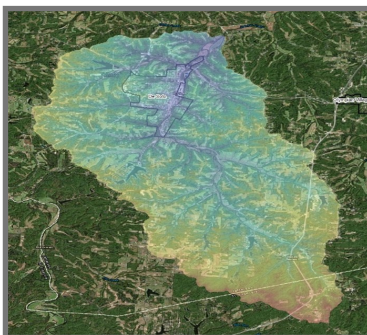


UPPER JOACHIM CREEK

FLOODPLAIN MANAGEMENT PLAN



SUMMARY:

The purpose developing the Floodplain Management Plan (FMP) is to enhance the community's flood resilience. An effective FMP offers options to lessen the impacts of flooding to the community's economy and the lives of those living near the many waterways. Once adopted, the FMP, maintained as a living document, is continually updated as new information arises, or as additional goals and strategies are developed. The goals of an FMP include:

- Reducing loss of life, injury, and hardship due to floods;
- Reducing flood-related damages;
- Reducing public expenditures for construction of additional flood damage reduction measures, emergency response actions, and post-disaster assistance; and,
- Preserving and enhancing natural floodplain values for fish and wildlife habitat along with their attendant benefits of groundwater recharge, moderation of floods, water quality improvement, and reduced erosion and sedimentation.

The FMP focused on the 1-percent Annual Chance of Exceedence (ACE), which refers to flood events that have a one percent probability of occurring in any given year, using existing Flood Insurance Rate Maps (FIRMS) from 2006 and preliminary FIRMS from 2019. The hydraulic model used FIRMS throughout the study is the same model used for the Federal Emergency Management Agency's (FEMA) Flood Insurance Study.

POTENTIAL MEASURES STUDIED:

Structural Measures	Nonstructural measures	Nonstructural and Nonphysical Measures
Levees	Elevation	Flood Warning Systems
Large Floodwalls	Relocation	Flood Insurance
Large Berms	Buyout/Acquisition	Floodplain Mapping (FIRM)
Flood Gates	Dry Floodproofing	Flood Emergency Preparedness Plans
	Wet Floodproofing	Land Use Regulations
	Small Berms	Evacuation Plans
	Small Floodwalls	Risk Communication

SILVER JACKETS PROGRAM

Silver Jackets teams across the United States bring together multiple state, federal, and local agencies, as well as non-governmental agencies, to leverage resources, learn from one another.

By applying their shared knowledge, the teams enhance response and recovery efforts when such events do occur.

The Upper Joachim Creek Floodplain Management Plan (FMP) was developed as an interagency Flood Risk Management (FRM) study via the Silver Jackets team funded under the USACE Flood Plain Management Services (FPMS) program.



UPPER JOACHIM CREEK

FLOODPLAIN MANAGEMENT PLAN

TOOLS

Land Use Policies and Regulations	EFFECTIVE	RECOMMENDED
Public Alert Flood Warning System	EFFECTIVE	RECOMMENDED
Warning Dissemination, Multi-Media	EFFECTIVE	RECOMMENDED
Flood Emergency Preparedness Plans (or EAP)	EFFECTIVE	RECOMMENDED
Development Policies – Moratorium	EFFECTIVE	NOT RECOMMENDED
Structure Elevations	EFFECTIVE	RECOMMENDED
Buyouts (Structure and Land Acquisition)	EFFECTIVE	RECOMMENDED
Flood proofing (Wet & Dry)	EFFECTIVE	RECOMMENDED
Community Education and Advocacy	EFFECTIVE	RECOMMENDED
Temporary Flood Risk Adaptive Measures	EFFECTIVE	RECOMMENDED
Information and Education	EFFECTIVE	RECOMMENDED
Flood Insurance	EFFECTIVE	RECOMMENDED
Community Rating System (CRS)	EFFECTIVE	RECOMMENDED
Local Drainage and Utility Protection	EFFECTIVE	FURTHER EVALUATION NEEDED
Tax Adjustments	EFFECTIVE	FURTHER EVALUATION NEEDED
Post-Flood Recovery Processes	EFFECTIVE	RECOMMENDED
Wetlands, Stream, and Riparian Protection and Restoration	EFFECTIVE	RECOMMENDED
Enhancement of Recreation and Education Opportunities	EFFECTIVE	RECOMMENDED
Dredging of Joachim Creek to Increase Channel Capacity	NOT EFFECTIVE	NOT RECOMMENDED
Accumulated Sediment Deposit/Debris Removal from Joachim Creek	EFFECTIVE	FURTHER EVALUATION NEEDED
National Guard Involvement	EFFECTIVE	FURTHER EVALUATION NEEDED
Bridge and Highway (re) Construction	---	ANALYSIS NOT PERFORMED
Detention/Retention Basins	EFFECTIVE	FURTHER EVALUATION NEEDED
Levees and Floodwalls	EFFECTIVE	FURTHER EVALUATION NEEDED

UPPER JOACHIM CREEK FLOODPLAIN MANAGEMENT PLAN ACTION PLAN:

- 1) Adopt the Upper Joachim Creek FMP
- 2) Develop a comprehensive public outreach plan
- 3) Adopt higher regulatory floodplain management standards
- 4) Maintain and expand the existing flood warning systems
- 5) Join the Community Rating System (CRS)
- 6) Implement nonstructural recommendations

IMPLEMENT NONSTRUCTURAL RECOMMENDATIONS:

After the USACE's National Nonstructural Committee visited De Soto and Jefferson County and performed visual assessments of 10 representative structures, the Committee identified potential mitigation measures to reduce flood risk, decrease flood damages, and to potentially eliminate life-loss. These findings were then further analyzed to include regulatory and economic criteria, which resulted in final recommendations, which is described below.

The 1-percent ACE flood event recommendations identify the cost and approach to mitigating all 229 structures that are expected to be damaged during such a potential flood event. Of the structures located within the floodplain in De Soto, 85 (39%) are recommended to be elevated, 70 (31%) are recommended to be acquired, 42 (19%) to be flood proofed, and the rest of the 32 structures (11%) had inundation below the first floor, and therefore only required either a sewer check valve or relocation of utilities.

UPPER JOACHIM CREEK FMP PARTNERS:

U.S. Army Corps of Engineers, U.S. Geological Survey, Federal Emergency Management Agency—Region VII, Missouri State Emergency Management Agency, Missouri Department of Transportation, Missouri Department of Natural Resources, City of De Soto & Jefferson County, MO, Citizens' Committee for Flood Relief, East-West Gateway Council of Governments, and Thriving Earth Exchange American Geophysical Union.