

Chronology of the U.S Army Corps of Engineers' impact on Chicago's rich history  
*Vibrant, dynamic, looking forward and leading into tomorrow*

#	Date	Important event in the history of Chicago pertaining to the Corps of Engineers
<b>Discovery &amp; Settlement 1673-1803</b>		
5	1673	French explorers <b>Marquette and Jolliet</b> canoed up the Illinois River and identified an easy portage between the Illinois River and Lake Michigan through Mud Lake: <i>"We could go with facility to Florida in a bark, and by very easy navigation. It would only be necessary to make a canal by cutting through but half a league of prairie, to pass from the foot of the Lake of the Illinois (Lake Michigan) to the St. Louis (Illinois) River, which empties into the Mississippi"</i>
	1717	As a result of the Seven Years' War, France ceded land east of Mississippi River to Great Britain and land west of the Mississippi to Spain
	1783	American Revolutionary War ends; title of area passes from Great Britain to the United States
	1784	Jean Baptiste Pointe du Sable establishes farm at what is to become Chicago
5	1795	Treaty of Greenville concludes Battle of Fallen Timbers under BG "Mad" Anthony Wayne; Potawatomi Indians ceded a six square mile parcel at mouth of Chicago River to the United States
5	1803	Army constructs Fort Dearborn at the mouth of the Chicago River
5	1812	Fort Dearborn massacre by the Potawatomi Indians as part of the War of 1812; 52 men, woman and children killed
	1816	Through the Treaty of St. Louis, tribes cede to US a tract of land 20 miles wide; 10 miles on either side of a proposed Illinois & Michigan (I&M) canal; outer limits of tract became known as "Indian boundary lines"
<b>Establishment 1803-1833</b>		
6	1816	Army Topographic Engineer, <b>MAJ Stephen Long</b> surveyed the Illinois Territory including the Chicago Portage: <i>"The central position of the place- the facility the country affords for communicating both by land and water with almost every other part of the north and northwest frontier gives it a high claim to consideration as a military post"</i>
6	1818	State of Illinois admitted to the Union; state boundary extended north to include the southwestern tip of Lake Michigan so that entirety of conceived canal between Lake Michigan and the Illinois River could be within the state
6	1828	Army infantry officers at Fort Dearborn dig a ditch through sandbar at the mouth of Chicago River, but it immediately fills in
6	1830	Army civil engineers Harrison and Guyon surveyed and mapped "the most practical route for connecting the waters of Lake Michigan with the Illinois River"; maps produced outline Chicago Harbor improvements and establishes the eventual I&M canal route
6	1833	Chicago incorporated as a town; population of 350; first anti-pollution ordinance for the Chicago River
<b>First Solutions 1833-1900 – Developing navigation and sanitation</b>		
7	1836	Construction of the I&M canal begins by the State of Illinois
	1833	Army engineers begin constructing piers at Chicago Harbor to improve navigation; the work took five years to complete under significant controversy including lapses in appropriations, difficulty acquiring supplies and equipment with uncertain currency and reassignment of command to Engineer officers; in 1834 <b>BG Charles Gratiot</b> assigns 2LT James Allen of the Dragoons temporary duty in charge of the work: <i>"It is known, that there is a probability of your meeting with some difficulty in the prosecution of your operations."</i>
	1837	Chicago's rapid population growth is fueled by waterborne transportation, speculation from canal construction; Chicago is incorporated as a city; population 4,170; Fort Dearborn is disestablished
	1838	Initial Chicago Harbor improvements completed; <b>CPT Allen</b> wrote <i>"the harbor at present affords an easy entrance and secure shelter in the worst weather to the largest class of boats and vessels engaged in the commerce of the lakes... this being the only shelter for a distance of more than 300 miles on the weather side of... (the lake) the greatest solicitation is felt for its continued improvements and permanent security by all interested in the extensive navigation on this lake."</i>
	1838	Corps of Topographical Engineers is established under COL John Abert; allowed for more efficient management of the civil works responsibilities of the War Department; regional offices were established including Racine, WI where CAP Thomas Jefferson Cram was assigned in charge of harbor works on Lake Michigan and roads in the Wisconsin territory; much of the focus was on surveying and road development between forts; Federal role for Great Lakes harbor construction debated for the next decade resulting in continued lapse in appropriations
	1842	CPT Cram was court marshalled, charged with mishandling public funds and found not guilty; Corps historian found <i>"In all the Corps history, Cram was the only topographical engineer tried for the mishandling of public money, a truly remarkable record considering the amount of money the Topographical Engineers handled, the temptations presented by an acquisitive society and the meager salary they received."</i>
7	1843	Congress appropriates funds to improve Chicago, St Joseph, Michigan City, Milwaukee harbors and a year later overrode President's veto to construct new harbors at Kenosha and Racine; CPT John McClellan moves office to Chicago.
	1847	Northwest River and Harbor Convention held in Chicago; in response to President Polk's vetos for 3 years, little known newly elected Congressman Abraham Lincoln spoke out against the president's strict interpretation of the constitution for only harbor improvements that supported international trade had federal interest; 15 principles were established asserting that since Congress had the constitutional right to regulate and tax commerce it also had the obligation to support commerce by providing <i>"all those facilities and that protection which the states individually would have afforded, had the revenue and authority been left there... the inequitable distribution of appropriations for interior rivers and lakes as compared to Atlantic ports and rivers should be corrected."</i>
7	1848	I&M canal opens; flow of the South Branch of the Chicago River is intermittently reversed

	1849	Chicago experiences first big flood causing extensive damage to boats and bridges along Chicago River
	1852	The Board of Rivers and Harbors was created by regulation to "examine, approve, modify, or reject every project or plan of the civil improvements"
	1853	Under newly elected President Pierce no project would be approved on the assumption that subsequent appropriations for the project would be made; he vetoed the next four appropriations acts (in all seven appropriations bills for Great Lakes improvements were veto's between 1838-1860; Chicago Board of Trade unlawfully seizes Federal dredge to dredge the harbor for the next 3 years; illustrates the stress during this period where the national issue as to the role and purpose of the Federal Government in making internal improvements; unreliable federal appropriations and local interests to complete projects during lapse in appropriations
	1855	LTC James Graham assumes command of Chicago office and reports the importance of Chicago harbor both in terms commerce "there are as many as ten principal railroads which, at this day, concentrate at this port after having traversed and intersected an area of most fertile country..." but also in terms of military importance during war "there is still another [claim on behalf on the preservation of the harbor], of not less magnitude which is exclusively national. It is the influence it would have on the military defense of this part of our frontier, and the success of our arms in time of war. A single glance at the general map of the United States would be sufficient to show the importance of Chicago as a military position in conducting our operations in defense of our northwestern frontier in time of war."
7	1856	Chicago begins to raise the level of its streets to accommodate Ellis Chesbrough's plan for a new sewer system to address flooding and pollution in the streets; this sewer system increased the waste load discharged into the Chicago River and necessitated water intake cribs to be constructed in Lake Michigan to protect the drinking water source; first crib completed 1867 two miles out in the lake
	1860	Republican National Convention is held in Chicago and Abraham Lincoln is nominated president under a platform that embraced the Federal role in river and harbor improvements within the interior of the country; the growth of the northwest territory via the Erie canal through the Great Lakes and the east-west pattern of communication and traffic established by lake transportation further strengthened by the construction of rail lines between the eastern seaboard and the western system of lakes and rivers cemented the divide between the north and south
	1861	Civil War starts and 93 engineer officers called to active duty; 15 joined Confederate army; in all 55 promoted to general during the conflict including CPT George Meade who was in charge of the lake survey in Detroit and commanded the Army of the Potomac and who defeated GEN Robert E. Lee at Gettysburg in 1863; Chicago harbor and I&M canal played a major role in the transport of Union troops and supplies
	1863	Corps of Topographic Engineers merged with the Corps of Engineers; COL Graham urged for appropriations to remedy the severe deterioration of the harbors from 11 years a lack of appropriations
	1865	Union Stockyards opens along the banks of Bubbly Creek at the entrance of the I&M canal; Civil War ends and the constitutionality of Federal support of internal harbor improvements was no longer an issue; appropriations for improvements and maintenance dramatically increased and remained constant for decades afterwards
7	1867	First intake crib constructed 2 miles out in the lake to protect city's drinking water source
	1869	Trans-continental railroad opens and Chicago has an unbroken rail connection to the Pacific coast
	1870	Corps of Engineers establishes the Chicago District; plan for the improvements to Chicago and Calumet harbors authorized; Chicago population hits 300,000 making it 5 <sup>th</sup> largest city
	1871	I&M Canal is deepened by the city of Chicago and the rate of flow reversal in the main and south branches of the Chicago River increase
	1871	The Great Chicago Fire; 200 dead / \$200M damage; massive planned rebuilding effort completed over 4 years
	1876	MAJ Junius Gillespie urges Chicago mayor to control illicit dumping that was occurring in the harbor approach; Chief of Engineers sends a draft bill to Congress outlawing dumping in navigational channels laying groundwork for Corps regulatory program
	1885	Chicago experiences another massive flood that threatens the water intake structures in Lake Michigan; this underscored the need for addressing river pollution in the Chicago River and was used by local officials to petition for a more permanent diversion away from the Lake Michigan
	1889	Following unsuccessful attempt by the State of Illinois for the I&M to be accepted by the Federal Government for improvement, the Illinois General Assembly passes the Sanitary District of Chicago Enabling Act and what is known today as MWRDGC is born
	1889	CPT William Marshall (grandnephew of Chief justice John Marshall who opined on the commerce clause establishing navigational servitude) states "no improvement in the Chicago River should be made by the general government; nor any public funds expended thereon so long as the city of Chicago uses it as a dumping ground for its filth and refuse of all kinds. The city should be required to remove all deposits made there in that tend to diminish its present navigable capacity or to cease depositing its sewage therein."
	1892	Construction of the Chicago Sanitary and Ship Canal (CSSC) begins by the Sanitary District of Chicago; deepening and widening Chicago and Calumet rivers underway by USACE
	1893	Columbian Exposition World's Fair; massive "White City" constructed at Jackson Park
	1895	CPT Marshall objects to the inability to regulate use of harbor piers "The piers of this harbor have long been infested with disreputable people and fisherman. Thieves, thugs, confidence men, liquor sellers and other of that kind make the United States piers and breakwaters the lowest of the slums of Chicago... numerous assaults and some murders have been committed upon these piers... because the United States cannot allege ownership and the city police seem well pleased to have the disorderly shore element transferred from the streets to the Government piers on the lake."
	1899	Section 10 Rivers and Harbors Act makes it unlawful to use navigation structures without permission and discharge refuse of any description into navigable waters; CPT Marshall leaves Chicago after 11 years and would become Chief of Engineers in 1908

7	1900	CSSC opens under controversy as an injunction is filed in US District Court by the City of St. Louis; Chicago population hits 1.5M making it 2nd largest city
<b>Massive Growth 1900-1939 – Expanding navigation and dilution</b>		
8	1906	LTC William Bixby predicts impacts to Lake Michigan water levels as a result of the free flow diversion through the CSSC; 30,000 cfs diversion has resulted in reduction of lake level by 8.9” and if persisted would further reduce to 1.5’ within 5 years
	1907	MWRDGC request to increase diversion through reversal of Calumet River is denied; a permit was eventually issued in 1910 allowing only a total of 4,167 cfs to be diverted from Lake Michigan
	1909	Burnham Plan for Chicago published
8	1910	Chicago population hits 3M; Indiana harbor is transferred to Federal Government; Chicago River is deepened to 21 feet; MWRDGC completes North Shore Channel to flush the North Branch Chicago River; dam is constructed at the confluence (USACE substantially removed the dam to allow for fish passage it in 2018)
	1913	<b>BG William Bixby</b> , Chief of Engineers, recommended no further improvements <b>“until at least such time as... the system of waterways freed as far as possible from the obstruction to navigation caused by municipal requirements.”</b> ; as a result, it would be many years before existing navigation channels would be considered for improvement
	1914	MWRDGC completes the first sewage treatment plan on the North Branch Chicago River in Morton Grove
	1919	MWRDGC initiates a 25-yr program to build sewage treatment plants based on activated sludge process
8	1920	After denying the state’s request to improve the I&M canal because the dimensions of the proposed locks were considered inadequate, Corps issues permit to State of Illinois for improving the Illinois Waterway by constructing five new locks on the Des Plaines and Illinois Rivers; \$20M bond was issued and construction began in 1921
8	1922	Calumet-Saganaskee (Cal-Sag) channel constructed by MWRDGC over 11 years; partially reversing the Little Calumet River
8	1930	The Federal Government takes control of the Illinois Waterway project from the state and works to complete lock and dam structures that were not yet completed; a second Chicago Engineer District is stood up for the project; second Supreme Court decree issued mandating sewage treatment and timetable to reduce diversion from lake
	1933	Illinois Waterway project is completed allowing for the continuous connection of at least 200-ft wide and 9-ft depth; the second Engineer District is closed; I&M Canal closes; today all of the channel in the City of Chicago is filled in to make way for the Stevenson Expressway
	1933	Century of Progress World’s Fair; northerly island constructed for this purpose; 39M visitors
<b>Consolidation and Policy Change 1938-1972 – Environmental awareness</b>		
9	1938	FDR passes the Flood Control Act of 1938 establishing a nationwide policy that flood control on navigable waters or their tributaries is in the interest of the general welfare and is the proper activity of the Federal Government when carried out in the cooperation with the States and local entities
	1938	Remainder of historic West Fork of the South Branch is filled in
	1939	MWRDGC constructs the Chicago River Controlling Works at the mouth of the Chicago River at Lake Michigan is completed to prevent reversals of flow and still allow passage of navigation to comply with the 1930 Supreme Court decree
	1941	Corps of Engineers assigned military construction program and the Manhattan project; Great Lakes Division was moved to Chicago to be more of a central location; Chicago District supervised several of the largest wartime construction projects in the program including the Douglass aircraft plant; several immense ordinance projects, airfield runway extensions and military hospitals in the region; Chicago Procurement District was one of six nationwide; military program in Chicago commenced until 1970 when the mission was transferred to Omaha District
9	1946	Congress authorized further improvements to the Illinois Waterway project including widening the Cal-Sag channel and constructing a lock and dam to control diversion, improving the Grand Calumet River for direct connection to Indiana Harbor and widening the CSSC from the Cal-Sag junction to Lockport; of the authorized project, only Cal-Sag channel widening and O’Brien lock and dam were constructed as a Congress required new focus on economic justification of public works projects and the necessary support of state and local interests
9	1955	ASCE declares the Chicago Sewage Disposal System one of the seven wonders of the modern engineering world; The Milwaukee District is closed; Chicago District assumes western Lake Michigan watershed in Wisconsin and Upper Peninsula Michigan
	1959	The St Lawrence Seaway is completed opening the Great Lakes navigation system to ocean going vessels; prior to completion several states petitioned for harbor improvements in anticipation of international shipping
	1963	Indiana Harbor improvements are completed
9	1965	USACE constructs the O’Brien Lock and Dam completely reversing the Calumet and Little Calumet Rivers; construction of Burns Waterway Harbor is authorized by Congress with provisions for reimbursement to the State of Indiana
	1965	<b>BG Roy Dodge</b> reports <b>“that public attitudes toward pollution are becoming more critical and we must reevaluate our procedures and policies on industrial waste, spoil disposal and domestic waste from government activities.”</b> ; a comprehensive study of alternative methods of dredged material disposal was conducted
	1971	Union Stockyards close
9	1972	Clean Water Act is passed
<b>Mitigation 1972-2019 – Navigation &amp; contaminated sediments</b>		
10	1970	President Nixon signed into law authorizing construction of confined disposal facilities to contain 10 years of spoil in areas where specified by the newly formed USEPA; under Section 123, PL 91- 611, as well as project-specific

		authorities, the Corps has constructed and/or operated 45 confined disposal facilities and removed over 100 million cubic yards of contaminated sediments from Great Lakes harbors and channels
10	1983	Chicago Area CDF constructed in Calumet Harbor after years of difficulty obtaining necessary items of local cooperation and dredging ceased for nearly a decade; facility has reached capacity and a DMMP is nearing completion with a recommendation to vertically expand the existing facility
10	2012	Indiana Harbor CDF constructed in two stages on an abandoned refinery site after 40 years of ceased dredging; high levels of contamination in both dredged sediments and surrounding areas added complexities; designs underway to expand facility by raising the perimeter dikes
<b>Mitigation 1972-2019 – Flood risk management</b>		
11	1972	State of Illinois, Cook County, City of Chicago and MWRDGC adopts the Tunnel and Reservoir Plan (TARP) consisting of two phases; first phase consisting of the construction of a network of tunnels to capture the “first flush” from combined sewer overflows and a second phase consisting of large reservoirs to increase the capacity of the system to address flooding
11	1985	First stages of the “Deep Tunnel” portion of the TARP goes online; constructed by MWRDGC with federal funding assistance from the USEPA; the entire tunnel system would be completed in 2006 consisting of a total of 110 miles of tunnels ranging in size from 9 to 33 feet in diameter, up to 350 feet below ground
	1986	After 12 years of gridlock in Congress over the size of the civil works program, WRDA 1986 is passed and includes increased requirements for local contribution to projects including cost-sharing provisions
	1990	Little Calumet River flood control and recreation project is initiated consisting of 22 miles of levees and floodwalls, control structure on Hart Ditch, 17 miles of trails and 385 acres of wetland mitigation
	1992	Chicago Flood fills the basements in many downtown buildings due to a construction accident at the Kinzie Street Bridge that flooded an interconnected series of tunnels that were used in the early 1900s to transport goods and coal between buildings; the Chicago District provided emergency support to the city including plugging the leak and pumping out the city; in all damages were estimated at nearly \$2B
	1999	Chicago Shoreline project is initiated to reconstruct 9 miles of the Lake Michigan shoreline to address storm damage and flooding; project is to be implemented in reaches by both the Federal Government and the City of Chicago and Chicago Park District
	2007	Des Plaines River flood control project is initiated consisting of six structural elements including two levees, two expansions of existing reservoirs, a lateral storage area and a modification of an existing dam; to date only the two levee projects have been implemented
	2015	MWRDGC completes construction of the CUP Thornton Composite reservoir adding 7.9BG to the Calumet TARP system
11	2017	Stage 1 of the CUP-McCook Reservoir completed adding 3.5BG to the mainstream and Des Plaines deep tunnel systems; Stage 2 will increase the reservoir to 10BG and is being constructed by MWRDGC through Sec 1043 agreement
<b>Mitigation 1972-2019 – Aquatic ecosystem restoration &amp; protection</b>		
	1979	Friends of the Chicago River formed as a result of a Chicago Tribune article titled “Our friendless River”
12	1988	Corps establishes environmental program recognizing that past practices unintentionally damaged sensitive ecosystems and asserts that adequate engineering expertise exists to correct these problems; <b>LTG Henry Hatch</b> <b>“It is we engineers who hold most of the keys to the solutions of the world’s environmental problems.”</b>
12	2002	Construction is completed on the first electric dispersal barrier to prevent invasive species transfer between the Great Lakes and Mississippi River basins through the CSSC; to date four barriers have been constructed with increasing effectiveness
12	2014	Great Lakes and Mississippi Interbasin Study outlines a range of options and technologies to address the transfer of aquatic invasive species between basins; Brandon Road identified as priority area for addressing Asian carps
12	2019	To date Chicago District has constructed 33 ecosystem restoration and protection projects totaling 4,100 acres of scarce habitat and 15 miles of stream restoration for federally listed threatened and endangered species mainly utilizing CAP and GLFER authorities and funds through both E&W Appropriations and USEPA-managed Great Lakes Restoration Initiative