

US EPA ARCHIVE DOCUMENT

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Kalamazoo River/Enbridge Spill - Removal POLREP-SITREP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V



Subject: SITREP # 58
Kalamazoo River/Enbridge Spill
Z5JS
Marshall, MI
Latitude: 42.2395273 Longitude: -84.9662018

To: Lt. Paul Baker, Kalamazoo County Sheriff's Office
 James Rutherford, Calhoun County Public Health Department
 Durk Dunham, Calhoun County Emergency Management
 Brian Whitsett, Michigan State Police, Emergency Mgt.
 Greg Danneffel, MDNRE
 Mike McKenzie, City of Battle Creek
 Leon Zupan, Enbridge
 Susan Hedman, U.S. EPA Regional Administrator
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 Connie Gibson, Calhoun County Sheriff's Office
 Cheryl Vosburg, City of Marshall
 David Chung, U.S. EPA
 Jason El-Zein, U.S. EPA
 Michael Chezik, U.S. Department of Interior
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 OSLTF USCG, USCG
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From: Ralph Dollhopf, U.S. EPA Incident Commander
 Stephen Wolfe, U.S. EPA On-Scene Coordinator
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Date: 09/29/2010

Reporting Period: 0700 hours 9/27/2010 to 0700 hours 9/29/2010

1 Introduction

1.1 Background

1.1.1 Site History

Background Information

Site Number:	Z5JS	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	OPA	Response Type:	Emergency
Response Lead:	PRP	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	7/26/2010	Start Date:	7/26/2010
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:	E10527	Reimbursable Account	

1.1.2 Preliminary Site Inspection and Response Activities

See SITREP #51 for a comprehensive description of preliminary operations.

1.2 Incident Objective and Command Emphasis

The following incident objectives and command emphasis are taken from the IAP for the Operational Period September 27, 2010, at 0700 to September 30, 2010, at 0700.

Incident Objectives

1. Ensure health and safety of the public and response and recovery personnel.
2. Ensure effective transition of regulatory oversight of the oil impacted areas from EPA to MDNRE jurisdiction as appropriate.
3. Maintain the isolation of the Kalamazoo River from up-gradient source area.
4. Contain and recover oil and contaminated vegetation in Talmadge Creek and Kalamazoo River.
5. Maintain effective unified communications with cooperating and assisting agencies and the public.
6. Perform remediation and restoration of all affected public and private areas of river and river systems.
7. Provide protection of environmentally and culturally sensitive areas including wildlife and historic properties.
8. Protect threatened and endangered species and continue to recover and rehabilitate injured wildlife.
9. Continue to collect, coordinate, manage and communicate environmental and public health data including maintenance of Joint Information Center function.

Command Emphasis

1. Implementation of tactics for recovery of submerged oil and sediment in the Kalamazoo River with prioritization of the Mill Pond area and re-evaluation of the Morrow Lake delta.
2. Emphasize the completion of sign-off packages, submittal and EPA review for Division A5/A6, B, and C.
3. Complete necessary grade restoration and stabilization work along Talmadge Creek in accordance with the approved plans.
4. Implementation of transition to long-term operation and maintenance of containment and submerged oil recovery.
5. Implement systematic DECON/demobilization of project resources.
6. Implement messaging and tactics on project status and next steps for public awareness.

2 Current Activities

2.1 Operations Section

2.1.1 Narrative

As noted above, in the Command Emphasis section, operational work has a new focus at this point in the response. The focus is now on recovery of submerged oil, operation and maintenance, and decontamination/demobilization activities. Commensurate with this new focus, the Operations Section Organization (ICS 207) was revised. The report structure has been revised to reflect these changes. Figure 7 summarizes the changes to the ICS 207.

See SITREP #51 for a comprehensive description of the operational area.

The current operational phases of the response consist of: 1) Talmadge Creek Restoration; 2) Shoreline and Overbank Cleanup; 3) Decontamination and Disposal; 4) Submerged Oil Cleanup;

and 5) Operations and Maintenance (O&M). Important areas being addressed at this point in the response include: Ceresco Dam (dredging); removal of hot spots of submerged oil; decontamination of equipment; removal of booms; and continued wildlife recovery, care, and support.

2.1.2 Oil Recovery and Cleanup Operations and Maintenance Branch

- Continued sheen operations at the entrance and on Morrow Lake.
- Ongoing sampling at Morrow Lake.
- Ongoing maintenance, decon, and demob or boom in all areas.
- Completed work on private property at MP13.75 that was described in SITREP #57. Approximately 25 bags of oiled material were removed.

Shoreline and Overbank Operations and Maintenance

- Scraping and sorbent pad/boom maintenance in area known as the “Lily Pad” at MP4.25.
- Hot spot cleanup at locations between MP10 and MP13.
- 24 hour assessment of test holes at MP13.25 indicates that limited hand and mechanized excavation along with flushing is necessary.
- EPA met with MDNRE personnel at MP13.25 to discuss additional O&M activities. Enbridge is submitting a revised response action plan for this area.
- Enbridge produced O&M plan which is currently under review by the EPA.

Source Area and Talmadge Creek Operations and Maintenance



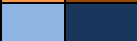

- Conducted pump around operations north of a private drive at Location B2.5.
- Focused on corrective actions identified by MDNRE.

The restoration phase of the response is being tracked using a four step process:

1. Prepped - Six hour trench /pit observation and EPA evaluation of trench/pit and preparation in progress. Forty-eight hour observation trench/pit where applicable.
2. Cleared - EPA evaluation completed and section ready for backfill.
3. Backfilled - Initial backfill/stabilization completed. Forty-eight hour observation trench/pit where applicable.
4. Restored - Section complete.

The progress of the restoration is outlined in Table 1 and is depicted in Figure 1 through Figure 5

Table 1 - Division A and B, Sections 1-10

Restoration Step		Percent Complete
1. Prepped		100%
2. Cleared		100%
3. Backfilled		100%
4. Restored		68%

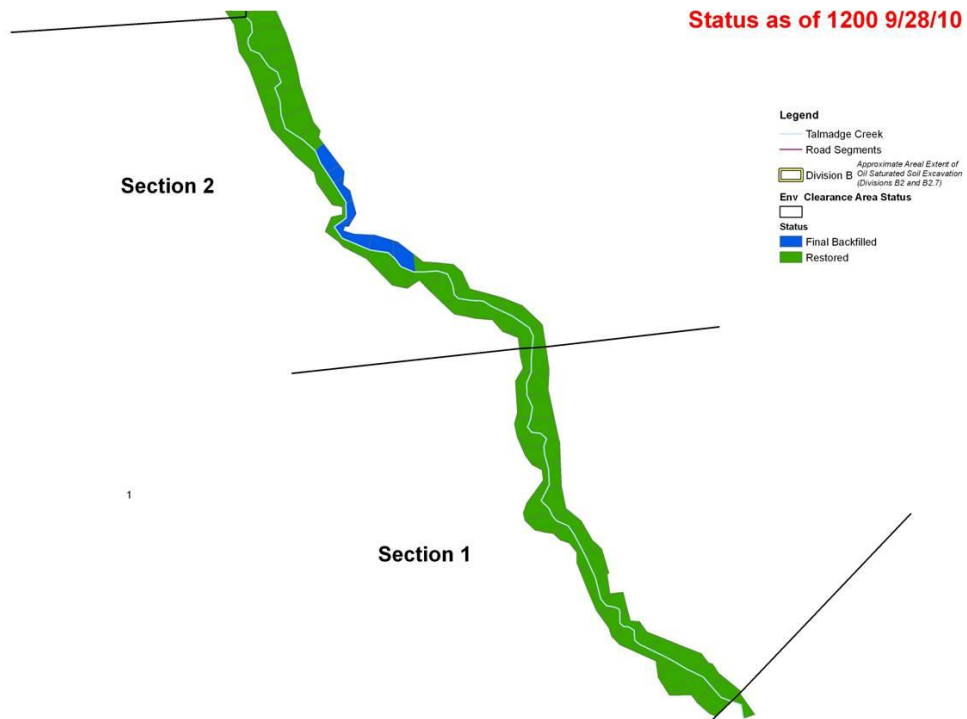
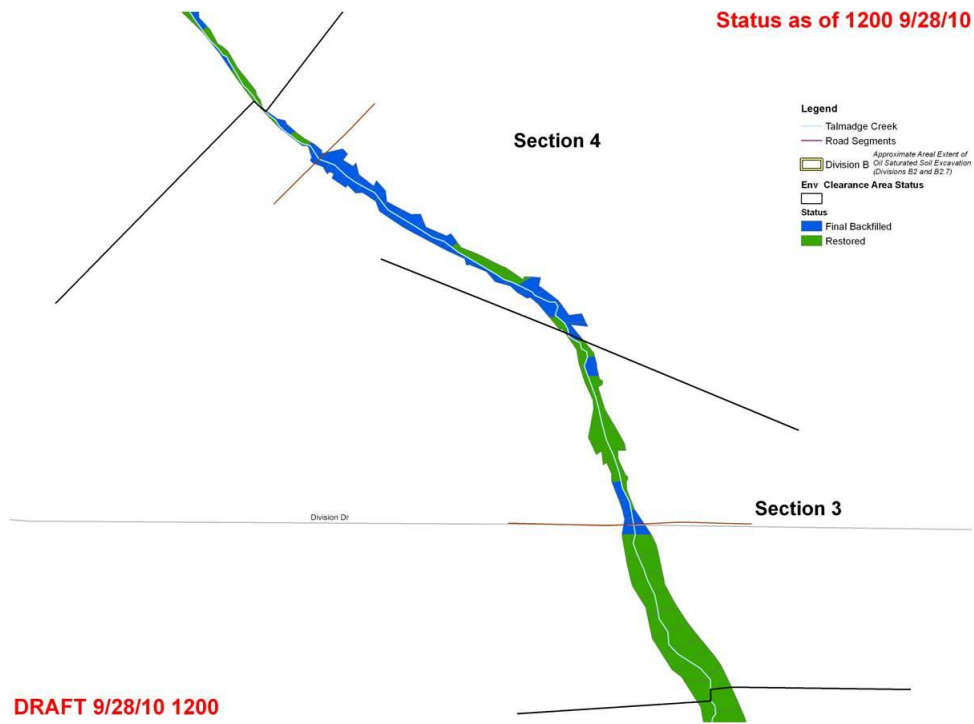


Figure 1 - Division A, Sections 1 and 2 (Locations A5 to A6)



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Figure 2 - Division B, Section 3 and 4 (Locations B2 to B2.5)

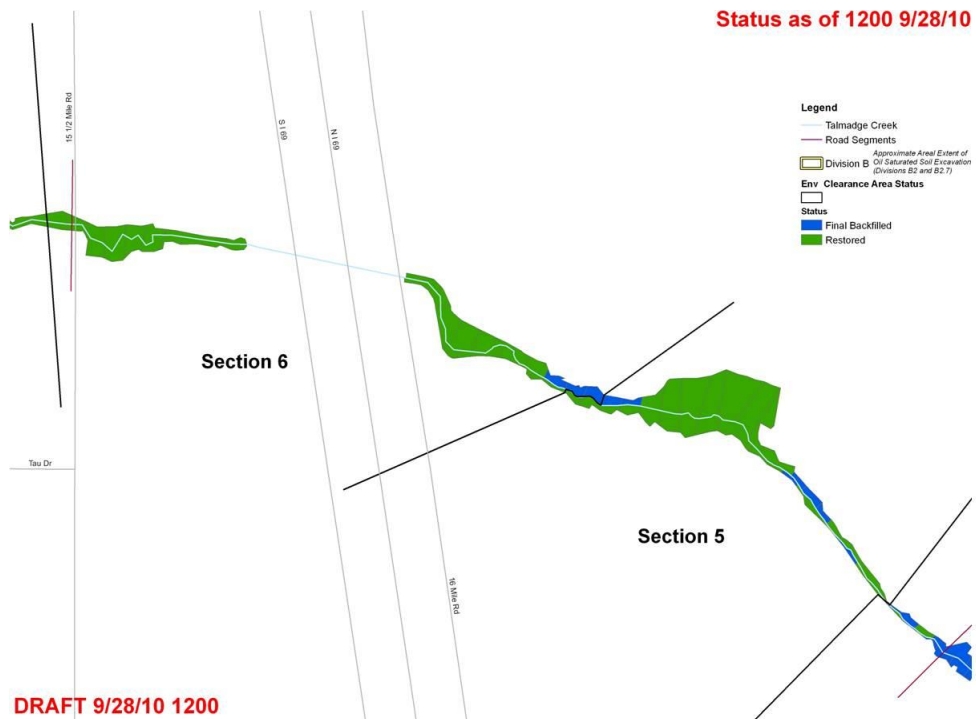


Figure 3 - Division B, Sections 5 and 6 (Locations B2.7 to B4)

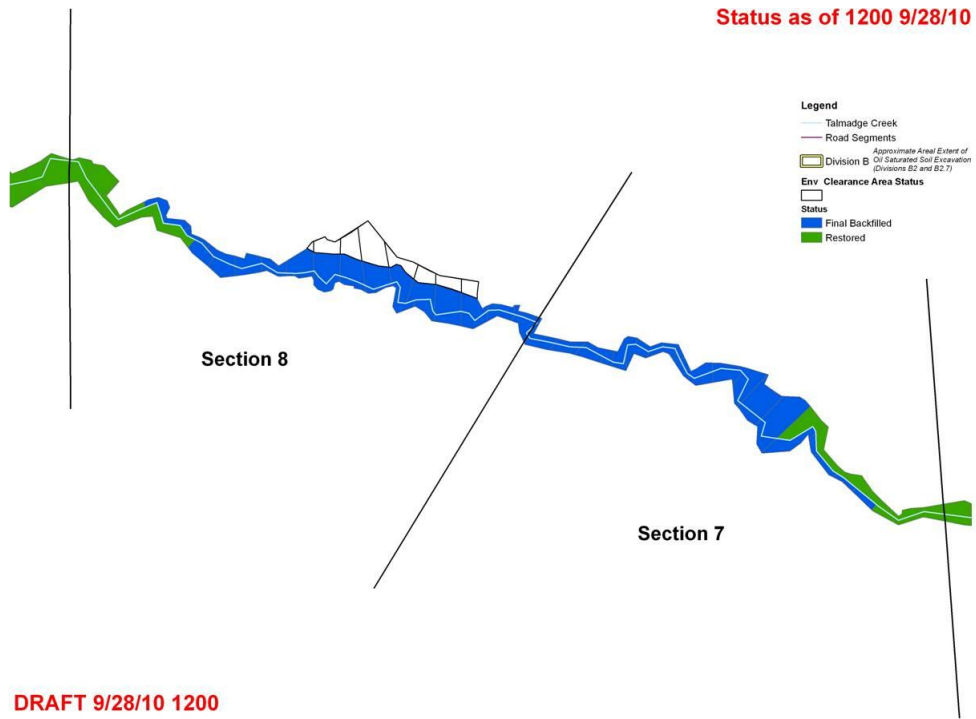


Figure 4 - Division B, Sections 7 and 8 (Locations B4 to B4.5)

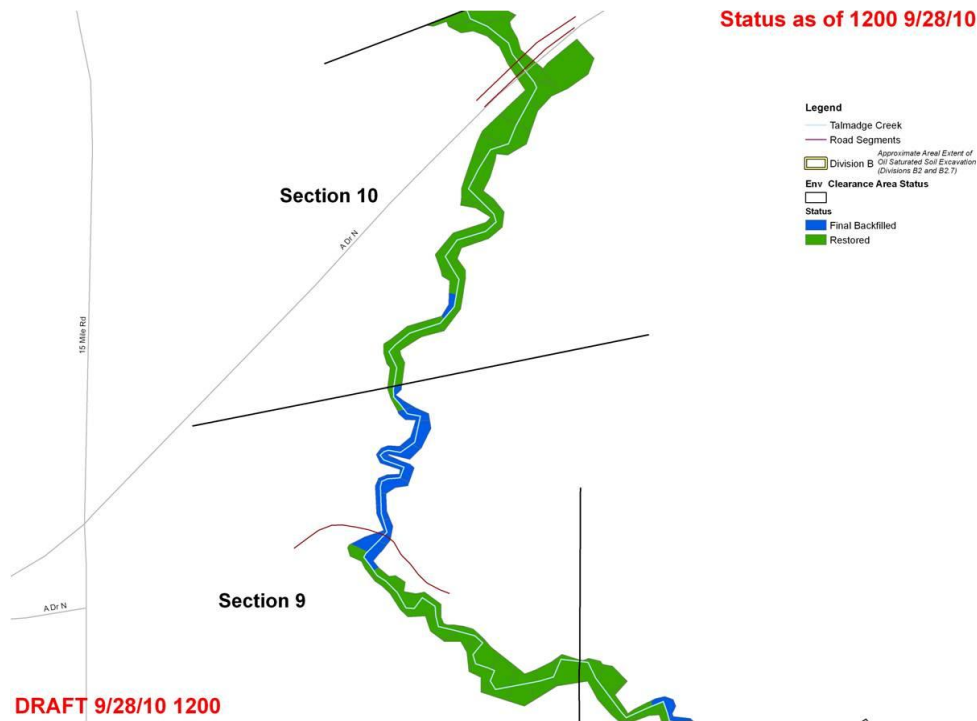


Figure 5 - Division B, Sections 9 and 10 (Locations B4.5 to B5)

2.1.3 Oil Recovery and Cleanup Submerged Oil Branch

- Demobilization of containment and recovery sites as necessary.
- Continued preparation for dredging operations at Ceresco Dam. Grading, liner installation, and gravel installation complete.
- Discovery of new priority areas of submerged oil at MP4.53, 5.31, and MP5.81.

Submerged Oil Recovery Group

- Ongoing aeration and agitation operations at MP26.25.
- Completion of aeration and agitation operations at MP0.9 (B3/B4 boundary), MP1.65 (B4.5 pond), MP7.75, MP14.75, MP26.0, MP26.65, MP27.9, MP28.25, MP33.0A, and MP33.0B, MP33.25.
- Excavation of creek bed at MP0.9 at Locations B3 and B4.
- Prep-work at MP5.55, MP5.63, MP5.75.

Table 2 - Submerged Oil Cleanup Status

Submerged Oil Cleanup	Percent Complete	Number of Sites	Total at Completion
Assessment	100%	20	20 ^a
Containment	100%	18	18
Work Plan	100%	18	18
Cleanup	39%	7	18
EPA Division Supervisor Sign-Off (Step 5)	0%	0	18

^a - After assessment, it may be determined that submerged oil is not present and no further activity is required.

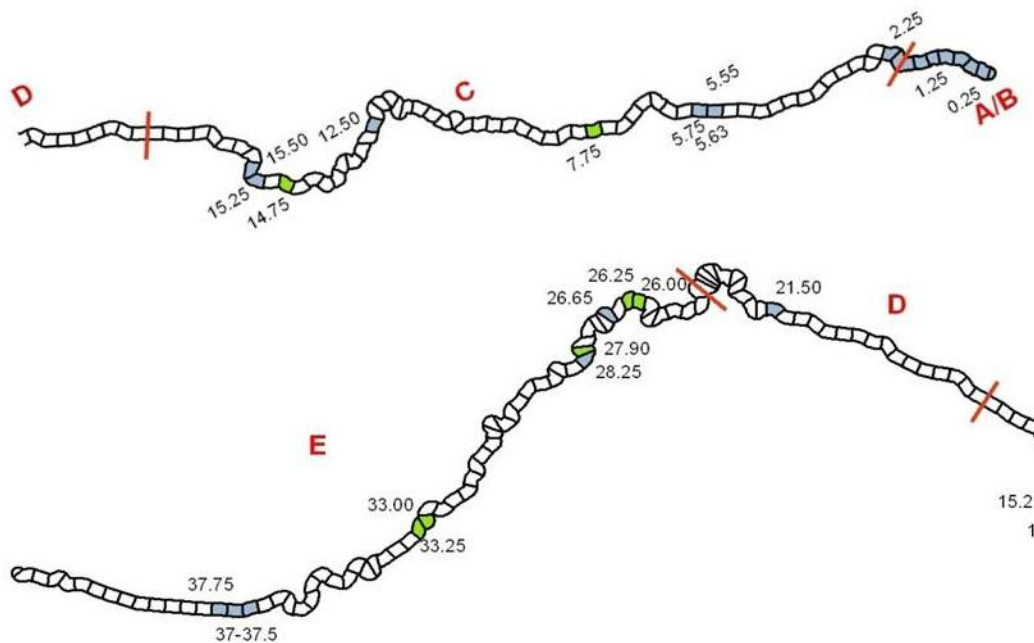


Figure 6 - Submerged Oil Cleanup Sites

2.1.4 Environmental Compliance and Oversight Branch

Source Area/Talmadge Creek

- Oversight of restoration and excavation activities.
- Planning of and transitioning toward operation and maintenance activities.

Transportation and Disposal Group

- Identified discrepancies between T&D's and Enbridge's numbers for the total volume of oil sent to the Griffith Facility. T&D is working with Enbridge to resolve the issues.
- Observed soil mixing, containment, excavation and mat chipping . Also observed debris and soil loading

2.1.5 Monitoring Branch

Enbridge reported the following

- Multiple soil cores and poling transects by Enbridge/TetraTech.
- Logging of multiple cores from upstream of I-69, Division E and Talmadge creek by Enbridge/TetraTech. Multiple cores identified with oil/sheen in upper interval.
- 49 bathymetry survey points to delineate
- Continuing ongoing real-time air monitoring programs for benzene and VOCs by Enbridge.
- Collection of background samples for Ceresco Dam dredging operations by Enbridge.
- START Oversight on September 27th consisting of duplicating 17 monitoring locations with UltraRAE and MultiRAE, totaling 125 readings. No readings in excess of the background were reported.
- EPA collected two split samples from Morrow Lake.

Table 3 – Samples Collected (as reported by Enbridge)

Sample Type	Number Collected 9/27	Number Collected 9/28
Air Monitoring	Not Reported by Enbridge	Not Reported by Enbridge
Surface Water	25	16
Vertical Water Column Samples	0	0
Private Well Samples	Not Reported by Enbridge	Not Reported by Enbridge
Sediment Samples	10	7
Sheen Samples	0	0
Other	0	0
Soil Samples	0	0

Table 4 – Samples Documented in SCRIBE (as reported by EPA)

Media	Sample Type	Number Collected 9/27	Number collected 9/28
Air	Summa Canister	0	16
Air	Tedlar Bags	0	0
Air	Monitoring Locations	17	0
Surface Water	Grab	1	0
Sediment	Grab	0	1

2.1.6 Additional Operations

EPA, USCG and Enbridge Operations have Branches that conduct activities in all Divisions: Technical Services Group, DECON Branch, Wildlife Environmental Damage Branch, and Air Operations.

Technical Services Group

- Coordinated with work crews to prepare MP12.5 for cleanup.
- Coordinated with work crews for removal, replacement, and maintenance of booms and sorbent materials as needed.

DECON Branch

- All sites are executing equipment demobilization and decon.

Wildlife Environmental Damage Branch

- The wildlife center reported approximately 259 animals in care and 1630 animals released.

Air Ops Branch

- During this operational period, there were 8 overflights.
- Air Ops observed and documented cleanup and restoration progress in all operational areas.
- Air Ops continued to investigate areas of interest and report on hot spots, oil mobilization, O&M, and DECON.
- Light sheen observed at the Morrow Lake Delta and at Mill Pond.

- Enbridge observed sheen at the following locations: MP10.75, MP13.5, 14.75, Mill Pond, D3, the Oxbow at MP21.25, MP25.5, MP26, MP26.25, MP26.65, MP26.9, MP28.25, and on the Morrow Lake Delta.
- EPA observed sheen at, near, or around the following locations: Location A5, A6.4, B3, B4.8, B5 (confluence), MP2.25, MP3.25, Island C, Island E, Island F, MP4.5, MP4.75, Ceresco Dam and peninsula above Ceresco Dam, MP10.75, MP13.5, MP14.25, MP14.75, MP15 (Mill Pond area), between MP18 to MP18.75, MP21.25, MP25.5, MP26, MP26.25, MP26.65, MP28.25, MP33.25, and on Morrow Lake Delta.

2.1.7 Progress Metrics

All progress metrics in Section 2.1.8 are as reported by Enbridge unless otherwise indicated.

Boom Report

Table 5 - Boom Report

Date	9/27	9/28
Number of Locations	26	26
Boom Deployed (feet)	121,397	121,460

Soil and Debris Waste Tracking

Table 6 - Soil and Debris Waste Tracking

Waste Stream*	Quantity Shipped On 9/26	Quantity Shipped On 9/27	Cumulative Quantity Shipped [†]
Haz Soil (yd ³) ^a	0	0	15,344
Non Haz Soil (yd ³) ^b	0	2,440	31,302
Haz Debris (yd ³) ^c	0	0	12,075
Non Haz Debris (ton) ^c	0	5	1,349

* Information for water (other than daily quantity shipped) is reported in other tables below. Quantity awaiting disposal is estimated.

† Due to the auditing of waste manifests, cumulative quantities may not reconcile with previous reports.

a. Haz soil (benzene impacted) is being transported to EnviroSafe (Oregon, OH).

b. Non Haz soil is being sent to Westside Recycling (Three Rivers, MI) and EQ/Republic (Marshall, MI).

c. Roll-off boxes containing waste sorbents, boom, pads, plastic, PPE, and oiled vegetation and biomass are being sent to EQ facility (Michigan Disposal) in Wayne, MI and Republic (Marshall, MI).

Oil/Water Recovery Tracking:

Note: Some of the values in the tables below have been audited and reconciled by Enbridge and may not correlate with previously reported values.

Table 7 –Oil water collected by location 9/27/10 0700

Location	Cumulative Total Collected (gallons)
Division A	5,407,993
Division B	4,390,065
Division C	952,700
Division D	119,850

Table 8 - Oil water Separation 9/28/10

Oil-Water - Enbridge Facility in Griffith, IN Facility (gallons)	
Oil	758,756
Other Material	1,400,050
TOTAL	2,158,806

Division E	50,030
DECON	243,410
Other Locations*	229,683
TOTAL	11,393,731

* Includes Frac, DECON, and Wildlife Center.

Table 9 - Oil/Water Volume Summary (Gallons)

Oil/Water Collected	11,393,731
Oil/Water Shipped Off-site	10,294,454
OIL/WATER REMAINING ON-SITE	1,099,277

Table 10 – Liquid Shipped Off-site

Oil/Water leaving Site	Destination	Daily Quantity Shipped (Gallons)9/26	Daily Quantity Shipped (Gallons)9/27	Cumulative Quantity Shipped (Gallons)†
Haz Water	Dynecol, Detroit, MI	0	16,000	2,410,198
Oil/Water	Enbridge Facility, Griffith, IN	0	0	2,158,806
Treated Non Haz Water	Liquid Industrial Waste Services, Holland, MI	0	0	370,200
Treated Non Haz Water	Plummer, Kentwood, MI	138,500	158,500	3,251,525
Haz Water	Safety Kleen ^a	0	0	825
Treated Non Haz Water *	Dynecol, Detroit, MI	0	0	134,200
Treated Non Haz Water *	Battle Creek POTW	0	0	1,968,700
Totals		138,500	174,500	10,294,454

* Treated Non Haz Water no longer sent to this location.

† Due to the auditing of waste manifests, cumulative quantities may not reconcile with previous reports.

a. New Age lab water and methanol mix generated by mobile laboratory.

2.2 Planning Section

Data Management Unit/GIS Unit

- Continued to process surface water data, importing preliminary and validated analytical results into Scribe, and continued to process maps as requested.
- Assisted with O&M survey mapping.
- Received CTEH data updates as previously requested.

Environmental Unit

- Reviewed plans submitted by Enbridge. Provided Monitoring branch with comments.
- Reviewed status of SCRIBE database with the Data Management Unit.

2.2.1 Anticipated Activities for Next Reporting Period

In the next operational period, Operations anticipates transitioning to focused decontamination operations and cleanup activities to finalize shoreline and overbank activities in Talmadge Creek and the Kalamazoo River as well as continuation of the submerged oil cleanup. Hot spots will continue to be addressed as identified.

2.2.2 Public Health

No new activities were reported.

2.3 Logistics Section

- No new activities to report.

2.4 Safety Reports

- Recommended changes to all major DECON areas between Enbridge Ops, Decon and Safety, and EPA Safety.
- EPA recommended attention to safety concerning mat road removal and the operation of the Timber Pros. Enbridge Safety is considering addressing this as a focus area for the next operational period.
- Outbound dirt road in Division A is in need of maintenance. Road has degraded to the point that it is potentially damaging to low chassis vehicles.
- Continued general safety inspections in all areas.
- Held safety stand down with a focus on demobilization safety.
- Updated demobilization procedures.
- Field Personnel have brought up IAP references to PPE/Decon which are inconsistent with the HASP.

2.5 Liaison Officer

The LNO engaged in ongoing coordination with assisting and cooperating agencies, the UC, Enbridge, and the PIO.

2.6 Information Officer

The Public Information Office reported the following activities:

- Enbridge reported the following call volumes between 9/26 and 9/27:
 - Media Inquiry Line (877-440-7157) 10
 - Oil Spill Public Information Hotline (800-306-6837) 36
- Enbridge reported the following community center visits between 9/26 and 9/27:
 - Battle Creek Community Center Visits 7
 - Marshall Community Center Visits 6

Enbridge reported that it received 1 inquiry from its www.response.enbridgeUS.com website between 9/26 and 9/27.

2.7 Finance Section

The current NPFC issued ceiling was \$21.6 million. Approximately 86.9% of the ceiling had been spent through September 27, 2010 (see burn rates below). These cost summaries reflect only EPA-funded expenditures for the incident.

Table 11 - FPN E10527 - Enbridge Pipeline Oil Spill

ERRS Contractors		Est. Expended	Est Burn Rate (9/26/10)	Est Burn Rate (9/27/10)
EQM (EPS50802)	T057	\$1,250,065	0	0
	T060	204,905	0	0
LATA (EPS50804)		1,451,396	0	0
ER LLC (EPS50905)		723,669	0	0
ERRS Contractors		\$3,630,035	0	0
Lockheed Martin (EPW09031)		150,000	0	0
T&T Bisso			27,000	
USCS		1,255,000		
START Contractor			58,224	
WESTON (EPS50604)		6,213,415	85,224	55,632
Response Contractor Sub-Totals		\$11,248,450	\$85,224	\$55,632
EPA Funded Costs:				
Total EPA Costs		3,610,803	36,900	36,400
Pollution Removal Funding Agreements:				
Total Other Agencies		\$1,330,106	\$7,620	\$7,620
Sub-Totals		\$16,189,359	\$129,744	\$99,652
Indirect Cost (16.00%)		2,590,297	20,759	15,944
Total Est. Oil Spill Cost		\$18,779,656	\$150,503	\$115,596

2.8 Response Actions to Date

Response Actions to date may be found in Situation Reports #1 through #57.

3 Participating Entities

3.1 Unified Command

U.S. EPA
 MDNRE
 Michigan State Police Emergency
 Management Division
 City of Battle Creek

Calhoun County Public Health
 Department
 Calhoun County Emergency Management
 Kalamazoo County Sheriff
 Enbridge (Responsible Party)

3.2 Cooperating and Assisting Agencies

ATSDR
 Calhoun Conservation District
 Calhoun County Commission
 City of Kalamazoo
 City of Marshall
 Emmett Township
 Fredonia Township
 Kalamazoo County Office of Emergency
 Management
 Marshall Area Firefighters Ambulance
 Authority

Marshall Police Department
 Marshall Township Government and Fire
 Department
 Michigan Department of Agriculture
 MDCH
 NOAA
 Oakland County HAZMAT/RRTN
 PHMSA
 USCG
 U.S. Department of the Interior/USGS
 USFW

3.3 Congressional Presence

State Representative Jase Bolger
 State Representative Kate Segal
 State Representative Ken Kurtz
 State Representative Phil Browne
 State Representative Phyllis Browne
 State Representative Bob Geuck
 State Representative Tanya Schuitmaker
 State Senator Mike Nofs
 U.S. Congressman Mark Schauer
 U.S. Senator Carl Levin
 U.S. Senator Debbie Stabenow

4 Personnel On Site

Table 12 - Personnel On Site

Agency/Entity	Numbers Reported 9/27	Numbers Reported 9/28
EPA	39	35
START	39	39
Calhoun County Public Health	0	3*
Calhoun County (CC) Sheriff	6	6
City of Battle Creek	3	3
Kalamazoo Sheriff	2	2
MDNRE	4	7
Michigan State Police (MSP)	1	1
NOAA - National Weather	1	2
USCG	0	0
USCG Contractor	0†	0†
USFWS	2	2
Enbridge ICP	86	87
Enbridge ICP Contractor	306	347
Enbridge	15	21
Enbridge Contractors	980	871
Total	1484	1426

* Staffing number includes 1 health officer for Kalamazoo County

† Contract terminated at 1900 on September 27, 2010.

5 Source of Additional Information

5.1 Additional Information

For additional information, please refer to <http://www.epa.gov/enbridgespill>. For sampling analysis data, please see <http://response.enbridge.com/response/main.aspx?id=13168>.

5.2 Reporting Schedule

SITREPs are now being created every other day and will continue until the UC establishes a different reporting schedule.

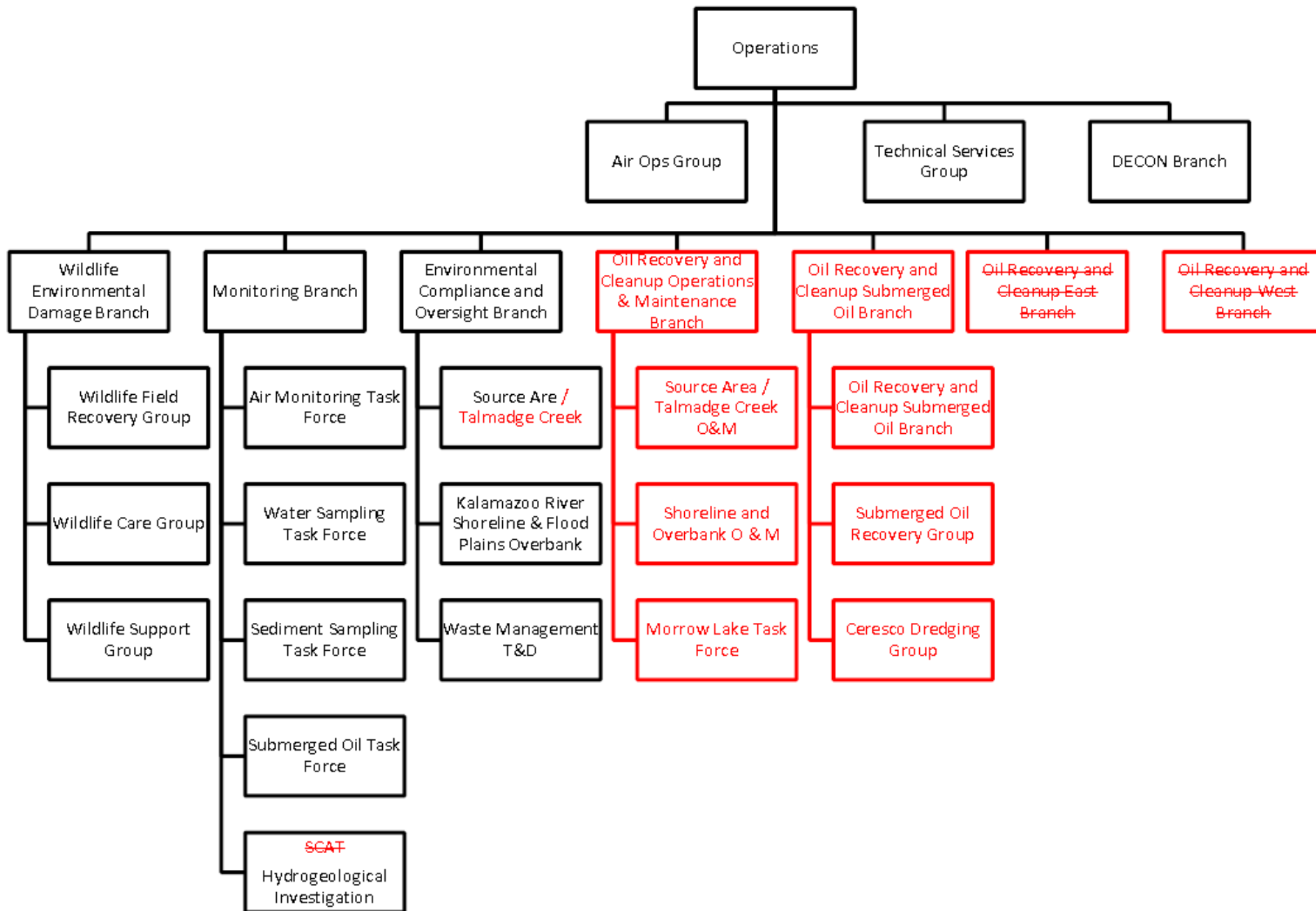


Figure 7 – Revisions to the Incident Command Structure