

Prepared Statement of Joel R. Euler
Given to the Committee on Environment and
Public Works
On Wednesday April 17, 2019 at
Kaufman Hall, Glenwood, Iowa

Greetings my name is Joel Euler and I am an attorney with offices located in Troy, Kansas. Troy is located 10 miles west of St. Joseph, Missouri. As a part of my general law practice I represent six drainage districts located in Missouri and Kansas along a stretch of the Missouri River which begins at the Kansas-Nebraska line and ends just north of Atchison, Kansas. I have assisted these districts with regulatory, operation and maintenance, flood flight and related activities starting with the great flood of 1993 and including the events of 1998, 2009, 2011, and 2019.

The districts I represent are primarily agricultural in nature, however, two districts, the Elwood Gladden Drainage District and the South St. Joseph Drainage and Levee District are what I refer to as hybrid or combination districts. These Districts contain agricultural, industrial/commercial and residential interests. Recent estimates value the assets protected by the structures to be in excess of \$2.7 billion with an estimated annual input in the local economy in the amount of \$100 million.

I have been invited to visit with you today regarding flood risk management and flood recovery efforts within the Missouri River basin as it pertains to the March, 2019 flood event. In that regard, I would like to speak about four areas which I believe are directly related to the event in question.

1. The Missouri River Mainstem Reservoir System Master Control Manual
2. The Missouri River Recovery Program
3. Policies and procedures relating to the repair and improvement of existing levee structures
4. The Corps of Engineers involvement in the 2019 flood event

THE MISSOURI RIVER MAINSTEM RESERVIOR SYSTEM MASTER CONTROL MANUAL

The retention and release of water in the Missouri River reservoirs is controlled by the aforementioned Master Manual. The purposes for operation of the system can be found in section 9 of the 1944 Flood Control Act and are as follows:

1. Flood control
2. Navigation
3. Hydropower
4. Water supply
5. Fish and wildlife
6. Irrigation
7. Water quality control
8. Recreation

The Master Manual is designed to facilitate the uniform operation of all reservoirs on the Missouri River mainstem. The Master Manual is necessary as each reservoir has its own operations manual and the Master Manual provides for the operation of each reservoir in conjunction with the other.

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The Corps of Engineers retains the authority to revise the master manual pursuant to Corps Engineering Regulation 1110 –2-240. Which indicates that water control plans will be revised as necessary to conform with changing requirements resulting from developments in the project area and downstream, improvements in technology, improved understanding of ecological response and ecological sustainability, new legislation, reallocation of storage, new regional priorities, changing environmental conditions and other relevant factors. The Manual also indicates that the goal is to maintain the flexibility that is required for effective operation of the systems.

The Master Manual also outlines various considerations taken into account when the control plan is developed or modified and indicates that input from external agencies, entities and stakeholders which will be affected will be taken. Further, the Manual indicates that the projects owned and operated by the Corps will be developed in concert with all basin interests which may be impacted or influenced by the project regulation.

While there are eight authorized purposes for operation of the system there is not any stated prioritization made between those purposes. As such, at times there is question among the downstream stakeholders as to the motives for operation of the system. I believe that it would be wise to prioritize the eight purposes in a fashion which placed an emphasis on flood control and thereafter prioritize the remaining seven purposes. This would give certainty to the stake holders as relates the basis of operation of the system.

I believe by doing this the system would be operated in a manner which would ensure that events of the type which have recently occurred and have occurred in the past would be greatly reduced. I also understand that operation in this fashion may reduce the effectiveness of the system to facilitate the other purposes, however, it would seem that the resources saved from continual repair operations resulting from high water events could be diverted to facilitate these other purposes.

THE MISSOURI RIVER RECOVERY PROGRAM

The Missouri River Recovery Program is used by the Corps of Engineers to purchase real estate which lays between a levee structure and the banks of the Missouri River. The program was initially conceived to assist in the protection of the federally listed species, piping plover, interior least turn and pallid sturgeon and address concerns which were caused by the Corps of Engineers Bank Stabilization and Navigation Project.

After acquisition the real estate is used to create chutes, backwaters, shallow water habitat, emergent sandbar habitat and cottonwood management plans to ensure the survival of the aforementioned species as well as other lifeforms located in the Missouri River basin. It would appear that an unintended consequence of the program is that it causes a degradation in the foreshore area (area between the levee structure and river bank) which acts to impede the flow of water during a flood event.

When the levees were initially designed the goal was to move the water downstream as quickly as possible, this was aided by having little or no substantial impedance in the foreshore area. This

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allowed the water to travel at a higher rate of speed which reduced both flooding and extended flood events.

The Missouri River Recovery Program has modified the foreshore area in that it has allowed the growth of cottonwood trees and underbrush and has created other structures which slow the water during a flood event. As the water slows it allows for the deposit of silts which increases the height of the foreshore and reduces the protective capability of the structure. In addition, it slows the speed with which the floodwater can leave the affected area thereby extending flood fight efforts and increasing the chance of a breach or overtop of a levee structure.

It should be noted that the Corps has recently modified the Master Manual to remove the spring rise and reservoir unbalancing. It has yet to be seen what effect these decisions will have on the ability to control water flow past the Gavin's Point dam but I believe these are steps in the right direction.

It should be noted that the Corps of Engineers is not the only agency with programs of this type the NRCS engages in the wetlands reserve program as well as an emergency watershed easement program which when placed in the foreshore of the levee structure have the same effect as discussed above.

To fully address this issue it will be necessary to determine the impacts of the Missouri River Recovery Program and like programs and to mitigate the impact they have on the management of the water in the Missouri River basin.

POLICIES AND PROCEDURES RELATING TO THE REPAIR OF EXISTING LEVEE STRUCTURES

In July, 1993 The Elwood Gladden Drainage District levee structure was overtopped and subsequently failed. After the failure and in May, 1995 the Corps of Engineers at the request of the Drainage District conducted a Reconnaissance Study to determine the federal and local interest in improving the structure. The Reconnaissance Study was completed in 1996 and recommended that further study be conducted.

Thereafter in May, 1999 a study to determine the feasibility of making improvements to the levee structure was commenced. The Feasibility Study was completed in September, 2006 and approved by the Northwestern Division of the Corps of Engineers in March, 2007. At this time the estimated cost to the repair was \$32,777,000.00.

In 2009 the Corps of Engineers and the local sponsor executed a Design Agreement. In 2014 a Project Management Plan was executed and at this time it was estimated that the project would cost approximately \$66,833,014.00. In January, 2017 the final cost estimate for the project was \$70,700,000.00.

A period of 22 years elapsed between the Reconnaissance Study to determine the interest of making an improvement to the Levee structure and the 2017 funding of the project. During that time the process was slowed by the failure of the federal government to adequately fund its

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portion of the project. Ultimately the funding shortages and time delays resulted in an increase in the overall cost of the project by approximately 50%.

The process for the repair or upgrade of an existing flood control project is the same process used to determine whether or not a new flood control project should be constructed and construction of the same. Part of this process includes a cost-benefit analysis to determine whether or not the project as enough benefit to the affected area to justify the expenditure of funds to construct the project. This along with other environmental and comment requirements to extend the time between a decision is made to repair or upgrade an existing structure and the time that the repair can be made.

It would seem that if a project already exists it would be feasible to do away with a number of the prerequisites for construction. This would allow a streamlining of the construction process and effectuate repairs and upgrades to existing flood control projects in a more timely fashion. Further, it would make sense to apply funds used in the repair of damages arising from flood events to activities which would prevent future flood damages. In other words it does not seem rational to continue to repair a structure which will not protect at the necessary levels because there are prerequisites to new construction which adversely affect the maintenance and upgrade of existing structures.

THE CORPS OF ENGINEERS INVOLVEMENT IN THE 2019 FLOOD EVENT

Finally, I want to comment on the effort of the Corps of Engineers during the March, 2019 high water event. To put this in perspective it is necessary to understand what I believe has been a transition of the Corps of Engineers from a hands-off advisory branch of the government to that of a working partner in both flood fight activities as well as flood repair and improvement activities.

In 1993 the Missouri River was at a 27 foot flood stage and on the side of the Elwood Gladden levee structure for a period in excess of 90 days. The result was an overtopping and subsequent breach of the levee structure. During the days and weeks leading up to the breach the Corps of Engineers was difficult to reach and offered little or no assistance with regard to flood fighting efforts, levee monitoring or river level determination. In fact on the date that the levee overtopped and breached the only advice received from the Corps of Engineers was to stay off of the levee structure.

After the breach of the levee structure water began to infiltrate the protected area and the structure began to act as a teacup retaining the water which was flowing into the protected area. When the District sought advice about how to resolve this issue no member of the Corps could be found.

Subsequent to that event the Corps increased its contact with the District and began to become more involved with assistance in levee operations. It conducted instructional courses in sandbagging and other flood fighting operations as well as other instruction relative to levee maintenance. With each subsequent high water event the Corps has increased its knowledge base and improved the service it has provided the districts I represent. In short, during high water

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events, the Corps has gone from a necessary evil to an invaluable partner in defending against potential flooding.

In both 2011 and 2019 the Corps provided around-the-clock assistance through its Emergency Operations office and on an individual basis. On more than one night during the recent event calls were made to Corps staff at all hours of the night, each call was taken and question answered. In addition, the Corps had a minimum of two staff members daily, on each of the six units I represent during the flood event. At the r-471-460 and l-455 structures where they felt overtopping was imminent and there was a risk to life they stationed personnel at the local emergency operations center around-the-clock for the 36 to 48 hours before during and after the river crest. Their presence gave a sense of confidence to the flood fighting team and comfort to the community as a whole. After the waters receded the Corps was on the scene to make an evaluation of the damages and assist with immediate repairs if necessary.

As specifically relates to the Kansas City District of the Corps of Engineers it is impossible for me to overstate the role it and its employees played in the flood fighting event as well as its ongoing support as relates to the current levee upgrade project on the l-455 and r-471-460 structures. In that regard, I believe the following individuals merit specific recognition:

- John Grothaus, Chief, Formulation Section
- Melissa Corkill, Chief, Civil Works Programs and Project Management Branch
- Geoff Henggeler, Chief, Civil Branch
- Craig Weltig, Civil Works Project Manager
- Scott Mensing, Civil Works Project Manager
- Jake Owen, Chief, Geotechnical Branch for Levee Safety
- Derek Petre, Geotechnical Engineer for Levee Safety
- Eugene J. Kneuvean, Chief Rediness, Contingency Office, Emergency Operations

If you have questions about the information contained in my statement or this topic generally I will be happy to answer them.

Very truly yours,
EULER LAW OFFICES, LLC
Joel R. Euler