and validated concurrently with the Chicago contract negotiations.

The COS model as presented is complex and includes a large number of variables, assumptions, and factors which require review by a professional consultant with expertise in the areas of utility financial management and rate-setting. In particular, the firm must be highly qualified to perform a detailed review of the proposed cost-of-service model, and to generate a detailed list of items within the model which should be challenged, require verification, are not in compliance with the AWWA M1 model, misrepresent supply chain assets, are not in compliance with industry standard, or are unclearly defined in the model. The selected firm must be a nationally recognized expert in rate-setting and should propose a team comprised of knowledgeable staff with a broad range of expertise representative of the proposed DWC cost-of-service review project. Importantly, the firm should present no conflicts of interest with the City of Chicago.

To this end, staff solicited Statements of Qualifications and scheduled scoping discussions with qualified firms, including those with current Master Services Agreements with the Commission. Several qualified firms were excluded from the review, including Jacobs, EXP, and Arcadis which



are under direct contract with the City of Chicago as a function of the embedded CTR team within the Chicago Water Department. Other firms, including Black & Veatch, were qualified but declined to participate due to engagement with the City of Chicago under separate contracts. Lastly, firms under contract with other wholesalers, including Burns & McDonnell, have been excluded in order to provide an independent review of the COS separate from that performed for other suburban agencies/commissions. Therefore, finding an exceptionally qualified firm without a conflict was challenging. However, several firms directed us to the Raftelis, Inc, a nationally recognized firm with relevant experience.

DWC staff requested an SOQ from Raftelis, which was reviewed and found to be favorable to the firm, with notable experience in the area of utility financial management and rate setting, including both work within the Chicagoland region, and significant work on large projects nationally. Staff conducted reference calls with several of the local clients and has requested that the Raftelis team be comprised of specific personnel which the references indicated would be especially competent and responsive.

The scope of services was developed in conjunction with DWC staff and the Raftelis team (scope summary attached), with an estimated cost of \$35,000. The initial work is expected to be completed by the end of the calendar year, although neither the schedule nor detailed scope can be fully controlled because coordination/communication and response to and from the City of Chicago will be required. Due to the nature of this work it is anticipated that following tasks will be necessary, including engagement and coordination with other suburban water wholesale agencies to ensure continuity. Therefore it is requested that this task order be approved in an amount not to exceed \$40,000 to accommodate uncertainties and the cost of reimbursables. Additional activities beyond the scope of this initial proposal will be processed as a separate Task Order.

*Budget Note: It should be noted that the cost for this project has not been budgeted for separately, but it is necessary to advance this work as soon as possible to coordinate with the Chicago contract negotiations and the alternative source water study, therefore it is recommended that this work be authorized as an expenditure in Account #01-60-628000 "Consulting Services – Engineering Consultants".*

**MOTION: To adopt Resolution R-43-22**

DuPAGE WATER COMMISSION

RESOLUTION NO. R-43-22

A RESOLUTION APPROVING AND RATIFYING CERTAIN TASK ORDERS  
UNDER A MASTER CONTRACT WITH RAFTELIS CONSULTING, INC. FOR AN  
COST-OF-SERVICE REVIEW STUDY

WHEREAS, the DuPage Water Commission (the "Commission") entered into a contract with Raftelis Consulting, Inc. (the "Consultant") to provide, from time to time, professional consulting services in connection with various projects of the Commission (the "Master Contract"); and

WHEREAS, the Master Contract sets forth the terms and conditions pursuant to which the Commission will obtain from time to time, and the Consultant will provide from time to time, professional engineering services for such discrete projects as are delineated and described in Task Orders to be approved by the Commission and the Consultant; and

WHEREAS, the Consultant and DWC staff have developed a scope of services in substantially the form described in the Task Orders as attached hereto and by this reference incorporated herein and made a part hereof as Exhibit 1 (the "Task Orders");

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the DuPage Water Commission as follows:

SECTION ONE: The foregoing recitals are incorporated herein and made a part hereof as findings of the Board of Commissioners of the DuPage Water Commission.

SECTION TWO: The Task Orders attached hereto as Exhibit 1 shall be and hereby are approved and, if already issued, ratified because the Board of Commissioners of the DuPage Water Commission has determined, based upon the representations of staff and the Consultant, that the circumstances said to necessitate the Task Orders were not reasonably foreseeable at the time the Master Contract was signed, the Task Orders



are germane to the Master Contract as signed, and/or the Task Orders are in the best interest of the DuPage Water Commission and authorized by law.

SECTION THREE: This Resolution shall constitute the written determination required by Section 33E-9 of Article 33E of the Criminal Code of 1961 and shall be in full force and effect from and after its adoption.

	Aye	Nay	Absent	Abstain
Bouckaert, D.				
Broda, J.				
Fennell, J.				
Gans, R.				
Gustin, P.				
Healy, J.				
Novotny, D.				
Pruyn, J.				
Rush, K.				
Russo, D.				
Saverino, F.				
Suess, P.				
Zay, J.				

\_\_\_\_\_  
Chairman

ATTEST:

\_\_\_\_\_  
Clerk

**EXHIBIT 1**



## TASK ORDER NO. 01

In accordance with Section 1.1 of the Master Contract for Professional Engineering Services Owner and Consultant agree as follows:

1. **Project:**

Cost-of-Service Review Study

2. **Services of Consultant:**

A. Basic Services:

1. **Study and Report Phase.**

- a. Review Owner's available data and consult with Owner to determine a mutually agreed upon program.
- b. Provide analysis of Owner's needs and comparative studies of prospective solutions.
- c. Provide a detailed review of the draft Chicago cost-of-service program, prepare documents listing items to be clarified, validated, or revised, assist DWC in engaging the City of Chicago with the appropriate refinements.
- d. Prepare, for review and approval by Owner, a report summarizing the Study and Report Services, together with Consultant's opinion, and review them in person with Owner.
- f. Provide up to twenty-five (25) paper copies and one (1) PDF copy of the draft report for review and approval by Owner and review them in person with Owner.
- g. Provide up to twenty-five (25) paper copies and one (1) PDF copy of the final report for review and approval by Owner and review them in person with Owner.
- h. Attend up to three (3) meetings with the DuPage Water Commission Board of Commissioners.

B. Additional Services:

As authorized by a Change Order issued pursuant to Section 2.1 of the Contract.

3. **Approvals and Authorizations:** Consultant shall obtain the following approvals and authorizations:

None Anticipated

4. **Commencement Date:**

Effective Date of This Task Order

5. **Completion Date:**

A. Study and Report Phase: As listed in the attached consultant Phase I Scope of Work, plus extensions, if any, authorized by a Change Order issued pursuant to Section 2.1 of the Contract.

6. **Submittal Schedule:**

A. As listed in attached Consultant proposal

7. **Key Project Personnel:**

A. As listed in attached Consultant proposal

8. **Contract Price:**

For providing, performing, and completing each phase of Services, an amount equal to Consultant's Direct Labor Costs times the following factor set forth opposite each such phase, plus an amount equal to the actual costs of all Reimbursable Expenses, but not to exceed:

Total (Phase I)	<b>\$35,000</b>
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9. **Payments:**

Direct Labor Costs shall mean the billing rate of all Consultants personnel including all professionals whether owners or employees, engaged directly on the Project.

Reimbursable Expenses shall mean the actual expenses incurred by Consultant directly or indirectly in connection with the Project, including expenses for transportation, telephone, postage, computer time and other highly specialized equipment, reproduction and similar Project related items.

10. **Modifications to Contract:**

None

11. **Attachments:**

Raftelis Phase I Scope of Work document



Approval and Acceptance: Acceptance and approval of this Task Order, including the attachments listed above, shall incorporate this Task Order as part of the Contract.

The Effective Date of this Task Order is June 16, 2022.

**DUPAGE WATER COMMISSION**

By: \_\_\_\_\_

Paul D. May, P.E.  
General Manager

**DESIGNATED REPRESENTATIVE FOR TASK ORDER:**

Name: Paul D. May, P.E.  
Title: General Manager  
Address: 600 East Butterfield Road, Elmhurst, Illinois 60126-4642  
E-mail Address: [may@dpwc.org](mailto:may@dpwc.org)  
Phone: (630) 834-0100

**RAFTELIS CONSULING, INC**

By: \_\_\_\_\_

[Consultant's Officer]  
Title

**DESIGNATED REPRESENTATIVE FOR TASK ORDER:**

Name: **John Mastracchio**  
Title: Executive Vice President  
Address:  
E-mail Address: [jmastracchio@raftelis.com](mailto:jmastracchio@raftelis.com)  
Phone: (518) 391-8944

## **PHASE 1 – SCOPE OF WORK**

Under this phase of the work, Consultant shall review the latest version of the City of Chicago's ("City's") preliminary cost of service study model, supporting calculations, and the cost of service study report, if available. The purposes of the review are (1) to assess its conformance to common industry practices, including the American Water Works Association Manual of Water Supply Practices M1, Principles of Water Rates, Fees, and Charges, Seventh Edition, (2) identify specific questions and challenges associated with the approaches, methods, procedures, assumptions, data, and information used to prepare the preliminary cost of service study model. The Phase 1 Scope of Work will include the following specific subtasks:

- a. Participate in an initial meeting with DWC to confirm the project purpose and background, discuss an overview of the water system, and discuss various project management items.
- b. Review of the City's cost of service study model, report, existing water supply contract between the City and DuPage Water Commission ("DWC"), and other supporting documentation.
- c. Complete a preliminary assessment of the appropriateness of the approaches, methods, and procedures employed, assumptions, data, and information utilized, and resulting wholesale rates, including:
  - i. Appropriate use of the utility-basis approach to identifying revenue requirements
  - ii. Details supporting the fixed assets identified as allocable to the DWC.
  - iii. Method of determining fair value rate base, appropriateness of the assets included in the rate base, and appropriateness of the annual and accumulated depreciation estimates.
  - iv. Appropriateness of the working capital requirement assumptions.
  - v. Basis and support for the method of determining the rate of return factor employed.
  - vi. Details supporting the operations and maintenance expense by cost center.
  - vii. Appropriate use of the cost allocation drivers, including commodity and demand factors, average day, maximum day, and maximum hour demands, and customer cost drivers.



- viii. Assessment of the appropriateness of the units of service used in the model, including average day, maximum day, and maximum hour flows, and customer units.
  - ix. Appropriateness, accuracy, and correctness of the model calculations.
- d. Prepare an additional information request list and list of interrogatories for DWC to forward to the City for a response.
  - e. Prepare a preliminary memorandum documenting the initial observations and findings regarding the conformity of the cost of service model with common industry practices and documentation of initial issues and challenges associated with the model for further assessment and evaluation.
  - f. Participate in up to three virtual meetings with DWC to discuss the cost of service model and information, review findings, and additional City information request list.

To support this Phase 1 scope of work, we would ask that DWC request the following information from the City, if available:

- Any written memorandums, reports, or other documentation of the approach, methodology, assumptions, and data used in the City's cost of service model.
- Detailed fixed asset information supporting the fixed asset original cost, depreciation, and reproduction cost new data that is input in the City's cost of service model.
- Detailed line-item operation and maintenance expense information supporting the functional expenses by category included in the City's cost of service model.

### ***PHASE 1 FEE ESTIMATE***

Raftelis proposes to complete the Phase 1 scope of work for a lump sum of \$35,000.

DATE: June 9, 2022

## REQUEST FOR BOARD ACTION

<b>AGENDA SECTION</b>	Omnibus Vote Requiring Super-Majority or Special Majority Vote	<b>ORIGINATING DEPARTMENT</b>	General Manager's Office
<b>ITEM</b>	A Resolution Approving and Ratifying Certain Task Orders Under a Master Contract with Carollo Engineering, for an alternative source water study  Resolution No. R-44-22	<b>APPROVAL</b>	PDM

Account number: 01-60-771200

The DuPage Water Commission is currently negotiating a water purchase contract extension with the City of Chicago, as the existing contract ends in December, 2023. Although Chicago has provided a cost-of-service model which would provide an appropriate rate structure, Chicago has not provided a commitment to establish a date certain for implementation of the COS rate. Rather, preliminary discussions with Chicago present uncertainty that a viable implementation plan or schedule will be adequately developed. Absent productive negotiations with Chicago relative to a long-term purchase contract with the cost-of-service model included, the DuPage Water Commission must give serious consideration to an alternative source water project.

Currently, the DuPage Water Commission is the largest wholesale consumer on the Chicago/Lake Michigan water system, purchasing over \$100M of water from Chicago annually. Expansion of the DWC system is anticipated in the near future with the addition of Montgomery, Oswego, and Yorkville, and the possible addition of Kane County communities as well. Based on the projected consumption growth from system expansion, as well as the current Chicago water rate and forecast continued rate escalation, it is likely that construction of a new source water system will be economically viable. If other suburban water wholesale agencies are included in an expanded regional project, a source water project may be found to be increasingly favorable. To validate the economic viability, construction cost/schedule, conceptual routing, consumption trends, and prospective partners, it is recommended to engage a professional engineering consultant to perform a detailed alternative source water study.

To this end, staff has evaluated previous discussions that DWC has had with potential vendors and has considered the capabilities and qualifications of a number of firms. Consistent with other activities currently underway, it is important that a firm be exceptionally qualified for this work, have relevant regional and national experience with similarly complex projects, and present no conflicts of interest with the City of Chicago. After evaluating the prospective firms, current staff concurs that Carollo Engineering is best suited to advance this study effectively. Carollo had previously met with DWC staff and had a thorough understanding of the prospective scope of services for the work and had drafted an initial presentation and begun to develop a project team. Importantly, Carollo has also recently completed a similar study for two other suburban regional water wholesalers, which provides intimate and detailed knowledge of the issues pertinent to the DWC objective and presents the opportunity to include a larger regional perspective and potentially engage other partners if that is found to be beneficial.

DWC staff coordinated a scoping meeting Carollo representatives to develop the scope of work and projected schedule for the desired services (proposal attached), with an estimated cost of



Resolution No. R-44-22

<b>AGENDA SECTION</b>	Omnibus Vote Requiring Super-Majority or Special Majority Vote	<b>ORIGINATING DEPARTMENT</b>	General Manager's Office
<b>ITEM</b>	<p>A Resolution Approving and Ratifying Certain Task Orders Under a Master Contract with Carollo Engineering, for an alternative source water study</p> <p>Resolution No. R-44-22</p>	<b>APPROVAL</b>	
<p>not to exceed \$300,000. The initial work is expected to be completed by February 2023, so that DWC can be properly informed of the viability of the source water project prior to the end of the Chicago contract negotiation. Developments and initial findings from the source water study will be presented to the Board for consideration and discussion as the project study advances.</p> <p><i>Budget Note: It should be noted that the cost for this project has not been budgeted for separately, but it is necessary to advance this work as soon as possible to coordinate with the Chicago contract negotiations, therefore it is recommended that this work be authorized as an expenditure in Account #01-60-771200. Due to other projects being under budget, there is adequate budgeted funding for this initiative.</i></p> <p>Resolution No. R-44-22 would approve Task Order No. 02 to the Master Contract with Carollo Engineering, Inc.</p>			
<b>MOTION:</b> To adopt Resolution No. R-44-22.			

DuPAGE WATER COMMISSION

RESOLUTION NO. R-44-22

A RESOLUTION APPROVING AND RATIFYING CERTAIN TASK ORDERS  
UNDER A MASTER CONTRACT WITH CAROLLO ENGINEERING, INC. FOR AN  
ALTERNATIVE SOURCE WATER STUDY

WHEREAS, the DuPage Water Commission (the "Commission") entered into a contract with Carollo Engineering, Inc. (the "Consultant") to provide, from time to time, professional engineering services in connection with various projects of the Commission (the "Master Contract"); and

WHEREAS, the Master Contract sets forth the terms and conditions pursuant to which the Commission will obtain from time to time, and the Consultant will provide from time to time, professional engineering services for such discrete projects as are delineated and described in Task Orders to be approved by the Commission and the Consultant; and

WHEREAS, the Consultant and DWC staff have developed a scope of services in substantially the form described in the Task Orders as attached hereto and by this reference incorporated herein and made a part hereof as Exhibit 1 (the "Task Orders");

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the DuPage Water Commission as follows:

SECTION ONE: The foregoing recitals are incorporated herein and made a part hereof as findings of the Board of Commissioners of the DuPage Water Commission.

SECTION TWO: The Task Orders attached hereto as Exhibit 1 shall be and hereby are approved and, if already issued, ratified because the Board of Commissioners of the DuPage Water Commission has determined, based upon the representations of staff and the Consultant, that the circumstances said to necessitate the Task Orders were not



Resolution No. R-44-22

reasonably foreseeable at the time the Master Contract was signed, the Task Orders are germane to the Master Contract as signed, and/or the Task Orders are in the best interest of the DuPage Water Commission and authorized by law.

SECTION THREE: This Resolution shall constitute the written determination required by Section 33E-9 of Article 33E of the Criminal Code of 1961 and shall be in full force and effect from and after its adoption.

	Aye	Nay	Absent	Abstain
Bouckaert, D.				
Broda, J.				
Fennell, J.				
Gans, R.				
Gustin, P.				
Healy, J.				
Novotny, D.				
Pruyn, J.				
Rush, K.				
Russo, D.				
Saverino, F.				
Suess, P.				
Zay, J.				

\_\_\_\_\_  
Chairman

ATTEST:

\_\_\_\_\_  
Clerk

**EXHIBIT 1**



## TASK ORDER NO. 02

In accordance with Section 1.1 of the Master Contract for Professional Engineering Services Owner and Consultant agree as follows:

1. **Project:**

Alternate Water Source Feasibility Studies based upon Carollo Engineering, Inc.'s proposal dated June 6, 2022.

2. **Services of Consultant:**

A. Basic Services:

1. **Study and Report Phase.**

- a. Review Owner's available data and consult with Owner to determine a mutually agreed upon program.
- b. Provide analysis of Owner's needs and comparative studies of prospective solutions.
- c. Provide economic analysis of various alternatives.
- d. Prepare, for review and approval by Owner, a report summarizing the Study and Report Services, together with Consultant's opinion, and review them in person with Owner.
- f. Provide up to twenty-five (25) paper copies and one (1) PDF copy of the draft report for review and approval by Owner and review them in person with Owner.
- g. Provide up to twenty-five (25) paper copies and one (1) PDF copy of the final report for review and approval by Owner and review them in person with Owner.
- h. Attend up to three (3) meetings with the DuPage Water Commission Board of Commissioners.

B. Additional Services:

As authorized by a Change Order issued pursuant to Section 2.1 of the Contract.

3. **Approvals and Authorizations:** Consultant shall obtain the following approvals and authorizations:

None Anticipated

4. **Commencement Date:**

Effective Date of This Task Order

5. **Completion Date:**

A. Study and Report Phase: As listed in the attached consultant report, plus extensions, if any, authorized by a Change Order issued pursuant to Section 2.1 of the Contract.

6. **Submittal Schedule:**

A. As listed in attached Consultant proposal

7. **Key Project Personnel:**

A. As listed in attached Consultant proposal

8. **Contract Price:**

For providing, performing, and completing each phase of Services, an amount equal to Consultant's Direct Labor Costs times the following factor set forth opposite each such phase, plus an amount equal to the actual costs of all Reimbursable Expenses, but not to exceed:

Total (All Phases)	\$ NTE 300,000
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9. **Payments:**

Direct Labor Costs shall mean the billing rate of all Consultants personnel including all professionals whether owners or employees, engaged directly on the Project.

Reimbursable Expenses shall mean the actual expenses incurred by Consultant directly or indirectly in connection with the Project, including expenses for transportation, telephone, postage, computer time and other highly specialized equipment, reproduction and similar Project related items.

10. **Modifications to Contract:**

None

11. **Attachments:**

Carollo Project Scope & Estimate, 6/6/2022



Approval and Acceptance: Acceptance and approval of this Task Order, including the attachments listed above, shall incorporate this Task Order as part of the Contract.

The Effective Date of this Task Order is June 16, 2022.

**DUPAGE WATER COMMISSION**

By: \_\_\_\_\_

Paul D. May, P.E.  
General Manager

**DESIGNATED REPRESENTATIVE FOR TASK ORDER:**

Name: Paul D. May, P.E.  
Title: General Manager  
Address: 600 East Butterfield Road, Elmhurst, Illinois 60126-4642  
E-mail Address: may@dpwc.org  
Phone: (630) 834-0100

**CAROLLO ENGINEERING**

By: \_\_\_\_\_

[Consultant's Officer]  
Title

**DESIGNATED REPRESENTATIVE FOR TASK ORDER:**

Name: **Len Rago, P.E.**  
Title: Senior Client Service Manager / Vice President  
Address: 8600 W. Bryn Mawr Avenue, Suite 900N, Chicago, IL 60631  
E-mail Address: lrago@carollo.com  
Phone: (773) 632-1141

# DuPage Water Commission

## Alternative Water Supply Study

June 2022

### Background

The DuPage Water Commission (DPWC) has supplied potable water to the majority of DuPage County for the past 30 years. That water has been supplied to DPWC by the Chicago Department of Water Management. Chicago's water rates have risen 360% over the last 20 Years. The Water purchase agreement between DPWC and Chicago signed in 1984 will be coming up for renewal in 2024.

The DPWC felt it appropriate that they review their options for water supply at this time. The DPWC decided to undertake a study to evaluate the potential for the Commission to develop an alternative water supply system to the City of Chicago.

The DPWC has asked Carollo Engineers to develop a scope of work and the associated fee to produce such a study allowing the DPWC the ability to assess the feasibility of such options that may be available to them.

Some of the core essential criteria of the proposed alternative water supply established at the onset of this scope include:

- The source water for the system will be Lake Michigan
- The initial membership of this water supply would be the existing and currently proposed members of the DuPage Water Commission.
- The Proposed Water System will meet the members design year maximum day demand.
- The Proposed Water System will meet all existing and reasonably projected water quality criteria established by the USEPA and Illinois EPA regulations.
- The Proposed Water System will be owned, operated, and maintained by the DPWC.

The scope of this study will include the following tasks:

### Task 0 – Project Management

The project will begin with a hybrid kickoff meeting featuring key team members (local team members in person and out of state team members present virtually) and key staff from the DPWC. Carollo Engineers (Team) will lead monthly progress meeting between the project manager and DPWC to facilitate communication and coordinate on decision items as the study is being developed. Invoices and project progress reports will be submitted monthly and reviewed at monthly progress meetings.



Deliverables and Workshops:

- Kickoff Meeting
- Monthly Progress Meetings
- Monthly Progress Reports

### Task 1 - Establish/Confirm the Project Design Criteria

The Team will coordinate with DPWC to acquire necessary data to develop a Project Design Criteria Table that will serve to define the scope and scale of the project facilities. It is assumed that required data and/or decisions will be available from the DPWC.

Some of the fundamental information required includes:

- Existing membership long range water demand projections - Basis for development of the base line criteria
- Prospective Future members and their long-range water demand projections (For future consideration)
- Prospective future water utilities that may become DPWC members or partners and their long-range water demand projections (For future consideration)
- System capacity
- Planning horizon
- Water delivery location - Assumed as at the DPWC's existing reservoir and pumping station
- Water quality goals
- System reliability and redundancy (i.e.: Redundant pumps, standby power, etc.)
- DPWC imposed constraints or requirements

The Team will develop and submit the following in advance of a meeting with the DPWC:

- A detailed Design Criteria Table listing the attributes of the proposed new water system to be defined by the DPWC.
- A list of documents and other information that will facilitate the development of the work of the Project.
- The Team will hold a design criteria workshop with the DPWC to discuss the attributes and the options available to help arrive at the final Design Criteria.

Deliverables and Workshops:

- Data Request Table
- Design Criteria Review Workshop
- Project Design Criteria Table incorporating the DPWC's decisions.

## Task 2 - Regulatory Review

The Team will review the existing regulatory requirements that will affect the proposed water system. Regulations to be reviewed include Illinois Administrative code and USEPA regulations. These requirements will include water quality standards (turbidity, THM's, TOC, biological contaminants, etc.) as well as distribution system requirements (minimum system pressures, disinfection residuals, cross connection prevention requirements, etc.).

This review will also include anticipated future regulations. This assessment will include an overview of information available from the USEPA as they develop their review of the National Primary Drinking Water Regulations.

The review will include discussion of easement acquisition for deep tunnels, Easements from state and/or federal agencies, and discussion of political feasibility of receiving cooperation.

Deliverables and Workshops:

- Regulatory Review Technical Memorandum

## Task 3 - Water Treatment Facility Conceptual Design

A Water Treatment Facility Task Force will be formed consisting of 3 to 6 of Carollo's key water treatment process specialists to collaborate on developing a base line water treatment concept for the DPWC. The key design criteria for selected treatment processes will be defined to match the treatment goals and system capacity needs. This task force will recommend a water treatment concept to be further developed in preliminary and detailed design phases following the completion of this study.

The Team will develop the basis of design for the facilities required for a surface water treatment facility that will be in compliance with the overall system design criteria established in Task 1. The basis of design will form the starting point for developing a physical definition of this facility to allow for determination of capital and operating costs. This basis of design will be based on a "conventional" treatment train – including rapid mix, flocculation, sedimentation, filtration, and disinfection.

Support systems necessary to operate and maintain the facility will be defined, including:

- Primary and standby power systems
- Chemical systems
- Residuals handling and disposal
- Maintenance facilities
- DPWC administrative and operating staff facilities
- Raw and/or finished water storage on site



- Finished water pumping station to convey finished water to the existing DPWC ground storage reservoirs.

Conceptual treatment plant site plans will be developed, providing sufficient detail to determine land requirements and develop conceptual facility cost estimates. Potential locations for the water treatment facility will also be identified.

A Technical Memorandum summarizing the water treatment facility assessment will be developed for the DPWC's review. A workshop will be held with DPWC's representatives to confirm the treatment approach and refine the conceptual design of associated support facilities.

Deliverables and Workshops:

- Water Treatment Plant Conceptual Design Technical Memorandum
- Water Treatment Plant Conceptual Design Workshop

#### Task 4. Develop Conveyance Alternatives

In addition to the development of a water treatment facility conceptual design, a conceptual design of the conveyance system will also be developed as a separate task. This will include the raw water intake, raw water conveyance system, and finished water pumping and conveyance. The conveyance system will be designed to meet the existing and proposed DPWC members water demands at maximum day flow conditions. This will result in a conveyance system maximum day capacity of approximately 200 mgd. Other alternative scenarios may be considered as an addendum should this base line option prove to be technically and economically feasible.

The Intake, Raw and Finished conveyance systems concept will be based on Tunnel construction in bedrock located approximately 120 to 170 feet below grade along the proposed route. The Conveyance System will consist of the following Components:

- Lake Michigan Intake Structure - Consisting of vertical shafts that are bored through the lake bottom to connect with an intake tunnel located approximately 160 feet below grade.
- Intake Lake Tunnel - Tunnel located in bedrock approximately 160 feet below grade and extending approximately one mile off-shore from the shoreline.
- Raw Water Tunnel - A conveyance line connecting the lake intake to a raw water pumping station. The pump station will pump the raw water the remainder of the distance to the proposed Water Treatment Plant. The locations of the tunnels and the pump station will be preliminarily located in this report based on initial investigations of the most promising routes and depth, based on technical feasibility and potential ease of easements and land acquisition along the way.

- Access Shafts - Vertical shafts providing access to tunnels for excavation and removal of rock as well as access to construct the final tunnel liners, will be required at various intervals along the route.
- Finished water tunnels - Tunnel to connect the proposed water treatment plant to the existing DPWC storage and pumping facility, located at X.

Three alternative routes for bringing water from Lake Michigan to the DPWC will be evaluated:

- North Suburban Route - to the extent possible, the tunnels will follow state and interstate highway routes as well as railroad easements to minimize the number of third-party entities that will require easement acquisitions. This alternative would terminate offshore in Illinois north of the City of Chicago, circumnavigate Chicago City limits to the north, and connect to DPWC facilities.
- South Suburban Route - to the extent possible, the tunnels will follow state and interstate highway routes as well as railroad easements to minimize the number of third-party entities that will require easement acquisitions. This alternative would terminate offshore in Indiana, circumnavigate Chicago City limits to the south, and connect to DPWC facilities.
- Alternative Corridor route - to the extent possible, the tunnels will follow state and interstate highway routes as well as railroad easements to minimize the number of third-party entities that will require easement acquisitions.

The conceptual design of these conveyance alternatives will include the tunnel size, depth, and route, along with an assessment of the permitting and regulatory agency involvement. This basis of design will be used to develop conceptual level cost estimates and construction duration estimates. The findings of this evaluation will be summarized in a technical memorandum and presented at a review workshop with DPWC for input on the proposed routes.

Deliverables and Workshops:

- Conveyance Alternatives Technical Memorandum
- Conveyance Alternatives Review Workshop

### Task 5 – Project Implementation and Schedule

With knowledge from the conceptual design of the new water system’s major components, the Team will develop an overall project implementation schedule. The schedule will identify a number of logical construction contracts, estimate the times necessary to complete detailed design, acquire land and permits, and procure and execute construction projects to result in a fully functional and operational water supply system.

*Phase 1 Schedule* - Phase 1 consists of the tasks required to make the decisions to proceed with the Project. These include legal, organizational, financial, and political decisions, including land and easement acquisition, initial decisions on tunnel routes, and hiring of critical



subconsultants to assist in specialty areas. Initial scheduling of the project will take place in Phase 1.

The list of Phase 1 Tasks will be reviewed and revised or expanded as deemed necessary to include any tasks desired by DPWC. This list will be shared with the DPWC and a workshop held to adjust and finalize the Task List. For each task, necessary resources (staff, consultants, funding etc.) will be identified as well as assigning one or more team members to lead the effort to accomplish the task. A half day workshop will be conducted with Carollo and DPWC key staff to refine the task list. The Finalized Phase 1 Task List will be translated to a schedule, applying durations to the tasks and developing constraints and precedence between the tasks resulting in an overall Phase 1 schedule.

This schedule will be developed in Microsoft Project to allow the schedule to be adjusted and updated as the project develops. A half day workshop will be conducted with Carollo and DPWC key staff to refine the task sequence and durations.

*Phase 2 Schedule* - This phase includes developing the detailed design packages and advertising for bids, selection of contractors and awarding construction contracts. Alternative project delivery methods will be evaluated and decisions on the delivery method(s) that suit the individual projects and DPWC desire to accelerate the project if necessary. This will lead to construction, startup, and hiring of DPWC staff to operate and maintain the new facilities.

*Overall Schedule* – The Team will provide a technical memorandum summarizing an overall project schedule, integrating Phase 1 and Phase 2 tasks. This schedule will indicate the slack or float in the overall schedule between the end of Phase 1 and the start of Phase 2 critical tasks. Initial discussion of project delivery types and alternative ways of staffing the program delivery will have been considered and some decisions may be incorporated into the overall schedule.

Deliverables and Workshops:

- Project Schedule Technical Memorandum
- Project Schedule Review Workshop

#### Task 6 - Project Cost Estimates

The Team will develop capital and O&M cost estimates for each of the major project components identified for the proposed water system. Operating costs including energy, chemicals, and labor will be estimated to assist in water rate development.

At the conceptual design phase, Capital estimates will be prepared in conformance with the Class 4 Opinion of Probable Construction Cost as defined by the American Association of Cost Estimating. Cost estimates and bid prices will be used to the extent available for projects of

similar nature and scope to the proposed DPWC facilities. Estimates and bids will be adjusted to reflect the desired capacity, geographic location, and time frame. To the extent available the Team will identify multiple reference projects in similar size and scope to compare costs and develop more accurate estimates.

Standard format cost estimating tables will identify the major line items, quantities of equipment and materials, and the applied unit costs based on recent local project work. Markups for indirect costs such as escalation, insurance, bonds, and contractor overhead/profit will be identified in the cost estimate summary tables as percentages of the quantifiable project components. These percentages will be in line with recent project data and adjusted to account for specific features of the projects based on engineering experience and judgment.

A cost estimate review workshop will be held with DPWC staff to communicate key assumptions used in development of cost estimates.

Deliverables and Workshops:

- Cost Estimate Technical Memorandum
- Cost Estimate Review Workshop

### Task 7 - Water Rates Development

Using information developed in Tasks one through six, the Team will develop a preliminary estimate of water rates necessary to support the capital and operational costs associated with the new water system on a unit cost basis. This calculated rate will represent the unit cost necessary to be collected to fully recover costs associated with building and operating the facilities.

The rate calculation will incorporate estimated operating and capital costs, financing assumptions, total projected water sales, and other relevant data. Assumptions used in development of this water rate will be defined in a brief technical memorandum. Estimated life cycle of various system components will be defined to account for periodic replacement of infrastructure.

The Team will make assumptions to account for various sources of funding and account for the various potential interest rates and durations of bond issuances. Water Rate development can be complex and include variables beyond the scope of this project. It is our understanding that the DPWC will commission a detailed rate study independent of this project. The Team will work with the DPWC to make reasonable assumptions to simplify the analysis and provide the DPWC with a preliminary water rate estimate. A workshop will be conducted to review the assumptions used in the development of water rate estimates and incorporate DPWC feedback.



Deliverables and Workshops:

- Future Water Rate Technical Memorandum
- Future Water Rate Review Workshop

### Task 8 – Study Report

The Team will compile the work completed during the study in the Summary Report. It is anticipated that each task outlined above will be included as a chapter in the Summary Report, as well as an executive summary. The Team will prepare a Draft Summary Report for review by the DPWC and conduct a review workshop to discuss the report and receive comments to prepare for the presentation to the Commissioners. Following incorporation of comments, the Team will deliver the Final Summary Report and deliver a presentation to the Commissioners outlining the summary of the Report and recommendations from the DPWC.

Deliverables and Workshops:

- Two hard copies of the Final Report
- An electronic (PDF) copy of the Final Report
- Draft Summary Report Review and Commissioner Presentation Preparation Workshop
- Commissioner Presentation

### Project Duration:

It is anticipated that the Project shall take approximately 6 months to complete the Draft Report.

It is anticipated that the Final Report shall be completed within 2 months of receipt of final comments from DPWC.

DuPage Water Commission Alternative Water Supply Study	LABOR HOUR	PROJECT COSTS				
	Totals	Labor Fee	Project Equipment Communication Expense (PECE)	Tunneling Subconsultant Enerley Associates	Other Direct Costs	TOTAL FEE
			\$ 13.00			
Raw Labor Rate						
Multiplier						
Billing Rate (\$81/hr direct labor cap for senior staff)						
<b>Project Scope</b>	<b>1288</b>	<b>\$ 234,566.15</b>	<b>\$ 17,004.00</b>	<b>\$ 27,670.00</b>	<b>\$ 18,133.50</b>	<b>\$ 297,373.65</b>
<b>Task 0 - Project Management</b>	<b>88</b>	<b>\$ 17,291</b>	<b>\$ 1,144</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 18,435</b>
Monthly Progress Meetings	24	\$ 4,707	\$ 312	\$ -	\$ -	\$ 5,019
Kickoff Meeting	40	\$ 8,324	\$ 520	\$ -	\$ -	\$ 8,844
Contract Administration	24	\$ 4,261	\$ 312	\$ -	\$ -	\$ 4,573
<b>Task 1 - Establish/Confirm the Project Design Criteria</b>	<b>80</b>	<b>\$ 14,515</b>	<b>\$ 1,040</b>	<b>\$ -</b>	<b>\$ 150</b>	<b>\$ 15,705</b>
Data Collection and Review	26	\$ 3,449	\$ 338	\$ -	\$ -	\$ 3,787
Design Criteria Development	22	\$ 4,806	\$ 286	\$ -	\$ -	\$ 5,092
Design Criteria Review Workshop	32	\$ 6,260	\$ 416	\$ -	\$ 150	\$ 6,826
<b>Task 2 - Regulatory Review</b>	<b>66</b>	<b>\$ 10,262</b>	<b>\$ 858</b>	<b>\$ -</b>	<b>\$ 10,000</b>	<b>\$ 21,120</b>
Review of Existing and Proposed Regulatory Requirements	20	\$ 3,550	\$ 260	\$ -	\$ -	\$ 3,810
Easement Evaluation	8	\$ 1,569	\$ 104	\$ -	\$ 10,000	\$ 11,673
Regulatory Review Technical Memorandum	38	\$ 5,143	\$ 494	\$ -	\$ -	\$ 5,637
<b>Task 3 - Water Treatment Facility Conceptual Design</b>	<b>220</b>	<b>\$ 33,874</b>	<b>\$ 2,860</b>	<b>\$ -</b>	<b>\$ 1,250</b>	<b>\$ 37,984</b>
Conventional Treatment Conceptual Design Development	68	\$ 10,466	\$ 884	\$ -	\$ -	\$ 11,350
Treatment Plant Siting Evaluation	56	\$ 7,944	\$ 728	\$ -	\$ -	\$ 8,672
Water Treatment Plant Conceptual Design Technical Memorandum	64	\$ 9,274	\$ 832	\$ -	\$ -	\$ 10,106
Water Treatment Plant Conceptual Design Review Workshop	32	\$ 6,190	\$ 416	\$ -	\$ 1,250	\$ 7,856
<b>Task 4 - Develop Conveyance Alternatives</b>	<b>96</b>	<b>\$ 18,103</b>	<b>\$ 1,508</b>	<b>\$ 27,670</b>	<b>\$ 1,484</b>	<b>\$ 48,764</b>
Lake Michigan Intake Structure Evaluation	20	\$ 3,621	\$ 260	\$ -	\$ -	\$ 3,881
Tunneling Evaluation	16	\$ 3,165	\$ 208	\$ 27,670	\$ 1,384	\$ 32,427
Conveyance Alternatives Technical Memorandum	60	\$ 7,039	\$ 780	\$ -	\$ -	\$ 7,819
Conveyance Alternatives Review Workshop	20	\$ 4,278	\$ 260	\$ -	\$ 100	\$ 4,638
<b>Task 5 - Project Implementation and Schedule</b>	<b>182</b>	<b>\$ 37,888</b>	<b>\$ 2,366</b>	<b>\$ -</b>	<b>\$ 2,750</b>	<b>\$ 43,004</b>
Develop Project Schedule	32	\$ 5,058	\$ 416	\$ -	\$ -	\$ 5,474
Develop Procurement and Delivery Alternatives	56	\$ 13,949	\$ 728	\$ -	\$ -	\$ 14,677
Project Schedule Technical Memorandum	58	\$ 10,116	\$ 754	\$ -	\$ -	\$ 10,870
Project Schedule Review Workshop	36	\$ 8,766	\$ 468	\$ -	\$ 2,750	\$ 11,984
<b>Task 6 - Project Cost Estimates</b>	<b>142</b>	<b>\$ 23,856</b>	<b>\$ 1,846</b>	<b>\$ -</b>	<b>\$ 100</b>	<b>\$ 25,802</b>
Engineer's Opinion of Probable Cost Development	72	\$ 10,038	\$ 936	\$ -	\$ -	\$ 10,974
Cost Estimate Technical Memorandum	54	\$ 10,681	\$ 702	\$ -	\$ -	\$ 11,383
Cost Estimate Review Workshop	16	\$ 3,138	\$ 208	\$ -	\$ 100	\$ 3,446
<b>Task 7 - Water Rates Development</b>	<b>210</b>	<b>\$ 41,474</b>	<b>\$ 2,730</b>	<b>\$ -</b>	<b>\$ 1,800</b>	<b>\$ 46,004</b>
Development of Future Water Rates	124	\$ 24,927	\$ 1,612	\$ -	\$ -	\$ 26,539
Water Rates Technical Memorandum	54	\$ 9,782	\$ 702	\$ -	\$ -	\$ 10,484
Water Rates Review Workshop	32	\$ 6,764	\$ 416	\$ -	\$ 1,800	\$ 8,980
<b>Task 8 - Study Summary Report</b>	<b>204</b>	<b>\$ 37,302</b>	<b>\$ 2,652</b>	<b>\$ -</b>	<b>\$ 600</b>	<b>\$ 40,554</b>
Summary Report Development	128	\$ 20,425	\$ 1,664	\$ -	\$ 200	\$ 22,289
Draft Summary Report Review and Commissioner Presentation Preparation	60	\$ 13,739	\$ 780	\$ -	\$ 300	\$ 14,819
Commissioner Presentation	16	\$ 3,138	\$ 208	\$ -	\$ 100	\$ 3,446
<b>TOTAL Hours - Tasks 0-8</b>	<b>1288</b>	<b>\$ 234,566.15</b>	<b>\$ 17,004.00</b>	<b>\$ 27,670.00</b>	<b>\$ 18,133.50</b>	<b>\$ 297,373.65</b>



ATTACHMENT B

**TASK ORDER No. 2**

In accordance with Section 1.1 of the Master Contract between the DuPage Water Commission ("Owner") and **Carollo Engineers** ("Consultant"), for Professional Engineering Services dated **October, 2013** (the "Contract"), Owner and Consultant agree as follows:

1. **Project:**

**Alternative Water Supply System Study**

2. **Services of Consultant:**

A. Basic Services: As described in the attached document entitled: -  
***Alternative Water Supply System Study - Scope of Work***

B. Additional Services: None

3. **Approvals and Authorizations:** Consultant shall obtain the following approvals and authorizations: None

4. **Commencement Date:**

June 17, 2022.

5. **Completion Date:**

***For use with single phase projects or multiple phase projects with single completion date:***

**February 20, 2023**, plus extensions, if any, authorized by a Change Order issued pursuant to Section 2.1 of the Contract.

6. **Submittal Schedule:**

Submittal: Draft Report

Due Date: December 20, 2022

Final Report

Due Date: 2 Months from receipt of comments on Draft

7. **Key Project Personnel:**

Names: Leonard M. Rago

Telephone: 224-500-0911

8. **Contract Price:**

**DIRECT COST TASK ORDER**

***For use with single phase projects or multiple phase projects with uniform pricing:***

For providing, performing, and completing all Services, an amount equal to Consultant's Direct Labor Costs times a factor of **3.10** for all Services rendered by principals and employees engaged directly on the Project, plus an amount equal to the actual costs of all Reimbursable Expenses.

Notwithstanding the foregoing, the total Contract Price shall not exceed **\$297,373.00**, except as adjusted by a Change Order issued pursuant to Section 2.1 of the Contract.

9. **Payments:**

For purposes of payments to Consultant, the value of the Services under this Task Order shall be determined as follows:

***For use with Direct Cost Task Orders:***

Direct Labor Costs shall mean salaries and wages paid to all Consultant personnel, including all professionals whether owners or employees, engaged directly on the Project, but shall not include indirect payroll related costs or fringe benefits.

Reimbursable Expenses shall mean the actual expenses incurred by Consultant directly or indirectly in connection with the Project, including expenses for transportation, telephone, postage, computer time and other highly specialized equipment, reproduction and similar Project related items.

10. **Special Safety Requirements:** None

11. **Modifications to Contract:** None

12. **Attachments:**

**Alternative Water Supply Study - Scope of Work - June 2022**

**DuPage Water Commission - Alternative Water Supply Study - Budget 6-6-22**



Approval and Acceptance: Acceptance and approval of this Task Order, including the attachments listed above, shall incorporate this Task Order as part of the Contract.

The Effective Date of this Task Order is June 16, 2022.

DUPAGE WATER COMMISSION

By: \_\_\_\_\_  
Paul D. May, P.E.  
General Manager

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

Name: Paul D. May, P.E.  
Title: General Manager  
Address: 600 East Butterfield Road, Elmhurst, Illinois 60126-4642  
E-mail Address: [may@dpwc.org](mailto:may@dpwc.org)  
Phone: (630) 834-0100  
Fax: (630) 834-0120

**Carollo Engineer**

By: \_\_\_\_\_

Name: Leonard M. Rago

Title: Vice President

By: \_\_\_\_\_

Named: Lindsey Busch

Title: Associate Vice President

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

Name: Leonard M. Rago, P.E.

Title: Vice President

Address: 8600 W. Bryn Mawr Avenue, Suite 900N

E-mail Address: lrigo@carollo.com

Phone: 224-500-0911

Fax: 773-632-1164