

## EPA REGION 8 AREA PLANNING STRATEGY

### INTRODUCTION

The Environmental Protection Agency (EPA) Region 8 Emergency Response and Preparedness Program has developed the following approach for developing Sub-Area Contingency Plans (SACP) in accordance with the Clean Water Act (CWA) §311(j)(4) as amended by the Oil Pollution Act (OPA or OPA 90). This SACP<sup>1</sup> strategy summarizes the approach for oil spill response previously presented and discussed at the October 30-31, 2013 Regional Response Team (RRT) meeting. The strategy will be implemented from 2013 to 2017.

The main goal of the Region 8 Area Planning Strategy is to develop an oil response planning approach that adequately addresses the region-wide potential for a significant oil spill to inland waters, given the significant oil infrastructure across the Region. To achieve this goal, the Region's oil response planning will strategically focus on large oil threats in order to address the large geographic area that makes up the Region — much of which consists of rural and remote areas, the unique planning inherent in oil spill response, and to address CWA §311(j)(4) requirements. Although focused on oil spill response, the successful completion of the oil response planning and GIS tool development discussed below along with planned updates to the Regional Contingency Plan (RCP)/Area Contingency Plan (ACP) will prepare and enhance the Region's ability to respond to both oil discharges and hazardous substance releases.

With this goal in mind and based on the recommendations of EPA Region 8 On-Scene Coordinators (OSCs), the Region's approach to oil response planning includes three key aspects:

- (1) A focus on oil response planning including identification/prioritization of key sensitive areas and pre-planned response strategies,
- (2) Establishment of watershed-based SACP boundaries,
- (3) The systematic use of interactive, computer-based GIS viewer technology to facilitate a timely and effective response and allow for efficient updates and distribution.

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<sup>1</sup> Note: The RCP/ACP will continue to serve as the overarching Regional policy and administrative procedures document for both Oil and Hazardous Substance Response. Therefore, the Area Contingency Plan for a geographical area will consist of both the RCP/ACP and the Sub-Area Contingency Plan.

## BACKGROUND

The all-hazard approach, which Region 8 and many other EPA regions adopted in the past, has not effectively addressed the threat of a worst case oil discharge to sensitive areas within the Region as prescribed by OPA 90. Regional planning efforts in the late 1990s resulted in the development of eight all-hazard plans which addresses only a fraction of the Region's geographic area and a small segment of the significant oil infrastructure. Collectively these plans only address 45 of the 291 counties within the Region, 21 of the 136 large oil storage facilities (FRPs), and a fraction of the extensive pipeline infrastructure spanning the Region. In addition, the plans are based on political boundaries (i.e. counties) and, as a result, bisect major rivers and tributaries.

A significant percentage of the nation's oil production, thousands of miles of interstate pipeline, truck and rail transport, and large storage facilities are densely represented in Region 8 and traverse not only the vast Rocky Mountains but also some of the country's largest tracts of pristine wilderness areas including many significant rivers and countless tributaries. The Region is home to over a dozen large refineries as well as over 136 FRPs having oil storage capacities exceeding 1 million gallons. Over 14 percent of the 2.1 billion barrels of domestically produced crude oil produced in 2011 (EIA<sup>i</sup>) were produced in the Region. Of the 3.3 billion barrels of crude oil imported in 2011 (EIA<sup>ii</sup>), approximately 25% came from Canada, the bulk of which was transported by pipelines across the borders of Montana and North Dakota and then down through Wyoming, Colorado, and Utah for refining as well as down across the Dakotas en-route to refineries in Missouri and Texas. These imports are expected to significantly increase with the completion of the Keystone pipeline.

Response planning mandated for oil under OPA 90 is unique. Under OPA 90, area contingency planning as well as response is lead at the federal level by the Federal On Scene Coordinator (OSC). Such planning is intended to provide for efficient, coordinated, and effective response in removing and mitigating the effects of a large oil spill in coastal areas as well as inland areas. Hazardous substance response planning on the other hand is conducted generally at the local (county, tribal) level in concert with SARA Title III requirements for local planning; although an OSC can initiate the development of a hazardous substance response plan where he/she deems necessary. Hazardous response planning, especially following 9-11 and the subsequent initiatives and resources provided to local governments for local preparedness by the Department of Homeland Security, has substantially increased the level of hazardous substance preparedness and planning efforts conducted at the local level in the last several years. EPA still maintains a relevant presence in assisting local governments in preparedness and

planning efforts through various outreach and training activities, while OSCs continue to provide technical and field assistance to local responders in the field, especially during large spills or potential Weapons of Mass Destruction (WMD) events.

## **APPROACH TO EPA REGION 8 AREA CONTINGENCY PLANNING**

### **(1) Establish New SACP Boundaries**

EPA Region 8 established ten watershed-based planning areas that cover the entire Region. The ten new planning areas will replace the previous eight SACP boundaries that covered only a portion of the Region. The boundaries were developed based on the standardized U.S. Geological Survey (USGS) Hydrologic Unit Maps and include the following watersheds (see Figure 1):

1. Yellowstone
2. Mid-Missouri
3. Green River
4. Colorado River
5. Utah Great Basin
6. South Platte, Upper Arkansas, Rio Grande
7. North Platte Cheyenne
8. Missouri Headwaters, Clark Fork
9. Souris, Red River
10. Missouri, James, White, Big Sioux

### **(2) Implement a Revised and Focused Planning Process**

The SACP will be prepared in accordance with the requirements provided in CWA Section 311(j) (4)(C) (Attachment 1). The SACP will consist of the documentation identified in the attached outline (Attachment 2) and the GIS-based viewer described below. The RCP /ACP will be the source of overall policy and administrative procedures. The SACP is intended to be a streamlined plan for emergency response and not be duplicative of all the administrative procedures and policies maintained in the RCP/ACP.

The plan requires increased governmental interagency coordination (local, state, federal, and tribal) and collaboration with facility representatives. Specifically, the planning process will:

- Focus on Oil. EPA plans to focus the SACP on oil response planning and provide a more coordinated response in the initial 24-48 hours of an emergency. This will allow the OSC and the Sub-Area Committees to better concentrate on the worst case discharges, threatened sensitive resources, and appropriate response strategies and control points.
- Establish Sub-Area Committees. The Sub-Area Committees will be made up of members from federal, state, local, and tribal governments and industry.
- Sub-Area Committee and RRT Coordination. The OSC for Sub-Area shall notify the RRT upon initiation of the SACP planning process, and will provide periodic updates. The RRT shall provide input and assistance to identify potential appropriate Sub-Area Committee representatives

and provide guidance to the Sub-Area Committees, as appropriate, to ensure inter-area consistency and consistency of individual ACPs with the RCP and NCP (NCP 300.115(2)). As the lead for the Sub-Area, the OSCs will strive to be communicative throughout the SACP development; however, it is expected that all RRT representatives will perform their due diligence to get detailed SACP process information from their agency representatives on the Sub-Area Committee.

- Identify Worst Case Discharges. Projections of worst case oil discharges to inland waters will be mapped.
- Identify and Prioritize Threatened Sensitive Areas. In close coordination with the trustees, states and tribes, EPA plans to include identification and prioritization of key, threatened sensitive areas. This approach would provide the OSC and other agency officials with general response priorities and strategies to implement in the initial stages of a response. It would not replace the requirement for coordination and consultation during an incident with the trustees as required under the NCP.
- Focus on Geographic Response Planning. The OSC will work collaboratively with industry, States and tribes, and federal and local governments to develop pre-planned response strategies and to identify and secure access agreements for control points. The SACP will focus on those worst case discharges posed by major facilities such as pipelines, large above-ground oil tanks, rail lines, etc., that pose significant risks to sensitive resources within the river basin and where pre-planned response strategies are needed. Although an entire water-basin will be delineated, only those sensitive areas with potential impacts will be specifically targeted for response strategies.
- Identify Resources, Equipment and Responsibilities. The SACP will include identification of resources, equipment, and clarification of each agency's responsibility and each facility's responsibility when responding to a worst case discharge.

### **(3) Modernize Dissemination of the SACP with a GIS Viewer and SharePoint**

As part of the sub-area planning process, EPA has developed an interactive, web-based GIS-based viewer. The viewer will be an important tool for the Emergency Operations Center (EOC) in the initial stages of a response and will provide readily-accessible information to the OSCs, trustees, state and local emergency responders. The viewer integrates real-time information from numerous databases including facilities and pipelines; water bodies; water intakes; sensitive areas that are prioritized for protection in the event of a spill; land status; and pre-planned response strategies and control points as they are developed. Industry response plans, equipment, and information will be made available on the viewer, to the extent possible. The web-based collaboration platform SharePoint will be used by the Sub-Area Committees in the development of the SACP documentation in conjunction with the GIS-based viewer. The viewer and the SharePoint site will be the primary method of disseminating the SACP. These web-based tools will better allow EPA and Sub-Area Committees to update and maintain the SACP in the future. SACP information will generally not be provided in hard-copy format.

**SCHEDULE AND KEY ASSIGNMENTS**

Given existing resources, EPA proposes to roll-out the planning process over a five to six year timeframe as shown below. This phased approach will allow EPA and the RRT opportunity to adjust the strategy and approach based on lessons learned during the initial development of the Green River, Missouri and Yellowstone SACPs. These three SACPs will serve as a pilot to determine the level of effort, degree of difficulty, and level of success that is involved in creating SACPs. EPA estimates each SACP will require two to three years to complete. Attachment 3 provides a status table showing percent complete for the main planning elements of the three pilot SACPs.

Area Contingency Plan (SACP)	OSC	2012	2013	2014	2015	2016	2017
Green River	Kerry Guy, Joyel Dhieux						
Missouri-Lake Sakakawea	Steve Way						
Yellowstone	Steve Merritt						
Colorado River							
Utah Great Basin			Initial Scoping				
South Platte							
North Platte							
Missouri Headwaters, Clark Fork							
Souris, Red River							
Missouri, James, White, Big Sioux							

**PLANNING STATUS**

**Viewer**

EPA has deployed a geospatial viewer and all Region 8 OSC's have been training in its use and functionality. Readily available base layers including, but not limited to, geographic response plan areas, water bodies, drinking water intakes, pipelines, critical habitats for threatened and endangered species, and the Pipeline & Hazardous Materials Safety Administration’s Unusually Sensitive Areas (drinking water and ecological resources) have been loaded into this viewer. EPA's FRP database has been thoroughly reviewed and validated and 27-hr spill projections have been developed for both FRPs and key pipelines within its Green River, Missouri – Lake Sakakawea, and Yellowstone SACPs. Both of these datasets have been added to the viewer. Furthermore, EPA has developed the structure required to manage other response planning data such as booming locations, staging areas, equipment caches,

additional sensitive environments, etc. and has started to populate the system with data from our industry partners as well as data collected by our own field teams. EPA has started updating its contacts database and migrating it to the viewer.

### **Green River SACP**

#### **Green River Area Committees**

The Green River SACP will be developed by two Area Committees—Upper Green River Watershed and Lower Green River Watershed. The Upper Green River Watershed Committee will focus on that portion of the watershed from the headwaters of the Green River and its associated tributaries in the Bridger-Teton National Forest in the Wind River Range in western Wyoming south to the Wyoming border, which includes the Flaming Gorge Reservoir. The Lower Green River Watershed Committee will focus on that portion of the watershed south of the Wyoming border and Flaming Gorge Reservoir and include the southern reach of the Green River and its associated tributaries to southeastern Utah, where it meets the Colorado River, and include that portion of the watershed in northwestern Colorado which includes two main tributaries, the Yampa and the White River.

#### **Lower Green River (below Flaming Gorge Reservoir)**

During the week of November 26, 2012, OSCs Guy and Dhieux traveled to Salt Lake City to meet with natural resource trustees along with various state, local, and tribal government representatives for the purpose of presenting the Region's strategy for re-starting area planning, initiating discussions on identifying sensitive areas along the Green River with the natural resource trustees, and asking for feedback on the area contingency planning strategy. The OSCs met with U.S. Fish and Wildlife on November 27 and with U.S. Department of Agriculture on November 28. On November 29 the OSCs provided a presentation on the Area Planning Strategy to the State Emergency Response Commission (SERC) Advisory Committee in the morning and to the SERC in the early afternoon. The OSCs also held a meeting with Bureau of Land Management at its Salt Lake City office later that afternoon.

The OSCs have scheduled a second outreach activity to be conducted during the week of March 18, 2013 in Rangely and Vernal Utah to meet with natural resource trustees and industry. This will include meetings with U.S. Fish and Wildlife Service (Grand Junction office), Bureau of Land Management (Price office), Chevron (Pipeline), Anadarko (Pipeline), Region V Response Planning Committee (Duchesne), and a presentation to the Tribal Emergency Response Commission (TERC) in Fort Duchesne.

## **Upper Green River**

Outreach will begin fall 2013.

## **Yellowstone SACP**

The Yellowstone Watershed covers an area of over 69,100 square miles and extends over the northern half of Wyoming, most of south central and southeastern Montana, and slightly into western North Dakota near the confluence with the Missouri. Given this large area and the regional transportation and logistical divisions therein, planning efforts are being focused into discrete zones for effective coordination with stakeholders and phased data collection. These four planning zones are the Upper Yellowstone, the Lower Yellowstone, the Bighorn/Wind Basins, and the Powder/Tongue Basins. EPA is working closely with Exxon Mobil, BNSF, the Montana-Wyoming Spill Co-Op, and other key LEPC stakeholders on the development of the SACP.

## **Upper Yellowstone Planning Zone**

The Upper Yellowstone Planning Zone is defined as the Headwaters of the Yellowstone River and the Clark's Fork, inside Yellowstone National Park, both in Wyoming and Montana, along with the portions of the watershed inside the following Montana counties: Park, Gallatin, Stillwater, Sweet Grass, Carbon, Yellowstone, Treasure, Rosebud, and Custer County to the confluence of the Tongue River. It does include the Big Horn River downstream of Yellowtail Dam at Bighorn Lake. This zone coincides with the boundaries of the Supplementary Environmental Project approved by the Montana Department of Environmental Quality (MT DEQ). The tactical response plans for this Planning Zone will be completed primarily by ExxonMobil Pipeline Company (EMPCO), under the direction of EPA and MT DEQ, in accordance with their settlement with MT DEQ for the Silvertip Pipeline Spill.

Thus far, EPA has been conducting outreach and coordination with stakeholders, including the LEPCs, FRP facilities, and the Montana-Wyoming Spill Co-Op, in partnership with ExxonMobil Pipeline Company and contractors. The most recent face-to-face meetings provided stakeholders with an overview of the Viewer and the concept for data collection and industry coordination. A meeting with Hanser's Towing in Billings revealed that they are well positioned to be the primary inland OSRO for the SACP in Montana. They have an ongoing relationship with the Montana-Wyoming Spill Co-Op along with logistical nodes throughout southeastern Montana.

Next steps for this Planning Zone will be continuing oversight of the tactical planning to be completed by EMPCO, coordination with all other industry stakeholders, finalizing the area committee membership, coordinating with natural resource trustees, and completing site surveys of viable control points along the rivers. These should be conducted in the spring and summer of 2013.

### **Lower Yellowstone Planning Zone**

The Lower Yellowstone Planning Zone is defined as the main stem of the Yellowstone River from the confluence with the Tongue River in Custer County to the confluence with the Missouri River in western North Dakota. This Planning Zone does not include either the Powder or Tongue Rivers. This Planning Zone is the lowest priority area for completion in the Yellowstone River SACP, although it contains the planned crossing point for the Keystone XL Pipeline, should that be approved. The planning activities in this area are likely to commence in 2014.

### **Bighorn/Wind Basin Planning Zone**

The Bighorn/Wind Basin Planning Zone is defined as the portion of the watershed throughout northwestern Wyoming and south central Montana that drains into Bighorn Lake, including the Shoshone, Bighorn, and Wind Rivers. The basin is bounded by the Bighorn Mountains to the east and the Wind River Range to the southwest. This portion of the watershed has numerous FRP facilities and significant large pipelines, including many owned and operated by Marathon Oil, a partner in the Montana-Wyoming Spill Co-Op. The coordination with the industry stakeholders in this area has already begun and will continue, along with the steps described above in the Upper Yellowstone Planning Zone, throughout the summer and fall of 2013. This Planning Zone is the second priority area for completion in the Yellowstone River SACP.

### **Powder/Tongue Basin Planning Zone**

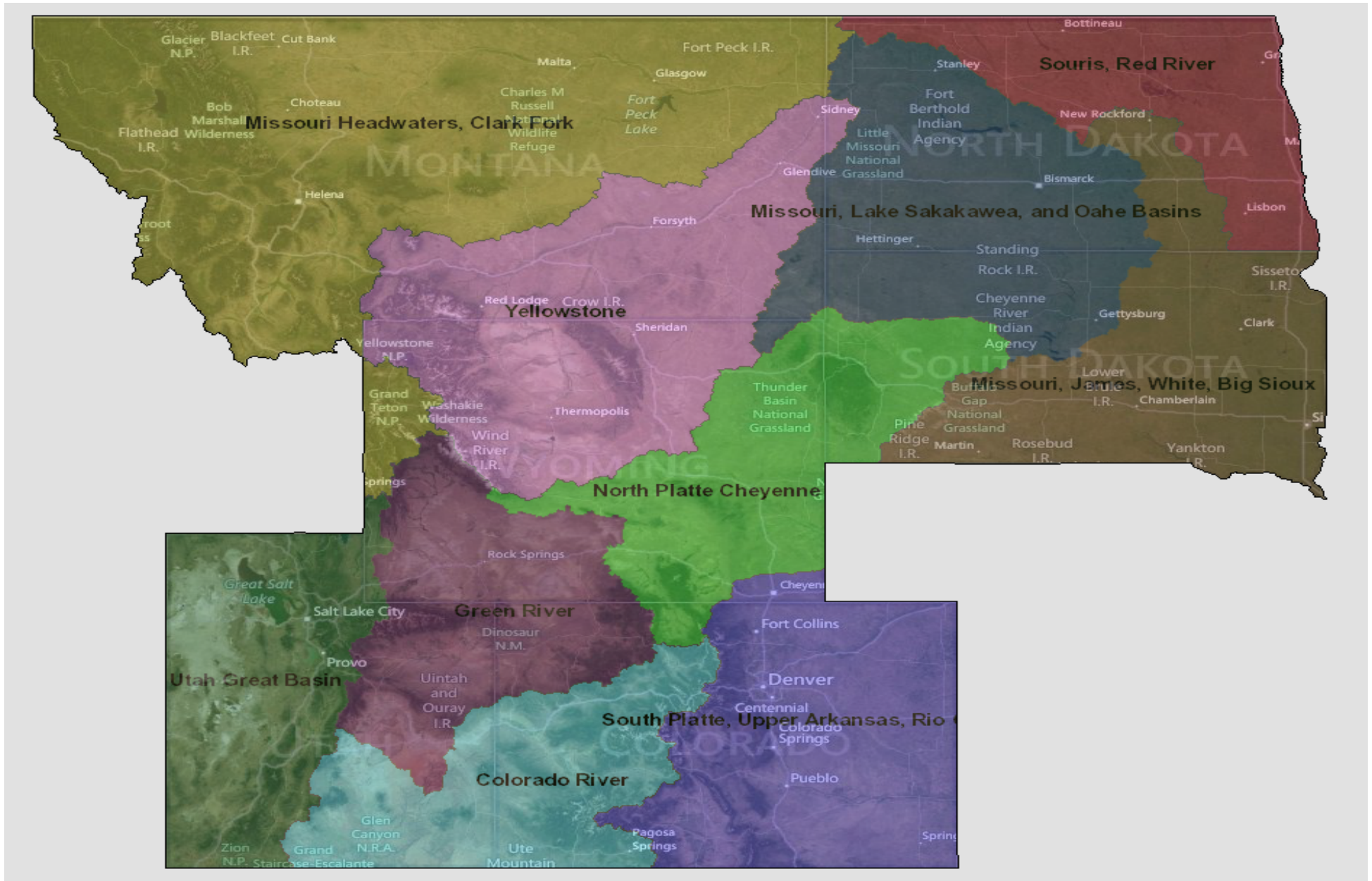
The Powder/Tongue Basin Planning Zone EPA is defined as the portion of the watershed throughout northeastern Wyoming and southeastern Montana that drains into the Powder and Tongue Rivers through their confluence with the Yellowstone River. This part of the watershed contains the most active oil and gas production and distribution within the Yellowstone Watershed and this portion of the Yellowstone River SACP is scheduled for completion during the fall and winter of 2013.



**Missouri – Lake Sakakawea (Mid-Missouri) SACP**

EPA has met with federal and state agencies and industry to begin the development of the SACP and the geographic response strategies. Data for sensitive environments / habitats have been identified and mapped. An initial field reconnaissance conducted in October 2012 provided preliminary response strategies for the Missouri River for the area west of Williston to the inlet to Lake Sakakawea. Additional field investigations are being planned for the spring of 2013 to continue with developing response strategies. Spill projections have been developed for all the major oil facility / pipeline systems within the subarea. Preliminary equipment and contact list information is currently available in the viewer. A meeting will be held with the Missouri River Area Committee in spring 2013 (April or May).

FIGURE 1



**Attachment 1****SACP Planning  
CWA Section 311(j)(4)(B)**

The Area Committee comprised of local, state, federal and tribal agencies along with facility owners and representatives, will develop the SACP's under the direction of the Federal On-Scene Coordinator. Trustees for Natural Resources shall be consulted and offered committee membership. Planning conducted under the SACP's will become part of the Region's Area Contingency Plan for the defined area and address the CWA Section 311 requirements below for an ACP.

## CWA Section 311 (j)(4)(C)

- (i) *When implemented in conjunction with the National Contingency Plan, be adequate to remove a worst case discharge and to mitigate or prevent a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operation in or near the area;*
- (ii) *Describe the area covered by the plan, including the areas of special economic or environmental importance that might be damaged by a discharge;*
- (iii) *Describe in detail the responsibilities of an owner or operator and of federal, state, and local agencies in removing a discharge, and in mitigating or preventing a substantial threat of a discharge;*
- (iv) *List the equipment (including firefighting equipment), dispersants or other mitigating substances and devices, and personnel available to an owner or operator and federal, state and local agencies to ensure an effective and immediate removal of a discharge and to ensure mitigation or prevention of a substantial threat of a discharge;*
- (v) *Describe the procedures to be followed for obtaining an expedited decision regarding the use of dispersants;*
- (vi) *Describe in detail how the plan is integrated into other Area Contingency Plans and vessel, offshore facility, and onshore facility response plans approved under this subsection, and into operating procedures of the National Response Unit;*
- (vii) *Include any other information the President requires; and*
- (viii) *Be updated periodically by the Area Committee.*

**Attachment 2****Table of Contents  
Sub-Area Contingency Plan Documentation**

*Note: It is not intended that the SACP documentation be voluminous, but rather a succinct document that provides: a brief but concise descriptions of the type and magnitude of oil infrastructure present in the geographical area; the nature and magnitude of worst case threats; the identified sensitive areas of concern that could be impacted; the rationale and priorities for response in the SACP area to mitigate and remove a discharge, including preplanned response strategies; and the equipment and resources available to address a worst case discharge. The documentation will reflect the collective oil response planning conducted by EPA, the Resource Trustees; local, state, and tribal governments; and industry. Together with the GIS-viewer, the SACP documentation identified in the outline below will serve as the Sub-Area Contingency Plan and meet the requirements specified in the CWA.*

1. Introduction
  - 1.1. Scope
  - 1.2. Purpose
  - 1.3. Statutory Authority

*Section 1.0, the Introduction, will be the same for all SACPs. Policy type information cited in the SACP (including ICS and its implementation) will not be directly included in the SACP but will reference the RCP/ACP.*

2. Description of the Sub-Area
  - 2.1. Watershed
  - 2.2. Sensitive Areas

*Section 2.0 will present the results of outreach work with trustees in identifying sensitive areas (critical habitat and T&E) and the rationale for protection priorities and concerns. This section will reiterate policy relating to consultation with F&W.*

3. Oil Threats
  - 3.1. Fixed Facility Hazards (Oil and Gas Wells, Oil Storage Facilities (FRPs))
  - 3.2. Transportation Hazards (Railroads, Pipelines, Tanker Trucks)
  - 3.3. Oil Production Facilities
  - 3.4. Worst Case Discharges and Projections

*The intent of Section 3.0 is to provide a general description of the oil production, storage, and transportation facilities within the SACP basin with more specific detail provided on the FRP facilities posing the worst case discharge.*

4. Response Roles and Operations
  - 4.1. Responsible Party, Local Jurisdictions, State Government, Tribal Government, Federal Government, State and Federal Natural Resource Trustees
    - 4.1.1. Emergency Notifications
  - 4.2. Response Strategies and Control Points
  - 4.3. Resources and Equipment
  - 4.4. GIS-Viewer

*Section 4.0 will provide a description of the government and private entities participating and responsible for the SACP (committee) and their roles and responsibilities in addressing an oil spill. This section will provide discussion and rationale for the response strategies and the resources and equipment available to implement those strategies. A description of the GIS-based Viewer, which will be a key tool used by EPA during a response, will also be included.*

5. Spill Chemical Counter Measures, In-Situ Burning, Bioremediation
  - 5.1. Use of Dispersants
  - 5.2. In-situ Burns
  - 5.3. Bioremediation

*Section 5.0 will provide language regarding use of countermeasures and any specific limitations or required approval for their use--- including prior RRT approval for use of dispersants.*

6. Other Contingency Plans

*One goal of the Area Planning Strategy and requirement of the CWA is to ensure industry (FRPs) and local response plans are consistent with the ACP. This section will identify the plans within the SACP that should be consistent with the Region 8 ACP (RCP/ACP and SACP).*

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<sup>i</sup> U.S. Energy Information Administration, U.S. Crude Oil Production Table 2006-2011, Annual Thousand Barrels, [www page]. URL [http://www.eia.gov/dnav/pet/pet\\_crd\\_crpdn\\_adc\\_mbb1\\_m.htm](http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbb1_m.htm)

<sup>ii</sup> U.S. Energy Information Administration, U.S. Imports by Country of Origin Table 2006-2011, Crude Oil, Annual Thousand Barrels, [www page]. URL [http://www.eia.gov/dnav/pet/pet\\_move\\_impcus\\_a2\\_nus\\_epc0\\_im0\\_mbb1\\_a.htm](http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_epc0_im0_mbb1_a.htm)