

# HEARTLAND ENGINEERS

*A Century of Superior Service  
1907 - 2007*



**US Army Corps  
of Engineers®**

Kansas City District

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Much of the history of U.S Army Corps of Engineers, Kansas City District, has been set forth in various historical documents as well as through oral renditions by long-time employees; the facts as represented here are accurate to the best of the company's knowledge. Various Internet websites were utilized to verify or supplement facts and were not quoted verbatim. The information utilized from such websites reflects the content on the websites at the time the research was performed.

*All photos provided by U.S Army Corps of Engineers and its resources except as noted.*

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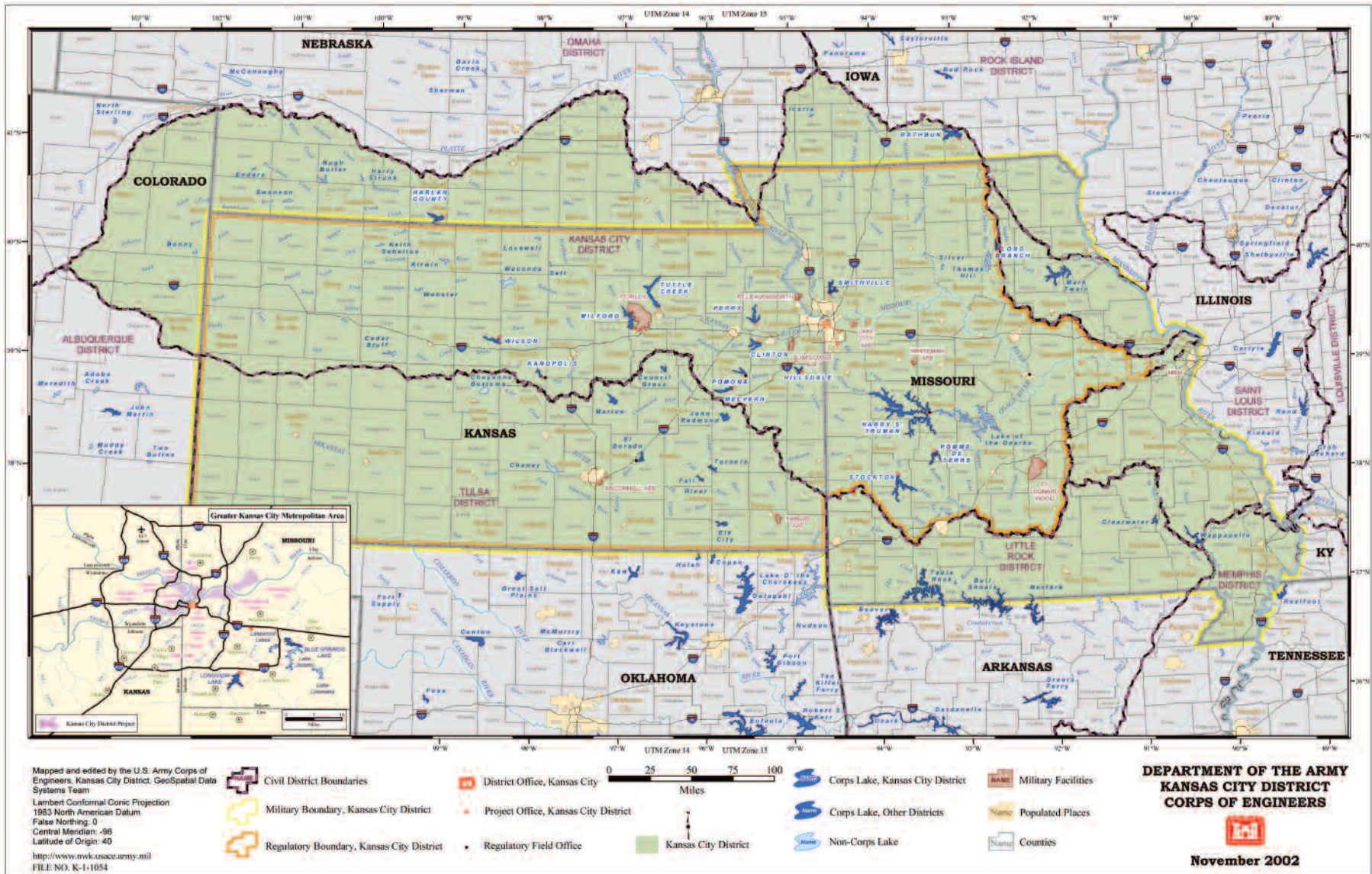
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COLONEL ROGER A. WILSON, JR.

In 1907 the Corps of Engineers established an office in Kansas City “...to explore the feasibility of improving navigation on the Missouri River.” That office eventually became a District Headquarters. From this humble beginning, the Kansas City District is now considered a full-service District with environmental services, military construction, civil works construction, and operations responsibilities across portions of five states in the Midwest. It is one of only 18 Districts of the Corps’ 45 to perform a military construction mission. The District has constructed hundreds of miles of levees and oversees those and many more constructed by others along the Missouri River and her tributaries. The District uniquely supports the Environmental Protection Agency in two separate geographic regions of the country, Region VII in the Heartland and Region II in the Northeast.

For over 100 years the Kansas City District stepped up to every challenge and served the Heartland and Nation with great distinction. It has done so during times of armed conflict, even sending its own overseas to aid war fighters and host nations during hostilities. It has done so during severe economic depression and times of great prosperity. It has done so in times of drought and disaster as witnessed during the 1935, 1951 and 1993 great floods. And, it has done so during periods of intense political, cultural, natural resource and environmental awareness. Throughout these times, the District stood ready, answered every call to duty and made a difference in the lives of people.

To commemorate the District’s first 100 years of service and the myriad of outstanding accomplishments, I’m honored to present to you “Heartland Engineers: A Century of Superior Service.” While not all encompassing, this book is representative of the major accomplishments of the District since it was established in 1907, and it pays tribute to the men and women, past and present, who achieved such greatness.

As we look forward to our next century, we are now confronted with our own set of seemingly insurmountable challenges ranging from an era of persistent conflict to global climate change. However, like taming a river for navigation, I’m confident we will meet these contemporary challenges and contribute to the rich heritage of the Heartland Engineer.

I want to thank all my predecessors, the commanders, who guided and led this District to the place it occupies today – a respected, service oriented agency of professionals. And, I want to thank those that participated in the completion of this important keepsake celebrating our past. I trust you will use it as a showcase and source of pride, and I hope you enjoy it for many years to come. Congratulations and good luck during the next 100 years!

***Building Strong!***

Colonel Roger A. Wilson, Jr.  
42nd Commanding Officer  
Kansas City District



**A very special thanks to all past and current Kansas City District employees who have contributed institutional knowledge, photographs or both to the successful completion of this Centennial book.**

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**Sincerely,**  
**David S. Kolarik,**  
*Kansas City District Public Affairs Officer*









George Washington appointed the first engineer officers of the Army on June 16, 1775, during the American Revolution, and engineers have served in combat in all subsequent American wars. The Army established the U.S. Army Corps of Engineers (USACE) as a separate, permanent branch on March 16, 1802, and gave the engineers responsibility for founding and operating the U.S. Military Academy at West Point.

In 1803, President Thomas Jefferson commissioned U.S. Army Captain Meriwether Lewis and Lt. William Clark to explore the northern portion of the recently acquired Louisiana Purchase in hopes of finding an overland route to the Pacific. Their expedition was called the Corps of Discovery, and their years of exploration, mapping, navigation and studies of the environment would lay the foundation for the USACE as a unique organization of experts across multiple disciplines.

Since Lewis and Clark returned from their expedition, the USACE, more commonly referred to as “the Corps”, has had very close ties to the Missouri River and its numerous tributaries. The Missouri River in its natural meandering state was infamous for its constantly shifting channels and erosive forces that ate away its banks and turned its waters the color of mud. Violent floods in the spring and summer devastated communities along the banks and inundated valuable agricultural and industrial acreage.

**Photo left:** The dredgeboat Meriwether Lewis





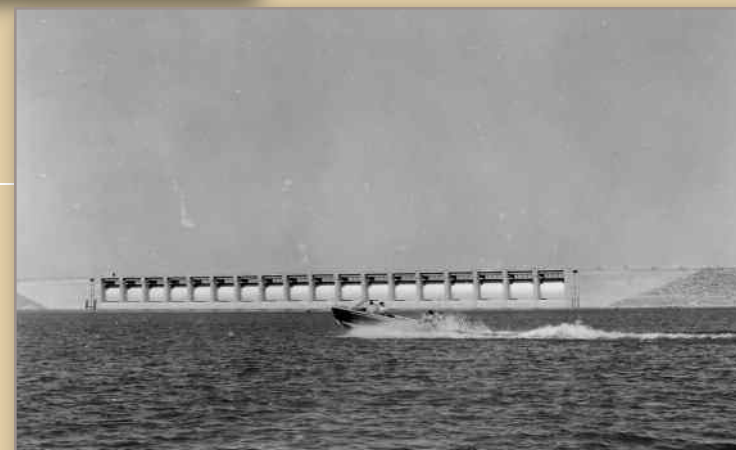
Since 1907 – continuing the early work of the Corps in pegging down the river – the Kansas City District has removed snags, protected banks, constructed navigation channels and built extensive flood control structures along the Missouri River, thus providing important socioeconomic benefits to the Heartland and the entire Nation. Throughout the years, legislation has further enabled the District to incorporate other benefits into its projects. From water supplies and hydropower, to recreation and transportation, the mission of the Corps has grown and changed much like the rivers of the Region.

The World War II era brought major changes to the District. The Flood Control Act of 1938 launched several decades of dam building for the District, beginning with Kanopolis Lake in 1940. This era also saw major changes in the District's military mission. The Corps was called on to design and build the infrastructure necessary to accommodate the expanding and evolving Armed Forces. For over half a century, the District has spearheaded massive construction projects including ordnance facilities, state-of-the-art training facilities, airfields, hospitals, barracks, dependent housing and amenities. The Cold War era brought even greater challenges for the District, as it had to keep pace with the new weaponry advances and build structures fast enough to support them.

By the 1970s, the Nation began to focus on environmental issues. The legacy of the Cold War left numerous former defense sites that stored and utilized hazardous sub-



*Visitors Center at  
Smithville Lake*



*Public boating at  
Harlan County Dam*



*New construction at  
Fort Leavenworth*

*Great Flood of 1951*



*Brush Creek  
improvements,  
Kansas City*

*Towboat pushing  
barges up the river*



stances which may later pose a threat to the health of the general public. The Kansas City District was called upon to assist the Environmental Protection Agency (EPA) to perform massive cleanup at Superfund sites throughout portions of the United States. The Department of Defense (DOD) also assigned the District to manage and clean up radiological waste generated from the development of nuclear weaponry, under the Formerly Used Sites Remedial Action Plan (FUSRAP) for the Department of Energy as well as Formerly Used Defense Sites (FUDS). Much of that work continues today.

Cleaning up the environment also meant cleaning up water sources and restoring the habitat of fish and wildlife. USACE has regulatory responsibility over the Nation's wetlands. In recent years, the District has partnered with a wide range of federal, state and local agencies and organizations to restore some of the Missouri River's ecosystem back to its natural state. This decades-long effort is providing protection for endangered species that make the Missouri River their home. The effort also expanded the opportunities for recreation and use of the river for residents and visitors who come to explore Lewis and Clark's "Gateway to the West."

For all of its many accomplishments, the Kansas City District has relied on countless dedicated personnel who have worked and served with great pride for many years. We celebrate these accomplishments and honor the contributions made by our people and partners each and every day.





*Blue Springs Lake and Dam, 1980s*

*USACE vessel Sgt. Floyd*



*Kansas City constructed the Turkey Creek Tunnel in 1919*

*Boat unloading at elevator and freight house, Hermann, MO*



*The District is currently rehabilitating the Turkey Creek Tunnel*



*Great Flood of 1951*



*Aerial of Missouri River modifications, 1953*



*District construction along the Missouri River*

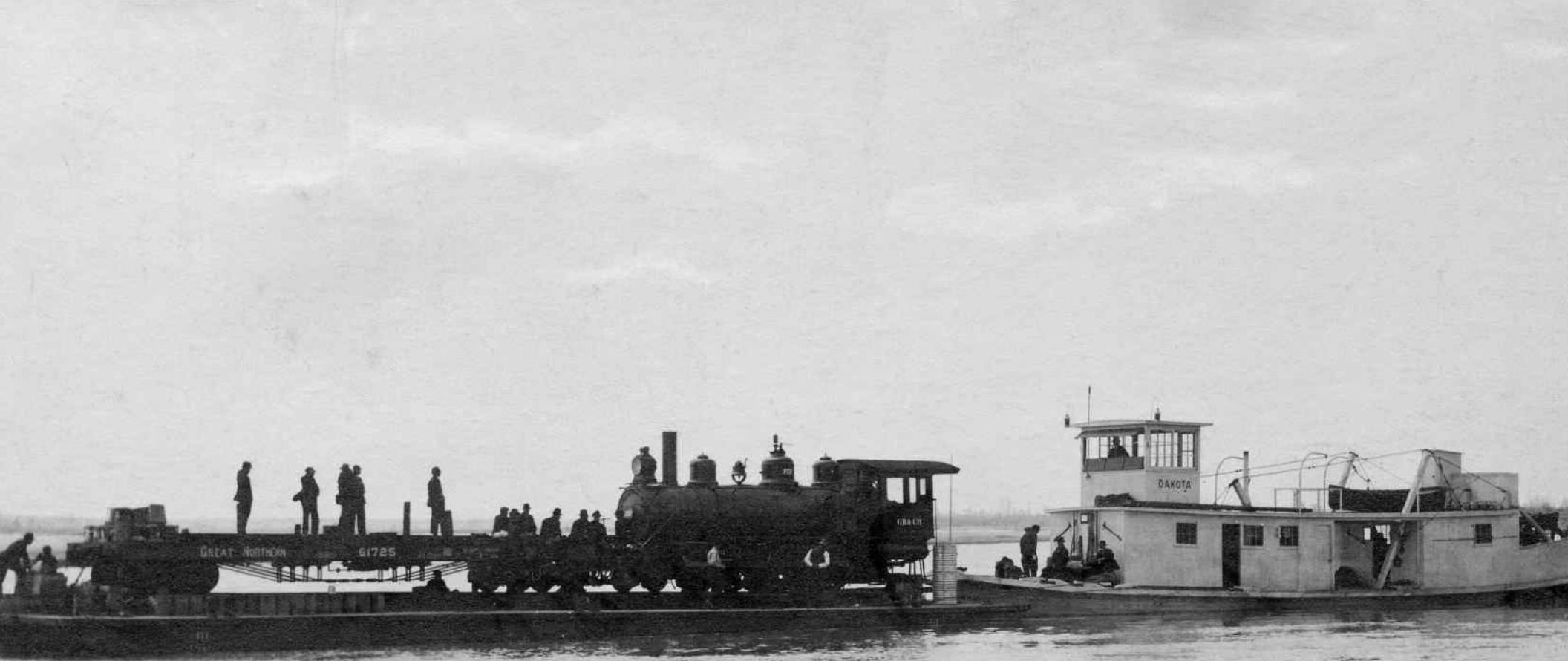


*Great Flood of 1993*



*Large debris washed ashore*





REIGHTING ON THE MISSOURI WILLISTON N.D.

  
PASON  
-191





In 1907, the Sioux City Office of the Army Corps of Engineers, along with its mission, was moved to Kansas City, Missouri and designated as the Kansas City District. Capt. Edward H. Schulz was appointed as the first District Engineer.

The most pressing need for the District was to continue to improve navigation on the sprawling and constantly changing Missouri River. Schulz knew that improvements in navigation could provide a boost to the local economy, and he set out to convince Congress of the same.

In 1908, armed with records from the locally formed Missouri River Valley Improvement Association, Schulz informed Congress how the farming economy was losing millions in potential revenue due to slow shipping on the rivers and skyrocketing railroad freight rates. River channel improvements would provide shipping alternatives and more competitive freight rates. What’s more, channeling the river would help slow erosion of the banks, resulting in more usable land along the river for crops and increased prosperity for the Region.



Snagboat Mandan from bluff in left bank, Missouri River, July 12, 1912

*Photo left: Freighting on the Missouri, Williston, ND, 1913*



1908  
First  
Model T



1910  
Hallmark  
founded



1912  
Titanic  
sinks



1914  
World War I  
begins



1914  
Union Station  
opens

Schulz's efforts were successful. In 1910, Congress authorized \$1 million in funding to create a permanent six-foot navigable channel between Kansas City and St. Louis, as well as an additional \$300,000 for channel modifications between Kansas City and Fort Benton, Montana.

One effective process Corps engineers used to deepen the channel was by building dikes that would slow and filter the water, but not block its flow. Mattresses of willow branches were woven together that would help trap the sediment flowing downstream. After a couple of years the sediment buildup would form manmade sandbars. These sandbars could then protect the bank from erosion, turn the current in a certain direction, and help in the narrowing of the channel. Ultimately, the sandbars could create a swifter current that would carve the bottom of the channel into a navigable depth.



*Constructing revetment weaving mattress and grade bank, Council Bluffs, IA*



*Granite rocks were sometimes used to weigh down mattresses*



*Workers build mattresses on a barge*



*Removing left abutment at Flowline bridge. Barge loaded with 25 yards of stone and ready for timing to Missouri River, August 27, 1913*



*Steel rings and I-beam removed from tubes, August 27, 1913*

*Steamboat August Wohlt loaded with wheat, corn and produce, May 4, 1918*



By 1912, Congress adopted the “Ten Year Plan” for developing the river, which called for \$2 million per year for systematic river improvements. Although Congress never actually provided the full funding, authorization of the plan sparked local interests to invest in development as well. Over \$1 million dollars was pledged to create steamboats to run between Kansas City and St. Louis. Port facilities were constructed in St. Louis, and \$75,000 in bonds were issued for building port facilities on the Kansas City riverfront.

Navigation on the river soared. In 1911, the river had hosted 63 shippers and 1,084 tons of freight. Just three seasons later, in 1914, the numbers jumped to 221 shippers and 13,677 tons of freight.

Unfortunately, with the onset of World War I, funding decreased and the momentum was lost. By 1915, channel improvements were only 14 percent complete. And by 1916, funding had ceased altogether. While the initial goals of the Corps were put on hold, much was accomplished to establish the future of the Corps missions and its plans for the river.



*Barges for JW  
Thompson, 1909*

*Workers use timbers to  
help reinforce the bank*



*An example of  
bank erosion*

*A steamboat sinks in the  
middle of the Missouri  
River. Removing hazards  
to navigation and  
improving the movement  
of freight on the Missouri  
River was the primary  
mission for the Kansas  
City District when it came  
into existence in 1907.*



*A snagboat at Gasconade  
harbor. Snagboats helped  
clear the river of debris.*









***At 2,320.7 miles the Missouri is America's longest river. It is 2.5 miles longer than the Mississippi River.***

*Looking south from Big Manitou Bluffs along Missouri River*





map of  
*Lewis and Clark's expedition*



***“The Missouri River was the second muddiest river in the world before it was regulated and controlled. Scientists determined that it carried almost three times the silt of the Nile River in Egypt. Only the Colorado River had a heavier silt content.”***  
– John Ferrell, *Soundings*







The District's second decade brought the challenge of meeting the needs of local river interests during a time when national interests were opposed to further development of the river, in part because of the need to reallocate resources in support of World War I.

In 1918, the Kansas City Navigation Company sold its boats and barges to a federal barge line operating between St. Louis and New Orleans. Congress saw the Mississippi River as a "better river highway" than the Missouri, because it had a deeper channel and could carry more tonnage in assisting the war effort.

As a result, traffic on the Missouri declined significantly and many improvements fell into disrepair. By 1921, only a little over a third of the original plan for a six-foot navigable channel was complete, and the improved areas downstream of Kansas City could only report a low water depth of four and a half feet.



Workers inspecting dike structure

**Photo left:** Snagboat on Missouri River



1918  
World War I  
ends



1920  
Women win  
right to vote



1922  
Walt Disney opens  
first animation studio  
at 31st and Forest



1926  
Liberty Memorial  
dedicated



1927  
Babe Ruth hits 60  
home runs in one  
season

Local river development interest groups were unwavering in their attempts to see the District's original navigation efforts continued, despite recommendations to the contrary. In 1923, the Mississippi River Valley Association was successful in convincing Congress to appropriate \$1.2 million in improvements. The District resumed work on the river, but the limited funds only allowed for repairs to existing revetments and progress was slow.

In 1925, as a sign of increasing federal interest in water resources development, Congress ordered The Secretary of War and the Federal Power Commission to study the options of combining navigation, hydro-power, flood control and irrigation works. The agencies responded with 308 Reports. The resulting studies from "308" would ultimately serve as the basis for the District's plan for development of the entire Missouri River Basin for years to come.



*Construction of a Louisiana Railway car barge*



*Sioux City waterfront*



*Dredgeboat Patricia Barrett, built in 1926*



*Caving bank partially graded, showing willow mat ready for paving stone*

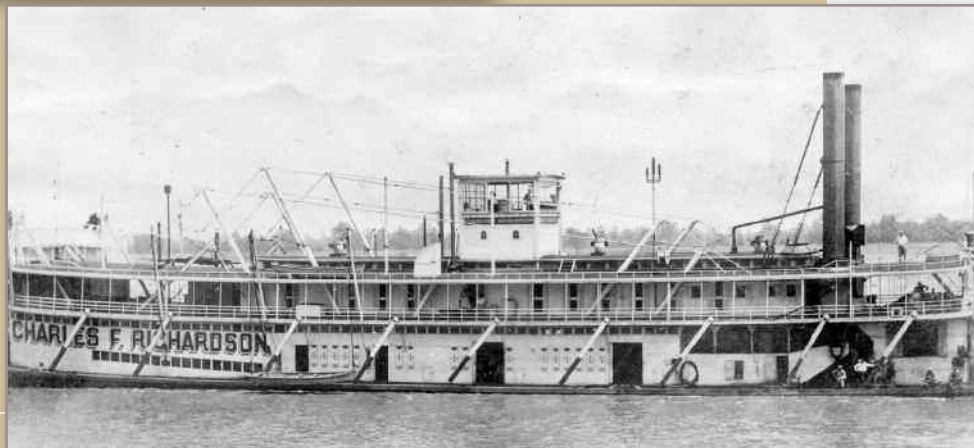


*Concrete beam crib dike*

By October of 1925, another local organization dedicated to river navigation had formed: The Missouri River Navigation Association. At its initial meeting, the keynote speaker was then-Secretary of Commerce, Herbert Hoover. Hoover excited the convention with his vision of a nine-foot deep navigable channel in the Heartland, with further improvements extending upstream to Sioux City, Iowa.

Congress agreed to a revised version of Hoover's plan and in 1926 appropriated \$12 million for the project. Channeling the river would resume again with many of the same methods originally proposed by Corps engineers in the late 1800s. They would build structures to guide the current and trap silt, forcing the river to carve out its own channel.

*Charles F. Richardson,  
built 1921*





*Construction nearly complete on the towboat Sarah Edenboon*



*Bank erosion threatens a crop of corn*



*Hydraulic grading on bank*



*Workers taking a break during railroad bridge construction*



*First "Kellner Jetties" built near the foot of Dorman Street. Patented by Mr. Kellner of Atchison, Kansas - October 1925*





DREDGE BLACK  
JULY 7, 1936 OAK MILLS BEND, MISSOURI RIVER

*The average lifespan of a Missouri River steamboat was 5.7 years. Twenty percent of these boats sank before their third season.*

*Removing a sunken steamboat*









Despite an influx of funding in the late 1920s, most of the traffic on the river was limited to hauling materials used for the navigational improvements. As the Great Depression took its toll on the national economy at every level, the transportation needs on the river all but disappeared. Relief came in the early 1930s in the form of President Franklin Delano Roosevelt's New Deal and the subsequent National (Industrial) Recovery Act (NIRA), which provided job opportunities to unemployed workers in part by allowing the President to approve new water resources projects.

Work on the river began again, and the economic relief allowed the Kansas City District to expand their regional client base and focus on flood protection in areas adjacent to the river. It was estimated at the time that over two million acres of urban and rural land were susceptible to devastating floods, at the expense of \$4.5 million annually. In 1933, the Missouri River Division was established as a way to more efficiently meet the challenge of the vast projects assigned to the Kansas City District by the NIRA. The Kansas City District boundary

changed from the entire Missouri River basin to the lowermost states in the basin.

**Photo left:** Laborers building mattresses, 1931



Stopping small leaks during high water, Gasconade, MO, June 20, 1928



1931  
Star Spangled Banner becomes National Anthem



1931  
Empire State Building completed



1933  
Kansas City Massacre



1935  
Municipal Auditorium opens



1935  
Social Security Act signed into law



Protection from floods as a mission for the Kansas City District gained even more momentum in 1933, when the District released its 308 Plan, as called for by Congress in House Document 308 in 1926. The plan presented an extensive study of the entire Missouri River Basin, taking into consideration how flood control measures could be effectively combined with other water resources developments like navigation, irrigation and hydropower.

The 308 Plan recommended a system of reservoirs and levees to protect local communities during flood conditions. It called for continued work on the six-foot navigable channel, extending it from Sioux City to Kansas City, as well as expanding the existing project to create a nine-foot navigable channel from Kansas City, MO to the mouth. The plan also proposed the first dam for flood control at Fort Peck, MT, which was part of the Kansas City District at that time. The Fort Peck reservoir would store headwater to supplement low water flows, and help maintain project depth for the six-foot and nine-foot navigation channels. Additionally a reservoir near Topeka, KS was recommended to supplement Fort Peck and control flooding on the Kansas River.



*Wood Bros. construction tow, 1928*



*Laying timber for matting, early 1930s*



*Taking a break from hard work on the river*

*Loading dock for rock,  
Sioux City, Iowa, 1932*



*Workers cutting  
timber, 1936*



*Kansas dust bowl*

Finally, the 308 Plan called for development and construction of a reservoir system on the Upper Missouri River that would use water for power and navigation.

When President Roosevelt and Congress started the Fort Peck Project under the NIRA in 1933, thousands from all over the country converged upon Montana in hopes of finding work after the devastating losses of the dust bowl and Great Depression. More than 7,000 men and women were employed to work on the dam itself, while thousands more set up businesses in the surrounding areas to support the workers and their families.

Corps engineers were charged with rapidly developing new techniques and solving extensive technical challenges. The complexity of the mission was described by Maj. Clark C. Kittrell, Fort Peck's District Engineer in the 1930s: "No engineering job of this magnitude had ever been attempted with so short a time for planning." Little did he know how prophetic his words would seem in the ensuing years as the District's roles and responsibilities expanded.





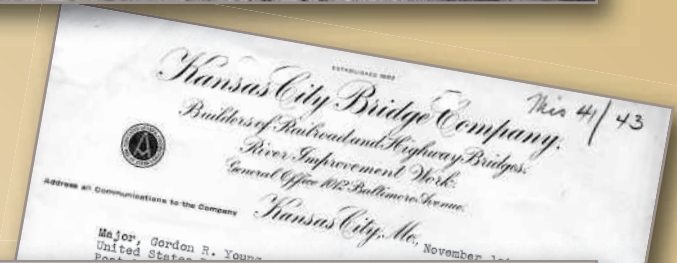
*Dredge pipeline floating on water*



*Rock Bluff Bend Revetment, 1933*



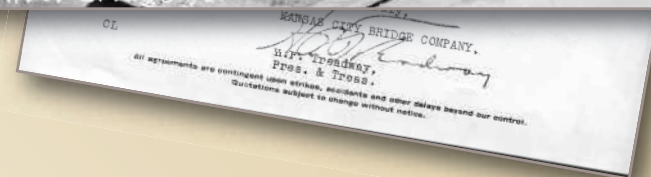
*Old wood dike that has fulfilled its purpose, Baltimore Bend*



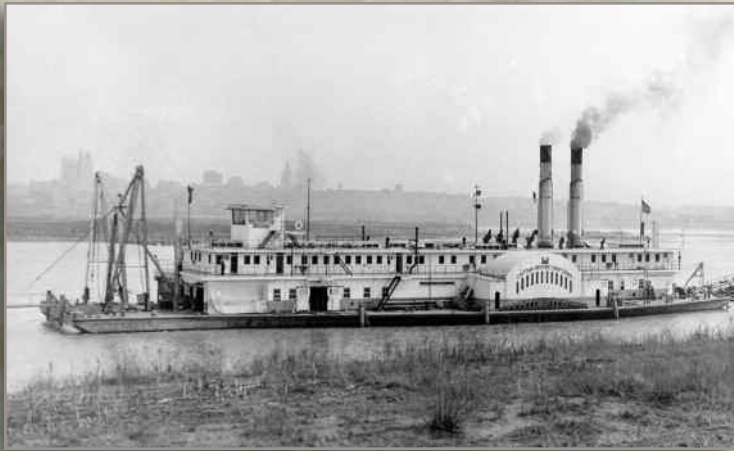
*Workers making string dike, Camden Bend, 1936*



*Bridge construction, 1928. Bridge building was another large part of river improvements made by the District*







*Captain Meriwether Lewis dredgeboat, capable of sucking and discharging 3,000 cubic yards of sediment an hour*

*An excerpt from FDR's speech at Fort Peck Dam, August 1934*



*President Roosevelt visits Fort Peck Dam, August 6, 1934*

Now people talk about the Fort Peck Dam as the fulfillment of a dream. It is only a small percentage of the whole dream covering all of the important watersheds of the Nation. One of those watersheds is what we call the watershed of the Missouri River, not only the main stem of the Missouri, but countless tributaries that run into it and countless other tributaries that run into those tributaries. Before American men and women get through with this job, we are going to make every ounce and every gallon of water that falls from the Heaven and the hills count before it makes its way down to the Gulf of Mexico.

It is because we have undertaken this gigantic task that will take us more than a generation to complete, because we have undertaken it now, and the people of the United States understand the objective of the idea, that I feel very certain we are going to carry it through to a successful completion.

That is one reason, my friends, the chief reason, that I am glad to be out in these parts today to see the work in its inception; to see the fine spirit of all the people who are engaged in the work. That is why, also, that I am very confident it is going to be carried through to the success and glory of the Nation.









Kansas City District's fourth decade saw the greatest expansion of its role in serving the Nation. With the growing specter of another world war looming, the military needed to quickly build facilities for housing and training the growing number of troops being inducted. Military planners called on the "Heartland Engineers". The Kansas City District represented a logical entity to provide these vital services. Its personnel were most familiar with local resources and construction capabilities and its engineering expertise was unparalleled. An intensive schedule of massive military construction began in 1940.

The District's civil works lost its priority to the war effort, but in the years preceding WWII the District reached an important milestone. In 1938, it was estimated that \$164 million had been spent on river improvements from Sioux City to the mouth. The river projects to date had saved an estimated \$24 million in maintenance costs and an additional \$50 million in value from land secured by channeling, as well as \$10 million in land created by river control. The combined benefits amounted to approximately 52 percent of the projects cost.

"The work of the District and the benefits it delivered to the people of the Heartland Region of the Missouri Basin had expanded far beyond the assignment which the Army engineers had been given a

half a century earlier."

– John Ferrell, *Heartland Engineers*

**Photo left:** Workers reinforce the river bank with asphalt, 1939



Construction began on Kanopolis Dam in 1940



1939  
World War II begins



1941  
Attack on Pearl Harbor/  
US enters WWII



1941  
Grandview Airport opens



1945  
Harry Truman becomes  
33rd President of the  
United States



1945  
World War II ends



As World War II escalated overseas in 1940, the District's mission expanded to include extensive military construction. Design and construction began immediately on Lake City and Weldon Springs ordnance facilities. The North American bomber plant and airfield was built in the Fairfax district at Kansas City. Fort Leonard Wood was built as a major training facility. The Corps completed 1,600 buildings in just six months – even though challenged by rough terrain and uncooperative weather conditions. Forts Leavenworth and Riley received new airfields and support facilities. Over 81 construction projects from the Army Air Corps were reassigned to the District in 1940.

In 1941, the District's already impressive military construction schedule was greatly accelerated. From February to May of that year, construction expenditures doubled. Jayhawk and Kansas ordnance facilities were designed and constructed. The District's military construction responsibility was expanded even more throughout Missouri and Kansas, and in 1942 an area office was opened in St. Louis. In total, more than \$900 million was spent on defense construction in the Heartland during the WWII era.

Even the river itself played an important wartime role as the Corps provided navigation support and oversaw the construction of a variety of vessels for use by the Coast Guard. In 1943, however, flooding in the basin turned attention away from the war



*Assembling B-25 bombers at North American Aviation, Kansas City, KS, 1942  
(Photo courtesy Library of Congress, LC-USW36-238)*

*Construction at Fort Leonard Wood, MO, 1941*



*War Department Theatre, Fort Riley, KS  
(Photo courtesy U.S. Calvary Museum, Fort Riley, KS)*

*Discharge barge depositing soil behind levee, in connection with the construction of the Liberty Bend cutoff, 1947*



*Dam construction workers on the front of the truck are acting as a counterweight for the load of rock in the bed, September 1939*



*Early construction at Kanopolis Lake*

and the Corps was asked to review previous flood control plans. Through the Missouri River Division, they submitted the Pick Plan, which was ultimately merged with the Bureau of Reclamation's Sloan Plan. The resulting Pick-Sloan Plan was approved as part of the Flood Control Act of 1944, and provided for eventual construction of 316 project units, with 112 dams capable of storing 107 million acre-feet of water and generating up to 2.6 million kilowatts of hydroelectric power. It also called for hundreds of miles of levees and flood protection structures.

With the end of the war in 1945, the Nation could once again turn its attention to the homeland. Several key pieces of legislation were passed that would have long lasting effects on the District's civil works. The Rivers and Harbors Act of 1945 allowed for a nine-foot navigation channel downstream from Sioux City. The Missouri Basin Inter-Agency Committee was formed, as directed by Congress, to provide integrated planning and coordination with local interests in water resource development. The Fish and Wildlife Coordination Act required planning to prevent loss of fish and wildlife when building dams and other structures on the Missouri River. The Water Pollution Control Act encouraged creating uniform state laws to control pollution.

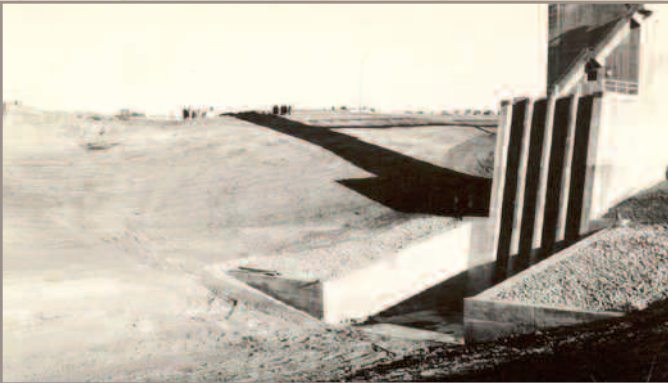




*Construction of water treatment plant, Fort Leonard Wood, 1941*



*Machine shop of William Mitchell*



*Construction of Kanopolis control tower*



*William Mitchell dredge boat. Operational in April of 1938 at Baltimore Bend of the Missouri*



*B-25 bombers almost ready for test flight, North American Aviation, Kansas City, KS, 1942  
(Photo courtesy Library of Congress, LC-USW36-140)*



*Canal at Rulo Bend,  
Rulo, NE, 1938*



*Truss railroad bridge  
over Kansas River, 1945*

*Aerial view of Jayhawk  
Ordnance Facility*



*Wide view of truss  
railroad bridge,  
Kansas River, 1945*

*Construction of Patton  
Hall, Fort Riley, KS  
(Photo Courtesy: U.S.  
Cavalry Museum,  
Fort Riley, KS)*







Massey's Garage

Lumber Yard



Tavern

Commercial State Bank



Furniture Store



Labor Union Office

3rd Street

Farm Machinery

2nd Street

1st Street

Furnas Street



Guest Foods

City Cafe

Phone Office

William's Tavern

Theatre

Liquor Store

Garage



Parsonage



Methodist Church

*In order to construct the Harlan County Dam, the Corps had to move an entire town a few buildings at a time. Some of Republican City's original foundations remain underwater. When lake levels are low, visitors can explore the streets of Old Republican City.*



*The Weldon Spring Ordnance Works was the world's largest producer of TNT. The area of the Ordnance Works during its operational years was 17,232 acres. Remediation of the site continues to this day.*

DANGER  
TNT  
EXPLOSIV









As the Kansas City District approached its half-century mark, the Corps took on the growing responsibility of serving and protecting the Heartland and Nation. The District saw continued expansion of river basin development as called for in the Flood Control Act of 1944. The first of these authorized dams, Kanopolis, opened in 1948, with completion of Harlan County Dam not far behind in 1952.

Flood protection, motivated by the Great Flood of 1951 and a flood in the Upper Missouri River Basin in 1952, galvanized both rural and urban interests to quickly arrive at a solution to this problem. The District expanded its basin studies and worked with the affected states to develop a coordinated plan addressing all major resources including recreation and wildlife. The subsequent Flood Control Act of 1954 authorized eight big dam and reservoir projects for the Kansas City District: Hillsdale, Melvern, Milford, Perry, and Pomona in Kansas; Stockton and Truman in Missouri; and Rathbun in Iowa.



B-47 Stratojet

*Photo left: Soldiers help locals with sand bagging, 1951 Flood*



1950  
North Korea invades South Korea



1951  
Starlight Theater opens



1955  
H&R Block's first office opens



1955  
Rosa Parks and Montgomery Bus Boycott



1957  
Sputnik launched by Soviet Union



Called the “Billion Dollar Flood”, the 1951 flood affected 116 cities and towns in Kansas and Missouri. The Kansas City Stockyards were devastated, Rosecrans and Fairfax airports inundated, the barracks at Fort Riley destroyed and 85,000 people were evacuated. Mother Nature wasn’t quite finished with the District. The area experienced a serious drought that lasted approximately four years, which demonstrated the need for water storage and resulted in Tuttle Creek’s “dry dam” restriction being removed.

Construction began on Tuttle Creek in 1952. In that same year Harlan County Dam opened. In order to build the Harlan County Dam, Corps engineers had to move an entire town – Republican City – a few buildings at a time. Some of the town’s original foundations still remain under water. When lake levels are low, visitors can explore the streets of the former town.

Following the end of WWII, the District’s military mission largely ended. However, with the onset of the Korean War the military mission was again revitalized. The Cold War era prompted the United States to keep the military in a high state of readiness to protect the Nation from attack. From this



*Devastating aftermath of 1951 Flood*



*Horses trapped by flood waters, 1951*



*Rescuing stranded flood victims, 1951*

*Tieville Dredging, 1955*



*Opening of pilot canal,  
Jackass Bend, 1957*



*Flood waters reach  
rooftops and strand  
homeowners, 1951*

threat, military readiness was given top priority. In order to maintain military readiness, the military needed infrastructure for troop training and air base construction away from major cities to limit collateral damage from a nuclear attack.

In 1951, the District was officially assigned a military mission with two major types of engineering tasks: modernizing and expanding facilities at five Air Force bases and three Army posts, and reopening ordnance facilities throughout the Heartland.

The air bases needed extensive renovation, new construction, and retrofitting of runways to accommodate the larger new bombers, like the B-36, B-47 and B-52.

Fort Riley was virtually transformed with a new hospital, regimental headquarters, gymnasium, chapel, family housing and barracks. Fort Leavenworth also received a new hospital, officers quarters and a new facility for the Command and General Staff College. Fort Leonard Wood was designated as a US Army Training Center-Engineer, and received new classrooms, barracks, family units and recreational facilities.





*Visitors flock to the public fishing area at Harlan County Dam*

*Newly completed Kanopolis Lake*



*Tuttle Creek Dam under construction*

*Harlan County Dam administrative building*



*Pomme de Terre groundbreaking celebration, 1957*



*Soldiers from Camp Carson, CO lend a hand during flooding*



*Flood waters surround local gas station, 1951*



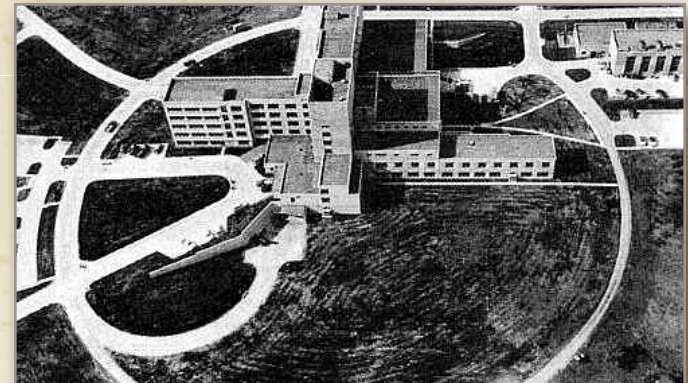
*Personnel housing, McConnell Air Force Base*



*B-52 Bomber Takeoff*



*Irwin Hospital, Fort Riley*





(THE Morning KANSAS CITY STAR)  
**The Kansas City Times**  
KANSAS CITY, JULY 13, 1951—FRIDAY—32 PAGES  
PRICE 5 CENTS

VOL. 114, NO. 167.



# KAW ROLLS INTO ARGENTINE

## Armourdale Is Evacuated by Most of 15,000 as River Rises Almost to Top of Levee—Situation Over the State Still Is Bad.

**AFTER STRUGGLE ON LEVEE**  
Water Goes Over About a Mile Upstream From the Kansas Avenue Bridge, and Men Leave to Help the Residents.

**INDUSTRIES ARE IN DANGER**  
Water Rushes Toward Plants in the Argentine District—Fight to Save Armourdale Plants—Exodus Ordered by City Officials Is Underway.

**"Central Industrial District Safe."**  
There is no danger to the Central Industrial district on the Missouri side from the flooding of the Kaw river, Col. R. P. West, acting chief of the Kansas City district of army engineers, said today.

**KANSAS PERIL UP**  
Thousands More Now Flooded From Their Homes in Eastern Section of State.

**ORDER 15,000 TOPEKANS OUT**  
Red Cross and Armed Forces Help More Aid-Town Fund of \$250,000.

**Water Going To St. Louis, Ottawa and Lawrence—Construction Are Called.**  
Roaring Kansas rivers spread terror and destruction throughout the eastern half of the state yesterday as nationwide forces were mobilized to aid in the disaster.

Thousands of persons

**ASKS NEUTRAL TALK SITE**  
Communists Informed by Railway That if Knowing Isn't Cleared of Enemy Troops Conference Should Be Shifted.

**SESSION HINGES ON REDS' ANSWER**

**THE WEATHER—RAIN.**  
Kansas City and vicinity mostly cloudy and overcast (rather cool) today and tomorrow (clouds break tonight) with high both days near 70. Low tonight near 60.

Water from the rampaging Kaw river poured over dikes into the Argentine district early this morning after thousands of residents were evacuated from the Armourdale area.

Major Kenneth Miller, early today they were at the scene of the break in Kansas City, Kansas.

**LEGEND**

- 1879 CHANNEL
- 1964 CHANNEL



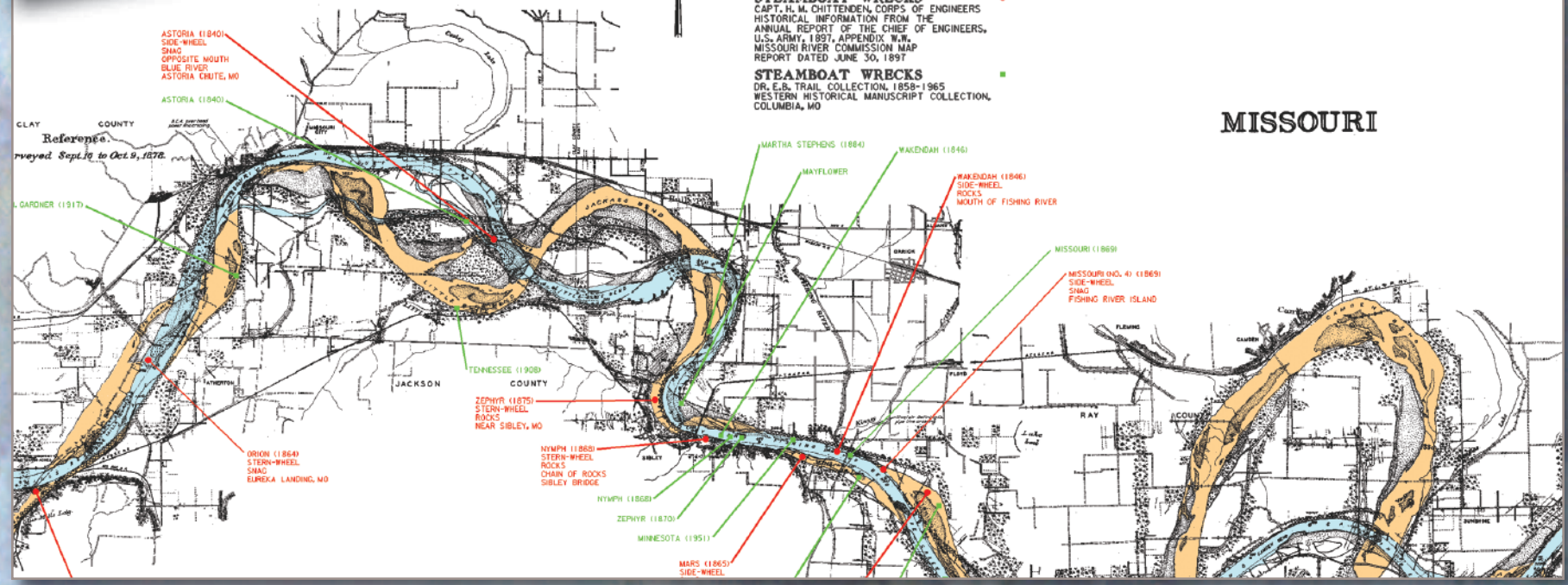
**STEAMBOAT WRECKS**  
CAPT. H. M. CHITTENDEN, CORPS OF ENGINEERS  
HISTORICAL INFORMATION FROM THE ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U.S. ARMY, 1897, APPENDIX, W.M. MISSOURI RIVER COMMISSION MAP REPORT DATED JUNE 30, 1897

**STEAMBOAT WRECKS**  
DR. E.B. TRAIL COLLECTION, 1858-1965  
WESTERN HISTORICAL MANUSCRIPT COLLECTION, COLUMBIA, MO

**ABANDONED SHIPWRECKS ON MISSOURI RIVER CHANNEL MAPS OF 1879 AND 1964**

BLUE MILLS TO LEXINGTON SECTION  
MILE 358.3 - 323.4  
MISSOURI RIVER  
SHEET NO. 10 OF 14

**MISSOURI**

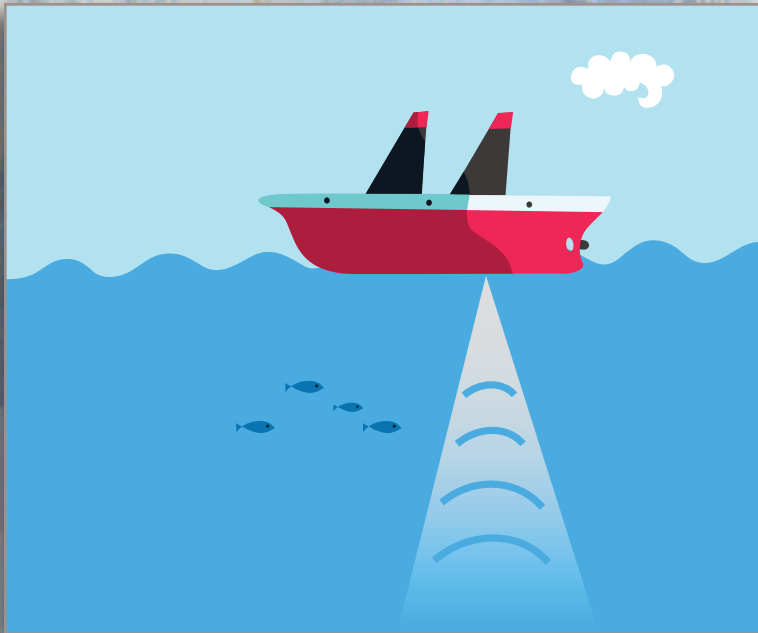




*1951 Flood*



*Thousands take in this awe-inspiring spectacle that defies description.*



*The Kansas City District celebrates a half century, 1957*

*In 1957, the Corps began using depth sounders on the Missouri River. Depth sounding uses sound waves to measure the depth of water.*









Urgency! The Kansas City District's sixth decade can best be described with that one word. Flood control and military construction projects grew at a seemingly impossible pace which pushed District engineers and contractors to their limits. Despite the immense challenges of this era, the District rose to the occasion with steadfast determination, ingenuity and flexibility.

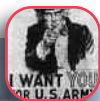
Flood control measures called for in the Pick-Sloan Plan were being engineered and constructed at great speed. In fact, the District started eight new dam projects in this decade alone – almost half of the 18 total dams to be constructed. The devastation of the 1951 flood was still fresh in the minds of the Corps and the public. Due to this devastation, there was continuing pressure to provide protection from future catastrophic floods as soon as possible.

The decade also found the Nation in a game of cat and mouse with the Soviet Union. Soviet military and missile technology was rapidly advancing. From this threat, President Eisenhower was determined to keep attacks at bay by countering each advancement in enemy military hardware with new and more sophisticated U.S. technology. This strategy of "deterrence" defined the Cold War Era. It also placed an incredible challenge before the Corps to provide the infrastructure necessary to support and maintain the constantly evolving military technology.



Construction of Topeka Atlas missile launch site, 1959

**Photo left:** Flooding of Pottawatomie Creek and Marais des Cygnes River, Osawatomie, KS, 1961



1958  
Elvis Presley joins Army



1959  
Classic "Kansas City" tops music charts



1963  
MLK "I Have A Dream" / March on Washington



1964  
Beatles play at Municipal Stadium



1967  
Chiefs in First Super Bowl



New legislation further promoted the District to engage local interests in water resource development and broaden the scope and uses for dam projects. The District recognized the importance of these additional uses, such as recreation, in providing revenue for towns and states. In the Water Supply Act of 1958, Congress authorized states and local entities to ask for additional water storage in federal reservoirs for local use. In 1965, the Federal Water Project Recreation Act defined recreation as a legitimate purpose in planning federal water resources projects.

During the 1960s, eight dam projects were started (Pomona, Wilson, Milford, Stockton, Perry, Rathbun, Truman and Melvern), three of which would be completed in the same decade (Pomona, Milford and Wilson). At the same time, Pomme de Terre and Tuttle Creek were completed. The broadened purposes of dam building were evident in these projects. Recreation was a major aspect of Pomme de Terre's lake and Tuttle Creek provided water storage. Truman Dam was also being constructed with multi-purpose uses: flood control, recreation, hydropower and fish and wildlife conservation.

Near the end of this decade, the Corps was called into service in 1966 when deadly tornadoes roared through Kansas. Following the tornadoes, Governor Avery requested the District's skills and resources for recovery services.



*Fishing from the bluffs, 1966*



*Construction on Stockton Dam, 1964*



*Visitors enjoy recreation at newly opened Pomona Lake, 1966*

*Aerial view of construction activity at Fort Riley, 1969*



*An example of a Minuteman II launch control facility located at Whiteman Air Force Base (U.S. Air Force photo/ Tech Sgt. Samuel A. Park)*

*Barracks at Fort Leonard Wood, aerial, 1963*



Service to the military brought with it the District's most demanding mission to date. President Eisenhower had approved an "emergency" new weapons system: the Intercontinental Ballistic Missile (ICBM). The Corps had the combined challenge of keeping up with the new weaponry advances while building structures fast enough to support them.

Glen Davis, Resident Engineer at the time, recalls, "We had two shifts working...and the only time you knew what day of the week it was is when you went to breakfast and the funny paper was in the rack...I averaged something like 70 hours a week for almost 2 years."

Operational missile bases were built at Forbes, Schilling, McConnell and Whiteman Air Force bases. The District gained invaluable "high-tech" knowledge of these missile silo projects. That experience served the Corps well when it was asked to build a precision instrument lab for the Air Force, and state-of-the-art flight simulation facilities at Forts Leavenworth and Riley.

The District also carried out numerous traditional military construction projects during this time. Fort Leonard Wood was expanded as a staging area. This required construction of administrative buildings, training facilities, barracks and mess halls. Building additions and improvements were made to Forts Riley and Leavenworth as well. In fact, between 1957 and 1961, the District built over 2,660 dependent housing units at all three forts.





*Towboat pushes freight, 1964*



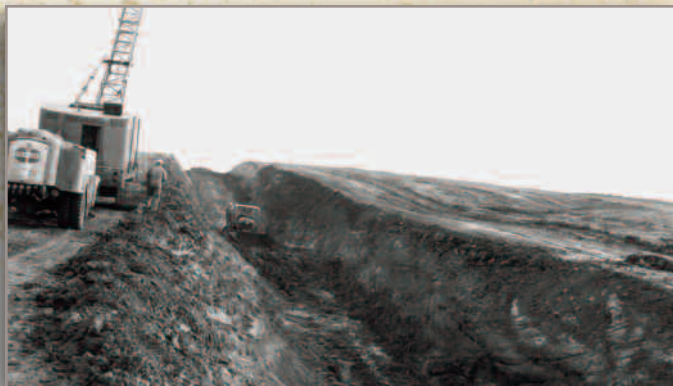
*Curb and gutter construction at Stockton Dam, 1964*



*Iowa Gov. Harold Hughes digs in at the Rathbun Dam groundbreaking, 1965*



*Spillway at Tuttle Creek Dam, completed 1962*



*Trench inspection during construction at Rathbun Dam, 1965*





*Barracks at Fort  
Leonard Wood, 1963*



*Lakeside camping,  
1966*



*Construction of  
Pomona Dam, 1963*



*Visitors preparing to  
windsurf at Kanopolis*

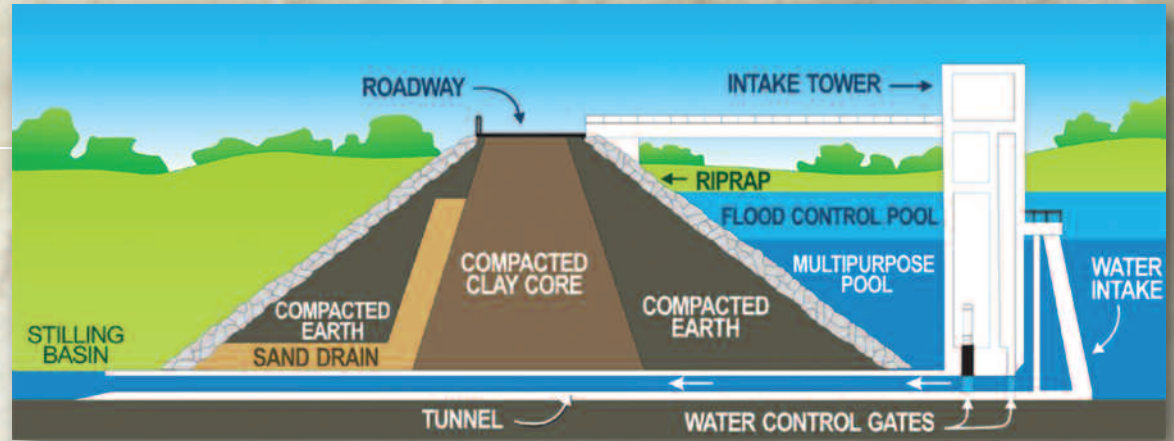


*Smithville Dam  
was authorized  
in 1965*





*Cross-section of a typical earth-filled dam in the District*

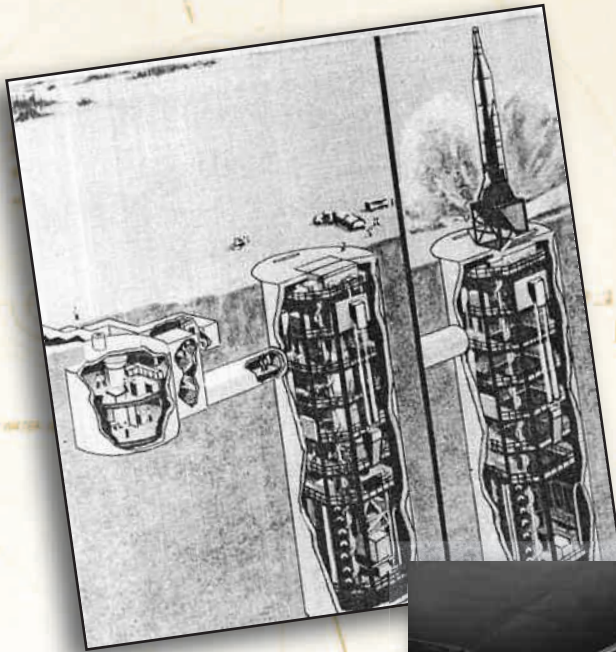


*Wilson Dam was completed in 1965*



*Pomme de Terre Dam was completed in 1961*





*The Atlas-F was deployed in a 180-foot deep underground missile silo with its own launch control center. These silos were located radially around a main base, approximately 35 miles away from it. They were built in groups of 12.*











By the early 1970s the District saw evidence that its efforts to permanently “peg down” the Missouri River had been successful. The channel was well over nine feet in most places, and there was less of a need for dredging because the river had become more or less self-scouring. Commerce on the river continued to expand. It was reported that 3.3 million commercial tons were shipped on the river in 1977.

During this time frame, the District’s civil works mission faced new public demands and changing values. President Nixon signed the National Environmental Policy Act into law. With this signing, the Corps responded with environmental guidelines for its civil works projects. As the nature of these civil works projects expanded, the Corps had to take on a balanced approach between existing water resource development policies and the new environmental and recreational policies. There was also pressure to add social science into the planning process. The District diversified and added a Planning Division to work in tandem with the Engineering Division.



Recreation at Rathbun Lake

**Photo left:**  
*Aerial of Stockton Dam, 1973*



1969  
Apollo  
11 & 12



1970  
Chiefs win  
Super Bowl IV



1970  
EPA  
established



1976  
Kemper Arena hosts  
Republican National  
Convention



1977  
George Lucas  
releases “Star Wars”



Five dams were completed in this decade: Perry, Stockton, Rathbun, Melvern and Smithville. The broader approach to dam building was reflected in some of the features of these new dams. Smithville has a very long shoreline, which is important because it provides habitat for fish and wildlife. Stockton also provides hydroelectric power. Rathbun has 55 square miles of land and water, all managed by the Corps. Although Clinton's dam was essentially completed in 1977, the Corps decided to slowly fill it over three years to improve fishing potential. This represented a determination to focus on the scope of the policies already in place.

A textbook example of the daunting challenge of dealing with conflicting policies in water resource development came in 1972, when the Environmental Defense Fund, (EDF) filed suit to stop construction of the Truman Dam. Among other things, they claimed that the District did not file the environmental impact study required by law. The U.S. District Court ruled that the District had "taken substantial and concrete steps" in preparing the study, even though the dam had been under construction for five years before the law requiring the study was enacted.



*Construction of Smithville Dam was completed in 1977*



*President Nixon speaking at the Rathbun Dam dedication, 1971*



*Truman Dam visitor center perched atop Kaysinger Bluff*

*Aerial view of Irwin Army Hospital, Fort Riley, 1969*



*Inspection at Fort Riley, 1969*

*Construction at McConnell Air Force Base*



The District's Chief of Engineering at the time, Paul Barber, was also an attorney and dedicated several months to working solely on the lawsuit. Barber recalls that the stack of papers the District filed as exhibits in response to the lawsuit was "four and a half feet thick."

As the end of the Vietnam War drew near in 1970, the Department of Defense announced a plan to greatly reduce and eliminate facility and manpower requirements for military missions. By July of 1970, the District's mission had been focused to one of civil works only.

The District's military accomplishments during the previous decades are unparalleled and remain a testament to its service to the Nation. The Kansas City District excelled in a variety of assignments, each with unique challenges, as they kept pace with rapidly evolving defense industry technologies while continuing the ongoing civil works missions. The District's work is a shining example of why the Nation relies on an experienced organization of highly trained, skilled and dedicated personnel who are always in a "ready" position to serve. In 1975, the Kansas City District was reassigned its military program mission, which it has had ever since.





*Construction at  
Melvern Dam, 1973*



*Construction at  
Clinton Lake, 1978*



*Floodwaters surround  
Jefferson City, 1973*



*Gate closure celebration  
of Stockton Dam and  
reservoir, December 1969*



*Cleaning up after Brush  
Creek floods Country  
Club Plaza, 1977*





FIRST-CLASS MAIL  
U.S. POSTAGE  
PAID \$0.42  
PERMIT NO. 1

U.S. POSTAGE  
PAID  
MAILED FROM ZIP CODE 10001  
PERMIT NO. 1

AUTO  
U.S. POSTAGE PAID  
NEW YORK, NY  
PERMIT NO. 1



These are examples; not all  
rates must be marked on n

*In the early 1970s, after its military mission had been reduced, the District was asked by the U.S. Postal Service to design and build several facilities, including five bulk mail centers.*



AUTOCH  
U.S. POSTAGE PAID  
JOHN F. GRANBERRY  
NEW YORK, NY  
PERMIT NO. 1

*Since it began operation in 1969, Perry Lake has prevented over \$4 billion in flood damages. Total cost of construction was just under \$50 million, recouping its cost nearly 80 times over.*

Note: "Standard (Standard Mail)"



NONPROFIT ORG.  
U.S. POSTAGE

NONPROFIT ORGANIZATION  
AUTOCR  
U.S. POSTAGE PAID

NONPROFIT  
U.S. POSTAGE









The Kansas City District's eighth decade saw the District being tasked with growing responsibilities in environmental stewardship. Protecting, preserving, and restoring the environment was a top priority for the Nation. The District showed strong leadership in all these capacities. By 1984, over 282,000 acres of public land were being protected from resource degradation at sixteen different Kansas City District sites.

The District was assigned a military mission once again just before the decade began. At McConnell Air Force Base, the District designed and constructed support facilities for the state-of-the-art B1 stealth bomber, an important aircraft in the Nation's continued efforts in nuclear deterrence. With the recent switch to an all-volunteer armed forces, the Army and Air Force relied on the Corps to make their bases more appealing to potential enlistees, with upgrades to housing and new amenities.

The Nation's continued intense focus on environmental cleanup would keep the District incredibly busy in this and subsequent decades. In 1980 Congress passed the Comprehensive Environmental

Response, Compensation and Liability Act (CERCLA), more commonly referred to as the "Super-

**Photo left:** Restoring wetlands protects fish and wildlife



New construction at McConnell Air Force Base



1980  
Mount St. Helen's erupts



1981  
Spirit of Freedom Fountain dedicated



1981  
IBM introduces personal computer



1985  
Royals win World Series



1986  
Challenger explodes



fund Act". This act called for cleanup of hazardous waste sites that constituted a threat to public health. The EPA gave the Corps an assignment to assist the EPA nationwide with Superfund projects. The Missouri River Division was designated as the National Design Center for the Superfund Program and the Kansas City District was given authority for Superfund design assistance to the EPA for five of the 10 EPA regions.

Anne M. Gorsuch, EPA administrator at the time, said, "The Corps' field expertise and in-place capabilities throughout the country are just what the EPA needs to carry out certain aspects of the Superfund program." Between 1982 and 1987, the District would supervise over \$48 million in Superfund work – a number that would almost triple by 1988.

In 1984, the District's responsibility in hazardous waste cleanup expanded even further. The Defense Environmental Restoration Program (DERP) was established to identify, investigate and clean up hazardous substances and wastes at both active and Formerly Used Defense Sites (FUDS). Among the numerous responsibilities, the District would find and dispose of unexploded



*Cleanup of hazardous materials  
at Weldon Springs Ordnance*



*Cleanup and demolition of  
abandoned buildings at  
Weldon Springs*



*Empty missile silo,  
Whiteman Air  
Force Base*

*Clinton Lake was completed in 1980*



*Construction of Blue Springs Lake spillway, 1985*



*Truman Dam spillway*

ammunition at ordnance sites and demolish unsafe and unsightly buildings.

This decade saw another important milestone for the District. After 75 years of hard work, the bank stabilization and navigational structures for the Missouri River were now complete. In addition, the effectiveness of the flood control dams was demonstrated when the Osage River flooded in 1986. The District's completed projects prevented an estimated \$244 million in damages to the surrounding area.

Large scale civil works projects continued in this era. Long Branch, Clinton, Hillsdale and Longview were completed, and construction began on Blue Springs.

Additional legislation was passed that would provide further opportunities for the District to work with communities in its jurisdiction. A wide range of environmental and recreational projects were enhanced as a result of this information. The Water Resources Development Act of 1986 changed the non-federal cost sharing requirements and expanded their roles in the planning, funding and management of projects.





*Shoring up the levee on  
the Marais des Cygnes  
River during the 1983  
flood, Osawatomie, KS*

*Longview Lake  
construction  
began in 1979*



*Construction at  
Clinton Lake, 1978*

*Aerial of road relocation,  
Blue Springs Lake  
construction, 1982*



*Blue Springs Lake  
Dam, 1980s*



*Aerial view of construction at Longview Lake*



*Local schoolchildren help Woodsy Owl clean up Truman Dam's recreational areas*



*Long Branch Lake today. The lake was placed in operation in 1980*



*Waddell Truss bridge restoration, 1983. The bridge was moved from Smithville Dam reservoir to Parkville, MO.*



*Current photo of Hillsdale Lake, which was placed in operation in 1981*

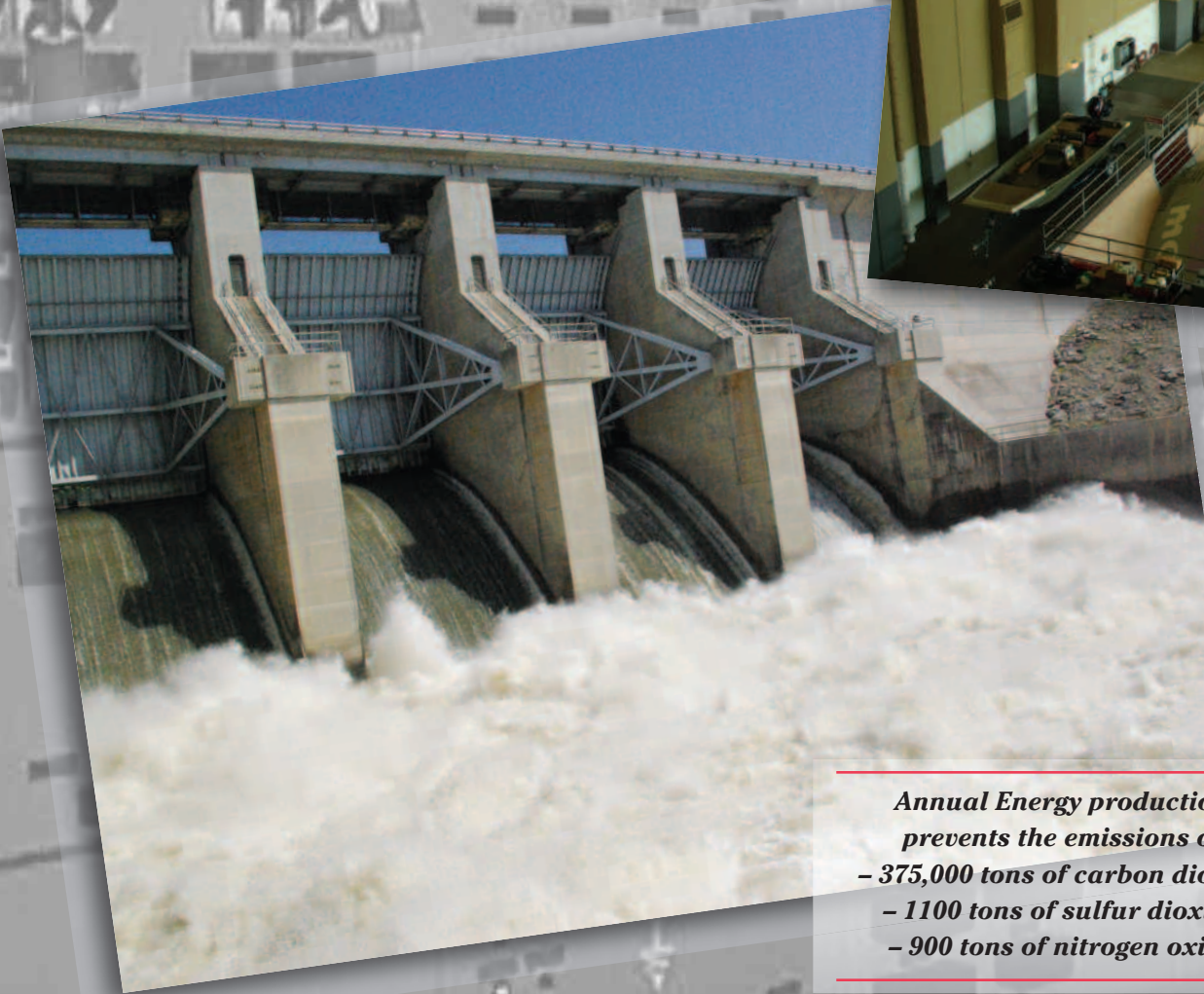




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*The generating capacity of the Truman Power Plant is rated at 160,000 kilowatts.*

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*Renewable energy produced by the Truman Power Plant annually offsets the use of approximately*

- 216,000 tons of coal*
- 747,000 barrels of fuel oil*

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*Annual Energy production prevents the emissions of*

- 375,000 tons of carbon dioxide*
- 1100 tons of sulfur dioxide*
- 900 tons of nitrogen oxide*

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*The B-1 Bomber is the U.S. military's only variable-sweep wing aircraft, which means the wing may be swept back and then returned to its original position during high-speed flight.*

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In the early 1990s the District would provide a great example of the intent of the Water Resources Development Acts of 1986 and 1988 with its Brush Creek Project. The District had been working on designing and building flood control measures in the area – prompted by Brush Creek flooding in 1977 that devastated the affluent Country Club Plaza. At Kansas City’s request, the District redesigned the project to include park and recreation features as well as beautification.

Phil Rotert, Chief of the Planning Division at the time, recalls, “there was just a tremendous amount of coordination and learning...particularly of how to design a project other than just a plain concrete channel that could be built, and then to figure out how much of it was going to be paid for by the city”. Rotert calls the innovative project “a very worthwhile effort.”

Another major flood struck the Missouri River Basin in 1993, and the District once again rose to meet the challenge. Roy Reed, then Chief of Programs and Project Management recalls, “during the early part of the flood we had people who were



Floodwaters threaten businesses in Parkville, MO, 1993

**Photo left:** Celebrating the completion of extensions to the Brush Creek project



1989  
Fall of  
Berlin Wall



1991  
Emanuel Cleaver  
elected first African-  
American Mayor



1991  
Desert  
Storm



1995  
Oklahoma City  
bombing



1997  
Grand Opening  
American Jazz  
Museum



voluntarily working 60 to maybe 80 hours a week, sometimes almost 24 hours around the clock.”

While the 1993 flood had devastating impacts elsewhere, Kansas City was left relatively unscathed because of the levee improvements and flood control structures the District had provided upstream in the wake of the Great Flood of 1951.

As in the five decades prior, The Kansas City District assisted the military in growth and operational readiness. In 1989, District engineers completed a successful move of the Army’s Engineer School from Fort Belvoir in Virginia to Fort Leonard Wood. Future engineers could now boast a new \$60 million state-of-the-art training and education facility. It was the first time in 50 years that all engineer training would take place at the same location.

The following year, legislation was passed that would require even more extensive construction at Fort Leonard Wood. The Base Realignment and Closure Act of 1990 (BRAC) called for the Department of Defense to streamline its operations by closing and realigning certain bases. By 1995, Fort McClellan in Alabama was ordered closed, and the U.S. Army’s Military



*Floodwaters engulf Southwest Boulevard, Kansas City, 1993*

*Aerial of Rulo, Nebraska, 1993 flood*



*Fort Leonard Wood Engineer School*

*New general instruction building at Fort Leonard Wood*



Police School and Chemical School would relocate to Fort Leonard Wood. In preparation for the move, the District built specialized training and support facilities and a three-story general instruction facility that was connected to the Engineer School building. The construction cost estimate for these two moves alone was in excess of \$500 million.



*Construction of support facilities at Whiteman Air Force Base, 1993*

The District also provided massive construction support to the Air Force. In the late 1980s the decision was made to station the new B-2 Spirit stealth bomber at Whiteman Air Force Base. Facilities were quickly needed that could accommodate this unique aircraft, and by 1993 the first B-2 touched down at Whiteman. Able to refuel in mid-air, the aircraft is essential in the Nation's support of overseas conflicts.

*A KC-135 Stratotanker from the 22nd Air Refueling Wing, McConnell Air Force Base refuels a B-2 Spirit from the 509th Bomb Wing, Whiteman Air Force Base (U.S. Air Force photo by Senior Master Sgt. Rose Reynolds)*







*Railroad bridge partly washed out, 1993 flood*

*Rebuilding Brush Creek*



*Construction of Blue Springs Lake picnic area, 1985*

*Aerial view of Little Blue River channel modifications, 1989*



*After working through many design challenges, Truman Dam went online with full reliable power December 1, 1999*



***In 1991 the District launched Partners for Environmental Progress, and committed to the restoration and preservation of over 48,000 acres of habitat that was lost due to prior bank stabilization and navigation work.***



***Tagging a least tern for tracking***



***Least tern feeding its young***



***Sampling shallow water habitat***









Throughout the final decade of its first century and to this day, the Kansas City District continues to work collaboratively for river recovery. The Corps and the U.S. Fish and Wildlife Service (USFWS), in partnership with Tribal nations, states, and other agencies, worked together to develop and implement recovery actions under the umbrella of the Missouri River Recovery Program. The Program's foundation stands on four pillars: habitat creation, flow modifications, science and public involvement.

The USFWS developed a Biological Opinion to protect the three threatened and endangered species that depend on the Missouri River: the pallid sturgeon, least tern and piping plover. The District responded by developing a more substantial Missouri River Mitigation Project. This was accomplished by acquiring the land needed to develop fish and wildlife habitat from Sioux City, Iowa, to St. Louis, Mo. The Water Resources Development Act (WRDA) of 1999 increased the number of acres to be acquired through the Mitigation Project to a total of 285,400, almost half of which is located in Kansas and Missouri. In 2004, the District and the USFWS



Smithville Lake

*Photo left: Wetlands provide habitat for fish and wildlife*



1999  
Union Station  
renovation completed



2001  
9/11  
attacks



2003  
Human genome  
project complete



2005  
Hurricane  
Katrina



2007  
Power and Light  
Entertainment  
District opens



announced the completion of construction of more than 1,200 acres of shallow water habitat for the pallid sturgeon. A total of 20,000 acres will be built along the entire length of the Missouri River by 2020.

After more than a decade of work on cleaning up hazardous waste sites, the District had proven itself a leader in this crucial mission. In 1998, the Kansas City District was called on to further assist in the cleanup of Cold War legacy wastes through the U.S. Department of Energy's Formerly Utilized Sites Remedial Action Program (FUSRAP). The program was created by Congress to remediate soils and buildings at multiple sites contaminated with radiological materials left over from their use in nuclear weapon production.

The District continued its cleanup responsibilities at other hazardous sites through the Heartland. Projects for the Kansas City District's Hazardous, Toxic and Radiological Waste Program (HTRW) for fiscal year 2000 were valued at \$183 million, with another \$15 million for its Defense Environmental Restoration Program (DERP) mission. The most significant DERP customer was Fort Riley, which was awarded the annual President's National Environmental Excellence Award in 2000. In the same year, the District



*Site cleanup at Blaine Naval Ammunition Depot, Hastings, NE*

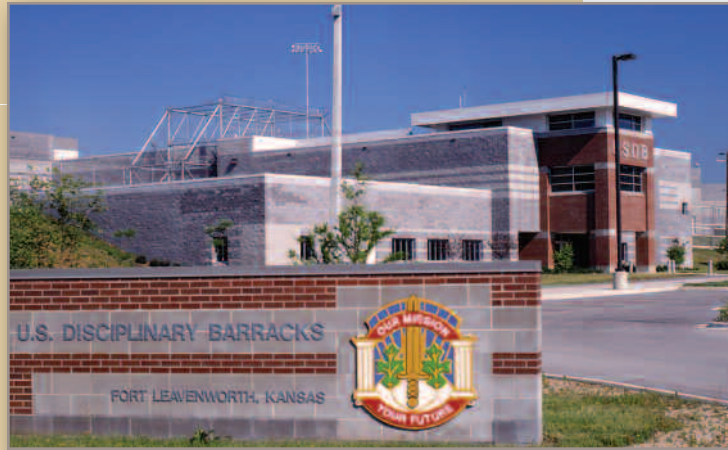
*FUDS work at Blaine continues into the night*



*FUSRAP site remediation*



*Entrance to U.S. Disciplinary Barracks, Fort Leavenworth*



*Aerial view of USDB, Fort Leavenworth*

*U.S. Pentagon, Washington, D.C., September 11, 2001*



was also recognized with the Presidential Design Award for the work performed at the Blaine Naval Ammunition Depot FUDS site.

Amendments to BRAC brought additional military construction needs for Forbes Field Air Guard Station, McConnell Air Force Base, Fort Riley and Fort Leavenworth. The District also designed and built a new state-of-the-art, 515-bed U.S. Disciplinary Barracks (USDB) at Fort Leavenworth. The USDB is the only maximum-security correctional facility in the Department of Defense. It is the oldest penal institution in continuous operation in the federal system.

The District also provided support at home and overseas as Fort Riley began training Military Transition Teams with the mission to train, mentor and advise Iraqi and Afghani security forces. The Afghanistan Engineering District (AED) was established in Kabul, Afghanistan and the Gulf Region Division was established with three Districts (Tikrit, Tallil, and Baghdad).

On the home front, District personnel quickly responded with relief efforts for natural disasters such as hurricanes Katrina, Floyd, Wilma and Ike, as well as the 9/11 terrorist attacks on the World Trade Center in New York City in 2001.





*The Kansas City District celebrated its 100th anniversary in 2007*



*Eagle Bluffs Mitigation Site*



*Using PONAR to grab samples of lake bottom material for analysis. The sampler is named after Great Lakes scientists, Charles E. Powers, Robert A. Ogle, Jr., Vincent E. Noble, John C. Ayers, and Andrew Robertson*



*Kansas City District provides personnel in support of the Global War on Terror*



*Doomed seedlings along the banks*



*The District is responsible for maintaining the trails in recreational areas*



*Chris Witte with paddlefish near Boonville, MO*



*Another District responsibility is performing prescribed burns*



*World Trade Center relief efforts, New York City, September 11, 2001*



*Water quality sampling*







*The pallid sturgeon can grow up to six feet in length and weigh up to 80 lbs.*

*Decadent Cottonwood forest*

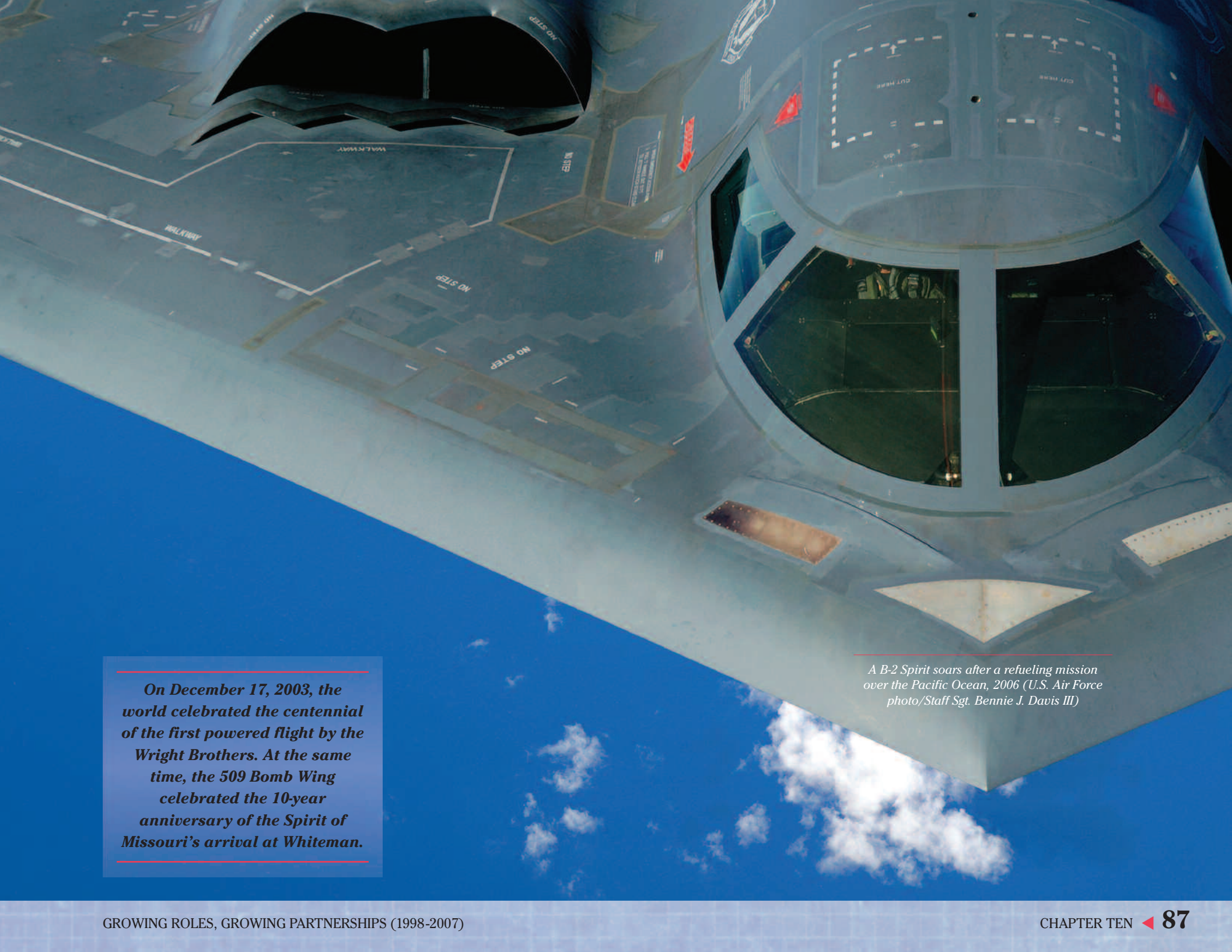


*Bald eagle in flight  
(Photo by Mike Watkins)*



***It's important to preserve and restore the Cottonwood forests in the District because they provide habitat for a wide variety of birds, including American goldfinches, yellow warblers, Northern orioles, mourning doves, warbling vireos, woodpeckers, black-capped chickadees and occasionally even bald eagles.***





*On December 17, 2003, the world celebrated the centennial of the first powered flight by the Wright Brothers. At the same time, the 509 Bomb Wing celebrated the 10-year anniversary of the Spirit of Missouri's arrival at Whiteman.*

*A B-2 Spirit soars after a refueling mission over the Pacific Ocean, 2006 (U.S. Air Force photo/Staff Sgt. Bennie J. Davis III)*









For over a century the U.S. Army Corps of Engineers Kansas City District has exemplified service to the Nation. The mission and values of the District are evident in every project, no matter the size. The men and women of the District continually prove themselves to be relevant, ready, responsible and reliable.

With its 18 dams and lakes, the Kansas City District provides the Heartland with water, power and recreation, while protecting families, farmland and businesses from flooding. As innovative and responsible stewards of the environment, the District works collaboratively with other organizations and agencies to restore and preserve fish and wildlife habitat along the waterways and wetlands within its jurisdiction. Environmental management and restoration also remains a top priority at former and current military sites. The District can quickly mobilize in times of natural disaster, offering relief and emergency management services.

---

**Photo left:** Lewis and Clark Command and General Staff College, Fort Leavenworth



*A lone fisherman enjoys a peaceful sunset at a District lake*





The Corps' historical strengths in program management, engineering design, research development and construction will prove invaluable as the District readies to meet new challenges and opportunities to strengthen the Nation's security, rebuild and rehabilitate the Nation's infrastructure and reduce risks from disasters.

The Kansas City District will continue to proudly serve the Armed Forces and the Nation in times of peace and war now and in the future.

*Early spring sunset on the  
Missouri River near Hartsburg*







*Sites, events and projects throughout the Kansas City District today*







*(Clockwise from top left)*

*2008 Leadership Development Program  
Retreat, Ft. Leonard Wood, MO*

*KCD park ranger on patrol at  
Pomme De Terre*

*KCD park ranger tagging an eagle*

*KCD personnel confer on construction  
project*





*(Clockwise from top left)*

*Col. Wilson assumes command from Col. Rossi*

*KCD park ranger conducts water sampling*

*KCD park ranger promotes water safety*

*Ribbon cutting at Ft. Riley, KS*





# KANSAS CITY DISTRICT ARMY CORPS OF ENGINEERS PAST COMMANDERS



**MAJOR  
EDWARD H.  
SCHULZ**  
1907-1912



**LT. COLONEL  
HERBERT  
DEAKYNE**  
1912-1915



**COLONEL  
C. Mc D.  
TOWNSEND**  
1916



**LT. COLONEL  
J. F. McINDOE**  
1916-1917



**BRIGADIER  
GENERAL  
WILLIAM H.  
BIXBY**  
1917



**COLONEL  
WILLARD  
YOUNG**  
1917-1919



**MAJOR  
R.T. WARD**  
1920



**MAJOR  
GILBERT VAN  
B. WILKES**  
1920-1924



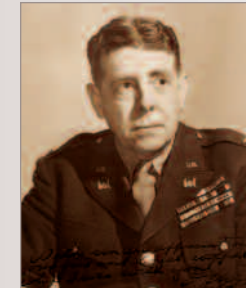
**MAJOR  
CLEVELAND C.  
GEE**  
1924-1927



**MAJOR  
GORDON R.  
YOUNG**  
1927-1930



**CAPTAIN  
THEODORE  
WYMAN JR.**  
1930-1934



**CAPTAIN  
O.E. WALSH**  
1934-35



**CAPTAIN  
J.M. YOUNG**  
1935-1936



**LT. COLONEL  
P.A. HODGSON**  
1936-1938



**COLONEL  
A.M. NEILSON**  
1938-1942



**COLONEL  
FRANCIS H.  
OXX**  
1942





# KANSAS CITY DISTRICT ARMY CORPS OF ENGINEERS PAST COMMANDERS



**COLONEL  
R. SELEE**  
1942-1943



**COLONEL  
R.E.M. DES  
ISLETS**  
1943-1944



**LT. COLONEL  
S.G. NEFF**  
1944-1945



**COLONEL  
W.E. POTTER**  
1945-1948



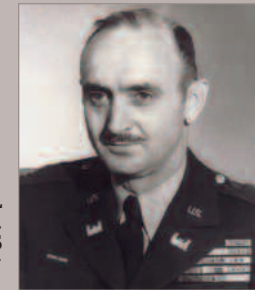
**COLONEL  
P.D. BERRIGAN**  
1948-1950



**COLONEL  
L.J. LINCOLN**  
1950-1953



**COLONEL  
KEITH R.  
BARNEY**  
1953-1955



**COLONEL  
EARNEST C.  
ADAMS**  
1955-1957



**COLONEL  
LAWRENCE E.  
LAURION**  
1957-1960



**COLONEL  
ANDREW P.  
ROLLINS JR.**  
1960-1963



**COLONEL  
MILES L.  
WACHENDORF**  
1963-1966



**COLONEL  
WILLIAM G.  
KRATZ**  
1966-1969



**COLONEL  
REUBEN L.  
ANDERSON JR.**  
1969-1971



**COLONEL  
WILLIAM R.  
NEEDHAM**  
1971-1975



**COLONEL  
RICHARD L.  
CURL**  
1975-1978



**COLONEL  
WALTER C.  
BELL**  
1978-1981



# KANSAS CITY DISTRICT ARMY CORPS OF ENGINEERS PAST COMMANDERS



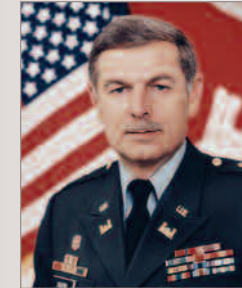
**COLONEL  
GURNIE C.  
GUNTER**  
1981-1984



**COLONEL  
ROBERT M.  
AMRINE**  
1984-1987



**COLONEL  
JOHN H.  
ATKINSON**  
1987-1990



**COLONEL  
WILBUR H.  
BOUTIN JR.**  
1990-1993



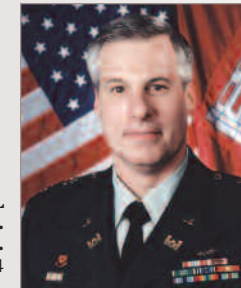
**COLONEL  
RICHARD H.  
GORING**  
1993-1995



**COLONEL  
ROBERT E.  
MORRIS**  
1995-1998



**COLONEL  
GEORGE H.  
HAZEL**  
1998-2001



**COLONEL  
DONALD R.  
CURTIS JR.**  
2001-2004



**COLONEL  
MICHAEL A.  
ROSSI**  
2003-2007



**COLONEL  
ROGER A.  
WILSON, JR.**  
2007-2010







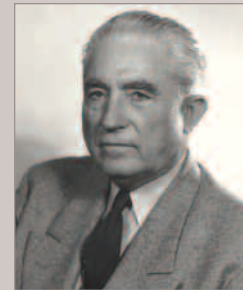
# KANSAS CITY DISTRICT ARMY CORPS OF ENGINEERS DISTINGUISHED CIVILIANS



**GEORGE C. HAYDON**  
PRINCIPAL  
ENGINEER  
1909 to 1933



**ALBERT O. ROWSE**  
CIVIL ENGINEER  
1911 to 1930



**LAFE S. HOWARD**  
SUPERINTENDENT  
GASCONADE  
BOATYARD  
1913 to 1958



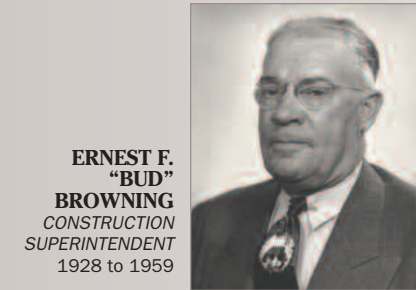
**DELBERT A. "POP" GIBBS**  
ASSOCIATE CIVIL  
ENGINEER  
1916 to 1946



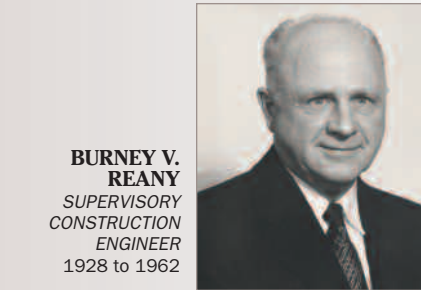
**JOHN F. McINTYRE**  
MASTER,  
TOWBOAT  
SERGEANT FLOYD  
1918 to 1968



**HARRY C. POOLE**  
JUNIOR  
ACCOUNTANT  
1924-1934



**ERNEST F. "BUD" BROWNING**  
CONSTRUCTION  
SUPERINTENDENT  
1928 to 1959



**BURNEY V. REANY**  
SUPERVISORY  
CONSTRUCTION  
ENGINEER  
1928 to 1962



**MEREDITH "JUMBO" BROYLES**  
SUPERVISORY  
CIVIL ENGINEER /  
CHIEF  
CONSTRUCTION  
DIVISION  
1928 to 1969



**DONALD H. McCOSKEY**  
CIVIL ENGINEER /  
CHIEF,  
ENGINEERING  
DIVISION  
1929 to 1950



**CECIL R. "OLD GRIFF" GRIFFITH**  
MARINE  
INFORMATION  
SPECIALIST  
1929 to 1965



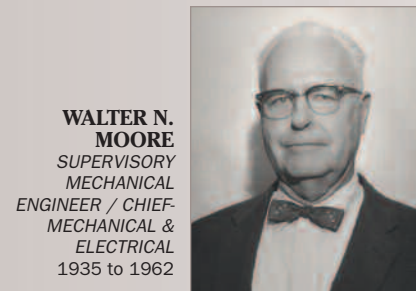
**MARSHALL E. HOY**  
FINANCIAL  
MANAGER  
1929 to 1972



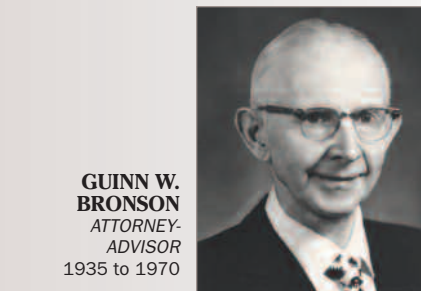
**WILLIAM E. "CAP" SUMMERLIN**  
MASTER, PIPELINE  
DREDGE WILLIAM  
BLACK  
1931 to 1959



**HAZEL L. LUCKOW**  
MAIL & FILE  
SUPERVISOR  
1933 to 1969



**WALTER N. MOORE**  
SUPERVISORY  
MECHANICAL  
ENGINEER / CHIEF-  
MECHANICAL &  
ELECTRICAL  
1935 to 1962



**GUINN W. BRONSON**  
ATTORNEY-  
ADVISOR  
1935 to 1970





# KANSAS CITY DISTRICT ARMY CORPS OF ENGINEERS DISTINGUISHED CIVILIANS



**LOUIS G. FEIL**  
SUPERVISORY  
CIVIL ENGINEER /  
CHIEF,  
ENGINEERING  
DIVISION  
1939 to 1966



**MORTIMER M.  
"MIKE"  
TURNER, JR.**  
SUPERVISORY  
CIVIL ENGINEER /  
CHIEF,  
ENGINEERING  
DIVISION  
1939 to 1971



**JOHN M.  
McCANN**  
SUPERVISORY  
CIVIL  
ENGINEER/CHIEF,  
LOCAL  
PROTECTION  
SECTION  
1943 to 1965



**REESE M.  
MILLER**  
LABOR RELATIONS  
OFFICER  
1931 to 1968



**OSCAR E.  
PETTIJOHN**  
REALTY OFFICER /  
CHIEF, REAL  
ESTATE DIVISION  
1936 to 1972



**WILLIAM N.  
(BILL) DOYLE**  
ADMINISTRATIVE  
OFFICER  
1937 to 1973



**DANIEL A.  
SHIEL**  
SUPERVISORY  
ATTORNEY-  
ADVISOR /  
DISTRICT  
COUNSEL  
1939 to 1974



**GLADYS M.  
DAVIES**  
SECRETARY  
1925 to 1973



**DONALD D.  
POOLE**  
SUPERVISORY  
NATURAL  
RESOURCES  
MANAGER  
1948 to 1976



**WALTER R.  
WYATT**  
SUPERVISORY  
CIVIL ENGINEER  
1936 to 1976



**MYRL E.  
MADDOX**  
LABOR RELATIONS  
OFFICER  
1937 to 1974



**JOHN W.  
MANNING**  
CHIEF, DESIGN  
BRANCH  
1938 to 1976



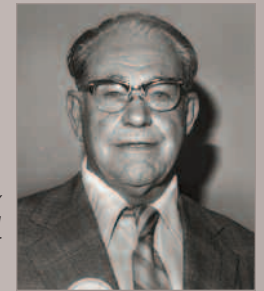
**EDWIN C.  
AUGUSTINE**  
SUPERINTENDENT,  
GASCONADE  
BOATYARD  
1929 to 1972



**ROYAL T. TATE**  
MASTER, PIPELINE  
DREDGE  
1930 to 1972



**JACOB F.  
REDLINGER**  
CHIEF,  
FOUNDATIONS AND  
MATERIALS  
BRANCH  
1957 to 1969



**ROBERT E.  
HURT**  
SUPERVISORY  
CONSTRUCTION  
REPRESENTATIVE  
1942 to 1973



# KANSAS CITY DISTRICT ARMY CORPS OF ENGINEERS DISTINGUISHED CIVILIANS



**DONALD L. FRITTS**  
 ASSISTANT CHIEF  
 ENGINEERING  
 DIVISION  
 1954 to 1984



**DENNIS H. BROWN**  
 SUPERVISORY  
 ELECTRONICS  
 TECHNICIAN  
 1942 to 1977



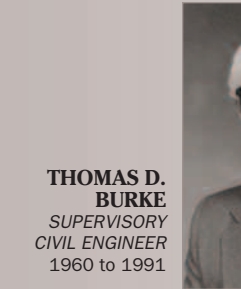
**WILLIAM H. FRAZIER**  
 PARK MANAGER  
 1952 to 1973



**BERNARD E. (GENE) UPSCHULTE**  
 CHIEF, REAL  
 ESTATE DIVISION  
 1973 to 1985



**MARION M. HARTER**  
 SUPERVISORY  
 STRUCTURAL  
 ENGINEER  
 1949 to 1981



**THOMAS D. BURKE**  
 SUPERVISORY  
 CIVIL ENGINEER  
 1960 to 1991



**PHILIP L. ROTERT**  
 CHIEF,  
 PLANNING  
 DIVISION  
 1959 to 1991



**BARBARA J. LEWIS**  
 INFORMATION  
 SUPPORT  
 MANAGER  
 1956 to 1992



**JEANNE M. PARKER**  
 ADMINISTRATIVE  
 OFFICER  
 1942 to 1990



**PAUL D. BARBER**  
 CHIEF,  
 ENGINEERING  
 DIVISION  
 1957 to 1992



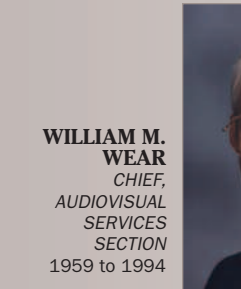
**JOAN R. CHAPMAN**  
 CONTRACTING  
 DIVISION  
 1962 to 1994



**JOHN P. ELMORE**  
 CHIEF,  
 OPERATIONS  
 DIVISION  
 1962 to 1987



**GLEN E. DAVIS**  
 CHIEF,  
 CONSTRUCTION  
 OPERATIONS  
 DIVISION  
 1954 to 1996



**WILLIAM M. WEAR**  
 CHIEF,  
 AUDIOVISUAL  
 SERVICES  
 SECTION  
 1959 to 1994



**JOHN E. MOYLAN**  
 CHIEF,  
 GEOTECHNICAL  
 BRANCH  
 1958 to 1991



**CLYDE (BUCK) ROWLAND**  
 VISUAL  
 INFORMATION  
 SPECIALIST  
 1960 to 1994







# KANSAS CITY DISTRICT ARMY CORPS OF ENGINEERS DISTINGUISHED CIVILIANS



**ROY D. REED**  
CHIEF, DEPUTY DISTRICT ENGINEER FOR PROJECT MANAGEMENT AND CHIEF OF PROGRAMS & PROJECT MANAGEMENT  
1960 to 1996



**WOODS C. HIGHT**  
EQUAL EMPLOYMENT OPPORTUNITY OFFICER  
1951 to 1977



**WAYNE H. COOK**  
PROGRAMS AND PROJECT MANAGEMENT DIVISION  
1959 to 1996



**HELEN V. BERETTA**  
CHIEF, TECHNICAL SERVICES BRANCH  
1957 to 1997



**MERLE L. BRADEN, PE, CVS**  
VALUE ENGINEERING OFFICER  
1961 to 1994



**DONALD N. JOHNSON**  
CHIEF, SPECIFICATIONS SECTION  
1959 to 1997



**BYRON BIRCHER**  
CHIEF, DESIGN BRANCH  
1960 to 1998



**LANA J. COFFMAN**  
PROGRAM ANALYST, OPERATIONS DIVISION  
1963 to 2001



**WESLEY G. ADAMS**  
DEPUTY CHIEF, OPERATIONS DIVISION, CHIEF, TECHNICAL SUPPORT BRANCH  
1969 to 2002



**JAMES O. EDMONDS**  
CIVIL ENGINEERING TECHNICIAN  
1960 to 1992



**JANIE CHOICE CAVITT**  
DEPUTY DISTRICT COUNSEL  
1978 to 2003



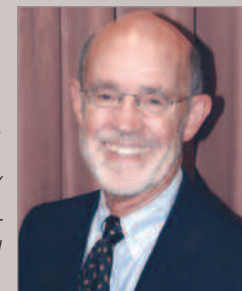
**MEL JEWETT**  
CHIEF, REGULATORY BRANCH OPERATIONS DIVISION  
1951 to 1995



**GERALD W. ADAMS**  
CHIEF, EMERGENCY MANAGEMENT, DISTRICT EXECUTIVE OFFICER  
1966 to 2002



**DAVID L. DAY**  
CHIEF, HTRW BRANCH, CHIEF, CIVIL WORKS BRANCH  
1969 to 2005



**LAWRENCE M. CAVIN**  
CHIEF, REGULATORY BRANCH, CHIEF, ENFORCEMENT SECTION  
1973 to 2002





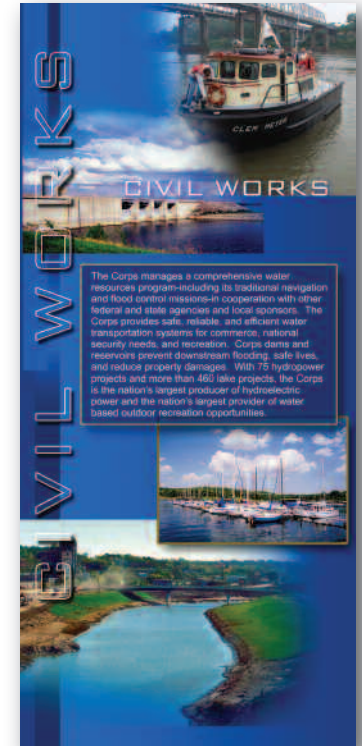
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# KANSAS CITY DISTRICT RESERVOIR PROJECTS

Lake Project	Year Authorized	Year Impounded
<b>IOWA</b>		
Rathbun	1954	1969
<b>KANSAS</b>		
Clinton	1962	1977
Hillsdale	1954	1982
Kanopolis	1938	1948
Melvern	1954	1975
Milford	1954	1967
Perry	1954	1969
Pomona	1954	1965
Tuttle Creek	1938	1959
Wilson	1944	1964
<b>MISSOURI</b>		
Blue Springs	1968	1988
Harry S. Truman	1954	1979
Long Branch	1965	1978
Longview	1968	1985
Pomme de Terre	1938	1961
Smithville	1965	1979
Stockton	1954	1969
<b>NEBRASKA</b>		
Harlan County	1938	1952



*The project lists included on the appendices are the most up-to-date information available at time of publication. The information listed is correct to the best of the company's knowledge.*





FLOOD CONTROL PROJECT	LOCATION	Significant Flood Works Features LV: Levee, CH: Channel, FW: Floodwall, IW: IWall, PP: Pump Plant, RG: Rolling Gate, GCS: Grade Control
<b>MISSOURI RIVER LEVEE SYSTEM</b>		
R 512-513 Kimsey-Holly R-500 L-497 L-488 R-482 Mo-Mill Creek: LV R 471-460 L-455 L 448-443 R-440 L-408 L-400 Liberty Bend R-35I, Section 1 R-35I, Section II L-246 Lower Chariton New Haven	Drainage District #7 CannonDD Iowa Point DD #4 Forest City, MO Holt County DD #7 Doniphan-Burr Oak DD #3 Amazonia LD Elwood-Gladden DD South St. Joseph DD Halls Levee District DD #15-45 Farley-Beerly DD Waldron LD Highway 291 MO Corps Mnt Atherton LD, MO Atherton-Blue Mills LD, MO Brunswick-Dalton DD, MO Lower Chariton DD, MO New Haven DD, MO	MO-Nemaha-KS: LV/RW Kimsey-Holly: LV/PP MO: LV MO- Tieback: LV/PP MO-Mill Creek: LV MO: LV MO-Mace-Dillon: LV / PP MO-Peter's Crk: LV / RW MO-Contrary Crk: LV/PP/RW MO-Contrary: LV MO- Independence Crk: LV/PP MO-Platte-Bee Crk: LV MO-Platte: LV/RW MO: LV MO - Little Blue: LV Little Blue: LV/CH MO-Grand-Chariton: LV/RW MO-Lower Chariton - Chariton: LV MO: LV
<b>KANSAS CITY UNITS</b>		
Birmingham NKC,DTA East Bottoms CID Missouri NKC, Lower Section Argentine Armourdale CID Kansas Upper Fairfax L-385	Birmingham DD City of Kansas City City of Kansas City City of Kansas City NKCLD Kaw Valley DD Kaw Valley DD Kaw Valley DD Fairfax DD City of Riverside	MO-Shoal: LV/PP/RG MO: LV/FW/PP MO - Blue: LV/FW/PP/RW MO: FW/PP MO-Rock Crk: LV/PP/RW? KS: LV/FWIPP KS: LV/FW/PP/RW KS-MO: LV/FW/PP/RW MO: LV/FW/PP/RW MO: LV/PP/RG
<b>TOPEKA UNITS</b>		
Soldier Creek North Topeka Levee Waterworks Auburndale South Topeka Levee Oakland	North Topeka DD North Topeka DD City of Topeka, KS City of Topeka City of Topeka City of Topeka	Soldier Creek: LV/CH KS: LV/CH/PP KS: LV/FW/RW KS: LV/PP/RW KS: LV/FW/PP/RW KS-Shunganunga: LV/FW/CH/PP/RW





## FLOOD CONTROL PROJECT

## LOCATION

**Significant Flood Works Features** LV: Levee, CH: Channel, FW: Floodwall, IW: IWall, PP: Pump Plant, RG: Rolling Gate, GCS: Grade Control

### NON-MISSOURI RIVER PROJECTS

Abilene  
 Atchison  
 Bannister Federal Complex  
 Barnard Levee  
 Bartley Levee  
 Bedford  
 Blue River Channel  
 Brush Creek Channel  
 Chariton Shoal Creek  
 Chariton Macon-Adair  
 Chariton Reinhardt Ranch  
 Clyde Levee  
 Fairbury Levee  
 Frankfort Levee  
 Gypsum Levee  
 Indianola Levee  
 Lawrence Levee  
 Little Blue River  
 Manhattan  
 Marysville Levee  
 Osawatomie  
 Ottawa  
 Salina  
 Seward  
 Stranger Creek  
 Stonehouse Creek

City of Abilene, KS  
 City of Atchison, KS  
 GSA  
 City of Barnard, KS  
 City of Barkley, NE  
 City of Bedford, IA  
 City of Kansas City, MO  
 City of Kansas City, MO  
 Shoal Creek DD  
 Chariton River DD  
 Worthington DD  
 City of Clyde, KS  
 City of Fairbury, NE  
 City of Frankfort, KS  
 City of Gypsum, KS  
 City of Indianola, NE  
 City of Lawrence, KS  
 Jackson Co. MO Parks & Rec.  
 City of Manhattan, KS  
 Marysville, KS  
 City of Osawatomie, KS  
 City of Ottawa, KS  
 City of Salina, KS  
 City of Seward, NE  
 Big Stranger Creek DD, KS  
 Stonehouse Creek DD # I, KS

Mud Creek/CH  
 Conduit/CH  
 Blue River-Indian Crk: LV/FW/IW/RG  
 Solomon-Rattlesnake: LV  
 Dry Creek: LV/CH  
 North 101 River: CH/GCS  
 Blue River: FW/CH/GCS  
 Brush Creek: CH  
 Shoal Creek: CH (2 mi )  
 Chariton: CH (17 mi )  
 Chariton: CH  
 Elk Creek: LV/CH  
 Little Blue: LV  
 Black Vermillion: LV  
 Gypsum Creek: LV/CH  
 Republican: LV  
 KS-Mud Creek: LV/CH/PP  
 Little Blue: CH  
 KS - Blue River: LV/PP/RW  
 Republican  
 Marais des Cygnes & Pottawatomie: LV/PP  
 Marais des Cygnes: LV/FW/PP/RG  
 Smoky Hill, Dry, Mulberry: RW/LV/PP  
 Big Blue: LV/PP  
 Stranger: CH  
 Stonehouse: LV/CH

### MILITARY INSTALLATIONS

Sherman Airfield  
 Funston Unit  
 Marshall Field Unit  
 Forsyth Unit  
 Lake City Levee

Ft. Leavenworth DPW, KS  
 Ft. Riley DPW, KS  
 Ft. Riley DPW, KS  
 Ft. Riley DPW, KS  
 Lake City Army Ammunition Plant, MO

MO: LV/PP  
 KS: LV  
 KS: LV  
 Republican: LV  
 Little Blue: LV/CH



# KANSAS CITY DISTRICT BENDS ON THE MISSOURI RIVER



LOCATION	Begins	Ends
Amazon Bend	0	3.4
Cora Island Bend	3.4	6
Bellefontaine Bend	6	9.2
Brickhouse Bend	9.2	11
Pelican Bend	11	16.7
Mullanphy Bend	16.7	21.9
Cui De Sac Bend	21.9	25.3
St. Charles Bends	25.3	28.2
Creve Coeur Bend	28.2	31.9
Springhouse Bend	31.9	33.9
Howard Bend	33.9	37.7
Bonhomme Bend	37.7	40.7
Weldon Springs Bend	40.7	43.7
Monarch Bend	43.7	45.5
Doziers Bend	45.5	48.6
Centaur Bends	48.6	51.2
St. Albans Bend	51.2	54.4
Augusta Bend	54.4	56.7
Hinkles Bend	56.7	60.6
Boles Bend	60.6	64.8
South Point Bend	64.8	67
Washington Bend	67	69.6
Marthasville Bend	69.6	74.6
Dundee Bends	74.6	78.2
New Haven Bends	78.2	82.7
Pinckney Bend	82.7	85.3
Berheimer Bends	85.3	89.7
Berger Bend	89.7	91.8
Bates Island Bend	91.8	93.9
Hermann Bend	93.9	97.9
McGirks Island Reach	97.9	103.4
Bluffton Bend	101.8	110.2
Gasconade River Bend	103.4	105.1
Straubs Bends	105.1	107.8
Morrison Bend	110.2	112.6
Portland Bend	112.6	116
Chamois Bend	116	118.4
Auxvasse Bends	118.4	122.3

LOCATION	Begins	Ends
St. Aubert Bend	122.3	125
Isbell Bends	125	128.7
Osage River Bend	128.7	130.2
Cote Sans Dessein Bend	130.2	132.8
Rising Creek Bends	132.8	142
Jefferson City Reach	142	145.9
Murrays Bend	145.9	149.8
Stanley Bend	149.8	151.8
Burlington Bend	151.8	155.2
Marion Bend	155.2	158.7
Eureka Bend	158.7	162.2
Sandy Hook Bend	162.2	166.8
Providence Bend	166.8	171.3
PlowBoy Bend	171.3	174.5
Lupus Bend	174.5	176.6
McBaine Bend	176.6	178.3
Searcys Bend	178.3	180.2
Rocheport Bends	180.2	187.2
Diana Bends	187.2	192.1
Franklin Island Reach	192.1	193.8
Franklin Bend	193.8	197
Boonville Bends	197	201.2
Lamine River Bend	201.2	203.6
Slaughterhouse Bend	203.6	205.8
Robinson Bends	205.8	208.9
Arrow Rock Bend	208.9	211.2
Salt Creek Bend	211.2	213.8
Saline City Bend	213.8	217.5
Euphrase Bend	217.5	220
Fish Creek Bend	220	222.3
Glasgow Bend	222.3	228.2
Cambridge Bend	228.2	232.2
Wilhoite Bend	232.2	234.3
Gilliam Bend	234.3	237
Little Missouri Bend	237	239.5
Bushwacker Bend	239.5	246
Grand River Bend	246	250.2
Brunswick Bend	250.2	253.1





# KANSAS CITY DISTRICT BENDS ON THE MISSOURI RIVER

LOCATION	Begins	Ends
DeWitt Bend	253.1	257.2
Miami Bend, Lower	257.2	259.8
Miami Bend, Middle	259.8	261.2
Miami Bend, Upper	261.2	263.4
Thomas Bend	263.4	265.8
Teteseau Bend	265	266.9
Prunty Bend	266.9	271.8
Malta Bends	271.8	275.4
Tamerlane Bend	275.4	279.7
Hills Bend	279.7	282.1
Cranberry Bend	282.1	284.4
Bakers Bend	284.4	289.9
Waverly Bend	289.9	296.4
Moberly Bend	296.4	299.5
Hodge Bend	299.5	301.2
Baltimore Bend	301.2	304.4
Berlin Bend	304.4	306.9
Tabo Bend	306.9	309.2
Sheepnose Bend	309.2	311.2
Lexington Bend	311.2	317.7
Bootlegger Bend	317.7	319.4
Sni Bends	319.4	323.5
Camden Bend	323.5	326.8
Napoleon Bend	326.8	332.1
Fishing River Bend	332.1	335
Sibley Bend	335	336.9
Jackass Bend	336.9	339
Little Blue Bend	339	340.5
Cooley Lake Bend	340.5	342.4
Missouri City Bends	342.4	346.5
Jacksons Bend	346.5	351.2
Liberty Bend	351.2	353.9
Big Blue River	353.9	358.6
Randolph Bend	358.6	363.8
Kansas City Reach	363.8	366.3
Kansas River Bend	366.3	368.4
Kaw Bend	368.4	372.1
Quindaro Bend	372.1	375.2

LOCATION	Begins	Ends
Parkville Bend	375.2	378.3
Pomeroy Bend	378.3	383
Weavers Bend	383	385.1
Pope Bend	385.1	388.4
Delaware Bend	388.4	392.6
Leavenworth Bend	392.6	396.7
Leavenworth Reach	396.7	398.4
Fort Bend	398.4	400.2
Weston Bend	400.2	403.9
Kickapoo Bend	403.9	406.9
Iatan Bend, Lower	406.9	408.3
Iatan Bend, Middle	408.3	409.7
Iatan Bend, Upper	409.7	412.5
Oak Mills Bend	412.5	415.8
Bean Lake Bend	415.8	417.9
Atchison Bend	417.9	425.1
Rushville Bend	425.1	428.8
Doniphan Bend	428.8	431.4
Geary Bends	431.4	435
Kenmoor Bend	435	438.6
Palermo Bend	438.6	442.6
St. Joseph Bend	442.6	449.5
Bon Ton Bend	449.5	451.8
Amazonia Bend	451.8	454.8
Burr Oak Bend	454.8	458.9
Mill Creek Bend	458.9	462.9
Dallas Bends	462.9	466.9
Charleston Bend	466.9	468.9
Mt. Vernon Bends	468.9	472.5
Forbes Bends	472.5	477.6
Wolf Creek Bend	477.6	480.5
Tarkio Bend	480.5	483.2
Iowa Point Bend	483.2	485.7
White Cloud Bends	485.7	489.4
Squaw Bend	489.4	491.1
Nemaha Bends	491.1	494.1
Rulo Bend	494.1	498.4

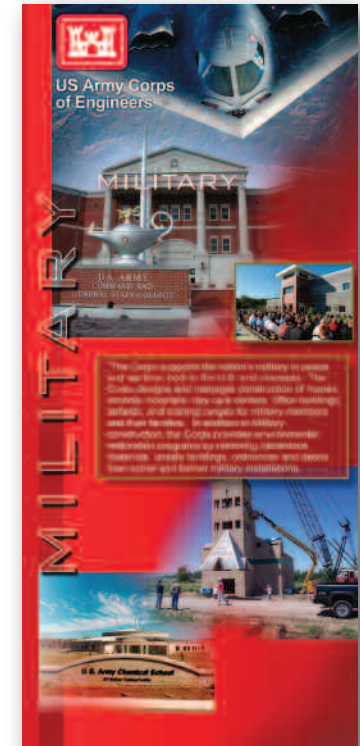


Name of Facility	Location	Name of Facility	Location
<b>Missouri</b>		<b>Missouri</b>	
Camp Crowder	Neosho	McDonnell Aircraft Corp. Lambert Field	
Missouri Ordinance Works	Pike County	(Formerly Curtis-Wright Corp)	St. Louis
Malden Army Air Field (Maulsby Auxiliary Field #2)	Maulsby	National Distillers Product Corp.	Kansas City
St. Louis Ordinance Plant	St. Louis	Whiteman Air Force Base	Knob Noster
St. Louis Ordinance Plant (McQuay-Norris Parking area)	St. Louis	St. Louis Disposal Center #2 (Harvey Parks Airport)	Sikeston
St. Louis Administration Center	St. Louis	St. Louis Ordinance Sub-Depot	St. Louis
Anderson Air Activities	McBride	Springfield National Cemetery	Springfield
St. Charles Rifle Range (Missouri National Guard Range)	St. Charles		
Weingarten POW Camp	Weingarten		
Ford Motor Company	Kansas City	Jayhawk Ordinance Works	<b>Kansas</b>
Pratt and Whitney Aircraft Corp. of Missouri	Kansas City	Kansas Ordinance Plant	near Galena
Aluminum Company of America	Kansas City	Camp Phillips	Parsons
Missouri Shipbuilding Corp & St. Louis Shipbuilding & Steel Co.	St. Louis	Coffeyville Army Airfield (Auxiliary field #1)	Smolan
Weldon Springs Ordinance Works	Weldon Springs	Coffeyville Army Airfield (Auxiliary field #2)	Coffeyville
Rosencrans Army Air Field	St. Joseph	Coffeyville Army Airfield (Auxiliary field #4)	Coffeyville
St. Louis Smelting and Refining Co.	Fredericktown	Strother Field (Auxiliary field #1)	Cowley Co.
Lambert Field (Curtis-Wright Technical Training School)	St. Louis	Strother Field (Auxiliary field #2)	Cowley Co.
Camp Clark POW Camp	Nevada	Olathe Naval Air Station	
Sedalia Army Air Field (Vichy Army Air Field, Outlying Field)	Sedalia	(Gardner CAA Intermediate Landing Field)	Gardner
Malden Army Air Field	Malden	Kansas City Modification Center #4	Kansas City
Richards - Gebaur Air Force Base	Grandview	Boeing Airplane Co. Plant #2	Wichita
St. Louis Naval Air Station	St. Louis	Independence Army Airfield (Auxiliary Field #4)	Independence
Malden Army Air Field (Dexter Aux. Field #1)	Dexter	Independence Army Airfield (Auxiliary Field #7)	Independence
Malden Army Air Field (Risco Aux. Field #3)	Risco	Concordia POW Camp	Concordia
Malden Army Air Field (Gideon Aux. Field #4)	Gideon	Independence Army Airfield (Auxiliary Field #3)	Independence
Malden Army Air Field (Campbell Aux. Field #6)	Campbell	Independence Army Airfield (Cherryvale Auxiliary Field #9)	Independence
Jefferson Barracks	St. Louis	Garden City AAF (Auxiliary Field #1)	Gray Co.
Ozarks Ore Co.	Ironton	Garden City AAF (Auxiliary Field #2)	Gray Co.
Missouri Institute of Aeronautics	Sikeston	Strother Army Airfield (Arkansas City-Winfield Airport)	Crowley Co.
Kansas City Public Service Co.	Kansas City	Beech Aircraft Corp.	Wichita
Ft. Leonard Wood	St. Robert	Lee Rubber and Tire Corp.	Kansas City
Cape Institute of Aeronautics	Cape Girardeau	Fairfax Field (Adjacent to Aircraft Assembly Plant)	Kansas City
American Can Company	St. Louis	Strother Field (Auxiliary field #5)	Arkansas City
Blytheville Army Air Field Hornersville Aux. A-1	Honersville	Hutchinson Municipal Airport (HNAS, Auxiliary Field #1)	Hutchinson
Blytheville Army Air Field Cooter Aux. #4	Cooter.	Cooperative Refinery Assoc.	Coffeyville
Blytheville Army Air Field Steele Aux. Field #1	Steele, Co.	Coffeyville Army Airfield	Coffeyville





Name of Facility	Location
<b>Kansas</b>	
Wichita Municipal Airport	Wichita
Pratt Army Airfield	Pratt
Liberal Army Airfield	Liberal
Walker Field-Smoky Hill Air to Air Gunnery Range	Gove Co
Liberal Army Airfield (Aux. AAF #3)	Garden City
Great Bend Army Airfield	Barton Co.
Camp Phillips (Salina Engr. Redistribution Center (Area M. Whse. Sec))	Salina
Kansas City Aircraft ASS. Plant #2	Kansas City
Walker Army Airfield	Victoria
Dodge City Army Airfield Jetmore Auxiliary Field #4)	Jetmore
Dodge City Army Airfield	Dodge City
Herington Army Airfield	Delavan
Midwest Solvents Co., Inc. (Plant sight of lessee) and Winthrop, MO. Plant 1312	Atchison
Goodyear Tire and Rubber Co. Plant 2217	Topeka
Garden City Army Airfield	Garden City
Ft. Riley	Manhattan
Eagle-Picher Mining and Smelting Co. (Paxon Operations)	Cherokee Co.
Independence AAF	Montgomery
Kansas City Disp. Center #2 (Fairfax Whse)	Kansas City
Hutchinson HF/DF Station	Hutchinson
Hutchinson Naval Air Station	Hutchinson
Wirt Field	Newton
Forbes Air Force Base	Topeka
Schilling Air Force Base	Salina
McConnell Air Force Base	Wichita



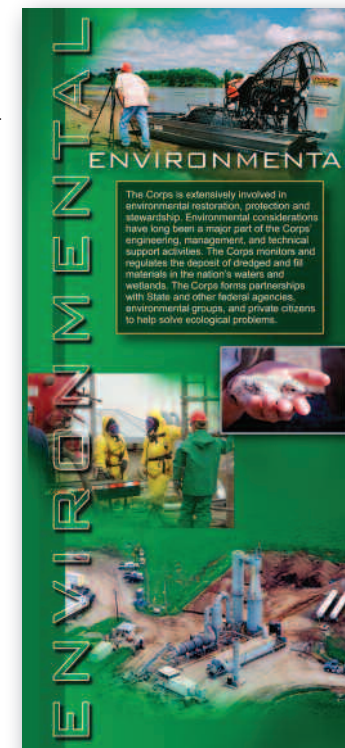


1. 57TH AND N. BROADWAY, KS SUPERFUND SITE, FIVE YEAR REVIEW
2. ALCOA, NY SUPERFUND - PRP OVERSIGHT FOR RD
3. ASTORIA AIRPORT: USTS
4. ASTORIA LOW LEVEL BOMBING RANGE: PA/INPR
5. ATCHISON CAVES LTM FOR FY05, 89TH RRC
6. ATLANTIC RESOURCES, NJ REMEDIAL DESIGN OVERSIGHT ACTIVITIES
7. BAKER AFS: UST
8. BASIN MINING, MT SUPERFUND SITE - FIVE YEAR REVIEW
9. BEAVER ARMY TERMINAL: POSS CONTAM WATER
10. BERRY CREEK, NJ SUPERFUND SITE - TECHNICAL ASSISTANCE RI/FS
11. BLAINE NAVAL AMMUNITION DEPOT: OU 15
12. BOG CREEK (OU2), NJ SUPERFUND SITE REMEDIAL DESIGN
13. BOG CREEK FARM, NJ FOCUSED FEASIBILITY STUDY
14. BOISE ARMY BARRACKS
15. BREWSTER WELLFIELD, NY SUPERFUND SITE - GROUNDWATER TREATMENT SYSTEM O&M
16. BROWNFIELDS - GRANT REVIEW ORIENTATION/COORDINATION
17. BROWNFIELDS SUPPORT TO THE CITY OF KANSAS CITY
18. BRUNEAU PRECISION BOMBING RANGE #2: ASR
19. BRUNO, NE SUPERFUND SITE TECHNICAL ASSISTANCE FEASIBILITY STUDY
20. BURNS AFSTA: SEVERAL UST'S
21. CALDWELL TRUCKING, NJ SUPERFUND SITE, OTHER TECHNICAL ASSISTANCE
22. CAMP PHILLIPS: PA/INPR
23. CAMP WHITE: PA/INPR
24. CAMPBELL AUX FLD #6: PA/INPR
25. CERRILLOS MINING DISTRICT, NM SUPERFUND - RA
26. CHEMICAL INSECTICIDE, NJ SUPERFUND SITE REMEDIAL DESIGN
27. CHEMICAL LEAMAN, NJ SUPERFUND SITE, TECHNICAL ASSISTANCE RI/FS
28. CHEMSOL, INC., NJ SUPERFUND-TECHNICAL ASSISTANCE FOR RA
29. CHEROKEE COUNTY, KS SUPERFUND, HAZ WASTE ENFORCEMENT SUPPORT
30. COASTAL RADIATION, LA SUPERFUND - NORM WASTE DISPOSAL
31. COFFEYVILLE AAF: ordnance project
32. COFFEYVILLE AUX FLD #4: PA/INPR
33. CONCORDIA POW CAMP: PA/INPR
34. CORNELL DUBILIER, NJ SUPERFUND SITE REMEDIAL DESIGN
35. CORVALLIS AAF: GW/SOIL CONTAMINATION
36. CPS/MADISON INDUSTRIES (OU2), NJ SUPERFUND SITE, RI/FS OVERSITE
37. DEXTER AUX FLD #1: PA/INPR
38. DIAMOND ALKALI, NJ SUPERFUND SITE TECHNICAL ASSISTANCE RI/FS
39. DIAMOND HEAD OIL REFINERY, NJ SUPERFUND SITE TECHNICAL ASSISTANCE RI/FS
40. DODGE CITY AAF: ASR COMPLETE
41. DOVER MUNICIPAL WELL, NJ SUPERFUND SITE TECHNICAL ASSISTANCE RI/FS
42. DUPONT NECCO PARK, NY SUPERFUND - PRP OVERSIGHT FOR RA
43. EAGLE MINE, CO SUPERFUND SITE, 5-YEAR REVIEW
44. EMMELLS SEPTIC LANDFILL, NJ SUPERFUND SITE REMEDIAL DESIGN
45. EPHRATA AF BASE: ASR COMPLETE
46. EPHRATA PATTERN BOMBING RANGE: OEW
47. EVOR PHILLIPS SUPERFUND SITE, NEW JERSEY
48. FAIRCHILD AFB ATLAS E MISSILE S-4:
49. FAIRCHILD AFB ATLAS E S-3:
50. FAIRCHILD ATLAS E S-9:
51. FEDERAL CENTER COMPLEX: HTRW
52. FEDERAL CENTER COMPLEX: PRP PROJECT (AKA BANNISTER)
53. FORBES AFB ATLAS FAC S-5: PA/INPR
54. FORBES AFB ATLAS FAC S-9: CONFIRMATION STUDY
55. FORBES AFB-AF FAC S-6:
56. FORBES AFB-AF FAC S-7: HTRW
57. FORBES AFB-AF FAC S-8: CON/HTRW
58. FORBES AFB: other HTRW areas
59. FORDLAND AFS P-68:
60. FOREST GLEN, NY SUPERFUND - PRP RA OVERSIGHT
61. FOREST PARK RECREATION CAMP: ASR
62. FORT COLUMBIA MIL. RES.: ASR
63. FORT STEVENS MIL RES: UST'S
64. FORT TOWNSEND: ASR
65. FORT WORDEN:
66. FORT WORDEN: Landfill
67. FRIED INDUSTRIES, NJ SUPERFUND SITE, REMEDIAL DESIGN
68. FT CARSON SUBPART X APPLICATION UPDATE
69. FT CROWDER: ASR COMPLETE
70. FT LEAVEN PRE GFPR IRP SITES
71. FT LEONARD WOOD MACHINE GUN RANGE: PA/INPR
72. FT LEONARD WOOD REMEDIAL INVESTIGATION FLW059/FLW037
73. FT LEONARD WOOD RIFLE QUALIFYING RANGE: PA/INPR
74. FT. RILEY SITE INVESTIGATION OB/OD GROUNDS (RANGE 16)
75. FT. LEAV. COST REIM. AE CONTRACT GOAL REMOVAL OF SITE FROM RCRA PERMIT
76. FT. LEONARD WOOD GENERAL ENVIRONMENTAL PROGRAM SUPPORT - DATA COLL/REP - RCRA ETC
77. GARDEN CITY AAF: LIMITED RI/FS
78. GARDEN CITY AUX FLD #2: 1 UST/EM TO LOCATE
79. GARDEN CITY AUX FLD #2: PA/INPR
80. GARDEN STATE CLEANERS, NJ SUPERFUND - RD OVERSIGHT
81. GATEWAY ARMY AMMUNITION PLANT: PA/INPR
82. GENERAL MOTORS, MASSENA, NY SUPERFUND - PRP RA OVERSIGHT
83. GENZALE, NY SUPERFUND SITE - REMEDIAL DESIGN - GROUNDWATER REMEDIATION SYS
84. GEO WRIGHT AIR FORCE BASE:
85. GIDEON AUX FLD #3: PA/INPR
86. GLEN RIDGE, NJ SUPERFUND SITE REMEDIAL DESIGN
87. GLOBAL LANDFILL (OU#2), NJ, SUPERFUND SITE, HWES-DESIGN
88. GLOBAL LANDFILL, NJ SUPERFUND - TECHNICAL ASSISTANCE FOR RD
89. GM MASSENA, NY SUPERFUND - PRP OVERSIGHT TECHNICAL ASSISTANCE
90. GREAT BEND PBR #2: OEW PROJECT
91. GRIFFISS AFB BRAC 95 ENVIRONMENTAL PROGRAM





92. GSA FEDERAL SUPPLY DEPOT, BELLE MEAD, NJ REMEDIAL INVESTIGATION
93. HERINGTON AAF: ASR RAC
94. HERINGTON RIFLE RANGE: POTENTIALLY 2 TANKS
95. HOOKER (HYDE PARK) LANDFILL, NY SUPERFUND - PRP OVERSIGHT TECHNICAL ASSISTANCE
96. HOOKER CHEMICAL/RUCCO, NY SUPERFUND-RD OVERSIGHT
97. HORSESHOE ROAD COMPLEX, NJ REMEDIAL DESIGN
98. HUDSON RIVER PCBS, NY SUPERFUND SITE, HAZARDOUS WASTE ENFORCEMENT SUPPORT-CONST
99. HUTCHINSON NAS: ASR
100. Higgins Disposal, NJ Superfund Site, Hazardous Waste Enforcement Support - Const
101. Hooker Hyde Park, NY Superfund Site, Oversight of O&M
102. IDAHO NAT. ENGR. LABORATORY: ASR COMPLETE
103. IMPERIAL OIL/CHAMPION (OU #3), NJ SUPERFUND SITE, REMEDIAL DESIGN
104. INDEPENDENCE AAF: OEW LMS ASR-NOFA
105. INDEPENDENCE SATELLITE POW CAMP: PA/INPR
106. INVES. & ASSESS IMA-AR/YAKIMA/FORT CARSON/AEC/MISC ENVIRONMENTAL
107. IOWA RCRA SUPPORT
108. JEFFERSON BARRACKS RIF RG: PA/INPR
109. JONES CHEMICAL
110. JUNIPER FOREST SUR TRG: PA/INPR
111. KANSAS CITY RECORD CENTER: PA/INPR
112. KAUFFMAN & MINTEER, NJ SUPERFUND SITE, REMEDIAL ACTION-CONSTRUCTION
113. KCDA NIKE 80-RADAR AREA: PA/INPR
114. KCDA NIKE BATTERY 10: PA/INPR
115. KCDA NIKE BATTERY 30: PA/INPR
116. KCDA NIKE BATTERY 60: PCBs at Control Site
117. KINGSLEY FIELD: DISPOSAL SITES
118. KIRKSVILLE AFS P-64: Tanks
119. Kansas Army Ammunition Plant - BRAC-ER 05 - several projects by WBS - Replacement project for P2 #153284
120. LAMBERT FLD: PA/INPR
121. LARSON AFB TITAN I MISSILE FACILITY S-1:
122. LIBERAL AAF: ASR
123. LIBERTY INDUSTRIAL, NY SUPERFUND SITE, HAZARDOUS WASTE ENFORCEMENT SPT, DESIGN
124. LINCOLN PARK, CO SUPERFUND SITE - FIVE YEAR REVIEW
125. LITUNGSTEN (GLEN COVE CREEK) (OUR), NY SUPERFUND SITE REMEDIAL DESIGN
126. LONE ELK COUNTY PARK: PA/INPR
127. LUDLOW SAND & GRAVEL, NY REMEDIAL DESIGN
128. LUDLOW SAND & GRAVEL, NY SUPERFUND SITE, OTHER CONSTRUCTION RESPONSE
129. MALDEN AIR BASE: PA/INPR
130. MALTA TEST STA: MALTA ROCKET FUEL AREA PRP PROJECT
131. MANCHESTER ANNEX: UST
132. MARK TWAIN IND PARK: PA/INPR
133. MARSHALL SATELLITE POW CAMP: PA/INPR
134. MARTIN AARON
135. MATTIACE PETROLEUM, NY SUPERFUND SITE, HAZARDOUS WASTE ENFORCEMENT SPT - GENERAL
136. MAULSBY AUX FLD #2: PA/INPR
137. MAYWOOD CHEMICAL, NJ SUPERFUND SITE, FIVE-YEAR REVIEW
138. MCGRAW EDISON, IA SUPERFUND SITE, FIVE-YEAR REVIEW
139. METALTEC, NJ SUPERFUND - TECHNICAL ASSISTANCE FOR FS
140. MIAMI INT'L AIRPORT: MIAMI INTL AIRPORT PRP PROJECT
141. MIDVALE SLAG, UT SUPERFUND SITE, FIVE-YEAR REVIEW
142. MIL PERSON RECORD CENTER: PA/INPR
143. MOHONK ROAD, NY SUPERFUND SITE, LONG TERM REMEDIAL ACTION
144. MONTCLAIR/WEST ORANGE, NJ SUPERFUND SITE REMEDIAL DESIGN
145. MONTGOMERY TOWNSHIP, NJ SUPERFUND - RD/RA
146. MOUAT INDUSTRIES, MT SUPERFUND SITE - FIVE YEAR REVIEW
147. MOUNTAIN HOME AF RGE #3: ASR
148. MUNICIPAL AP-HUTCHINSON: PA/INPR
149. NAS-QUILLAYUTE: HTRW
150. NASCOLITE, NJ SUPERFUND - RD
151. NAV AIR STA, TILLAMOOK: 8 UST'S
152. NEBRASKA ORDNANCE PLANT: OPERABLE UNIT 1
153. NEW HANOVER COUNTY AIRPORT BURN PIT PRP PROJECT
154. NIAG FALLS AR CHEM PLT: PRP
155. NIKE HERCULES SL-60: PA/INPR
156. NL INDUSTRIES, NJ SUPERFUND SITE, HAZARDOUS WASTE ENFORCEMENT SPT - GENERAL
157. NORTH BEND AIRPORT: ASR NOFA
158. NORTHWEST MANEUVER AREA: OEW PROJECT EE/CA
159. O'REILLY GEN HOSPITAL: PA/INPR
160. OLATHE NAVAL AIR STATION: WASHRACK, DRUMS, CONC.US
161. OLD ROOSEVELT FIELD, NY SUPERFUND SITE, OTHER TECHNICAL ASSISTANCE, VALUE ENGINEERING SCREEN
162. OLEAN WELL FIELD, NY SUPERFUND-PRP OVERSIGHT - RD
163. ORDNANCE OPERABLE UNIT 2
164. ORRICK SATELLITE POW CAMP: PA/INPR
165. POCATELLO MIL AF:
166. POCATELLO MOV TARGET RANG: ASR
167. POHATCONG VALLEY (OU#1), NJ SUPERFUND SITE, HAZ WASTE ENFORCEMENT SPT- DESIGN





168. PORT ANGELES COMBAT RANGE: ASR COMPLETE
169. POTTAWATOMIE PBR #1: HND TO PERFORM EE/CA
170. PRATT AAF: ASR COMPLETE
171. PRATT AAF: oew project
172. PRATT PBR #1: New OEW
173. Puget Sound Naval Puget Sound Naval Ammo Depot: HTRW
174. QUANTA RESOURCES, NJ SUPERFUND, HAZ WASTE ENFORCEMENT SUPPORT
175. RADIATION TECHNOLOGY (OU2), NJ SUPERFUND SITE RI/FS OVERSIGHT
176. RADIATION TECHNOLOGY, NJ SUPERFUND-HAZARDOUS WASTE ENFORCEMENT SUPPORT-DESIGN
177. RADON TESTING, ATCHISON CAVES, ATCHISON, KANSAS
178. REDMOND AAF: PA/INPR
179. REICH FARM, NJ SOILS INVESTIGATION
180. REYNOLDS METALS, NY SUPERFUND-PRP RA OVERSIGHT
181. RICHARDS-GEBAUR AFB: PRP PROJECT
182. RICHARDSON HILL ROAD LANDFILL, NY SUPERFUND SITE - HAZ WASTE ENF SUPPT - CONSTR
183. RISCO AUX FLD #3: PA/INPR
184. RIVERFRONT, MO SUPERFUND SITE
185. ROCKAWAY BOROUGH WELL FIELD, NJ SUPERFUND SITE, RD TECHNICAL ASSISTANCE
186. ROCKY HILL, NJ SUPERFUND - RD/RA GROUNDWATER PUMP AND TREAT SYSTEM
187. ROEBLING STEEL, NJ SUPERFUND SITE REMEDIAL DESIGN
188. ROLLING KNOLLS LANDFILL, NJ SUPERFUND SITE OVERSIGHT OF RI/FS
189. ROSEBURG RIFLE RANGE: FURTHER ACTION BY HND RE
190. ROSECRANS ARMY AIR FIELD & NATIONAL GUARD: OE
191. S E OREGON GUNNERY RANGE: MMRP
192. SADDLE MT TAR RG: PA/INPR
193. SALINA WASTE ANNEX: PA/INPR
194. SAND PT NAS-MAGNUSON PK: PA/INPR
195. SCHILLING AFB: CWM Project
196. SCHILLING AFB: SHILLING AFB PRP PROJECT
197. SCIENTIFIC CHEMICAL PROCESSING, NJ SUPERFUND - HAZ WASTE ENFORCMNT
198. SEDALIA AAF RIFLE RANGE: ASR COMPLETE
199. SEDALIA SATELLITE POW CAMP: PA/INPR
200. SHENANDOAH ROAD, NY SUPERFUND SITE-HAZ WASTE ENFORCEMENT SUPPORT
201. SHIELDALLOY CORPORATION, NJ SUPERFUND SITE, HAZ WASTE ENFORCEMENT SPT-DESIGN
202. SIDNEY LANDFILL, NY SUPERFUND SITE, REMEDIAL ACTION OVERSITE
203. SIDNEY LANDFILL, NY, NJ SUPERFUND, HAZARDOUS WASTE ENFORCEMENT SUPPORT
204. SLOP PRELIMINARY INVESTIGATION
205. SMOKY HILL AIR-AIR GNRV RANGE: ASR COMPLETE
206. SMOLAN SATELLITE POW CAMP: PA/INPR
207. SOLVENT SAVERS, NY SUPERFUND SITE, TECH ASSIST
208. ST LOUIS MEDICAL DEPOT: PA/INPR REVIEW & DOCUMENT BASIS OF THE PROPERTY STATUS
209. ST LOUIS NAVAL AIR STATION AREA 1: PA/INPR
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211. ST. CHARLES NATIONAL GUARD TARGET RANGE: PA/INPR
212. ST. LOUIS ORDNANCE PLANT: PA/INPR
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