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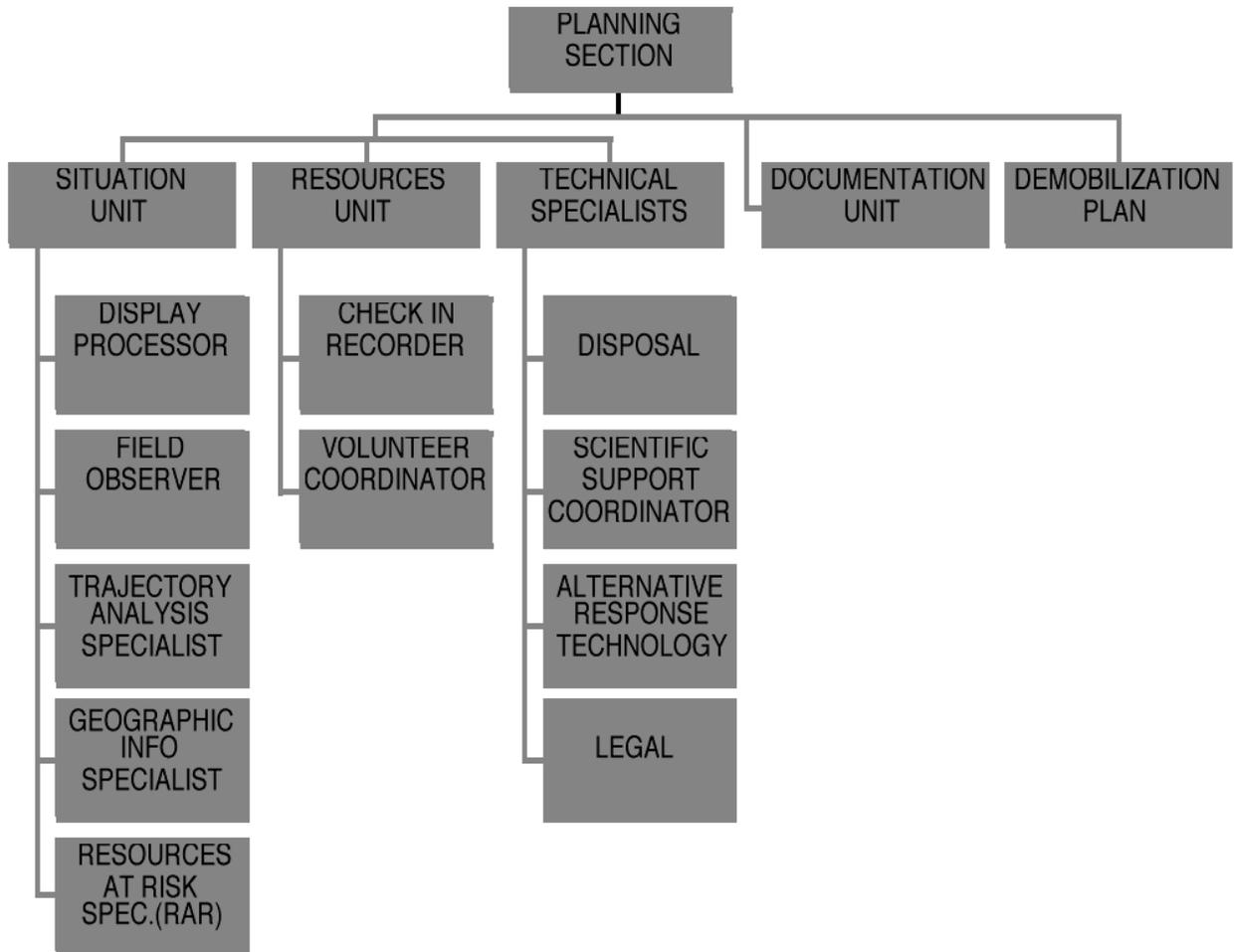
4000 Planning

4100 Planning Section Organization

The Planning Section is responsible for the collection, evaluation, and dissemination of tactical information related to the incident, and for the preparation and documentation of Action Plans. The section also maintains information on the current and forecasted situation, and the status of resources assigned to the incident, which includes the Situation, Resource, Documentation, Demobilization Units, and the Technical Specialists.

Refer to the [FOG 2000, Planning](#) for more details on specific responsibilities for all members of the Planning Section.

Figure 4-1 Planning Section Organization



4110 Planning Section/Planning Cycle Guide

See [FOG 2000, Planning Cycle](#) for more information.

4120 Planning Section Objectives

4120.1 0-4 Hours

- Evaluate extent of the incident.
- Initiate incident logs.
- Begin Section stand-up.

4120.2 4-24 Hours

- Identify and prioritize effected or potentially affected environmentally, archaeologically, and economically sensitive areas. Communicate this information to the Operations Section and Unified Command (UC) to ensure initial efforts minimize or avoid impact to such areas.
- Designate personnel to implement an incident tracking system.
- Continue evaluating the extent of the incident.
- Forecast probable spill impacts.
- Develop strategic plans for response activities during the 24-48 hour operational period and beyond.

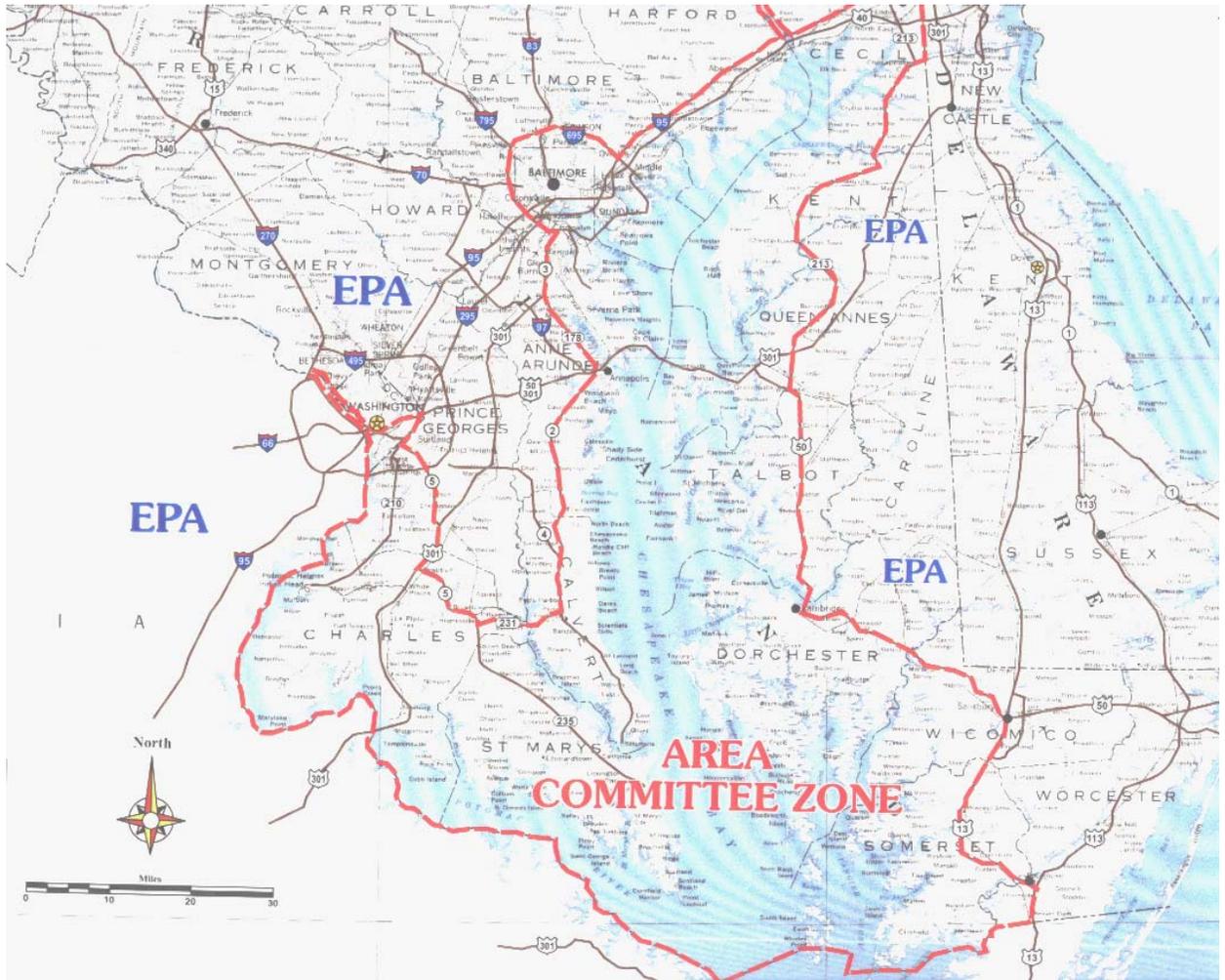
4120.3 24-48 Hours

- Continue to identify and prioritize sensitive areas.
- Continue tracking incident progress in cooperation with the Operations Section.
- Forecast probable spill impacts.
- Develop strategic plans for response activities for the next few days of the operational period.

4200 Situation

The Situation Unit is responsible for the collection and evaluation of information on current and possible future status of oil spill and spill response operations. This responsibility includes the compilation of information regarding the type and amount of oil spilled, the amount of oil recovered, the oil's current location and anticipated trajectory, and the impacts on natural resources. See [FOG 2000, Situation Display](#) for more information.

4210 Chart/Map of Area



4220 Weather/Tides/Currents

Seasonal weather patterns may affect the planning and operational aspects of a response. Detailed weather information and forecasts can be obtained from a variety of sources, including the National Weather Service. <http://www.nws.noaa.gov/er/lwx>

For tides and currents, Internet sites will not give accurate enough information; only Thomas Point Light's station is listed. The Activities Baltimore's Operations Center can provide excellent data with many more substations for calculations. The Operations Center can be reached 24 hrs per day at (410)-576-2525.

4230 Situation Unit Displays

Various methods may be established for displaying current situation information to the UC. The method of choice will depend on availability of resources, the kind of system used (i.e. OSC2 - see section 4240 below), and the physical command post layout. See [FOG 2000, Situation Display](#) for more information.

4240 On-Scene Command and Control (OSC2)

Commandant (G-MOR), in conjunction with the Coast Guard Research and Development Center and the U.S. Army Corps of Engineers, has developed an integrated crisis management system designed to provide real time (or near-time) response and planning information to a UC. Although still in a prototype stage of development, the system includes electronic forms using a Microsoft Access relational database, a Geographic Information System (GIS) situation display, and a web-based intranet system for disseminating information. See <http://www.uscg.mil/hq/g-m/mor/Articles/OSC2.htm> for additional information about the OSC2 prototype

4250 Required Operational Reports

4300 Resources

The Resources Unit is responsible for the status of all resources (primary and support) at an incident. This is achieved through the development and maintenance of a master list of all resources used during the event.

4310 Resource Management Procedures

4310.1 Check-in Procedures

Check-in recorders are responsible for ensuring all personnel are properly accounted for as they report to an incident. This includes field workers, support personnel, and personnel who will be working at the command post.

4320 Volunteers

4320.1 Assistance Options

Volunteers can come from a wide variety of backgrounds and work experiences and can be used in many different manners. They may be fully integrated into the command structure.

4320.2 Assignment

Volunteers will be assigned based on expertise and interest.

4320.3 Coordination

State and local emergency management agencies within the Area Committee zone are excellent resources from which expertise in volunteer coordination can be drawn.

4320.4 Training

Those volunteers, who will be involved in the post-emergency response phases of an oil spill, will need hazardous materials awareness training. OSHA regulations and 29CFR1900.120 dictate that post-emergency response workers have 40 hours of HAZWOPER training. These 40 hours of training would be difficult and expensive to set up for volunteers. Instead, volunteers can fall under a “De Minimis” exception. Under OSHA Directive CPL 2-2.51 and OSHA Standards Interpretation and Compliance Letters (dated 02/13/1992), “a minimum of four hours [of training] would be appropriate in most situations.” The criteria for De Minimis is:

- a) The job site is in an area where a qualified person has decided that the exposure potential is expected to remain under Permissible Exposure Limits (PEL),
- b) Health risks from skin absorption are minimal,
- c) Workers have been trained on procedures in the event of an emergency and hazards associated with the hazardous substances in their workplace,
- d) Workers have completed training including topics such as decontamination procedures, heat stress, hypothermia, water safety, and operating procedures, and
- e) Supervisors have received a minimum of 24 hours of training.

Potential sources for the four hours of hazardous materials awareness training include the RP, Maryland Department of the Environment (whose qualified trainers will be heavily involved in spill response), the EPA, the South Baltimore Mutual Assistance Plan (SBIMAP), Anne Arundel County, Baltimore City, Baltimore County, Howard County, Prince George’s County, Montgomery County, or Maryland Fire and Rescue Institute (MFRI).

4400 Documentation

The Documentation Unit is essential to properly collecting, organizing, and maintaining custody of materials during and following the incident response. Guidance for properly performing these tasks may be found in the ICS Documentation Unit Leader Job Aid at the Online Documents page of the National Strike Force Coordination Center.

<http://www.uscg.mil/hq/nsfweb/index.html>

4410 Services Provided

Responsible for the maintenance of accurate, up-to-date incident files. This unit shall ensure each section is maintaining and providing appropriate documents.

4420 Administrative File Organization

Establishing and maintaining an administrative filing system is dependent on the complexity of the incident, as well as the potential for future litigation. Typically the person assigned to the Documentation Unit Leader position will be experienced in the management of such a task. Assistants should review the Job Aid found on the Web Site provided above.

4500 Demobilization

Responsible for developing the Incident Demobilization Plan, and assisting sections and units in ensuring that an orderly, safe, and cost effective demobilization of personnel and equipment is accomplished from the incident.

4510 Sample Demobilization Plan

4600 Environmental

4610 Historic Properties

The National Historic Preservation Act requires Federal agencies to take into account the effects of response actions on historic properties when responding to spills. As the Federal official designated to coordinate and direct response actions, the Federal OSC is responsible for ensuring historic properties are appropriately considered while planning and during a spill response. Historic properties include any prehistoric or historic district, site, building, structure, or object listed in, or eligible for inclusion in, the National Register of Historic Places (36 CFR Part 60). The listing of these sites is not currently included in this plan, however detailed maps identifying historic sites are available from the Maryland Department of Natural Resources, Geographic Information Systems Division. See [Section 4630.26 Maryland Mapping Services](#). There are approximately 1300 sites in Maryland listed on the National Register of Historic Places with approximately 1000 other sites with significant historical value. The Maryland Historical Trust is the State Historic Preservation Office for the state of Maryland and should be contacted to determine if any historic sites are located in the area impacted by the spill or response actions.

Most historic sites are located on land and are not likely to be impacted by spills of oil or hazardous substances. However, many sites are located near the water, which can be adversely impacted by containment and recovery operations. Heavy equipment is particularly harmful to archeological sites and the OSC should use other methods of containment and recovery in these areas. Some historic sites are located underwater and may be damaged by an oil or hazardous substance spill. However, even underwater, the sites are more likely to be adversely impacted by containment and recovery operations than the spill itself.

Before conducting containment or recovery operations on a historic site, the OSC should contact the Maryland Historical Trust to determine the sensitivity of the site. The Maryland Historical Trust may also be able to assist in identifying which containment and recovery techniques are least likely to impact the historic site. See [Section 4730.1 Cultural and Historic Properties](#) for more information.

4620 Environmentally Sensitive Areas and Maps

4620.1 Introduction

The Port of Baltimore area of jurisdiction is divided into eight sectors to facilitate identification and prioritization of sensitive environmental and economic resources targeted for protection following a spill event. Natural barriers or borders used by the Chesapeake Bay Program's Geographic Information System (GIS) divide the area into the sectors; See Figure 4-2. Identification of resources and strategies for protecting sensitive resources are described by each sector in Figures 4-3 to 4-23. The OSC must also take historic properties into account when responding to spills. Historic properties include any prehistoric district, site, building, structure, or object included in, or eligible for inclusion on the National Register. [Section 4610 Historic Properties](#) contains more information. [Section 4630 Local Contacts](#) provide contacts, resources, and references related to the protection of sensitive environmental and economic resources and historic properties.

The primary reference used to identify sensitive environmental and economic resources is the Sensitivity of Coastal Environments and Wildlife to Oil - State of Maryland Atlas (Virginia Institute of Marine Science). These Environmental Sensitivity Index (ESI) maps were produced as an atlas for the National Oceanic and Atmospheric Administration (NOAA) to aid in sensitive resource identification during oil spills. The categories of resources listed in the atlas are divided into high, medium, and low priorities for protection based on their sensitivity to oiling, ability to be cleaned, length of time, and cost of recovery. Short descriptions of resource characteristics (e.g., shoreline types, wildlife habitats, area characteristics) are included. A general discussion of prioritization is provided for each sector. During an actual spill this information can, and often should, be supplemented with information in the desktop resources and through the local and regional contacts.

The eight sectors delineated for this portion of the plan are:

- (1) Baltimore Harbor/Patapsco River
- (2) Upper Bay/Susquehanna River/Elk River/Sassafras River
- (3) Craighill Angle/Chester River

- (4) Middle Bay/Eastern Bay/Choptank River/Severn River
- (5) Lower Bay/Tangier Sound
- (6) Patuxent River
- (7) Potomac / Anacostia River
- (8) Atlantic Coastal Zone

For the electronic versions of this ACP, the following hyperlinks will take you to the detailed ESI maps themselves shown in Figure 4-2.

		35	Broomes Island	74	Wye Mills
1	Washington East	36	Mechanicsville	75	Claiborne
2	Alexandria	37	Prince Fredrick	76	St. Michaels
3	Mount Vernon	38	Benedict	77	Easton
4	Quantico	39	North Beach	78	Tilghman
5	Indian Head	40	Deale	79	Oxford
6	Widewater	41	South River	80	Trappe
7	Nanjemoy	42	Annapolis	81	Denton
8	Mathias Point	43	Round Bay	82	Hobbs
9	Passapatanzy	44	Gibson Island	83	Sharps Island
10	King George	45	Curtis Bay	84	Church Creek
11	Dahlgren	46	Sparrows Point	85	Cambridge
12	Colonial Beach	47	Baltimore West	86	Seaford West
	North	48	Baltimore East	87	Seaford East
13	Colonial Beach	49	Middle River	88	Sharptown
	South	50	Gunpowder Neck	89	Laurel
14	Stratford Hall	51	Hanesville	90	Taylors Island
15	St. Clements	52	Edgewood	91	Golden Hill
	Island	53	Perryman	92	Blackwater River
16	Piney Point	54	Spesutie	93	Chicamacomico
17	Kinsale	55	Aberdeen	94	Mardela Springs
18	St. George Island	56	Conowingo Dam	95	Barren Island
19	Heathsville	57	Havre De Grace	96	Honga
20	Burgess	58	Northeast	97	Wingate
21	Ewell	59	Elkton	98	Nanticoke
22	Great Fox Island	60	St. Georges	99	Wetipquin
23	Crisfield	61	Delaware City	100	Eden
24	Saxis	62	Earleville	101	Salisbury
25	Popes Creek	63	Cecilton	102	Highland Point
26	Charlotte Hall	64	Betterton	103	Bloodsworth
27	Rock Point	65	Galena	104	Deal Island
28	Leondardtwn	66	Swan Point	105	Monie
29	St. Marys City	67	Rock Hall	106	Kedges Straits
30	Point Lookout	68	Chestertown	107	Terrapin Sand Pt
31	Point No Point	69	Love Point	108	Marion
32	Solomons Island	70	Langford Creek	109	Selbyville
33	Hollywood	71	Centreville	110	Assawoman Bay
34	Cove Point	72	Kent Island	111	Berlin
		73	Queenstown	112	Ocean City

113 [Public Landing](#)
114 [Tingles Island](#)

115 [Girdletree](#)
116 [Boxiron](#)

117 [Whittington Point](#)
118 [Fort Belvoir](#)

4620.2 Baltimore Harbor/Patapsco River

The Baltimore Harbor sector includes Baltimore Harbor, the Patapsco River and its tributaries. It is the most industrialized sector in the Chesapeake Bay and the resources identified for protection reflect the industrialized nature of the area. In general, resource protection strategies should attempt to exclude or divert oil from impacting the more sensitive tributaries of the Patapsco River. The highest priority areas for protection are:

- Boyds Pond, entire pond.
- Bear Creek, and its tributaries north of the I-695 Bridge.
- Stoney Creek, entire creek.
- Back Creek, entire creek.
- Main Creek, entire creek.
- Marley Creek, north of junction with Curtis Creek.
- Shallow Creek, entire creek.
- Cox Creek, entire creek.

Figure 4-3 High Level Priorities for protection following a spill event in the Baltimore Harbor/Patapsco

ESI Map Number	Resource Characteristics
48	Fort McHenry - historically significant seawall, fragile, difficult to clean without damaging.
45	Fort Carroll - historically significant seawall, fragile, difficult to clean without damaging.
45	Upper reaches of Stony Creek and Nabbs Creek - freshwater marshes, fringe intertidal marsh, waterfowl wintering habitat, and anadromous fish nursery area.
45	South shore of Curtis Bay - freshwater marsh.
45	Cox Creek - freshwater marshes and fringe intertidal marsh.
46	Wall Cove - freshwater marsh, coarse sand beaches, marina.
46	Boyds Pond - tidal and nontidal wetlands, State endangered species habitat, listed for preservation in Federal Coastal Zone Management Act.

46	Bodkin Creek and tributaries Back Creek and Main Creek- freshwater marsh, fringe intertidal marsh, anadromous fish nursery area, marinas, coarse sand beaches.
46	Shallow Creek and tidal flats at mouth- exposed tidal flats, freshwater marshes, waterfowl wintering habitat, and archeological sites.
46,49	Upper reaches of Bear Creek, Lynch Cove, Chink Creek, Bullneck Creek, and School House Cove- freshwater marshes, marinas, sheltered fine sand beaches.

Figure 4-4 Medium Level Priorities for protection following a spill event in the Baltimore Harbor Sector.

ESI Map Number	Resource Characteristics
45	Rock Creek- coarse sand beaches, high concentration of marinas, waterfowl wintering habitat
45	Curtis Creek, Furnace Branch, Marley Creek- coarse sand beaches, archeological site, marinas, and a anadromous fish nursery area.
45	South shore of Patapsco River between Curtis Bay and Bodkin Point- riprap, coarse sand beaches with some seawalls/bulkhead.
45, 48	South shore of Patapsco River between Hanover Bridge and Harbor Tunnel- freshwater marshes, tidal flat, coarse sand beaches, water intakes.
46	North Shore of Patapsco River between Bear Creek and Shallow Creek- coarse sand beaches, riprap, small freshwater marshes, and seawalls/bulkhead
46	North Point Creek- coarse sand beaches, small freshwater marshes, and marinas
47, 48	Middle Branch Patapsco River- all seawalls small freshwater marsh at Smith Cove and transformer station. Historical site (Constellation), and Inner Harbor commercial zone.

Figure 4-5 Low Level Priorities for protection following a spill event in the Baltimore Harbor Sector.

ESI Map Number	Resource Characteristics
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45	B.G.&E. water intake in Middle Branch Patapsco River- B.G.&E. power plant cooling water intake of 150 million gallons per day.
45	B.G.&E. water intake on North shore Patapsco River west of Key Bridge toll plaza- B.G.&E. power plant cooling water intake 200 million gallons per day.
45	South shore Patapsco River between Harbor Tunnel and Curtis Bay- all seawalls/bulkhead, high density industrial sites.
48	B.G.&E. water intake at Winans Cove- B.G.&E. power plant cooling water intake of 75 million gallons per day; Wopora Inc. cooling and wash water intake of 5400 gallons per day.
48	Lebanon water intake at Lazaretto Point- Lebanon Chemical cooling water intake of 1000 gallons per day.
48	Northwest Harbor- high-density industrial sites, marina, water intakes.
48	Colgate Creek- all seawalls.

4620.3 Upper Bay/Susquehanna River/Elk River/Sassafras River

This sector comprises the Chesapeake Bay from the Gunpowder River and North. It includes the Susquehanna, Elk, and Sassafras Rivers, and the entire C&D Canal including portions in Delaware. Coarse sand beaches, interspersed with fresh water, tidal marshes and swamps, exposed mud flats and sheltered tidal flats, characterize the upper bay area. The reaches of the rivers in this sector are comprised of highly sensitive fresh water tidal marshes. The area is ringed with identified critical areas and contains several archeological sites of significance. The highest priority areas for protection are:

- Susquehanna National Wildlife Refuge.
- Sassafras River NRMA.
- Susquehanna River, entire river.
- Turners Creek.
- Stillpond Creek.
- Romney Creek, and its tributaries.
- Sassafras River, south shore up to Back Creek and entire river east of Back Creek.
- Bohemia River and its tributaries north of the Route 213 bridge.
- Elk River, north of the C & D Canal.

- C & D Canal, entire canal.
- Furnace Bay and Mill Creek.
- Monks Island.

The most probable threat in this sector involves a tug with an oil barge in tow or a small tanker transiting the C&D canal enroute to Baltimore or Norfolk.

Figure 4-6 High Level Priorities for protection following a spill event in the Upper Bay

ESI Map Number	Resource Characteristics
57	Susquehanna River - Freshwater marshes, coarse sand beaches, Submerged Aquatic Vegetation (SAV) beds, wintering and breeding area for waterbirds, spawning and nursery area for anadromous fish, areas identified for protection in the Coastal Zone Management Act.
57	Furnace Bay and Mill Creek - Freshwater marsh and coarse sand beach, SAV beds, waterfowl wintering and breeding area, and anadromous fish nursery area.
58	Upper Reaches of Northeast River - freshwater marsh.
58	Upper Reaches of Elk River - extensive freshwater marsh, wintering and breeding area for waterfowl, anadromous fish nursery area.
59	Long Creek - freshwater marsh.
59	Back Creek - freshwater marsh, wintering and breeding area for waterfowl.
58, 59, 62	Tributaries to the Elk River - freshwater marsh.
62, 63	Upper Reaches of the Bohemia River - extensive freshwater marsh and sheltered tidal flats, waterfowl wintering area.
55	Upper Reaches of Swan Creek - freshwater marsh, waterfowl breeding area.
54	Mosquito Creek - extensive freshwater marsh.
54	Back Creek - extensive freshwater marsh, nesting area for endangered avian species.
53	Little Romney Creek, Delph Creek, and Old Woman's Gut - freshwater marsh, nesting and wintering area for endangered avian species.
53	Romney Creek - freshwater marsh, anadromous fish nursery area, nesting area for endangered avian species and wading birds, clam beds.
51	Monks Island - extensive freshwater marsh, wintering area for endangered avian species, breeding and wintering area for waterfowl

50, 51	Towner Cove - extensive freshwater marsh.
52, 53	Redmon Cove - freshwater marsh
53	Upper Reaches of the Bush River - freshwater marsh.
50, 52, 53	Tributaries of the Bush River - freshwater marsh.
52	Upper Reaches of Otter Point Creek - extensive freshwater marsh, breeding area for waterfowl and wading birds.
52	Lauderick Creek - freshwater marsh, and breeding area for waterfowl.
54, 62, 64	Tributaries of the Sassafras River - freshwater marsh, coarse sand beach, bulkhead.
62, 64	Scotchman Creek and Stillpond Creek -extensive freshwater marsh, tidal flats, and waterfowl wintering area
64	Lloyd Creek - freshwater marsh, consolidated shore, nesting, and wintering area for endangered avian species.
51, 67	Upper Reaches of Farlee Creek - freshwater marsh, archeological sites.

Figure 4-7 Medium Level Priorities for protection following a spill event in the Upper Bay

ESI Map Number	Resource Characteristics
54	Beach and near shore area between Susquehanna River and Furnace Bay - freshwater marsh and SAV beds.
54, 62, 64, 65	Sassafras River - coarse sand beach, anadromous fish nursery area, nesting and wintering area for endangered avian species.
57	Spesutie Narrows - freshwater marsh, coarse sand beach, bulkhead, and waterfowl breeding and wintering area, anadromous fish nursery area.
50	Briery Point to Leggs Point - coarse sand beach, archeological sites.
51	Lower Reaches of Farlee Creek - consolidated shore, SAV bed, marina, and small freshwater marshes.
51	Worton Creek - freshwater marsh, consolidated shores, coarse sand beach, marina, and anadromous fish nursery area.
51	Churn Creek - freshwater marsh, consolidated shore, coarse sand beach, and archeological site.
51	Stillpond Creek - freshwater marsh, consolidated shore, and coarse sand beach.

Figure 4-8 Low Level Priorities for protection following a spill event in the Upper Bay

ESI Map Number	Resource Characteristics
57, 58	Lower Reaches of the Northeast River - coarse sand beach, consolidated shore, and marinas.
58, 62	Lower Reaches of the Elk River - coarse sand beaches, consolidated shore, and marinas.
62, 63	Lower Reaches of the Bohemia River - coarse sand beaches, consolidated shore, and marinas.
ALL IN SECTOR	Coarse sand beaches of Eastern and Western shore of the Chesapeake Bay.

4620.4 Craighill Angle/Chester River

The sector comprising the Craighill Angle and Chester River Area is located northward of a line extending from the northern tip of Kent Island to the mouth of the Magothy River. Coarse sand beaches interspersed with freshwater tidal marshlands characterize the Craighill sector. The waters of this sector, utilized by sport and commercial fisherman, provide a harvest of several of the States prime market fin and shellfish including; Hog Croakers, Channel Catfish, Mud Carp, Set, Croaker, Eel, Stripped Bass, Bluefish, Oyster and Softshell Clam. The sector is a prime recreational area, drawing pleasure boats from the tri-state area. All of Maryland's major commercial vessel traffic passes through this area. Ships and barges south from the Delaware Bay and north past Hampton Roads transit the waters of this zone.

The zone is physically and logistically one of the areas that may be easiest to control and clean up a spill. Resources from Baltimore and surrounding areas may be readily mobilized to this sector. The coarse sand beaches are conducive to easier containment and removal of spilled material and there are numerous landings available to provide operational bases for response personnel.

The large number of commercial vessels entering and departing the Port of Baltimore heading both north and south, make the Craighill Angle an area of increased risk for vessel casualties.

Figure 4-9 High Level Priorities for protection following a spill event in the Craighill Angle/Chester River

ESI Map Number	Resource Characteristics
50	Dundee Creek and Saltpeter Creek - freshwater marsh, coarse sand beach, fine sand beach, breeding area for wading birds, archeological site
50	Gunpowder River - freshwater marsh, coarse sand beach, consolidated shore, riprap, waterfowl wintering area.

50	Hawthorn Cove - extensive freshwater marsh
50	Seneca Creek - extensive freshwater marsh, coarse sand beach, fine sand beach, consolidated shore, B.G.&E. water intake
50	Pooles Island - coarse sand beach, wading bird nesting area, wildlife preserve.
46	Shallow Creek - freshwater marsh, tidal flat, fine sand beach, riprap, consolidated shore, waterfowl wintering area.
44	Magothy River - fresh water and fringe intertidal marsh, coarse sand beach, consolidated shore, oyster beds, SAV beds, marinas, and waterfowl wintering area.
67,70	Rock Hall Harbor and Huntingfield Creek - coarse sand beach, intertidal marsh, consolidated shore, riprap, oyster beds, and marinas.
70	Grays Inn Creek - fringe intertidal marsh, marinas, and riprap.
70	Lanford Creek - freshwater and fringe intertidal marsh, SAV beds, Oyster beds, waterfowl wintering area, breeding and wintering area for endangered avian species, wildlife reserve, marinas.
70	Corsica River - fringe intertidal marsh, coarse sand beach, riprap, and marinas.
70	Grove and Reed Creek - fringe intertidal marsh, nesting and wintering area for endangered avian species.
70	Eastern Neck Narrows and Island - fringe intertidal marsh, coarse sand beach, waterfowl wintering area, shore bird and wading bird breeding and wintering area, SAV beds, archeological site, National Wildlife Refuge, wintering area for endangered bird species.
68,71	Chester River - freshwater and intertidal marsh, coarse and fine sand beach, SAV beds, waterfowl wintering area, breeding and wintering area for endangered avian species, Oyster beds, archeological sites, marinas.
68	Southeast Creek - Fringe intertidal marsh, fine sand beach, marina
73	Queenstown Creek - intertidal marsh, coarse sand beach, Clam beds, waterfowl wintering area, marina.
73	Kent Narrows - fringe intertidal marsh, consolidated shore, marinas, and a large tidal movement between Chester River and Eastern Bay.
ALL IN SECTOR	Shellfish beds.

Figure 4-10 Medium Level Priorities for protection following a spill event in the Craighill Channel/Chester River

ESI Map Number	Resource Characteristics
49	Middle River - fine sand beach, exposed tidal flat, riprap, consolidated shore, residential bulkhead, anadromous fish nursery area, archeological sites, and marinas.
49	Browns Creek to Breezy Point Beach - freshwater marsh, riprap, consolidated shore, and archeological sites.
46, 49	Back River - freshwater marsh, coarse sand beach, consolidated shore, anadromous fish nursery area, and marinas.
46	Bodkin Creek - freshwater marsh, coarse and fine sand beaches, anadromous fish, nursery area, and marinas.
44	Little Magothy River - fringe intertidal marsh and consolidated shore.
66, 67	Eastern Shore Chesapeake Bay between Tolchester Beach and Tower 13 - coarse sand beach, clam and oyster beds, archeological sites.
66	Tavern Creek - fringe intertidal marsh.
66	Swan Creek - fringe intertidal marsh, consolidated shore, and marinas.
70	Huntingfield Beach - coarse sand beach, riprap, and archeological sites.
70	Tilghman Creek - fringe intertidal marsh.
73	Walsey Creek, Winchester Creek, and Muddy Creek - fringe intertidal marsh, and some consolidated shore.
72	Piney Creek and Macum Creek - fringe intertidal marsh, SAV beds.
69	Intertidal Marsh South of Love Point - fringe intertidal marsh, archeological site.

Figure 4-11 Low Level Priorities for protection following a spill event in the Craighill Channel/Chester River

ESI Map Number	Resource Characteristics
ALL IN SECTOR	Fresh and intertidal marsh along the Eastern and Western shore of the Chesapeake Bay and Kent Island not previously mentioned.
ALL IN SECTOR	Coarse and fine sand beaches of the Eastern and Western shore of the Chesapeake Bay and Kent Island.
ALL IN SECTOR	Marinas along the Eastern and Western shore of the Chesapeake Bay and Kent Island.

4620.5 Middle Bay/Eastern Bay/Choptank River/Severn River

The Middle Bay Sector includes the Chesapeake Bay from the Chesapeake Bay Bridge south to Cove Point; the Severn River, South River, Rhode River, and West River on the Western shore; and the Wye River, Miles River, Tred Avon River and Choptank River on the Eastern shore. The sector supports the greatest amount of recreational fishing and boating in the bay, and includes a high density of marinas. The Western shore includes beaches inhabited by a Federally Threatened invertebrate species, subtidal shellfish beds, and a National Scenic River (Severn River). The Eastern shore is characterized by extensive fringe intertidal marsh along a plethora of islands, tidal creeks, and rivers.

The majority of petroleum traffic in the sector is through the Chesapeake Bay Channel. An incident in the channel is the most likely source of a major spill in this sector. The only marine transportation related facilities in this sector are in Easton and Cambridge Maryland. The associated barge traffic on the Tred Avon and Little Choptank River present an additional potential threat.

Figure 4-12 High Level Priorities for protection following a spill event in the Middle Bay sector

ESI Map Number	Resource Characteristics
43	Severn River - National Scenic River.
41	South River, Rhodes River - fringing intertidal marshes, raptor nesting area.
39	Fishing Creek - inlet at Chesapeake Beach, intertidal marsh.
38	Parker Bay - Extensive intertidal marsh, raptors nesting in spring and summer.
34	Calvert Cliffs State Park - fine and course sand beaches surrounding Grover, Thomas, and Grays Creeks, all hosting intertidal marshes
34	Calvert Cliffs Water Intake
39, 38, 34	Western Shore - between Cove Point and Chesapeake Beach - Federally Endangered Tiger Beetles - Flag Ponds, Scientists Cliffs, Willow Beach, Randale Cliffs.
73	Kent Narrows - intertidal marsh separating Chester River and Eastern Bay.
73, 74	Wye River - fringing intertidal marsh, extensive freshwater marshes in the Wye Narrows and Wye East River.
75	Poplar Island - Refuge, tidal flats, extensive nesting areas for wading birds and raptors.
76	Miles River - fringing intertidal marsh, year-round raptor nesting ground.
78	Nelson Island Refuge in Choptank River

85	Bolingbrook Creek (Choptank River) - Federally Threatened Tiger Beetles
85	Dickenson Bay Refuge (Choptank River) - waterfowl nesting.
83, 84	Butter Pot Point - extensive intertidal marsh, SAV.
83, 84	Little Choptank River - continuous fringe intertidal marsh.
90	Slaughter and Parsons Creek (Little Choptank) - extensive intertidal marsh.
90, 91	Taylor's Island Wildlife Management Area - wildlife refuge.
90, 91	St. Johns Creek, Punch Island Creek - extensive intertidal marshes.

Figure 4-13 Medium Level Priorities for protection following a spill event in the Middle Bay sector

ESI Map Number	Resource Characteristics
40	Cambridge (Choptank River) - fine sand beaches on both sides of Cambridge harbor.
40	Tributaries to Choptank River - fringe intertidal marshes.
40	West River - sheltered tidal flats at far reaches of tributaries
40	Tributaries to Tred Avon River - fringe intertidal marshes.

Figure 4-14 Low Level Priorities for protection following a spill event in the Middle Bay sector

ESI Map Number	Resource Characteristics
40	South and West Rivers - large number of recreational marinas.
39	Herring Bay to Chesapeake Beach - fine and coarse sand beaches.

4620.6 Lower Bay/Tangier Sound

The Lower Bay Sector includes the Chesapeake Bay from Cove Point to the Virginia border, the Nanticoke River, the Wicomico River, the Monie River, the Manokin River, the Annemessex River, and the Pocomoke River. The sector has the greatest quantity of sensitive natural resources of all the sectors. Tangier Sound, which accounts for at least half of the sector area, is characterized by extensive salt marsh, shallow shellfish beds, and coarse sand beaches (several of which support a Federally Threatened invertebrate species).

A major spill would most likely occur from a vessel, a petroleum storage facility in Salisbury, or from the power plant in Vienna. Response strategy for a spill from a facility in Salisbury or Vienna should attempt to reduce the movement of oil further downstream in the Wicomico or Nanticoke River, respectively. Marshes along the river should be monitored to detect oil escaping around the containment boom.

Response strategy for a spill from a vessel in the Chesapeake Bay Channel should attempt to contain as much oil around the vessel as possible, and divert or exclude oil from entering the extensive salt marshes of Tangier Sound. Disturbance of marsh sediments, the shellfish beds, and Submerged Aquatic Vegetation (SAV) beds should be minimized. Weather permitting, oil should be deflected toward the Western shore, where there is easier access to the beaches, and with the exception of the areas inhabited by the endangered invertebrate species, the resources are designated a lower priority.

Response strategy for a spill from a vessel in Tangier Sound should be similar to the strategy for a spill in the channel. Significantly more emphasis should be placed on diverting and excluding oil from entering the extensive salt marshes. Booming or placing sand berms across the creeks should provide protection of large areas with minimal effort.

Bald Eagles, waterfowl, and other waterbirds heavily utilize Tangier Sound. Hazing birds from affected areas and removing dead animals should be a high priority during a spill in the area to reduce the impacts from direct and/or indirect contact through ingestion of oiled carcasses.

Figure 4-15 High Level Priorities for protection following a spill event in the Lower Bay Sector

ESI Map Number	Resource Characteristics
34	Cove Point - Federally Threatened Tiger Beetle habitat, coarse and fine sand beaches.
32	Drum Point - Federally Threatened Tiger Beetle habitat, coarse sand beaches
31	Carroll Pond - freshwater marsh, largest unmined coastal peatland known in Maryland, three state rare plant species, included in the National Wetlands Priority Conservation Plan and Federal Coastal Zone Management Act.
30, 31	St. Jerome Creek - extensive fringe intertidal marsh, exposed fine sand beach, wading bird breeding area, resident Spot and Croaker populations, marinas.
20	Little Wicomico River - extensive fringe intertidal marsh, freshwater marsh, resident Spot population, wading bird and Osprey breeding area, archeological site, marinas.
95	Barren Island
96, 102	Hooper Island
103	Bloodsworth Island
103	Adam Island
103, 106	Holland Island
103, 106	South Marsh Island
106, 107, 21, 22	Smith Island

Figure 4-16 Medium Level Priorities for protection following a spill event in the Lower Bay Sector

ESI Map Number	Resource Characteristics
32	Chesapeake Bay shoreline from Drum Point to Cove Point - coarse sand beaches, fringe area for Federally Threatened Tiger Beetles.
31	Chesapeake Bay shoreline from Biscue Pond to 0.5 miles south of Carroll Pond - archeological site, coarse sand beach.
30	Deep Creek - extensive fringe intertidal marsh
30	Tanner Creek - extensive fringe intertidal marsh.
30	Chesapeake Bay shoreline from Tanner Creek to Point Lookout - State Park, archeological site, coarse sand beach, riprap.
90	Saint Johns Creek
90, 91	The Big Broads and Boggs Gut
96, 97, 103	Large tributaries to the Honga River
97, 98, 103, 104	Large tributaries to Fishing Bay

98, 99	Large tributaries to the Nanticoke River
99, 104, 105	Large tributaries to the Wicomico River
104, 105	Large tributaries to Monie Bay
104, 105, 108	Large tributaries to the Manokin River
108	Large tributaries to the Annemessex River
22, 23	Little Annemessex River
22, 23, 24	Large tributaries to Pocomoke Sound and Pocomoke River

Figure 4-17- Low Level Priorities for protection following a spill event in the Lower Bay Sector

ESI Map Number	Resource Characteristics
29, 31, 32	Chesapeake Bay shoreline from Cedar Point to Biscue Pond- coarse sand beach and seawall.
30, 31	Chesapeake Bay shoreline from 0.5 mile south of Carrol Pond to St., Jerome Creek- coarse sand beach.
30	Chesapeake Bay shoreline from St. Jerome Creek to Tanner Creek- coarse sand beach, riprap.
96, 97, 103	Small tributaries to the Honga River
97, 98, 103, 104	Small tributaries to Fishing Bay
98, 99	Small tributaries to the Nanticoke River
99, 104, 105	Small tributaries to the Wicomico River
104, 105	Small tributaries to Monie Bay
104, 105, 108	Small tributaries to the Manokin River
108	Small tributaries to the Annemessex River
22, 23, 24	Large tributaries to Pocomoke Sound and Pocomoke River

4620.7 Patuxent River

The Patuxent River sector includes the Patuxent River and its tributaries. Marshes along the Patuxent provides nesting areas for endangered avian species, habitat for wintering waterfowl waterbirds, in addition to resting, feeding and nesting grounds for wildlife. Herring, Perch, and Striped Bass spawn in the Patuxent and its tributaries. The river is a focus area of the North American Waterfowl Management Plan, a designated State Scenic River, and is included in the National Wetlands Priority Conservation Plan.

In general, resource protection strategies should attempt to reduce oil movement further upstream or downstream within the river, and exclude or divert oil from entering the tributaries of the Patuxent River.

Figure 4-18 High Level Priorities for protection following a spill event in the Patuxent River

ESI Map Number	Resource Characteristics
37	Patuxent River north of Bowan Wildlife Management Area- extensive freshwater and tidal marshes, anadromous fish spawning area, migratory bird and Bald Eagle nesting, foraging, and wintering area, contains Geographic Area of Special Concern by Federal Coastal Zone Management Act, and Non-tidal Wetland of Special State Concern.
37	Hunting Creek- intertidal freshwater marsh.
37	Swanson Creek- extensive intertidal freshwater marsh; power plant water intake at Chalk Point.
36	Indian Creek- extensive undisturbed estuarine intertidal marsh, breeding habitat for Wood Ducks, nesting, foraging, and wintering area for Bald Eagles, included in National Wetlands Priority Conservation Plan.
36	Trent Hall Creek and tributaries- extensive tidal and freshwater marsh, Wood Duck nesting and foraging area, nesting, foraging, and wintering area for Bald Eagles, Canvasback wintering area, included in the National Wetlands Priority Conservation Plan.
36	Persimmon Creek- intertidal marsh with fringe intertidal marsh and small area of bulkhead, nesting and foraging area for Wood Ducks.

36	Spring Creek and Marsh Point - saline tidal and freshwater marsh, nesting habitat for Wood Ducks, nesting habitat for Bald Eagles, habitat for two state rare avian species, identified for preservation of restoration in the Coastal Zone Management Act, and identified as a critical area by the Maryland Chesapeake Bay Critical Areas Commission.
36	Battle Creek - one of northern most stands of the Bald Cypress, supports rare insect species, migratory bird habitat, contains Non-tidal Wetland of Special State Concern, identified for reservation or restoration in the Federal Coastal Zone Management Act, fringe intertidal and freshwater marsh.
34	St. Leonard Creek - extensive fringe intertidal marsh with small fine sand beaches and bulkhead, waterfowl wintering and wading bird nesting and foraging area, nesting and foraging area for Bald Eagles, nursery area for Spot, White Perch, Yellow Perch, and Striped Bass.
33	Cuckhold Creek and tributaries - extensive fringe intertidal marsh with occasional bulkhead, waterfowl wintering and wading bird nesting and foraging area, several marinas.
32, 34	Hellen Creek - most southern coastal stand of Eastern Hemlock, Nature Conservancy Preserve, fringe intertidal marsh.
32	Back Creek, Mill Creek, and tributaries - extensive fringe intertidal marsh with occasional bulkhead, wading bird foraging and nesting area, high concentration marinas
32	Drum Point - Federally Threatened Tiger Beetle habitat.
35, 36, 37	Water column of Patuxent River from Bowan Wildlife Management Area to St. Leonards Creek - Striped Bass nursery area.
32, 35, 36	Water column and bottom of Patuxent River from Trent Hall to mouth - Oyster and Soft Shell Clam beds important for wildlife, recreational harvest and commercial harvest, Blue Crabs.

Figure 4-19 Medium Level Priorities for protection following a spill event in the Patuxent River Sector

ESI Map Number	Resource Characteristics
36	Buzzard I Creek - fringe intertidal marsh with occasional bulkhead and coarse sand beaches.
36	Washington Creek - fringe intertidal marsh.
36	Cremona Creek - fringe intertidal marsh.
35	Cat Creek - fringe intertidal marsh with small section bulkhead.

35	Roslin Creek - fringe intertidal marsh.
35	Cole Creek - fringe intertidal marsh.
35	St. Thomas Creek - fringe intertidal marsh.
35	Jack Bay - fringe intertidal marsh with small section bulkhead.
35	Ben Creek - fringe intertidal marsh.
35	Nan Creek - fringe intertidal marsh, fine sand beaches.
35	Island Creek - fringe intertidal marsh with small section bulkhead.
34	Mears Creek and Mears Cove - fringe intertidal marsh and fine sand beaches.
32	Little Kingston Creek - fringe intertidal marsh.
32	Town Creek - fringe intertidal marsh with small sections of coarse sand beach and bulkhead, marinas.
32	Lewis Creek - fringe intertidal marsh.

Figure 4-20 Low Level Priorities for protection following a spill event in the Patuxent River Sector

ESI Map Number	Resource Characteristics
36, 37	East and West shore Patuxent River from Rowan Wildlife Management Area to Kit Point and Queen Tree Landing - coarse sand beaches, fringe intertidal marsh, occasional bulkhead.
32, 33, 35	East and West shore Patuxent River from Kit Point and Queen Tree Landing to mouth - sheltered fine sand beach with occasional fringe intertidal marsh, riprap, and bulkhead.

4620.8 Potomac River

This sector includes the entire Potomac River and its tributaries from the Route 495 Bridge through the District of Columbia including tributaries on both the Maryland and Virginia sides.

The Potomac River mainstem is typically comprised of coarse sand beaches. The characteristics of the Potomac's tributaries include highly sensitive freshwater marshes, extensive intertidal marshes and sheltered tidal flats. Numerous Federally Endangered Bald Eagle nesting and wintering areas and anadromous fish nursery areas exist in the creeks of the Potomac. In addition several National Parks and a National Wildlife Refuge are priorities for protection.

As was recently demonstrated, this is a particularly difficult river to protect due to the strong currents. Potential spill sources include two pipelines, which run in the vicinity of the Potomac River, and barge and tanker traffic serving six marine transportation related facilities. Special attention should be paid to strategic locations for containment and deflection boom sites, which allow road access for oil removal. Due to the net outflow of the river, spills occurring in the Chesapeake Bay will most likely not impact the Potomac River.

Figure 4-21 High Level Priorities for protection following a spill event in the Potomac River

ESI Map Number	Resource Characteristics
1	Kenilworth Aquatic Gardens - freshwater tidal marsh, National Park Service.
3	Piscataway Creek - freshwater marsh, coarse sand beach, sheltered fine sand beach, three rare plant species, Bald Eagle nesting area, marina, identified in Federal Coastal Zone Management Act.
3	Pomonkey Creek - freshwater marsh, exposed fine sand beach, Black Duck breeding habitat, identified in National Wetlands Priority Conservation Plan and Emergency Wetlands Resources Act.
118	Pohick and Accotink Bays - tidal freshwater marsh, archeological sites, Bald Eagle nesting area.
118	Belmont Bay and tributaries - tidal freshwater marsh, Bald Eagle nesting area, archeological sites, marina
118	Marumsc Creek - freshwater marsh, National Wildlife Refuge.
118	Bank of Potomac downstream of Hallowing Point - freshwater wetlands, National Wildlife Refuge, Bald Eagle nesting area, waterfowl wintering area.
4	Farm Creek - freshwater marsh, Bald Eagle feeding area.
4	Neabsco Creek - freshwater marsh, Bald Eagle nesting area, marinas, waterfowl nesting and wintering area.
4	Powell Creek - freshwater marsh, waterfowl breeding and wintering area.
4	Quantico Creek - freshwater marsh, sheltered tidal flats, sheltered fine sand beach, waterfowl breeding and wintering area, Heron rookery, resident estuarine and anadromous fish.
4	Chopawamsic Creek - freshwater marsh and sheltered tidal flats, waterfowl breeding and wintering area.

5	Mattawoman Creek - freshwater marsh, extensive intertidal marsh, sheltered tidal flats, archeological sites, natural environmental area, Black Duck wintering area, anadromous fish nursery area, Great Blue Heron rookery, rare or threatened plants and invertebrates, identified in Federal Coastal Zone Management Act, National Wetlands Priority Conservation Plan, and Emergency Wetlands Resources Act.
5	Chicamuxen Creek - extensive intertidal marsh, Bald Eagle nesting area, endangered and threatened plant species, identified in National Wetlands Priority Conservation Plan and Emergency Wetland Resources Act.
5	Rosier Creek - fringe intertidal marsh, waterfowl wintering area, wading bird nesting area, Bald Eagle nesting and wintering area, archeological site.
5	Cuckold Creek - fringe intertidal marsh, coarse sand beaches, waterfowl wintering area, Bald Eagle nesting and wintering area, submerged aquatic vegetation.
5	Mattox Creek - fringe intertidal marsh and coarse sand beach, waterfowl wintering area, Heron rookery, Soft Shell Clam beds, archeological sites, marina
6	Aquia Creek - freshwater marsh, sheltered fine sand beach, marinas, archeological sites, waterfowl wintering area, anadromous fish nursery areas, Bald Eagle nesting area, Federally Endangered plant species.
7,8	Nanjemoy Creek - freshwater marsh, extensive intertidal marsh, coarse sand beach, Bald Eagle nesting area, waterfowl wintering area, anadromous fish spawning and nursery area, Heron rookery, submerged aquatic vegetation, identified in National Wetland Resources Act.
8	Fort Tobacco River - fringe intertidal marsh and sand beach, waterfowl nesting area, Heron rookery, waterfowl wintering area, submerged aquatic vegetation, archeological sites, marina, areas identified in National Wetland Priority Conservation Plan and Emergency Wetlands Resources Act.
9	Potomac Creek - freshwater marsh and sheltered fine sand beaches, Bald Eagle nesting area, Heron rookery, anadromous fish nursery area, waterfowl wintering area, archeological sites, marinas.
11	Machodoc Creek - freshwater, fringe intertidal, and supratidal marsh, waterfowl wintering area, Bald Eagle nesting area, Heron rookery, Soft Shell Clam bed, archeological sites.
13,25	Popes Creek - fringe intertidal marsh, Bald Eagle nesting and wintering area, White Perch spawning area, Striped Bass nursery area, identified in National Wetlands Priority Conservation Plan and Emergency Wetlands Resources Act

15	Nomini Creek and Buckner Creek- fringe intertidal marsh, Oyster bed, waterfowl wintering area, archeological sites.
15	Lower Machodoc Creek- coarse sand beaches, fringe intertidal marsh, Oyster beds, waterfowl wintering area, Bald Eagle nesting area, archeological sites, marinas.
16	Poplar Hill and Belvedere Creeks- extensive intertidal marsh, Bald Eagle nesting area, waterfowl wintering area, anadromous fish spawning and nursery area.
16	Piney Point- coarse sand beach, Least Tern nesting area.
25, 26, 27	Wicomico River- extensive intertidal marsh, coarse sand beach, Soft Shell Clam and Oyster beds, Yellow Perch spawning area, anadromous fish nursery area, Bald Eagle nesting area, two rare plant species, waterfowl and shorebird breeding and wintering area, submerged aquatic vegetation, areas identified in National Wetlands Priority Conservation Plan and Emergency Wetlands Resources Act.
28	St. Clements Bay- intertidal marsh, coarse sand beach, Bald Eagle nesting area, waterfowl wintering area, Soft Shell Clam and Oyster beds, archeological sites, areas identified in National Wetlands Priority Conservation Plan and Emergency Wetlands Resources Act.
28	Breton Bay- intertidal marsh and coarse sand beaches, Bald Eagle foraging area, waterfowl wintering area, state threatened plant species, Soft Shell Clam and Oyster beds, marinas, areas identified in Federal Coastal Zone Management Act.
16, 29	St. George Creek- intertidal marsh, coarse sand beach, bulkhead, anadromous fish nursery area, waterfowl wintering area, Soft Shell Clam and Oyster beds.
29	St. Mary's River- intertidal marsh, coarse sand beach, bulkhead, waterfowl wintering area, Bald Eagle and Wood Duck nesting area, Soft Shell Clam and Oyster beds, identified in National Wetlands Priority Conservation Plan and Emergency Wetlands Resources Act.
17	Yeocomico River- fringe intertidal marsh, coarse sand beaches, Bald Eagle nesting and wintering area, waterfowl wintering area, anadromous fish spawning and nursery area, Oyster bed, wading bird nesting area, marinas, archeological sites.
18, 29	Smith Creek- fringe intertidal marsh, coarse sand beaches, Oyster beds, wading bird nesting area, waterfowl wintering area, marinas, submerged aquatic vegetation.
19	The Glebe, Coan River, and Kingscote Creek- fringe intertidal marsh, coarse sand beaches, sheltered fine sand beaches, Oyster beds, anadromous fish spawning and nursery area, wading bird and Bald Eagle nesting area, archeological site, marina.

20	Little Wicomico River - fringe intertidal marsh, anadromous fish spawning and nursery area, wading bird and Raptor nesting area, archeological sites, marinas.
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Figure 4-22 Medium Level Priorities for protection following a spill event in the Potomac River Sector

ESI Map Number	Resource Characteristics
1, 2	Anacostia River - National Park Service, Washington Navy Yard, marinas.
2	West Bank of Potomac between Belleview Blvd. and Villaway Blvd. - extensive freshwater wetlands.
3	Little Harmony Creek - freshwater wetlands, sheltered tidal flats, archeological site.
3	Dogue Creek - freshwater wetlands, coarse sand beaches, archeological site.
3	Broad Creek - freshwater wetlands, anadromous fish nursery area.
3	East Bank of Potomac Between Paskataway Creek and Marshall Hall - freshwater wetlands, rare plant and amphibian species, Paskataway Park.
118	Gunston Cove - coarse sand beaches, archeological sites, waterfowl wintering area.
5, 118	Occoquan Bay - freshwater wetlands, coarse sand beaches, anadromous fish nursery area, waterfowl wintering area, archeological sites, Mason Neck National Wildlife Refuge
5	Freestone Point - coarse sand beaches, archeological sites.
6	Brent Marsh - fringe intertidal marsh, Bald Eagle nesting and wintering area.
6	Wades Bay - coarse sand beaches, fringe intertidal marsh, submerged aquatic vegetation, Bald Eagle nesting area.
9	Passapatanzy Creek - freshwater wetlands, Bald Eagle nesting area.
10	Mudds Marsh - coarse sand beaches, fringe intertidal wetlands, rare plant and amphibian species, submerged aquatic vegetation.
7, 10	North Bank of Potomac - extensive submerged aquatic vegetation.
11	Chotlink Creek - freshwater wetlands, Bald Eagle nesting and wintering area, wading bird nesting area

8, 11	Western Half Potomac River - Clam and Oyster beds, submerged aquatic vegetation, waterfowl wintering area, Bald Eagle feeding area, Dahlgren Weapons Laboratory.
11	Gambo Creek - fringe intertidal wetland, freshwater wetland, supratidal wetland.
11	Black Marsh - freshwater wetland, waterfowl wintering area
12	Piccowaxen Creek - fringe intertidal wetland, archeological site.
13	Monroe Bay - fringe intertidal wetland, Bald Eagle nesting and wintering area, residential bulkhead, marinas, boat ramp.
14, 27	St. Catherine Sound - Oyster and Clam beds, waterfowl wintering area, submerged aquatic vegetation.
15	Medleys Neck - coarse sand beaches, fringe intertidal wetland, Clam and Oyster beds, submerged aquatic vegetation, archeological site.
14, 15	Gurrioman Bay and Nomini Bay - coarse sand beaches, extensive intertidal wetlands, Clam beds, waterfowl wintering area and wading bird nesting area.
16	Blake Creek - fringe intertidal wetlands, Bald Eagle nesting area, anadromous fish spawning and nursery area, archeological site.
16	McKay Cove, Herring Creek, and Tall Timber Cove - fringe intertidal wetland, bulkhead, Oyster bed, waterfowl wintering area, anadromous fish spawning and nursery area, archeological site, marina.
16	Piney Point Creek - fringe intertidal wetland, waterfowl wintering area, Clam bed.
17	Gardner Creek, Jackson Creek, Bonum Creek - fringe intertidal wetland, waterfowl wintering area, anadromous fish spawning and nursery area, Bald Eagle nesting area, archeological sites.
18, 19	Calvert Creek, Rowley Bay, Harry James Creek - fringe intertidal wetland, submerged aquatic vegetation.
30	Point Lookout Creek - fringe intertidal wetland, archeological site, boat ramp.
19, 20	Presley Creek, Hull Creek - fringe intertidal wetland, Raptor and wading bird nesting area, anadromous fish spawning and nursery area, archeological site.

Figure 4-23 Low Level Priorities for protection following a spill event in the Potomac River Sector

ESI Map Number	Resource Characteristics
2	Hunting Creek
2	Cove South of National Airport - Washington Sailing Marina.

3	Swan Creek - freshwater wetlands, residential bulkhead.
6	Mallows Bay - freshwater wetland, coarse sand beaches, submerged aquatic vegetation.
10	South Bank Potomac at Caledon Park - coarse sand beaches, Bald Eagle nesting and wintering area, State Park.
11	Western Third Potomac Waterway - Oyster and Clam beds, submerged aquatic vegetation, waterfowl wintering area.
12	Pasquahanza Creek - fringe intertidal wetland, sea wall, power plant intake.
12	Eastern Third Potomac Waterway - Oyster and Clam beds, submerged aquatic vegetation, archeological sites.
14, 15	Northern Third of Potomac Waterway - Clam and Oyster beds, submerged aquatic vegetation, archeological sites.
15, 16	Flood Creek - fringe intertidal wetland.
19	Cod Creek - fringe intertidal wetland.
20	Cubitt and Hack Creeks - fringe intertidal wetland.

4630 Local Contacts and Resources

4630.1 Local Contacts

The following local contacts can be used to obtain additional information on sensitive areas in each of the sectors:

4630.1.1 Baltimore Harbor/Patapsco River:

South Baltimore Industrial Mutual Aid Plan

Contact: Craig Childress (A&A Environmental Services)

(410)-636-3700

4630.1.2 Craighill Angle/Chester River

Eastern Neck National Wildlife Refuge

1730 Eastern Neck Rd

Rock Hall, Maryland 21661

(410) 639-7056

http://www.gorp.com/gorp/resource/us_nwr/md_eastn.htm

<http://www.kentcounty.com/gov/parkrec/parks/eneck.htm>

4630.1.3 Middle Bay/Eastern Bay/Choptank River/Severn River

Maryland Department of Natural Resources

Wye Mills Work Center

P.O. Box 68

Wye Mills, Maryland 21679

(410) 827-8612

<http://www.dnr.state.md.us/>

4630.1.4 Lower Bay/Tangier Sound

Blackwater National Wildlife Refuge

2145 Key Wallace Drive

Cambridge, Maryland 21613

(410) 228-2692

<http://www.friendsofblackwater.org/>

4630.1.5 Potomac River

Mason Neck National Wildlife Refuge

14344 Jefferson Davis Highway

Woodbridge, Virginia 22191

(703) 490-4979

http://www.gorp.com/gorp/resource/us_nwr/va_mason.htm

National Park Service

National Capitol Region

1100 Ohio Drive, SW

Washington, DC 20242

(202) 619-7065

<http://www.nps.gov/ncro/>

Virginia Department of Environmental Quality
13901 Crown CT
Woodbridge, Virginia 22193
(703) 583-3800
<http://www.deq.state.va.us/>

Virginia Department of Game and Inland Fisheries
P.O. Box 11104
Richmond, Virginia 23230-1104
(804) 367-1215
Contact: Rick Busch
<http://www.dgif.state.va.us>

4630.2 Resources Available During A Spill

4630.2.1 Endangered Species Locations:

U.S. Fish and Wildlife Service
177 Admiral Cochrane Drive
Annapolis, Maryland 21401-7307
Contacts: Peter McGowan (410)-573-4523
Mary Ratnaswamy (410)-573-4541
<http://www.fws.gov/>

Maryland Department of Natural Resources
Wildlife and Natural Heritage Program
Tawes State Office Building, E-1
580 Taylor Avenue
Annapolis, Maryland 21401
(410) 260-8540
<http://www.dnr.state.md.us/wildlife/>

National Marine Fisheries Service Northeast Region

One Blackburn Drive

Gloucester, MA 01930

Hotline: 1-800-853-1964

Contact: Andy Cohen (978)-281-9213

<http://www.nero.nmfs.gov/ro/doc/nero.html>

4630.2.2 Waterfowl Concentration Areas:

U.S. Fish and Wildlife Service

177 Admiral Cochran Drive

Annapolis, Maryland 21401-7307

Contacts: Doug Forsell (410)-573-4560

Beth McGee (410)-573-4524

Peter McGowan (410)-573-4523

<http://www.fws.gov/>

Maryland Department of Natural Resources

Wildlife and Natural Heritage Program

Tawes State Office Building, E-1

580 Taylor Avenue

Annapolis, Maryland 21401

(410) 260-8540

<http://www.dnr.state.md.us/wildlife/>

4630.2.3 Marine/Estuarine Fisheries Information:

Maryland Department of Natural Resources Tidewater Fisheries
Division

Tawes State Office Building, E-1

580 Taylor Avenue

Annapolis, Maryland 21401

(410) 260-8260

<http://www.dnr.state.md.us/fisheries/>

4630.2.4 Freshwater Fisheries Information:

Maryland Department of Natural Resources Freshwater Fisheries

Cederville Visitors Center

Contact: Don Cosden (301)-888-2423

Maryland Department of Natural Resources, Fisheries Service

Tawes Building B-2

580 Taylor Avenue

Annapolis, Maryland 21401

Contact: Eric Schwaab (410) 260-8281

<http://www.dnr.state.md.us/fisheries/>

4630.2.5 Historical Site Information

Maryland Historical Trust

100 Community Place

Crownsville, Maryland 21032-2032

For Standing Structures: Orlando Ridout (410) 514-7642

For Archeological Sites: Richard Hughes (410) 514-7660

For Underwater Sites: Susan Langley (410) 514-7662

(410) 353-8777 cell

Langley@dhcd.state.md.us

<http://www.marylandhistoricaltrust.net/>

4630.2.6 Maryland Mapping Services

Maryland Department of Natural Resources, Geographic

Information Systems Division

Chesapeake and Coastal Watershed Service, Maryland

Department of Natural Resources

Tawes State Office Building E-2

580 Taylor Avenue

Annapolis, Maryland 21401

(410)260-8759 (fax)

1-877-620-8DNR (8367) x8751 (Toll Free in Maryland)

Kenneth Miller (410) 260-8751 kenmiller@dnr.state.md.us

Bill Burgess (410) 260-8755 wburgess@dnr.state.md.us

Maps can be generated on-line showing many environmental, historic, political and infrastructure resources at MERLIN Online - www.mdmerlin.net. An Internet connection capable of at least 56K download speeds is recommended.

4630.2.7 Maryland Water Supply

In addition to water intakes listed on the ESI maps, MDE controls the permits for private water intakes as well.

Maryland Department of the Environment

Water Supply

2500 Broening Highway

Baltimore, Maryland 21224

(410) 631-4462

4700 Technical Support

Technical support for a response can be found with certain advisors with special skills needed to support an incident. Technical specialists may be assigned anywhere in the ICS structure, but are typically assigned to the Environmental Unit.

4710 Hazardous Materials

4710.1 Toxicologist

4710.2 Product Specialist

4710.3 Certified Marine Chemist

4710.3.1 The Marine Chemist Association

The Marine Chemist Association is an independent professional organization composed of chemists certified by the National Fire Protection Association in accordance with published rules. The Association originated in May 1938, as the Marine Chemists' Subsection of the NFPA, Marine Section. Upon termination of the Marine Section in 1948, the present Association was organized for the following purposes:

1. To promote the science of, and improve the method of evaluation and eliminating health, fire, and explosion hazards in marine and associated industries.
2. To obtain and circulate information relative to these hazards and other information regarding the professional and ethical activities of its members.
3. To enhance the general welfare of its members by promoting a closer relationship with all concerned industry and regulatory bodies.

The [United States Coast Guard](#) and the [Occupational Safety and Health Administration](#) require that a certificate issued by a Marine Chemist must be obtained before hot work or fire producing operations can be carried out in certain spaces aboard a marine vessel. The appropriate U.S. Coast Guard Regulations are contained in 46 CFR [35.01-1\(c\)\(1\)](#), [71.60-1\(c\)\(1\)](#), [91.50-1\(c\)\(1\)](#), [167.30-10\(c\)\(1\)](#), and [189.50-1\(c\)\(1\)](#). The appropriate OSHA regulations are contained in [29 CFR 1915.14](#).

In complying with both the U.S. Coast Guard and OSHA regulations, the Marine Chemist applies the requirements contained in National Fire Protection Association Standard 306. NFPA 306, Control of Gas Hazards on Vessels, describes conditions that must exist aboard a marine vessel. A survey by the Marine Chemist ensures that these conditions are satisfied.

In addition, a Marine Chemist is able to perform similar evaluations on other than marine vessels where an unsafe environment exists for workers, or hot work is contemplated on a system that might contain residues of a flammable or combustible product or materials.

Web Site: <http://marinechemist.org/>

4710.4 Certified Industrial Hygienist

An Industrial Hygienist (IH) is a professional who is dedicated to the health and well being of the worker. Typically, this would have an IH evaluating the health effects of chemicals or noise in a work place.. The IH professional traditionally has gained knowledge though a combination of education, training, and experience. Ideally, this knowledge is used to anticipate when a hazardous condition could occur to cause an adverse health effect on workers or the environment. Failing that, the IH must be able to recognize conditions that could lead to adverse health effects to workers or a community population.

4710.4.1 American Board of Industrial Hygiene

The American Board of Industrial Hygiene (ABIH®), a not-for-profit corporation, was organized to improve the practice and educational standards of the profession of Industrial Hygiene.

The activities that carry out this purpose include:

1. To receive and process applications for examinations, and to evaluate the education and experience qualifications of the applicants for such examinations.
2. To grant and issue to qualified persons, who pass the Board's certification examination, certificates acknowledging their competence in Industrial Hygiene or aspects thereof, and to revoke for cause certificates so granted or issued.
3. To provide for maintenance of certification by requiring submission of evidence of continued professional qualifications by the holders of certificates in the Comprehensive Practice or Chemical Practice of Industrial Hygiene.
4. To maintain a record of certificates granted by the Board.
5. To furnish to the public, and to interested persons or organizations, a roster of those persons in good standing, having special training, knowledge and competence in Industrial Hygiene as evidenced by certification granted by the corporation.

Web Site: <http://www.abih.org/>

4710.5 Chemist or Chemical Engineer

4710.6 Sampling

4720 Oil

4720.1 Scientific Support Coordinator (SSC)

The SSC a NOAA employee, provides scientific support for response and contingency planning in coastal and marine areas. The SSC assists in:

- Assessing the hazards that may be involved.
- Predicts of movement and dispersion of oil and hazardous substances through trajectory modeling.
- Provides information on the sensitivity of coastal environments to oil and hazardous substances and associated cleanup and mitigation methods.
- Provides expertise on living marine resources and their habitats, including endangered species, marine mammals and National Marine Sanctuary ecosystems.

- Provides information on actual and predicted meteorological, hydrological, ice, and oceanographic conditions for marine, coastal, and inland waters, and tide and circulation data for coastal and territorial waters.

In certain situations, the SSC could act as the Environmental Unit Leader. SSC support for the Upper Chesapeake Estuary area is provided by the U.S. Coast Guard 5th District.

4720.2 Natural Resource Damage Assessment

Oil spill incidents of significance initially lead to two primary actions: a response to contain and clean up the spilled petroleum product(s), and an assessment of the injuries to natural resources caused by the pollutant. The Oil Pollution Act of 1990 (OPA 90) authorizes Federal Resource Trustees (Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Department of the Interior), State Resource Trustees (designated by the governor of each state), federally recognized Indian tribes, and foreign trustees to seek compensation for injuries to natural resources caused by a discharge of oil.

The National Oceanic and Atmospheric Administration (NOAA) has updated the DOI's regulations for Natural Resource Damage Assessment (NRDA) resulting from discharge of oil. These regulations supersede the DOI NRDA regulations for oil spills. It is also important to understand the procedures set forth in the DOI Rules because CERCLA shall still apply to oil spills in which the oil is mixed with hazardous substance activities. Any assessment of damages prepared in accordance with the regulations being promulgated by NOAA shall have the force and effect of a refutable presumption on behalf of the trustees. RP's then have the initial burden of disproving the assessment.

Under OPA 90, the RP is liable for damages, including natural resource damages, resulting from a discharge of oil into marine waters of a State. Natural resource damages, therefore, can be sought through federal or state law or both, but may be claimed only once. Double recovery is not permitted, and hence it is imperative in spills of significance that Federal and State trustees coordinate claims for natural resources damages. The monetary damages are compensatory rather than punitive in nature.

4720.3 Lightering

In addition to local, commercial lightering companies, the National Strike Force and Navy SUPSALV own oil-pumping equipment. They recently added equipment capable of pumping highly viscous oils.

4720.4 Salvage

In addition to contractors, the Navy Supervisor of Salvage is an excellent source of expertise and equipment for salvage, search, and recovery operations. When a commercial contractor is hired, they would make an excellent supervisor during a federal led response to ensure proper actions are being taken. SUPSALV can be contacted directly or through the Chief of Naval Operations.

4720.5 Shoreline Cleanup Assessment

NOAA has a Shoreline Assessment Job Aid, which can aid the response organization in determining the extent of damage along various types of shoreline.

http://response.restoration.noaa.gov/shor_aid/shor_aid.html

4720.6 Specialized Monitoring of Applied Response Technologies (SMART)

SMART is used to scientifically monitor the use of dispersants, other chemical countermeasures, or in-situ burns. These operations however, because of their time sensitivity shall not be delayed pending the arrival of SMART monitoring equipment or personnel.

SMART is used to collect scientific information for the Unified Command to provide a measurement of success in the operation and to improve the knowledge about non-mechanical recovery procedures.

Documents for SMART can be found at:

<http://www.uscg.mil/hq/nswfweb/NSF/onlinedoc2.html>

4720.7 Response Technologies (Dispersant, ISB, Bioremediation, Mechanical)

Regional Response Teams III and IV have developed a [Selection Guide for Oil Spill Applied Technologies](#). This selection tool will be useful to both the Unified Command and the Planning Section during a response. The guide is a step-by-step process to determine which categories of technologies and specific products and strategies that might be employed during a response.

The steps are:

1. Determine if the situation is on inland waters, adjacent lands, or coastal waters. Using the matrix for the location, consider the response phase, the oil type, volume of oil, the weather conditions, the decision authorities (i.e. RRT requirements), monitoring considerations, and miscellaneous considerations to identify potential strategies or products.
2. Review the potential strategies or products in depth. A description of the strategy or product includes: the availability of the product, application requirements, health and safety issues, operational constraints, environmental concerns, waste generation, disposal issues, and resources for technical support, are included for better comparison of the specific products and strategies.
3. Select the product(s) or strategy(s). A detailed table format allows for comparison of toxicity data, operational considerations, fresh or saltwater usage, cost information, amount availability, etc.

4720.7.1 Dispersants

The Region III Response Team provides technical and procedural guidance for the use of dispersants. On August 1, 1990 a proposal to incorporate the Dispersant Employment Evaluation Plan (DEEP) into the Regional Contingency Plan (RCP) was presented by the work group and unanimously accepted by the RRT. It is now included in Annex XI of the RCP. The DEEP is intended to be a guideline that assists decision-makers in their evaluation of the complex considerations of dispersant use. The following information is taken directly from the DEEP.

4720.7.1.1 RRT Policy on Dispersants

It is the policy of the Region III RRT that it is preferable to attempt to remove spilled oil from the environment rather than distribute it throughout the water column. Therefore, the potential use of dispersants in this region will be restricted as follows:

1. OFFSHORE MARINE SITUATIONS: Dispersants may be considered as a response tool in offshore marine situations, where significant diffusion is predicted to occur before the dispersed oil reaches area of less than 40 feet of water. In these situations, the dispersant will not be the only response tool, but strategically employed in those areas where physical containment could not occur in time to protect a sensitive area of concern.

2. NEAR SHORE AND ESTUARINE SITUATIONS: In near shore and estuarine situations, the use of dispersants will be reserved for those situations of extreme risk such as; where physical containment could not be effected and dispersants would reduce an imminent threat to an important species or distinct population of fish, wildlife or other biota, or to reduce catastrophic economic impacts.

Where any of the above conditions exist, the OSC will consult the concurrence network as described in Section 4 of the RCP. In all cases of dispersant use, a consistent, logical program of monitoring dispersant effectiveness and effects is required. Where hazards to human life exist, the regulations in sub-part J of the NCP apply and the OSC may authorize dispersant use without regional concurrence network approval.

Currently, there are no pre-approved areas for dispersant use anywhere within Maryland or Virginia State waters.

State waters are defined as the Chesapeake Bay and its tributaries and waters within 3 miles seaward of the baseline from which the territorial sea is measured.

4720.7.1.2 State Policies

The Region III RCP requires that the states with jurisdiction over the affected waters must concur with proposals to use dispersants. The summaries of the dispersant use policies for the states in the COTP Baltimore zone will be included in the ACP when they are made available by the states.

4720.7.2 Other Types of Chemical Countermeasures

Section 311(d)(2) of the Clean Water Act and Section 4201(a) of the Oil Pollution Act of 1990 require the preparation of a “schedule of dispersants, other chemicals, and other spill mitigating devices and substances, if any, that may be authorized for use on oil discharges...” (300.905(a). Subpart J (40 CFR Part 300.910) of the [National Oil and Hazardous Substances Pollution Contingency Plan \(NCP\)](#) governs the use of dispersants and other chemical and biological agents that may be listed on this schedule. EPA prepares and maintains this schedule, known as the NCP Product Schedule. Vendors, response personnel, other federal agencies, state agencies, and the public request and use Product Schedule information.

The listing of a product on the NCP Product Schedule does not constitute approval of the product. To avoid possible misinterpretation or misrepresentation, any label, advertisement, or technical literature that refers to the placement of the product on the NCP Product Schedule must either reproduce in its entirety EPA's written statement that it will add the product to the NCP Product Schedule under Sec. 300.920(a)(2) or (b)(2), or include the disclaimer shown below. If the disclaimer is used, it must be conspicuous and must be fully reproduced. Failure to comply with these restrictions or any other improper attempt to demonstrate the approval of the product by any NRT or other U.S. Government agency shall constitute grounds for removing the product from the NCP Product Schedule. [40 CFR 300.920(e)]

The NCP Product Schedule contains five product categories listed below.

- Dispersants;
- Surface washing agents;
- Surface collecting agents (none presently listed);
- Bioremediation agents; and
- Miscellaneous oil spill control agents.

<http://www.epa.gov/oilspill/ncp/>

4720.7.3 In-Situ Burn (ISB)

Region III Response Team in the RCP and specific RRT III ISB guidance provides technical and procedural guidance for the use of in-situ burn. The Area Committee's entire zone lies in what is considered a "Zone B" status. Zone B status is given to those areas which lie within state territorial boundaries, are designated as marine reserves, National Marine Sanctuaries, National or State Wildlife Refuges, units of the National Park Service, or proposed or designated Critical Habitats, or are considered coast wetlands, including submerged algae or sea grass beds. Zone B requires case-by-case approval of ISB by the RRT III. The RRT III will respond to the OSC's request for authorization to conduct ISB in Zone B within 4 hours from the time of notification. If the RRT has not responded within 4 hours, the OSC may conduct ISB.

NOAA has several job aids available for ISB.

<http://response.restoration.noaa.gov/oilaid/ISB/ISB.html>

4720.8 Decontamination

4720.9 Disposal

In dealing with oil spills, one of the main problems encountered is what to do with the waste materials, once the cleanup has begun. When dealing with the method of disposal, there are three main areas of concern; ecology, logistics, and finance. What further effects or risks are going to occur due to relocation of the waste material? Ideally, the goal is to dispose of the material without any further hazard generated or further impacts to the environment, including air, surface water, ground water, and soils. How can waste be safely moved from the site to the disposal and /or treatment area? What is the availability of the machinery needed for removal? What is the capacity of the disposal and/or treatment facility? How much is it going to cost to dispose of the waste? What are the possibilities of recycling the wastes into a useful product to help offset the disposal cost?

Waste material generally fall into one of the following categories:

- Recovered liquids (oil/water mixtures)
- Contaminated absorbents and debris
- Contaminated soil/sand

Liquid waste is probably the easiest form of waste to deal with because it is easily handled, moved, or sometimes can be processed into a useful product. Absorbents are the most widely used products for oil spill cleanup. Organic absorbents, mainly made of straw, are biodegradable. Many new absorbents are synthetic and their biodegradability is greatly reduced. The best absorbent would be one that could be reused, much like a sponge, leaving only liquid waste, which is easily disposed of, thereby reducing cleanup costs and the amount of solid waste generated.

4720.9.1 Potential Disposal Methods

4720.9.1.1 Recovered Liquid Waste

1. Disposal in accordance with 40 C.F.R. 262.20-23 for RCRA wastes.
2. Recycling (recovery in settling tanks, used oil recyclers).
3. High temperature incineration.
4. Evaporation of light ends.
5. Oxidation.
6. Biodegradation.
7. Open burning where permitted.

8. Use as fuel.

4720.9.1.2 Contaminated Sorbents and Debris

1. Disposal in accordance with 40 C.F.R. 262.20-23 for RCRA wastes.
2. Incineration at waste-to-energy facilities.
3. Soil thermal treatment facilities (special conditions apply).
4. Class I permitted municipal waste landfill.

4720.9.1.3 Contaminated Soils

1. Disposal in accordance with 40 C.F.R. 262.20-26 for RCRA wastes.
2. Soil thermal treatment facilities.
3. Incineration at waste-to-energy facilities.

4720.9.2 Waste Disposal Site Selection

Maryland Department of the Environmental (MDE) is responsible for determining the eligibility of facilities to use general permits for soil thermal treatment and used oil recycling. MDE also issues permits for landfilling, air pollutant emissions, hazardous waste treatment, storage and disposal, and for the registration and/or certification of used oil transporters, collection facilities and recyclers. The MDE Waste Management Division regulates the handling, storage, and testing of petroleum contaminated soil, solid waste, and hazardous waste. Oil spill wastes may be disposed of at permitted facilities (federal, state and local) authorized by the EPA and MDE. During federalized spills, it is the responsibility of the FOOSC to ensure that waste resulting from a spill is handled properly.

4720.9.3 Waste Characterization

The first step in determining which method(s) of disposal will be utilized is to characterize the waste and determine if it is subject to the requirements of the Resource Conservation and Recovery Act (RCRA), 40 C.F.R. The RP's knowledge of the material and/or laboratory analysis, and the intended use of the recovered material, must be used to determine if the material meets the criteria for hazardous waste set forth in 40 C.F.R 261.

4720.9.4 RCRA Regulated Waste.

If the material meets the criteria for RCRA regulated wastes, it can only be disposed of at an approved hazardous waste treatment/disposal facility. If the spill is not a hazardous waste listed in 40 C.F.R 261 Subpart D, but exhibits a characteristic of hazardous waste per 40 C.F.R 261 Subpart C, it is possible to treat the waste on-site to render it non-hazardous prior to off-site disposal. The waste generator shall treat hazardous waste in tanks or containers only, provide a waste analysis plan to document treatment, and ensure compliance with 40 C.F.R 262.34 requirements while accumulating and treating the waste. This kind of treatment would include stabilization of soils with cement, neutralization, and other simple forms of non-thermal treatment. Evaporation of organics and dilution are not permissible.

4720.9.5 Non-RCRA Regulated Wastes

Several options exist for disposal, treatment or recycling of wastes and recovered products that are not subject to RCRA requirements. Following is a brief summary of each option and recommended procedures.

4720.9.5.1 Used Oil Recyclers

Used oil recyclers can process recovered oil and oil/water mixtures into reusable products. Used oil recycle facilities must possess an MDE Oil Operations Permit. For specific requirements, see Section 26.10.15 of the Code of Maryland Regulations.

4720.9.5.2 Waste-to-Energy Incinerators

Waste-to-Energy (WTE) Incinerators produce energy from the incineration of municipal solid wastes. Depending on the nature of the material to be disposed of, WTE facilities may be a viable option for disposal of oil debris and/or soils. WTE facilities must have a permit from MDE. For specific requirements, see Section 26.04.07.25 of the Code of Maryland Regulations.

4720.9.5.3 Soil Treatment Facilities (STF's)

Soil Treatment Facilities (STF's) remove petroleum contaminants from soil, resulting in clean soil for various uses. STF's are an option for petroleum contaminated soils, provided that the soils are not classified as a hazardous waste as defined in 40 C FR 261. STF's must have a MDE Oil Operations Permit. For specific requirements, see Section 26.10.13 of the Code of Maryland Regulations.

4720.9.5.4 Land Filling

Land filling of soil and debris, which is non-hazardous and non-saturated in a lined Class I landfill in an acceptable disposal option. Landfills must be permitted by the MDE. Decisions regarding acceptance of wastes are at the discretion of the landfill operator. Laboratory analysis of waste may be required prior to acceptance. For specific requirements, see Section 26.04.07 of the Code of Maryland Regulations. In some cases, treatment of petroleum-contaminated soil may include “land farming.” This process involves spreading the soil in a thin layer over an impermeable liner or surface. The contaminant reduction is caused by a combination of volatilization, biodegradation, and photodegradation.

4720.9.5.5 Contact Water

Contact water is any water that has come in contact or is contaminated with oil. While the RP is expected to provide sufficient containment, collection, and storage resources, the disposal of excess contact water may become necessary if a lack of storage capacity is available in order to ensure an efficient response. The OSC/UC should consider the disposal of contact water as a last resort. The RRT has guidance and checklists to assist the OSC/UC in deciding upon procedures, standards, and monitoring protocols. RRT approval is not required for the disposal of contact water, but State approval is required.

4720.10 Dredging

4720.11 Deepwater Removal

4720.12 Heavy Lift

4730 General

4730.1 Cultural and Historic Properties

4730.1.1 National Register of Historic Places

The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

<http://www.cr.nps.gov/nr/about.htm>

4730.1.2 Maryland Department of Housing and Community Development (DHCD), Division of Historical and Cultural Programs

The Maryland Department of Housing and Community Development is dedicated to providing the citizens and communities of Maryland with responsive, compassionate, fair, and efficient service. Through the diversity of its programs and the commitment of its employees, DHCD continues to find new and innovative ways to meet its objectives: revitalizing communities, encouraging homeownership, increasing the supply of affordable housing, preserving Maryland's cultural heritage, and providing outstanding customer service.

DHCD's Division of Historical and Cultural Programs is charged with identifying, studying, evaluating, preserving, protecting, and interpreting Maryland's significant prehistoric and historic sites, districts, structures, cultural landscapes, heritage areas, and cultural objects and artifacts, as well as less tangible human and community traditions. [Section 4610 Historic Properties](#) contains more information.

<http://www.dhcd.state.md.us/>

<http://www.marylandhistoricaltrust.net/>

4730.2 Legal

4730.2.1 U.S. Department of Justice

The U.S. Department of Justice provides the highest level of legal advice within the Federal Government. The Environment and Natural Resources Division (ENRD) is responsible for litigation ranging from: protection of endangered species, to global climate change, to cleaning up the nation's hazardous waste sites. Nearly one-half of the Division's lawyers enforce the nation's civil and criminal environmental laws and the health and environment of all Americans. The Division also defends environmental challenges to government programs and activities. It represents the United States in all matters concerning the protection, use, and development of the nation's natural resources and public lands, wildlife protection, Native American rights and claims, and the acquisition of federal property.

<http://www.usdoj.gov/>

<http://www.usdoj.gov/enrd/index.html>

4730.2.2 U.S. Coast Guard- MLC Atlantic Area Legal Division

The Maintenance and Logistics Command (MLC) offers legal support within the U.S. Coast Guard. The Chief of the Legal Division is the principle legal advisor and Staff Judge Advocate to Commander, Atlantic Area/Fifth District/Maritime Defense Zone Atlantic, Commander Maintenance and Logistics Command Atlantic, their respective staffs, and subordinate units.

<http://www.uscg.mil/mlclant/ldiv/ldiv.htm>

4730.2.3 Maryland Office of the Attorney General

The main functions of the Maryland Office of the Attorney General are to have general charge, supervision, and direction of the legal business of the State and to act as legal advisor and representative of the major departments, various boards, commission, officials and institutions of State Government. The Attorney General is the legal advisor to virtually every agency in each of the three branches of Maryland's government.

<http://www.oag.state.md.us/>

4730.3 Public Health

4730.3.1 U.S. Department of Health and Human Services

The Department of Health and Human Services (USDHHS) is the U.S. government's principal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves. The USDHHS will work to support the Maryland Department of Health and Mental Hygiene.

<http://www.hhs.gov/>

4730.3.2 Maryland Department of the Health and Mental Hygiene

The mission of the Maryland Department of Health and Mental Hygiene (MDHMH) is; to protect and promote the public health by creating healthy people in healthy communities, to strengthen partnerships between state and local governments, the business community and all health care providers in Maryland and, to build a world class organization grounded in the principles of quality and learning, accountability, cultural sensitivity and efficiency. The MDHMH issues public health alerts and works with the Maryland Department of the Environment to issue alerts as necessary for fisheries closures or warnings.

<http://www.dhmf.state.md.us/>

4730.4 Human Resources

4730.4.1 Maryland Department of Human Resources

The Maryland Department of Human Resources (DHR) serves families and individuals in need of temporary economic assistance and vulnerable children and adults seeking protection from abuse or neglect. Operating through 24 local Departments of Social Services, DHR is responsible for the administration of all major social service programs across the State. Today, DHR encompasses five administrations: Childcare, Social Services, Family Investment, Child Support Enforcement, and Community Services.

<http://www.dhr.state.md.us/>

4740 Law Enforcement

Many federal, state, and local governmental agencies work together during a law enforcement situation. Federal, state, and local agencies with have both distinct and complementary jurisdictions. Coordination is extremely important.

4750 Search and Rescue

Many federal, state, and local governmental agencies work together during a Search and Rescue (SAR) situation. While the U.S. Coast Guard is ultimately responsible for SAR on the navigable waterways of the United States, it relies heavily upon state and local assets to successfully resolve cases, with minimal loss of life.

4760 Marine Fire

The Mid-Chesapeake Marine Emergency Response Group (MCMERG) will provide valuable contact information and additional resources in the event of a marine fire or marine casualty.

4800 Required Correspondence, Permits & Consultation

4810 Administrative Orders

An Administrative Order is a tool used by the FOSC to ensure appropriate actions are being taken by a RP in a potential threat, or actual spill, or FWPCA hazardous material release. Under 33 USC 1321 (c) and (e), a FOSC may issue orders to RP's to ensure effective and immediate removal of a discharge, or the mitigation, or prevention of a substantial threat of a discharge of oil or FWPCA hazardous substance. A FOSC may also issue administrative orders "that may be necessary to protect public health and welfare."

4820 Notice of Federal Interest

The Notice of Federal Interest (NOFI) is used to designate and notify the owners, operators, or persons in charge, in writing that an oil pollution incident occurred or threatens to occur and that specified personnel may be financially responsible for that incident. The RP is liable for among other things, removal costs and damages resulting from the incident. The NOFI notifies the RP that the failure or refusal to provide all reasonable cooperation and assistance requested by the FOSC, will eliminate any defense, or entitlement to limited liability. The NOFI notifies the responsible party that failure to properly carry out the removal of the discharge, or comply with any administrative order of the FOSC, may result in civil penalties, or up to three times the cost incurred by the Oil Spill Liability Trust Fund (OSLTF).

4830 Notice of Federal Assumption

The Notice of Federal Assumption (NOFA) is used to notify the RP of an oil pollution discharge and to advise that he/she is financially responsible. The NOFA also advises that their actions to abate the threat or removal of oil from the waters, or adjacent shoreline, has been evaluated as being unsatisfactory by the FOSC and that the FOSC will conduct further oil response/removal activities under federal laws.

4840 Letter of Designation

Designation of a source under section 1014 of OPA 90 is done to fulfill the requirements relating to the dissemination of information about an incident, through advertisements. This ensures that potential claimants will be aware of the opportunity and procedures for submitting claims for uncompensated removal costs or damages. Exact specification and types of advertisement required are provided in the letter issued by the National Pollution Fund Center (NPFC). OPA 90 provides that designation of source is done where "possible and appropriate." The NPFC will designate the source, notify the reporting party/guarantor, and set the advertising requirements. In the event that it appears there is a reasonable possibility for claims in a given incident, but the source is not known, the FOSC immediately notifies the NPFC. The NPFC will then advertise as required under section 1014(c) of OPA 90.

4850 Fish and Wildlife Permits

4860 ESA Consultations

4870 Disposal

4870.1 Ocean Dumping

If the OSC/UC decides that either a stricken vessel or its cargo would best be disposed of at sea, after other disposal methods have been ruled as unacceptable, the RRT can assist in obtaining the appropriate permits from the EPA. RRT III has guidance and checklists to assist the OSC/UC in requesting emergency ocean dumping. 40 CFR 220.3(c) also contains guidance on emergency dumping permits.

4870.2 Use of Foreign-Flag Vessels

If the OSC/UC cannot find U.S.-flagged vessels or barges to support the collection and storage of oils or hazardous materials, serve as reception vessels for lightering, support salvage operations, or other needs, the OSC/UC may use foreign-flagged vessels, if a Limited Jones Act Waiver is obtained. The RRT has guidance and checklists to assist the OSC/UC in obtaining a waiver from the U.S. Customs Service and Department of the Treasury.

4880 Dredging

4890 Decanting

4900 Reserved for USCG Area/District