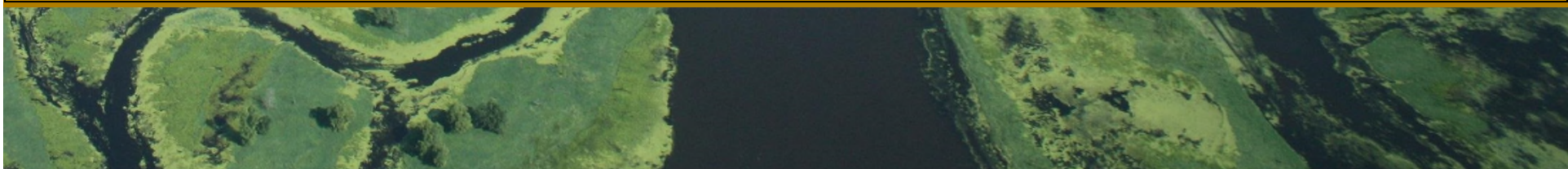


Upper Mississippi River Preparedness Efforts: Geographic Response Plans, Initial Incident Action Plans, and La Crosse Functional Exercise

Upper Mississippi River Hazardous Spills Coordination Group



Presentation to Region 5/Region 7 Joint RRT Meeting – St. Charles, Missouri – 4/23/2015

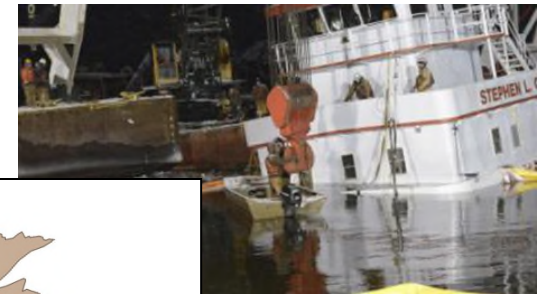


Presentation Overview

- **Introduction** – Tom Kendzierski, Wisconsin DNR (UMR Spills Group Chair)
- **Geographic Response Plans and Incident Action Plans** – Ann Whelan, US EPA
- **La Crosse Functional Exercise – Process and Outcomes** – David Morrison, Minnesota PCA
- **Questions and Discussion**

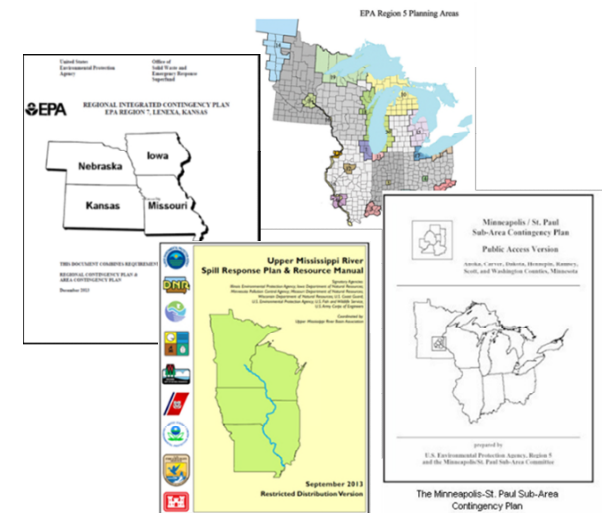
Introduction

- Updates on recent collaborative preparedness efforts on the Upper Mississippi River (UMR)
- In particular:
 - Development of geographic response plans (GRPs), including initial incident action plans (IAPs)
 - La Crosse, Wisconsin functional exercise (oil release from rail, UMR Pool 8)
- Relevant in light of recent events and upcoming training/exercises



UMR GRPs- Background

- Before 2009 - Planning tools in place for the UMR/Region:
 - Region/area plans (Region 5 and 7)
 - Inland sensitivity atlases
 - Sub-area plans
 - UMR spill response plan
 - Site-specific response strategies
- In light of spill events (and associated responses), identified a need for more geographically-focused planning efforts
- US EPA and USFWS initiated collaborative, inter-agency, inter-partner geographic response plans (GRPs)
- Began in the Upper Mississippi River National Wildlife and Fish Refuge (UMRNW&FR), focused on UMR “pools”



UMR GRPs- Background

What is a Geographic Response Plan (GRP)?

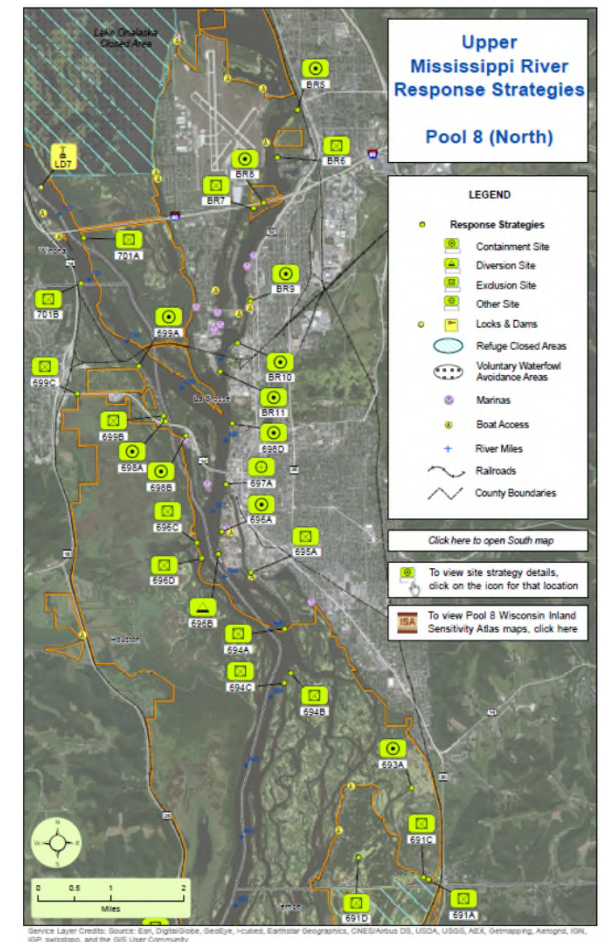
- A GRP is a location-specific strategy (or set of strategies) to help guide the initial response to a spill of oil or other hazardous materials

What is the purpose of a GRP?

- A GRP provides initial guidelines for responders in the event of spill, greatly reducing the time needed to make decisions about how to respond.

Why create GRPs?

- A GRP gives responders the information and guidance they need to ensure that response to a spill is fast and effective while protecting sensitive resources threatened by the spill.



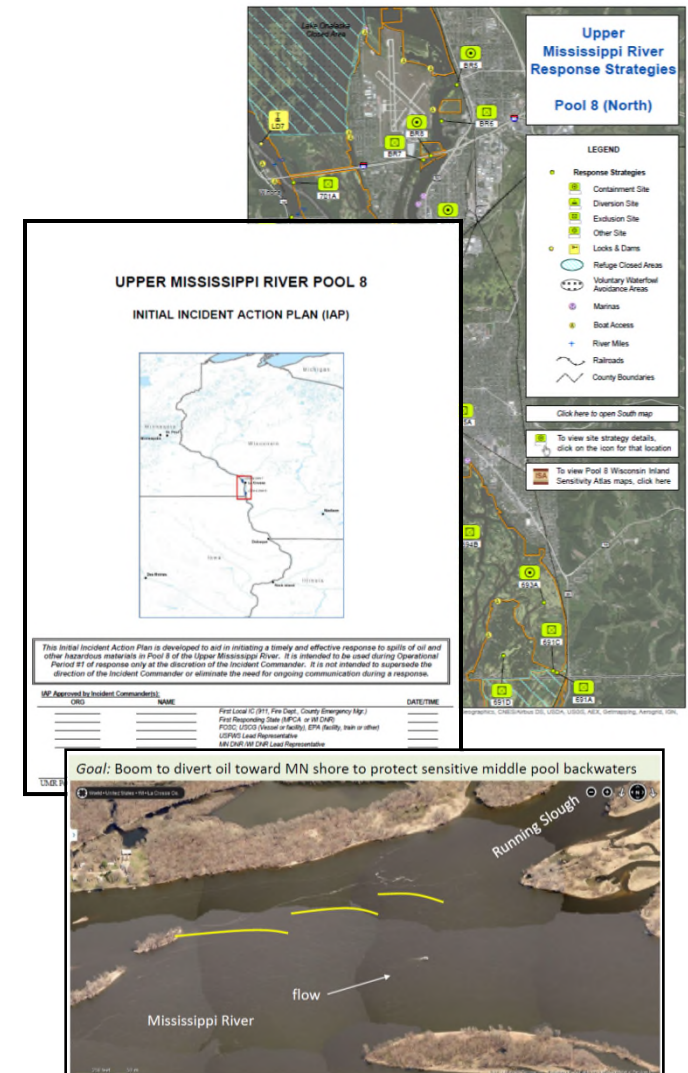
UMR GRPs- Evolution

UMR GRPs – Phase One

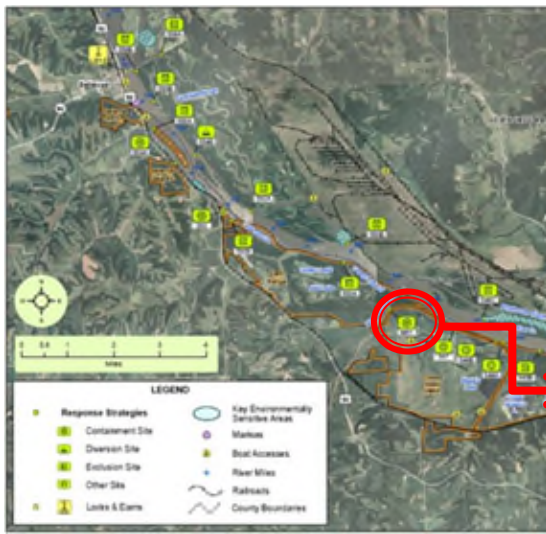
- Initial UMR GRPs focused primarily on site-specific response strategies
- Also included description of the pool, inland sensitivity atlas maps, basic contact information, and tactics manual

UMR GRPs – Phase Two

- Add initial incident action plan (IAP)
- Better aerial illustration of response tactics
- Begin to cover areas outside of UMRNW&FR



UMR GRPs- Example Response Strategy



1) Overview Map Shows Strategies for Area

Upper Mississippi River Pool 13 (North) Response Strategies

Click here to open South map
To view site strategy details, click on the icon for that location.

GOAL: Divert spilled product to collection point before it flows into Pool 7.

Site Number	Waterbody, River Mile	Site Name
BR1	Black River	Black River at Bike Trail

Booms	Land Access	Boat Access
200'	Yes	Yes

Strategy Implementation: [to Aerial View](#)

Anchor boom upstream of bike bridge on ROB. Cascade two 100' R booms to divert oil to private access below bridge. Collection see strategy [200](#).

Site Access

Bike trail (Great River State Trail) crossing near Landfill site at mouth of Black River. Canoe access near site. Accessible by air boat. Boat access at R058 and R060. Co. Rd. 2 (private). Turn right from Co. Rd. 2 onto Lytle Rd. to access trail.

UTM y18 E: 4926795 UTM y18 N: 632313
Latitude: 43.959637 Longitude: -91.338323

Spill Response Strategy - Upper Mississippi River National Wetlands and Park Buffer
May 2016

2) Selecting a strategy point leads to detailed description

1. DIVERSION (FOR CONTAINMENT AND COLLECTION) Booms in a Stream

The objective of stream booming is to remove oil from the fastest water and divert it to slower water. A stream can be boomed by deploying the boom either upstream or downstream. In either case, the boom is first set out on the stream bank. Before the boom is deployed, rig anchor points on the boom. The boom is attached to a shore anchor, and then the boom is either towed upstream to a midstream anchor point, or the boom is allowed to drift downstream with the current. Once the boom is set, intermediate anchors are set as needed to ensure that the boom maintains the proper configuration (ensuring that the current perpendicular to the boom should not exceed 1/2 knot). Examples of deployment configurations follow.

Deflection (Single Boom)
A boom is deployed from one bank at an angle to the current and anchored midstream or on the opposite bank for diverting the oil to an eddy or other quiet-water collection point on the shoreline. Alternatively, a single long boom can be used in a multichannel stream to divert oil so that it stays in one channel.

Deflection (Cascade)
Several booms are deployed in a cascade fashion when a single boom can't be used because of a fast current or because it's necessary to leave openings for both to get through. This configuration can be used in strong currents where it is impossible or difficult to deploy one long boom. Shorter sections of booms used in a cascade deployment are easier to handle in fast water. However, more equipment is needed than when a single boom is used.

Spill Response Tactics Manual - EPA Region 5
JUL 2011

3) Can then link to tactics manual or aerial photo

BR1 - Black River at Bike Trail


Goal: Divert spilled product to collection point before it flows into Pool 7

UMR GRPs- Initial Incident Action Plan

Benefits of the initial Incident Action Plan

- Accelerate response process during first operational period
- Helps define roles
- Helps establish response objectives
- Provides detailed contact information
- Conforms to ICS process and protocols
- **But... not** a substitute for incident-specific consultation and considerations

UPPER MISSISSIPPI RIVER POOL 8
INITIAL INCIDENT ACTION PLAN (IAP)



This Initial Incident Action Plan is developed to aid in initiating a timely and effective response to spills of oil and other hazardous materials in Pool 8 of the Upper Mississippi River. It is intended to be used during Operational Period #1 of response only at the discretion of the Incident Commander. It is not intended to supersede the direction of the Incident Commander or eliminate the need for ongoing communication during a response.

IAP Approved by Incident Commander(s):		
ORG	NAME	DATE/TIME
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

UMR Pool 8 - ICS 202 IAP- 1 January 2015

GRP/IAP Development Process

Process Steps

- Identify participants: private, local, state, federal
- Conduct workshop(s)
- Conduct field assessment
- Review and finalize materials
- Create final product (CD)
- Six months to one year total timeline is typical
- **The process can be as important as the product!**



SPILL RESPONSE SITE EVALUATION FORM

Site Name: **Nakomis Ave.** Strategy Number: **4**
(include all commonly used names)

River Mile(s): **n/a, Black River**

Date: **8/28/14**

Team Name: **J. Nissan** Page 2

Person Completing Form: **SAF** Page 1 **08/27/2014 22:44**

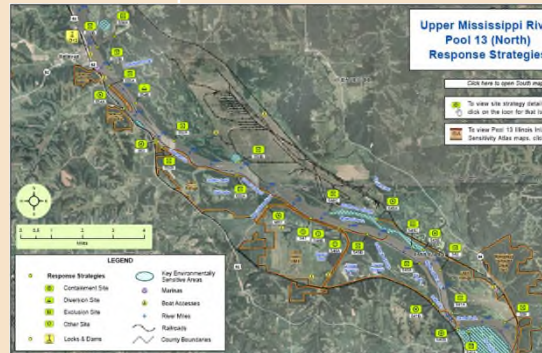
Final GRP Product



All materials on stand-alone CD, which includes:

Maps & Strategies

- Overview Map
- Strategy Pages
- Oblique Aerial Imagery
- Tactics Manual
- Inland Sensitivity Atlas



GOAL: Divert spilled product to collection point before it flows into Pool 7.

Site Number	Waterbody	Pool Mile	Site Name
BR1	Black River		Black River at Bike Trail

Strategy	Boom	Length (ft)	Lead	Boat	Access
BR1	200	Y	Y	Y	

Strategy Implementation (Go to Anchor Point)

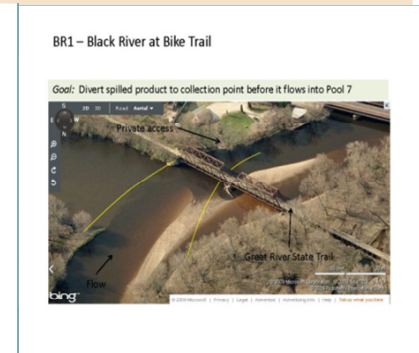
Anchor boom upstream of bike bridge on RCB. Cascade two 100' B booms to divert oil to private access below bridge. Collection see strategy BR1.

Site Access

Site trail (Great River State Trail) crossing near Launch site at mouth of Black River. Canoe access near site accessible by foot trail, trail access at 90th and 95th. Co. Rd. Z (private). Turn right from Co. Rd. Z onto Lytle Rd. to access trail.

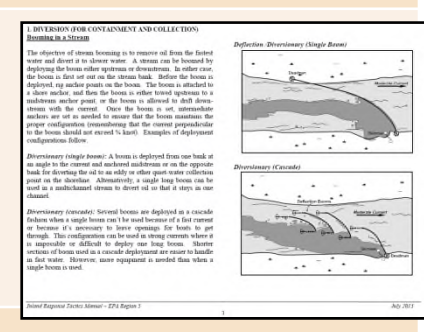
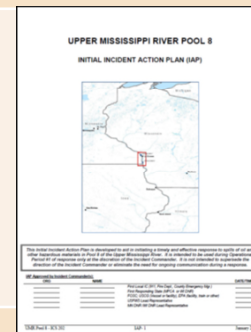
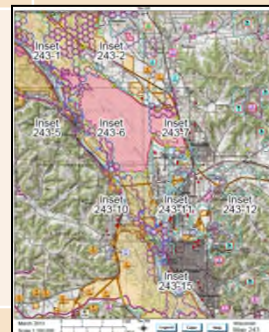
UTM x/y: 490765 UTM x/y: 433313
 Latitude: 43.95937 Longitude: 91.33823

9/18 Response Strategy - 1 Upper Mississippi River National Wetlands and Fish Refuge May 2010



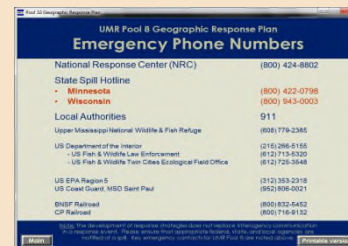
Plans

- Area-specific Incident Action Plan (IAP) template
- UMR plan and field guide
- Regional plans



Supplemental Materials

- Resource overview document
- Contact lists
- Habitat fact sheets
- Navigation charts



GRPs – Status and Next Steps

Status

- Have completed full GRPs for UMR Pools 7, 8, 10, 13, and 19; as well as Horicon Marsh
- Response strategies only for Twin Cities (UMR Pools 1 and 2, St. Croix River), St. Louis (Pool 27 and Open river), where full Sub-area Plans exist
- All these available on CD
- **Adapted for use in recent UMR incidents**

Next Steps

- Complete UMR Pools 5, 5a, and 6 (this year)
- Next – UMR Pools 11 and 12
- Habitat and species fact sheets as companion tools
- Work on providing via RRT5 website (viewer), other venues in addition to CD
- Format can be shared with others if interested



La Crosse Functional Exercise – Background and Rationale

UMR Hazardous Spills Coordination Group Identified Needs:

- **Test existing plans and tools** (e.g., UMR Spill Plan, ISA maps)
- **Support development of new ones** (e.g., Pool 8 GRP/IAP)
- **Bring together local, state, federal, and private sector partners**
- **Exercise specific capabilities and areas of concern; address emerging issues** (environmental response, oil by rail)

Process and Timeline

- **October 2013:** UMR Spills Group decision to hold exercise(s)
- **November 2013-March 2014:** Tabletop planning
- **April 16, 2014:** La Crosse tabletop (72 participants), interest in larger exercise
- **May-September 2014:** Functional exercise planning
- **October 3, 2014:** Functional exercise, accompanied by training sessions on October 2nd and 4th

Functions Exercised

- 1) **Establish Incident Command including Unified Command**
- 2) **Exercise the functions of a Wildlife Branch** (wildlife reconnaissance, recovery, hazing)
- 3) **Exercise the functions of an Environmental Unit** (environmental assessment)
- 4) **Successfully field deploy boom**, testing the Pool 8 Geographic Response Plan
- 5) **Test the functionality and interoperability of communications systems**
- 6) **Test draft Pool 8 initial Incident Action Plan**

Additional Objectives

- Involve local agencies
- Engage industry
- Integrate US FWS and state natural resource agencies in response
- Respond to concerns regarding rail transportation of crude oil; explore response considerations for Bakken crude
- Simulate impact to high value natural resources (migratory waterfowl in UMRNW&FR)

Exercise Approach

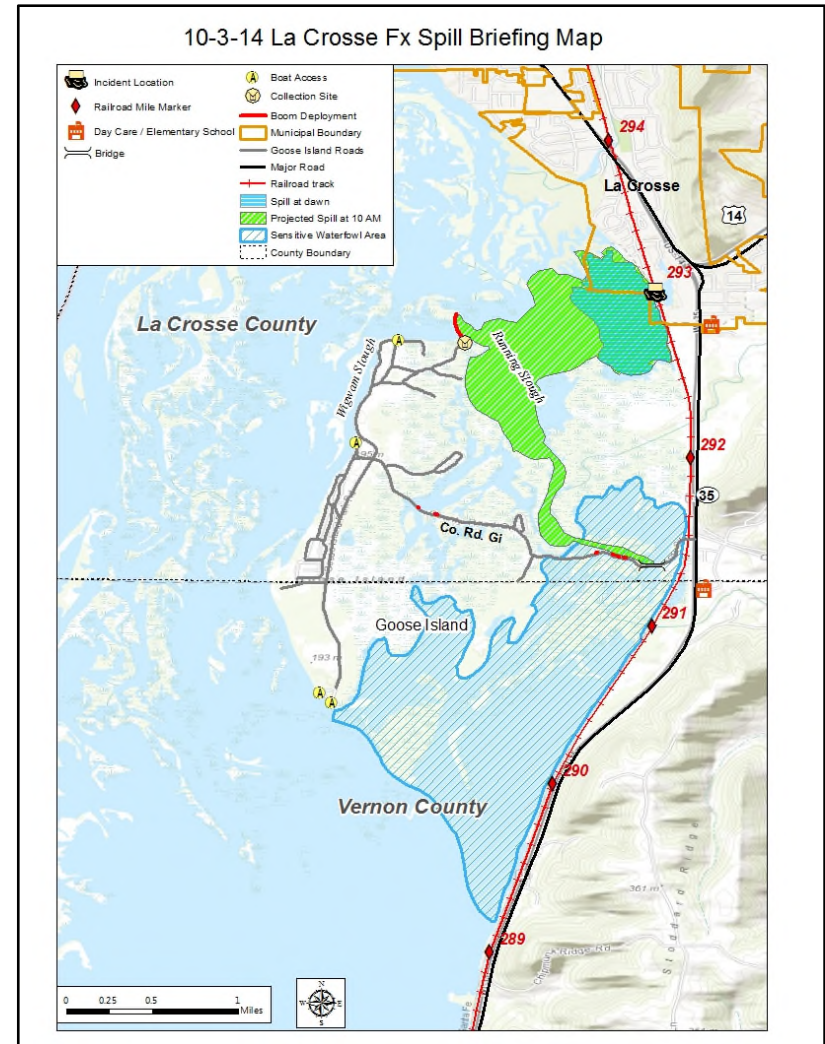
- Host **classroom training prior day** (10/2) to share information, build skills, and “get the bugs out”
- Hold **field training following day** (10/4) to practice strategies and skills
- Include **evening and weekend sessions** to encourage local/volunteer participation
- **Pre-populate ICS** to facilitate testing of Unified Command
- Have **both command post and field presence**

Participation

- **125 Total Participants**
 - 27 local (Fire, Police, EM, county, city)
 - 21 state (IA, MN, WI – DNR, PCA, HSEM, EM)
 - 43 federal (EPA, FRA, FWS, NOAA, USDA, USCG, U.S. Marshal, CAP)
 - 29 industry/private sector (BNSF, CP, OSROs, local facilities)
 - 1 elected officials/staff (County Board)
 - 1 citizen advocacy (CARS)
 - 3 UMRBA staff

Event Scenario

- 5 rail cars spill Bakken crude, total of approximately 150,000 gallons released to river in Pool 8 on Wisconsin side
- Spill happens during the night, approximately 2 a.m.
- There is not a large fire associated with the spill
- Spill reaches river in Goose Island area; estimated 2,200 waterfowl congregated in area southeast of Goose Island
- Exercise begins at 8:00 a.m. the following morning, with local and private sector response in progress



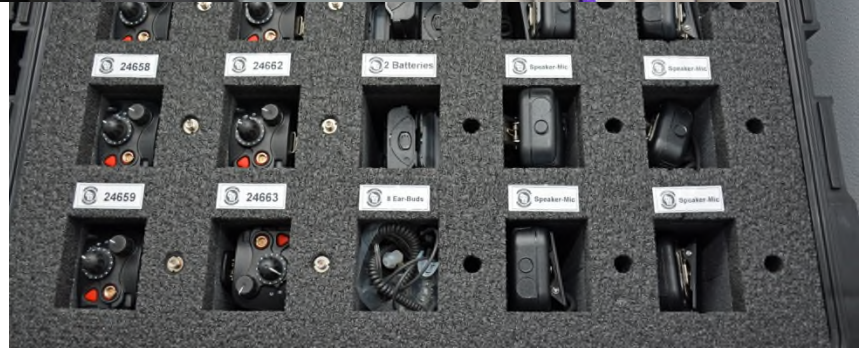
Incident Command



Field Activities



Field Activities

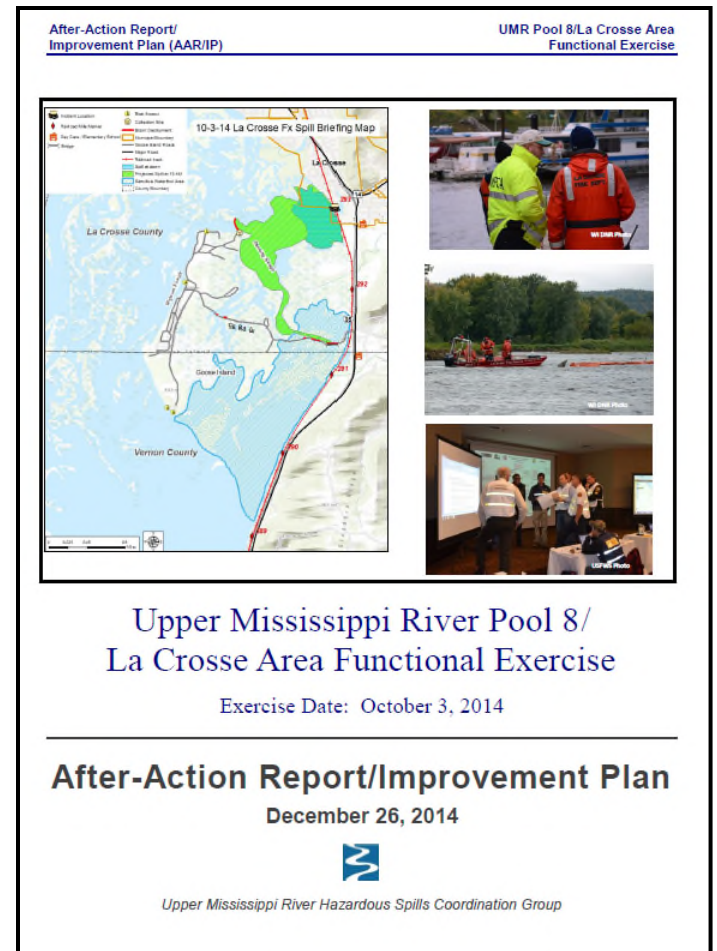


Public Information/Media



Strengths and Successes

- Broad participation, interaction and collaboration (local, state, federal, private sector)
- Effective, realistic simulation of events
- ICS quickly established
- Practical, hands-on ICS training
- Communications systems established and effective (WEM trailer key asset)
- Exposure to a wide variety of personnel and equipment (collection and containment, air monitoring, wildlife, communications)



Areas for Improvement

- Limited ICS readiness among some participants, lack of “practical” ICS training
- Underutilization of some personnel and assets
- Permit lacking for wildlife rehabilitator
- Few shoreline assessment-trained individuals
- Limited ability/readiness to discuss in-situ burning options
- Challenges associated with media engagement

After-Action Report/
Improvement Plan (AAR/IP) UMR Pool 8/La Crosse Area
Functional Exercise



A map of the La Crosse area showing the Mississippi River and surrounding land. The map is titled "10-3-14 La Crosse Fx Spill Briefing Map" and includes a legend with various symbols and colors. The map shows the river flowing through La Crosse County and Vernon County, with several points of interest marked.



Three photographs showing participants in safety gear, a boat on the river, and a group of people in a meeting.

**Upper Mississippi River Pool 8/
La Crosse Area Functional Exercise**

Exercise Date: October 3, 2014

After-Action Report/Improvement Plan
December 26, 2014


Upper Mississippi River Hazardous Spills Coordination Group

Next Steps/Relevance

Related Next Steps

- Develop strategies/tactics/policies for in-situ burning on UMR and in UMRNW&FR
- Regional SCAT training
- Ongoing UMR-focused training
- Develop media tools and messages
- Assess/increase exercise planning capability in the region

Ongoing Relevance

- Relevance for recent incidents, ongoing concerns
- FEMA-sponsored exercise in La Crosse (June 2015)
- Other UMR exercises
- Exercise materials available at www.umarba.org/haz-minutes.htm



Upper Mississippi River Preparedness Efforts

Questions/Discussion