

Public Hearing Agenda

5:30 p.m. - Introduction and Hearing Guidelines

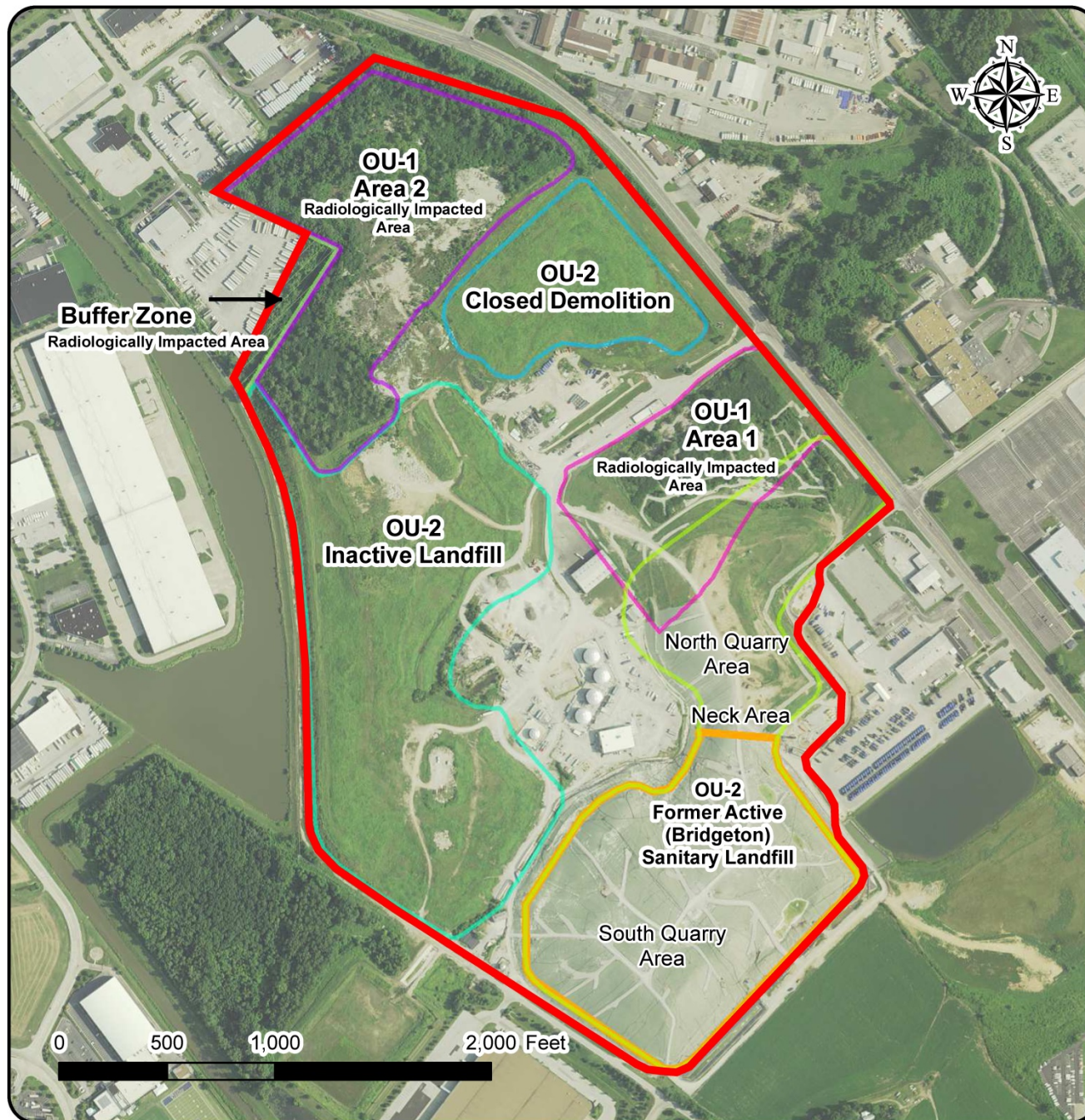
5:45 p.m. - Bridgeton Stormwater Permit Presentation

6:15 p.m. - Record Public Comments

7:15 to 7:30 p.m. - Wrap up and adjourn

Public Hearing Purpose

- Record comments on the proposed draft renewal of the MoDNR stormwater permit
- Response to questions and comments will be provided in writing and posted to our website
- Overview of regulatory oversight
- Summarize wastewater and stormwater at the facility
- Explain the National Pollutant Discharge Elimination System (NPDES) permitting process
- Next steps

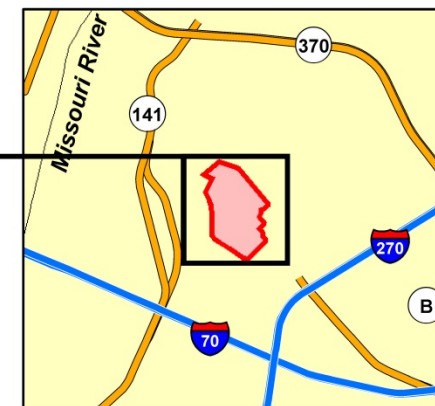


West Lake Landfill Site Location and Operable Units

Legend

- West Lake Landfill Boundary
- OU2 - Former Active Sanitary Landfill
- OU1 Area 1 (Phase 1 report)
- Approx Subsurface Smoldering Event
- OU2 - Closed Demolition Landfill
- OU2 - Inactive Landfill
- Buffer Zone portion of Crossroad Property

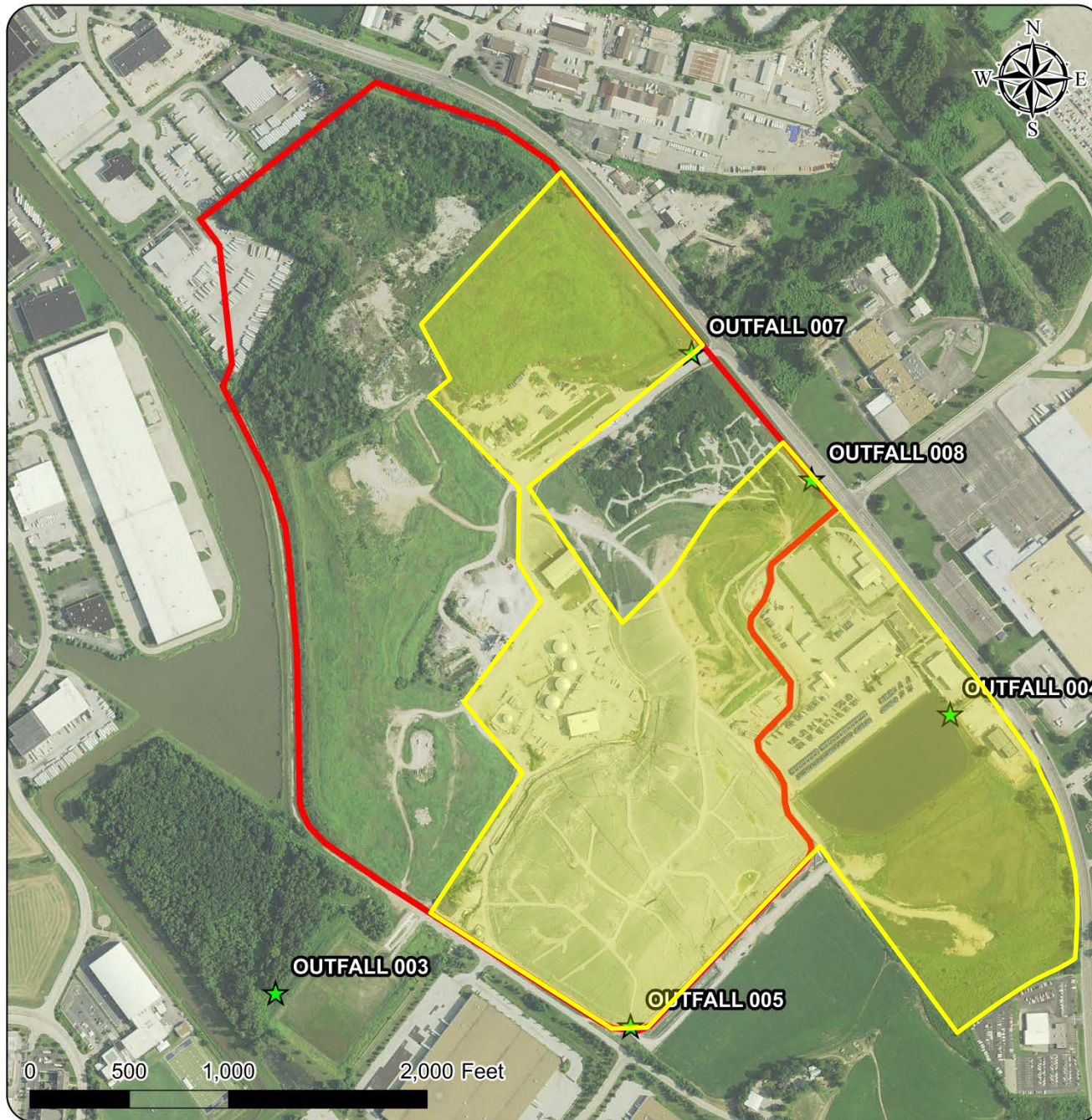
Operable Unit 1 = Radiological Areas
 Operable Unit 2 = Nonradiological Areas
 Note: Boundaries are approximate and subject to change.



Regulating Water at Bridgeton Landfill

Department of Natural Resources (MoDNR):

- Stormwater discharges
 - NPDES Permit for applicable portions of the site
 - Operable Unit 2, Former Active (Bridgeton) Sanitary Landfill
 - Closed Demolition Landfill
 - Other operational areas; transfer station, wastewater treatment plant and soil borrow area



MSOP Stormwater Outfalls

Legend

- ★ Outfalls
- West Lake Landfill
- NPDES Boundary



Aerial Photography: National Agriculture Imagery Program - 2014

Although data sets used to create this map have been compiled by the Missouri Department of Natural Resources, no warranty, expressed or implied, is made by the department as to the accuracy of the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the department in the use of these data or related materials.

Department of Natural Resources (MoDNR):

- Stormwater discharges
 - NPDES permit since 1991
 - The draft permit is a renewal
 - Five Outfalls; #003, 004, 005, 007 and 008
 - Old Fee Fee Creek and Tributary to the Missouri River
- The Bridgeton NPDES Permit does not authorize direct discharge of wastewater or leachate to waters of the state.

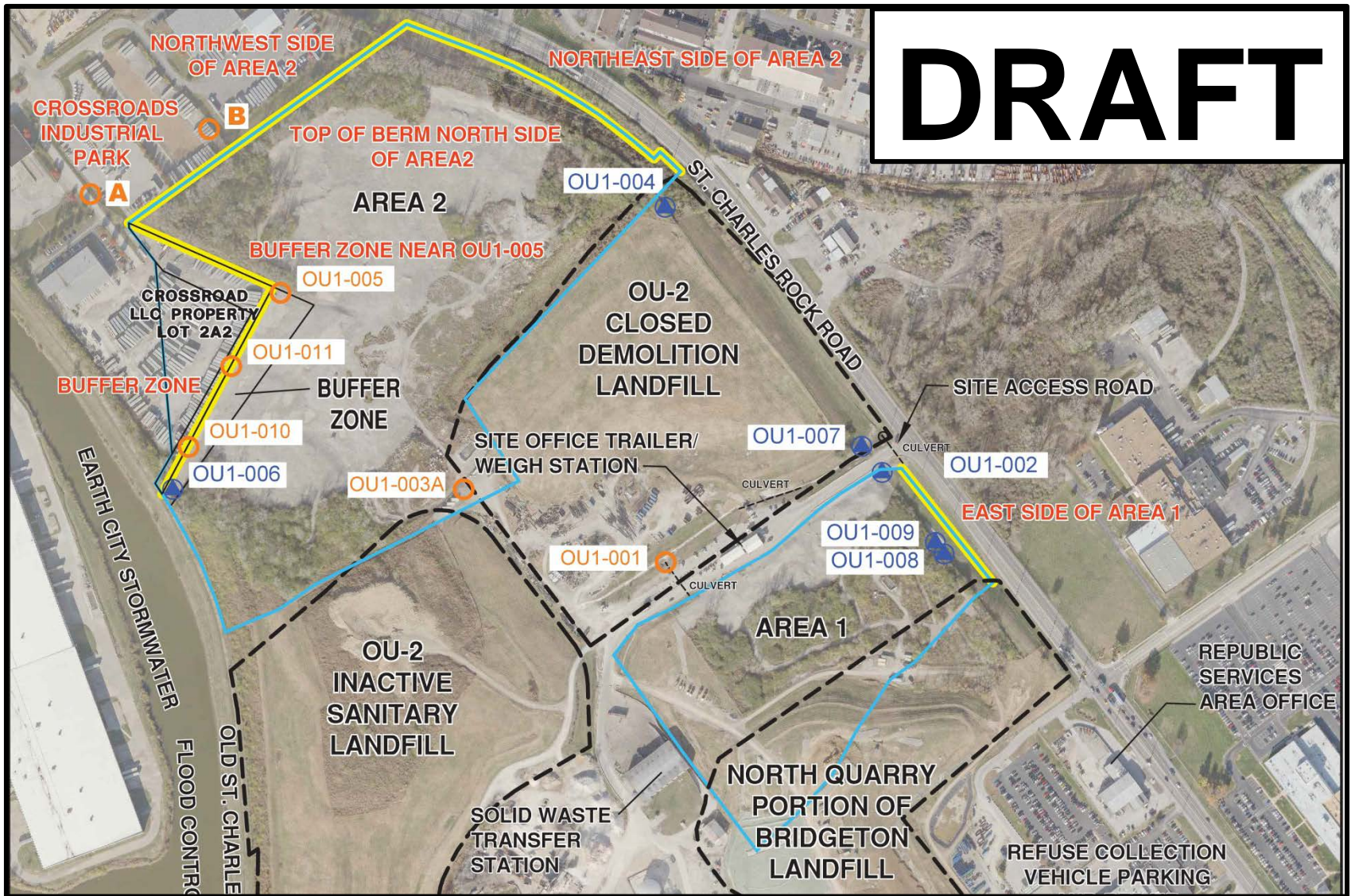
Department of Natural Resources (MoDNR)

- Wastewater and leachate
 - Stored or treated in the on-site wastewater treatment plant for discharge is sent to the Metropolitan St. Louis Sewer District
 - MSD maintains a separate NPDES Permit and Pretreatment Program overseen by MoDNR
- Groundwater (Bridgeton Landfill) – overseen by Solid Waste Management Program

U.S. Environmental Protection Agency (EPA):

- Stormwater discharges
 - Monitored and regulated by EPA, including radionuclides, as part of the Stormwater Monitoring Work Plan required to be conducted by the responsible parties
 - Area 1 and 2 of Operable Unit 1
 - Buffer Zone/Crossroad Property
 - Inactive Sanitary Landfill
 - Stormwater data available on EPA's website
- Groundwater (West Lake Landfill) – Operable Unit 3; includes the entire superfund site

DRAFT



Source: Aerial provided by Cooper Aerial Surveys Company (December 2, 2016)

Legend

- Stormwater Sampling Point
- Inspection/Monitoring Point

Inspection Paths

BUFFER ZONE Inspection Area Name

0 600

SCALE IN FEET

Figure 1

Stormwater Monitoring Locations and Inspection Paths

West Lake Landfill OU-1 RI Addendum

EMSI Engineering Management Support, Inc.

National Pollutant Elimination System (NPDES) Permit

- Permitting established via Clean Water Act
- Applies to any point source discharge of pollutants to waters of the state
 - Stormwater discharges from landfills are point sources under the Clean Water Act
- Other laws and regulations:
 - Title 40 of the Code of Federal Regulations
 - Missouri Revised Statutes Chapter 644 and 640
 - Title 10 Division 20 of the Code of State Regulations

Pollutants Monitored in an NPDES Permit

- Must be representative of the discharge
- Pollutants present in the discharge with water quality or technology standards
- Pollutants required by the previous permit
- Sampling frequency and reporting
 - Frequency, magnitude and duration of discharge
 - Typically quarterly for stormwater discharges
- 30+ different pollutants or indicators in the draft

Bridgeton Draft Renewal Permit Pollutants

PHYSICAL	METALS		NUTRIENTS
Flow	Aluminum	Iron	Ammonia
Precipitation	Antimony	Lead	OTHER
CONVENTIONAL	Arsenic	Mercury	Benzene
Biochemical Oxygen Demand	Beryllium	Nickel	Chloride
Chemical Oxygen Demand	Cadmium	Selenium	Sulfate
Oil & Grease	Chromium (III)	Silver	α -Terpineol
pH	Chromium (VI)	Thallium	Benzoic Acid
Settleable Solids	Cobalt	Zinc	p-Cresol
Total Suspended Solids	Copper		Phenol

- Typical pollutants for stormwater discharges from MO landfills

Discharge Limits Established in an NPDES Permit

- Technology-based limits (derived from technology standards) for all applicable pollutants of concern
 - EPA Effluent Limitation Guidelines 40 CFR 400-471
 - State Effluent Limitations; 10 CSR 20-7.015
 - Case-by-Case technology-based limits
- Water quality-based limits where technology-based limits are not adequate to meet water quality standards in receiving water 10 CSR 20-7.031

Water Quality-Based Limits Established in an NPDES Permit

- “Reasonable potential”
- Water quality-based limits established
 - When discharge causes or contributes to an exceedance of the state water quality criteria
- Mass balance approach
 - Data from applications and discharge monitoring reports
 - Water quality standard
 - Receiving waterbody flow and concentration
 - Discharge flow and concentration

Benchmark

- Not a limit; used when water quality-based limits are not needed
- Assesses effectiveness of stormwater pollution prevention and best management practices
- Exceedance requires review of pollution prevention and best management practices by the permittee
- Corrective action when necessary to improve pollution prevention
- Failure to make measureable progress toward achieving a benchmark is a violation

Radionuclide Monitoring

- Radionuclide monitor is not included in proposed draft NPDES permit
- EPA's Draft Stormwater Monitoring Work Plan, which identifies outfalls, establishes monitoring and reporting and determines future long-term monitoring and maintenance
- Sampling associated with this effort is on-going as the work plan is revised and finalized before issuance of the permit

Radionuclide Monitoring

- MoDNR will review the final EPA Stormwater Monitoring Work Plan for OU-1
 - epa.gov/mo/west-lake-landfill-superfund-site-bridgeton-missouri-fact-sheet-august-2017
- MoDNR will take appropriate action, if deficiencies are identified
- MoDNR added language to the permit as Special Condition #16

Radionuclide Monitoring

- Special Condition #16:

“This permit shall be reopened and modified, or alternatively revoked and reissued, at such time the department has determined the Stormwater Monitoring Plan for West Lake Landfill Operable Units 1 and 2, under the jurisdiction of U.S. EPA, is insufficient to monitor or control pollutants originating from West Lake Landfill Operable Units 1 and 2, and discharging to waters of the state.”

Responsiveness and Oversight

- MoDNR review efforts and findings will be made available on website
- MoDNR will take all actions necessary to implement the Missouri Clean Water Law
- MoDNR will continue to assess the site and respond to any changing site conditions, such as the extreme rainfall events of December 2015 and April 2017

Responsiveness and Oversight

- Sampling and sharing of data collected by MoDNR in those events led to engineering control improvements at the site and additional protective measures by the potential responsible parties overseen by MoDNR and EPA
- All data will continue to be posted to the MoDNR's website dnr.mo.gov/bridgeton

Next Steps

- Public hearing comments associated with the proposed draft NPDES permit recorded
- Response to questions and comments will be provided in writing and posted to our website
- MoDNR will consider all comments
- Issue final decision
- Send responses to comment
- 30-day appeal window

Public Hearing Ground Rules

- Facilitator leads the meeting
- Fill out comment cards if you wish to speak publicly or provide comments
- Only one person speaks at a time
- When offering testimony, use microphone at front of room, speak clearly and identify yourself for the court reporter
- Given limited time, reduce repetition of comments already offered
- Minimize disruptions and help us maintain order
- Thank you for participating in tonight's public hearing. The department will consider all comments received during the public comment period, including those received tonight. The department will respond in writing when the final permit is issued.