



Missouri

Missouri River-Flood Forecast Inundation Map



FOR MORE INFORMATION: http://water.weather.gov/ahps2/inundation/inundation_google.php?gage=levk1 AND <http://www.nfrmp.us/state/MissRiverPilot.cfm>

Project Description

- Pilot Project for USACE Institute of Water Resources
- Prototype flood inundation maps for 21 miles of a very large and dynamic river, the Big Muddy, or Missouri River
- Expand on 2011 flood maps and Interagency Levee Task Force
- Flood Forecast Inundation Map
- National Weather Service (NWS) Advanced Hydrologic Prediction Service (AHPS) website
- A warning system with NWS forecast point tied to the gage for and action flood stages, developed by NWS and the community
- Peak flow timing, 10 days

Flood Risk Reduction Outcomes

- Enables risk informed decision making for potential property owners prior to flood events
- Enables actionable risk reduction, including evacuation, for those willing to take steps when flooding is imminent
- Allows emergency responders to see flooded routes in advance
- Presents visual of flooding with all-the-time easy access on web
- Extends risk information beyond the base flood or 1%-AEP
- Prevents needless flood fighting efforts, which reduces costs
- Communities can claim credit under the FEMA Community Rating System for Activity 610: Flood Warning and Response

Challenges Overcome / Continuing Challenges

- This sediment laden river is fast flowing and full of mud and silt, a challenge for various water resource uses
- The Missouri River floodplain is extremely flat compared to other NWS AHPS sites in upland areas
- Process and product
- Process requires new gage at one point
- Process had to address levees
- Capacity building for a new gage (NWS to make site daily forecast point)

Partners and Project Cost

Agency	Investment
State Risk Management Team	\$4K In-kind
NOAA NWS	\$30K In-kind
USACE	\$83K
USGS	\$4K In-kind
Counties and cities	\$24K In-kind
Gage	\$15k
O&M (gage)	~\$15k
FEMA	\$1K In-kind
TOTAL	\$176,000

Successes/Best Practices

- Developed a survey for the State Emergency Management Agency (SEMA) to collect feedback on map elements that would better serve public
- Established a consistent and repeatable process for future reaches to be mapped, including states outside of Missouri
- New maps assist in managing future development
- Leveraged NWS quality assurance review

USACE Project Point of Contact

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Missouri River-Flood Forecast Inundation Map



Data Type

- Inundation Levels
- Flood Categories
- Current/Forecast

Inundation Levels

NAVD88	Stage
779.7*	37.1*
778.7*	36.1*
Record Crest: 35.34 ft	
777.7*	35.1*
776.7*	34.1*
775.7*	33.1*
774.7*	32.1*
773.7*	31.1*
772.7*	30.1*
Major Flooding Begins	
771.7*	29.1*
770.7*	28.1*
769.7*	27.1*
768.7*	26.1*
767.7*	25.1*
766.7*	24.1*
Moderate Flooding Begins	
765.7*	23.1*
764.7*	22.1*
763.7*	21.1*
762.7*	20.1*
Minor Flooding Begins	
761.7*	19.1*
760.7*	18.1*

Hydrograph River at a Glance

Print this map

Missouri River at Leavenworth, KS (LEVK1)

Data Type

- Inundation Levels
- Flood Categories
- Current/Forecast

Inundation Levels

NAVD88	Stage
777.5	36.9
778.5	35.9
Record Crest: 34 ft	
777.5	34.9
776.5	33.9
775.5	32.9
774.5	31.9
773.5	30.9
Major Flooding Begins	
772.5	29.9
771.5	28.9
770.5	27.9
769.5	26.9
768.5	25.9
767.5	24.9
Moderate Flooding Begins	
766.5	23.9
765.5	22.9
764.5	21.9
763.5	20.9
Minor Flooding Begins	
762.5	19.9
761.5	18.9
760.5	17.9
Near Flooding Begins	
759.5	16.9
758.5	15.9
757.5	14.9
756.5	13.9
755.5	12.9
754.5	11.9
753.5	10.9
752.5	9.9
751.5	8.9
750.5	7.9
749.5	6.9
748.5	5.9
747.5	4.9
746.5	3.9
745.5	2.9
744.5	1.9
743.5	0.9
742.5	0.0

Current Stage: 4.3 ft at 05/05/2014 08:00:00 UTC

Selected Inundation Level: NAVD88: 767.5 stage: 24.1* ft

Selected inundation level is in yellow.

National Observations Inundation Locations Inundation Google

http://water.weather.gov/ahps2/inundation/inundation_google.php?gage=levk1

Weather Forecast Office Kansas City/Pleasant Hill, MO Missouri Basin River Forecast Center

Hydrograph River at a Glance Download Inundation Mapping

Print this map Find your location by address or ZIP code: Go

Map Satellite

Documented levee, shown inundated (left)

2011 flooding in Parkville called for setup of this portadam

Water Depth in Feet

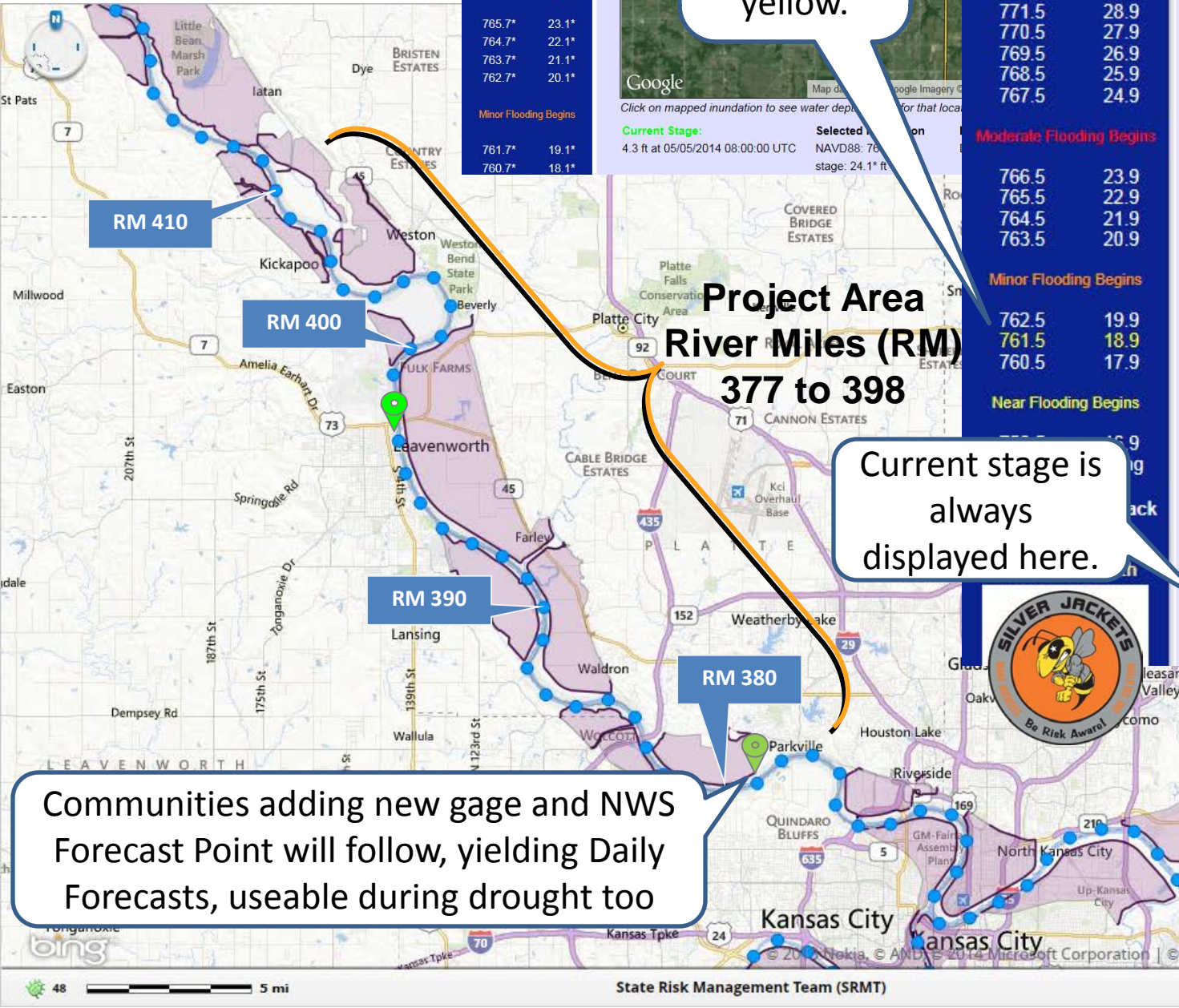
37.1'
32.0'
28.0'
24.0'
20.0'
16.0'
12.0'
8.0'
4.0'
0.0'

Gauge Location

About Inundation
Download Dataset (s)
FAQ
User Guide
Inundation Sites
Inundation Legend

Same reach, inundation maps released prior to 2011 flooding

Current stage is always displayed here.



Communities adding new gage and NWS Forecast Point will follow, yielding Daily Forecasts, useable during drought too

