

Southwestern Illinois Flood Prevention District Council

Annual Report 2018-2019



August 21, 2019



**Southwestern
Illinois
Flood Prevention
District Council**

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Collinsville, IL 62234

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August 21, 2019

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Chairman, Monroe County Board of Commissioners
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Waterloo, IL 62298

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Chairmen Elmore, Kern, and Prenzler:

Charles M. Etwert
Chief Supervisor of
Construction and the Works

Transmitted herewith is the 2018-2019 Annual Report of the Southwestern Illinois Flood Prevention District Council. The submission of this report is in satisfaction of the requirement of our authorizing statute (70 ILCS 750/40).

The Council has adopted two primary goals: to assure accreditation by the Federal Emergency Management Agency (FEMA) of area levee systems (limiting any economic damage to the region during the period during which accreditation is being sought) and achieving the Authorized Level of Protection to the extent possible with the funds available. The Council has continued to make great progress toward achieving both goals during the last year.

We will enter FY 2020 with all of the 100-Year Level of Protection construction completed. Five certification reports have been submitted to FEMA. Wood (formerly Amec Foster Wheeler) has submitted the Wood River East & West Forks Package, the Prairie DuPont/Fish Lake Package, and the Lower Wood River Package. The Corps of Engineers has submitted the Upper Wood River Package and the East St. Louis MESD Package.

a regional partnership to rebuild Mississippi River flood protection

The reviews by FEMA have been very lengthy and in some cases have involved the addition of some Illinois state agencies.

On April 29, 2019 FEMA accepted the MESD Levee System as structurally sound.

On July 24, 2019, Wood submitted the fourth submittal package to FEMA for the Prairie Du Pont and Fish Lake Levee Systems. A FEMA letter of continued accreditation is anticipated within the next thirty days.

In the Lower Wood River and the Wood River East & West Forks additional requested updated modeling has been submitted to the Illinois State Water Survey (ISWS), with an additional review now required by the Illinois Department of Natural Resources. Issuance of continued letters of accreditation should be forthcoming upon completion of their review.

The Corps of Engineers is waiting for FEMA's response to their resubmittal of the Upper Wood River Levee System with a letter of continued accreditation expected before the end of the year.

The Council continues to be well on its way to achieving accreditation in FY 2020, using only the revenue available from the dedicated FPD sales tax.

The intent is to work closely with FEMA to ensure the new maps reflect the 100-Year improvements. The Council now anticipates FEMA issuing new maps in 2020 or 2021.

The Council continues to work with the Corps of Engineers regarding the Council's design and building of the 500-Year Authorized Level of Protection Projects. The Council intends to build the most cost effective and highest priority flood protection projects throughout the Counties of Madison, Monroe, and St. Clair, Illinois to restore the federally Authorized Level of flood protection in the Metro-East.

The Corps of Engineers will provide oversight on the design and construction of these projects, to ensure that funds expended by the Council, where applicable, will be eligible for future Work In-Kind Credit.

Amended Project Partnership Agreements for the Design Deficiency Corrections for East St. Louis, Illinois Flood Protection Project and the Wood River Levee System have been executed, allowing for the utilization of \$12,415,405.70 of Work In-Kind Credit in the East St. Louis and \$16,041,496 of Work In-Kind Credit in the Wood River System earned to date. In addition, the Corps of Engineers has received \$95.2 million dollars of FY 2019 Work Plan Funds for East St. Louis. These Agreements and Work Plan Funds will be utilized on Authorized Level construction.

The Council's FY 2020 budget focuses on the continued design of Authorized Level projects and the construction of Authorized Level Bid Packages #18, #14, #11, and #9.

The recent May/June 100-Year flood event (the second highest event on record at 45.93 ft., and the longest flood event on record at 126 days), tested the seventy-five million dollars of flood protection improvements the Council has built. However, all improvements performed as designed and the Metro East American Bottom Levees handled the event much better than ever before.

In summary, I am pleased to report on behalf of our Board of Directors, that we continue to make progress in building and financing significant improvements to the flood protection systems in the Metro-East.

Thank you for supporting our efforts throughout the year.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles M. Etwert". The signature is fluid and cursive, with a large initial "C" and "E".

Charles M. Etwert
Chief Supervisor of Construction and the Works

I. Introduction

On August 15, 2007, the Federal Emergency Management Agency announced their intention to “de-accredit” the Mississippi River levee systems protecting a 174 square mile area in three Illinois counties known as the American Bottom. The practical effect of this action would be to cripple the area economically and put an enormous financial burden on businesses and residents in this area. The threat of this action by FEMA prompted a chain of events that is without precedent in the area. The result is a cooperative regional effort to improve flood protection and secure FEMA accreditation for the levee system protecting the American Bottom from flooding.

The American Bottom is an area of incalculable economic value and historical significance. It is home to some 156,000 residents. Businesses in the area employ upwards of 55,000 people. Some of the nation’s most prestigious companies have major manufacturing facilities having national significance in the area. Additionally, the area is rich in multimodal transportation assets that make it well positioned as a future center of commerce and industry.

The region’s leadership recognized that extraordinary measures were necessary to protect this economic asset and the homes and livelihoods of a large portion of the region’s population. A new revenue source was created in 2008 and a regional organization was formed to carry out an ambitious plan to maintain a level of flood protection that has been in place for some 75 years.

Acting on a plan to improve flood protection, even one that may be subject to adjustment from time to time, is an essential ingredient in helping businesses and citizens prepare for the future, to restore investor confidence in the area, and to assure taxpayers that their money is being spent effectively. The unpredictability of the Mississippi River serves as constant reminder that we need to demonstrate real progress in carrying out that plan.

The purpose of this report is to outline the activities of the Southwestern Illinois Flood Prevention District Council in 2018-2019 towards implementing flood protection improvements at the 100-Year Level of Protection and the 500-Year Level of Protection (also known as the Authorized Level).

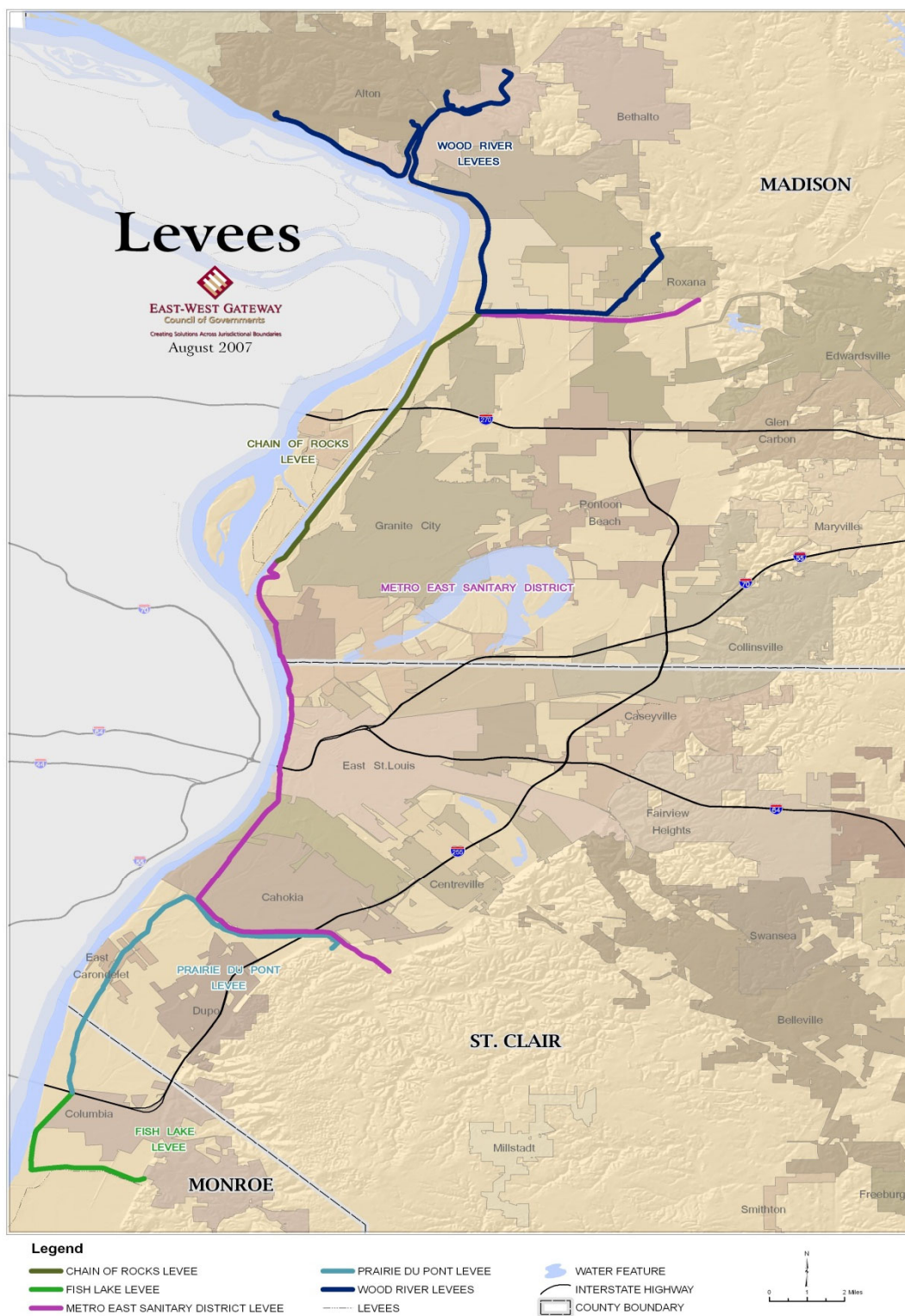
II. Background

A system of 65 miles of mainline and wing levees protects an area called the American Bottom in Southwestern Illinois from flooding by the Mississippi River. The American Bottom is an area of 174 square miles that is home to 156,000 people and 56,000 jobs. The levee system was authorized by Congress, and designed and built by the U.S. Army Corps of Engineers to provide protection from a flood event on the Mississippi River of 54 feet on the St. Louis gauge. The American Bottom has not been flooded by the Mississippi River in the 75 years since the flood protection system was initially built, including during the flood of record in 1993, reportedly as much as a 380-year event.

Mississippi River flood protection consists of five “federal” levees (see Figure 1), i.e. levees designed and built by the federal government and whose owners participate in the Corps of Engineers Public Law 84-99 emergency assistance program. The construction of the following five (5) levees was authorized in federal law:

- **Wood River Levee** - Operated and maintained by the Wood River Drainage and Levee District. Construction authorized under Section 4 of the Flood Control Act of 1938, Pub. L. 75-761, with subsequent improvement was authorized under Section 1001(20) of the Water Resources Development Act of 2007, Pub. L. 110-114 (“WRDA 2007”)
- **Chain of Rocks Canal, Levee, and Locks** - Operated and maintained by the Army Corps of Engineers. Construction authorized under the River & Harbors Act of 1945, Pub. L. 79-114
- **East St. Louis Levee** - Operated and maintained by the Metro East Sanitary District. The Flood Control Act of 1936, Pub., authorized construction. Law 74-738, as modified by the Flood Control Act of 1965, Pub. L. 89-298, and the Water Resources Development Act of 1976, Pub. L. 94-587. Subsequent improvement was authorized under the Energy and Water Development Appropriations Act of 1988, Pub. L. 100-202
- **Prairie DuPont Levee** - Operated and maintained by the Prairie DuPont Levee and Sanitary District. Construction was authorized under the Federal Flood Control Act of 1936. Subsequent improvement was authorized under Section 102(8) of the Water Resources Development Act of 2000, Pub. L. 106-541 (“WRDA 2000”) and Section 5070 of the WRDA 2007
- **Fish Lake Levee** - Operated and maintained by the Fish Lake Drainage and Levee District. The Flood Control Act of 1954 authorized construction. Subsequent improvement was authorized under Section 102(8) of WRDA 2000 and Section 5070 of WRDA 2007

The Metro-East Sanitary District (formerly the East Side Levee and Sanitary District, originally formed in 1910) is authorized by the Metro-East Sanitary District Act of 1974, 70 ILCS 2905/. The Wood River and Fish Lake Districts were authorized by the Illinois Drainage Code, 70 ILCS 605/. The Prairie DuPont District was authorized by the Sanitary District Act of 1907, 70 ILCS 2205/. The Levee Districts own and have primary responsibility for maintaining the levee systems (with the exception of the Chain of Rocks Levee, which is owned and maintained by the Corps of Engineers).



**Figure 1 –
Levee Systems**

The Southwestern Illinois Flood Prevention District Council was formed in 2009 through an Intergovernmental Agreement between the Flood Prevention Districts of Madison, St. Clair and Monroe counties as authorized by the Illinois Flood Prevention District Act of 2008, 70 ILCS 750/. The primary responsibility of the FPD Council is to plan, finance, design, and build capital improvements to the levee system. The Council's interim goal is to assure accreditation by FEMA in accordance with criteria described in 44 CFR 65.10 – Mapping of Areas Protected by Levee Systems. The Council's long-term goal is to achieve the Authorized Level of Protection, as defined by the Corps of Engineers.

In 2007, the Corps indicated that the agency had “reduced confidence” that the levee system could protect against a flood that has a 1% chance of being equaled or exceeded in any single year (commonly referred to as a 100-year flood or a base flood) without flood fighting. FEMA's announced decision to deaccredit the levee systems in our area, which is the industrial core of the St. Louis region, was based on this assertion by the Corps. In July 2009, FEMA issued preliminary flood insurance rate maps for the area that showed the American Bottom as a flood hazard area with no protection from flooding. Appeals of those maps were submitted by a number of local governments during the 90-day period provided by law; all of those appeals were denied in September 2010.

The region's leadership did not agree with the decision by FEMA to deaccredit the levee system. A number of area governments, businesses and citizens joined to file a lawsuit challenging this decision based, in part, on the lack of any documentation of levee system deficiencies. In part as a result of that lawsuit and complaints about the mapping process across the country, FEMA agreed to revamp its mapping process and has not yet issued any new flood insurance rate maps for the area.

While the Corps built the levee systems in this area generally in the 1940s and 1950s using design standards in place at the time for a high level of flood protection, the current “design deficiencies” are measured relative to current engineering standards. The issue is not a failure of adequate maintenance by local levee districts, or any dramatic change in the condition of the levees, but primarily a change in engineering standards and in the procedures for measuring risk. The levee systems have consistently been determined to be in *acceptable* or *marginally acceptable* condition by annual and more thorough 3-year periodic inspections by the Corps.

According to its own preliminary evaluations and cost estimates, the Corps suggested that it could cost hundreds of millions of dollars to restore and maintain the authorized (54 feet flood elevation) level of flood protection. Further, the schedule to make these investments would essentially be open-ended, dependent entirely on the pace of federal appropriations. Making assumptions consistent with typical levels of federal appropriations, the project could take decades to complete. While the federal government could pay as much as 65% of the cost, it could take decades for those funds to be authorized and appropriated, so there would be significant uncertainty about the cost and schedule of the project. That continued uncertainty would impose very high costs on residents and businesses in the area, and, more importantly, would subject the area to increased flood risk.

Because of the uncertainty of federal funding and the complexity and time-consuming nature of the USACE project development process, levee improvements will be primarily locally funded. The three affected counties have imposed a ¼% sales tax to pay for the restoration of the levee system and formed a new organization, the Southwestern Illinois Flood Prevention District Council, to carry out the levee improvement project. The tax has been collected since January 2009 and currently, produces about \$12.0 million annually.

III. FPD Council Activities

The following describes the work of the Council over its ten-year existence. Work done this year has brought the Council much closer to meeting its objectives. The Project Timeline since the announcement of de-accreditation by FEMA is shown in Figure 2.

Over the last few of years, the greatest challenge and source of doubt about the project has been the continued involvement of the Corps of Engineers in granting permission for most of the improvements to the levee system that the Council has proposed. The Corps is an institution that moves very deliberately, is governed by elaborate and extensive guidelines and procedures, most of which apply to federally funded projects but are being applied to our locally funded project. This process caused significant delays in the design process, but most of that is now behind us. The focus has always been completing all construction as soon as possible.

The FPD Council began operations in July 2009. Since that time, the organization has:

- Completed a comprehensive inspection of the levee system
- Performed an economic analysis of the costs of mandatory flood insurance
- Provided support to local governments to appeal preliminary flood insurance rate maps,
- Conducted a design competition to determine the most cost-effective approach to assuring compliance with FEMA standards for levee system accreditation
- Sold \$94 million in bonds to pay for levee improvements.
- Completed the design of levee system improvements that will meet FEMA standards
- Developed a budget to complete the project solely with the proceeds from the FPD sales tax
- Received all required permits from state and federal agencies to proceed with construction
- Awarded contracts on the ten construction packages required to complete the project
- Completed all construction needed to achieve FEMA accreditation and submitted required certification packages to FEMA for review and approval
- Committed to restore the federally Authorized Level of Mississippi Flood River Protection in the Metro-East, designing and building the most critical and cost effective projects
- Sold an additional \$83.8 million in bonds for 500-Year Authorized Level Protection Projects
- Started designing 500-Year Authorized Level Protection Projects in Madison, Monroe, and St. Clair Counties.

The Council's general goals have been to:

- assure compliance with FEMA accreditation standards with currently available revenue sources by late 2019 or early 2020 (originally the end of 2015), but extended due to obtainment of easements, several high river stage events, construction alternatives & additions, construction delays, and lengthy reviews); and
- build as many critical and cost effective Authorized Level Protection Projects, with the funds available, to achieve 500-Year flood level protection

Notwithstanding the Council's strong disagreements with FEMA's decision to deaccredit the Metro-East levees and the agency's continuing efforts to overturn that decision, every effort is being made to remove all doubt about compliance with FEMA accreditation criteria. In October 2010, the Council engaged a team of engineering consultants led by AMEC Environment & Infrastructure, Inc. (now Wood Environment & Infrastructure Solutions, Inc.) to design and manage construction of improvements to the levee system.

Today, after years of design work, multiple levee system inspections, drilling over 2000 borings along the entire length of the levee system, and submitting thousands of pages and many gigabytes of electronic files of design documentation to the Corps of Engineers, the Council has completed the 100-Year construction. The Council has built the project, using only funds from the dedicated sales tax and has significant funds to utilize towards the 500-Year Authorized Level of Protection.

The Council has worked to comply with all relevant environmental laws and regulations. The Illinois Environmental Protection Agency has granted approval for the project under Sec. 401 of the Clean Water Act to certify that the project will not discharging pollutants into any bodies of water. Similarly, the Corps of Engineers has granted conditional approval under Sec. 404 of the Clean Water Act for mitigating the project's impact on wetlands.

The Council continues to work closely with our congressional delegation to help expedite the project and to advance legislation that would streamline future design approvals and would enable future funding of improvements to the levee system. All of the members continue to be supportive of the project and are working on our behalf to advance our interests with the Corps, with FEMA, and in Congress.

The general design features of the Proposed FEMA Certification Levee System Improvements are shown in Appendix I to this report.

In December 2015, the Council was successful with the issuance of additional sales tax revenue bonds which will generate a net \$77.5 million for the 500-Year Authorized Level of Protection Projects. It is the intent, to use these funds, to build the most cost effective and highest priority flood protection projects throughout the Counties of Madison, Monroe, and St. Clair, Illinois.

The Corps of Engineers is providing oversight on the design and construction of these projects, to ensure that funds expended by the Council will be eligible for future Work In-Kind Credit towards future Corps projects when the Corps is able to obtain funding.

The Council has accepted Authorized Level Project Summary Reports for the Wood River Levee System, the Metro East Sanitary District (MESD) Levee System, and the Prairie DuPont/Fish Lake Levee System.

The Council has adopted policies that emphasize the use of our local workforce on the construction of the project. It is the Council's policy that all contractors working on the project use a Project Labor Agreement (PLA) and comply with Illinois law regarding the use of prevailing wages. The Council also implemented a minority business and workforce utilization policy. The Council remains committed to employing local labor and local firms to the maximum extent possible on the project, and to paying fair wages and providing good working conditions for everyone working on the project.

The Corps of Engineers reviewed the Project Labor Agreement issue for over two years. The Corps agreed that PLAs can contribute to project cost savings and efficiency, however, they indicated, they cannot mandate the use of PLAs.

In June 2016, the Corps tested the use of a Best Value Tradeoff Approach for the construction of the Wood River Shallow Cutoff Wall Phase II. The evaluation criteria was to give weight to proposals that include PLAs and demonstrate the ability to achieve economy and efficiency.

The Corps originally requested 35% Council cash funding for this project, with the Council countering with a request for Work In-Kind Credit in lieu of cash. The Corps agreed to the Work In-Kind Credit but then determined that it could not be utilized until after the amendment of the Project Partnership Agreement, which would take up to a year. Therefore, the Corps decided to proceed utilizing only federal funds to build the project.

The Corps awarded the contract to Mi-Con, a division of Michels Corporation, whose proposal did not include a Project Labor Agreement (PLA). None of the four proposals received had a PLA. Therefore, per the Council's policy of requiring Project Labor Agreements on all construction contracts, the Council future participation with the Corps utilizing the Best Value Tradeoff Approach is very unlikely.

The Council is going to maximize Work In-Kind Credit work as much as possible, satisfy the 5% cash requirement by providing the Corps funds for oversight on design and construction, and construct projects 100% where the Corps' benefit cost ratio is low and Corps funds are not anticipated.

During the last three years, there have been five significant events that have impacted the 100-Year and 500-Year Levee System Improvements affecting certification, design and construction.

In December 2016, the Corps of Engineers informed the Council the Wood River Levee System amended Project Partnership Agreement, originally scheduled to be approved in January 2017, would not approved for at least two years. This delay was due to additional field information obtained during the design and construction of the 100-Year Projects and the design of the 500-Year Projects. This information indicated that the estimated cost of the Wood River Levee Systems projects would exceed the amount identified in the Wood River Levee System Reevaluation Report for Design Deficiency Corrections approved in 2011 by more than twenty percent, which required a new decision document be approved.

A new decision document required that a Risk Assessment and a Supplemental Report be completed, which take at least twenty-four months. The amended Project Partnership Agreement for the Wood River Levee System was recently executed on July 26, 2019. During this time delay, the Council accumulated \$16,041,4956 of Work In-Kind Credit which will be utilized on the Wood River Levee System.

In the spring of 2017, at the end of April and the beginning of May, the Metro East area experienced its second record flood event in the last three years. The April/May flood event was the sixth highest elevation ever recorded, following the third highest flood event which occurred December/January 2016.

All of the Council's projects performed as designed and no problems were experienced, which reflects the design and construction management provided by Wood Environment & Infrastructure Solutions, Inc. and the performance of the Council's contractors. The April/May 2017 flood event was a good test of the improvements that have been constructed to date.

Unfortunately, the flood event delayed construction that needed to be completed, such as the East St. Louis 126 Inch Sewer Rehabilitation, the MESD clay cap project, and the four remaining relief wells in the Wood River Levee System. However, all of these projects were finally completed during FY 2018.

In May 2017, the Corps of Engineers received notification of FY 2017 Work Plan Funding and FY 2018 President's Budget Funding. The Corps received FY 2017 Work Plan Funding of \$31.7 million for the Wood River Levee System and zero dollars for the MESD Levee System. Due to the Risk Assessment and Supplemental Report mentioned earlier, the Corps of Engineers only had the ability to use about fifty percent of the \$31.7 million dollars in the Wood River area on the second phase of the Wood River Deep Cutoff Wall Project..

Therefore, the Council and the Corps of Engineers' St. Louis District both requested a portion of the funds be reprogrammed to the MESD Levee System, where the Corps of Engineers had a project (Cahokia Relief Wells) designed and ready to build. Unfortunately, after waiting almost a year, the Council was informed, with the approval of the 2018 appropriations bill, new baseline and updated reprogramming limits, the request to reprogram the Wood River funds to East St. Louis would have to be updated and resubmitted.

The Corps suggested, the Council wait until the Corps was informed of FY 2018 Work Plan Funding for the MESD Levee System. Unfortunately, the the Corps didn't receive any FY 2018 Work Plan Funds. However, in November 2018 the Corps did receive \$95.2 million dollars for the MESD Levee System, eliminating the need to transfer funds from the Wood River Levee System. The Corps will spend the Wood River funds on Wood River Levee System, utilizing a Council design and also designing and constructing other Authorized Level Projects.

In June 2017, the Corps of Engineers informed the Council that it would be utilizing a Risk Informed Design Process for the East St. Louis Design Deficiency Project for the Metro East Sanitary District (MESD) Levee System. The Risk Informed Design Process determines which projects (based on vulnerability and effect) should be completed first, to achieve the most effective use of available funds. In the past the Corps looked at a system in general when accessing a risk factor, now they will be providing a risk factor for individual hazards or segments. The determination of individual project risk factors changes project priorities and design responsibilities between the Corps of Engineers and Wood.

All of these events impacted the 100-Year and 500-Year Levee System Improvements affecting certification, design and construction.

A sixth significant event occurred early this year, but had no affect on certification, design, or construction. On June 8, 2019, the Mississippi River at St. Louis reached a flood elevation of 45.93 ft., the second highest elevation ever recorded. It was a 100-Year Flood event and the river remained above flood stage for a record length of time of 124 days. Three record flood events, in less than three

years, confirm the need for the work the Council is completing for the 100-Year accreditation and ultimately for the 500-Year Authorized Level.

Current design and construction for FY 2020 includes 1) the Corps of Engineers constructing the MESD Deep Cutoff Wall Project, which was identified as the project which should be built first by the Risk Informed Design Process 2) Wood taking the Corps' design of the Cahokia Relief Well Project and the Council constructing MESD Bid Package # 18, 3) Wood completing the design of Wood River Bid Package #8 with the Corps of Engineers constructing, 4) Wood completing the design of MESD Bid Package #14A and the Council constructing, 5) Wood completing the design of MESD Bid Package #11 and the Council constructing 6) Wood completing the design of Wood River Bid Package #9 and the Council constructing and 7) Wood completing the design of a portion of the Prairie DuPont/Fish Lake Bid Packages #15/16/17.

The general design features of the Wood River Levee System, the Metro East Sanitary District (MESD) Levee System and the Prairie DuPont/Fish Lake Levee System Authorized Level Projects are provided in Section V and Appendix III of this report.

In summary, progress continues in building and financing significant improvements to the flood protection systems in the Metro-East. The Council remains committed to achieving accreditation in FY 2020. With the continued support of the area's leadership and cooperation from the Corps of Engineers and FEMA, the Council will be able to meet any remaining challenges to completion of the 100-Year Accreditation Project and make great strides towards achieving the Authorized Level of Protection.

Figure 2

Project Timeline

2007

August - FEMA Announce De-accreditation

2008

May - Legislation Becomes Law to Enable Sales Tax and Flood Prevention Districts

July – County Flood Prevention Districts Formed by Counties

July/September – Tax Approved by County Boards

September – Counties Advance Funding for Project Development Work

2009

January – Tax Collection Begins

June – Intergovernmental Agreement Signed

June – First Meeting of FPD Council

July – FPD Council Staff Hired

August - FPD Council Authorizes Challenges of FIRMS

September – Financial Advisor Selected

September - Project Strategy Adopted

December – Begin Levee Inspection

December – Select Consultant for Design Competition

2010

February - Issue RFP for Design Competition

June – Design Consultants Selected

October – Begin Design and Pre-Construction Testing

November – 2010 Series Bonds Issued

2011

March – Progress Drawings Submitted

May – 30% Design Drawings Submitted

Figure 2

Project Timeline

	June – Project Implementation Plan
	September – 60% Design Drawings Submitted
2012	
	January/December – Design of 100 –Year Projects
2013	
	January/December – Design of 100-Year Projects Continues
	September – USACE Permits Approved
	September – Construction Begins
2014	
	April – Design of 100-Year Projects Completed
	August – All 100-Year Construction Contracts Awarded
2015	
	February – 500-Year Authorized Level Resolution
	July – Design of 500-Year Projects Begins
	August/September – USACE Proposes New Cost Saving Alternative Reducing Costs by \$50M and Extending Construction Schedule
	October – East St. Louis 126-Inch Sewer Rehabilitation Project Required for Accreditation
	December – 2015 Series Bonds for 500-Year Authorized Level Projects Issued
	December – Third Highest Flood Event on record Delays Construction
2016	
	April – Council Completes Wood River Deep Cutoff Wall Project – Eligible for \$14M Work In-Kind Credit (WIK)
	December – Corps Informs Council of Two Year Delay for Wood River PPA Approval Delaying Utilization of WIK
	December – Wood River East & West Forks Accreditation Package to FEMA
2017	
	March – Upper Wood River Accreditation Package to FEMA
	April/May – Sixth Highest Flood Event on Record Delays Construction Again

Figure 2

Project Timeline

June – Corps Informs Council of Utilization of Risk Informed Design Process in MESD Changing Priorities

July – Prairie Du Pont/Fish Lake Accreditation Package to FEMA

October – Lower Wood River Accreditation Package to FEMA

2018

February – Completion of 100-Year FEMA Certification Levee System Improvements

May – East St. Louis Work In-Kind Credit Receives Preliminary Approval

August – East St. Louis (MESD) Accreditation Package to FEMA

November – Corps receives \$95.2 M Work Plan Funds for East St. Louis Design Deficiency Corrections

2019

February – Corps gives Preliminary Approval for \$16M of Work In-Kind Credit for the Wood River Levee System

April – East St. Louis Design Deficiency Project Partnership Agreement Executed

May – Corps Approves \$12M of Work In-Kind Credit for East St. Louis Flood Protection Project

July – Wood River Design Deficiencies Corrections Project Partnership Agreement Executed

May/June – 100-Year Flood Event on Mississippi River, Second Highest Ever at 45.93 FT., Lasting a Record 125 Days. All 100-Year Improvements Operate as Designed

2020

FEMA Accreditation Achieved FY 2020

Authorized Level Projects Design Continues

Authorized Level Projects Construction Continues

IV. Financing and Budget

Table 1 is a financial summary of the Council's activities through September 30, 2018, prepared by Scheffel Boyle.

Revenue from a dedicated sales tax is used to support the Council's ongoing design and construction activities. Sales tax revenue showed substantial growth 2009 thru 2011 coming out of the recession. Growth was slowed in 2012, declined in 2013, but has reached new highs the last five years. The amount collected in 2018 was \$12,348,606. (See Figure 3).

The Council issued bonds for \$94,195,000 in November 2010. After setting aside funds for a debt service reserve and costs of issuance, \$87 million was available to fund construction of the FEMA Certification Levee System Improvements. In December 2015, additional bonds were issued providing \$77.5 million in funds for the 500-Year Authorized Level of Protection Projects. The Council will meet its goal of achieving FEMA certification in 2020 utilizing only the revenues available from the dedicated FPD sales tax.

Figure 3
Flood Prevention District Sales Tax Trends 2009-2012-2016-2017-2018

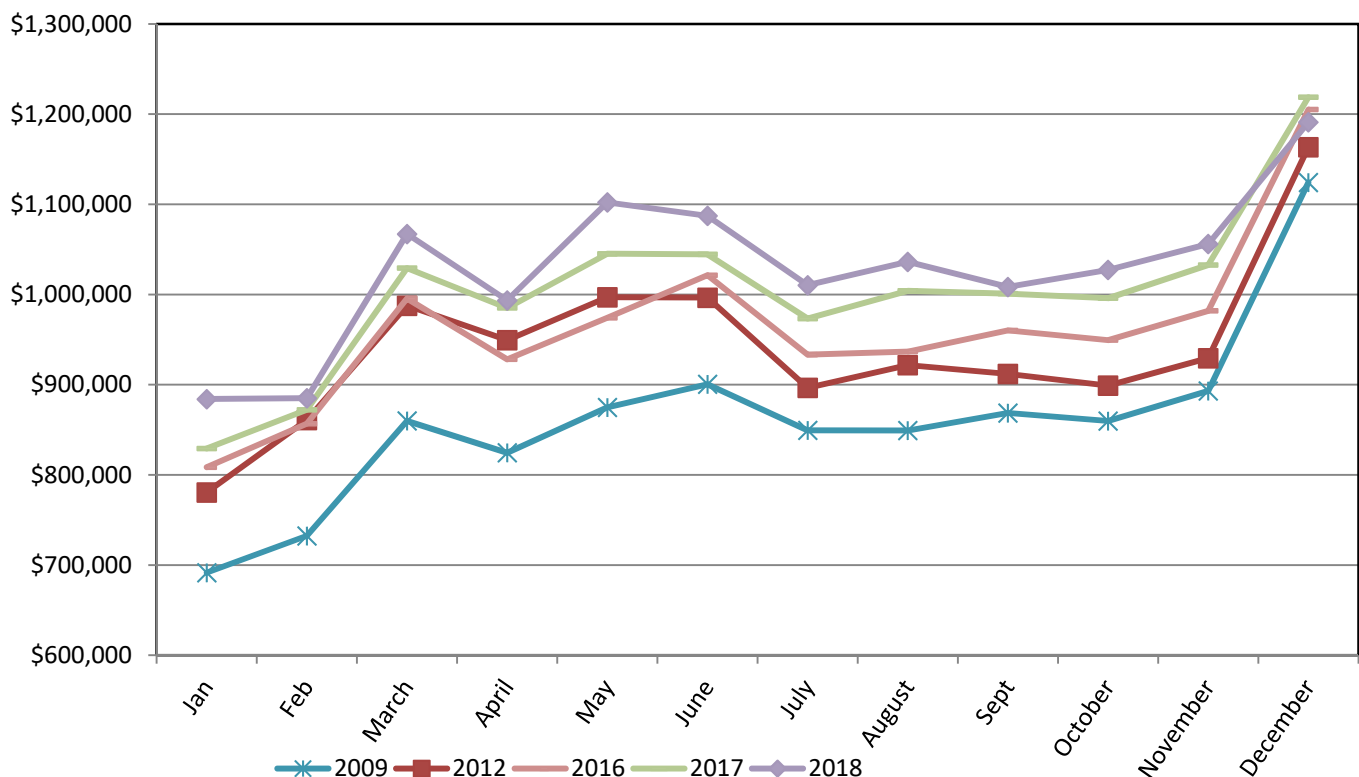


Table 1

**SOUTHWESTERN ILLINOIS FLOOD PREVENTION DISTRICT COUNCIL
STATEMENT OF REVENUES, EXPENDITURES. AND
CHANGES IN FUND BALANCES - GOVERNMENTAL FUND
FOR THE YEAR ENDED SEPTEMBER 30, 2018**

REVENUES:

District Sales Tax	\$ 12,312,372
Less: Return of Excess Sales Tax to Districts	(1,531,889)
Interest Income	<u>688,402</u>

Total Revenues \$ 11,468,855

EXPENDITURES:

Current:	
General and Administrative	\$ 253,358
Design and Construction	2,940,517
Professional Services	176,159
Debt Service:	
Principal	3,300,000
Interest	7,498,652
Less: Federal Interest Subsidy	(850,071)
Capital Outlay	1,409
Total Expenditures	<u>\$ 13,320,024</u>

NET CHANGE IN FUND BALANCE \$ (1,851,139)

FUND BALANCE:

Beginning of Year	<u>\$ 55,740,052</u>
End of Year	<u><u>\$ 53,888,913</u></u>

Table 2 provides project expenditures for design, construction management, and construction proposed in FY 2020.

Table 3 compares the Estimated Authorized Level Funding Needed for FY 2020 thru FY 2022 to the Estimated Available Authorized Level Funding FY 2020 thru FY 2022, indicating an anticipated funding shortage slightly over \$25 million dollars. Possible bond refunding and or the issuance of a third bond issue could cover this shortage.

Table 2
Estimated Project Expenditures 10.1.2019 -9.30.2020

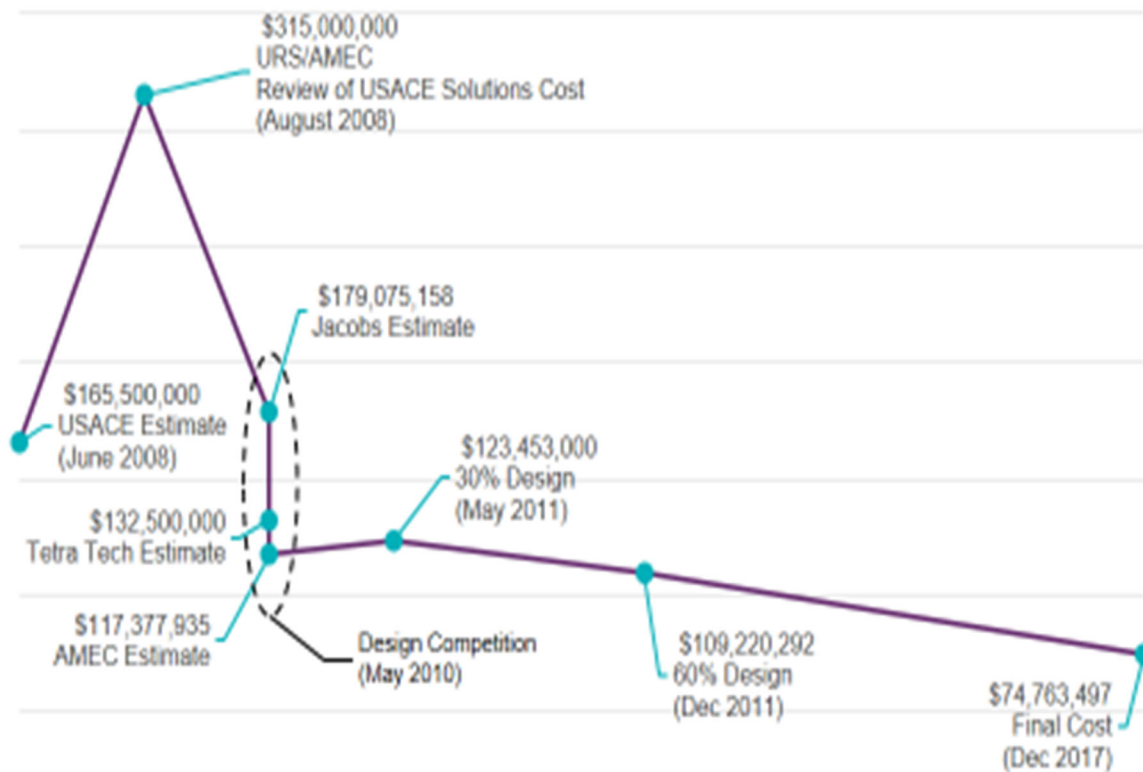
Design & Construction Management	FY 2020
Engineering Design	
<i>W. O. #1 Program Mgmt.</i>	\$150,000
<i>W. O. #3 Preconstruction Activities</i>	\$0
<i>W. O. #3 Flood Activities</i>	\$60,000
 Authorized Level Work Orders	
<i>W.O. #11 FEMA</i>	\$5,498
<i>W.O. #13 Wood River Field & Design BP #8, BP #9, & BP #10</i>	\$400,000
<i>W.O. #14 MESD Field & Design</i>	\$800,000
<i>W.O. #16 Prairie Du Pont/Fish Lake Field & Design</i>	\$1,700,000
<i>W.O. #17 Life-Cycle Cost FEMA Improvements</i>	\$5,000
<i>W.O. #18 MESD Deep Cutoff Wall Utility/Easement Assistance</i>	\$123,905
<i>W.O. #19 Wood River LERRD's</i>	\$75,629
 Construction Management.	
<i>W. O. #? Construction Management BP #14, BP #15/16/17 & BP#18</i>	\$1,930,000
TOTAL ENGINEERING DESIGN & CONSTRUCTION MGMT.	\$5,250,032
 Construction	
<i>Bid Package #9 - Wood River Partial</i>	\$1,200,000
<i>Bid Package #11 - MESD</i>	\$3,700,000
<i>Bid Package #14 - MESD</i>	\$1,300,000
<i>Bid Package #18 - MESD</i>	\$8,500,000
<i>Contingency (10% FPD Construction)</i>	\$1,470,000
<i>Utilities</i>	\$600,000
<i>Property Acquisition Authorized Level - Wood River</i>	\$250,000
<i>Property Acquisition Authorized Level - East St. Louis</i>	\$500,000
<i>Property Acquisition Authorized Level - Prairie Du Pont/Fish Lake</i>	\$250,000
<i>Wetland Mitigation</i>	\$600,000
<i>HazMat Mitigation</i>	\$1,500,000
<i>Legal</i>	\$300,000
<i>Corps of Engineers Authorized Level Costs</i>	\$2,772,851
TOTAL CONSTRUCTION	\$22,942,851
 TOTAL ENGINEERING DESIGN & CONSTRUCTION	\$28,192,883
 REFUND OF SURPLUS FUNDS TO COUNTY FPD ACCOUNTS	\$ 2,000,000

V. FEMA Certification Construction Costs

Southwestern Illinois Flood Prevention District Council FEMA Certification Levee Improvement Projects

BID PACKAGE	LOCATION/PROJECT	CONTRACTOR	CONSTRUCTION COST
1	Gravity Drain & Toe Rehabilitation	Noeth Excavating	\$133,641.00
2A	Fish Lake 1 Pump Station	Korte & Luitjohan	\$797,599.53
2B	Prairie DuPont, MESD, and Wood River 5 Pump Stations	Korte & Luitjohan	\$5,346,710.92
2C	MESD Site 12 Force Mains	Haier Plumbing	\$311,692.00
3	Wood River Blanket Drains, Earth Fill, Relief Wells, Seepage Berms, Piping, Weirs	Keller Construction	\$12,922,903.94
4	MESD 1 Pump Station, Clay Cap, Piping, RWs	Haier Plumbing	\$6,398,834.40
5	MESD Clay Cap, Earth Fill, Piping, Relief Wells Rip Rap, Sluice Gate Rehabs	Keller Construction	\$14,420,883.71
6	Prairie DuPont & Fish Lake Clay Cap, Seepage Berms, Piping, Relief Wells, Sluice Gate Rehabs	Lane Construction	\$15,436,257.14
7A	Upper Wood River Shallow Cutoff Wall	Kamadulski Excavating	\$3,375,350.25
7B	Lower Wood River Deep Cutoff Wall	TREVIICOS	\$14,919,724.29
5A	East St. Louis 126 Inch Sewer Repair	SAK Construction	\$699,900.00
		TOTAL	\$74,763,497.18

History of Construction Cost Estimates



7

Exceptional design and construction management by Wood Environment & Infrastructure Solutions, Inc. (formerly Amec Foster Wheeler Environment and Infrastructure Inc.) and excellent bids and construction by the contractors utilized has allowed the Council to complete the 100-Year Levee System Improvements under estimated costs and have significant funds available for the 500-Year Levee System Improvements.

VI. Authorized Level Levee Improvement Projects

The Board of Directors has approved the design of Authorized Level Projects in the Wood River Levee System, the Metro East Sanitary District (MESD) Levee System, and the Prairie DuPont/Fish Lake Levee System. Wood is continuously working with the Corps of Engineers regarding the design and construction of the following Bid Packages

Wood River Levee System

Bid Package 8 - Includes the design and construction of a new 14,000-gpm pump station at Canal Road, approximately 22 relief wells, conveyance systems, and grading work. This package spans the Lower Wood River Levee from station 431+00 to 455+00.

The Corps of Engineers has requested that the Corps build this bid package. Wood will complete the design in Fall 2019 and provide it to the Corps to construct.

Estimated Construction Cost \$ 5,600,000.

Bid Package 9 – Formerly this package spanned the Lower Wood River Levee from station 493+35 to 480+15 and included the design and construction of a new pump station and 18 relief wells; however, this Corps of Engineers is now planning to design and construct the work in this reach.

Bid Package 9 is now planned to be a relief well abandonment package. The detailed scope and total number of relief wells to be abandoned has not yet been finalized, but it will include abandonment of all wood stave relief wells throughout Upper and Lower Wood River (there are no relief wells along the East/West Fork Levees). Abandonment of wood stave relief wells cannot occur until new relief wells are installed as replacements.

Estimated Construction Cost \$ TBD

Bid Package 10 – Formerly this package spanned the Lower Wood River Levee from station 530+50 to 630+30 and included the design and construction of a new pump station, 36 relief wells, seepage berms, and earthwork fill; however, this package is no longer anticipated to be designed or constructed by the FPD Council since it is anticipated that we will have already met our 35% non-federal sponsor local cost share. As a result, the improvements throughout this reach will be designed and constructed by USACE.

Estimated Construction Cost \$ N/A

Metro East Sanitary District (MESD) Levee System

Bid Package 11 - Spans the MESD Levee from Station 774+00 to 889+00. This package currently includes the design and construction of 56 relief wells, abandonment of old wood stave relief wells, conveyance system improvements, and modifications to the existing G.C.E.D. #1X pump station to increase its capacity.

Estimated Construction Cost \$ 9,500,000.

Bid Package 12/13 – Formerly this package spanned the MESD Levee from station 1014+00 to 1482+00 and included the design and construction of 103 relief wells, conveyance systems, and a pump station. However, that work will now be designed and constructed by USACE. Bid Package 12 is now planned to include pump station improvements and/or replacements at the Phillips Reach #2 (Site 09) and the Levin Drive (Site 10) pump stations to accommodate increased relief well flow at the authorized level flood event. This package is in the very early planning stage and the extent of the improvements has not yet been determined...

Estimated Construction Cost \$ N/A

Bid Package 14 – This package has been split into two packages: Bid Package 14A and 14B.

Bid Package 14A - Spans the MESD Levee from station 821+00 to 863+00 and includes the design and construction of a riverside shallow cutoff trench, two riverside clay blankets, and filling of a landside ditch. It will be advertised for bid Fall 2019.

Estimated Construction Cost \$ 1,300,000

Bid Package 14B - Spans the MESD Levee from station 961+00 to 977+00 and includes the design and construction of a landside filter blanket. It is anticipated to be advertised for bid at the completion of construction of the USACE-designed and constructed MESD deep cutoff wall project (estimated to be late 2021).

Estimated Construction Cost \$ 2,900,000

Bid Package 18 – Is the Cahokia Relief Well Project, which spans the MESD Levee from station 1207+00 to 1352+00 (the span is known as the “elbow”), and includes the design and construction of 51 relief wells and modification to the Cahokia Pump Station. This project was originally designed by the Corps, but is being reviewed, modified as needed (with appropriate USACE approvals), and sealed by Wood for the Council to advertise for bid late 2018.

Estimated Construction Cost \$ 9,700,000

The Corps of Engineers is utilizing a Risk Informed Design Process to determine which projects (based on vulnerability and effect) should be completed first, to achieve the most effective use of available funds. At this time, the MESD Deep Cutoff Wall, Bid Package #14 and the Cahokia Relief Well (BP #18) Projects have been identified as the projects to be built first.

Prairie DuPont/ Fish Lake Levee System

Bid Packages 15 - Spans the Prairie DuPont Levee System in St. Clair County from station 167+65 to 435+00 and includes the abandonment of 53 existing relief wells, construction of 10 new seepage berms, 57 new relief wells, and the construction of a new pump levee station at station 209+13. This package is currently on hold pending completion of the Corps' Semi-Quantitative Risk Assessment and LSOG Review. Estimated timeframe for completion is Spring 2020. The conclusions from the Risk Assessment will likely alter the underseepage features previously included within the Prairie DuPont/Fish Lake Levee System bid packages.

Estimated Construction Cost \$ 16,300,000.

Bid Package 16 – Spans the Prairie DuPont Levee System in Monroe County from station 435+00 to 550+00 and includes the abandonment of 37 existing wells, construction of 7 new seepage berms, and 40 new relief wells. This package is currently on hold pending completion of the Corps' Semi-Quantitative Risk Assessment and LSOG Review. Estimated timeframe for completion is Spring 2020. The conclusions from the Risk Assessment will likely alter the underseepage features previously included within the Prairie DuPont/Fish Lake Levee System bid packages.

Estimated Construction Cost \$ 6,800,000

Bid Package 17 – Spans the Fish Levee System from station 550+00 to 809+35 and includes the abandonment of 47 relief wells, construction of 6 new seepage berms, 71 new relief wells and the construction of a larger pump station at levee station 691+00. This package is currently on hold pending completion of the Corps' Semi-Quantitative Risk Assessment and LSOG Review. Estimated timeframe for completion is Spring 2020. The conclusions from the Risk Assessment will likely alter the underseepage features previously included within the Prairie DuPont/Fish Lake Levee System bid packages.

Estimated Construction Cost \$ 9,300,000

VII. FEMA Certification and Mapping

Certification reports have been submitted to FEMA as each levee system was completed. Wood prepared reports for Wood River East/West Forks, Prairie DuPont/Fish Lake, and Lower Wood River. All levee improvements leading to certification were completed by February 8, 2018.

The USACE submitted a National Flood Insurance Program (NFIP) Levee System Evaluation Reports (LSER) for the Upper Wood River Levee System, which includes the Mel Price uncontrolled underseepage area and will be submitting the same for the for East St. Louis (MESD) Levee System, including the Chain of Rocks Levee.

All levee improvements leading to certification were completed by February 8, 2018.

Previously there was concern about the timeline for the Corps of Engineers making necessary improvements to a critical stretch of levee in the Wood River area in the vicinity of the Mel Price Lock and Dam. FEMA had agreed to accept the Corps' certification of that portion of the system with the Corps utilizing an interim operations plan until funding of final improvements was available. In March 2019, the Corps of Engineers received \$24,087,000 in the FY20 President's Budget for construction of the needed improvements.

100-Year Certification Packages Status

East & West Fork Levee Systems

Originally submitted by Wood on December 5, 2016

FEMA Completeness Check and Comments received January 26, 2018

Additional base flood modeling required with review and approval by Illinois State Water Survey and Illinois Department of Natural Resources

Accreditation anticipated early 2020

Prairie DuPont & Fish Lake Levee Systems

Originally submitted by Wood on July 6, 2017

FEMA Completeness Check and Comments received January 26, 2018

Additional hydrologic and hydraulic (H&H) analysis by the Illinois State Water Survey required.

Final certification documents submitted to FEMA on July 24, 2019. Letter of continued accreditation anticipated in the near future.

Lower Wood River Levee System

Originally submitted by Wood on October 17, 2017

FEMA Completeness Check and Comments received April 20, 2018

Additional base flood modeling required with review and approval by Illinois State Water Survey and Illinois Department of Natural Resources

Accreditation anticipated early 2020

Upper Wood River Levee System

Originally submitted by Corps of Engineers on March 10, 2017

Comments received from FEMA September 5, 2017

Corps waiting for response to latest submittal

Accreditation anticipated early 2020

MESD Levee System

Corps of Engineers submitted to FEMA on August 31, 2018

FEMA accepts MESD Levee System as structurally sound on April 29, 2019. Revised

FEMA maps will reflect levee accreditation

The 100-Year Certification review and submittal process continues to make progress. The reviews are lengthy, with an approval process that can take over two years.

FEMA is working with the Council and has indicated that it didn't want to issue maps, after the Council completed its' improvements and then again after the certification process was complete. Therefore, FEMA isn't going to issue new maps until all of the levees have received accreditation. The intent is to work closely with FEMA to ensure the new maps when issued, reflect the levee improvements. It is currently anticipated that FEMA will be issuing new maps in 2020 or 2021.

VIII. Work In-Kind Credit

The Council continues to work with the Corps of Engineers to ensure the work the Council does on the 500-Year Authorized Level of Protection Projects is eligible for future Work In-Kind Credit.

This is an elaborate and multi tasked process, taking up to two years before a project is guaranteed to be eligible for Work In-Kind Credit. A project is only guaranteed to be eligible if there is a properly executed Project Partnership Agreement (PPA) for the Levee System.

The Council first operated under Memorandums of Understanding, which allowed work to be considered for Work In-Kind Credit prior to the execution of an amended Project Partnership Agreement. The credit is only good towards the non-Federal contribution of funds for a project, and it will not be considered for the five percent cash requirement.

Next, an Integral Determination Report (IDR) that identified the work the Council intended to perform as In-Kind contributions in a Levee System had to be approved.

Finally, the amendments to the PPAs had to be finalized and submitted to the Corps' Mississippi Valley Division (MVD). After approval by the MVD, they were forwarded to headquarters in Washington, D.C. for approval.

On April 1, 2019, the amended Project Partnership Agreement between the Council, the Corps of Engineers, and the Metro East Sanitary District was executed. This made \$12,415,405 of work, the Council had completed, eligible for Work In-Kind Credit towards the Design Deficiency Corrections for East St. Louis, Illinois Flood Protection Project.

On July 26, 2019, the amended Project Partnership Agreement between the Council, the Corps of Engineers, and the Wood River Drainage and levee District was also executed. This made \$16,041,496 of work, the Council had completed, eligible for Work In-Kind Credit towards the Supplemental Design Deficiency Corrections for the Wood River Levee System.

In the Prairie DuPont/Fish Lake Levee System, the Council will operate under the Memorandum of Understanding signed in 2015 and under Section 408 authorization, which allows the Council to provide funds to the Corps of Engineers for design and construction oversight. A Project Partnership Agreement cannot be utilized, since the Corps of Engineers has determined the Prairies DuPont/Fish Lake Levee System Design Deficiency Project has a low benefit cost ratio, which prevents the Corps from obtaining funds.

However, the Corps of Engineers is currently performing a Risk Assessment Review for possible funding not based on a benefit/cost ratio. Anticipated completion date is summer of 2020.

If a funding alternative allowing federal funding in conjunction with non-federal funding is not determined, the Council will pay all project costs in the Prairie DuPont/Fish lake Levee Systems.

The Council started the 500-Year Authorized Level design process prior to having the amended Project Partnership Agreements with the Work In-Kind Credit provision. This had a slight risk, but the risk was low, since the Council was working with the Corps and was designing and constructing projects the Corps had identified as part of the Authorized Level of Protection.

Starting the design, prior to having the Project Partnership Agreements, will allow the projects to be completed two years earlier and provide additional flood protection to the Metro-East area sooner. The first Authorized Level Projects are scheduled to be awarded in November, less than six months after the execution of the Project Partnership Agreements.

The Council, where needed, will satisfy the Corps' five percent cash requirement by providing the Corps funds for the oversight of the design and construction of authorized projects being built by the Council.

IX. Conclusions, Issues and Next Steps

Much progress has been made in the ten years that the Council has been in existence towards the regional goal of maintaining a high level of flood protection for the American Bottom area. Doing so is a regional priority and the Council has acted with a great sense of urgency, commitment, and cooperation in conceiving major improvements to the flood protection system. That process reached important milestones last year with the completion of all of the 100-Year Level of Protection Projects and the submittals of all of the certification packages.

With the interim goal of achieving FEMA accreditation in sight, the process of achieving the long-term goal of 500-Year Authorized Level of Protection is well on its way. The Council's intent has been expressed by resolution; action has been initiated by the authorization of the design of Authorized Level Projects in the Wood River Levee System, the Metro East Sanitary District (MESD) Levee System, and the Prairie DuPont/Fish Lake Levee System and a successful bond sale generating an additional \$77.5 million in construction funds.

There are a number of critical next steps as we continue to move forward:

- Achieve FEMA certification in FY 2020
- Continue to work with levee districts to establish sufficient funding for ongoing maintenance of improvements, FEMA Level Improvements – Life Cycle Costs have been prepared by Wood for each of the Levee Systems
- Continue to identify the most cost effective and high priority projects in the Wood River and MESD Levee Systems as the Corps of Engineers completes its Risk Assessment & Supplemental Report for Wood River and utilizes the Risk Informed Design Process for the East St. Louis Design Deficiency Project
- Prioritize the Authorized Level Projects in the Prairie Du Pont/Fish Lake Levee System
- Complete the design of the 500-Year Authorized Level of Protection Projects that can be built either by the FPD or the Corps of Engineers
- Construct as many cost effective and high priority Authorized Level of Protection Projects, which qualify for Work In-Kind Credit, as possible
- Issuance of additional bonds needed to complete the Authorized Level of Protection Projects

Mississippi River flood stages in December 2015/January 2016 (fourth highest elevation recorded) and April/May 2017 (seventh highest elevation record) delayed construction completion and pushed accreditation back, but the Council will meet its interim goal of achieving FEMA certification with the revenue available from the dedicated FPD sales tax in FY 2020.

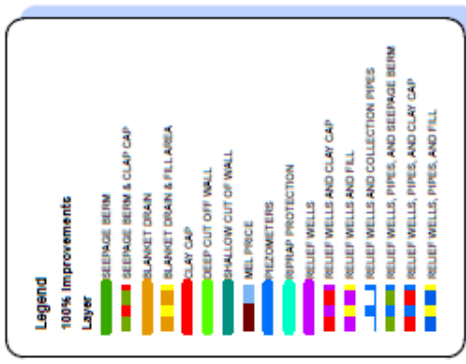
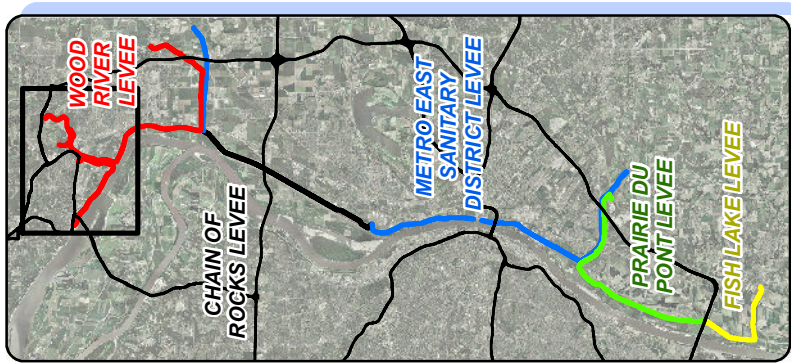
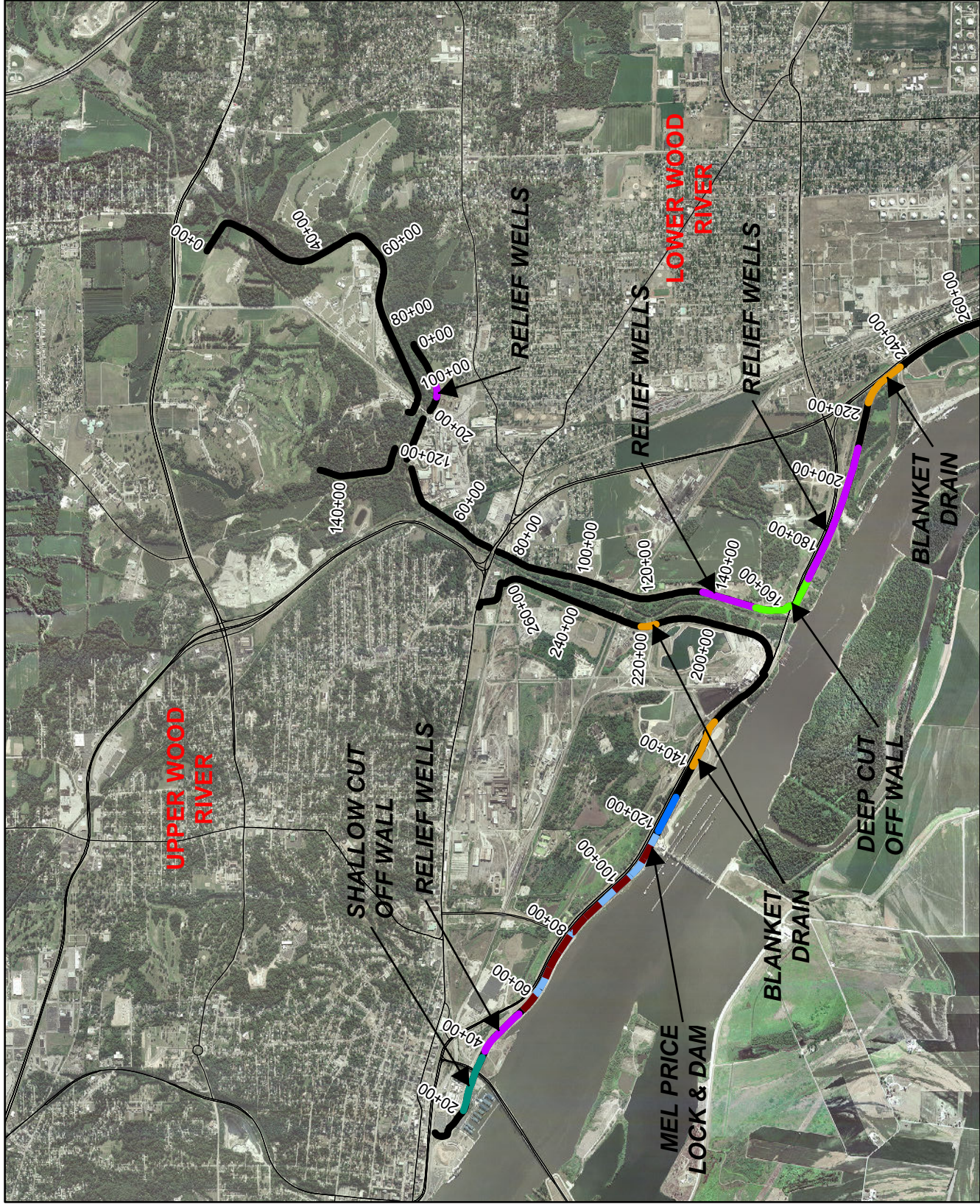
The recent May/June 100-Year flood event (the second highest event on record at 45.93 ft., and the longest flood event on record at 125 days), tested the seventy-five million dollars of flood protection improvements the Council has built. However, all improvements performed as designed and the Metro East American Bottom Levees handled the event much better than ever before.

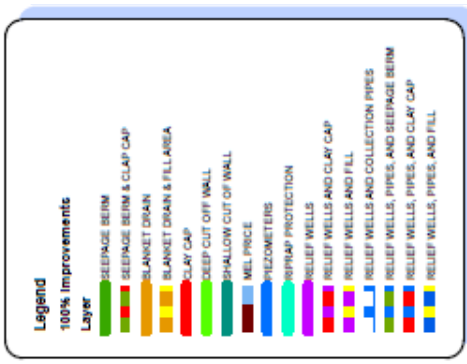
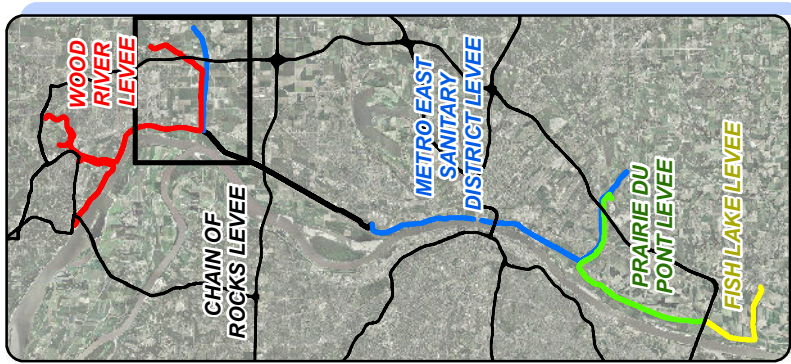
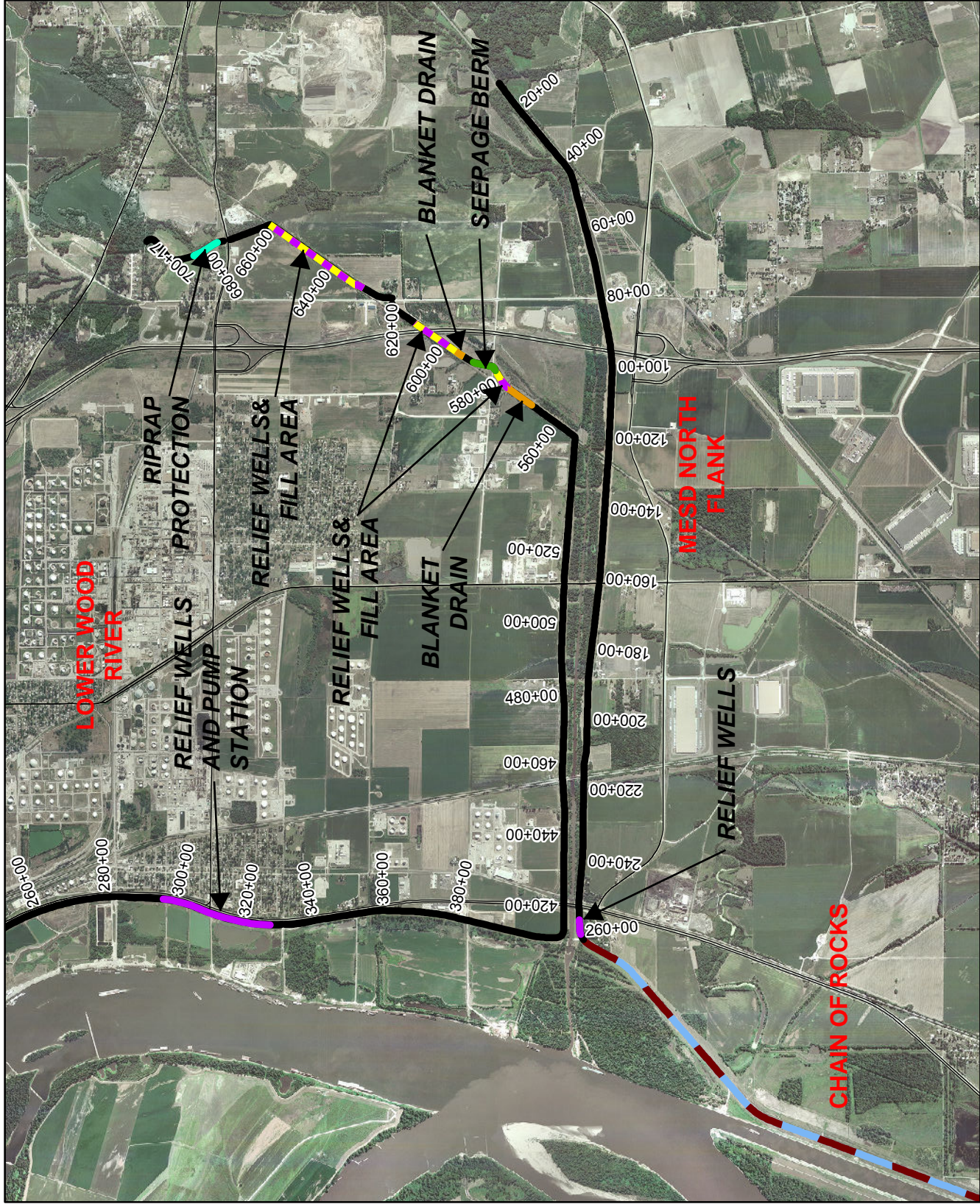
Three record flood events, in the last four years, confirm the need for the work the Council is completing for the 100-Year accreditation and the ultimately for the 500-Year Authorized Level of Protection.

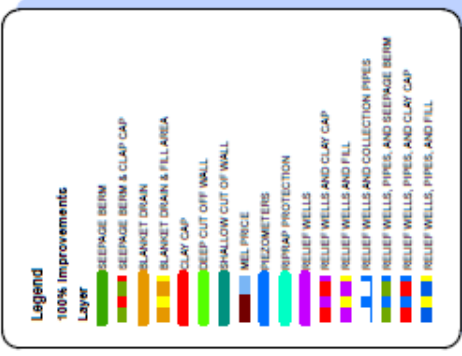
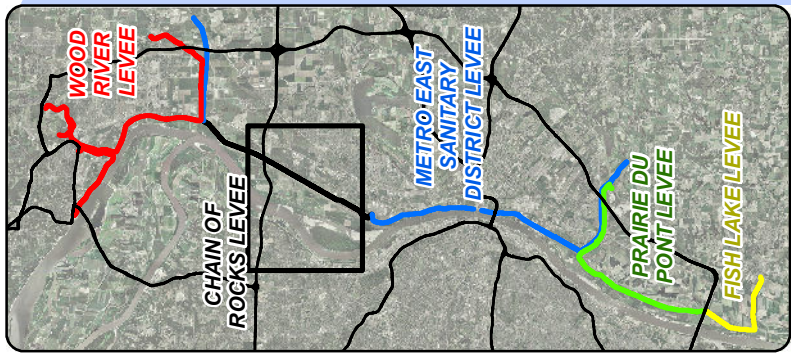
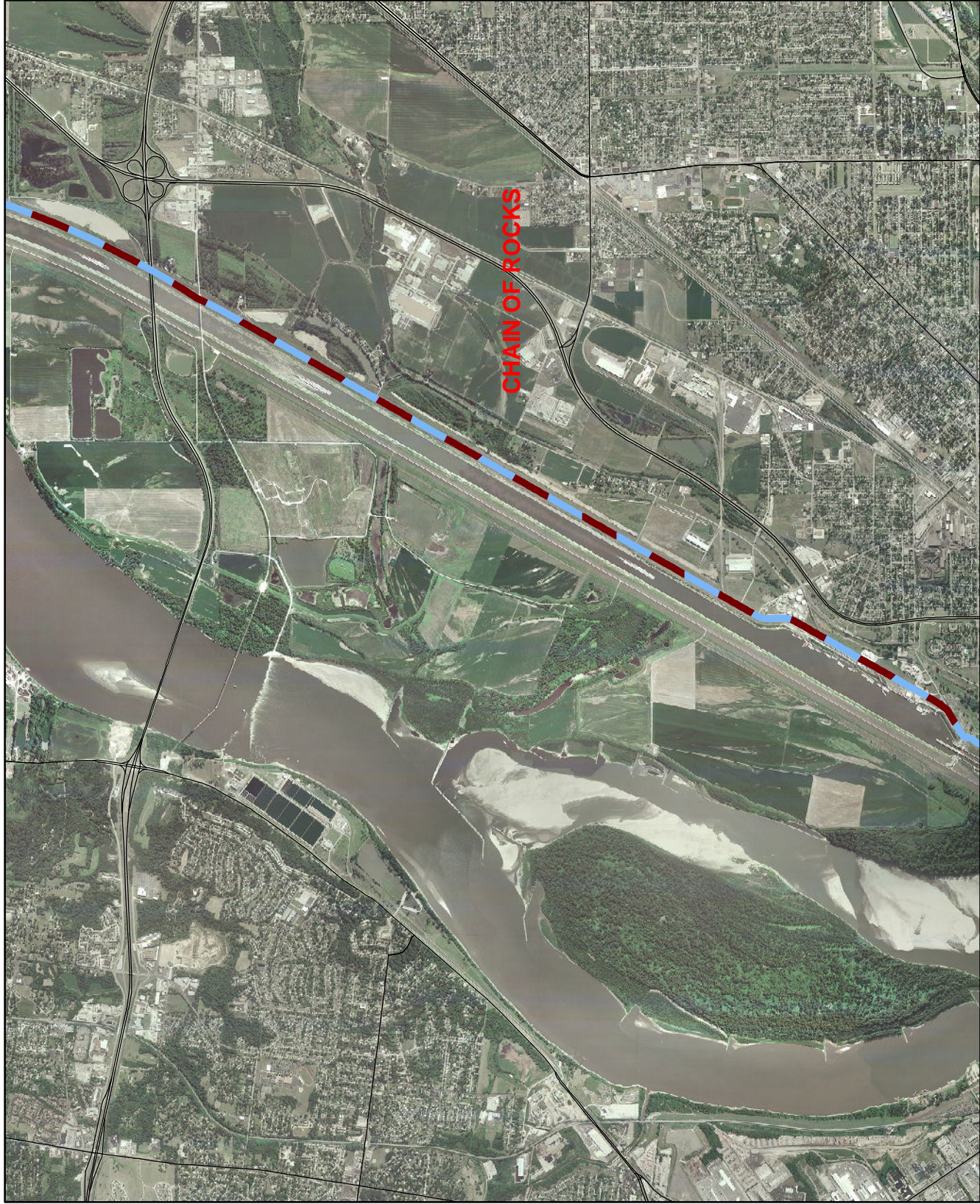
With the Corps of Engineers, receiving FY 2019 Work Plan Funds & FY 2020 Budget Funds and the Council issuing a third bond issue, the Council's ultimate goal of providing Authorized Level of Protection to the Metro-East could be achieved twenty years sooner than original thought.

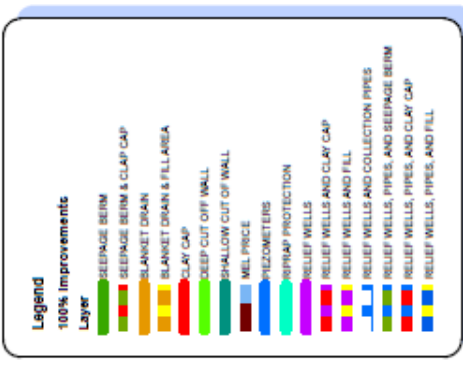
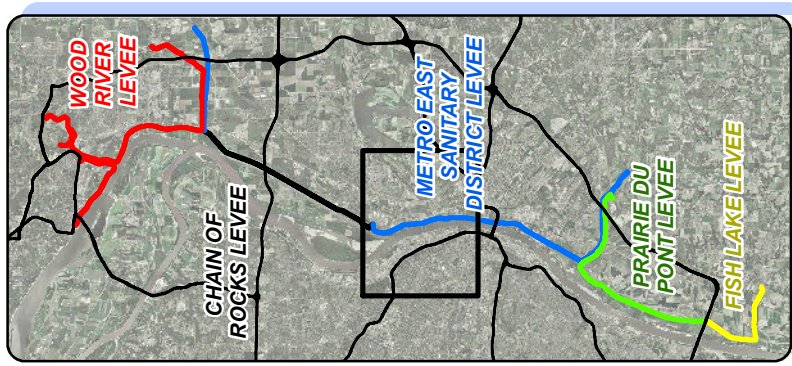
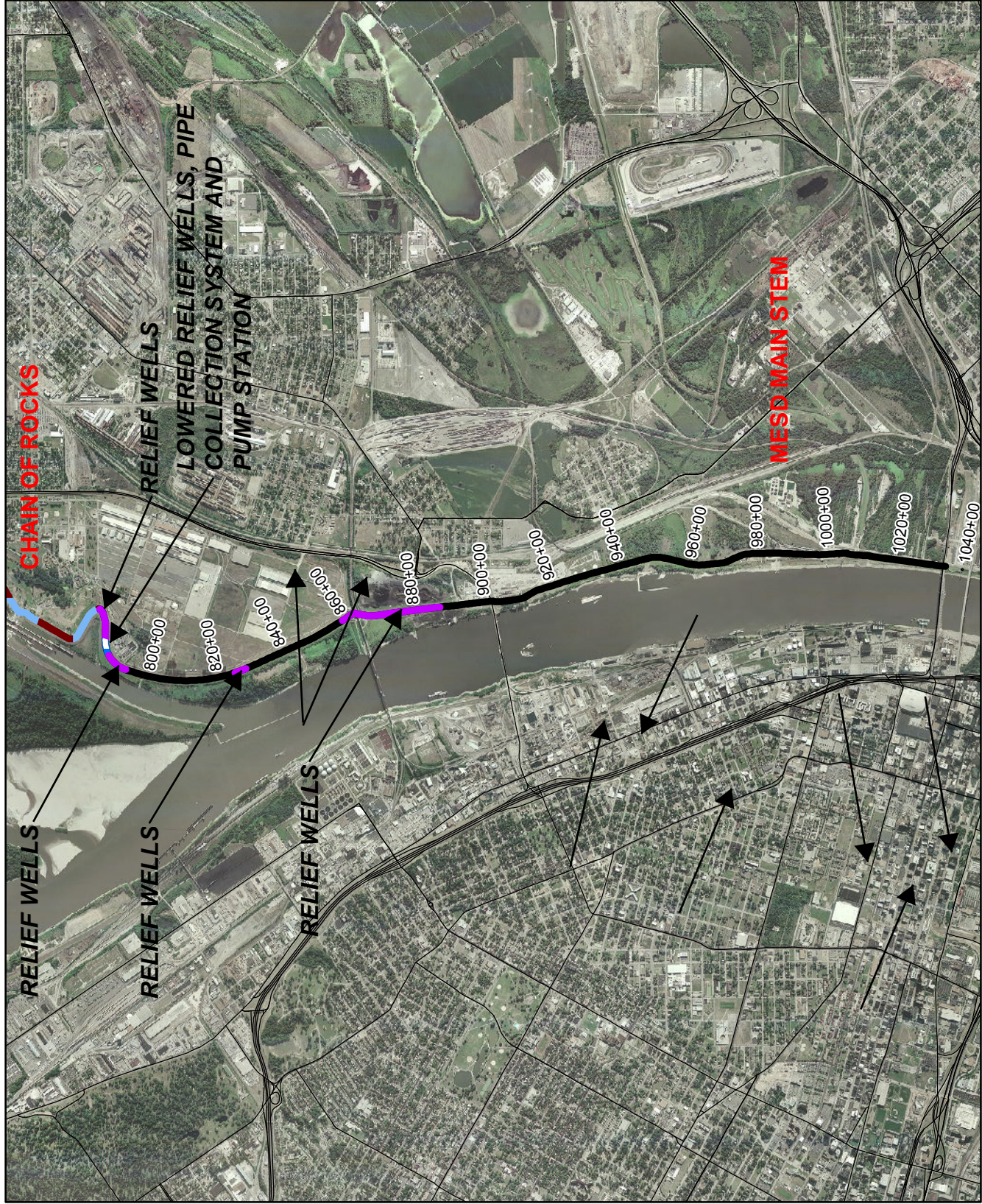
Appendix I

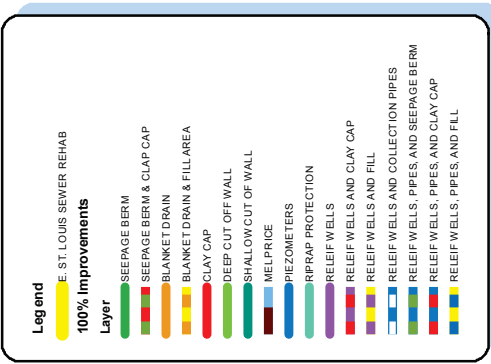
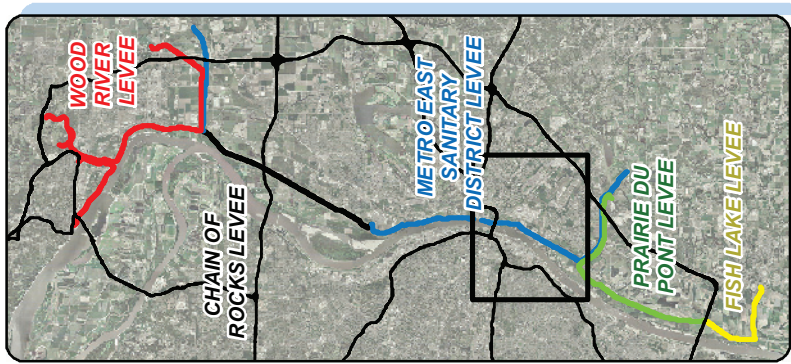
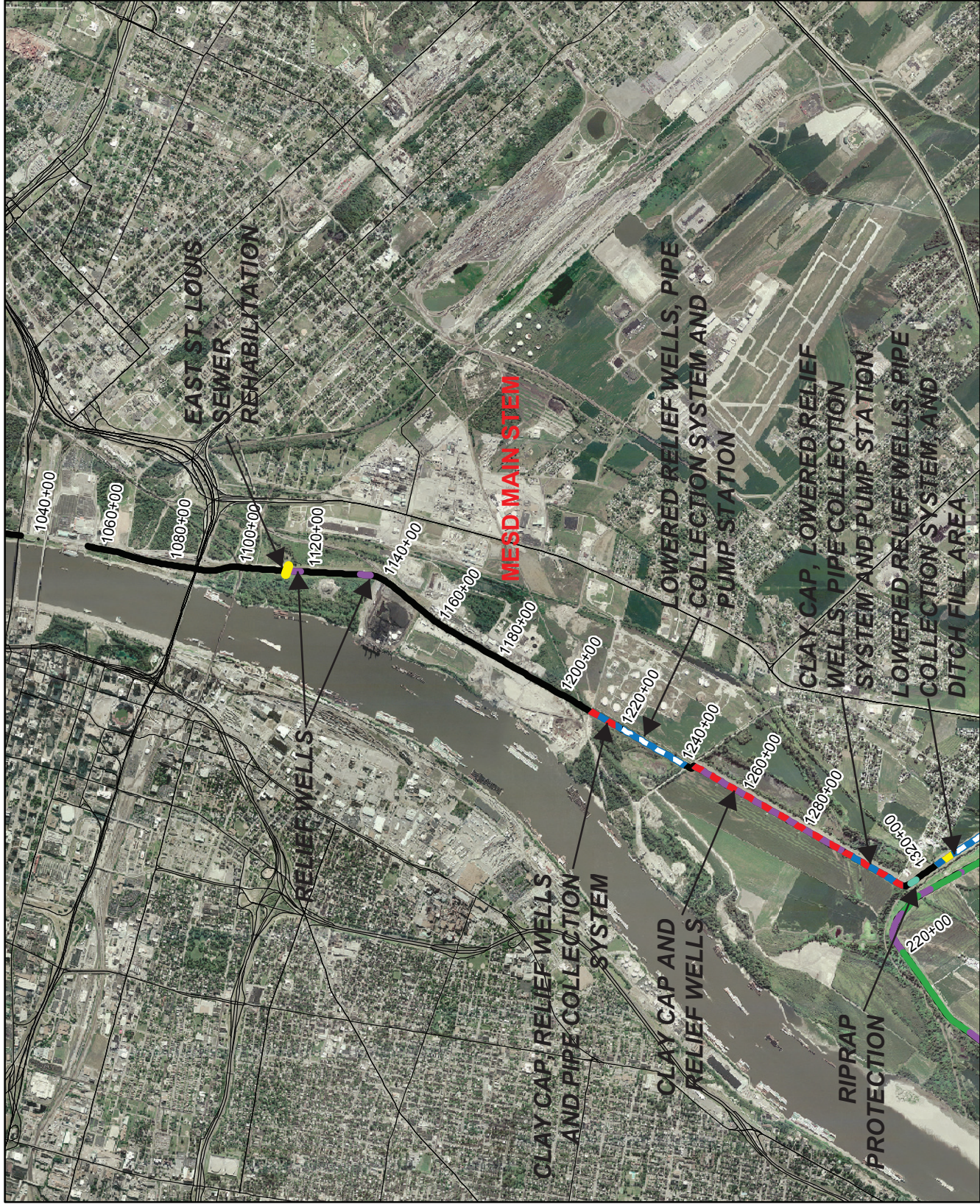
FEMA Certification Levee System Improvements

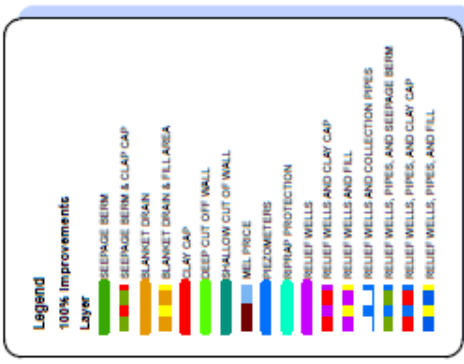
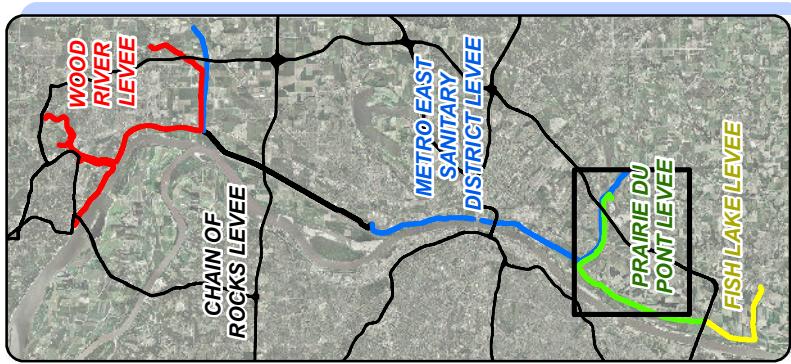
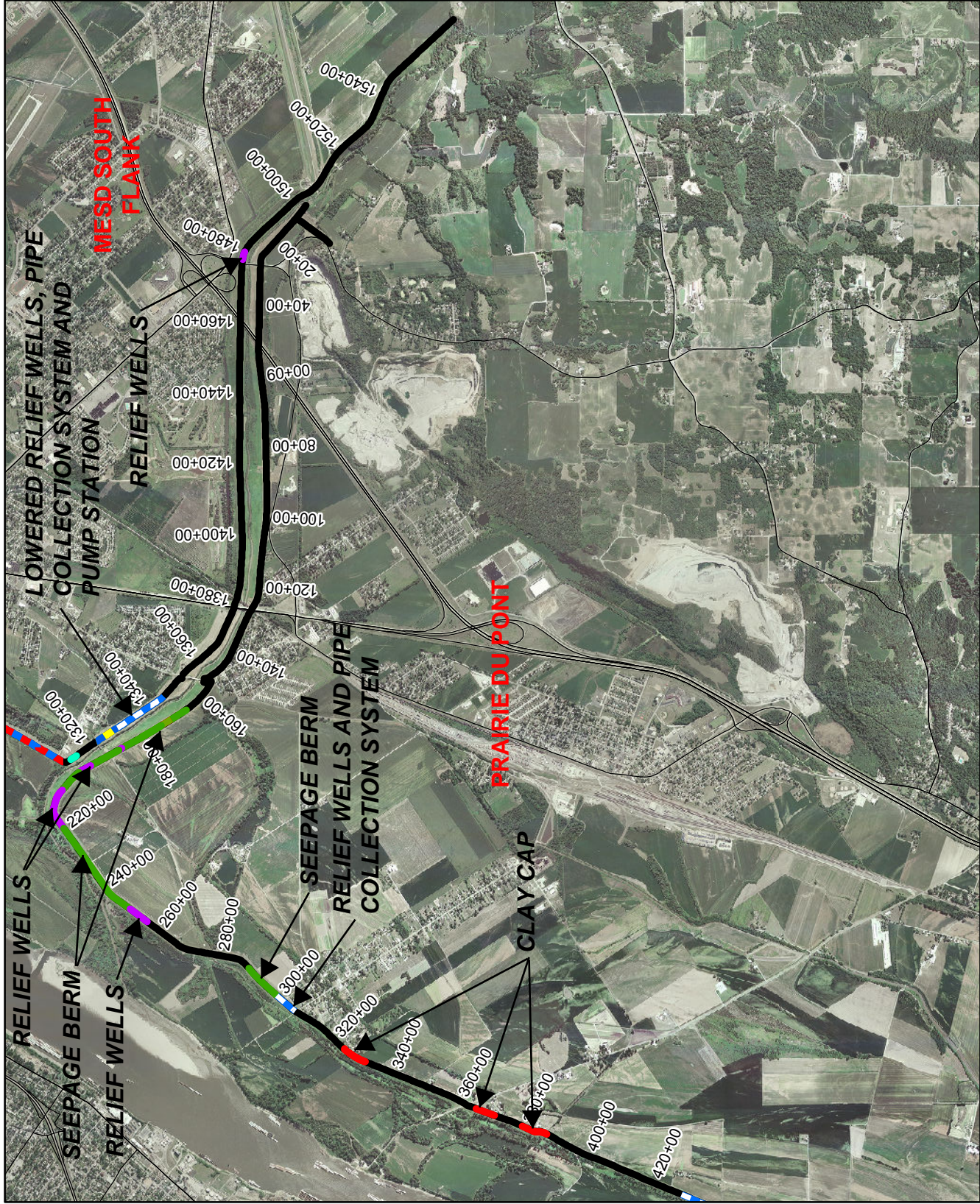


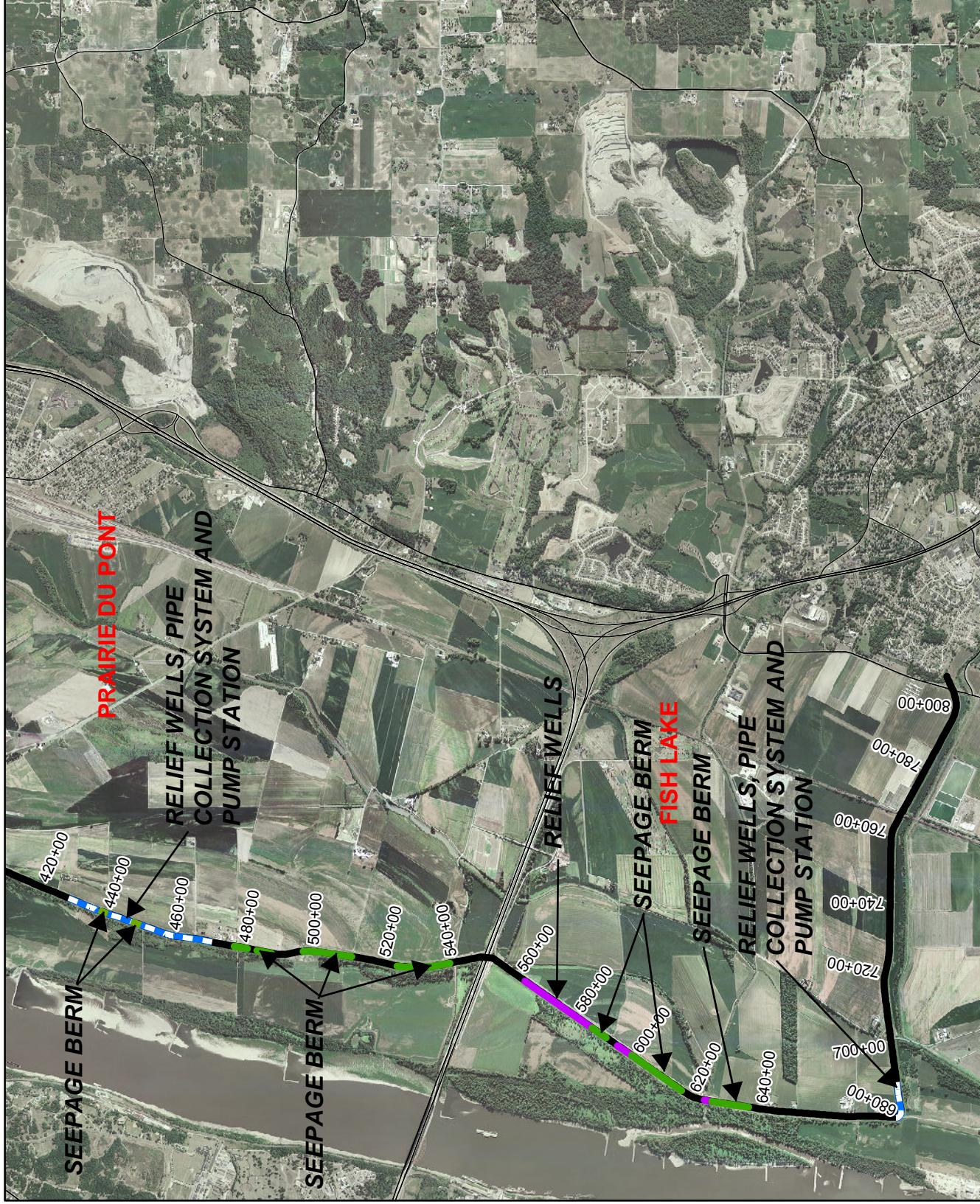
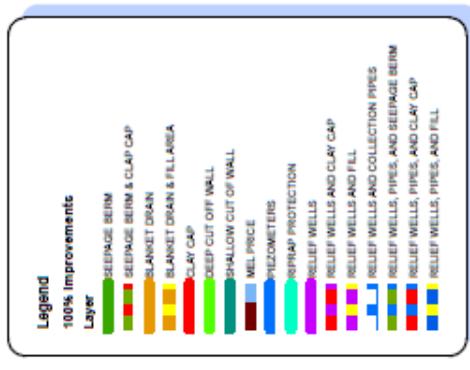
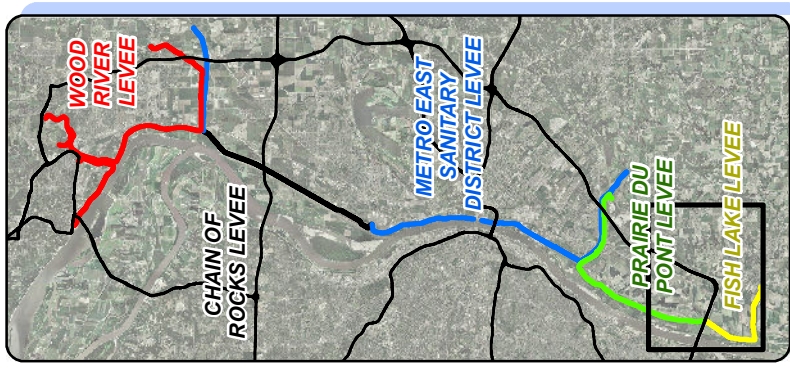












Appendix II

Southwestern Illinois Flood Prevention District Council

Resolution Expressing the Official Intent To Restore the Federally Authorized Level of Mississippi Flood River Protection in the Metro-East

Southwestern Illinois Flood Prevention District Council

RESOLUTION Expressing the Official Intent To Restore the Federally Authorized Level of Mississippi Flood River Protection in the Metro-East

WHEREAS, the Southwestern Illinois Flood Prevention District Council has made great progress towards meeting its goal of fully protecting the Metro-East from a 100-year flood by the end of 2015; and,

WHEREAS, the threat from the Federal Emergency Management Agency to classify the area as prone to flooding will be averted, along with the terrible economic consequences of the action; and

WHEREAS, the Council has demonstrated that the most expeditious and cost-effective approach to improve flood protection over the last several years is to use local funds to undertake critical flood protection projects; and

WHEREAS, the Council cannot continue to delay needed improvements to flood protection because of the lengthy, unpredictable, and costly design and construction process conducted by the U.S. Army Corps of Engineers; and

WHEREAS, the Corps of Engineers is unwilling to comply with local workforce policies; and

WHEREAS, dramatic progress can be made when the pace and cost of construction is determined locally; and

WHEREAS, the design and construction of projects by the FPD can move ahead rapidly and at a far lower cost than by delegating this work to the Corps of Engineers; and

WHEREAS, the FPD has available funds and availability of future federal funding is unknown; and

WHEREAS, the design and construction of projects built by the FPD using local funds may be considered for future Work In-Kind Credit by the Corps of Engineers as allowed by the use of Memoranda of Understanding, the inclusion in Integral Determination Reports, and the amendment of Project Partnership Agreements; and

WHEREAS, economic growth can be expected if the authorized level of protection is being pursued; and

WHEREAS, now is the time to initiate the restoration of the federally authorized level of flood protection in the Metro-East providing the region with a higher level of flood protection, while simultaneously completing the 100-year level projects; and

WHEREAS, the long-term goal of the FPD is to fully restore the federally authorized level of flood protection (Mississippi River elevation of 54 feet on the St. Louis gauge -- also known as the 500-Year flood).

NOW, THEREFORE, It Is Hereby Resolved by the Board of Directors of the Southwestern Illinois Flood Prevention District Council that it is the intent to restore the federally authorized 500-year level of Mississippi River flood protection through the following actions:

1. *Design.* Immediately begin the design of the most critical and cost-effective projects to restore the federally authorized level of flood protection; and

2. *Funding Strategy.* Take immediate steps to implement a funding strategy with the FPD being totally responsible for the design and the construction of flood protection (authorized level) projects. This includes using current surplus funds and judicious borrowing to maximize the available funding for capital expenditures on flood protection through the year 2020 (\$94,500,000 is currently estimated to be available), building the most cost effective and highest priority projects throughout the Counties of Madison, Monroe, and St. Clair, Illinois; and

3. *Workforce Policies.* Comply with all current FPD workforce policies to ensure fair wages and working conditions for project workers, encourage the use of local workers, and avoid any work stoppages that could delay projection completion; and

4. *Levee Districts Participation.* Seek the financial participation of each Levee District to generate additional funds to supplement FPD funding and enable additional construction; and

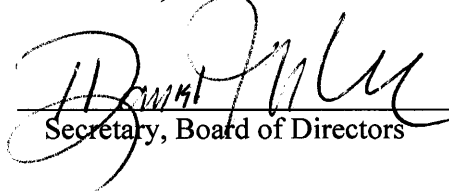
5. *Corps of Engineers Participation.* Notify the Corps of Engineers of the FPD's strategy and request that the Corps expedite projects that are 100% federally funded, such as the emergency design deficiency correction at the Melvin Price Locks and Dam, a project-that was identified as an emergency need six years ago, but still lacks a federally sanctioned permanent design solution and any funding for construction..

If any section, paragraph or provision of this Resolution shall be held to be invalid or unenforceable for any reason, the invalidity or unenforceability of such section, paragraph or provision shall not affect any of the remaining provisions of this Resolution.

This resolution was approved February 18, 2015.



President, Board of Directors



Secretary, Board of Directors

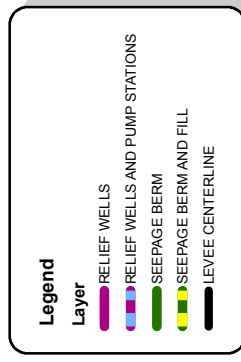
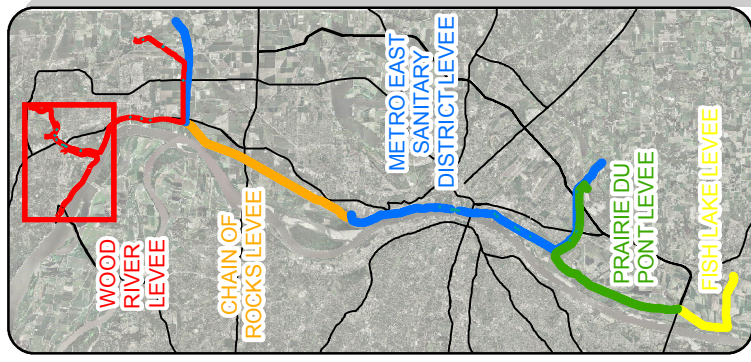
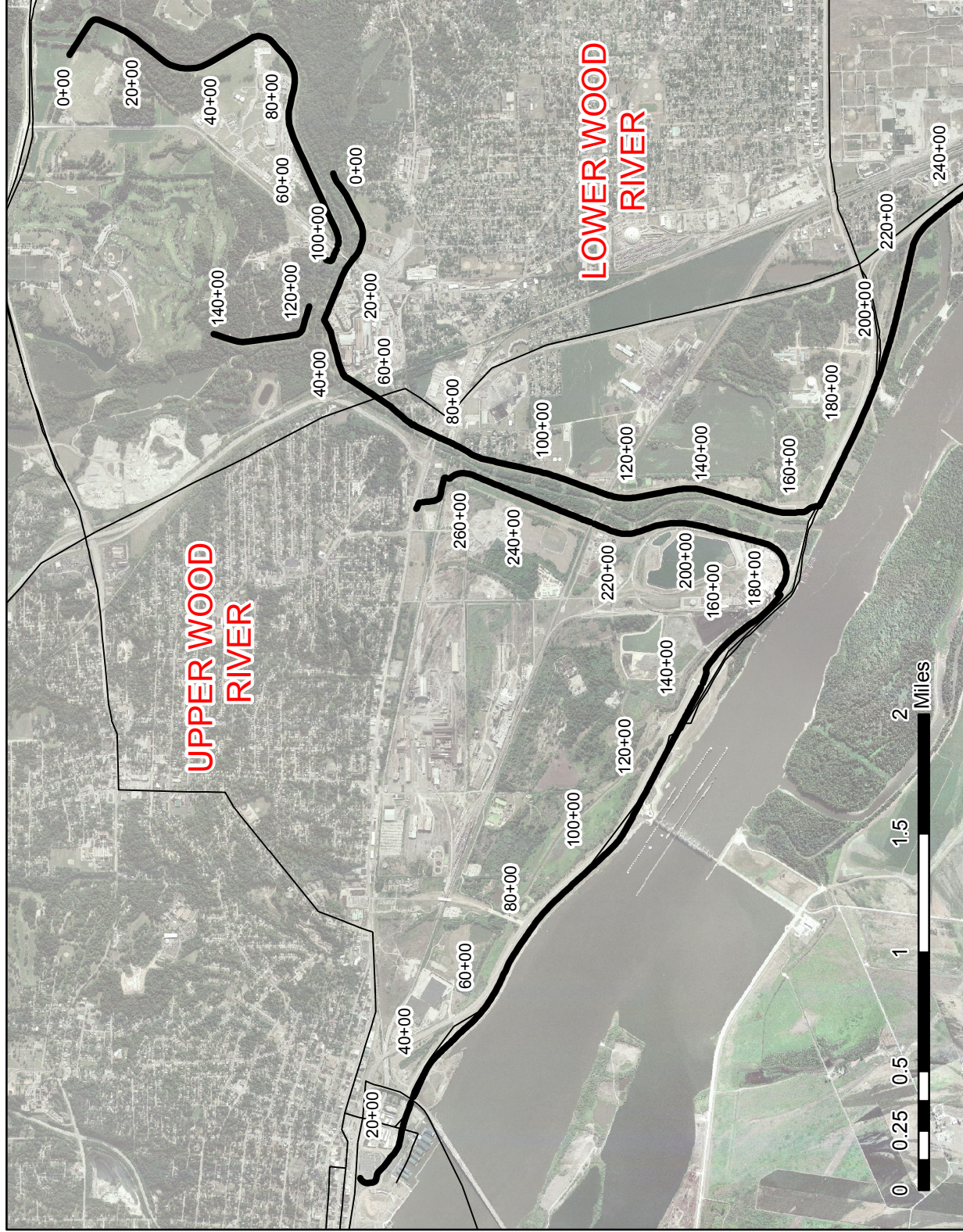
Appendix III

Proposed 500-Year Authorized Level Levee System Improvements

Wood River Levee System

Metro East Sanitary District (MESD) Levee System

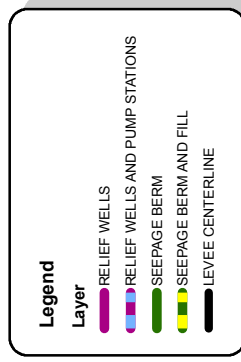
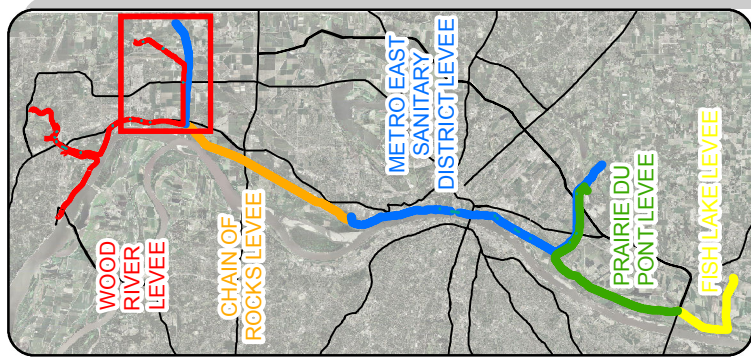
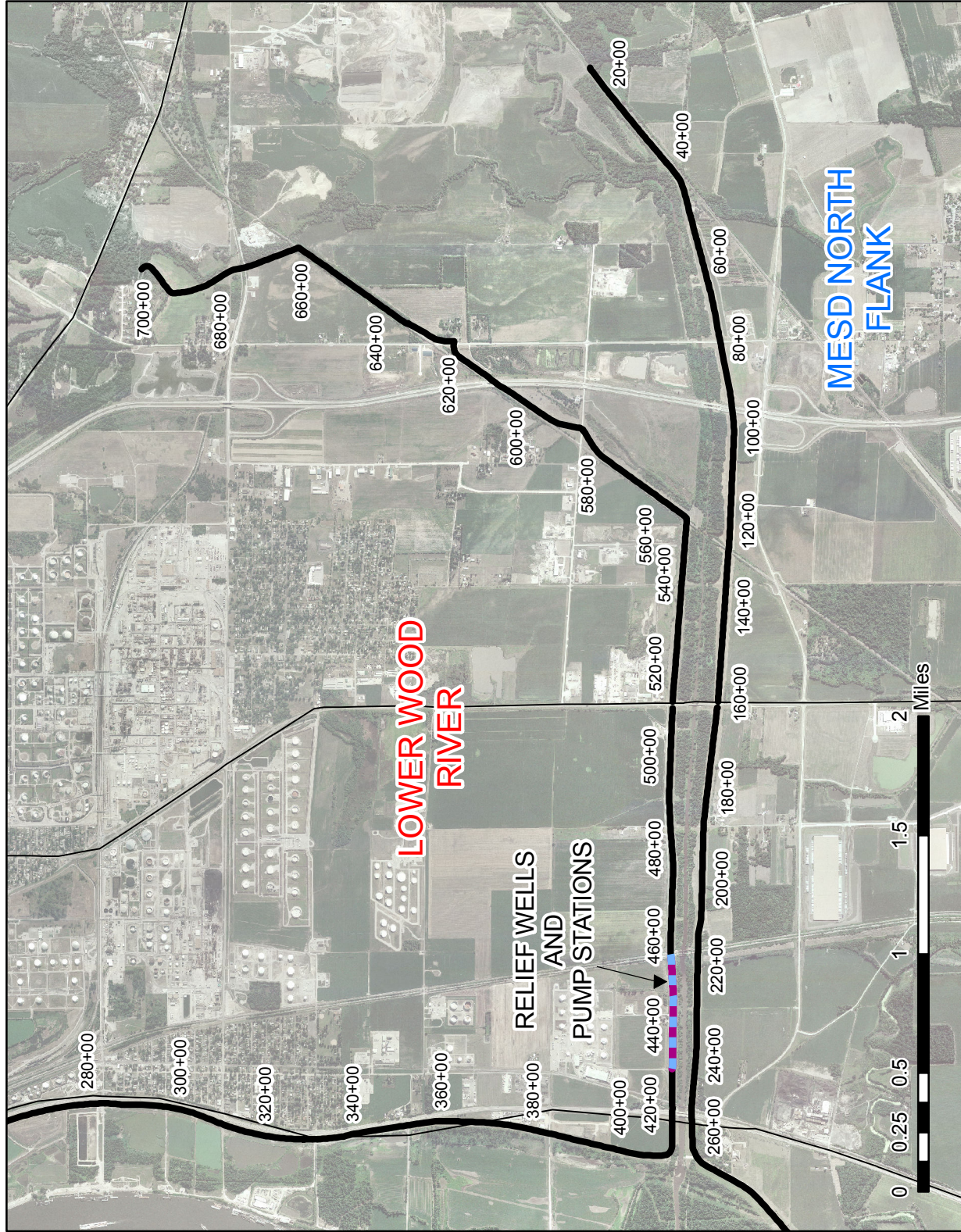
Prairie DuPont/Fish Lake Levee System



31 JUL 2019

AUTHORIZED LEVEL DESIGN

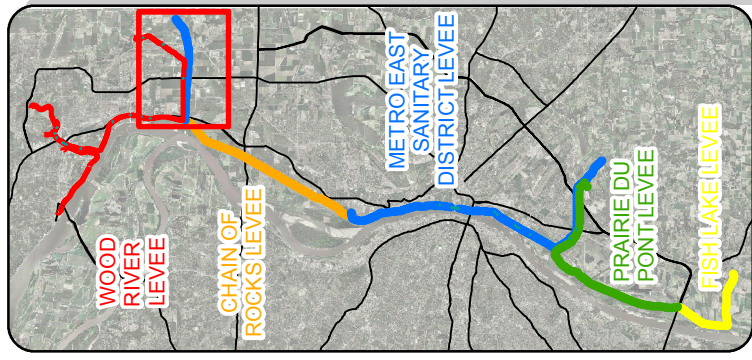
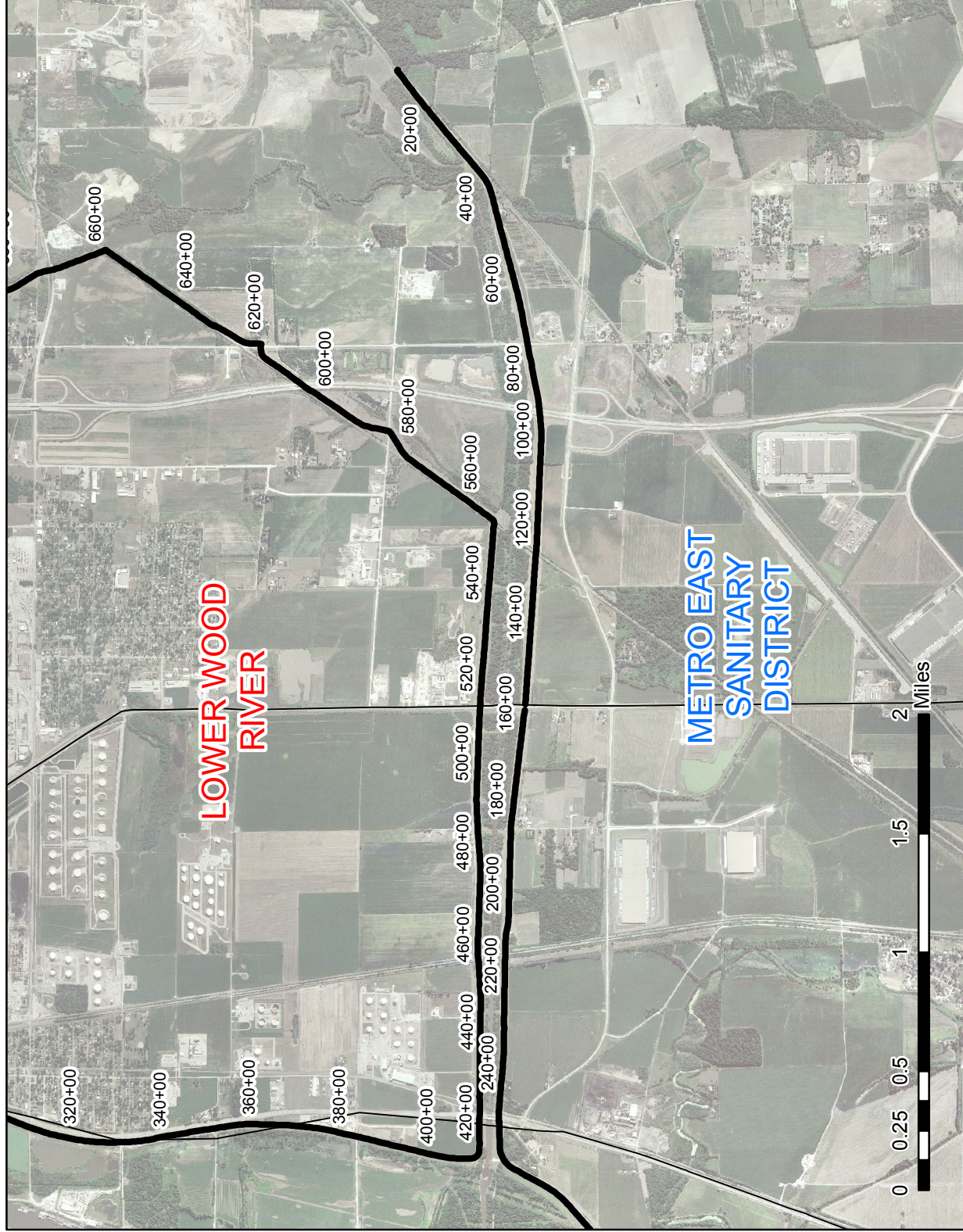
WOOD RIVER LEVEE



31 JUL 2019

AUTHORIZED LEVEL DESIGN

WOOD RIVER LEVEE



Legend

Layer

- RELIEF WELLS
- SEEPAGE BERM
- LEVEE CENTERLINE

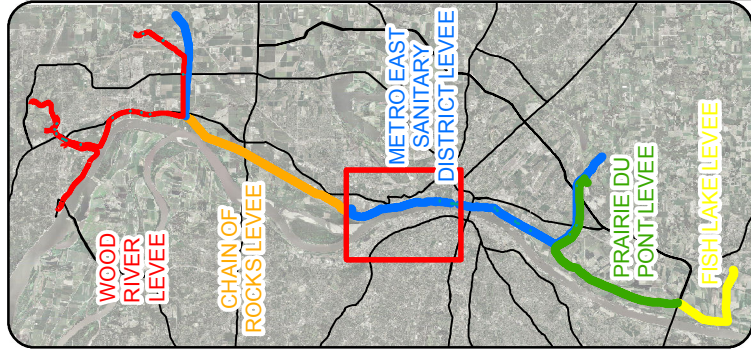
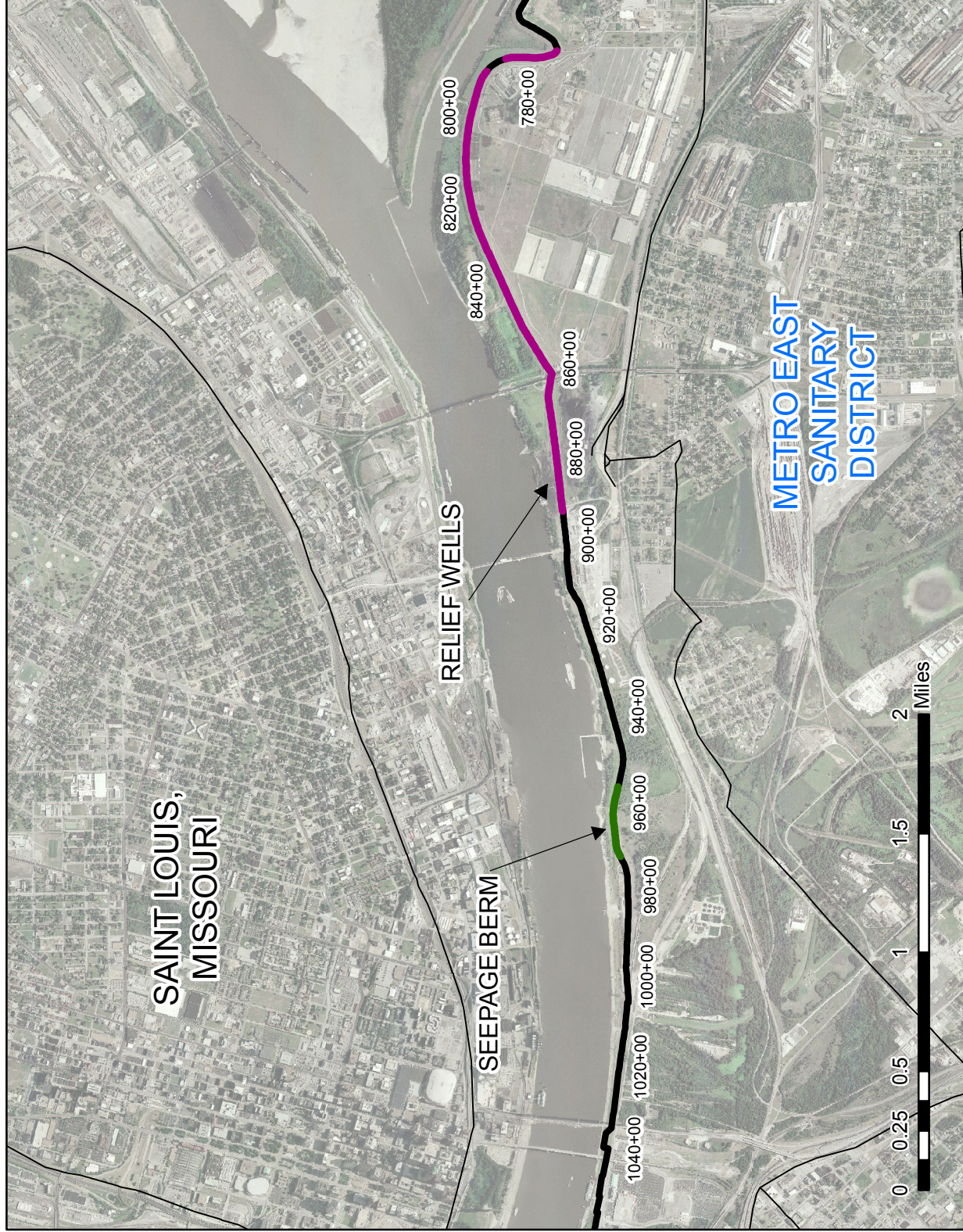


31 JUL 2019

AUTHORIZED LEVEL DESIGN

METRO EAST SANITARY DISTRICT LEVEE





Legend

Layer

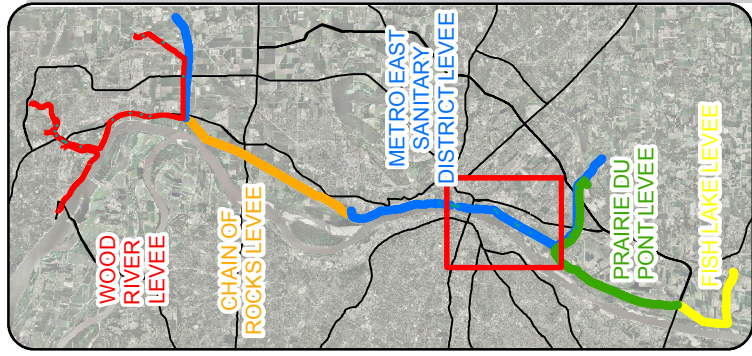
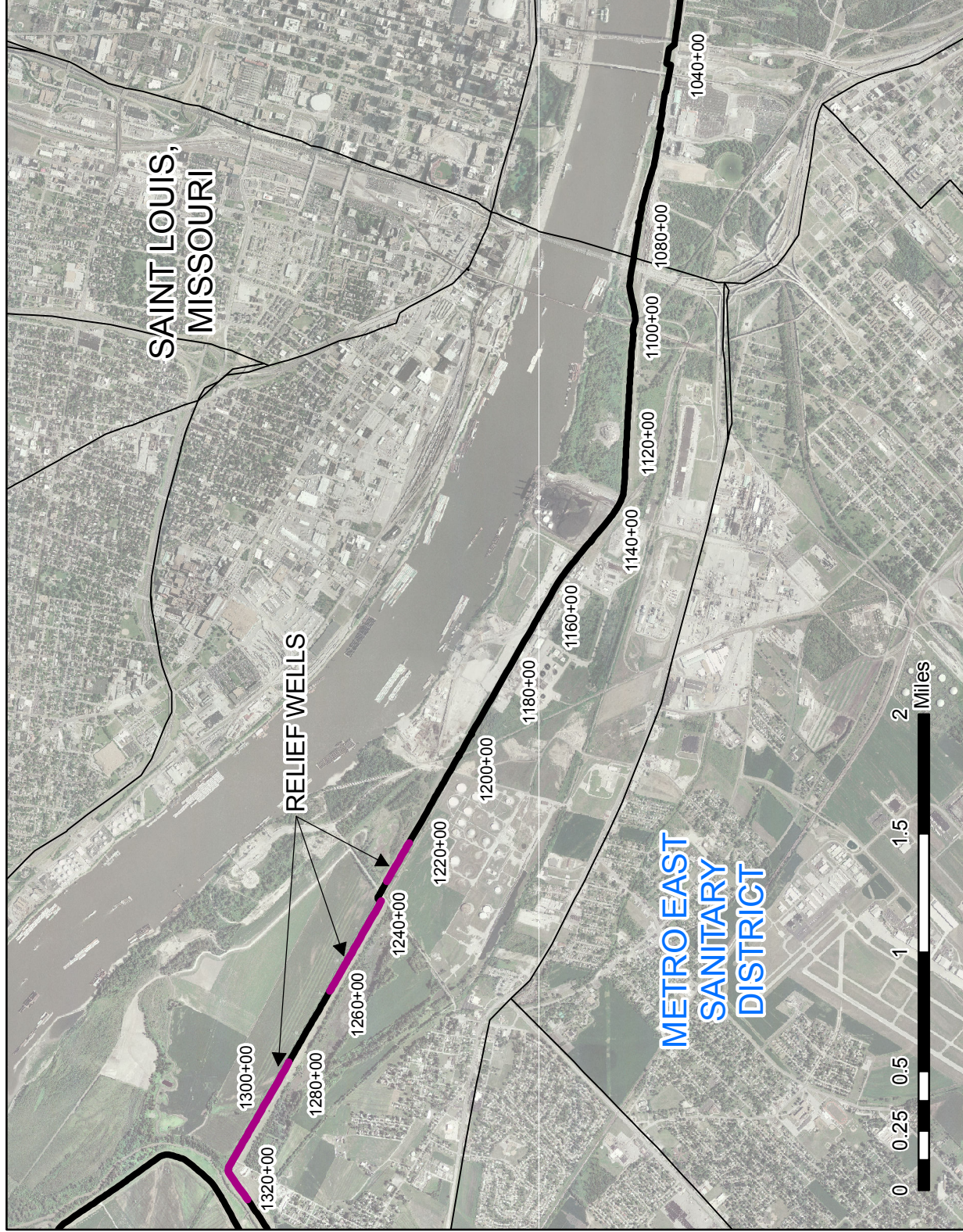
- RELIEF WELLS
- SEEPAGE BERM
- LEVEE CENTERLINE



31 JUL 2019

AUTHORIZED LEVEL DESIGN

METRO EAST SANITARY DISTRICT LEVEE



Legend

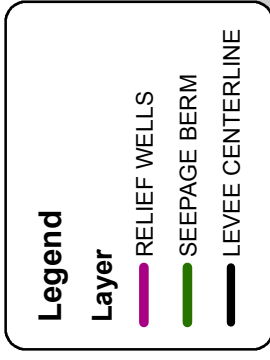
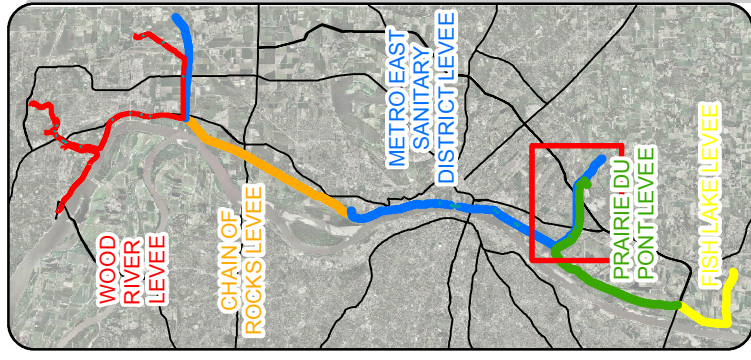
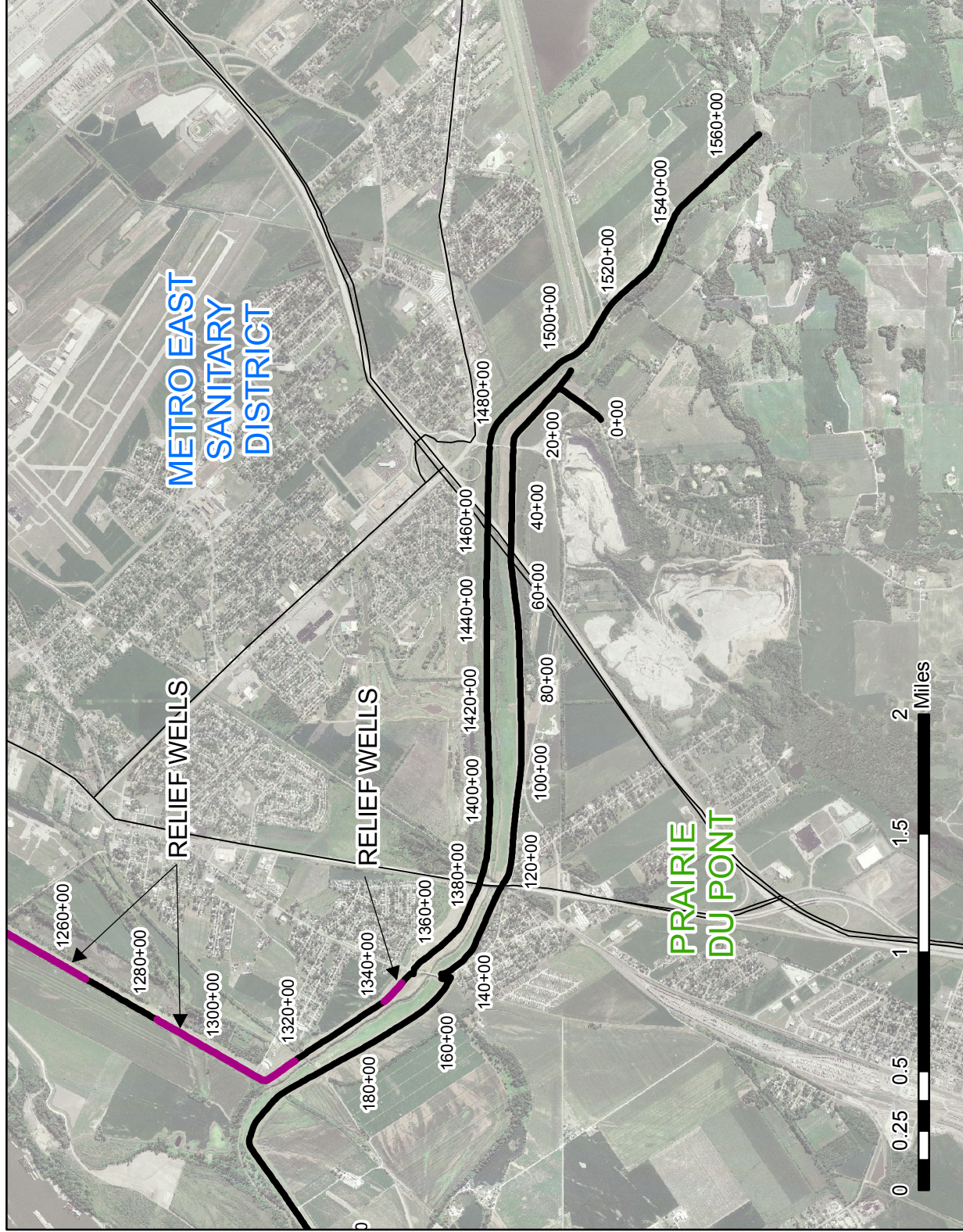
Layer

- RELIEF WELLS
- SEEPAGE BERM
- LEVEE CENTERLINE



31 JUL 2019





31 JUL 2019

AUTHORIZED LEVEL DESIGN

METRO EAST SANITARY DISTRICT LEVEE

AUTHORIZED LEVEL DESIGN

PRAIRIE DU PONT/FISH LAKE LEVEE

31 JUL 2019

