

# **Biennial Report** 2023

**APPENDIX A: PARTNER DATA - POINT SOURCE** 









Illinois Extension UNIVERSITY OF ILLINOIS URBANA-CHAMPAIG



BLOOMINGTON NORMAL WRD Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:			
Capital Improvements:					
Operations and Maintenance:					
Feasibility Studies or Permit Required Projects not already listed:					
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)					
Other Resources Invested:					

#### BLOOMINGTON NORMAL WRD Outreach and Communications (JANUARY - DECEMBER 2021)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



#### BLOOMINGTON NORMAL WRD Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

Facility	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF	Year	Daily Avg. Flow	Total P In	Total P Out	Total P Out Annual Avg.	Total N In	Total N	Total N Out Annual Avg.	Watershed group (WS Group name or "No")	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Facility No. 1	IL0027731	None	22.5	2017	15.1	177,755	101,470	2.49		819,790	18.90	No	Design Engineering \$102,003
	IL0027731	None	22.5	2018	15.7	166,331	101,236	2.42		779,275	19.80	No	TN concentration is measured 1 day/month as per permit requirements
	IL0027731	None	22.5	2019	20.67	163,885	95,995	1.78		821,980	13.76	No	TN concentration is measured 1 day/month as per permit requirements
	IL0027731	None	22.5	2020	18.31	160,965	96,360	2.18		762,120	17.89	No	TN concentration is measured 1 day/month as per permit requirements
	IL0027731	None	22.5	2021	19.63	163,505	105,328	2.08		927,100	18.97	No	TN concentration is measured 1 day/month as per permit requirements
Facility No. 2	IL0073504	None	7.5	2017	3.8	60,955	43,263	3.74		257,957	22.30	No	Design Engineering \$92,731 Upgrade \$1080
	IL0073504	None	7.5	2018	4.09	60,910	40,442	3.63		245,645	21.34	No	
	IL0073504	None	7.5	2019	5.07	62,050	39,420	3.02		275,406	19.81	No	
	IL0073504	None	7.5	2020	4.57	61,906	34,744	3.11		236,172	21.14	No	
	IL0073504	None	7.5	2021	5.17	53,238	29,830	2.35		263,400	20.80	No	



#### DOWNERS GROVE SANITARY DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:		
Operations and Maintenance:	Service contract for maintaining the on-line phosphorus analyzer	\$6,000
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)	General Manager time, roughly 5% of hours for period	0.05 FTE, \$8,000
Other Resources Invested:		

#### DOWNERS GROVE SANITARY DISTRICT Outreach and Communications (JANUARY - DECEMBER 2021)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



# DOWNERS GROVE SANITARY DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

Facility	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In			Total N In	Total N	Out Annual	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Wastewater Treatment Center		PDOP - attempting BNR	11	2021	9.74	147,755	86,999	3.3	902,410	466,373		River Salt Creek	Operated sidestream RAS anerobic tank in attempt to get BNR. Used primary sludge for process carbon additions.



#### FLAGG CREEK WRD Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:		
Capital Improvements:				
Operations and Maintenance:	Chemical, supplies and chem feed/metering labor	\$92,850		
Feasibility Studies or Permit Required Projects not already listed:				
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)	Lab testing, monitoring and reporting	\$17,450		
Other Resources Invested:				

\_\_\_\_\_

#### FLAGG CREEK WRD Outreach and Communications (JANUARY - DECEMBER 2021)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



#### FLAGG CREEK WRD Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In		Total P Out Annual Avg.	Total N In	Total N	Total N	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
										-			*TN tested on effluent only/ TN in = NH3
Facility No. 1	IL0022586	none	12	2017	12.35	106,740	76,980	2.2	643630 *	702,940	18.7	No	
Facility No. 1	IL0022586	none	12	2018	12.99	111,240	66,140	1.9	564710 *	719,500	19.7	No	
Facility No. 1	IL0022586	none(Jan- Jul)/Chem- P(Aug-Dec)	12	2019	15.98	108,200	54,040	1.2	517112 *	858,902	18.4		TP out loading (approx): Jan- Jul = 1,200, Aug-Dec = 500
Facility No. 1	IL0022586	none(Jan- Jul)/Chem- P(Aug-Dec)	12	2020	11.5	97,440	31,230	1	443000 *	618,190	19	No	
Facility No. 1	IL0022587	Chem-P	12	2021	9.87	99,189	27,653	1	26150 <b>^</b>	586,119	20	No	<sup>^</sup> TN influent testing started in- house.



#### GLENBARD WASTEWATER AUTHORITY Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:		
Capital Improvements:	DuPage River Salt Creek Special Conditions Assessment	\$281,000		
Operations and Maintenance:	DuPage River Salt Creek Workgroup Membership	\$34,140		
Feasibility Studies or Permit Required Projects not already listed:				
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)	Average of 2 staff attending IAWA and workgroup meetings	\$4,000		
Other Resources Invested:				

#### GLENBARD WASTEWATER AUTHORITY Outreach and Communications (JANUARY - DECEMBER 2021)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



#### GLENBARD WASTEWATER AUTHORITY Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

Facility	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In		Total P Out Annual Avg.	Total N In	Total N	Total N Out	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Glenbard Wastewater Authority Main Plant	IL0021547	None	16 (permitted)	2021	10.12	220,265	87,798	2.85	1,238,413	953,147		DuPage River Salt	Participation in workgroup assessments that go towards adaptive management and other watershed improvements to remove impairments (either caused by nutrients or not)
Glenbard Wastewater Authority Combined Sewer Outfall	IL0022471		N/A (wet weather plant) 58 Peak	2021	N/A	N/A	147	0.55	N/A	N/A		DuPage River Salt	Participation in workgroup assessments that go towards adaptive management and other watershed improvements to remove impairments (either caused by nutrients or not)



GREATER PEORIA SANITARY DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:		
Operations and Maintenance:		
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)		
Other Resources Invested:		

#### GREATER PEORIA SANITARY DISTRICT Outreach and Communications (JANUARY - DECEMBER 2021)

D	escription:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
		None				



# GREATER PEORIA SANITARY DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In			Total N In	Total N	Total N Out Annual	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Facility No. 1	IL0021288	EBPR	37	2021	23.26	293,136	28,124		2,357,8 32	343,988	4.77		EBPR constructed and made active in 2018; project cost approximately \$11,476,342…



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:	
	Total	\$19,564,913	
	Contract 16-272-3P, Conversion of Primary Tanks to High Strength Waste Receiving and Distribution - Design and Evaluation of Alternatives, Calumet WRP (CWRP) (to receive a carbon sources to aeration batteries for EBPR).	\$15,276	
Capital Improvements:	Contract 18-248-3P, S2EBPR Pilot Study, CWRP (will pilot a sidestream return activated sludge fermentation to evaluate its effectiveness and benefits to EBPR for potential full scale implementation at any of the District's WRPs) (Construction completed)	\$8,581	
	Contract 19-157-3P, Installation of Mechanical Mixers, SWRP. To install mechanical mixers in pass one of the Aeration Batteries, A, C and D. (Construction in progress)	\$8,389,247	
	Contract 19-159-3P, Chemical P Removal Back-up System, SWRP. This contract will install a chemical dosing system utilizing either ferric chloride or alum for polishing needs for phosphorous control. Will be awarded and construction will commence in 2022)	\$453,700	
	Temp Chemical P removal Installation - Job Order Contract	\$450,156	
	Total	\$1,503,306	
	M&O Dept - Ostara P removal - chemicals	\$496,929	
	M&O Dept - Ostara P removal - Maintenance Parts	\$50,260	
	M&O Dept - Ostara P removal - Maintenance Operator	\$224,307	
	M&O Dept - Ostara P removal - Maintenance Staff	\$177,726	
<b>Operations and Maintenance:</b>	M&O - Temp Chemical P removal Installation - chemicals	\$287,985	
	M&O Dept - Chemical P removal Installation (Temporary) - Maintenance Parts	\$4,171	
	M&O Dept - Temporary Chem P removal - Maintenance Staff	\$6,680	
	M&O Dept -Kirie WRP Bio-P - Maintenance equipment	\$26,117	
	Dupage River Salt Creek Workgroup membership	\$101,130	
	Lower Des Plaines Watershed Group membership	\$128,000	

# METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:
	Total	\$700,830
	M&R Dept. Feasibility Study for Kirie WRP - Contract	\$29,911
	M&R Dept. Feasibility Study for Egan WRP - Contract	\$29,911
Feasibility Studies or Permit Required Projects not already listed:	M&R Dept. Feasibility Study for Hanover Park WRP - Contract	\$27,448
	M&R Dept. Feasibility Study for Lemont WRP - Contract	\$18,299
	M&R Dept Dupage River Salt Creek Workgroup special project	\$99,094
	M&R Dept CAWs P Assessment Reduction Plan	\$496,167
	Total	\$3,347,144
	Engineering Dept Design and Post award engineering, consultant oversight and construction oversight (~15 FTEs)	\$2,100,000
	Chemical P removal Installation (Temporary)- Staff (~3.5 FTE)	\$392,537
Total Staff working on NLRS activities (in	M&O Dept – Kirie Bio P (~0.3 FTEs)	\$29,131
any capacity): (No. of staff hours in the year or FTEs &	M&O Dept – Stickney BioP (operations staff, ~2 FTEs)	
approx. \$ value)	M&R Dept Technical oversight on design and feasibility studies (~1.8 FTEs)	\$290,000
	M&R Dept Research and technical oversight at 7 WRPs (~1.8 FTEs)	\$222,476
	M&R Dept Research and Demonstration at the Fulton County site and other collaboration with the agricultural sector (~1.5 FTEs)	\$220,000
	M&R Dept Microbiological research and support (~1.0 FTEs)	\$93,000
	Total	\$6,278
Other Resources Invested:	M&R Dept Research supplies and consumables at WRPs	\$2,470
	M&O Dept – Kirie Bio P, instrument repairs	\$3,808
	Grand Total	\$25,122,472



Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Field Days:	June 28, 2021. The event featured presentations from researchers and concluded with a multi-stop tour of the Fulton County	50 and agricultural sector, water professionals, researchers, academia	farmland and to get feedback from farmers and stakeholders. Researchers at MWRD and from U of I presented information about several of the research projects at the site, including crop interseeding, woodchip bioreactors, grass buffers, and drainage	The MWRD Day took place in coordination with the Illinois Farm Bureau and other partners, including the Fulton and Cook County Farm Bureaus (CFB), University of Illinois, and Illinois Nutrient Research and Education Council (NREC).	
Presentations:	different watershed highning councils	>2000. General public and municipal leaders.	Watershed Planning Councils represent communities located within the six major watersheds in Cook County. They communicate the needs and interests of the members of the public and local governments to the MWRD.		
Conferences:	handling facilities with President Commissioner Kari K. Steele and staff welcoming our partners from Illinois Farm Bureau, Cook County Farm		best practices in nutrient loss reduction	Illinois Farm Bureau, Cook County Farm Bureau, Fulton County Farm Bureau and the MWRD.	



Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Educational Events/ Workshops/ Trainings:	The MWRD's 9th Annual <u>Sustainability Summit</u> was held virtually on Oct. 12, 2021	>100	EQ (Exceptional Quality) Compost, and learned about composting and food scrap collection and sustainability efforts across the nation, the Chicago Park District and in disadvantaged communities in Chicago. MWRD engineers also addressed stormwater management resources, green infrastructure, the MWRD's flood prone property acquisition program and grants and available resources to belp combat	Presenters included MWRD Senior Environmental Soil Scientist Dr. Theresa Johnston; University of Washington Professor Dr. Sally Brown, Chicago Park District Assistant Director of Landscape Matt Freer; Stephanie Katsaros, of the Illinois Food Scrap Coalition; Chicago Food Policy Action Council Systems and Strategy Manager Ma'raj Sheikh; MWRD Senior Civil Engineer Andre Haynes; MWRD Senior Civil Engineer Stephen Haucke; MWRD Associate Civil Engineer Lucas Roat; and MWRD Public Affairs Specialist Annie Wright.	
Awards/Recognition Activities:	Chicago Metropolitan Agency For Planning (CMAP) Regional Excellence Award in the category of Regional Resilience				
Print or Media:	These media advisories/press releases/media reports were also posted on mwrd.org and shared on MWRD social media, including Facebook, LinkedIn, Twitter and Instagram.	> 10,000			
	January, 3, 2021: " <u>Rural-urban collaboration</u> <u>yields alternative solutions to improve state</u> <u>water quality</u> ," AGRINEWS.			MWRD, Illinois Farm Bureau, University of Illinois at Urbana- Champaign (UIUC) Crop Science Department, UIUC Department of Agricultural and Biological Engineering, Illinois Sustainable Technology Center, Illinois Central College, Ecosystem Exchange, and Fulton County Farm Bureau.	



Descriptio n:	Name:	Attendanc e:	Topics Covered:	Partnerships:	Response/ Feedback:
Print or Media Cont.:	January 7, 2021: " <u>Rural-Urban Collaboration Yields</u> <u>Illinois Water Quality Solutions</u> ," Successful Farming.		nutrient loss reduction strategies	MWRD, Illinois Farm Bureau, University of Illinois at Urbana- Champaign (UIUC) Crop Science Department, UIUC Department of Agricultural and Biological Engineering, Illinois Sustainable Technology Center, Illinois Central College, Ecosystem Exchange, IFB, and Fulton County Farm Bureau.	
	January 28, 2021: " <u>Chicago Park District Working to</u> <u>Heal Environment, Ecosystem at Big Marsh Park</u> ," WTTW Chicago.		resource recovery, adaptive land use, ecosystem restoration	MWRD, Chicago Park District, Northwestern University	
	February 23, 2021: " <u>We now treat half the world's</u> wastewater and we can make inroads into the other half," MENAFN.		resource recovery, nutrient management	MWRD, Ostara	
	March 22, 2021: " <u>MWRD joins the world in "Valuing</u> <u>Water" for World Water Day</u> ." MWRD press release.		nutrient recovery, resource recovery	UN World Water Day	
	April 6, 2021: " <u>MWRD develops reactor to intensify</u> biological treatment," MWRD press release.		Biological phosphorus removal, nutrient recovery, resource recovery		
	April 14, 2021: " <u>MWRD Develops Reactor To</u> Intensify Biological Treatment," Water Online.		Biological phosphorus removal, nutrient recovery, resource recovery		
	June 24, 2021: " <u>Long-Term Trends Show</u> Improvements in Water Quality in the Chicago Metropolitan Region With Investment in Wastewater Infrastructure, Deep Tunnels, and Reservoirs," AGU.		water quality research, nutrient loss, nutrient management		
	July 19, 2021: " <u>Down on the farm for Field Day: How</u> the MWRD, Illinois Farm Bureau and partners are collaborating to protect water." MWRD press release.		nutrient loss reduction strategies	MWRD, Illinois Farm Bureau	



Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Print or Media Cont.:	September 2, 2021: " <u>Southside Blooms'</u> <u>flower farm grows from MWRD compost</u> ." MWRD press release.		resource recovery	MWRD, Chicago Eco House, Southside Blooms, Emerald South Economic Development Collaborative, South East Chicago Commission, the Office of Lt. Governor Juliana Stratton's Justice, Equity, and Opportunity Initiative, the Illinois Criminal Justice Information Authority and Illinois Department of Agriculture	
	September 16, 2021: " <u>Illinois Officials</u> <u>Release Third Nutrient Loss Reduction</u> <u>Strategy Biennial Report," Illinois</u> <u>Department of Agriculture</u> ."		nutrient loss reduction strategies	Illinois Department of Agriculture and Illinois Environmental Protection Agency (EPA)	
	October 1, 2021: " <u>How Chicago's Poop</u> <u>Becomes Amazing Fertilizer</u> ," Next City.		nutrient recovery, resource recovery	MWRD, Chicago Eco House, Southside Blooms, Emerald South Economic Development Collaborative, South East Chicago Commission, the Office of Lt. Governor Juliana Stratton's Justice, Equity, and Opportunity Initiative, the Illinois Criminal Justice Information Authority and Illinois Department of Agriculture	
	October, 5, 2021: " <u>The Water Research</u> <u>Foundation Wins DOE Grant to Improve</u> <u>Energy Efficiency and Resource Recovery</u> <u>at Water Resource Recovery Facilities</u> ," The Water Research Foundation.		Biological phosphorus removal	U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy, The Water Research Foundation, Hampton Roads Sanitation District (VA), DC Water, Metro Water Recovery (Metro) (CO), U.S. Military Academy West Point, University of Michigan, Northwestern University, Oak Ridge National Laboratory and Black & Veatch, Charlotte Water, City of Boulder, Raleigh Water, Clean Water Services (OR), Delta Diablo (CA), Great Lakes Water Authority (MI), Hillsborough County Public Utilities (FL), Metropolitan Water Reclamation District of Greater Chicago, and the New York City Department of Environmental Protection.	
	October 13, 2021. " <u>Highlighting sustainable</u> living: MWRD Summit reflects on how to improve water environment and reclaim resources." MWRD press release.		resource recovery, stormwater management, water quality improvements	MWRD, University of Washington, Chicago Park District, the Illinois Food Scrap Coalition; Chicago Food Policy Action Council	
	October 25, 2021. " <u>What all Evanston</u> residents should know about climate <u>change</u> ," Evanston RoundTable.		climate change, nutrient loss reduction strategies, water quality improvements		



Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Outreach Tools/ Publications:	mwrd website		nutrient loss reduction strategies		
Social Media:	<u>Facebook</u> <u>Twitter</u> <u>Instagram</u> <u>Linkedin</u>	As of Jan. 10, 2022, the MWRD had more than 8,191 followers with a post reach of 129,386 on Facebook, 5,035 on Twitter, 5,488 on LinkedIn and 1,709 on Instagram and rising. In 2021, we reached nearly 1.38 million impressions on Twitter and more than 345,000 views on YouTube.			
Newsletter:	https://mwrd.org/mwrd-flow-july-2021 https://mwrd.org/mwrd-flow-august-2021 https://mwrd.org/mwrd-flow-september-2021	months in particular covered nutrient loss	nutrient loss reduction strategies, resource recovery, nutrient management		



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow		Total P	Total P Out Annual Avg.	Total N In		Total N Out	Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Stickney	IL0028053	Bio-P	1200	2021	617	16,498,733	1,376,832	0.7	72,128,896	16,260,160		Area Waterways	Data was derived through District Maintenance and Operations Dept. (M&O) routine sampling and Analytical Lab Division (ALD) analyses; batteries were converted to an anoxic-anaerobic-oxic configuration; Ostara® process operating for P-recovery on post-digester centrate; installed actuators on air-valves for automation in summer 2018; currently accepting high strength organic material for carbon supplementation; P removal feasibility study was completed in mid 2019; received new NPDES permit for allows P trading with Lemont WRP; mechanical mixers have been installed in 3 out of 4 batteries; a permanent chemical P polishing system is being installed after the permit start of August 2021; a temporary chemical P facility was installed as stop gap measure in June 2021; WRP was in compliance with P permit every month since start of permit in August 2021
Calumet	IL0028061	None	354	2021	243	6,309,290	2,700,133	3.7	21,243,713	6,988,979	9.5	Area Waterways	Data was derived through District M&O routine sampling and ALD analyses; all batteries were converted to an anoxic- anaerobic-oxic configuration, but this practice was discontinued in mid 2018 and batteries reverted to full aerobic conditions; currently accepting high strength organic material for carbon supplementation (this practice is still occurring though no Bio-P configurations are in place in 4 of the batteries); P removal feasibility study was completed in mid 2019; a pilot sidestream EBPR test concluded in late 2020; a full-scale sidestream EBPR test in one battery started in 2021 and was completed in January 2022; a chemical P facility is being designed to be in place by start of permit (January 2024); a P removal plan is being generated in 2022.
Terrence J. O'Brien	IL0028088	None	333	2021	206	2,352,561	1,084,994	1.7	15,120,673	6,630,928	10.7	Area Waterways	Data was derived through District M&O routine sampling and ALD analyses. Finished doing pilot scale testing of algae for nutrient removal; P removal feasibility study was completed in mid 2019. A sidestream EBPR pilot was initiated in 2020 and is still being tested. One battery will be converted to a sidestream EBPR process.



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

Facility	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow		Total P	Total P Out Annual Avg.	Total N In	Total N Out	Total N Out Annual Avg.	Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
James C. Kirie	IL0047741	Bio-P	52	2021	29	374,143	58,435	0.6	2,532,653	898,674	9.0	Plaines	Data was derived through District M&O routine sampling and ALD analyses; one of two batteries converted to a quasi- anaerobic-oxic configuration (other plant battery is pass through); 2 of 6 tanks have baffle walls and large bubble mixers installed; P removal feasibility study completed in late 2018; joined the Lower Des Plaines Watershed Group in late 2018. Received final permit in July 2021 with compliance 60 months from effective date.
John E. Egan		Nitrogen removal on sidestream (currently not running)	30	2021	23	413,032	226,081	3.4	2,178,029	1,373,762	20.5	River/Salt Creek Workgroup	Data was derived through District M&O routine sampling andALD analyses; no bio-P efforts completed thus far but possible approaches have been developed; The Anita Mox process installed on post-digester centrate in August 2016 to reduce nitrogen loading at plant headworks but is no longer running due to mechanical issues; P removal feasibility study was completed in late 2018. Received a modified permit in July 2021.
Hanover Park	IL0036137	None	12	2021	7	117,092	67,332	3.4	802,724	467,462	23.4	River/Salt	Data was derived through District M&O routine sampling and ALD analyses; P removal feasibility study was completed in mid 2018; a final permit was provided in April 2021.
Lemont	IL0028070	None	2.3	2021	3	40,518	22,730	3.0	267,619	150,023	19.7	Plaines	Data was derived through District M&O routine sampling and ALD analyses; P removal feasibility study was completed in mid 2018; joined the Lower Des Plaines Watershed Group in late 2018; received new draft NPDES permit for review in Summer 2019; new draft permit allows Stickney WRP to trade P with Lemont WRP.

#### NORTH SHORE WRD Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:	Advanced Bio-P Process Modeling & Optimization Contract	\$125,000
Operations and Maintenance:	Phosphorus is 1/8 O&M Budget (Phos 1 of 8 limits)	3,125,000
	Phosphorus Removal Feasibility Study Completed	\$50,000
Feasibility Studies or Permit Required Projects not already listed:	Phosphorus Optimization Study Completed	\$50,000
	Watershed Workgroup Membership Dues, DRWW & NBWW	\$119,000
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)		
Other Resources Invested:		

#### NORTH SHORE WRD Outreach and Communications (JANUARY - DECEMBER 2021)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Newsletters:	Annual Watershed Workgroup Newsletters	Online	Water Quality Monitoring, NARP	Other Workgroup members	



#### NORTH SHORE WRD Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

Facility	NPDES Number	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF	Year	Daily Avg. Flow	Total P In	Total P Out	Total P Out Annual Avg.	Total N In	Total N Out	Total N Out Annual Avg.	Watershed group	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
NSWRD - Clavey Road WRF	IL0030171		17.8	2017	14.17	118,000	50,000	1.12	969,000	837,000	17.4	No	
				2018	15.26	135,000	44,400	0.95	1,139,000	794,000	17.7	North Branch (NBWW)	
		Bio-P		2019	17.86	145,000	58,000	1.09	1,199,000	811,000	15.3	"	
		Bio-P		2020	13.84	130,000	39,700	1.05	972,000	710,000	18.8	"	
		Bio-P		2021	13.7	123,000	47,000	1.15	1,005,000	968,000	24	"	
NSWRD - Gurnee WRF	IL0035092		23.6	2017	15.23	187,000	73,700	1.57	1,390,000	1,020,000	23.3	Des Plaines River (DRWW)	
				2018	15.41	202,000	52,700	1.11	1,760,000	912,000	20.1	"	
		Bio-P		2019	16.40	240,000	65,900	1.35	1,731,000	897,000	18.3	"	
		Bio-P		2020	16.40	227,000	39,700	0.88	1,572,000	876,000	19.4	"	
		Bio-P		2021	11.55	193,000	29,000	0.84	1,492,000	803,000	23.1	"	
NSWRD - Waukegan WRF	IL0030244		22.0	2017	21.67	180,000	85,400	1.26	1,630,000	1,110,000	16.8	Des Plaines River (DRWW)	
				2018	23.38	250,000	46,300	0.67	1,910,000	1,080,000	16.0	"	
		Bio-P		2019	25.67	255,000	64,100	0.84	1,914,000	1,159,000	15.2	"	
		Bio-P		2020	21.89	216,000	65,200	0.97	1,617,000	1,055,000	15.7	"	
		Bio-P	Ĩ	2021	17.32	175,000	52,000	1.02	1,520,000	1,030,700	20.0	"	



SANGAMON COUNTY WRD Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:			
Capital Improvements:					
Operations and Maintenance:					
Feasibility Studies or Permit Required Projects not already listed:					
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)	Sugar Creek (7858 hours approx.), Spring Creek (25884 hours approx.)	Sugar Creek (17 employees / \$419,824.00 approx.), Spring Creek (56 Employees / \$965,732.00 approx.)			
Other Resources Invested:					

#### SANGAMON COUNTY WRD Outreach and Communications (JANUARY - DECEMBER 2021)

C	escription:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
		None				



#### SANGAMON COUNTY WRD Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In				Total N Out	Total N Out Annual	group (WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
SCWRD Spring Creek Facility		Full BNR (Bio-P & N)	32	2021	32.91	220,399	35,164	0.35	1,813,282	681,233		Sangamon River	NA
SCWRD Sugar Creek Facility		Full BNR (Bio-P & N)	15	2021	10.57	56,308	10,650	0.33	450,466	151,228		Sangamon River	NA



VILLAGE OF ADDISON TREATMENT PLANTS Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:		
Operations and Maintenance:		
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)		
Other Resources Invested:		

#### VILLAGE OF ADDISON TREATMENT PLANTS Outreach and Communications (JANUARY - DECEMBER 2021)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



#### VILLAGE OF ADDISON TREATMENT PLANTS Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In			Total N In	Total N	Total N Out Annual	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Addison-North STP	IL0033812	None	5.3	2021	2.897	115	79	3.27	841	577		DuPage River Salt Creek Workgroup	No Nutrient Removal has been implemented
A.J. LaRocca WTF	IL0027367	None	3.2	2021	1.91	83	69	4.31	1,186	390		DuPage River Salt Creek Workgroup	No Nutrient Removal has been implemented



#### WHEATON SANITARY DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2021)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:		
Operations and Maintenance:		
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)		
Other Resources Invested:		

#### WHEATON SANITARY DISTRICT Outreach and Communications (JANUARY - DECEMBER 2021)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



#### WHEATON SANITARY DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2021)

Facility	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In			Total N In	Total N	Total N Out Annual	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Facility No. 1	IL0031739		8.9	2021	6.65	80,330	65,073	3.61	702,736	437,543		DuPage River Salt Creek	



Point Source 2022

**Title Page Placeholder** 

BLOOMINGTON AND NORMAL WATER RECLAMATION DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements (add rows if more than one)	Total	\$673,102
	Facility No. 1 Design Engineering	\$102,003
	Facility No. 1 Design for Bio-P	\$44,745
	Facility No. 2 Design for Bio-P	\$432,543
	Facility Design Engineering & Upgrade	\$93,811
Operations and Maintenance (staff, materials and supplies for day to day nutrient work)		
Feasibility Studies or Permit Required Projects not already listed (add rows if more than one)		
Total Staff working on NLRS activities (in any capacity) No. of staff hours in the year or FTEs & approx. \$ value) working on nutrient related matters		
Other Resources Invested (add more rows if needed)		
RE: Capital Improvements line: Some facilities have a singl people will have a greater difficulty. Please use your best ju		he capital improvements project somewhat easier. Most other
is just another NPDES Permit Limit and you have 7 other n	umeric limits, so 1/8 of your O&M time is nutrients - tha	nutrients and other pollutants. If you decide that phosphorous t is a valid explanation. If you can look at work orders with purposes of these questions, please consider ammonia to be

a limit of a toxic substance, rather than a source of nitrogen fertilizer.



BLOOMINGTON AND NORMAL WATER RECLAMATION DISTRICT Outreach and Communications (JANUARY - DECEMBER 2022)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				

BLOOMINGTON AND NORMAL WATER RECLAMATION DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

Facility	NPDES Number	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In	Total P Out	Total P Out Annual Avg.	Total N In	Total N	Total N Out Annual Avg.	Watershed group (WS Group name or "No")	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Facility No. 1	IL0027731	None	22.5	2017	15.1	177,755	101,470	2.49		819,790	18.90	No	Design Engineering \$102,003
	IL0027731	None	22.5	2018	15.7	166,331	101,236	2.42		779,275	19.80	No	TN concentration is measured 1 day/month as per permit requirements
	IL0027731	None	22.5	2019	20.67	163,885	95,995	1.78		821,980	13.76	No	TN concentration is measured 1 day/month as per permit requirements
	IL0027731	None	22.5	2020	18.31	160,965	96,360	2.18		762,120	17.89	No	TN concentration is measured 1 day/month as per permit requirements
	IL0027731	None	22.5	2021	19.63	163,505	105,328	2.08		927,100	18.97	No	TN concentration is measured 1 day/month as per permit requirements
	IL0027731	None	22.5	2022	16.61	163,520	107,138	2.22		1,016,830	21.08	No	TN concentration is measured 1 day/month as per permit requirements. Preliminary design work for bio-p has been initiated with fiscal YTD cost \$44,745.
Facility No. 2	IL0073504	None	7.5	2017	3.8	60,955	43,263	3.74		257,957	22.30	No	Design Engineering \$92,731 Upgrade \$1080
	IL0073504	None	7.5	2018	4.09	60,910	40,442	3.63		245,645	21.34	No	
	IL0073504	None	7.5	2019	5.07	62,050	39,420	3.02		275,406	19.81	No	
	IL0073504	None	7.5	2020	4.57	61,906	34,744	3.11		236,172	21.14	No	
	IL0073504	None	7.5	2021	5.17	53,238	29,830	2.35		263,400	20.80	No	
	IL0073504	None	7.5	2022	4.89	57,385	32,379	2.77		271,660	23.24	No	Design work for bio-p improvements have progressed with fiscal YTD cost \$432,543. construction to begin early 2024.



DOWNERS GROVE SANITARY DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:		
Capital Improvements:				
Operations and Maintenance:	Service contract for maintaining the on-line phosphorus analyzer	\$6,000		
Feasibility Studies or Permit Required Projects not already listed:				
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)				
Other Resources Invested:				

#### DOWNERS GROVE SANITARY DISTRICT Outreach and Communications (JANUARY - DECEMBER 2022)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



# DOWNERS GROVE SANITARY DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

Facility	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In	Total P Out	-	Total N In	Total N	Total N Out Annual Avg.	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Wastewater Treatment Center	IL0028380	PDOP - attempting Bio- P first 6 mo, None second 6 mo	11	2022	10.3	136,145	73,000	2.9	770,150	392,375	16.1	DuPage River Salt Creek	For the first 6 months, operated a sidestream RAS anaerobic tank in an attempt to get BNR. Used primary sludge for process carbon additions. This process was removed from service in July 2022 as it was determined not to be provided any benefit and was impacting the plant's ammonia removal efficiency.



FLAGG CREEK WATER RECLAMATION DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:		
Capital Improvements:				
Operations and Maintenance:				
Feasibility Studies or Permit Required Projects not already listed:				
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)				
Other Resources Invested:				

#### FLAGG CREEK WATER RECLAMATION DISTRICT Outreach and Communications (JANUARY - DECEMBER 2022)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



#### FLAGG CREEK WATER RECLAMATION DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

\_\_\_\_\_

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF	Year			Total P	Total P Out Annual Avg.	Total NH3*/ TN^ In	TKN^ in	Total N	Total N Out Annual Avg.	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr		lb/yr	(mg/L)		
Flagg Creek	IL0022586	None	12	2017	12.35	106,740	76,980	2.2	643630*		702,940	18.7	No	
Water Rec. Dist.		None	12	2018	12.99	111,240	66,140	1.9	564710*		719,500	19.7	No	
2.04		None (Jan- Jul)/Chem-P (Aug-Dec.)	12	2019	15.98	108,200	54,040	1.2	517112*		858,902	18.4		TP out loading (approx): Jan-Jul =  1,200, Aug-Dec = 500
		Chem-P	12	2020	11.5	97,440	31,230	1.0	443000*		618,190	19	No	
		Chem-P	12	2021	9.87	99,189	27,653	0.9	26150^	571090^	586,119	20		<sup>^</sup> TN estimated from in-house NO3 testing; TKN estimated from historical data.
		Chem-P	12	2022	10.99	123,584	30,061	0.9	33,401^	795,615^	661,340	20		<sup>A</sup> TN estimated from in-house NO3 testing; TKN estimated from historical data.



# GLENBARD WASTEWATER AUTHORITY Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:	DuPage River Salt Creek Special Conditions Assessment	\$281,000
Operations and Maintenance:	DuPage River Salt Creek Workgroup Membership	\$34,140
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)	average of 2 staff attending IAWA and workgroup meetings	\$4,000
Other Resources Invested:		

### GLENBARD WASTEWATER AUTHORITY Outreach and Communications (JANUARY - DECEMBER 2022)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



# GLENBARD WASTEWATER AUTHORITY Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In	Total P Out	Total P Out Annual Avg.		Total N		Watershed group (WS Group name or "No")	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Glenbard Wastewater Authority Main Plant	IL0021547	None	16 (permitted)	2022	11.37	247,818	96,220	2.78	1,016,60 8	827,765	26.87	DuPage River Salt Creek Workgroup	Participation in workgroup assessments that go towards adaptive management and other watershed improvements to remove impairments (either caused by nutrients or not)
Glenbard Wastewater Authority Combined Sewer Outfall	IL0022471	None	N/A (wet weather plant) 58 Peak	2022	N/A	N/A	705	0.65	N/A	N/A	N/A	River Salt Creek	Participation in workgroup assessments that go towards adaptive management and other watershed improvements to remove impairments (either caused by nutrients or not)



GREATER PEORIA SANITARY DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:		
Operations and Maintenance:		
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)		
Other Resources Invested:		

### GREATER PEORIA SANITARY DISTRICT Outreach and Communications (JANUARY - DECEMBER 2022)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



## GREATER PEORIA SANITARY DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In		Total P Out Annual Avg.	Total N In		Annual	Watershed group (WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Greater Peoria Sanitary District		Bio-P and Bio-N	37	2022	20.92	295,000	24,200	0.38	2,280,000	299,000	4.70	Illinois River Watershed Group	



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:	Total	\$4,163,489
	Contract 18-254-3P, Chemical Phosphorus Removal Facility, CWRP. This contract will install a chemical dosing system utilizing either ferric chloride or alum for phosphorus removal needs. (Contract was awarded in August 2022 and construction has commenced. No payments made until mobilization has been satisfied.)	\$0
-	Contract 19-157-3P, Installation of Mechanical Mixers, SWRP. This contract will install mechanical mixers in pass one of the Aeration Batteries, A, C and D. (Construction final completion was achieved in June 2022.)	\$705,632
	Contract 19-159-3P, Chemical Back-up System, SWRP. This contract will install a chemical dosing system utilizing either ferric chloride or alum for polishing needs for phosphorus control. (Contract was awarded in February 2022 and construction is in progress.)	\$2,770,198
	Contract 21-089-3P, Phosphorus Removal Modifications to Battery D, OWRP. This project will convert one aeration tank to sidestream return activated sludge fermentation as well as installing three mechanically mixed zones at the start of each other aeration tank. (The contract is currently in design by a consultant as well as MWRD staff with an anticipated advertisement and award in 2023.)	\$621,309
	Contract 21-092-3P, Battery E Activated Sludge Facility. OWRP. This project will construct a new aeration battery design around enhanced biological phosphorus removal as well as including sidestream return activated sludge fermentation. (Consultant design under 22-RFP-06 has just begun in 2022 with advertisement and award expected in 2025.)	\$66,350
Operations and	Total	\$1,522,931
Maintenance (staff, materials	M&O Dept - Ostara P removal - chemicals	\$496,929
and supplies for day to day	M&O Dept - Ostara P removal - Maintenance Parts	\$50,260
nutrient work)	M&O Dept - Ostara P removal - Maintenance Operator	\$224,307
-	M&O Dept - Ostara P removal - Maintenance Staff	\$177,726
	M&O - Temp Chemical P removal Installation - chemicals	\$287,985
·	M&O Dept - Chemical P removal Installation (Temporary) - Maintenance Parts	\$4,171
·	M&O Dept - Temp Chem P removal - Maintenance Staff	\$6,680
-	M&O Dept -Kirie WRP Bio-P - Maintenance equipment	\$45,742



# METROPOLITAN WRD OF GREATER CHICAGO Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Operations and	Dupage River Salt Creek Workgroup membership	\$101,130
Maintenance Cont.		\$101,130
	Lower Des Plaines Watershed Group membership	\$128,000
Feasibility Studies or	Total	\$20,668
Permit Required Projects not already	M&R Dept. Feasibility Study Kirie WRP - Contract	\$7,407
listed (add rows if more than one)	M&R Dept. Feasibility Study Egan WRP - Contract	\$10,915
nore than one)	M&R Dept. Feasibility Study Hanover Park WRP - Contract	\$1,155
	M&R Dept. Feasibility Study Lemont WRP - Contract	\$1,191
Total Staff working on	Total	\$3,350,770
NLRS activities (in any capacity) No. of staff hours in the	Engineering Dept Design and Post award engineering, consultant oversight, construction oversight (~15 FTEs)	\$2,100,000
year or FTEs & approx. \$ value) working on	Chemical P removal Installation (Temp) - Staff (~3.5 FTE)	\$392,537
nutrient related matters	M&O Dept – Kirie Bio P (~0.2 FTEs)	\$18,982
	M&O Dept – Stickney BioP (operations staff, ~2 FTEs)	
	M&O Dept – OWRP review design of nutrient removal facilities (~0.05 FTEs)	\$4,000
	M&R Dept Technical oversight on design and feasibility studies (~1.2 FTEs)	\$162,000
	M&R Dept Research and technical oversight at 7 WRPs (~2.96 FTEs)	\$258,651
	M&R Dept Research and demonstration at the Fulton County site and other collaboration with the agricultural sector (~1.5 FTEs)	\$230,000
	M&R Dept Microbiological research and support (~2.1 FTEs)	\$184,600
Other Resources	Total	\$5,321
Invested (add more rows if needed)	M&R Dept Research supplies and consumables at WRPs	\$5,321
-	Grand Total	\$9,063,179



Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Field Days:	The MWRD's annual field day held on June 7, 2022 features presentations from researchers and multi-stop tour of the Fulton County research site.	50 attendees, including agricultural sector, water professionals, researchers, academia	The onsite event was designed to showcase BMPs to minimize nutrient loss from farmland and to get feedback from farmers and stakeholders. Researchers at MWRD and from U of I presented information about several of the research projects. Phosphorus losses via erosion etc., Bioreactor and Biochar-Sorption (B2) System and Water Lifting Devices for Drainage Subirrigation Systems	The field day at MWRD Fulton County site was co- organized by MWRD and Illinois Farm Bureau, and other partners, including the Fulton and Cook County Farm Bureau, University of Illinois (U of I) researchers, and the Illinois Nutrient Research and Education Council.	
Presentations:	The MWRD held virtual tours for general audiences each month. Each quarter, the MWRD participates and presents at five different watershed planning councils, including the Cal- Sag Channel Watershed Planning Council (WPC), Little Calumet River WPC, Lower Des Plaines River WPC, Poplar Creek and Upper Salt Creek WPC, and North Branch of the Chicago River WPC.	public and municipal	Watershed Planning Councils represent communities located within the six major watersheds in Cook County. They communicate the needs and interests of the members of the public and local governments to the MWRD.		
Conferences:	The MWRD hosted a Nutrient Loss Reduction Stewardship Information Exchange on August 3, 2022	25 attendees including MWRD, Illinois Farm Bureau, Cook County Farm Bureau, State Young Leader Committee, Forest Preserve District, and University of Illinois	Presentations and open discussions included an overview of nutrient removal activities at MWRD plants, research activities at Fulton County, collaboration efforts of the group to date, etc. This also included a tour of MWRD facilities.	Illinois Farm Bureau, Cook County Farm Bureau, Fulton County Farm Bureau and the MWRD.	



Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Educational Events/ Workshops/ Trainings:	The MWRD's 10th Annual Sustainability Summit was held at the Ford Calumet Environmental Center at Big Marsh Park in Chicago on Oct. 21, 2022. Press release: <u>https://MWRD.org/ten-years-embracing-environmentalism- and-collaboration-MWRDs-annual-sustainability-summit</u> . Video: <u>https://www.youtube.com/watch?v=JHjZmsmJ7AY</u>	75	Exceptional Quality (EQ) Biosolids and Biosolids Compost. Sustainable	Presenters included Dr. Theresa Johnston, MWRD Senior Environmental Soil Scientist; Bona J. Heinsohn, MA, CAE Director of Governmental Affairs & Public Relations, Cook County Farm Bureau and Rich Fisher, Principal Civil Engineer, MWRD	
Awards/ Recognition Activities:	Water Research Foundation Outstanding Subscriber Award for Applied Research; Illinois Section Illinois Water Environment Association Public Official of the Year award to MWRD President Kari K. Steele			The Water Research Foundation (WRF), Illinois Water Environment Association (IWEA), Water Environment Federation (WEF)	
Print or Media:	These media advisories/press releases/media reports were also posted on MWRD.org and shared on MWRD social media, including Facebook, LinkedIn, Twitter and Instagram.	> 10,000			
	March 5, 2022: "We must expand water's role in the circular economy," The Guardian UK and Global Cause. https://www.globalcause.co.uk/water/we-must-expand-waters-role-in-the-circular-economy/		nutrient recovery		
	June 14, 2022: "U of I, MWRD exploring best use of water resources," FarmWeek Now AGRINEWS. https://www.farmweeknow.com/environmental/u-of-i- MWRD-exploring-best-use-of-water- resources/article_2a3923fa-e735-11ec-b0e9- 6f2b5ba870f2.html		nutrient loss reduction strategies	Illinois Farm Bureau, the Fulton and Cook County Farm Bureaus, University of Illinois, and Illinois Nutrient Research and Education Council	
	June 15, 2022: "Field Day 2022: MWRD and partners convene in Fulton County to advance nutrient loss reduction studies," MWRD press release. <u>https://MWRD.org/field-day- 2022-MWRD-and-partners-convene-fulton-county-advance- nutrient-loss-reduction-studies</u>		nutrient loss reduction strategies	Illinois Farm Bureau, the Fulton and Cook County Farm Bureaus, University of Illinois, and Illinois Nutrient Research and Education Council	



Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Print or Media Cont.:	June 23, 2022: "MWRD's applied research in protecting water quality claims international prize from the Water Research Foundation," MWRD press release. <u>https://MWRD.org/MWRDs-applied- research-protecting-water-quality-claims- international-prize-water-research</u>		nutrient management and nutrient loss reduction strategies	Water Research Foundation	
	Oct. 28, 2022: "Ten years of embracing environmentalism and collaboration at the MWRD's annual Sustainability Summit," MWRD press release. <u>https://MWRD.org/ten-years-embracing- environmentalism-and-collaboration-MWRDs- annual-sustainability-summit</u>		resource recovery, stormwater management, water quality improvements	Cook County Farm Bureau, Chicago Park District, municipalities	
	Nov. 21, 2022: "MWRD collaborates to clean up local and international waterways," MWRD press release. <u>https://MWRD.org/MWRD-collaborates- clean-local-and-international-waterways</u>		nutrient loss reduction strategies	Illinois Farm Bureau	
	Dec. 6, 2022: "MWRD & Agricultural Partners Collaborate to Capture Nutrients in Waterways," Stormwater Solutions. <u>https://www.estormwater.com/nutrient-</u> <u>recovery/press-release/21438542/MWRD-</u> <u>agricultural-partners-collaborate-to-capture-</u> <u>nutrients-in-waterways</u>		nutrient loss reduction strategies		
Outreach Tools/ Publications:	MWRD website		nutrient loss reduction strategies		



Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Social Media:	Facebook, June 9, 2022: https://www.facebook.com/MetropolitanWaterRecla mationDistrict/posts/pfbid0QFxDDCEDZWxnpKJoz wsbtFn6edVeWcCbRiLU5FT6C4Jq8Y2c4Wk6XuG SDrH7zNPQI				
	Facebook, Aug. 3, 2022: https://www.facebook.com/MetropolitanWaterRecla mationDistrict/posts/pfbid0giZJsUj8bhn7cfYjB86iRm n1BW1rZ2JquXoFHXP6zqF8GhVZFTjTeL1nD1bbb 3yzl				
	Twitter, Nov. 21, 2022: "MWRD collaborates to clean up local and international waterways," <u>https://twitter.com/MWRDGC/status/159481512621</u> 7039873?s=20&t=WVXZKihemko9eT6NhJNAAA				
Newsletters:	https://MWRD.org/MWRD-flow-july-2021 https://MWRD.org/MWRD-flow-august-2021		nutrient loss reduction strategies, resource recovery, nutrient management		



### METROPOLITAN WRD OF GREATER CHICAGO Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

Facility		Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF	Year	Daily Avg. Flow	Total P In	Total P Out	Total P Out Annual Avg.	Total N In	Total N Out	Total N Out Annual Avg.	Watershed group (WS Group name or "No")	
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Stickney	IL0028053	Bio-P	1200	2022	678	17,595,154	1,094,439	0.5	82,118,877	19,650,897	9.7	Chicago Area Waterways	
	December 2021. A permanent chemical P polishing system is being installed after the permit start of August 2021 (awarded February 2022). A temporary chemical P facility was installed in September 2021. WRP has been in compliance with P permit every month since start of permit in August 2021.												
Calumet	IL0028061	None	354	2022	236	6,970,626	2,886,434	4.0	27,415,377	6,654,345	9.3	Chicago Area Waterways	
Terrence J. O'Brien	IL0028088	None	333	2022	210	2,054,315	907,801	1.4	14,230,652	6,304,545	9.9	Chicago Area Waterways	
Comments	completed	Data was derived through MWRD M&O Department routine sampling and ALD analyses. Finished doing pilot scale testing of algae for nutrient removal. P removal feasibility study was completed in July 2019. A sidestream EBPR pilot was initiated in 2020 and is still being tested. One battery will be converted to a sidestream EBPR process (anticipated award March 2023). A new battery is being designed and will do biological phosphorus removal (begin December 2023 with anticipated award January 2025).											
James C. Kirie	IL0047741	Bio-P	52	2022	36	364,635	32,417	0.3	2,721,790	891,595	8.1	Lower Des Plaines	
Comments	of six tanks March 201	s have baffle walls and la	arge bubble	mixers insta	lled (June 20 <sup>-</sup>	17). The P re	moval feasibili	ty study compl	eted in March	2019. Joined the	e Lower Des Plair	attery is pass through). Two les Watershed Group in have mixers and baffle walls	
John E. Egan	IL0036340	Nitrogen removal on sidestream (currently not running)	30	2022	23	332,817	202,018	3.0	1,856,955	1,279,364	18.8	DuPage River/Salt Creek Workgroup	
Comments	at plant he	lerived through MWRD I adworks but is no longer uly 2021 (P limit effective	running. R	ejoined the D	DuPage/Salt C	creek workgro	oup in June 20					6 to reduce nitrogen loading 2. Received a modified	
Hanover Park	IL0036137	None	12	2022	7	109,448	59,216	2.8	797,151	427,299	19.9	DuPage River/Salt Creek Workgroup	
Comments												asibility study was completed ompleted in December 2022.	
Lemont	IL0028070	None	2.3	2022	3	41,744	22,213	2.8	289,124	165,130	20.6	Lower Des Plaines	
Comments		lerived through MWRD I Group in late 2018; rec											



### NORTH SHORE WATER RECLAMATION DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements (add rows if more than one)	Advanced Bio-P Process Modeling & Optimization Contract (Continued)	\$95,000
	Temporary Back-Up Chemical P Removal Facilities	\$69,000
Operations and Maintenance (staff, materials and supplies for day to day nutrient work)	Phosphorus is 1/8 O&M Budget (Phos 1 of 8 limits)	\$3,035,600
Feasibility Studies or Permit Required Projects not already listed (add rows if more than one)		
Total Staff working on NLRS activities (in any capacity) No. of staff hours in the year or FTEs & approx. \$ value) working on nutrient related matters		
Other Resources Invested (add more rows if needed)	Watershed Workgroup Membership Dues, DRWW & NBWW	164,000

#### NORTH SHORE WATER RECLAMATION DISTRICT Outreach and Communications (JANUARY - DECEMBER 2022)

Descrip	otion:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
Newslett	ters:	Annual Watershed Workgroup Newsletters	Online	Water Quality Monitoring, NARP	Other Workgroup members	



# NORTH SHORE WATER RECLAMATION DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

Facility	NPDES	Nutrient Removal (Bio-P, Bio-N,	DAF		Daily Avg. Flow			Total P Out Annual Avg.		Total N Out	Total N Out	Watershed group (WS Group name or "No")	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
NSWRD - CLAVEY	IL0030171	None	17.8	2017	14.17	118,000	50,000	1.12	969,000	837,000	17.4	No	
ROAD WRF		Bio-P		2018	15.26	135,000	44,400	0.95	1,139,000	794,000	17.7	North Branch (NBWW)	
		Bio-P		2019	17.86	145,000	58,000	1.09	1,199,000	811,000	15.3	NBWW	
		Bio-P		2020	13.84	130,000	39,700	1.05	972,000	710,000	18.8	NBWW	
		Bio-P		2021	13.7	123,000	47,000	1.15	1,005,000	968,000	24.0	NBWW	
		Bio-P & Chem-P		2022	14.61	103,000	26,000	0.58	1,045,000	870,000	20.2	NBWW	
NSWRD - GURNEE WRF	IL0035092	None	23.6	2017	15.23	187,000	73,700	1.57	1,390,000	1,020,000	23.3	Des Plaines River (DRWW)	
		Bio-P		2018	15.41	202,000	52,700	1.11	1,760,000	912,000	20.1	DRWW	
		Bio-P		2019	16.4	240,000	65,900	1.35	1,731,000	897,000	18.3	DRWW	
		Bio-P		2020	16.4	227,000	39,700	0.88	1,572,000	876,000	19.4	DRWW	
		Bio-P		2021	11.55	193,000	29,000	0.84	1,492,000	803,000	23.1	DRWW	
		Bio-P & Chem-P		2022	12.96	165,000	35,500	0.85	1,519,000	883,000	22.9	DRWW	
NSWRD - WAUKEGAN WRF	IL0030244	None	22.0	2017	21.67	180,000	85,400	1.26	1,630,000	1,110,000	16.8	Des Plaines River (DRWW)	
		Bio-P		2018	23.38	250,000	46,300	0.67	1,910,000	1,080,000	16.0	DRWW	
		Bio-P		2019	25.67	255,000	64,100	0.84	1,914,000	1,159,000	15.2	DRWW	
		Bio-P		2020	21.89	216,000	65,200	0.97	1,617,000	1,055,000	15.7	DRWW	
		Bio-P		2021	17.32	175,000	52,000	1.02	1,520,000	1,030,700	20.0	DRWW	
		Bio-P & Chem-P		2022	20.19	180,000	42,000	0.68	1,771,000	1,109,000	18.8	DRWW	



SANGAMON COUNTY WATER RECLAMATION DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:		
Operations and Maintenance:		
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)	Sugar Creek (7858 hours approx.), Spring Creek (25884 hours approx.)	Sugar Creek (17 employees / \$419,824.00 approx.)
		Spring Creek (56 Employees / \$965,732.00 approx.)
Other Resources Invested:		

#### SANGAMON COUNTY WATER RECLAMATION DISTRICT Outreach and Communications (JANUARY - DECEMBER 2022)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



# SANGAMON COUNTY WATER RECLAMATION DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

Facility	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In	Total P Out	Total P Out Annual Avg.	Total N In	Total N	Annual	Watershed group (WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Spring Cree Facility	k IL002198 9	Bio-P & Bio-N	32	2022	30.22	160,170	30,085	0.46	2,030,089	711,025	7.73	Sangamon River	N/A
Sugar Creel Facility	i IL002197 1	Bio-P & Bio-N	15	2022	9.78	49,616	8,566	0.45	527,855	174,764	6.08	Sangamon River	N/A



URBANA & CHAMPAIGN SANITARY DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:		
Operations and Maintenance:		
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)		
Other Resources Invested:		

### URBANA & CHAMPAIGN SANITARY DISTRICT Outreach and Communications (JANUARY - DECEMBER 2022)

Descript	tion:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
		None				



# URBANA & CHAMPAIGN SANITARY DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

	NPDES	Nutrient Removal (Bio-P, Bio- N, None etc.)			Daily Avg. Flow	Total P In		Total P Out Annual Avg.			Out Annual	Watershed group (WS Group	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
UCSD NEP	IL0031500	None	17.3	2022	9.38	171,300	56,900	2.1	1,291,400	598,300	21.1	Watershed Implementation	The activated sludge part of the plant has been optimized for P removal, including an anaerobic zone.
UCSD SWP	IL0031526	Bio-P	7.98	2022	6.65	106,600	5,022	0.3	826,600	202,600	10.2	Salt Fork Watershed Implementation Group	



VILLAGE OF ADDISON Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:
Capital Improvements:		
Operations and Maintenance:		
Feasibility Studies or Permit Required Projects not already listed:		
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)		
Other Resources Invested:		

# VILLAGE OF ADDISON Outreach and Communications (JANUARY - DECEMBER 2022)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



# VILLAGE OF ADDISON Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In			Total N In	Total N		(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Addison-North STP	IL0033812	None	5.3	2022	3.26	54,084	35,924	3.62	366,385	253,056	25.50	DuPage River Salt Creek Workgroup	No nutrient removal has been implemented
A.J. LaRocca WTF	IL0027367	None	3.2	2022	1.96	32,815	23,627	3.96	216,283	124,460	20.86	DuPage River Salt Creek Workgroup	No nutrient removal has been implemented



# WHEATON SANITARY DISTRICT Staff and Financial Resources (JANUARY - DECEMBER 2022)

Description:	Program (If applicable):	Dollars/Number of Staff:				
Capital Improvements:						
Operations and Maintenance:						
Feasibility Studies or Permit Required Projects not already listed:						
Total Staff working on NLRS activities (in any capacity): (No. of staff hours in the year or FTEs & approx. \$ value)						
Other Resources Invested:						

### WHEATON SANITARY DISTRICT Outreach and Communications (JANUARY - DECEMBER 2022)

Description:	Name:	Attendance:	Topics Covered:	Partnerships:	Response/ Feedback:
	None				



# WHEATON SANITARY DISTRICT Facility Nutrient Tracking (JANUARY - DECEMBER 2022)

	NPDES	Nutrient Removal (Bio-P, Bio-N, None etc.)	DAF		Daily Avg. Flow	Total P In		-	Total N In	Total N	Total N	(WS Group name or	Comments (about data, and Capital Projects for Nutrients, what was done, \$ spent etc.)
			MGD		MGD	lb/yr	lb/yr	(mg/L)	lb/yr	lb/yr	(mg/L)		
Facility No. 1	IL0031739		8.9	2022	6.88	85,748	61,654	2.95	736,808	405,871	19.42		August /2021-Pilot RAS Fermenter