

### METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) is an award-winning, independent government agency responsible for protecting the region's water environment. The MWRD accomplishes this by protecting area waterways and the source of drinking water (Lake Michigan), providing stormwater management for residents and businesses across Cook County and transforming and reclaiming wastewater in its service area which encompasses 92 percent of the land area of Cook County. As an innovative utility of the future, the MWRD strives to develop groundbreaking technologies to recover and reuse valuable resources that improve water quality and protect the planet.

Established through an enabling act by the Illinois General Assembly in 1889 as the Sanitary District of Chicago, the MWRD's names, roles, jurisdiction and authority have changed over more than 130 years. The enabling act in 1889 was in direct response to a long standing problem with contamination of the water supply and nuisance conditions of the rivers. The MWRD reversed the flow of the Chicago and Calumet River Systems to stop the discharge of sewage to Lake Michigan and instead, discharge it to the Des Plaines River, where it could be diluted as it flowed into the Illinois River and eventually the Mississippi River. Prior to the MWRD's construction of a 61.3 mile system of canals and waterway improvements, the Chicago and Calumet River Systems were tributaries to Lake Michigan. These river systems are now tributaries to the Illinois River system. MWRD constructed seven wastewater treatment plants in the 1920s-1930s.

From 1955 through 1988, the MWRD was called the Metropolitan Sanitary District of Greater Chicago. In order to provide a more accurate perception of the MWRD's current functions and responsibilities, the name was changed effective January 1, 1989, to the Metropolitan Water Reclamation District of Greater Chicago.

#### **MISSION AND RESPONSIBILITIES**

The mission of the MWRD is to protect the health and safety of the public in its service area, protect the quality of the water supply source, improve the quality of water in watercourses in its service area, protect

businesses and homes from flood damages, and manage water as a vital resource for its service area.

The MWRD collects wastewater from municipalities in its service area, conveys it to water reclamation plants, provides full secondary treatment, and provides tertiary treatment when appropriate. The MWRD is also responsible for stormwater management for all of Cook County. The MWRD does not treat and transport drinking water to homes and businesses; for information regarding drinking water in your neighborhood, contact your local municipality.

#### **SERVICES**

The MWRD's seven modern water reclamation plants provide excellent treatment for residential and industrial wastewater, meeting permitted discharge limits virtually at all times. The treatment process is protected by a pretreatment program to guard against hazardous substances and toxic chemicals.

Water reclamation plants are strictly regulated pursuant to federal and state requirements. The MWRD routinely monitors industries and nonresidential sources to assure that wastes are disposed of in an environmentally responsible and lawful manner.

Treated water, along with runoff from rainfall, enters local canals, rivers, and streams that serve as headwaters of the Illinois River system. Stormwater in the separate sewered area is controlled to reduce flood damages by a number of stormwater detention reservoirs. In the combined sewer area, the MWRD's Tunnel and Reservoir Plan (TARP) has significantly reduced basement backup and overflows to local waterways.

Flow within the MWRD's waterway system and the Lake Michigan discretionary diversion flow are controlled by three inlet structures on Lake Michigan: the Wilmette Pumping Station, the Chicago River Controlling Works, and the O'Brien Lock and Dam. The single outlet control structure is the Lockport Lock and Powerhouse.

While exercising no direct control over water collection systems owned and maintained by cities, villages, sewer districts, and utilities, the MWRD

does control municipal sewer construction by permits outside the City of Chicago. The MWRD also owns a network of intercepting sewers to convey wastewater from the local collection systems to the water reclamation plants.

#### **FACILITIES**

The MWRD is located primarily within the boundaries of Cook County, Illinois. The MWRD serves an area of 882.1 square miles, which includes the City of Chicago and 128 surrounding suburban communities. The MWRD serves an equivalent population of 10.35 million people; 5.25 million real people, a commercial and industrial equivalent of 4.5 million people, and a combined sewer overflow equivalent of 0.6 million people. MWRD's 560 miles of intercepting sewers and force mains range in size from 6 inches to 27 feet in diameter, and are fed by approximately 10,000 local sewer system connections.

TARP is one of the country's largest public works projects for pollution and flood control. Four tunnel systems total 109.4 miles of tunnels, 8 to 33 feet in diameter and 150 to 300 feet underground. The tunnels are designed to empty into three large reservoirs to provide storage for the polluted water captured by TARP.

The MWRD owns and operates one of the world's largest water reclamation plants, in addition to six other plants and 23 pumping stations. The MWRD treats an average of 1.3 billion gallons of water each day. The MWRD's total water treatment capacity is over 2.0 billion gallons per day.

The MWRD controls 76.1 miles of navigable waterways, which are part of the inland waterway system connecting the Great Lakes with the Gulf of Mexico. It also owns and operates 34 stormwater detention reservoirs to provide regional stormwater flood damage reduction.

The MWRD uses all of its biosolids through a farmland application program in nearby counties and local use of EQ biosolids and composted biosolids in the Chicago metropolitan area.

### **GOVERNANCE**









The MWRD is governed by a nine-member Board of Commissioners (Board). Commissioners are elected at large and serve on a salaried basis. Three Commissioners are elected every two years for six-year terms. Biannually, the Board elects from its membership a President, Vice President, and Chairman of the Committee on Finance.

### WATER RECLAMATION PLANTS









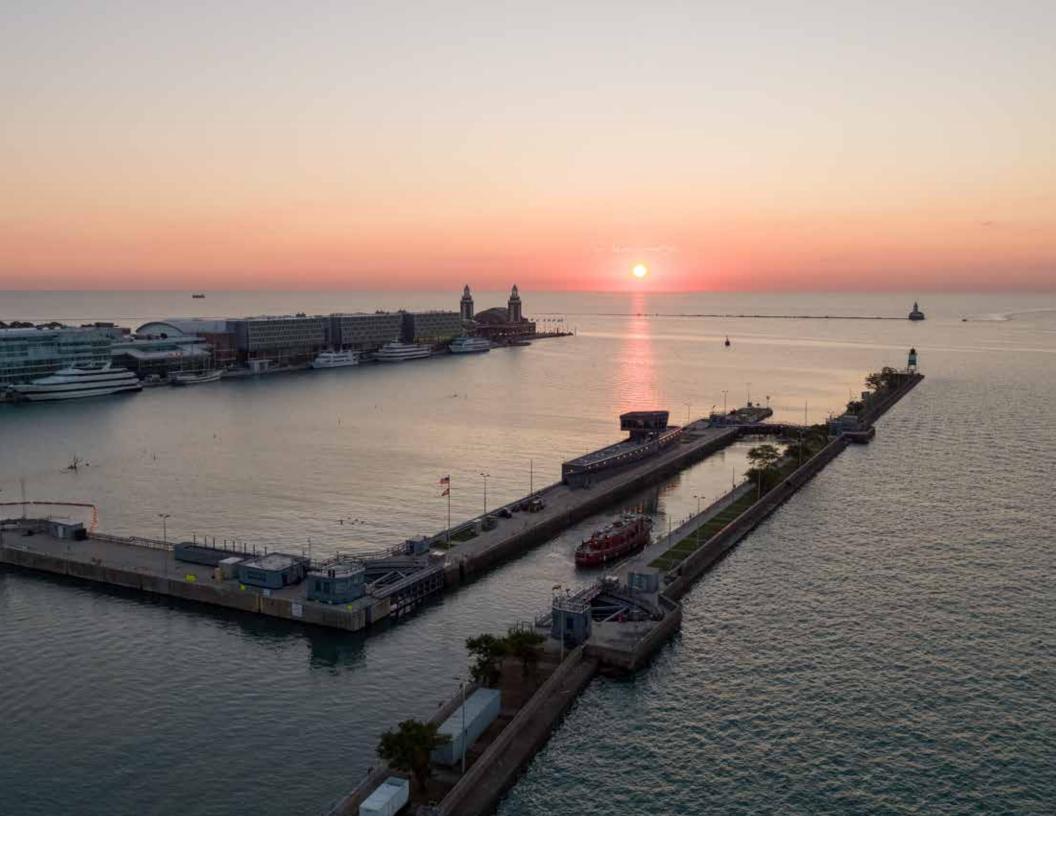








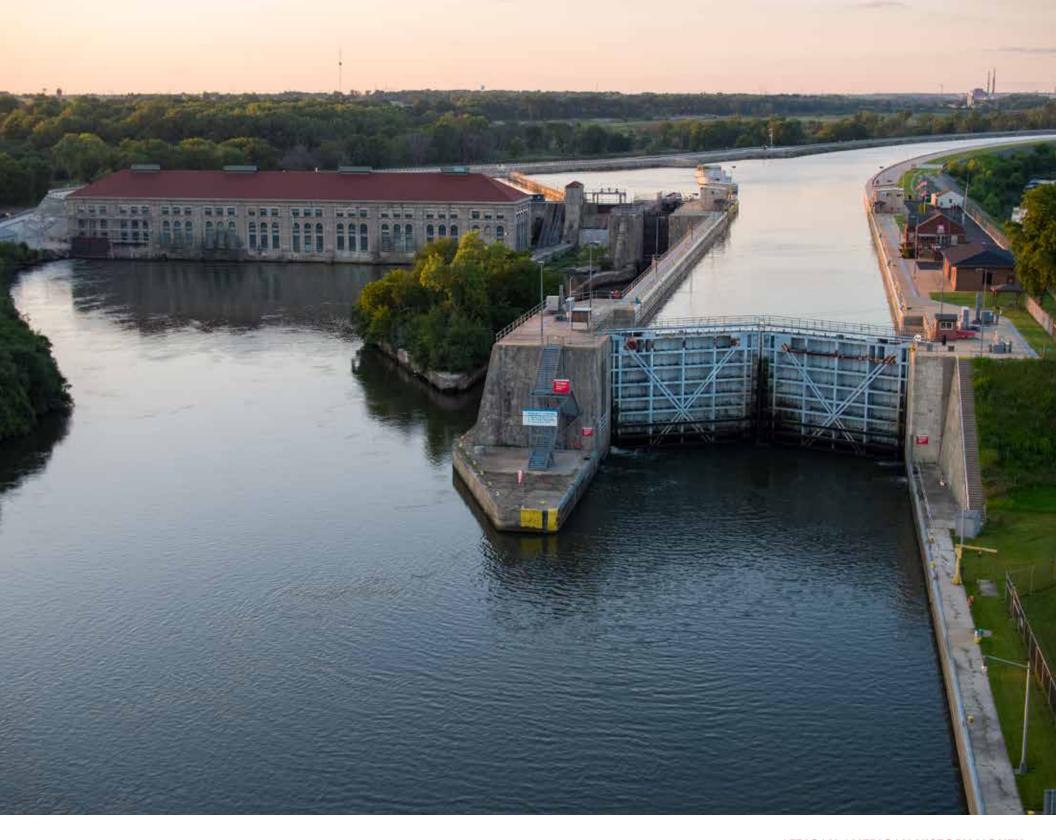
- | CALUMET WATER RECLAMATION PLANT
- **2 EGAN WATER RECLAMATION PLANT**
- 3 HANOVER PARK WATER RECLAMATION PLANT
- **4 KIRIE WATER RECLAMATION PLANT**
- **5** LEMONT WATER RECLAMATION PLANT **6** O'BRIEN WATER RECLAMATION PLANT
- 7 STICKNEY WATER RECLAMATION PLANT



# **JANUARY**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
					1939 MWRD installs locks at	<b>1900</b> Chicago River
					lakefront intakes.  NEW YEAR'S DAY	<b>1900</b> Chicago River reversed; Chicago Sanita and Ship Canal complete
	4	5	6	7	8	9
	4	<b>3</b>	•	<b>/</b>	•	3
				MWRD BOARD MEETING		
0	11	12	13	14	15	16
	<b>2018</b> McCook Reservoir					
	first fill.					
7	18	19	20	21	22	23
	MARTIN LUTHER KING, JR. DAY			MWRD BOARD MEETING		
4/31	25	26	27	28	29	30
4/31	23	20	2/	20	23	30

A view of the sun rising over Lake Michigan near the Chicago River Controlling Works (CRCW), Chicago Harbor Lock and Navy Pier. The MWRD built CRCW and the lock between 1936 and 1938 and operated the lock until 1984 when the US Army Corps of Engineers took over operations. The MWRD continues to operate the CRCW sluice gates.

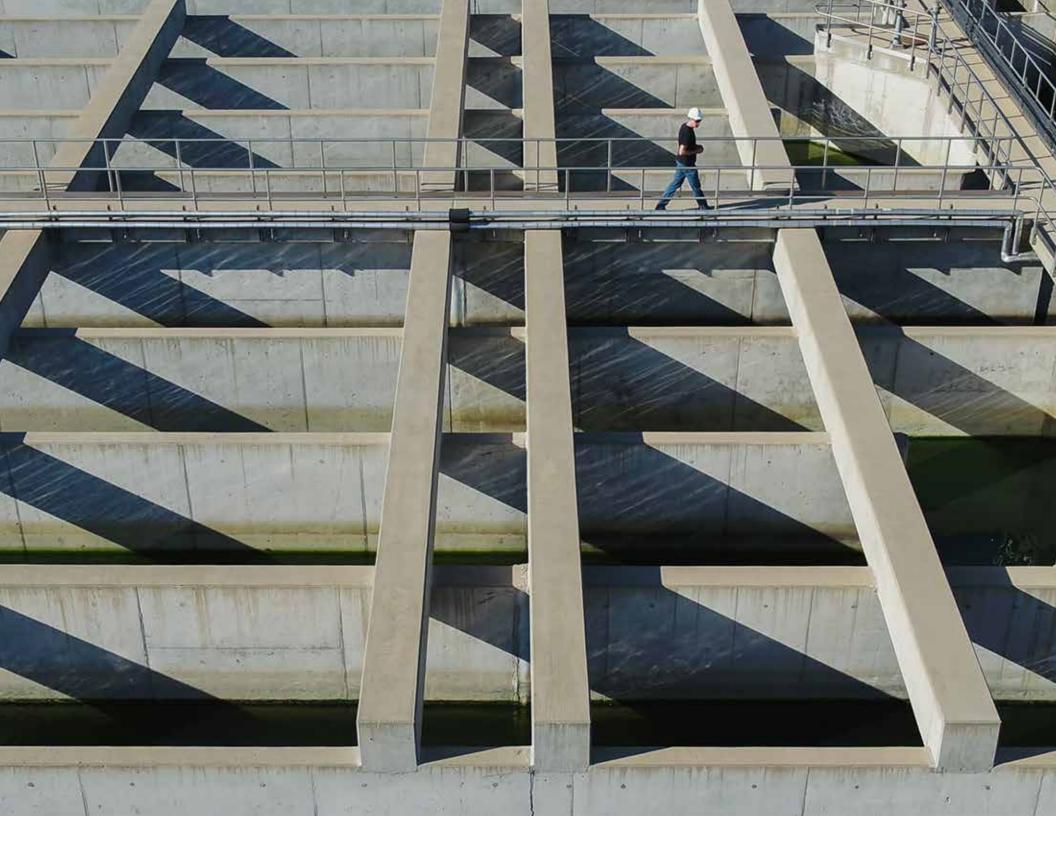


## **FEBRUARY**

### AFRICAN AMERICAN HISTORY MONTH AMERICAN HEART MONTH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
		GROUNDHOG DAY		MWRD BOARD MEETING		
7	8	9	10	11	12	13
					CHINESE NEW YEAR	
					LINCOLN'S BIRTHDAY	
14	15	16	17	18	19	20
				<b>1971</b> Fulton County Prairie Plan begins.		
VALENTINE'S DAY	PRESIDENTS' DAY			MWRD BOARD MEETING		
21	22	23	24	25	26	27
		EN	GINEERS WE	EK		
28						
20						
NATIONAL SCIENCE DAY						

A view to the north showing the Lockport Powerhouse, Lock and Dam, located at the end of the Chicago Sanitary and Ship Canal. The area features an elevation difference between the Chicago Sanitary and Ship Canal and the Des Plaines River of approximately 36 feet, which allows for the generation of hydroelectric power at the Powerhouse and dam are still in operation but the (barely visible) original lock was later replaced by the much larger lock in 1933.



## **MARCH**

### WOMEN'S HISTORY MONTH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
	2006 TARP tunnels (109.4 miles) completed. CASIMIR PULASKI DAY			MWRD BOARD MEETING		
7	8	9	10	11	12	13
	INTERNATIONAL WOMEN'S DAY					
14	15	16	17	18	19	20
DAYLIGHT SAVING TIME BEGINS			ST. PATRICK'S DAY	MWRD BOARD MEETING		
21	22	23	24	25	26	27
	WORLD WATER DAY	<b>2016</b> UV disinfection begins at O'Brien WRP.				PASSOVER BEGINS AT SUNDOWN
28	29	30	31			

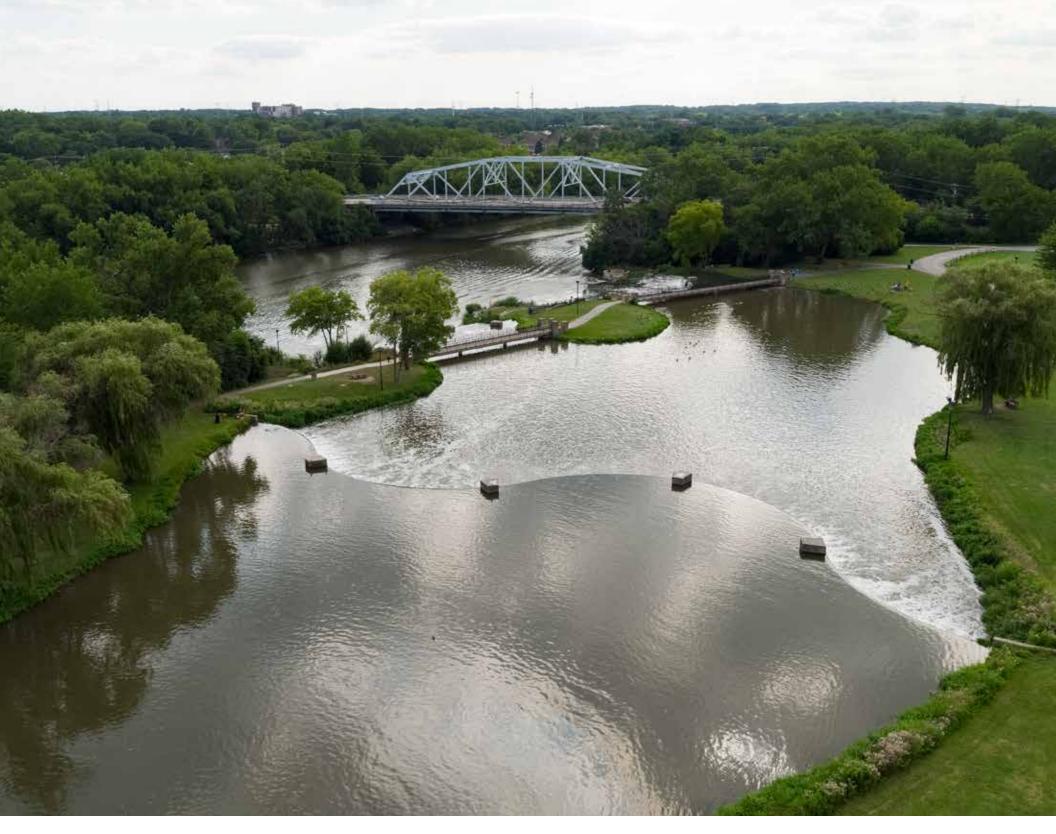
<sup>&</sup>gt;> The disinfection facility at the Calumet Water Reclamation Plant, which improves the quality of the water leaving the facility via a process of chlorination. During this last stage of the wastewater treatment process, the water flows through a labyrinth of tunnel-like passages in the concrete contact basin, allowing time for the chlorine to kill off the harmful pathogens. The water is then dechlorinated and empties into the nearby Little Calumet River.



**APRIL** EARTH MONTH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
				MWRD BOARD MEETING	GOOD FRIDAY	
4	5	6	7	8	9	10
LAST DAY OF PASSOVER						
EASTER 11	12	13	14	15	16	17
"	12		<b>14</b>	15	10	17
	RAMADAN BEGINS			MWRD BOARD MEETING		
18	19	20	21	22	23	24
			ADMINISTRATIVE PROFESIONALS DAY	EARTH DAY		
25	26	27	28	29	30	
					ARBOR DAY	
An MWPD skimmer heat trav	rels north on the South Branch of the	Chicago Divor poar Ding Tom Momor	ial Park. The MWPD's skimmer heats	s natrol the Chicago Area Waterway		efter significant storms year

An MWRD skimmer boat travels north on the South Branch of the Chicago River near Ping Tom Memorial Park. The MWRD's skimmer boats patrol the Chicago Area Waterway System from April until October and after significant storms year-round, working to remove trash, branches and leaves from the water.

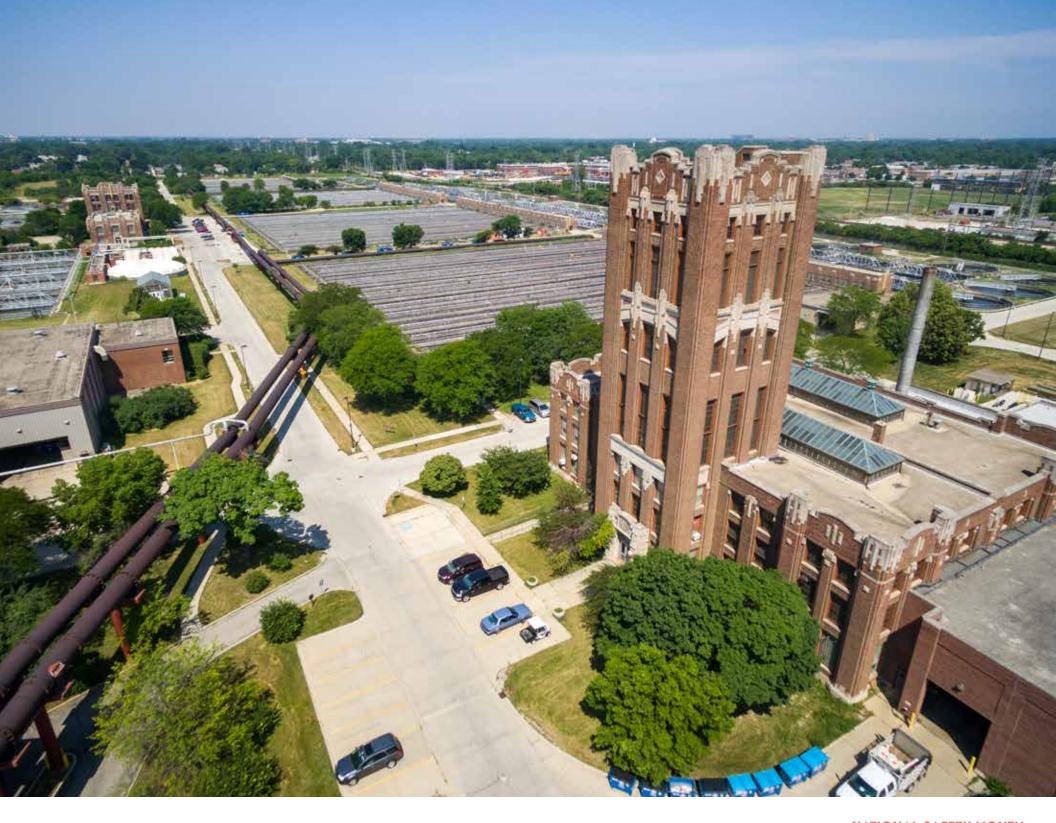


# MAY

### ASIAN PACIFIC AMERICAN HERITAGE MONTH NATIONAL BIKE MONTH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4	5	6	7	8
ORTHODOX EASTER			CINCO DE MAYO	MWRD BOARD MEETING		
9	10	11	12	13	14	15
		••	<b></b>	-		
			1980 Kirie WRP commences			
MOTHER'S DAY		RAMADAN ENDS	operations. EID AL-FITR			ARMED FORCES DAY
16	17	18	19	20	21	22
1963 Hanover Park WRP					NATIONAL BIKE TO WORK	
completed.				MWRD BOARD MEETING	DAY	
23/30	24/31	25	26	27	28	29
1020 Couthwest plant	1985 Mainstream Tunnel					
<b>1939</b> Southwest plant (Stickney WRP) commences operations. (23rd)	TARP system begins operating. (24th) MEMORIAL DAY	<b>2016</b> Stickney WRP nutrient recovery facility unveiled.				<b>1889</b> Sanitary District of Chicago established.
Sidestream Floyated Pool Acr	ation (SEDA) Station 4 in Worth Jooki	na west with the Harlem Ave bridge	wor the Cal Sag Channel visible in th	as background. The MWPD built five	SEPA stations in the early 1990s on t	the Cal Sag Channel and the

<sup>&</sup>gt;> Sidestream Elevated Pool Aeration (SEPA) Station 4 in Worth, looking west with the Harlem Ave bridge over the Cal-Sag Channel visible in the background. The MWRD built five SEPA stations in the early 1990s on the Cal-Sag Channel and the Calumet River to improve water quality by increasing the amount of dissolved oxygen in the water. SEPA 4 is surrounded by park space and attracts many visitors and is also a popular photo destination for weddings and family gatherings.

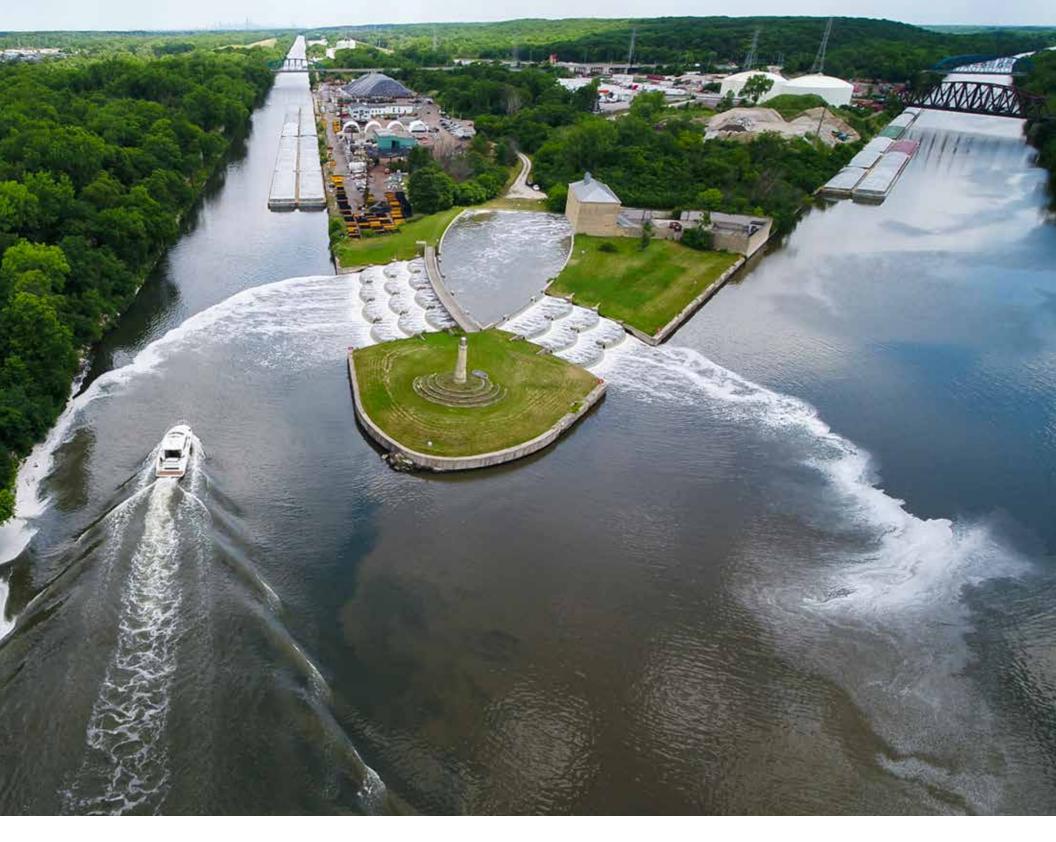


# JUNE

### NATIONAL SAFETY MONTH LBGT PRIDE MONTH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
			<b>1930</b> West Side plant (Stickney) commences operations.	MWRD BOARD MEETING		
6	7	8	9	10	11	12
13	14	15	16	17	18	19
	FLAG DAY	<b>1989</b> Nicholas J. Melas Centennial Fountain comes online to commemorate MWRD's 100th Anniversary.		MWRD BOARD MEETING		JUNETEENTH
20	21	22	23	24	25	26
FATHER'S DAY						
27	28	29	30			

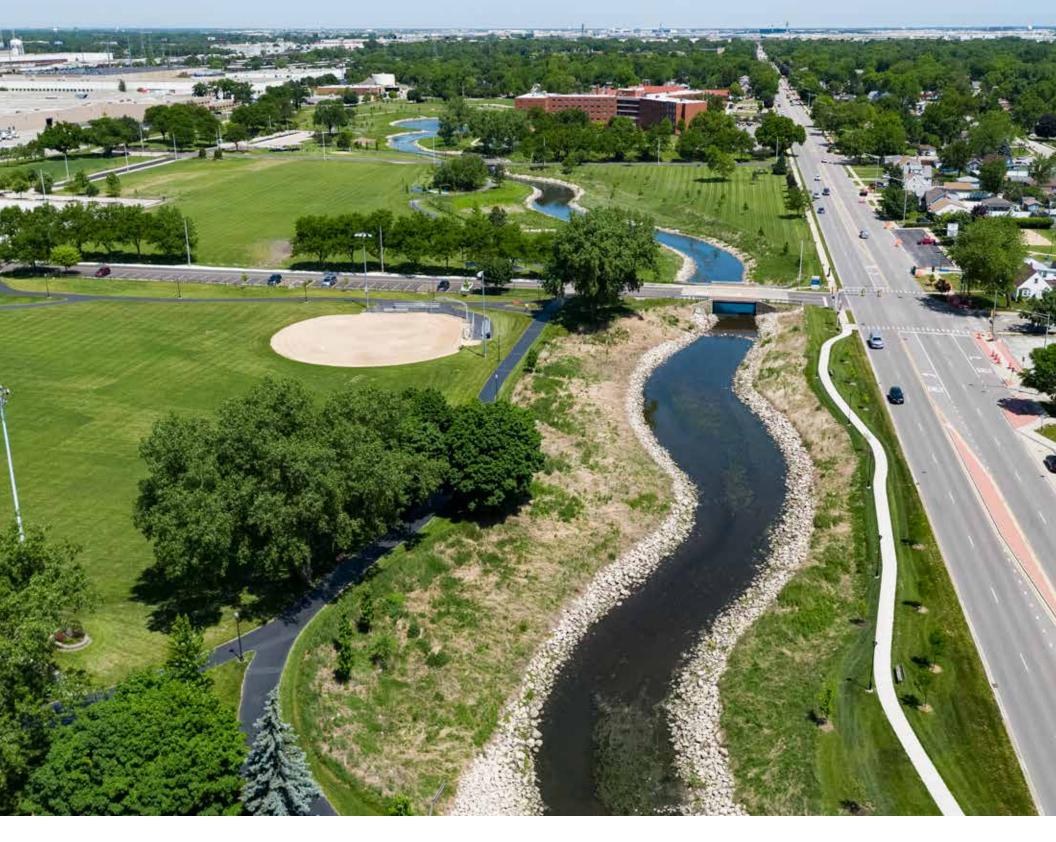
<sup>&</sup>gt;> The Terrence J. O'Brien Water Reclamation Plant (WRP) in Skokie, originally called North Side, has been in operation since 1928. The O'Brien WRP originally treated sewage for a population of 800,000 within a 78-square-mile area, but currently serves over 1.3 million people in an area of 143 square miles and cleans an average of 230 million gallons of wastewater per day (mgd) and has the capacity to treat 450 mgd.



# **JULY**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
4	5	6	7	8	9	10
NDEPENDENCE DAY	19	13	14	15	16	17
	12	13	14	15	16	<b>2015</b> Disinfection facility a Calumet WRP completed.
8	19	20	21	MWRD BOARD MEETING  22	23	Calumet WRP completed.
	EID AL-ADHA					
25	26	27	28	29  NATIONAL INTERN DAY	30	1980 Chicago Underflow Plan (later named Gloria Alitto Majewski) TARP Reservoir completed.

Sidestream Elevated Pool Aeration (SEPA) station 5 in Lemont at the confluence of the Chicago Sanitary and Ship Canal, at left, and the Cal-Sag Channel, at right. SEPA 5 is part of the Illinois and Michigan Canal National Heritage Corridor and features a lighthouse near 3-foot waterfalls that can aerate 372 million gallons of water per day.



# **AUGUST**

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
2	3	4	5	6	7
			MWRD BOARD MEETING		
9	10	<b>11</b>	12	13	14
16	17	18	19	20	21
23	24	25	26	1907 Chicago River Main Channel and Chicago	28
			<b>1922</b> Cal-Sag Channel becomes operational.	extension completed.  Lockport Powerhouse and Lock went online.	
30	31				
	9 16 23	9 10 17 23 24	2     3     4       9     10     11       16     17     18       23     24     25	2       3       4       5         MWRD BOARD MEETING         9       10       11       12         16       17       18       19         23       24       25       26         1922 Cal-Sag Channel becomes operational.	2     3     4     5     6       MWRD BOARD MEETING       9     10     11     12     13       16     17     18     19     20       23     24     25     26     27       1907 Chicago River Main Channel and Chicago Sanitary and Ship Canal extension completed. Lockport Powerhouse and Lock went online.     1992 Cal-Sag Channel Lock went online.

Addison Creek along Wolf Road in Northlake, showing completed portions of the MWRD's Addison Creek channel improvements which will increase the stormwater conveyance capacity of the waterway and includes the construction of a nearly 200-million-gallon capacity stormwater reservoir at Washington Boulevard and 25th Avenue in nearby Bellwood. The MWRD projects will reduce overbank flooding to approximately 2,200 structures along the creek from Northlake to Broadview.

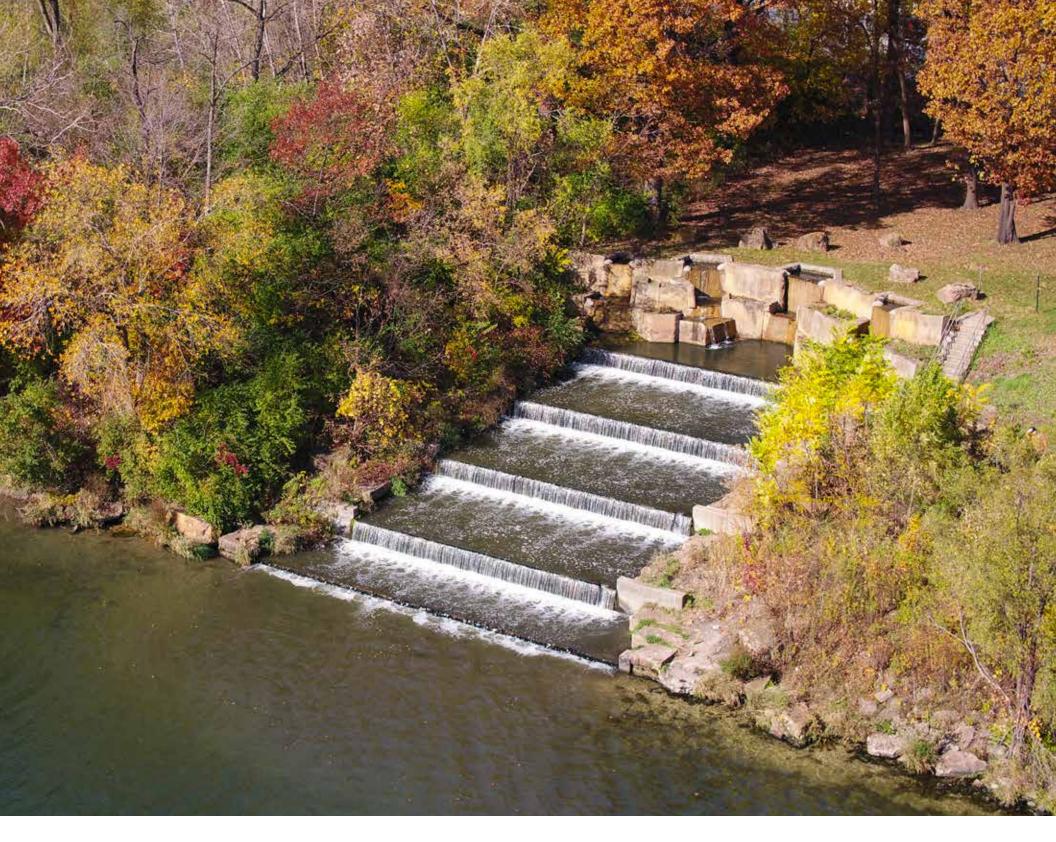


## **SEPTEMBER**

### NATIONAL HISPANIC HERITAGE MONTH NATIONAL PREPAREDNESS MONTH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
			<b>2015</b> Thornton TARP Reservoir completed.	MWRD BOARD MEETING	<b>1892</b> Chicago Sanitary and Ship Canal construction begins.	
5	6	7	8	9	10	11
	LABOR DAY ROSH HASHANAH	1938 Chicago River Controlling Works opens.				1922 Calumet WRP completed. PATRIOT DAY
12	13	14	15	16	17	18
<b>1907</b> North Shore Channel construction begins.			NATIONAL HISPANIC HERITAGE MONTH BEGINS YOM KIPPUR			<b>1969</b> Sewage and Waste Control Ordinance adopted.
19	20	21	22	23	24	25
				MWRD BOARD MEETING		
26	27	28	29	30		

<sup>&</sup>gt;> The Wilmette Pumping Station and Sheridan Rd bridge at the North end of the North Shore Channel in Wilmette, looking northeast towards Wilmette Harbor and Lake Michigan. The MWRD completed construction of the Pumping Station in 1910.

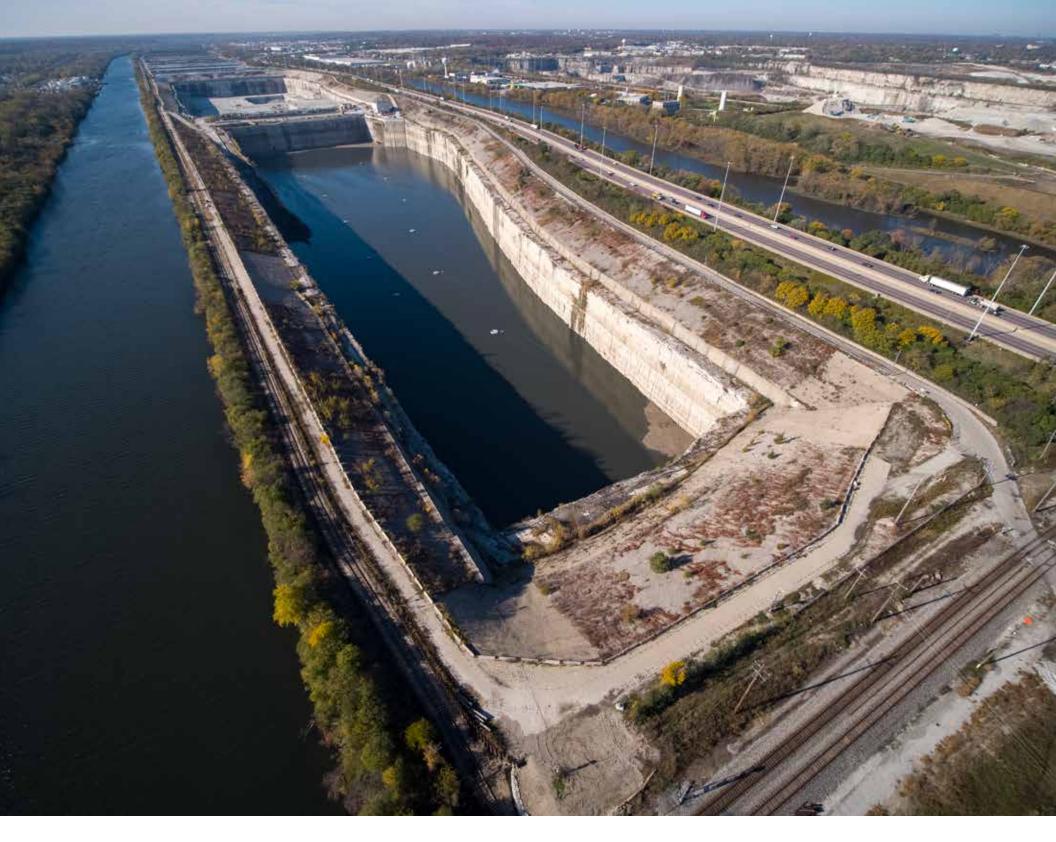


# **OCTOBER**

### BREAST CANCER AWARENESS MONTH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
1928 North Side Sewage Treatment Works (later renamed O'Brien) WRP completed.	4	5	6	7  MWRD BOARD MEETING	8	9
10	11 INDIGENOUS PEOPLES' DAY	19	13	14	NATIONAL HISPANIC HERITAGE MONTH ENDS	16 WEFTEC 2021
17	18	19	20	A DAY WITHOUT WATER MWRD BOARD MEETING	1955 ASCE names Chicago Sewage Disposal System one of seven engineering wonders of U.S.	23
24/31  1990 Construction begins on O'Hare (Majewski) Reservoir. (31st) HALLOWEEN	25	1972 Tunnel and Reservoir Plan (TARP) adopted.	27	28	29	30

<sup>&</sup>gt;> The smallest Sidestream Elevated Pool Aeration (SEPA) station, SEPA 2, is located at 127th Street on the Little Calumet River in Chicago and features four three-foot waterfalls that aerate 56 million gallons of water per day.



## **NOVEMBER**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
		ELECTION DAY		MWRD BOARD MEETING		
,	8	9	10	11	12	13
DAYLIGHT SAVING TIME NDS				VETERANS DAY		
4	15	16	17	18	19	20
			2004 Illinois legislature names MWRD stormwater			
		<b>1961</b> Lemont WRP commences operations.	names MWRD stormwater authority for Cook County.	MWRD BOARD MEETING		
21	22	23	24	25	26	27
					<b>1907</b> Lockport Powerhouse delivers first electric current to Chicago.	
				THANKSGIVING	<b>2015</b> Thornton Reservoir first fill.	
28	29	30				
CHANUKAH BEGINS	<b>1910</b> First water flows into North Shore Channel.					

Stage 1 of the McCook Reservoir, viewed to the southwest with the Chicago Sanitary and Ship Canal on the left and the Stevenson Expressway and Des Plaines River on the right, was completed in 2017 and can hold 3.5 billion gallons of combined sewage and stormwater. Stage 2, which is barely visible in the background at top left, is currently being excavated and will add another 6.5 billion gallons of storage when it is completed by 2029.



## **DECEMBER**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
				MWRD BOARD MEETING		<b>2017</b> Stage I of McCool Reservoir unveiled.
	6	7	8	9	10	11
	LAST DAY OF CHANUKAH	MWRD ANNUAL MEETING				
	13	14	15	16	17	18
				1975 Egan WRP completed. MWRD BOARD MEETING		
	20	21	22	23	24	25
					CHRISTMAS EYE	CHRISTMAS
3	27	28	29	30	31	CIRCOTINA
ANZAA BEGINS						

<sup>&</sup>gt;> The Stickney Water Reclamation Plant (WRP) is one of the largest wastewater treatment facilities in the world and serves residents in central Chicago and 46 other communities. The Stickney WRP consists of two plants: the original West Side Plant which was placed in service in 1930 and the Southwest Plant which was placed in service in 1939. The Stickney WRP currently serves over 2.3 million people and cleans an average of 700 million gallons of wastewater per day.



**ABOUT THE COVER** Final settling tanks at the Calumet Water Reclamation Plant (WRP) on the south side of Chicago. The facility can treat over 400 million gallons of wastewater per day.

All of the photos in this calendar were taken by the MWRD Office of Public Affairs.

























