District Department of the Environment
Water Pollution Control Contingency Plan

2011

The District of Columbia Department of the Environment
Natural Resource Administration
Water Quality Division

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List of Acronyms

AWTP—Blue Plains Advanced Wastewater Treatment Plant

CERCLA—Comprehensive Environmental Response, Compensation, and Liability Act

CWA— Clean Water Act

DC-RIZ—District Radio Interoperability Zone

DCWPCCP—District of Columbia Water Pollution Control Contingency Plan

DC Water—District of Columbia Water and Sewer Authority

DDOE—District Department of Environment

DEM—Virginia Department of Emergency Management

DEQ—Virginia Department of Environmental Quality

DoD—Department of Defense

DOI—Department of Interior

EOC—Emergency Operations Center

EPA—Environmental Protection Agency

EPC—Emergency Preparedness Council

FEMS—Fire and Emergency Medical Services Department

FOSC—Federal On-Scene Coordinator

HAZMAT—Hazardous Materials

HSEMA—Homeland Security and Emergency Management Agency

IC—Incident Commander

LEPC—Local Emergency Planning Committee

MDE—Maryland Department of the Environment

MPD—Metropolitan Police Department

NCP—National Contingency Plan

NPFC—National Pollution Fund Center

NPS—National Park Service

NRC—National Response Center

NRDA—Natural Resource Damage Assessments

NRS—National Response System

NRT—National Response Team

NSF—National Strike Force

OPA—Oil Pollution Act, 1990

RERT—Radiological Emergency Response Team

RP—Responsible Party/ies

RQ—Reportable Quantity

RRC—Regional Response Center

RRT—Regional Response Team

SARA—Superfund Amendments and Re-authorization Act of 1986

SONS—Spill of National Significance

USCG—US Coast Guard

UST—Underground Storage Tank

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DEFINITIONS

Definitions and explanations provided below are only intended for use in understanding in this contingency plan.

A

Area Planning—Regional oil spill response planning mandated by the Oil Pollution Act 1990 to address removal of the worst-case discharge/spill and to mitigate and prevent a substantial threat of such discharges/spills. The product of this process is the "area contingency plan", prepared by an area committee.

B

Barrel—42 United States gallons at 60 degrees F.

Biohazard—Biological substances that, especially if infective, may cause or pose a threat to humans or their environment (i.e., blood, bacteria, microbes, viruses, etc.).

Bioremediation Agent—Microbiological cultures, enzyme or nutrient additives that are deliberately introduced into an oil discharge and that will significantly increase the rate of biodegradation to mitigate the effects of the discharge.

Burning Agents—Those additives through physical or chemical means, improve the combustibility of the substances to which they are applied.

C

Chemical Agent—Those elements, compounds, or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious effects of the removal of the pollutant from the water. These agents include biological additives, dispersants, sinking agents, miscellaneous oil spill control agents, and burning agents, but do not include sorbents.

Claim—A request made in writing for a sum certain for compensation for damages or removal costs resulting from an incident.

Claimant—Any person or government that presents a claim for compensation.

Clean Water Act (CWA, PL 92-500, 33 U.S.C. §1251 et seq. (1972)***)***—Comprehensive water pollution control law enacted in 1972 to restore and maintain the chemical, physical, and biological integrity of the Nation's Waters. Under Title III of the CWA, unlawful discharges (oil/hazardous waste) are subject to civil and criminal penalties.

Cold Zone—Area where the command post and support functions that are necessary to control the incident are located. This is also referred to as the clean zone, green zone or support zone in other documents. (EPA Standard Operating Safety Guidelines, OSHA 29 CFR 1910.120, NFPA 472).

Combined Sewer—A system which conveys both sanitary sewage and stormwater and may also covey industrial waste. May also be involved in receiving and conveying pollutants as a result of spills or discharges.

Combustible Liquid—Liquids which have a flash point greater than 60.5°C (141°F) and below 93°C (200°F). U.S. regulations permit a flammable liquid with a flash point between 38°C (100°F) and 60.5°C (141°F) to be reclassed as a combustible liquid.

Compatibility Group—Letters identify explosives that are deemed to be compatible. Class 1 materials are considered to be "compatible" if they can be transported together without significantly increasing either the probability of an incident or, for a given quantity, the magnitude of the effects of such an incident.

A – Substances which are expected to mass detonate very soon after fire reaches them.

B – Articles which are expected to mass detonate very soon after fire reaches them.

C – Substances or articles which may be readily ignited and burn violently without necessarily exploding.

D – Substances or articles which may mass detonate (with blast and/or fragment hazard) when exposed to fire.

E&F – Articles which may mass detonate in a fire.

G – Substances and articles which may mass explode and give off smoke or toxic gases.

H – Articles which in a fire may eject hazardous projectiles and dense white smoke.

J – Articles which may mass explode.

K – Articles which in a fire may eject hazardous projectiles and toxic gases.

L – Substances and articles which present a special risk and could be activated by exposure to air or water.

N – Articles which contain only extremely insensitive detonating substances and demonstrate a negligible probability of accidental ignition or propagation.

S – Packaged substances or articles which, if accidentally initiated, produce effects that are usually confined to the immediate vicinity.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)—The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund) and as amended by the Superfund Amendments and Re-authorization Act (SARA) or Superfund. The Act provides federal funds for use in cleaning hazardous waste sites left uncontrolled^ abandoned. It is also used in cleaning up accidents, spills, and contaminants placed in the environment. Under CERCLA, EPA is given authority to identify those responsible for contamination and seek their cooperation for the cleanup of the site. If the responsible party cannot be determined EPA will assume responsibility for the cleanup. CERCLA can be implemented in all U.S. states and territories with the assistance of the state environmental agencies.

Compressed Gas—A mixture or material which, when enclosed in a container, has either a vapor pressure of 40 pounds per square inch (psi) at 70°F or a vapor pressure of 120 psi at 130°F. or any flammable material having a vapor pressure exceeding 40 psi at 100°F.

Control Zones—Designated areas at dangerous goods incidents, based on safety and the degree of hazard. Many terms are used to describe control zones; however, in this guidebook, these zones are defined as the hot/exclusion/red/restricted zone, warm/contamination reduction/yellow/limited access zone, and cold/support/green/clean zone. (EPA Standard Operating Safety Guidelines, OSHA 29 CFR 1910.120, NFPA 472).

Corrosive Material—are alkaline or caustic, or basic or acidic, when in contact with living tissue, will cause damage by chemical action, strong caustics will damage or destroy metal, plastics and even glass and may react violently when in contact with organic matter or certain chemicals or there opposite therefore acidic and base should not be allowed to mix uncontrolled.

Cryogenic Liquid—A refrigerated, liquefied gas that has a boiling point colder than -90°C (-130°F) at atmospheric pressure.

D

District of Columbia Hazardous Waste Management Act 1984—Establishes a program of regulation over the generation, storage, transportation, treatment, and disposal of hazardous waste and fuels containing hazardous waste. The Act also insures safe and effective hazardous waste management through the reduction and elimination of the source, wherever feasible and as expeditiously as possible the generation of hazardous waste and the release of toxic chemicals in the District of Columbia.

District of Columbia Oil Liability Trust Fund, District of Columbia Law 5-188, Section 10—Although never funded, consists of civil penalties and other charges recovered to establish funding to finance the removal, prevention or the spread of pollutants. This fund may be used when the responsible parties can not be identified, refuse, or are unable to take corrective actions during pollution incidents.

District of Columbia Underground Storage Tank Fund—A fund established under District of Columbia Code Title 6-999.5, entitled UST Trust Fund, for the clean-up of oil or hazardous substance (except those regulated under the District of Columbia Hazardous Waste Management Act) discharges or releases from underground tanks within the District of Columbia.

District of Columbia Water Pollution Control Act (1984) District of Columbia Official Code §§ 8-103.01 et. seq.—Law regulating the discharge of pollutants to the District of Columbia waters and the protection of the fish and aquatic life and their habitats. The Act prohibits the discharge from point or nonpoint source of any substance that may alter or interfere with the restoration or maintenance of the chemistry, physical, radiological, and biological integrity of the waters of the District of Columbia or any degraded spoil, solid waste incineration residue, sewage, garbage, sewage sludge, munitions, chemicals, chemical waste, hazardous waste, discarded equipment, rock, sand, cellar dirt, oil, gasoline, and related petroleum products and industrial, municipal, and agricultural waste. Enforcement of this act shall be carried out by the District Department of the Environment.

District Department of the Environment Water Pollution Control Contingency Plan (DCWPCCP)—DDOE Water Quality Division's contingency planning document that addresses oil, hazardous substances and sewage spill incidents that threaten or impact the natural resources, i.e., surface and ground water within the boundary of the District of Columbia. The Plan offers guidance on processes and methodologies through which the District Department of the Environment can better respond to and coordinate environmental emergencies among other District of Columbia, state, and federal agencies, as well as other adjacent local governments. The Plan is also coordinated and integrated with existing federal, regional, and local incident response plans to ensure an efficient, integrated and comprehensive response to pollution incidents affecting ground and surface waters in the District of Columbia.

District Department of the Environment Emergency Coordinator—Serves as DDOE's Point of Contact and key liaison with affected private and public sector agencies*, including the Federal government and adjacent states, for the purposes of DDOE emergency incident response coordination and emergency planning/preparedness for the District of Columbia or adjacent states where a potential impact to the District may exist. The DDOE EC represents DDOE on the Region III Regional Response Team Executive Committee and select sub-committees.

*These agencies and/or jurisdictions include: the District of Columbia Homeland Security and Emergency Management Agency [HSEMA], District of Columbia Fire and Emergency Medical Services [FEMS], the District of Columbia Metropolitan Police Department [MPD], the District of Columbia Department of Health [DC DOH], the District of Columbia Department of Real Estate Services [DRES], District of Columbia Public Schools [DCPS], the District of Columbia Department of Public works [DC DPW], the District of Columbia Department of Transportation [DDOT], the Washington Area Metropolitan Transit Authority [WMATA], the Metropolitan Washington Council of Governments [MWCOG], DC Water, the U.S. Environmental Protection Agency [US EPA], the U.S. Coast Guard [USCG], the U.S. Army Corps of Engineers, the U.S. Department of Homeland Security, the Federal Emergency Management Agency [FEMA], the U.S. Department of the Interior, the National Park Service, the Commonwealth of Virginia, the State of Maryland, etc.

Discharge—The spilling, leaking, releasing, pumping, pouring, emitting, emptying, or dumping of any pollutant or hazardous substance, including a discharge from a storm sewer, into or so that it may enter District of Columbia waters.

Dispersants—Those chemical agents which emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

District of Columbia Waters—Flowing and still bodies of water whether artificial or natural, whether underground or on land, so long as in the District of Columbia, but excludes water on private property prevented from reaching underground or land watercourses, and also excludes water in closed collection or distribution systems.

E

Economically Sensitive Areas—Environments that are susceptible to the direct impacts from oil spills and hazardous material releases due to the economic value of the resource (recreational and/or commercial). These areas may include industrial intakes, marinas, commercial/recreational fishing areas, boating and public recreational areas, human use areas and historic sites.

Environment—As defined and addressed under the DCWPCCP, includes navigable waters, the waters of the contiguous zone, any surface or ground water, piped stream water, stormwater/combine sewer, land surfaces and habitat adjacent to these waters and under some circumstances public space.

Environmental Assessment—Involves monitoring of the impact to District of Columbia resources (water, flora, fauna) from a spill or discharge in the environment based on information gathered from the incident/impacted area. Information may include aerial surveys, modeling and tracking estimates, and weather assessments. Such assessments will be used to coordinate with the natural resource trustees activities in their assessment of natural resource damage.

Environmentally Sensitive Areas—Environments that may be considered habitat to fish and wildlife. Examples of these areas may include wetlands, mud flats, beaches, rocky banks, cliffs, vegetated/barren banks, lakes, streams, rivers, spawning grounds, shellfish beds, nursery areas, and endangered/threatened animals and plants.

Explosive—Any chemical compound, mixture, or device the primary or common purpose of which is to function by explosion. Common terms include, but are not limited to, dynamite, black powder, pellet powders, initiating explosives, blasting caps, safety fuses, fuse igniters or lighters, squibs, igniter cord, and lighters.

F

Facility—Any structure, group of structures, installation, equipment, pipe or pipeline or device (other than a vessel), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or area where oil or hazardous substances have been deposited, stored, disposed of or placed, or otherwise come to be located.

Federal On-Scene Coordinator (FOSC)—Similar in function as those of the state/local Incident Commander. Under the National Contingency Plan, the FOSC directs federal response efforts and coordinates all other efforts at the scene of a discharge or release. The FOSC is pre-designated by the regional or District of Columbia head of the lead federal agency (EPA or USCG).

Flammable Liquid—Any liquid having a flash point below 60°C (140°F) and having an absolute

vapor pressure not exceeding 2.8 kg per sq cm (40 lb per sq in) absolute at 37.8°C (100°F).

Flammable Solid—Solid substance, other than one classified as an explosive, which may cause fires through friction, absorption of moisture, spontaneous chemical changes, or as a result of retained heat from manufacturing or processing.

Fund—Includes the Oil Spill Liability Trust Fund established by Section 9509 of the Internal Revenue Code of 1986, which reimburses local governments up to $250,000 per occurrence and CERCLA, Section 9623, which reimburses local governments for hazardous material response up to $25,000 per occurrence.

H

Hazardous Substance—Refers to any toxic pollutant referenced in or designated in or pursuant to section 307(a) of the CWA; any substance designated pursuant to section 311 (b)(A) of the CWA; or any hazardous waste having the characteristics of those identified under or listed pursuant to the District of Columbia Hazardous Waste Management Act of 1977, as amended.

Highly Toxic Material—Substances so toxic as to afford an unusual hazard to life and health during fire fighting operations. Examples would include parathion, tetraethyl phosphate (TEEP) hexaethyl tetraphosphate (HETP), and similar pesticides.

I

Incident—An occurrence or series of occurrences having the same origin, involving one or more vessels, facilities, resulting in the discharge or release or substantial threat of a discharge or release of oil or hazardous substances, or pollutant which may present an imminent and substantial danger to the public health or welfare.

Incident Commander (IC)—Term used to recognize the ranking public safety official who establishes direction and control at an incident scene. The IC will direct all operations at the scene including coordination and response.

L

Liquified Petroleum Gas (LP or LPG)—Substances having a vapor pressure not exceeding that allowed for commercial propane composed of predominately of the following hydrocarbons, either by themselves or as a mixture – propane, propylene, butane, and butylene (including isomers).

Local Emergency Planning Committee (LEPC)—A group of District of Columbia officials and private citizens charged under SARA Title III with developing and updating the District of Columbia's hazardous substances response plan and with identifying and assessing hazards posed by extremely hazardous substances, or other substances, stored or transported through the District of Columbia.

N

National Contingency Plan (NCP)—Also known as the federal Oil and Hazardous Substances Pollution Contingency Plan it represents the incident response plan prepared by the National Response Team. The NCP is required by CERCLA as amended by SARA and the CWA. The purpose of the Plan is to effectuate the response powers and responsibilities created by CERCLA and the authorities established by Section 311 of the CWA. It applies to all federal agencies and is effective for the navigable waters of the US and adjoining shorelines; releases or threats of releases of hazardous substances and contaminants; efficient coordination and effective response; division of responsibilities among federal, state and local government in response actions; national response organizations that may be involved in response actions; establishment of requirements for federal regional and local contingency plans; procedures for pollutant removal and response operations; designation of trustees; national policy and procedures for the use of dispersants; and consideration to other contingency plans.

National Pollution Funds Center—Established by the US Secretary of Transportation to administer the Oil Spill Liability Trust Fund. The designated District of Columbia official authorized to access that fund is director of the District Department of the Environment. (***Note***: the Mayor must formally designate the official who can access these funds).

National Response Center (NRC)—The national communications center for activities related to response actions. The center is located at Coast Guard Headquarters in the District. It is open 24 hours a day for the reporting of ongoing or potential hazardous incidents or oil spills, and for requesting the notification and assistance of federal agencies.

National Response System (NRS)—Supported by a network of federal, state, local and industrial participants the system provides a framework for all responders to deal with pre-spill planning and spill response. Components of the NRS includes the National Response Center (NRC), National Response Team (NRT), 13 Regional Response Teams (RRT), Area Committees, and Federal On-Scene Coordinators

(FOSC). These groups work with state, and local officials, industry, and citizens to develop and maintain a network of response contingency plans.

National Response Team (NRT)—A group of federal agencies responsible for evaluating methods of responding to pollutant discharges or releases and for recommending changes to promote efficiency of operations.

National Strike Force (NSF)—Special team established by the USCG, including three USCG Strike Teams, the Public Information Assistance Team, and the National Strike Force Coordination Center. The NSF is available to provide trained personnel and specialized equipment to assist in training, stabilization and containment, and monitoring and direction of the response actions.

Natural Resources—Includes the land, fish, wildlife, biota and water, which are held in trust, and managed or controlled by the District of Columbia and other federal trustees.

O

Oil—Oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, diesels, bio-diesel, cooking oils, sludge, oil refuse, and oil mixed with waste other than dredged spoil, and petroleum including crude oil or any fraction thereof.

Oil Pollution Act, 1990 (OPA)—Enacted in August of 1990, to strengthen the National Response System by providing better coordination of spill and contingency planning among federal, state, local authorities, and industry. OPA established the Oil Liability Trust Fund for response to oil spills; amended the National Contingency Plan to require the federal government to direct all public and private response efforts for certain types of spill events; require Area Committees to develop detailed location-specific Area Contingency Plans as well as owners and operators of vessels and certain facilities to prepare their own response plans; and increased penalties for regulatory noncompliance, broadened the response and enforcement authority of the federal government, and preserved state authority to establish laws governing oil spill prevention and response.

Oxidizing Material—Substances such as chlorates, permanganates, peroxides, or nitrates that yield oxygen readily to stimulate combustion.

P

Pesticide Safety Team Network—Consists of approximately 40 emergency teams located throughout the country operated by the National Agricultural Chemical Association. Teams will respond to hazardous substances emergencies involving agricultural chemical pesticides. CHEMTREC serves as the communication link for this service.

Poisonous Gas—Any noxious gas that in small amounts in the air is dangerous to life. Examples include - chlorine, cyanogen, flourine, hydrogen cyanide, nitrate oxide, nitrogen tetraoxide, and phosgene.

Pollutant—Contaminant, defined under CERCLA, as any element, substance, compound or mixture, including petroleum (OPA 90) and disease causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, directly or indirectly through the food chain, may reasonably be anticipated to interfere with the restoration and maintenance of the chemical, physical, radiological or biological integrity of the waters of the District of Columbia, or cause death, disease or behavioral abnormalities, cancer, genetic mutation, physiological malfunction, or physical deformations. For purposes of this document pollutant would also include all oils as defined under OPA and the CWA.

R

Radioactive Material—Material(s) that spontaneously emit ionizing radiation.

Radiological Emergency Response Team (RERT)—Established by EPA to provide response and support for incidents or sites containing radiological hazards. Requests for their support are made through the NRC or directly to EPA's Radiological Response Coordinator, in the Office of Radiation Programs.

Regional Response Team (RRT)—Planning, policy, and coordinating bodies that do not respond directly to incidents. There are thirteen RRTs, each with federal and state representatives. The RRTs are responsible for developing Regional Contingency Plans for their region.

Removal—The containment and act of removing oil, hazardous material and pollutant or substance that may impact the water, from the water or shorelines or the taking of such actions as may be necessary to minimize or mitigate damage to the public health or welfare (including, but not limited to fish, shellfish, wildlife, public and private property, and shorelines and beaches) or to the environment.

Removal Costs—Costs of the removal that are incurred after a discharge or release of oil or hazardous substances has occurred or in which there is a substantial threat, the costs to prevent, minimize or mitigate pollution from such an incident.

S

Superfund Amendments and Re-authorization Act of 1986* (*SARA) Title III—Also known as The Emergency Planning and Community Right-to-Know Act, refers to the provisions of Title III of the Superfund Amendments and Re-authorization Act of 1986 (SARA), which establishes Local Emergency Planning Committees that are responsible for the development of and annual review local hazardous material emergency response plans.

Size and Classes of Discharges/Releases—Refers to the volume of the spill and the number of resources needed to respond to it based on the IC's and FOSC for classifying, but not intended to imply associated degrees of hazard to public health or welfare, nor are they a measure of environmental injury. Any oil discharge that poses a substantial threat to public health or welfare or the environment or results in significant public concern shall be classified as a major discharge regardless of the following quantitative measures as related to inland waterways: For reporting purposes any amount of oil spilled is reportable, while reportable quantities of hazardous substances varies [refer to 40 CFR (National Oil and Hazardous Substances Pollution Contingency Plan) Part 302, Table 302.4 for guidance on reportable quantities for hazardous substances.]

Oil, Federal (40 CFR 300.5, Definitions, Size Classes of Discharges):

Minor discharge is a discharge (any amount) to inland waters less than 1,000 gallons of oil.

Medium discharge is 1,000 to 10,000 gallons of oil to the inland waters.

Major discharge is more than 10,000 gallons of oil to the inland waterways.

Hazardous Substances:

Minor release is a quantity of hazardous substance(s), pollutant(s), or contaminants) that poses minimal threat to public health or welfare or the environment.

Medium release does not meet the criteria for classification as a minor or major release.

Major release is any quantity of hazardous substance(s), pollutant(s), or contaminant(s) that possesses a substantial threat to public health or welfare or the environment or results in significant public concern.

Spill of National Significance (SONS)—A spill due to its severity, size, location, actual or potential impact on the public health and welfare or environment, or the necessary response effort is so complex that it requires extraordinary coordination of federal, state, local and responsible party resources to contain and clean – up the discharge/release. Spills greater than 10,000 gallons would fall into this category.

Trustee for Natural Resources in the District—State resources management agency designated who may pursue claims for damages under Section 107(f) of CERCLA or Section 1006 of the OPA. State designee will act on behalf of the public for natural resources within the boundary of, belonging to, managed by or controlled by the District of Columbia. The lead trustee is a liaison officer to any federal coordinator and coordinates with state emergency response, environmental, and natural resource agencies. The designated Trustee for the District of Columbia is the director of the District Department of the Environment or his dully appointed agent.

Substantial Threat—A pollutant which may present an imminent and substantial danger to the public health and welfare, including danger to the livelihood of members of the public health and welfare (District of Columbia Official Code 8–103.08(b))

U

U.S Fish and Wildlife Service Region 5 Spill Response Plan for Oil and Hazardous Substances January 2004—Provides response guidance and standardized procedures, i.e., notification requirements, resource evaluation and response, pre-spill planning, incident evaluation, natural resource damage assessment to U.S. Fish and Wildlife Service for responding to oil and hazardous substance spills.

Unstable (Reactive) Chemicals—Any substance, other than those classified as an explosive or blasting agent, which will vigorously react and is potentially explosive. Examples include organic peroxides, nitromethane, and nitrate.

W

Wetland—A marsh, swamp or other area periodically inundated by tides or having saturated soil conditions for prolonged periods of time and capable of supporting aquatic vegetation.

RECORDS OF CHANGE

Change Number	Date of Change	Type of Change/Date Entered	Change Made By (Signature/Phone)

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I. INTRODUCTION

I.A PURPOSE AND SCOPE

The *District Department of the Environment Water Quality Division Water Pollution Control Contingency Plan* (Plan) is intended to provide guidance to District of Columbia agencies and departments, including the District Department of the Environment (DDOE), that respond to hazardous substance, oil, and sewage spills that may threaten or impact ground, surface or piped stream waters, and/or natural resources within the boundaries of the District of Columbia. The Plan is designed to promote timely and effective response to spill events. It summarizes procedures, policies, and responsibilities for assessing, mitigating, cleaning up, and following up on spills, and for recovering costs for impacts to natural resources. It also clarifies the responsibilities and required responses with respect to the water quality-related aspects of a spill incident, thereby enhancing coordination among the state, local, and federal agencies and other responders.

Because DDOE Water Quality Division is the specifically charged with protecting water resources in the District of Columbia, this while the primary audience for this Plan will be DDOE staff, the Plan includes a comprehensive discussion of the roles of all local and federal agencies that may be involved in spill response, assessment, cleanup, or recovery. The Plan focuses on two separate aspects of a spill response scenario. These are:

1. The lines of communication and the response actions that are typically taken by first responders prior to DDOE being called to the scene. It is important for DDOE to understand the goals and response methods employed by other responders so it can successfully perform its own functions when it is called to do so.

2. The specific types of response and cleanup activities that will be required for oil, hazardous substance, and sewage spills that impact or could impact District of Columbia waters. While DDOE may or may not perform these activities itself, it will have a lead technical role in guiding, overseeing, and evaluating the success of these activities to ensure that the waters of the District of Columbia are protected, and, if impacted, are restored as much as possible to their original conditions.

DDOE is not considered a first responder, but it does have legal responsibility to ensure that response is carried out to protect the environment. Because first responding agencies such as the District Fire and Emergency Medical Services or federal responding agencies may contact DDOE at any point in the response process either to inform DDOE of the spill or to request specific assistance, DDOE must be ready to respond quickly and with an awareness of its responsibilities, capabilities, strategies, and methods for interacting with all other parties which are also responding to the spill, and which have their own responsibilities, capabilities, strategies, and methods for interacting with other entities. This document provides DDOE with the background necessary to successfully fill its role in responding to spills.

While the Plan is an independent document, it does heavily reflect existing state and federal agency contingency and response plans and it is not intended to take the place of those documents. Instead, it provides the necessary coordination with those plans from a District of Columbia perspective.

The DDOE's Natural Resource Administration, Water Quality Division, will review and assess the effectiveness of the Plan annually, especially with respect to other existing plans. The review would

include an update of document information and may include staged drills with other District of Columbia, federal, and local response agencies.

I.B LEGAL AUTHORITY

The District of Columbia Water Pollution Control Act of 1984 (District of Columbia Law 5-188 and District of Columbia Official Code §8-103 et seq) regulates the restoration the District of Columbia waters and the protection of the fish and aquatic life and their habitat. District of Columbia Official Code §8-103.08.b specifically states:

> *whenever there is a discharge or substantial threat of discharge of a pollutant or hazardous substance into the waters of the District of Columbia that presents an imminent and substantial danger to the public health or welfare, the Mayor is authorized to act to remove or arrange for removal of the pollutant. In addition, the Corporation Counsel of the District of Columbia [now the Office of the Attorney General] may also bring suit on behalf of the District of Columbia to restrain immediately any person causing or contributing to a discharge or threat of discharge; to recover costs of removal incurred by the District of Columbia; to impose civil penalties; or to seek any other relief as the public interest may require.*

District of Columbia Official Code §8-103.08.c also authorizes the Mayor to establish a contingency plan for responding to environmental emergencies and stipulates what the plan should contain. District of Columbia Official Code §8-103.09 authorizes the Mayor to establish a financial system to account for revenues and expenses associated with the removal of pollutants and the establishment of penalties associated with pollution incidents. The Plan addresses these requirements.

There are also a number of key federal laws and regulations, including the Clean Water Act (CWA, PL 92-500); the Oil Pollution Act (OPA) of 1990; the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by Superfund Amendments and Re-Authorization Act of 1986 (SARA); and the National Contingency Plan (NCP) (EPA 2010a), that support and encourage the development, implementation of a District of Columbia contingency plan. CWA, OPA, CERCLA, and SARA provide for resource support and reimbursement of costs for actions associated with oil and hazardous substances removal. Sewage spills that impact surface waters are covered by the requirements of the CWA.

I.C GEOGRAPHIC COVERAGE AREA

The following sections describe the geographic area that this Plan covers.

General Description

The geographic area covered under this Plan includes the District of Columbia only. The District of Columbia borders the Potomac River, approximately 95 miles northwest from its confluence with the Chesapeake Bay to a point approximately one-half mile above Chain Bridge. The Potomac River forms most of the western boundary of the District along the Virginia shoreline (Arlington County and the City of Alexandria). The northern, eastern, and southern boundaries of the District of Columbia are surrounded by Maryland (Prince George's County and Montgomery County). The District of Columbia's border is demarcated by the Potomac River and includes all water and land within the river up to the mean high water mark of the Virginia shoreline. From the south, its western and northern boundary is primarily found along Western Avenue, while its northern and eastern

boundaries are found along Eastern Avenue. The District of Columbia's eastern and southern boundary follows Southern Avenue. All three of these streets lie within the District of Columbia.

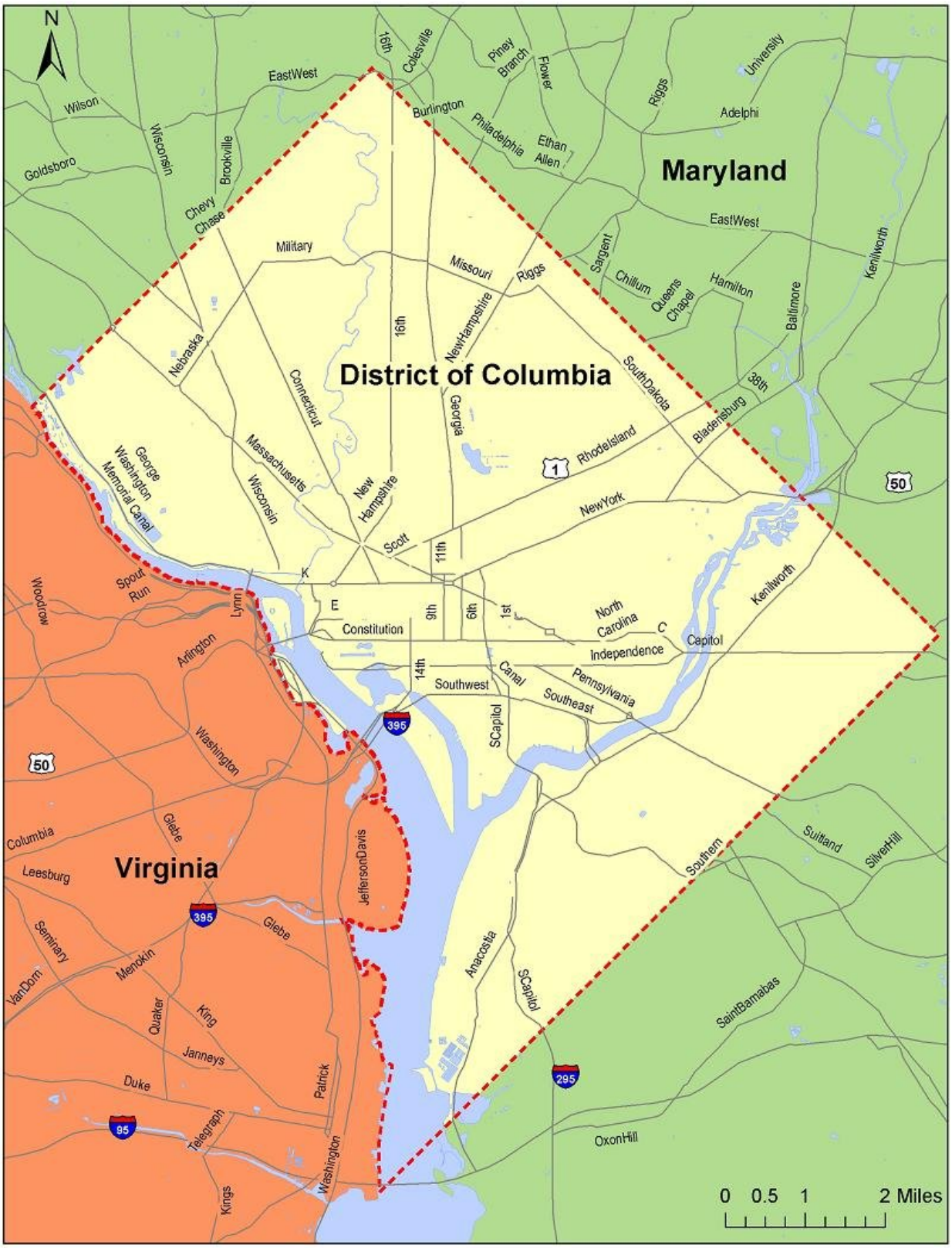
Detailed Boundary Description

The western corner boundary of the District of Columbia is located less than one-half mile above Chain Bridge at the mean high water mark of the Potomac River along the Virginia shoreline. Moving southeasterly, the boundary follows the mean high water mark of the Potomac River along the Virginia shoreline past Roosevelt Island and the Boundary Channel near the Pentagon. The boundary then turns in a southerly direction along the Virginia shoreline to Gravelly Point and Reagan National Airport, then past Hunter Point and Daingerfield Island, and continues in a southerly direction, again along the Potomac's mean high water mark bordering the City of Alexandria, to Jones Point. Jones Point, which forms the south corner boundary of the District of Columbia, is located about one-eighth of a mile below the Woodrow Wilson Memorial Bridge.

The District's eastern boundary is formed by moving from Jones Point in a northeasterly direction across the Potomac River and continuing to the intersection with I-295/Anacostia Parkway at Oxon Creek. The eastern boundary continues in a northeasterly direction until it meets Southern Avenue. The boundary then follows Southern Avenue to its eastern corner boundary, located at the intersection of Southern and Eastern Avenues; from this point, the boundary line turns 90 degrees northwesterly, following Eastern Avenue, and forms the northeastern boundary line of the District. This line continues along Eastern Avenue until it intersects with 16th Street, NW. The boundary line continues in a northwesterly direction, paralleling, but northeast of, Verbena Street, to a north boundary cornerstone located south of the Maryland East West Highway. At this point the boundary turns 90 degrees southwest, forming the western boundary of the District. This southwesterly line traverses Rock Creek and Rock Creek Park until it reaches and follows Western Avenue. Western Avenue continues in a southwesterly direction, passing intersections with Utah Avenue, Connecticut Avenue, Wisconsin Avenue, and Massachusetts Avenue, at which point Western Avenue ends. The boundary line continues in the same southwesterly direction crossing through the Dalecarlia Reservoir, the Clara Barton Parkway, the C&O Canal, and the C&O Canal National Historical Park, and ends at the western corner boundary along the Virginia shoreline. This boundary is shown on the map in Figure 1 below.

I. INTRODUCTION

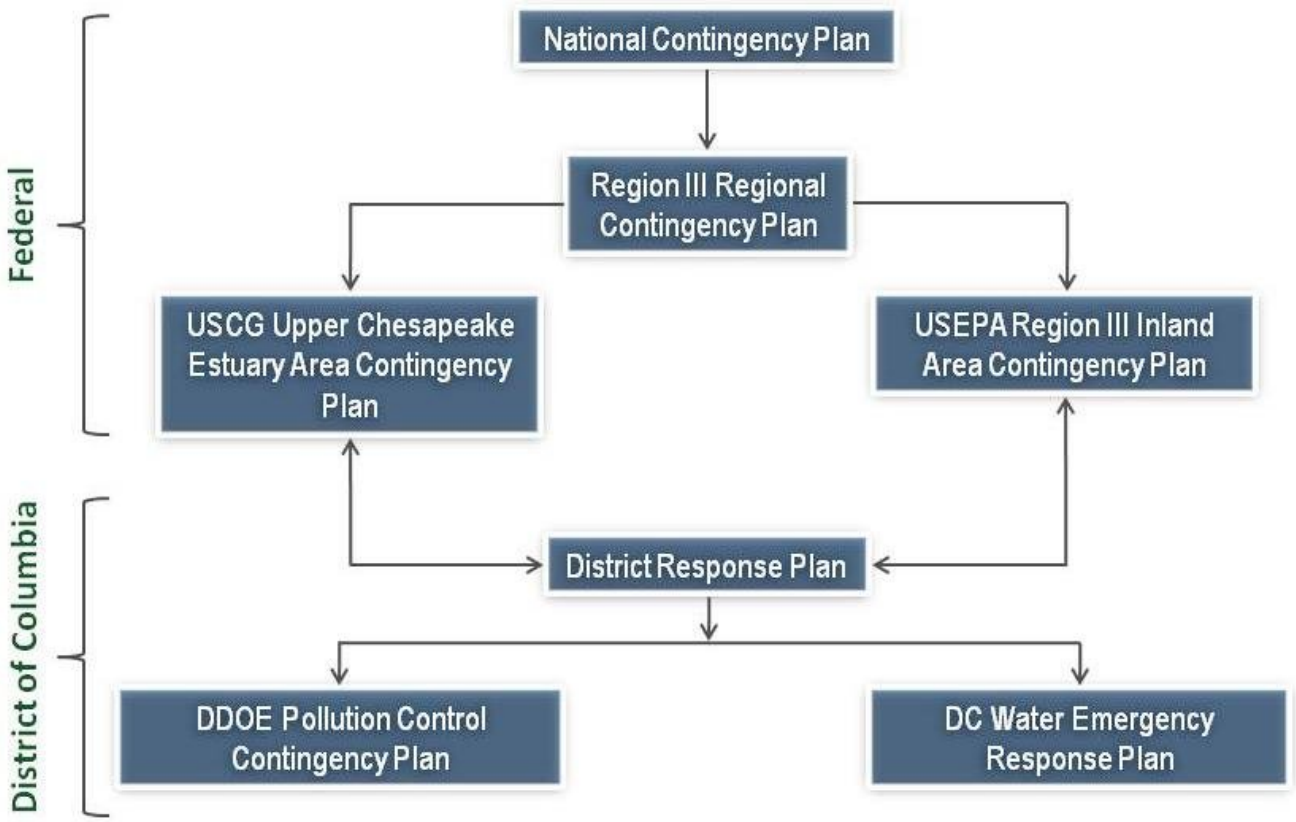
FIGURE 1: DISTRICT OF COLUMBIA BOUNDARY



I.D RELATIONSHIP TO OTHER PLANS

The Plan has been developed as a comprehensive document, directly reflecting and intended to be interactive with other existing federal, state, and District of Columbia agency contingency and response plans. The relationships of these plans are shown in Figure 2.

FIGURE 2: RELATIONSHIP OF RESPONSE PLANS



The NCP identifies three levels of federal contingency planning: National, Regional, and Area. While each level of planning provides important resources information, guidance, and response actions, it is the Area level of contingency planning that primarily recognizes and coordinates with state, local, and facility contingency and response plans. At a local level, the District Response Plan coordinates emergency response to incidents in the District of Columbia. The DDOE Pollution Control Contingency Plan and the DC Water Emergency Response Plan support specific response functions for spill incidents.

As part of its function in coordinating spill response in the District of Columbia, the DDOE Pollution Control Contingency Plan is based on, and integrated with, the U.S. Coast Guard (USCG) *Upper Chesapeake Estuary Area Contingency Plan* and the USEPA Region III Inland Area Contingency Plan. Together with these Area level plans, the Plan provides a means of coordinating action with appropriate federal, regional, state, and local resources for responding to oil, hazardous substances, or sewage discharges or releases to surface, ground, and piped stream waters within the District of Columbia. Specifically, the Plan addresses the requirements of existing federal and state laws and regulations and provides essential response guidance and assessment information for the protection

and restoration of natural resources impacted by these pollution incidents. The Plan assists District of Columbia representatives and federal officials in clearly understanding specific District of Columbia resources in cases where a Federal On-Scene Coordinator (FOSC) has been placed in control and/or a unified command system is in place.

Based on the planning relationships described above, as well as other local plafnning exercises, the Plan has been coordinated with and has drawn on information found in the plans summarized in Figure 2, plus additional plans and documents. The list below summarizes the plans used to coordinate response protocols in the DDOE Pollution Control Contingency Plan:

- National Contingency Plan (EPA 2010a) (http://www.epa.gov/oem/guidance.htm#ncp).
- 2009 Upper Chesapeake Estuary Area Contingency Plan, May 2009 (http://homeport.uscg.mil/mycg/portal/ep/portDirectory.do?tabId=1&cotpId=1).
- USEPA Region III Inland Area Contingency Plan, January 2007 (http://www.epaosc.org/site/doc_list.aspx?site_id=2037).
- District Response Plan, December 2008 (http://dcema.dc.gov/dcema/frames.asp?doc=/dcema/lib/dcema/pdf/district_response_plan.pdf).
- DC Water Emergency Response Plan (to be updated in 2010).
- Commonwealth of Virginia Emergency Operations Plan, September 2009 (http://www.vdem.state.va.us/library/plans/index.cfm).
- State of Maryland Core Plan for Emergency Operations, August 2009 (http://www.mema.state.md.us/MEMA/content/pdf/The_State_of_Maryland_Emergency_Operations_Plan_26Aug09.pdf).
- Region III Regional Contingency Plan (http://www.rrt3.nrt.org/) (EPA 2010b).
- US Fish and Wildlife Service (USFWS) *National Oil Spill Contingency Plan*, July 2005 (http://www.fws.gov/contaminants/FWS_OSCP_05/FWSContingencyTOC.htm) (USFWS 2005).

I.E INCIDENT RESPONSE PROTOCOLS

This section describes the various ways that response to a spill or release incident can be initiated in the District of Columbia.

Oil and Hazardous Substance Spills

1. Initial notification of incident is reported via the 911 system. If the initial report of an incident is made via the 911 system, the 911 operators will dispatch the District Fire and Emergency Medical Services Department (FEMS) to the scene as first responders. The 911 operations center will then contact the Homeland Security and Emergency Management Agency (HSEMA) and, if warranted, the National Response Center (NRC). HSEMA will contact DDOE Emergency Coordinator, who will then inform the relevant sections of DDOE for response. Notification of a spill by HSEMA may or may not be accompanied by a specific request for assistance from DDOE; however, it is DDOE's responsibility to understand its role and responsibility for spill response and to determine itself whether, and what kind, of a role it should take in the response.

2. Initial notification of incident is reported via NRC. If the initial report of an incident is made via the NRC, NRC will report the incident to HSEMA, which will in turn inform DDOE Emergency Coordinator. DDOE Emergency Coordinator will then inform the relevant sections of DDOE for response. As above, DDOE should ensure that it assesses the situation itself to determine its potential response for any given spill.

3. Initial notification of incident is reported via another source. While the 911 system and the NRC are the primary mechanisms through which oil and hazardous substances spills are reported and response is initiated, response may be initiated in other ways if the initial report goes to other agencies. But in each case, these other agencies will inform FEMS and HSEMA, which will then initiate their communications and response protocols in the same way as described above. As in the cases above, DDOE should ensure that it assesses the situation itself to determine its potential response for any given spill.

Sewage Spills

Notification of sewage spills may come from DC Water or it may come from other sources. DC Water is responsible as the first responder to sewage spills. Because of DC Water's familiarity with the requirements of the CWA, the Blue Plains National Pollutants Discharge Elimination Permit and DC Water Pollution Control Act and Water Quality Regulations, it is DC Water's policy to immediately contact DDOE directly in the event of a spill to obtain guidance this notification while be followed by written notification within twenty-four (24) hours.

Notification Protocols

Once an incident has been reported, a number of notification protocols are activated. These are summarized in Figures 3 and 4. Figure 3 shows the communications and responses for an incident requiring only local response; Figure 4 shows the communications and responses for an incident involving federal response. The following sections summarize the various agencies that respond or provide support to responders once a spill or release has been reported.

FIGURE 3: INCIDENT REQUIRING ONLY LOCAL RESPONSE

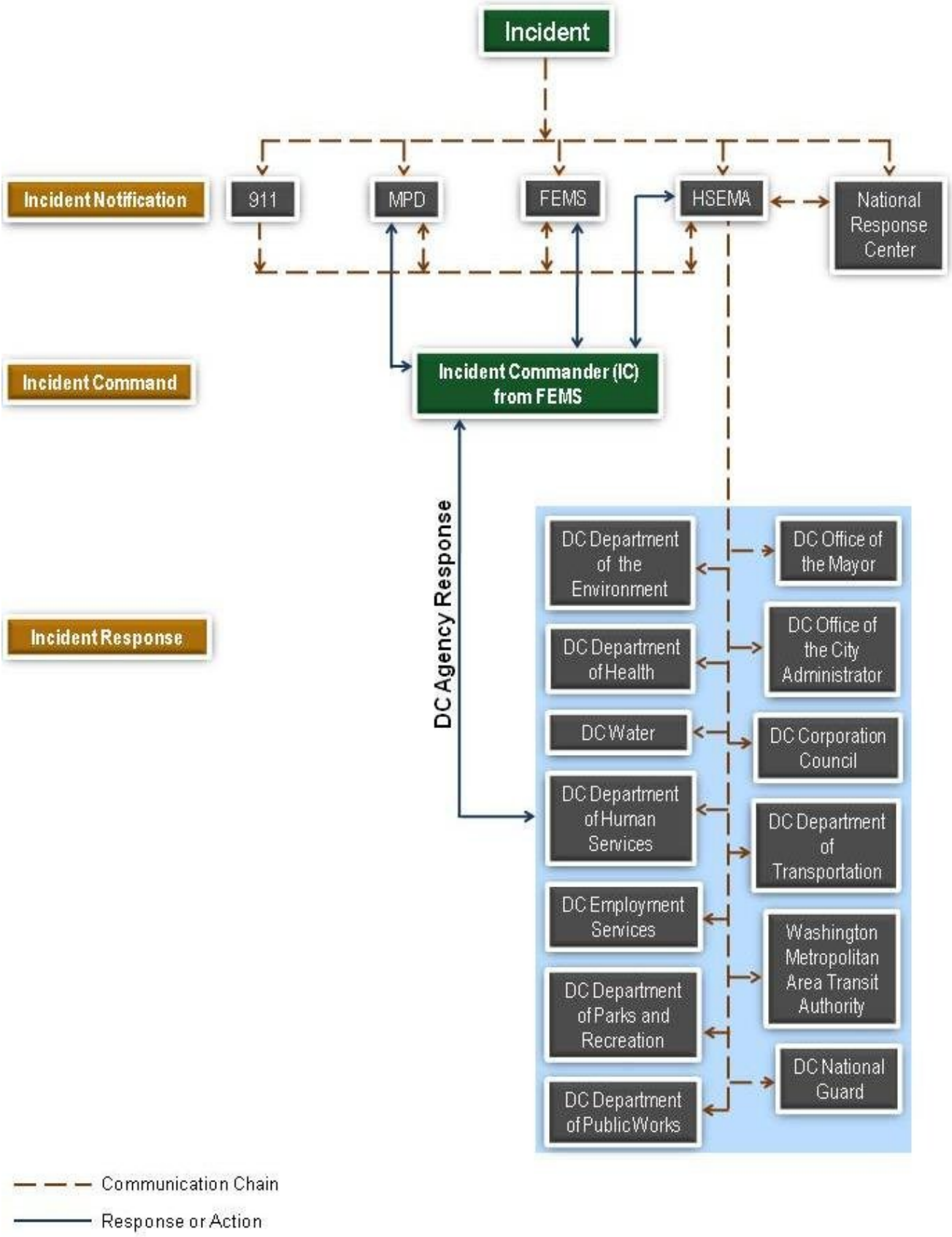
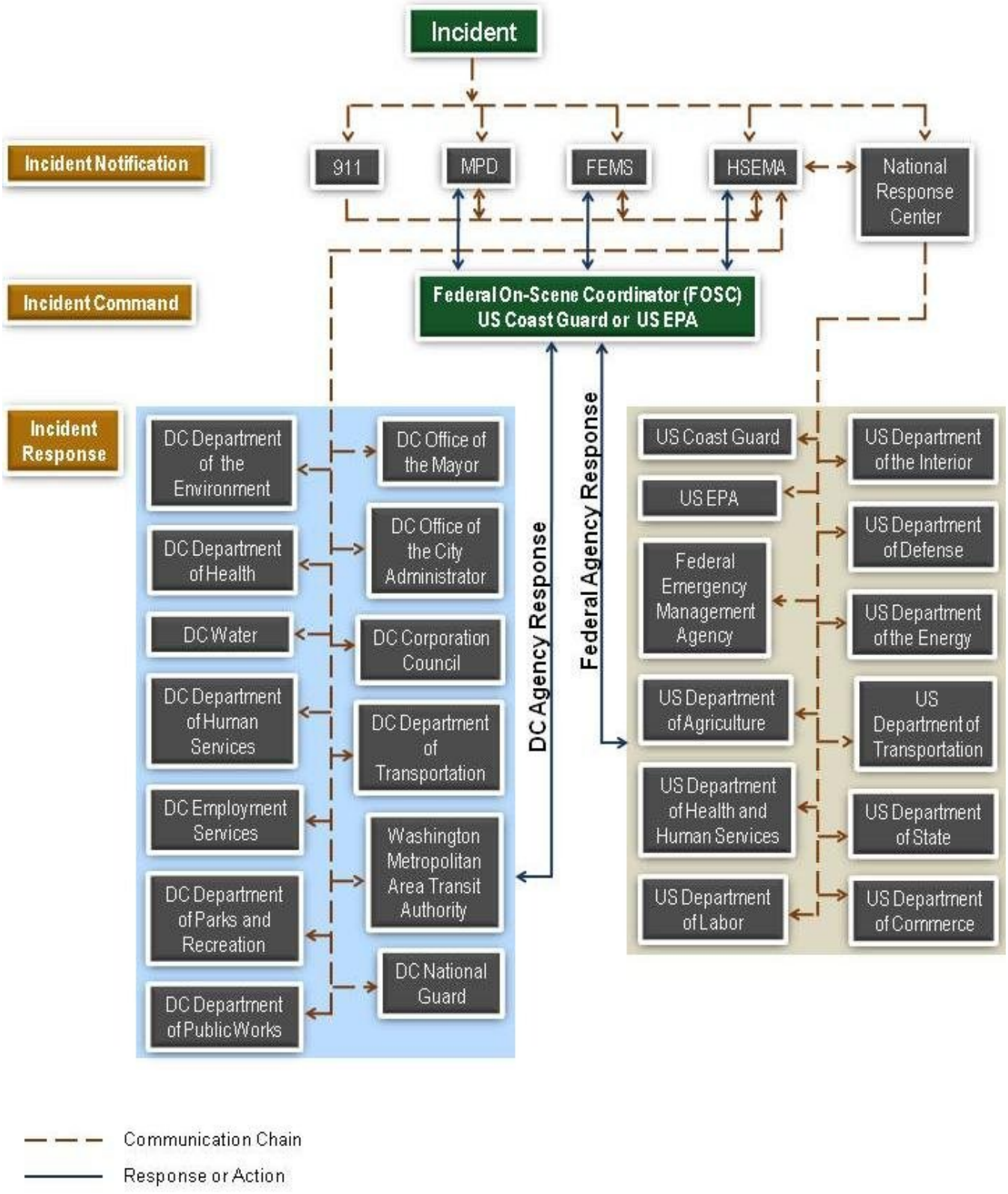


FIGURE 4: INCIDENT INVOLVING FEDERAL RESPONSE



I.F DISTRICT OF COLUMBIA'S AGENCY/DEPARTMENT ROLES AND RESPONSIBILITIES

This section summarizes the roles and responsibilities of local (District of Columbia) agencies and departments in responding to different types of spill incidents.

Emergency Response/Coordination Agencies for Oil or Hazardous Substance Spills

Homeland Security and Emergency Management Agency (HSEMA, previously known as Office of Emergency Preparedness and the Emergency Management Agency) coordinates the District's response to emergency and disasters. HSEMA is responsible for the District's planning and emergency preparedness, response and recovery, and mitigation activities. The Deputy Mayor for Public Safety and Justice chairs the Emergency Preparedness Council (EPC), the principal body that addresses District Response Plan planning and implementation. The Director of HSEMA chairs the Local Emergency Planning Council. The Chief, Operations Division manages the Emergency Operations Center (EOC) on a 24-hour/7 days per week basis.

In the event of a major oil or hazardous substance spill involving extensive interagency or multi-jurisdictional coordination and depending on escalating incident conditions, HSEMA will activate the EOC and the required emergency support functions as outlined in the District Response Plan. HSEMA will gather, collect, analyze, and distribute the necessary information and intelligence to support the incident response and perform assessments of the situation through Situation Reports, determining the immediate critical needs and the need for federal assistance. If on-scene response is warranted, HSEMA will deploy the Unified Command Center to gather information on the type of hazardous material involved and other data.

Fire and Emergency Medical Services Department (FEMS) acts as Incident Commander (IC) for oil or hazardous substance incidents within the District of Columbia. As IC, FEMS has operational, containment, point of contact, and safety responsibilities, including:

Operational

- Directs incident command structure and operations center.
- Ensures appropriate personnel and equipment are available and responsive.
- Coordinates patient movement from threatened health facilities.
- Implements mass casualty plan.
- Maintains roster of on scene equipment, materials and personnel.

Containment

- Contains and identifies pollutant material(s).
- Decontaminates and mitigates incident scene.
- Monitors impact from any airborne or surface pollutants.

Point of Contact

- Provides lead control and coordination for all public information.
- Ensures all local, state, and federal agencies and organizations are promptly notified.
- Alerts area hospitals; if necessary.

Safety

- Provides on-scene emergency medical services.
- Coordinates movement of injured.

Should FEMS' resources become exhausted, then a fire department mutual aid agreements with National Capital Region (NCR) jurisdictions could be invoked to provide assistance. In instances where the resources and technical capabilities of the District of Columbia are exceeded, the NRC will be contacted and upon the arrival of the FOSC, the District of Columbia will provide resources and assistance as requested in support of the response. The FOSC will set up a Unified Command Center, which will include representatives from relevant local agencies depending on the nature of the spill. A representative from DDOE will typically be included in this command structure to provide insight and information about natural resources and to ensure that environmental regulations are followed. Requests for support from local agencies would be made via the unified command structure and could include information on sensitive areasIn addition other requests could include traffic control, security, haz-mat response support, emergency medical services support, fire suppression or watch support should the spill involve flammables.

Metropolitan Police Department (MPD) provides area security and cordons off incident areas preventing public access; assists with traffic control; and helps notify the public of any emergency evacuation. MPD also maintains a bomb squad that can dispose of any explosive material that may be involved in a spill.

Responding Agency, Natural Resource Impacts

District Department of the Environment (DDOE) is responsible for responding to pollution incidents that impact District of Columbia waters; enforcing all District of Columbia water pollution control laws; and protecting District of Columbia natural resources. According to protocols established in the District Response Plan, for a local spill incident (i.e., an incident with a local IC as opposed to a FOSC), DDOE takes command of the incident site once the site has been stabilized by FEMS (e.g., the spill is contained, there is no more immediate threat to human health, and the incident has moved to the cleanup stage). In this role, DDOE will lead oversight of the cleanup, disposal, documentation of required activities and will continue with responding agencies (See Section III, Oil and Hazardous Materials Emergency Response, for a full discussion of the response phases). As part of these responsibilities, DDOE and its divisions will:

- Implement soil and water quality sampling and analysis (as necessary).
- Recommend and coordinate appropriate procedures for the removal and disposal of hazardous substances and oil.
- Coordinate with DC Water on response to sewage spill incidents; initiate and oversee remedial cleanup; enforce applicable local and federal laws and regulations.

- Coordinate recovery costs from the responsible party (RP).
- As state trustee, act as responsible agency for the protection and assessment of natural resources damages related to hazardous waste and oil pollution incidents.
- Compile and maintain records of incident costs, response, damage, and cleanup; and compile and prepare the post incident report.

Responding Agency, Sewage Spills

DC Water provides emergency response to pollution incidents at the Blue Plains Advanced Wastewater Treatment Plant and adjacent areas. The response provides for the protection of human health and the environment through effective wastewater treatment plant operations. They are also responsible for mitigation and cleanup of sewage spills outside of Blue Plains Treatment Plant or other sewage-related incidents in a timely manner.

District of Columbia Executive Agencies

District of Columbia Executive Agencies play an important role in supporting incident response through ensuring that adequate resources are allocated to the incident; entering into and authorizing implementation of mutual aid agreements; and providing executive and legal support in cleanup and cost recovery operations. More information on the specific roles of District of Columbia Executive Agencies is provided in Appendix E.

Other District Supporting Agencies

Other District agencies can provide various support functions during or after an incident, including assisting in response planning/implementation; supplying specialized equipment or personnel; and other functions. More information on the potential roles of other District of Columbia Agencies in incident response is provided in Appendix E.

I.G STATE AGENCY/DEPARTMENT ROLES AND RESPONSIBILITIES

Maryland and Virginia border the District of Columbia at different locations along the Potomac River. Releases of oil, hazardous substances, or sewage in the District could potentially impact these states. The District has well established emergency coordination protocols with Maryland and Virginia. In the event of a spill incident, the District of Columbia may request assistance in the form of personnel or equipment from Maryland or Virginia based on pre-existing agreements such as the Emergency Management Agency Compact (EMAC). Either state may also respond to an incident on the Potomac that has the potential to impact that state. Finally, Maryland and Virginia would be part of any federal led incident response that had the potential to impact their states.

The following sections outline the primary agencies in each state that would respond to spill incidents crossing the District of Columbia border.

Commonwealth of Virginia

Virginia Department of Emergency Management (DEM) provides trained staff and equipment for emergency response to oil and hazardous substance incidents impacting the Commonwealth of Virginia. DEM also maintains a 24-hour/7 days a week EOC to coordinate and respond to incidents. In addition, DEM will provide back-up services to the District of Columbia's HAZMAT units.

Virginia Department of Environmental Quality (DEQ) is responsible for enforcing water pollution laws and regulations; permitting solid, hazardous, special, and radioactive waste; implementing provisions of SARA Title III; and providing technical expertise and regulatory assistance. DEQ is also responsible for recommendations during pollution incidents and maintaining a list of response contractors/personnel and equipment for use during oil and hazardous waste incidents.

State of Maryland

Maryland Emergency Management Agency (MEMA) is responsible for coordinating Maryland's response to any major emergency or disaster. MEMA consists of 70 staff members divided into two directorates – Operations and Administration. The Operations Directorate includes exercise and training, planning, regional programs, mitigation and recovery, the Maryland Joint Operations Center (MJOC), and critical infrastructure protection. The Administration Directorate handles agency logistics, personnel, supplies, fiscal services, grants management, technology support, interoperability, and communications. The Executive Directors office manages all public affairs, direct interaction with the National Capital Region, and legislative activities. The MJOC is operated around-the-clock by a combination of MEMA staff and National Guard personnel. The MJOC serves as a communications hub for emergency responders statewide and supports local emergency management.

Maryland Department of the Environment (MDE), Response Division maintains a 24-hour phone line and will respond to any releases/spill of oil or hazardous waste within the State that threatens public health or the environment. In most cases, the Response Division will provide technical assistance and
needed equipment to the IC in charge of the incident. In addition, MDE will provide back-up to District of Columbia HAZMAT units.

I.H FEDERAL AGENCY ROLES AND RESPONSIBILITIES

Some level of federal involvement will occur during all oil spills and hazardous substance incidents involving reportable quantities (RQ) of hazardous substances. Depending on the location and severity of the spill and its potential impact on federal resources, the level of effort may range from telephone communications and coordination with the District of Columbia's IC to full federal involvement with a lead responsibility under the command and control of a FOSC.

The authority for federal involvement is well grounded in federal law and regulation as well as in the contingency planning required under those laws and regulations. The primary legal driver for federal involvement in spill incidents is the CWA, which not only prohibits the discharge or release of pollutants into navigable waters of the United States, but also establishes the basis for federal involvement and response. Subsequently, Congress passed both the OPA and the CERCLA to broaden federal authority and strengthen the federal response and coordination system for oil spills and hazardous substance discharges. These laws enhanced federal authority to contain and remove pollutants; assess and seek damages; and specify emergency response actions.

In addition to these laws, EPA promulgated the NCP to minimize adverse impacts from oil and hazardous substance releases. The NCP provides guidance to federal, state, and local agencies for coordinated and effective action. The NCP established the framework for the development of the current USCG and EPA Area Contingency Plans. These plans establish the roles and responsibilities of the lead federal agencies and provide comprehensive guidance for coordination among federal,

state, and local government response agencies. Finally, the federal government will become involved if there is an incident that occurs on, or has the potential to impact, federally owned land or assets. Because the federal government is a large landowner in the District of Columbia, federal involvement in spill incidents may be more likely than in other localities.

A summary of the federal agencies that may be involved in response and/or the provision of backup or auxiliary resources or coordination is provided below.

Emergency Response/Coordination Agencies

Environmental Protection Agency (EPA) provides expert advice on environmental effects of oil, hazardous substances, pollutants or other contaminant spills/discharges, and environmental control techniques. EPA officials also serve as FOSCs for incidents requiring a federal lead that occur in areas where EPA has jurisdiction (see Section II.A Notification and Response Actions). EPA can provide legal expertise on the CWA, CERCLA and OPA. EPA may also enter into contracts or cooperative agreements with the District of Columbia in order to implement a response action.

US Coast Guard (USCG) provides response expertise in transporting of oil and hazardous substances and on requirements for packaging, handling, and transporting regulated hazardous substances. The USCG maintains a technical and resource capability to deal with oil and hazardous material incidents in coastal areas and can provide designated FOSCs. In coordination with the District of Columbia they may enter into a contract or cooperative agreement in order to implement a response action to a pollution incident. The USCG's NRC is the single point of contact for all pollution incident reporting as well as for tracking minor, medium, or major spills.

Public Health Agency

The Department of Health and Human Services (HHS) is the United States government’s principal agency for protecting human health. The Office of the Assistant Secretary for Preparedness and Response (ASPR) supports Regional Emergency Coordinators (RECs) throughout the U.S. HHS RECs establish relationships with federal, state, local, tribal and territorial officials and healthcare representatives in order to conduct planning for effective federal emergency response, and to facilitate coordinated preparedness and response activities for public health and medical emergencies. Any incidents that cause mass casualties and/or pose a threat to the general the population may warrant coordination with HHS.

Resource Agencies

As with District Agencies, technical and logistical support for incident response may be available from federal agencies. In addition, many federal agencies own and/or are responsible for land within the District (e.g., the National Park Service, the U.S. Army Corps of Engineers); therefore, they will be responsible for any incident responses on their property. Detailed information on resources available from a number of federal agencies is summarized in Appendix E.

II. General Notification and Response

II.A Notification and Response Actions

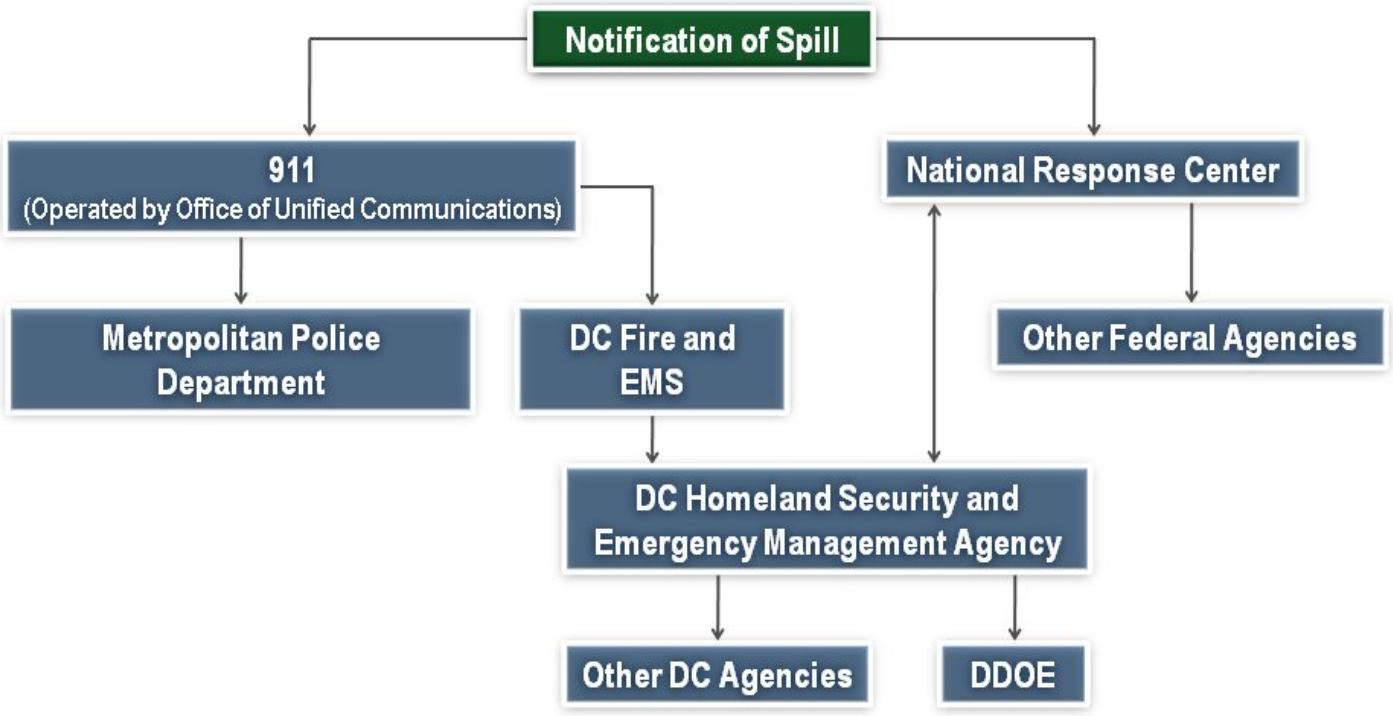
Background

As required under District of Columbia Law 5-188 and DC Official Code §8-103.08, and called for under Section 9(a)(1), Section 304 of SARA Title III (CERCLA) and under Section 2704(C)(2)(a) of OPA, the party or parties responsible for oil or hazardous substances spills/releases of RQs are required to immediately notify/report the incident to appropriate federal or state government Local/State Incident Response agencies and officials. The RQ for oil is any amount spilled. The RQs for hazardous substances are determined based on physical, chemical and toxicological properties of the substance, including aquatic and mammalian toxicology, ignitability, and reactivity. A summary of RQs for hazardous substances can be found on EPA's Emergency Management homepage at http://www.epa.gov/oem/content/reporting/rqover.htm. In the case of the District of Columbia, notification made to the District's 911 number (run by the Office of Unified Communications) and/or the HSEMA or to the NRC will satisfy this requirement.

District of Columbia Incident Notification

There are two primary ways that oil and hazardous waste spills are reported. The first is directly to local authorities (e.g., the 911 system or FEMS), while the second is through the NRC. No matter which agency is contacted first, that agency will then contact HSEMA. HSEMA will in turn contact a number of local agencies, including DDOE. HSEMA will contact the NRC if they have not been notified of the spill and the spill meets requirements for notification on the national level. A flow chart of incident notification is provided in Figure 5 below.

Figure 5: Notification of Spill Procedure



District of Columbia Initial Incident Response

A report of a spill would generate initial incident response by FEMS, MPD, and HSEMA, as described below.

911

When a call is received via 911 for oil or hazardous waste spills, the operator will ask the following questions to the individual reporting the incident:

1. Where is the incident?
2. What type of substance is involved?
3. Is it leaking?
4. How much was spilled or leaked?
5. Where is the substance coming from?
6. Do you see the formation of a cloud or vapor?
7. How long has it been there?
8. Do you know the placard number?
9. What is the size of the container?
10. Is anyone contaminated?
11. Is anyone sick or injured?

After gathering the above information, the incident would be categorized according to the following classifications:

1. 61D1 – Hazmat (Uncontained).
2. 61D2 – Illegal Drug Lab (Uncontained).
3. 61C1 – Hazmat (Contained).
4. 61C2 – Illegal Drug Lab (Contained).
5. 61B1 – Small Spill (<5 gallons/23 liters).
6. Abandoned Waste.

This information is then used to inform FEMS so that FEMS can dispatch the appropriate response equipment and personnel.

FEMS

Incident reports from the 911 system or HSEMA involving oil or hazardous substance spills are routed to FEMS for the dispatch of appropriate equipment/personnel, including the HAZMAT unit (if necessary).

II. General Notification and Response

In cases that involve minor oil spills (20 gallons or less), any of the District of Columbia's fire units may respond. For larger oil spills (more than 20 gallons) and all hazardous substance spills, the FEMS HAZMAT unit will respond. This unit consists of Engine 12 [E-12], First Battalion Chief, Truck Co. 4, Rescue Squad, and Medic 12. If the HAZMAT unit is unavailable, HAZMAT units can be requested from adjacent jurisdictions under existing mutual aid agreements.

FEMS has fire boats that monitor emergency communications channels so that they can respond directly to incidents. Additionally, the fire boats may be requested by FEMS or the Coast Guard. Fire boats carry containment and absorbent booms, and their main responsibility in the case of a spill is to contain the spill and keep it from spreading. If possible, the fire boats may also try to identify the source of the spill.

At the incident scene, the first highest ranking District of Columbia fire official to arrive is given the title and responsibility of IC. The responsibilities of the IC are discussed in Section III Oil and Hazardous Materials Emergency Response.

MPD

The MPD would also be dispatched through the 911 system to secure the area and provide crowd and traffic control, if needed. The MPD Harbor Patrol is also available to assist with spills. Typically, this assistance would be requested by FEMS to help FEMS fire boats control the spill. MPD does not have spill control equipment, but MPD personnel can support FEMS and FEMS equipment to help control the spill.

HSEMA

HSEMA is responsible for notifying all other resource agencies and personnel as requested by the IC or any of their designated field personnel. In support of the incident and in coordination with the IC, HSEMA's director/or designee (i.e., Operations Chief, Operations Shift Supervisor, or Environmental Planning Specialist) may also contact other appropriate agencies or personnel directing support of the incident at HSEMA. In cases where HSEMA receives notification of a spill incident from NRC that has not yet been reported to local authorities, it will ensure that FEMS and other appropriate District of Columbia agencies/personnel are notified. In addition, HSEMA is typically requested to be on-scene to help coordinate response and cleanup operations.

Incident Command

The designation as IC is typically given to the ranking state/local (District of Columbia) public safety official who is first to arrive at the incident scene. Typically, this is the first highest ranking District of Columbia fire official to arrive. In this capacity, the IC establishes direction and control at the incident scene and directs all operations at the scene, including coordination and response. Should an incident be determined significant (i.e., it exceeds the resources and capabilities of the District of Columbia IC, or it involves a federal facility), then the IC would request federal assistance and intervention, at which time a FOSC would be dispatched and upon arrival take lead responsibility for the incident. The FOSC will be supplied by the EPA, USCG, or Department of Defense (DoD), depending on which federal agency has jurisdiction in the location of the spill (See full discussion of the jurisdictional boundaries of EPA and the USCG in the “EPA/USCG Geographic Boundary Description” section of this document). A DoD FOSC is always required in incidents involving DoD facilities. FOSC responsibilities are very similar to those of the IC, except that the FOSC has an enhanced ability to apply federal resources to the incident. It should also be noted that there can be only one IC or FOSC in charge during a response action. As stated above, the FOSC takes responsibility for management of the incident upon his arrival at the scene and the local IC moves into a support role. However, it should be emphasized that the local IC should work to establish a coordinated working relationship with the FOSC in order to promote

maximum response capabilities as well as prompt access to federal resources.

General Incident Command Responsibilities

The general responsibilities of the IC or FOSC, as outlined in the NCP (40 CFR Part 300.12) are as follows:

- Direct incident response efforts.
- Coordinate all other efforts at the incident scene.
- Collect pertinent information and data regarding the spill or discharge.
- Coordinate with other federal, state, and local government response agencies.
- Designate other federal, state, and local agencies to act as their field representative.
- Consult regularly with representatives of the response team in order to ensure that legal and regulatory requirements are being addressed.
- Ensure notification of all appropriate agencies and officials regarding incidents. In particular, notify appropriate federal, state, and local agencies in instances involving public health emergencies.
- Ensure that appropriate natural resource trustees are notified of incidents that threaten or impact natural resources and coordinate all trustee responses. Request trustee approval for use of dispersants or other chemical countermeasures.
- Address worker health and safety.
- Maintain open lines of communication and ensure that public and private interests are kept informed as to incident response actions and progress.
- Ensure that response actions are in conformity with all requirements of the NCP as well as other associated state and federal contingency plans.
- Establish a costs and damage accounting system.

Initial On-Scene Response Activity

Upon arrival at the incident scene, the IC/FOSC will immediately carry out a number of actions designed to contain the spill/release, minimize human health and environmental risk and damage, and establish a comprehensive management incident system. The first and primary responsibility for the IC/FOSC is the protection of human health and welfare. This may be addressed through the immediate evacuation of citizens (if necessary) and the containment and mitigation of the incident. The IC/FOSC will also ensure notification of, and coordination with, appropriate federal, state, and/or local response agencies and resources, including DDOE's Natural Resources Administration Water Quality and/or Hazardous Waste Divisions. Other District of Columbia agencies (i.e., Department of Public Works, Chief Management Officer and/or City Administrator, Office of Occupational Safety and Health, etc.) may also be notified or requested to assist depending on the nature and extent of the incident.

The IC/FOSC will also maintain an accurate and frequent line of communication with the media and public regarding the incident through the designated lead Public Affairs Officer (PAO).

An important part of the IC/FOSC's responsibility during spill incidents is to evaluate/assess the

incident, including determining the location of the spill or release; identifying the pollutant(s); evaluating the spill's potential to migrate through water or air; estimating the amount of product involved; and identifying RPs. Much of this information documenting the specifics of the spill will be critical for use in later accounting of costs for response and cleanup.

Threats to Human Health/Natural Resources

Should an incident involve or threaten public safety, health, or welfare, then the IC/FOSC will request that the appropriate human services, public health, or environmental agencies (District Department of Health/ US Department of Human Health Services; District Office of Occupational Safety and Health/OSHA; or DDOE/US EPA) be notified immediately. This is especially critical if evacuations of large populations become necessary. In such instances, HSEMA will activate the Emergency Alert System (EAS, http://www.sbe37.org/html/eas2.html). If local governments in the region need to be notified, then HSEMA will utilize the Washington Area Warning Alert System (WAWAS) to alert NCR jurisdictions. Should the incident be more localized, then MPD and FEMS vehicles would be used to broadcast information through sirens, loud speakers, and/or door to door notification. In the case of local command of an incident through an IC, the IC would communicate directly with HSEMA, which would in turn contact appropriate agencies. In the case of a federally controlled incident scene with a FOSC, the FOSC would work with the local IC and the IC's staff to coordinate additional federal, state and local resources.

In cases where an incident involves a threat or damage to natural resources, the IC/FOSC will request notification of DDOE (state natural resources trustee) and /or the Department of Interior's USFWS (federal natural resources trustee) and the National Park Service (NPS). In most cases involving local incident command for spills into the environment, the IC will transfer authority over the site to DDOE once the site has been stabilized (e.g., the spill is contained, there is no more immediate threat to human health, and the incident has moved to the cleanup stage). At this point, the designated DDOE contact will become IC and will continue operations at the site. In the case where the spill incident is under control of a FOSC, DDOE will coordinate with the FOSC to determine roles and responsibilities for the cleanup.

DDOE Role in Spills Threatening Natural Resources

As described in Section I.E., Incident Response Protocols, DDOE can be contacted regarding a spill incident in numerous ways. In most cases, the first point of contact within DDOE is the DDOE Emergency Response Coordinator. After assessing whatever information is provided about the spill the DDOE Emergency Response Coordinator then identifies the appropriate resources from within DDOE to respond. Often, it will be the DDOE Emergency Response Coordinator response who will determine DDOE's response and on-site responsibilities based on DDOE's legal responsibilities to protect the environment. Appropriate DDOE personnel then respond and work with the IC or the FOSC to ensure that threats to natural resources are factored into the incident response. When the incident evolves from response to recovery, the IC or FOSC may turn over responsibility to DDOE or a federal natural resource agency to lead the recovery stage.

First responders may also request assistance from DDOE directly from the incident site. Because each spill is unique, it is difficult to predict what first responders might need and how they would request it. Therefore DDOE should be ready to respond to spills through different notification processes and should be ready to fill different specific needs for different incidents, all while also knowing DDOE's general responsibilities for all spills.

DDOE personnel have many unique capabilities and a wide knowledge basis that can be helpful in

incident response. Among the capabilities unique to DDOE are:

- Understanding of surface water networks, watersheds, and surface contours that will influence the spread of a spill in surface waters;
- Knowledge of local habitats, environments, and species that may be impacted or threatened by spill incidents;
- Expertise in sampling procedures and protocols, appropriate sampling parameters, and evaluation of results to determine the impact of spilled substances;
- Knowledge of various methods, techniques, products, or approaches that can be used to contain, mitigate and/or clean up the spilled substance;
- Expertise in habitat and stream restoration that can be used to ensure that natural resources are restored to the extent possible;
- Knowledge of water quality laws and regulations that can be used to leverage recovery.

First responders should be encouraged to contact DDOE directly to request these resources in order to ensure a more effective response to the incident and to ensure minimum damage to natural resources impacted by the spill. DDOE should consider reaching out to first response agencies (e.g., FEMS, MPD, HSEMA) and their front line defenders to ensure that first response personnel know DDOE's spill response capabilities and responsibilities. This will increase the likelihood that DDOE will be brought in to spill incidents at the appropriate time, which will help to maximize DDOE's effectiveness in carrying out its responsibilities.

Multiple Area Incidents

In the event that a spill or release occurs in one jurisdiction and then moves into another jurisdiction, or if the event initially impacts more than one jurisdiction, then the lead agency IC or FOSC will transfer responsibility to the IC or FOSC whose jurisdiction is most vulnerable to the impact from the spill or release. Incidents that involve multiple jurisdictions will likely have a FOSC placed in charge. In cases involving more than one area contingency plan, all plans will be activated. In the event that there is confusion about the lead agency for a multiple jurisdiction incident, then the Regional Response Team will be requested to determine the FOSC. In these cases, DDOE will need to coordinate its response with any other natural resource agencies responding to the incident to ensure that all responsibilities for mitigation, cleanup, and follow-up are clearly defined between the various agencies.

Federal Response

Designation of a federal response to an incident and assignment of a FOSC brings an enhanced ability to secure and coordinate other federal agency assistance and resources. Federal response is typically required when incidents are determined to meet any of the following conditions:

- They are determined to be significant (i.e., involving multiple government jurisdictions).
- They are of a magnitude requiring resources and capabilities beyond what the District of Columbia can provide.
- They involve federally owned or managed facilities.

If any of these conditions are met, the IC will request a federal response and assistance. Typically, the IC would either contact the National or Regional Response Center directly or request HSEMA to contact them. The National or Regional Response Centers will then determine the appropriate federal agency with jurisdiction over the incident based on the type of incident and its geographic location. In instances where a DoD facility is involved, the FOSC will always be a representative from DoD. After determining which federal agency will supply the FOSC, the FOSC would be dispatched to the incident scene to take over the direct responsibility and command of the incident.

It should be noted that the IC remains in charge of the incident site until the FOSC arrives.

EPA/USCG Response Boundary Description

A map of the jurisdictional boundary between EPA and the USCG for spill response in the District of Columbia is shown in Figure 6. In general, the USCG has jurisdiction on spills in the Potomac and Anacostia Rivers — the green shaded area in the map — while EPA has jurisdiction over spills inland of these water bodies; however, the USCG also has jurisdiction in some parts of Southwest and Southeast. Relative to the District of Columbia, the geographic boundary delineating response responsibility between EPA and USCG begins at the western shore of the Potomac at the I-495/I-95 Woodrow Wilson Memorial Bridge and extends northwest along the west bank of the Potomac River until it meets the I-495 American Legion Bridge. The boundary parallels the bridge and moves to the east bank of the Potomac River. It then follows the east bank south to the Arlington Memorial Bridge, then east to Independence Avenue. The boundary extends east on Independence Avenue, then north on 15th Street SW to Bladensburg Road. It continues northeast on Bladensburg Road to New York Avenue. The boundary then turns east on New York Avenue to the intersection of New York Avenue, MD Route 50, and I-295 then south on I-295 to Suitland Parkway. The boundary follows east on Suitland Parkway to the eastern edge of the District of Columbia. The “interior” of this boundary on the Potomac and Anacostia Rivers is the jurisdiction of the Coast Guard. The more inland “exterior” of this boundary is the jurisdiction of the EPA.

Public Information/Notification

The need to keep District of Columbia citizens and local governments in the region informed during a pollution incident is critical. Normally, it is the FEMS PAO who will have the lead responsibility for assisting the FEMS IC in managing the release and control of incident information to the media and public (Appendix F). The lead PAO will also coordinate information updates with other agency PAOs participating in the response and cleanup action as necessary. In instances where there is a FOSC in charge, the lead federal agency PAO will assume lead responsibility for the control and release of information through the FOSC. In support of the lead federal PAO, the District of Columbia’s lead PAO will ensure coordination with other District of Columbia agency PAOs. In the event of a long-term incident, the IC/FOSC will establish a joint information center near the incident scene for holding news briefings and releasing incident information to the public.

HSEMA utilizes several systems to transmit or exchange emergency information:

- **Washington Area Warning Alert System (WAWAS) –** The circuits of this network are part of the Washington, DC area civil defense warning system and must be operative at all times. The system facilitates maximum receipt and transmission of civil defense warning information which is used to alert the public.

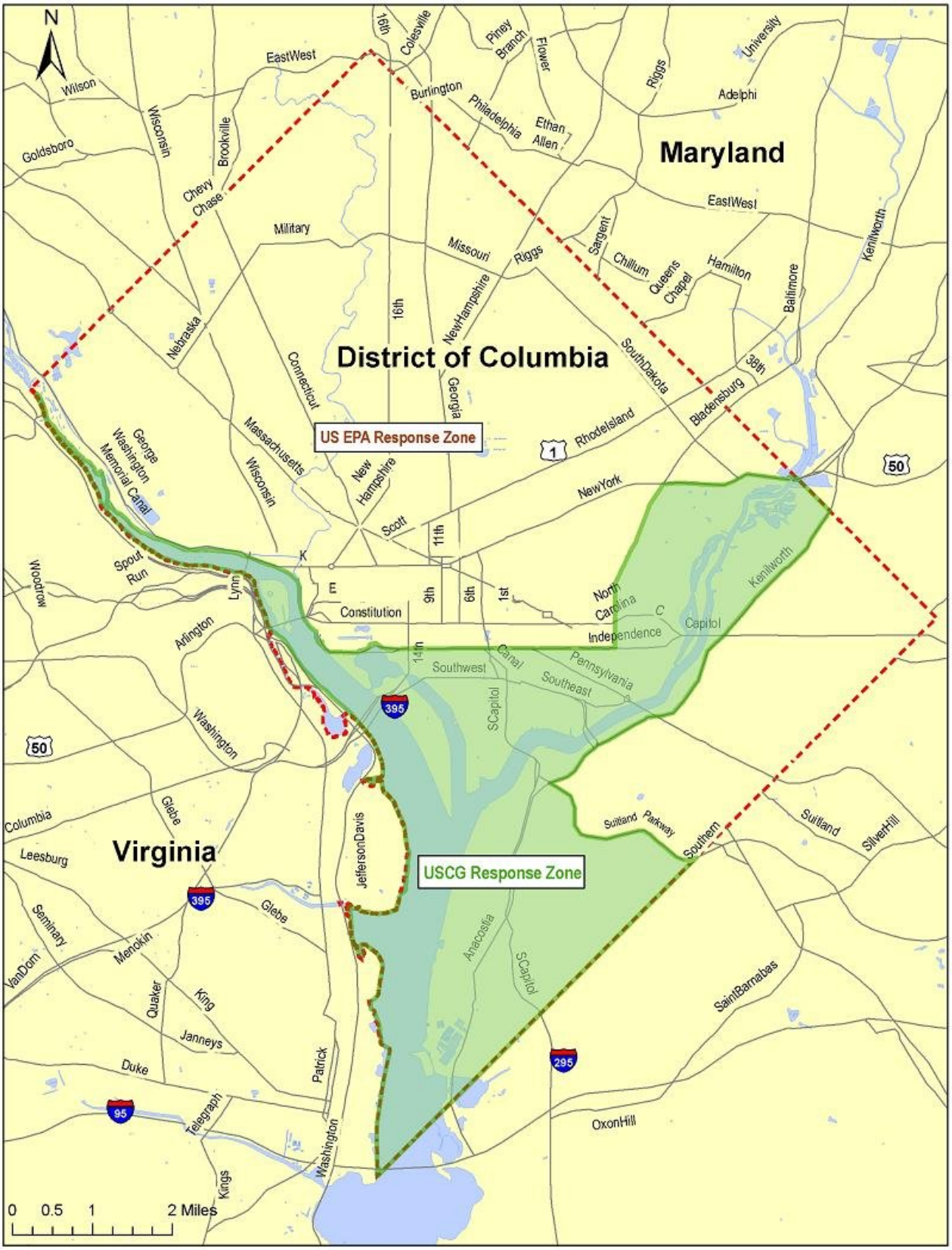
- **Regional Incident Communication and Coordination System (RICCS) –** This system utilizes the Roam Secure Network emergency notification and wireless communication system to serve as the primary communication network for emergency management coordinators, county executives, and other leaders from the 17 local government jurisdictions that comprise Metropolitan Washington Council of Governments (MWCOG).

- **Roam Secure Alert Network (RSAN) –** This emergency communication network creates a unified emergency notification and wireless communication system, which enables important information to be transmitted to various participants in real-time through all wireless carriers and devices (pagers, cell phones, blackberry) and computer e-mail.

- **Alert DC –** Refers to a text notification system powered by RSAN that allows citizens to receive emergency text messages on any text capable device including computer email, cellular phones and pagers. It provides real-time updates and instructions on evacuation routes and shelter information, preparedness and protection measures, and appropriate information contacts. Access to this notification system is available to the general public.

As a communication alternative, the 311 call center utilizes reverse 911 to notify and warn the general public and special needs populations registered within the Verizon directory database.

FIGURE 6: EPA AND US COAST GUARD RESPONSE BOUNDARY



II.B NATURAL RESOURCES TRUSTEES

Trustees are appointed federal, state, or local officials who act on behalf of the public as trustees for natural resources and their supporting ecosystems. Trustees are, by law, required to respond during instances where there is actual or a threat of injury, destruction, or loss to natural resources.

State Trustees

Pursuant to section CWA Section 311 (Oil and Hazardous Substance Liability) subsection 1321 f(5) and 111(h)(1) of CERCLA and for purposes of sections 111(h)(1), 111(b), and 107(f) of CERCLA, the NCP states that states may act as trustee for damage to resources within the boundary of a State belonging to, managed by, controlled by, or appertaining to such State (40 CFR Subpart G, 300.73). Additionally, OPA Section 1006 specifically stipulates that the Governor of each state shall designate state and local officials who may act on behalf of the public as trustee for natural resources and shall notify the President of that designation. In the case of the District of Columbia, the Mayor has designated the director of DDOE as state trustee. In this capacity, the state trustee shall ensure that in the event of damage to natural resources that an assessment of natural resource damages will be made, and that a plan will be developed and implemented for the restoration, rehabilitation, replacement, or acquisition of the equivalent of natural resources under their trust. The state trustee must also have ready access to appropriate state officials who have environmental protection, response, and natural resource responsibilities.

Federal Trustees

The NCP states that in cases where natural resources are lost or damaged as a result of a discharge of oil or release of a hazardous substance, then a federal trustee(s) are required to act (40 CFR, Subpart G). Natural resource trustees are represented by the head of the federal land managing agency, or the head of any other single entity designated by it to act as trustee for a specific resource.

General Trustee Responsibilities

40 CFR, Subpart G, Section 300.615 of the NCP in general stipulates that natural resource trustee responsibilities include:

- Determining the need for an assessment.
- Assessing damages to resources.
- Coordinating and planning with the IC/FOSC and/or other trustees.
- Conducting preliminary surveys of impacted areas.
- Providing advice on recommended actions concerning resources.
- Seeking recovery of losses from RPs or from applicable funding sources.
- Devising and conducting restoration, rehabilitation and replacement plans.
- Participating in negotiations with the RP.

In instances where multiple trustees are involved because of co-existing or contiguous natural resources or concurrent jurisdictions, then those trustees are expected to coordinate and cooperate in carrying out their responsibilities.

A list of state and federal Natural Resource Trustees is provided in Appendix G.

II.C PRELIMINARY ASSESSMENT, MITIGATION, CLEANUP, AND DISPOSAL

Preliminary Assessment

At an incident scene, the IC/FOSC has an immediate need for information about the incident in order to fully assess the nature and extent of the incident. This preliminary assessment of the incident in turn forms the basis for incident response (evacuations, containment, mitigation, cleanup, funding sources, etc.) and helps the IC/FOSC to quickly establish direction and control of the scene. Information collected during the preliminary assessment is used to determine any immediate threats to human health and welfare or the environment. The preliminary assessment should include gathering information about the type and quantities of material involved; the location, extent, and movement of the spill or release; and any potential public safety and/or environmental risks. Because hazardous substances often present more acute threats to humans, hazardous substance spills often require a different set of approaches and responses than do oil spills. For example, hazardous substance spills often require securing the immediate incident area, establishing a safety zone, evacuating residents as needed, and requesting specialized equipment and trained personnel. Guidance for oil spills and hazardous substance discharges are discussed in more detail under Section III.E (Oil Spill Incidents) and Section III.F (Hazardous Substances Incidents) respectively.

Mitigation and Cleanup

Mitigation and cleanup operations will differ for oil spills and hazardous substance releases. While the general response approaches may be similar, specific actions, cleanup techniques, and agency personnel can differ. In all instances, the mitigation of risks to human health and welfare and the environment are of primary concern. Once sufficient initial information on the incident (type of material, quantity, source, area involved, threats to public safety and the environment, and predicted movement) has been gathered, then the IC/FOSC can take immediate steps to stabilize the incident. This is accomplished through the elimination of the source or its threat and containment and removal of the spill pollutants. In cases where public safety is a concern, appropriate federal and state health and human service agencies will be contacted. Once the incident has been stabilized, the IC/FOSC will initiate actions to conduct cleanup of the site and assess damages. For an incident with a local IC, the local IC would typically transfer authority to DDOE to conduct these phases of the response. In the case where the spill incident is under control of a FOSC, DDOE will coordinate with the FOSC to determine roles and responsibilities for the cleanup.

At this stage, it is essential that the RP assume financial responsibility and participate where possible in the cleanup. If the RP cannot be identified or refuses or is unable to assist, then the District of Columbia and/or federal representatives will ensure that cleanup operations are initiated. In the case of the District of Columbia, DDOE will assume responsibility to coordinate cleanup operations. If federal funds cannot be readily accessed or secured, then the District Oil Liability Trust Fund or the District UST Trust Fund may be opened, depending on the type of incident and the availability of funds.

Oil

Oil spills frequently require containment equipment, such as floating booms and earthen dikes, to contain and control spilled oil product, while sorbent pillows, pads, pumps, skimmers, and other equipment are used to collect the oil product. In certain instances, the use of dispersants may be used. Refer to Section IV.D (Managing Cleanup) for additional information about spill containment, cleanup equipment and

technologies, and the use of dispersants. When the soils become saturated with an oil product, heavy equipment is brought in to excavate the contaminated soil and transported to a facility capable of processing the soils. Oil products removed from aquatic environments will contain oil and water and will require processing to separate the mixture. DDOE will work to support the proper removal and disposal of oil-contaminated water or soil, either through direct oversight of removal operations by qualified public or private entities or through coordination with the FOSC when the FOSC is in charge of the incident site.

Hazardous Substances
Hazardous substance incidents often require different response technologies and approaches than do oil spill incidents. Unlike oil, which generally has the same physical and chemical characteristics no matter the type of oil product involved (crude, refined), hazardous substances differ greatly in their chemical and physical makeup, and therefore they require specialized response personnel and equipment. Incidents will involve HAZMAT units from the District of Columbia's FEMS and/or EPA or the USCG that can quickly stabilize, contain, cleanup, and remove hazardous substances.

At the incident scene, the IC/FOSC will establish a safety area of at least 500 feet upwind from the incident, as well as other protective zones, as warranted. In addition, medical personnel, press, command center, equipment staging areas, etc., will be established in various zones of safety. MPD will maintain these zones and will control entry into the incident area.

Response Agency Communications

Regardless of the type of incident, there is a critical need for continuous and accurate communication between the IC/FOSC and the responding agencies. Throughout all incidents, HSEMA continually monitors emergency services communication systems for current incident activity. This becomes even more important in situations where safety of life or property is involved. In the District of Columbia, the MPD and FEMS will use the day-to-day operational radio frequencies. In instances where assistance is required from other metropolitan area jurisdictions, the Mutual Aid Radio System and/or Washington Area Warning Alert System (WAWAS) will be used for coordination.

The District of Columbia's Office of Unified Communications operates the District's 800 MHz radio system with multiple channels and talk groups, including logistics, response, etc. This system has a radio zone called the District of Columbia Radio Interoperability Zone (DC-RIZ) that allows for seamless radio communication for multiple District agencies. In the event of an incident, HSEMA will assign all responding units to a talk group in DC-RIZ in support of the incident.

If additional communications or on-site coordination is needed to support the incident, then the HSEMA Unified Command Center, which contains additional communication systems, will be dispatched to the scene to serve as the forward command and EOC in support of the IC. This unit will be staffed with HSEMA personnel and Emergency Coordinators from other agencies.

II.D TERMINATION AND FOLLOW-UP

Once the incident has been contained and all hazard and risk to human populations and the environment eliminated, and cleanup has been completed, the local IC (typically a DDOE employee at this phase of the incident response) or the FOSC will initiate compilation of incident reports and forms and will file such reports within 30 days to appropriate District of Columbia agencies, the FOSC, NRC/ RRC, and the US Coast Guard's National Pollution Funds Center (NPFC), as required. (A discussion of the

requirements for filing claims with the NPFC under OPA is provided in Section III.E Oil Spill Incidents.) Project termination should also include reviewing and verifying all costs accounting and tabulating expenditures. The IC/FOSC will also conduct follow up oversight to ensure that all remedial actions have taken place. This may include follow up monitoring and sampling of the site to ensure that all pollutants have been properly removed from the incident site; waste has been disposed of properly and other pollutants have been recycled; and the public's health and welfare and its environmental interest have been adequately protected.

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III. Oil and Hazardous Materials Emergency Response

III.A Introduction

Sections I and II summarized the basic roles and responsibilities of the various agencies involved in spill response and outlined the communications chains used to notify responders about the spill. This section describes the actual response actions that must occur to respond to a spill, and includes discussions of the general phases that occur during the overall life-cycle of spill response (Section III.B), DDOE's general responsibilities during these phases (Section III.C), and DDOE's specific responsibilities during data collection (Section III.D), cleanup (Section III.E) and site restoration (Section III.F). The section concludes with a discussion of cost recovery (Section III.G).

III.B Incident Response Phases

Based on guidance found in NCP, there are four generalized, but distinct, notification and operational response phases involved with oil or hazardous substances spill incidents. These include:

Phase I: Discovery and Notification

As described in Section II.A Notification and Response Actions, the initial report of an incident is typically made either through local emergency reporting networks (e.g., 911) or through the NRC. If the District of Columbia first receives the incident report through 911, it may immediately respond to the incident scene and initiate all necessary and immediate assessment, containment, and mitigation. During this initial phase the District of Columbia IC (typically FEMS) would also ensure immediate notification of HSEMA, which would determine whether the spill requires notification of either USCG (NRC) or EPA (Regional Response Center). HSEMA would also notify all other appropriate District of Columbia agencies (See Figure 3: *Summary of Protocols after an Incident is Reported* in Section I.E Incident Response Protocols). If NRC receives the initial notification of a spill, it will contact appropriate federal agencies and coordinate locally with District agencies through HSEMA.

Phase II: Preliminary Assessment and Initiation of Action

During this phase, the FOSC/IC will gather important information about the incident in order to evaluate it efficiently and effectively and to determine the appropriate response actions to contain the incident and prevent or mitigate further damage. Information that needs to be gathered includes identifying the source and extent of the spill, the type of product involved and its location, and a determination of potential or real threat to public safety and welfare. During this phase, the FOSC/IC would ensure that the appropriate natural resource trustees are notified so that they may conduct a preliminary assessment. Another important part of this phase is to identify the RP(s) and determine their responsibilities in the response/cleanup effort.

Phase III: Containment, Countermeasures, Cleanup, and Disposal

This phase focuses on taking action to prevent further loss, damage, or threat to public safety and the environment. Potential response actions could include shut off of the discharge, containment of the spill, damage control or salvage operations, use of chemicals, and/or removal and cleanup. If the incident is under the control of a local IC, the cleanup operations are the responsibility of the District of Columbia. If the incident is under the jurisdiction of the federal government, the FOSC will communicate with local authorities to coordinate the cleanup. In this case, the District of Columbia may be contracted to perform cleanup operations or may advise and support the FOSC's cleanup efforts. Once the spilled product has been recovered, then an appropriate action would be taken to

remove and recycle or dispose of the spilled product in accordance with federal and state requirements.

Phase IV: Documentation and Cost Recovery

The final phase involves the maintenance and proper accounting of all records and actions in order to form the basis for cost recovery. It is the responsibility of the FOSC/IC to ensure that all actions are approved and supported through documented records. Once all records and reports are completed, then the FOSC/IC will transmit such documents to appropriate offices responsible for follow up actions.

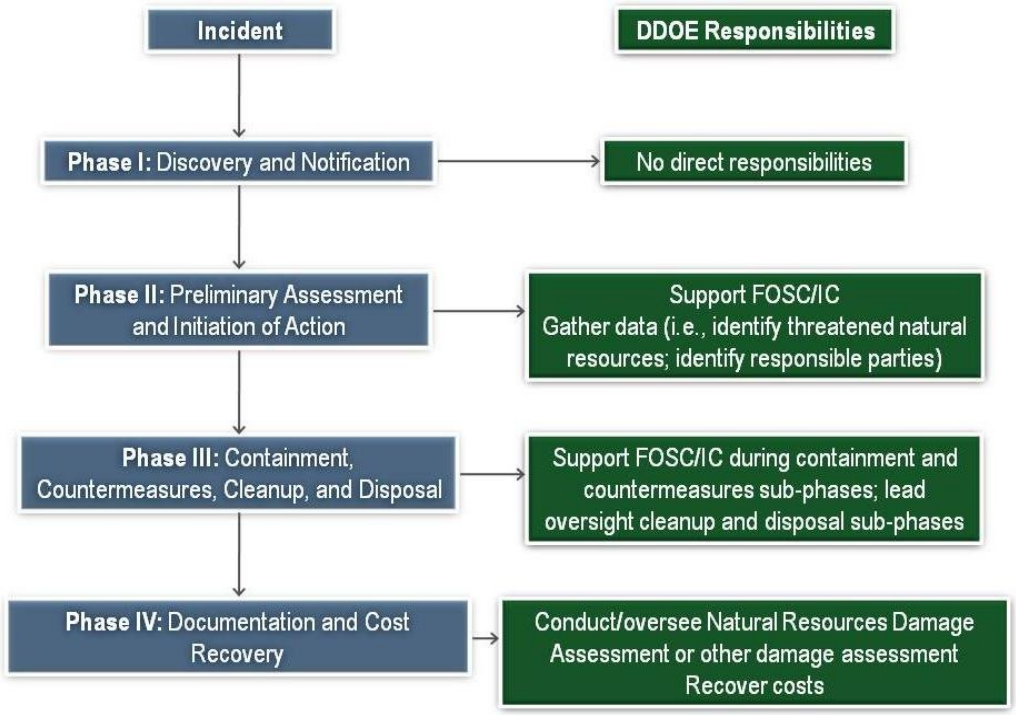
III.C DDOE ROLE IN INCIDENT RESPONSE

DDOE's role is primarily in Phases II, III, and IV of the response. DDOE's responsibilities for any individual spill will be determined based on various factors, including whether or not the federal government has become involved in the spill through a FOSC; what role (if any) the RP is playing in the response; and on what the FOSC/IC requests of DDOE. However, in general, DDOE will have some responsibility for the following tasks:

1. Data collection to support Phase II.
2. Oversight of Cleanup under Phase III.
3. Site restoration under Phase III.
4. Cost recovery under Phase IV.

These responsibilities are shown graphically in Figure 7.

FIGURE 7: DDOE RESPONSIBILITIES FOR SPILL RESPONSE



DDOE's specific responsibilities will be dependent on the nature of the individual spill and the response. For example, if the federal government has become involved in the spill response through a FOSC, the FOSC will lead all phases of the response (data collection, cleanup, site restoration, and cost recovery), and DDOE will serve in a support role. In this type of situation, DDOE will likely be requested to work with federal agencies to provide local expertise for the response. Individual requests may range from providing requested information to actually performing cleanup tasks. However, under a scenario where a local IC is in charge of the site, DDOE will typically serve in a more primary role in collecting data necessary to assess the specific hazards and the potential for harm to the public or the environment; planning and overseeing the restoration of the site; and recovering costs through a Natural Resource Damage Assessment (NRDA) or other means.

DDOE's role will also be impacted by when/if a RP can be identified and what role the RP plays in the response. If the RP is capable and willing to participate in the containment and cleanup of the spill, then DDOE may act in more of an oversight role and ensure that the RP contains the spill and cleans up and restores the site to an acceptable condition.

The following sections describe in more detail DDOE's roles and responsibilities during the various phases of spill response, and methodologies it can utilize to fulfill its responsibilities.

III.D Data Collection

Data collection is a crucial part of the response to any spill incident. Responders must have access to data such as the location and type of spill in order to respond with appropriate manpower, equipment, and containment techniques. Information about the type of spill and the environment in which it was spilled also help to establish successful cleanup operations. Finally, summary information on the entire response effort will be necessary to assess damage to natural resources and recover costs spent on the incident response.

Information about the spill incident is collected from the time of the initial spill report through site restoration. As described in Section II.A Notification and Response Actions, the initial information about the spill is recorded by the emergency communications system (either 911 or the NRC hotline) and is used to dispatch the appropriate first responders. Local ICs and FOSCs use their own data collection forms (e.g., Incident Command System series 200 forms – see Appendix A) to collect information necessary to manage response operations and properly document the response. DDOE has its own data collection forms that help it to collect the data necessary to perform its functions at the incident site (also included in Appendix A). Other data will be developed during the cleanup and restoration. These pieces of information must be maintained to keep a proper record of site restoration and recovery. Responders should also consider other potential uses of the information, such as for recovering costs (see III.D Cost Recovery), and should ensure that all potential information needs are considered as data is collected throughout the response.

III.E Cleanup

DDOE most likely will have a role in overseeing the cleanup of a spill. DDOE's specific responsibilities with respect to cleaning up a spill will depend on the specific circumstances of the spill, including whether other entities with jurisdiction assume the cleanup role, and/or whether the RPs initiate cleanup. In all cases, DDOE's responsibilities would include setting cleanup goals or targets, and performing final evaluation of the site after cleanup. In addition, DDOE's role could include overseeing the cleanup if it is being performed by the RP. Sections IV. Oil Spill Incidents and

V. Hazardous Substances Incidents summarize some of the appropriate techniques for cleaning up oil and hazardous substance spills, respectively.

III.F SITE RESTORATION

Site restoration occurs after cleanup of the spill and consists of restoring the natural environment to its pre-spill condition to the extent possible. If it is not possible to restore the environment to its pre-spill condition, DDOE or other agencies responsible for protecting the environment must determine what is feasible in terms of restoration. This may require additional studies or data collection, all of which should be considered part of the spill response effort. DDOE or any other agency responsible for site restoration should document all decisions related to the ability to restore the environment and the costs for use in cost recovery (see Section III.D Cost Recovery for more information).

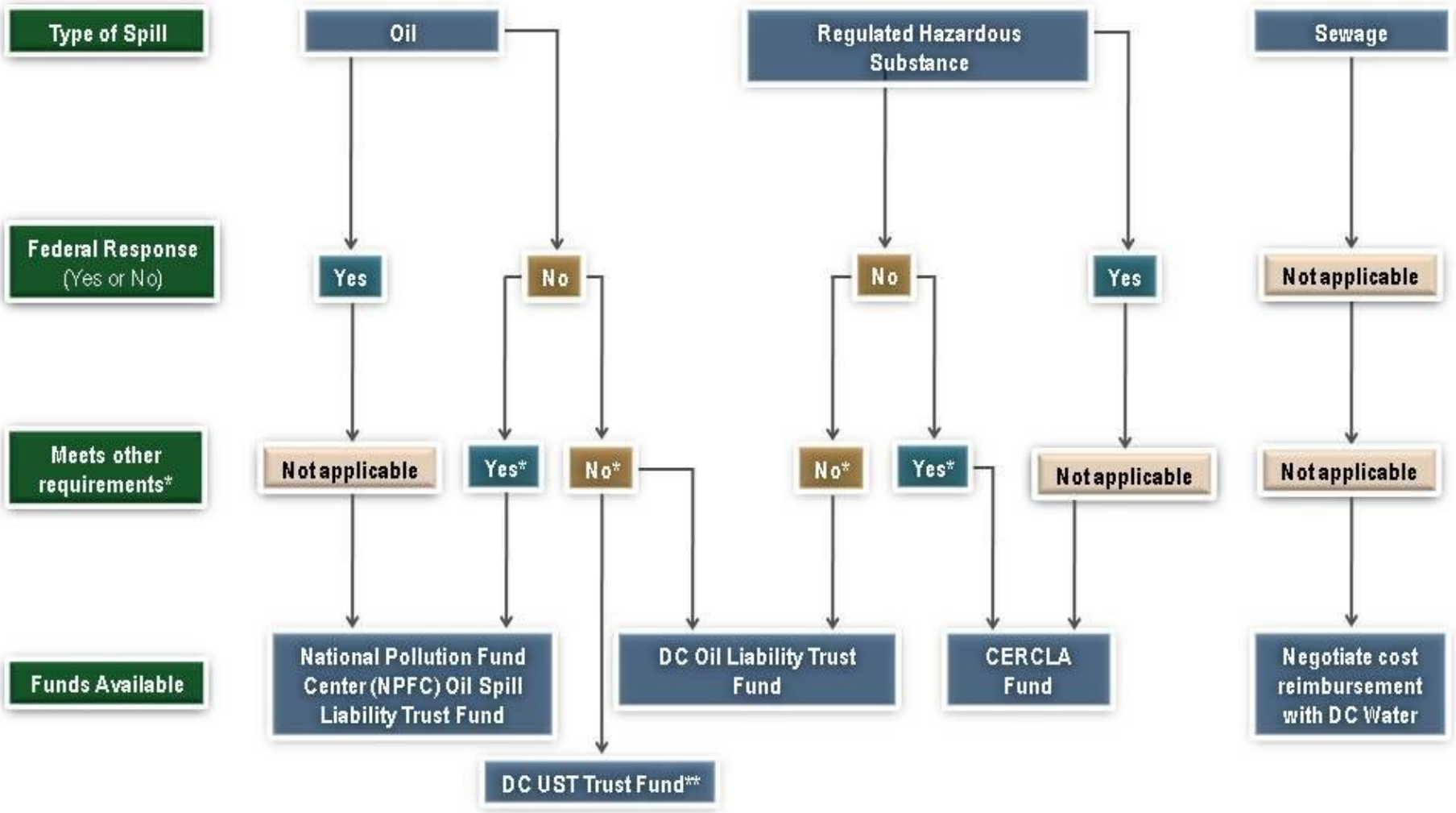
DDOE's exact role in site restoration will vary depending on the nature of the spill and the parties involved in the response. In some cases, DDOE may have a more direct role in designing and implementing the restoration solutions, while in other cases, DDOE may have more of an advisory or oversight role. In any case, DDOE's expertise in local issues, including knowledge of existing ecosystems, threatened or endangered species, fisheries, and water quality issues, will be invaluable in ensuring that the site is restored to the maximum extent possible.

Paying for Cleanup and Restoration Actions

An important part of the cleanup and restoration effort is accessing appropriate funding mechanism to pay for cleanup/restoration expenses, particularly in cases where the RP is unable or unwilling to pay these costs. In many cases, the injured parties must pay for cleanup and restoration themselves and then try to recover costs from the RPs later (see Section III.G for a discussion of Cost Recovery).

There are several local and federal funds that may be available to defray the immediate expenses associated with cleanup and restoration. These funds are accessible only under certain conditions. Therefore, DDOE (or other agencies with responsibility for funding cleanup efforts) will prepare itself with the requirements for accessing each fund so that it can access the appropriate fund for the situation. A flowchart showing the major funds available to defray immediate costs for cleanup of different incident types and the criteria that must be met before the funds can be accessed is provided in Figure 8. More specific discussions of the criteria for each fund are found in Sections IV. Oil Spill Incidents, V. Hazardous Substances Incidents, and VI. Sewer Spill Emergency Response.

FIGURE 8: FLOWCHART OF FUNDS AVAILABLE TO DEFRAY COSTS FOR CLEANING UP SPILLS



* Local agencies responding to incidents which do not include a federal response should check federal regulations to determine requirements for accessing federal funding mechanisms.

** Fund available only if incident was caused by discharge from a UST.

III.G COST RECOVERY

The last phase of spill response is cost recovery. Responding to spill incidents can involve significant expenses, including costs for spill containment and cleanup, and as well as restoring the site (as much as is feasible) to pre-spill conditions. Emergency first responders (including FEMS and MPD) and other agencies (HSEMA, DDOE, etc.) with a response role must mobilize; utilize and in some cases expend equipment (such as sorbent materials, booms, etc.); quarantine the site to contain the spill; then remediate it. This can result in a large effort in terms of manpower and material, in addition to the potential loss of resources resulting from the spill. In cases where public resources are being used to respond to the spill and public resources are potentially being damaged by the incident, the public has a right to be compensated for these costs. Cost recovery is an extremely important part of the overall spill response process, and cost recovery should be a goal of the response from the beginning of the response effort.

The most important part of cost recovery is compiling and maintaining accurate information that will be used in the recovery process. This includes ensuring that the data collection effort conducted under the first phase of the response effort (described in Section III.D Data Collection) is comprehensive and includes all of the data necessary to support efforts to recover costs as well as to support cleanup and restoration efforts. As mentioned in the preceding paragraph, it is crucial to ensure that the data collected at the beginning of the response is collected with ultimate cost recovery for the response in mind. Data should include identification of the parties responsible for the spill; details on the spill (type of contaminant(s), amount of spill, location of spill, etc.); identification of the natural resources impacted by the spill (location of natural resources relative to the spill, area impacted, types of plants, animals, or resources impacted, etc.); and mitigation efforts (summary of responding personnel, equipment used, etc.). Data collection has been discussed comprehensively in Section III.D and it is up to the parties responsible for carrying out cost recovery activities (typically, DDOE or Natural Resource Trustees) to ensure that the data collection effort reflects data needs for cost recovery efforts.

As the entity best able to evaluate damages to local natural resources, DDOE will have a major role in the cost recovery process. DDOE responders should track natural resources impacted by the spill, as well as their own resources expended in responding to the spill.

The data needs for the cost recovery efforts will depend on the methodology used to support cost recovery. Costs for the response itself may be straightforward and can be based on the man hours of the responders and costs for equipment and other materials. Responders maintain records of their costs for responding to specific incidents, and these records can be compiled for use in cost recovery. Costs for cleanup and restoration can be assessed in a similar fashion, using the man hours of responding agencies and the costs for any contractors. However, costs for the assessment of damages to natural resources may be more complex. These methods for evaluating and assessing damages can range from straightforward and simple methods based on the type of material spilled and the quantity to complex methods that monetize and evaluate the loss of natural resources. By evaluating the complexity of the situation in the beginning and making some basic decisions as to what kind of data will be needed later on to recover costs, the agency responsible for cost recovery can make recovery efforts more efficient and effective.

As described above, one of the primary factors in recovering costs is assessing damages to natural resources and determining a cost associated with these damages. The following section describes the

District of Columbia's methods for assessing damages to natural resources.

Natural Resource Damage Assessment

Purpose
This subsection summarizes the Natural Resource Damage Assessment (NRDA) process for evaluating damage and loss to natural resources resulting from oil spills or the discharge of hazardous substances.

Background
The CWA, CERCLA and OPA authorize NRDAs to address residual injuries resulting from spill incidents. The Department of Interior (DOI) National Oceanic and Atmospheric Administration (NOAA) "published a final rule to guide trustees in assessing damages to natural resources from a discharge of oil". (NOAA DARRP 2010) The rule provides a blueprint enabling natural resource trustees to focus on significant environmental injuries; develop/implement efficient and effective restoration of the injured natural resources and services; and encourage public and responsible party involvement in the restoration process. These DOI rules provide non-mandatory guidance for establishing damage and losses to natural resources and determining the costs for such injuries. In order to determine injury and associated costs to natural resources, DOI recommends that the trustee follow a five step process:

1. Conduct initial pre-assessment.
2. Conduct pre-assessment screening.
3. Prepare assessment plan.
4. Conduct damage assessment.
5. Prepare post-assessment report.

Step four of the NRDA process (conduct damage assessment) offers two assessment procedures to determine supportable natural resource injury. One or both procedures can be used. The first (Type A) uses a simplistic computer model and offers easy, but limited, pre-assessment information in coastal and marine environments. The second (Type B) represents a more comprehensive and resource intensive effort. The need for a Type B assessment should be evaluated on a case-by-case basis and can be used if a full scale assessment is warranted. DOI has updated its final rule for Type A procedures (February 8, 2000) and for Type B procedures (October 2, 2008).

NOAA also developed guidance documents for natural resource trustees using the OPA rule. These guidance documents are also useful for planning assessments of damage caused by other spill types. NOAA guidance documents include "Preassessment Phase," "Injury Assessment," "Specifications for Use of NRDAM/CME Version 2.4 to Generate Compensation Formulas," "Primary Restoration," and "Restoration Planning." Additionally, NOAA has developed an OPA Damage Assessment, Remediation, and Restoration Program website which is located at http://www.darrp.noaa.gov/library/1_d.html.

Legal Authority
There is both federal and state legal authority supporting the District of Columbia's efforts to seek compensation for loss and damage to District of Columbia natural resources. Under the Water

Pollution Control Act, District of Columbia Law 5-188 (District of Columbia Official Code §8.103.08(b)), the District of Columbia may seek to recover costs, impose civil penalties or seek any other relief as the public interest may require for discharges or substantial threat of discharges of pollutants into District of Columbia waters. DC Official Code §8.103.17(e) states that an owner or operator of a vessel or onshore or offshore facility from which a hazardous substance or pollutant is discharged shall be liable for the full costs of removal, or for the cost of any assistance provided or arranged by the Mayor… for such amount as represents the damage to water quality and the aquatic life, in addition to any civil penalty. This authority is also embedded in federal law, specifically in CERCLA Section 107, which allows for the trustees to recover costs from RPs for damage to natural resources resulting from hazardous substances and to assess damages to natural resources for the purpose of Section 1321 of the CWA. CERCLA allows for "expenses for damages for injury to, destruction of, or loss of natural resources, including reasonable costs of assessing that injury, and the destruction or loss resulting from such a release." The natural resources referred to under CERCLA include "land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any State or local government, or foreign government." Funds collected for these purposes can only be used for the recovery of costs associated with the damage assessment, and to restore, replace, or acquire the equivalent of the injured natural resource. Damage assessments can exceed the cost of restoration, thereby making the RP liable for lost use and non-use values as well.

The OPA has provisions and authority for seeking compensation for injuries to natural resources that are essentially the same as CERCLA, and it does not provide any further authority, other than injuries caused by oil spills.

District of Columbia Natural Resource Damage Assessment Methodology

Use of Funds Recovered from Damage Assessments
Money recovered from NRDAs or other damage assessment activities is to be deposited into the District of Columbia's Oil Spill Liability Trust Fund and will be used only for the following:

- Enhancing/restoring damaged natural resources or ecological habitat beyond the remedial actions taken by the responsible party.
- Enhancing/restoring natural resources or ecological habitat damaged by natural causes.
- Acquiring land to be preserved for the enhancement of water resources in the District
- Developing restoration and enhancement techniques for natural resources.
- Investigating methods and conducting studies for improving and refining techniques for containment, abatement, and removal of pollutants from the environment.
- Conducting studies to determine the nature and extent of pollutants that may impact waters of the District.
- Developing wildlife rescue and rehabilitation programs.

Interest earned on reimbursements shall be used only for the purposes outlined above.

Payment for damages is due to DDOE within 90 days after the receipt of a written request for payment. Payments not made within 90 days are liable for interest charges on the outstanding balance.

There will be no double recovery. DDOE will develop a Memorandum of Understanding with the appropriate federal trustees as defined under OPA to provide further assurances of no double recovery.

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IV. Oil Emergency Response

IV.A Background

This section provides comprehensive information on emergency response to oil spills. It includes discussions on the laws and regulations governing oil spill response (Section IV.B); the proper procedures for reporting and responding to oil spills (Section IV.C); specific techniques, approaches, and equipment for containing and cleaning up oil spills (Section IV.D); and information on funding mechanisms that can be used to pay for costs of responding to, and cleaning up, oil spills (Section IV.E).

IV.B Laws and Regulations

Response to, and planning for, oil spill incidents is regulated under both federal and state laws and regulations. The District of Columbia Water Pollution Control Act (Act) is the primary law establishing the basis for planning, response, and protection of water, fish and aquatic life, and habitat within the District of Columbia. The Act prohibits the discharge of substances (such as oil) that would alter or interfere with the natural integrity of the above-mentioned resources. It also requires notification of appropriate authorities in case of a spill or unauthorized discharge. Finally, the Act establishes special funds to finance the removal, prevention, or spread of pollutants. Likewise, the District of Columbia's Underground Storage Tank (UST) Management Act (District of Columbia Official Code §8-113) also requires notification of releases from USTs and addresses containment, mitigation, cleanup and recovery, response, and cost funding of releases from USTs. The UST Management Act also establishes an UST Trust Fund for the cleanup of releases of regulated substances from a UST.

Federal laws that provide the legal support and guidance for incidents involving oil products are found within the CWA, which prohibits the unlawful discharge or release of any pollutant (including oil) and makes the discharge or release of pollutants subject to civil and criminal penalties. The CWA essentially broadened the scope of the NCP, which forms the framework for response to pollutant discharges and releases. The OPA expanded on the CWA authority. OPA calls for contingency planning by federal, state, and local authorities; establishes funding support for oil spill response; preserves state authority to establish laws and regulations governing oil spill prevention and response; and broadens the federal government’s response and enforcement authority. Under OPA, the District of Columbia and other states are encouraged to develop emergency response plans for oil spills.

IV.C Notification and Response Procedures

There are both local and federal requirements for reporting oil spills. As described in Section II.A Notification and Response Actions, District of Columbia Law 5-188, DC Official Code § 8-103.08 and Section 2704(C)(2)(a) of OPA require the party or parties responsible for oil or hazardous substances spills/releases of RQs to immediately notify/report the incident to appropriate federal or local/state government incident response agencies and officials. This notification sets the response in motion as described in Section II.A Notification and Response Actions.

As described in Section II.A Notification and Response Actions, DDOE will likely be contacted by HSEMA to provide technical support to the incident response. As described in the preceding sections, HSEMA will usually be the contact for DDOE no matter whether the response is led by local or federal responders. In the case of local response, DDOE will typically have a primary role supporting the local IC in managing the response. If the incident is managed by a FOSC, DDOE will most likely serve more of a support role with federal agencies leading the response. DDOE’s specific

responsibilities will vary from incident to incident and will be based on the nature and extent of the spill and the requests of the IC/FOSC.

IV.D MANAGING CLEANUP

As described above, DDOE's role in managing the cleanup of an oil spill will depend on who is in charge of the incident. If there is a local IC in command of the site, it is likely that DDOE will play a major role in oversight of spills. If there is a federal FOSC in charge, DDOE will probably be in more of an advisory role while the federal agencies lead the cleanup effort.

Typically, DDOE will not perform the actual cleanup itself. Instead, it will perform technical oversight and/or management of the cleanup effort. As part of its primary mission, DDOE will ensure that the cleanup effort meets all required environmental laws. DDOE can provide technical assistance with cleanup targets or goals, cleanup methods, and assessment protocols to ensure that the cleanup target has been met. Depending on the circumstances, DDOE may provide oversight for cleanup crews hired by the RP, or it may hire cleanup crews itself if the RP cannot be identified or refuses to perform the work depending on the availability of funds. Accessing the funds available for defraying cleanup expenses is discussed below.

Response Strategies: Containment/Cleanup Techniques

The first and foremost response goals are to eliminate the source of the spill, prevent continued spillage, contain the spilled material, and/or protect sensitive areas. During most spills, actions to control the source of the spill and contain the spilled material will occur simultaneously. This document will not discuss methods for eliminating the spill or preventing continuing spillage; instead, it will focus on responding to releases that have occurred into the environment.

The selection of containment and cleanup strategies for oil spills will vary between incident scenes based on the type of oil product (viscosity and concentrations) and the physical characteristics of the spill location.

Oil Spill Containment Methods

One of the first priorities for controlling a spill is to contain the spilled substance to keep it from contaminating additional waterbodies or sensitive areas. Containing the spill makes cleaning it up easier. Oil spill containment methods generally use some type of physical structure to impede the spread of the oil. The basic methods for physically containing spills are through the deployment of either booms or barriers. Booms take advantage of the fact that most types of oil float on top of water by capturing surface oil concentrations while allowing clean water to flow underneath them. Barriers can be designed to contain oil in the same way and can also be designed to block all flows. These types of physical containment methods are described in detail in the sections below.

Other options for containing oil and keeping it from spreading include using sorbent materials or chemical or biological agents. However, the primary function of these options is to remove the oil from the water or otherwise render it harmless. This document does not consider these options as part of a containment strategy but as cleanup options, which are discussed below.

Open Water Containment Methods

Spills that occur in open waters can spread quickly through downstream flow and currents. Containment of open water oil spills is generally accomplished through the use of booms. Different

types of booms are described below.

Booms

Booms are basically barriers that float on the water's surface and prevent material accumulating on the water surface from flowing downstream with the current. Since oil typically floats on top of the water's surface, floating booms can be effective in preventing oil spills from spreading by capturing the surface concentrations of water and oil while permitting the water below the boom line to pass underneath. Booms can also help to concentrate the oil behind the boom, making it easier to remove through other methods. However, it should be noted that in higher velocity/rougher waters, oil may be entrained with water and may flow below booms. Therefore, use of booms should always be evaluated with respect to local conditions and other options for containing the oil.

Although there is a great deal of variation in the design and construction of booms, all generally share the following four basic elements:

- An above-water "freeboard" to contain the oil and to help prevent waves from splashing oil over the top of the boom.
- A flotation device.
- A below water "skirt" to contain the oil and help reduce the amount of oil lost under the boom.
- A "longitudinal support," usually a chain or cable running along the bottom of the skirt that strengthens the boom against wind and wave action. The support may also serve as a weight or ballast to add stability and help keep the boom upright.

Booms can be manufactured from many different materials, can contain different features (e.g., sorbents), and can be deployed in different ways (e.g., inflatable booms, segmented booms, etc.). If manufactured booms are not immediately available, other substances, such as boards, poles, trees, etc. can be used to serve similar purposes.

The type of boom used will be dependent on the type of oil product, the current velocity, and the wind. Many booms are limited to relatively slow-moving water and minimal wave conditions; however, some booms are designed to be used in more dynamic conditions. Examples of different types of booms include:

- *Fence booms*: These booms have a high freeboard and a flat flotation device, making them less effective in rough water, where wave and wind action can cause the boom to twist.
- *Round or curtain booms*: These booms have a more circular flotation device and a continuous skirt. They perform well in rough water, but are more difficult to clean and store than fence booms.
- *Non-rigid or inflatable booms*: These booms come in many shapes. They are easy to clean and store, and they perform well in rough waters. However, they tend to be expensive, more complicated to use, and puncture and deflate easily.

Boom Deployment

Decisions regarding whether to deploy booms and the type of boom to deploy are made by assessing local conditions, such as:

- Current speed.
- Presence/absence of waves.
- Water depth.
- Shoreline configuration.
- Presence/absence of natural collection points.
- Presence/absence of debris in water.
- Type/amount of oil.
- Weather.
- Time of year.

Booms can be deployed to contain oil and/or to prevent it from reaching selected areas. When deploying booms, the first priority is to contain the oil in the vicinity of the spill to minimize or eliminate any further spread of the oil. Efforts should then be made to place the boom on the leading edge of the oil slick with the greatest oil concentration. Final containment efforts should be made to protect any sensitive areas.

Booms can be deployed in several different ways depending on the objective. Several examples are provided below:

Containment Booming: Boom is deployed in a "U" shape in front of the oncoming slick. Oil is contained within the "U". Containment booms are typically used in open water or on inland waters where currents are less than one knot.

Diversion Booming: Boom is deployed at an angle to the oncoming oil slick to divert it from a selected area. Diversion booms are typically used in inland streams where currents are greater than one knot; and/or across small bays and harbor entrances, inlets, rivers, or creeks. Diversion booming can be done in several different configurations, including:

- Single – use of a single, continuous boom to divert flow and oil to the desired location.
- Cascade – use of a series of booms anchored to one shore. Each individual boom covers part of the waterway, with subsequent downstream booms deployed further out into the waterway, creating coverage over the entire waterway. Each subsequent boom diverts flow further towards one shore, with the final boom capturing the accumulated oil at the shoreline.
- Chevron – boom is deployed in a "V" shape, with the bottom of the V pointing upstream and the tops of the V anchored to the shoreline. This diverts oil away from the middle of the channel and toward the shoreline, where it can be collected.

Exclusion Booming: boom is anchored around or deployed in front of the sensitive areas. These booms are typically used across small bays, harbor entrances, or river or creek mouths where the current is less than one knot and breaking waves less than 25 cm.

Sorbent Booming: boom is anchored along the shoreline to protect sensitive areas. These booms are typically used on quiet waters.

Booms may be stationary or moveable, depending on the situation. Stationary booms are fixed to a structure, such as a pier or a buoy, while moveable booms can be towed behind or alongside one or more vessels. When stationary or moored, the boom is anchored below the water surface. It is necessary for stationary booms to be monitored or tended due to changes produced by shifting tides, tidal currents, winds, or other factors influencing water depth, direction, and force of motion. Boom tending requires round-the-clock personnel to monitor and adjust the equipment. The forces exerted by currents, waves, and wind may significantly impair the ability of a boom to hold oil. For example, currents may wash oil beneath a boom's skirt, while wind and waves can force oil over the top of the boom's freeboard or even flatten the boom into the water, causing it to release the contained oil. Mechanical problems and improper mooring can also cause a boom to fail.

Most booms perform well in gentle waters or waters with smooth, long waves; however, rough and choppy water is likely to contribute to boom failure. In some circumstances, lengthening a boom's skirt or freeboard can aid in oil containment. However, because they have more resistance to natural forces such as wind, waves, and currents, these oversized booms are more prone to failure or leakage than are smaller ones. Generally, booms will not operate properly when waves are higher than one meter or currents are moving faster than one knot per hour. However, techniques and equipment exist to deploy booms in higher current speeds and choppier water. Different anchoring techniques and boom angles can be used for higher current velocities, and some newer booms have been designed for higher current speeds. For example, boom vanes, which consist of a series of vertical metal “vanes” suspended below a floatation device, can hold a boom in place in higher currents without the need for multiple anchors to the shoreline or to a ship. Boom rudders may also help stabilize booms in higher velocity waters.

There are certain rules of thumb when deploying booms in faster waters (Oskins 2009). These include:

- Use a smaller/sharper angle of deployment in the river. Use of a boom angle chart can be critical in these types of situations.
- Employ shorter booms.
- Employ a smaller boom size.

Containment Areas

Booms are often used to divert oil to a specific location, or containment area, where it can be collected and disposed. If possible, first responders should have pre-planned areas identified for containment. These areas will be chosen based on shoreline configuration and the presence of slow moving or slack water. They should also not be environmentally sensitive or contain critical facilities (e.g., water intakes). Identifying potential containment areas in advance may be most appropriate for larger waterbodies; however, this approach may not be practical for every water body in a jurisdiction.

Criteria for selecting appropriate containment areas include:

- Channel configuration (width and depth).
- Backwater areas.
- Side channels.
- Ponds adjacent to waterways (can be used for containment/recover) (Stock 2009).

Inland Containment Methods

In contrast to open water spills, spills that occur inland in smaller channels may offer containment options in addition to booms, including the use of barriers to block the flow altogether. These inland containment methods are described below.

Barriers

Barriers are physical measures that block flow, thereby containing oil and keeping it from spreading. They are typically constructed in smaller channels to prevent spills from flowing downstream into larger waterbodies. Unlike booms, which are pre-manufactured and stored prior to use, barriers are typically constructed on-site. They can range from simple piles of earth or sandbags moved into a stream to larger, sophisticated engineered structures with underdrains, sorbents, and other features to help mitigate the spill.

Barriers can be designed to provide physical containment of the spill, but some designs may also provide pollutant removal through the use of sorbents incorporated into the barrier. These two types of systems are summarized below:

Non-Sorbent Barriers: Berms, dams, dikes, and other type of barriers can be constructed to impede the passage of water downstream and cause ponding upstream. They can be constructed from any material that can impede the flow of water and retain it behind the barrier, such as sand bags, earth, wood, etc. In an emergency, dams or dikes may be created on-site by moving earth from the streambank into the stream. However, the potential environmental and regulatory impact of these actions should be weighed versus the potential impact of the spill before constructing a barrier in this way.

More sophisticated barrier designs can add to the value of the structure in pollutant containment and cleanup. Adding underdrain pipes at the bottom of the barriers allows clean water to flow through the barrier, while retaining oil that has accumulated at the surface, eliminating the potential for contamination downstream. The barriers also allow oil to be concentrated, making cleanup/removal easier.

Sorbent Barriers: Sorbent barriers combine the containment capabilities of barriers with the cleanup capabilities of sorbents. These types of barriers function by impounding the spill through the physical barrier, allowing the sorbents embedded in the barrier to sorb pollutants and remove them from the water. These types of system work best when the sorbents can be changed out while the barrier remains in place. For example, barriers may be constructed of wire mesh and stakes which contain sorbent pillows. For a more thorough discussion of sorbents, see the separate discussion below.

Barrier Deployment

Deploying a barrier to contain a spill can be a challenge. The barrier must be large enough, both in height in the stream and width across the stream, to prevent water from flowing around it, and it must be anchored sufficiently so that it is not washed away by the hydraulic forces of the flow. Therefore, barriers are typically impractical for large or deep channels. Their use is typically confined to shallow water areas, particularly when alternate preferred containment methods, such as booming, are ineffective. Deploying sorbent barriers adds the challenge of ensuring that the sorbing capacity of the sorbent materials is maximized. There may also need to be access to change out sorbents. Therefore, sorbent barriers are typically used on slow, small velocity streams; tidal inlets or channels; or narrow channels.

In addition to potential limitations in deploying barriers caused by flow and size of the waterbody, the barriers themselves have their own logistical challenges. Barriers can require a great deal of time and effort to construct, depending on access conditions, topography, etc. In addition, the barrier must be designed to ensure that it can hold the impounded water for sufficient time to allow removal of the oil. If the barrier is intended to hold the flow for an extended period of time (e.g., weeks or months) or if the barrier must retain flow during precipitation events, engineering studies should be conducted to ensure that the barrier is designed properly and that it can retain projected flow volumes. Responders should also ensure that all permits or waivers are obtained to construct flow barriers, even in an emergency situation.

Cleanup/Removal Techniques

Once an oil spill is contained, it must be cleaned up and the oil must be removed from the waterbody or otherwise mitigated. Cleanup/removal options for oil include mechanical methods for oil removal, such as skimming the oil, as well as methods for physically removing the oil through using sorbents. Other options, such as the use of chemical or biological agents to disperse, sink, or consume the oil, may pose their own potential problems, such as toxicity, consumption of dissolved oxygen in the water column, or concentration of oil in the bottom sediments. Therefore, these types of cleanup/removal techniques should be thoroughly evaluated for direct impacts on soils/sediments, and other impacts, before they are employed.

NOTE: Sinking on non-buoyant oils require different containment and cleanup techniques. While sinking oils can be encountered in District of Columbia waters, this is not typical and they are not covered in this Plan.

Mechanical Methods

Mechanical cleanup/removal technologies include towed skimmers, continuously operational skimmers (used in large oil spills), vacuum trucks, and fishing nets. Skimmers and vacuum trucks have been found to be effective during large oil spills and spills with heavy concentrations of oil. The use of continuous skimmers is generally focused on areas that are environmentally sensitive and where it is necessary to prevent or minimize damage. Other physical methods, such as scooping the oil or dredging, may be effective if the oil has congealed or sunk to the bottom. Fishing nets also can be effective in collecting congealed oils. When using these techniques, responders must set up washing stations to clean equipment in an environmentally safe manner, as well as storage facilities to contain and store recovered oil product.

Skimmers

A skimmer is a device for recovering spilled oil from the water's surface. Skimmers may be self-propelled, used from shore, or operated from vessels. The efficiency of skimmers is

highly dependent upon multiple factors, including the viscosity of the oil, its thickness, and the water conditions. In moderately rough or choppy water, skimmers tend to recover more water than oil.

Three types of skimmers--weir, oleophilic and suction--are described in detail below. Specific skimmers may be better suited for use in specific situations and responders should evaluate each skimmer type to determine which is most appropriate for that spill.

Weir skimmers use a dam or enclosure positioned at the oil/water interface. Oil floating on top of the water spills over the dam and is trapped in a well inside, bringing with it as little water as possible. The trapped oil and water mixture can then be pumped out through a pipe or hose to a storage tank for recycling or disposal. These skimmers are prone to becoming jammed and clogged by floating debris. Clogging may be minimized by putting some sort of trash trapping material around the top of the float (e.g., netting or fencing).

Research has shown that weir length and oil film thickness near the weir are the most important factors affecting oil recovery for these skimmers (Borst et. al. 1984, cited in Hammoud 2006). Weir skimmers work best when gravity drives the oil toward the weir; however, high oil density and viscosity tend to reduce their effectiveness. It is also important to control the weir height to ensure efficient trapping of oil. Weirs that can be adjusted for weir height while in operation (e.g., hydraulic or automatic leveling weirs) will be more effective than weirs that cannot adjust to site-specific conditions.

Oleophilic ("oil-attracting") skimmers use belts, disks, drums, brushes, or continuous mop chains of oleophilic materials to blot oil from the water surface. The oil is then squeezed out or scraped off into a recovery tank. Oleophilic skimmers are flexible, allowing them to be used effectively on spills of any thickness. The responder should consider the type of oil spilled before employing an oleophilic skimmer. Oils with low viscosity, such as diesel oil or kerosene, do not accumulate well on oleophilic surfaces. However, recovery of these types of oils may be enhanced by adjusting the skimmer. For example, decreasing the rotation rate of the oleophilic surface may increase recovery. At the opposite end of the spectrum, materials with high viscosity, such as heavy oils, may adhere well to the skimmer, but may be difficult to remove from it. Different skimmers have been designed for different oil types, and it is important to try to match the skimmer type with the material spilled.

Oleophilic skimmers can also be deployed in waters of different depths. For example, rope mops are ideal for shallow water because the rope requires minimal water to float. In addition, these types of skimmers work well on water that contains debris or ice because the rope does not carry debris and/or ice with it as it moves to the wringer.

Suction skimmers operate similarly to a household vacuum cleaner. Oil is sucked up through wide floating heads and pumped into storage tanks. Although suction skimmers are generally very efficient, they are vulnerable to becoming clogged by debris and require continual skilled observation. Suction skimmers operate best on smooth water where oil has collected against a boom or barrier.

Oil must be recovered from skimming operations, and skimmers must be operated in tandem with recovery and storage systems. In some cases, such as suction skimmers, oil will be directed into a storage system directly from the skimmer. In other cases, the skimmer will need to be pumped out to a separate storage system on a periodic basis.

Sorbents

Sorbents are insoluble materials or mixtures of materials used to recover liquids. They can be useful in oil spill response because they can contain and remove oil from the spill area. In addition, some sorbents can be recycled for re-use in future spills (Adebajo, et al. 2003). However, some experts believe their use should be restricted to mopping up operations after the bulk of the oil has been removed using other methods. For example, the Massachusetts Department of Environmental Protection notes potential issues with disposing of used sorbents, as well as their relatively high costs for deployment (capital and labor). See Massachusetts Department of Environmental Protection Oil Spill Protection and Response webpage (http://www.mass.gov/dep/cleanup/os/) for more information.

Sorbents work through the mechanism of absorption, or adsorption, or both. Absorbents are materials that pick up and retain liquid distributed throughout their molecular structures, causing the solids to swell 50 percent or more. The absorbent must be at least 70 percent insoluble in excess fluid. Adsorbents are insoluble materials coated by liquid on their surfaces, including pores and capillaries, without the solid swelling more than 50 percent in excess liquid. To be useful in combating oil spills, sorbents need to be both oleophilic (oil-attracting) and hydrophobic (water-repellent). Although they may be used as the sole cleanup method in small spills, sorbents are most often used to remove final traces of oil, or in areas that cannot be reached by skimmers. Sorbent materials used to recover oil must be disposed of in accordance with approved local, state, and federal regulations. Any oil removed from sorbent materials must also be properly disposed of or recycled.

There are many different types of sorbents available commercially, and there is minimal summary documentation or comparative study regarding the effectiveness of different types of sorbents. In addition, sorbents are not required to be listed on the NCP Product Schedule. However, sorbents that contain chemical or biological components, especially when made in loose form, may be required to be listed (Nichols 2006).

Sorbents can be divided into three basic categories: natural organic; natural inorganic; and synthetic. Each of these categories is described further below:

> *Natural organic sorbents:* include peat moss, straw, hay, sawdust, ground corncobs, feathers, and other readily available carbon-based products. Organic sorbents can adsorb between three and 15 times their weight in oil, but there are disadvantages to their use. Some organic sorbents tend to adsorb water as well as oil, causing the sorbents to sink. Many organic sorbents are loose particles such as sawdust, and are difficult to collect after they are spread on the water. However, these problems can be counterbalanced by adding flotation devices, such as empty drums attached to sorbent bales of hay, to overcome the sinking issue, and wrapping loose particles in mesh to aid in collection.
>
> *Natural inorganic sorbents*: consist of clay, perlite, vermiculite, glass wool, sand, or volcanic ash. They can adsorb from four to 20 times their weight in oil. Inorganic sorbents, like organic sorbents, are inexpensive and readily available in large quantities.

These types of sorbents are not used on the water's surface.

Synthetic sorbents: include manmade materials that are similar to plastics, such as polyurethane, polyethylene, and polypropylene, and are designed to adsorb liquids onto their surfaces. Other synthetic sorbents include cross-linked polymers and rubber materials, which absorb liquids into their solid structure, causing the sorbent material to swell. Most synthetic sorbents can absorb up 70 times their own weight in oil.

The following characteristics of sorbents and oil types must be considered when choosing the appropriate type of sorbents for cleaning up oil spills:

- *Rate of absorption/adsorption* – Absorption is most effective and faster with light hydrocarbons (e.g., gasoline, diesel fuel, benzene). Once it is absorbed, oil cannot be re-released. Adsorbents are more effective for thicker oils since these thicker oils adhere to the surface of the adsorbent more effectively.
- *Oil retention* – The weight of recovered oil can cause a sorbent structure to sag and deform, and when it is lifted out of the water, it can release oil that is trapped in its pores. Lighter, less viscous oils are lost through the pores more easily than are heavier, more viscous oils during recovery of adsorbent materials, causing secondary contamination.
- *Application and Recovery* – Application of sorbents must be carefully controlled because the sorbent must be recovered in order to remove the sorbed oil from the environment. Each of the different categories of sorbents (natural organic, natural inorganic, synthetic) must be applied differently to ensure that it can be recovered. Application of synthetic sorbents may be the easiest in this respect because the sorbents were designed with recovery in mind, and so they have been packaged as booms, pillows, or other easily-recoverable forms. In contrast, many natural organic sorbents exist as loose materials, and they must be packaged or otherwise contained so that they can be recovered after deployment. Some natural organic sorbents, such as hay or straw, may be bound in bales for deployment. However, other types of organic sorbents, such as clay and vermiculite, are dusty, difficult to apply in windy conditions, and potentially hazardous if inhaled. Therefore, these types of sorbents must be deployed with particular care.

Sorbent Deployment

Sorbents are generally manufactured in particulate form for spreading over an oil slick, or as sheets, rolls, pillows, or booms. Different sorbent products may be deployed in different ways based on their sorbent properties, their packaging, the water conditions in which they are to be used, and the ways in which they must be disengaged or disposed. For example, sorbent booms may be deployed in similar ways to standard non-sorbent booms, with special consideration being given to the nature of the sorbents and how the sorbents will function in that particular spill incident. There must also be a strategy for removal of the boom for oil disposal. Similarly, deployment of sorbents in barriers, or as floating pillows, rolls or sheets, must include a plan for recovery.

When removing a sorbent product from the cleanup operation, care must be taken not to cause a release of any sorbed oil. All sorbents must be used within manufacturer specifications to

ensure that they are successfully deployed and recovered while maximizing their effectiveness.

Other Mechanical Removal Methods

Other mechanical removal methods may be used to clean up spilled oil that has fallen to the bottom. These other mechanical methods, including dredging, may cause more environmental disturbance than they resolve, thus the consequences of action should be considered before these other removal methods are employed. These options can also be expensive because of the equipment involved and the amount of material that may be removed. Finally, removal operations that disturb stream channels may require permits, and so the appropriate regulatory agencies should be consulted prior to engaging in these types of operations.

Chemical Removal

The NCP Subpart H, Part 300 of 40 CFR, states that the on scene commander must obtain concurrence with both the EPA representative to the Regional Response Team and the state environmental agency, and natural resource trustees prior to the use of any dispersant, chemical, or biological agent (collectively known as chemical countermeasures) for the pollutant removal action. Chemicals use is highly controlled, requiring approval for use, and should only be used after consideration has been given to the following:

- Chemical availability.
- Effectiveness.
- Salinity of water.
- Weather and sea conditions.
- Biochemical impacts on the environment.
- Political and public consideration.
- Impact to other ongoing cleanup.
- Desired chemical reaction.

Chemical countermeasures include:

- *Collecting Agents* - Used to prevent the spread of oil; applied at specified rates.
- *Dispersing Agents* - Used to reduce toxic concentration, accelerate biological decomposition or reduce flammability; applied with coarse spray and agitated; oil is not recoverable once dispersant is applied. Dispersing Agents are not 100 percent effective and may require additional cleanup actions.
- *Sinking Agents* - Used to transport oil from the surface to the bottom. Use is prohibited due to potential bottom contamination.
- *Biological Agents* - Nutrients, enzymes, microbial additives that expedite biological degradation process.
- *Burning Agents* - Improve the combustibility of oil; should be used only as a last resort.

- *Gelling Agents* - Solidify pollutants to aid in recovery. Currently under research and development.

EPA's Emergency Management website (http://www.epa.gov/emergencies/index.htm) has additional information on chemical agents and their applications for oil spill response. There has been a recent increase in evaluations of chemical agents and their impacts on the environment in the wake of the April 2010 Deepwater Horizon oil spill in the Gulf of Mexico, and more up-to-date and comprehensive literature should become available to evaluate the risks and benefits of chemical agents.

Shoreline Oil Removal

The previous subsections of this document have focused on containing and removing oil from surface waters. However, spilled oil can also contaminate shorelines, and once the oil has come ashore and contaminated soils and vegetation, the cleanup becomes more complicated, expensive, and detrimental to natural resources.

Cleaning/removing oil from shorelines requires different techniques and strategies than removing oil from water. EPA's document *Understanding Oil Spills and Oil Spill Response* (EPA 1999) recommends evaluating the following factors when determining the appropriate type of shoreline cleanup activity:

- *Type of oil spilled* - Since lighter oils tend to evaporate and/or break down more easily, any spills of light oils may not require intensive shoreline cleanup. For example, light oils may be able to be cleaned by wiping areas with sorbent materials. However, spills of heavier oils tend to create mixtures of oil and water or hardened tarballs that cling to rocks and sediments. These types of heavier oils can require more physically demanding removal efforts, such as raking or removal with heavy equipment.

- *Geology of the shoreline and rate of water flow* - The composition of the shoreline (i.e., soils, vegetation, slope, etc.) impacts the type of cleanup that is feasible. For example, oil sticking to large boulders may be easier to clean than oil sinking into fine sediments. Similarly, the flow of the water will also impact the feasibility and ease of cleanup. Standing or slow-moving waters will tend to be more impacted than faster-moving waters because oil can accumulate and remain in slower moving waters.

- *Type and sensitivity of biological communities likely to be affected* - Some types of biological communities are less sensitive to oil than others, and may recover quickly from minor spills even without remediation efforts. In contrast, more sensitive communities may be dramatically impacted by oil spills. However, cleanup efforts may also cause damage to biological communities, whether the cleanup efforts are physical, chemical, or biological. Responders must understand the nature of the communities in the impacted areas before deciding on a shoreline cleanup strategy.

Incidents where oil has contaminated shoreline areas generally will be labor intensive. Depending on the size of the spill, contractors may have enough manpower to handle the incident, but significant spill incidents may require local, state, and federal personnel as well as the activation of the National Guard to assist. Depending on the size and type of spill, the response may require the use of heavy equipment such as graders, front end loaders, backhoes and trucks, vacuum

trucks, sorbents, and booms. Several options for cleaning up shorelines contaminated with oils are provided below.

Sorbent Materials

One potential option for removing oils from shorelines is using sorbent materials, as described above. However, using sorbent materials to clean oils from shorelines may be more practical than using them to sorb oils directly from the water. First of all, deploying the sorbents may simply involve wiping contaminated surfaces with sorbent materials. Some sorbent products are designed as mops for these types of uses; sorbent pads may also be used to wipe down rocks or vegetation. While this cleanup method can be labor intensive, it has the advantage of minimizing disturbance of soils, habitat, or vegetation, thus also minimizing additional harm to the environment. Cleanup personnel should wear appropriate safety gear, and used sorbent materials must be disposed of properly.

Pressure Washing/Hydroblasting

A second method for removing oil from shorelines is the use of pressure washing, hydroblasting, or steam cleaning equipment to remove oil from rocks, boulders, and manmade structures. Low pressure washing can also be initiated to remove lighter non-sticky oils. The washwater is typically drained to a lined trench or other containment area where it can be collected and removed. Pressure washing can be successful in removing oils from vegetation, but it may be less successful in removing oil from sediments or rocks because it may drive the oil into the sediments. Therefore, pressure washing must be undertaken with caution and planning for control of the washwater.

Physical Removal

Physical removal of oil may be possible in some instances. In areas where vegetation has been impacted, it may be necessary to remove the vegetation through cutting. Raking or shoveling the upper sediments may expose oil underneath, allowing it to evaporate or be removed through sorbents. If the oil has not penetrated too deeply into the sediments, it may be worthwhile to just remove the contaminated soils altogether. However, this requires heavy equipment. In addition, any disturbance or removal action must be balanced against the impact of the removal action itself on the ecology of the site.

Bioremediation

Bioremediation is the process of adding materials to contaminated environments to enhance natural biodegradation processes. EPA has defined bioremediation agents as “microbiological cultures, enzyme additives, or nutrient additives that significantly increase the rate of biodegradation to mitigate the effects of the [oil] discharge” (Nichols and Venosa 2009). In their capacity as representatives of EPA, Nichols and Venosa note that bioremediation is a promising technology as a secondary cleanup option for oil spills because it is less costly, less intrusive, and more environmentally benign than many other options.

The concept of bioremediation is based on the premise that a significant percentage of oil components are readily biodegradable in nature. Bioremediation can consist of:

- Bioaugmentation, in which oil degrading bacteria are added to supplement the existing microbial population.

- Biostimulation, in which growth of indigenous oil degraders is stimulated by the addition of nutrients or other growth-limiting co-substrates.

Nichols and Venosa summarized the status of bioremediation as an oil cleanup method based on their own studies, plus a review of peer-reviewed literature and non peer-reviewed vendor studies. They note that there are very few peer-reviewed papers demonstrating the effectiveness of bioremediation outside the laboratory under actual field conditions. Based on peer-reviewed literature, they have concluded that bioaugmentation through the addition of oil degrading bacteria is not more effective than biostimulation through adding nutrients alone. However, the authors conclude that biostimulation through the addition of nutrients can enhance oil degradation depending on the type of oil contamination, the nature of the nutrient products used, and the environmental conditions at the spill site.

EPA has developed the *Guidelines for the Bioremediation of Marine Shorelines and Freshwater Wetlands* document (Zhu, et. al. 2001), which provides a good overview of bioremediation, should this be considered an option for response in the District of Columbia.

IV. E OIL SPILL COST RECOVERY

In the event of an oil spill, all efforts should be made to identify the RPs and secure agreement that they will be responsible for covering all costs incurred as a result of the spill. In incidences where the RPs cannot be identified or they refuse to accept responsibility, then mitigation and cleanup costs will be covered (within approved funding levels) by the District of Columbia or the federal government.

Under any of the scenarios mentioned, the IC/FOSC is responsible for completing and maintaining the documentation that supports all actions taken. The information must follow accepted accounting practices and must be sufficient to support all costs incurred. The information collected will form the basis for the District of Columbia or federal fund reimbursement. This section serves to provide the District of Columbia's IC and/or their representatives with guidance in seeking reimbursement for OPA responses to pollution incidents in the District of Columbia.

OPA

OPA §2712 stipulates that funds are available to the governor of a state for costs incurred by the state for claims associated with uncompensated removal and damages of spills covered under OPA. In the case of the District of Columbia, the Mayor is designated to make these claims. Upon request by the Mayor or his designee to the federal government, EPA or USCG may obligate funds up to $250,000 (consistent with the NCP) for the immediate removal of an oil discharge or the mitigation/prevention of a substantial threat of an oil discharge. In order to appoint a designee prior to an oil spill incident, the Mayor must submit the individual's name(s), address, title and telephone number in writing to the director of the National Pollution Fund Center (NPFC), Suite 1000, 4200 Wilson Blvd., Arlington, Virginia 22203-1804.

Oil Spill Liability Trust Fund (OSLTF)

The federal government established the OSLTF as a source of funds to pay removal and certain other costs and damages resulting from oil spills or substantial threats of spills to navigable waters of the US. The OSLTF is used for costs not directly paid by a RP or guarantor. This could include costs to respond to spills when there is no identified RP. This fund is administered through the NPFC and managed by the USCG (USCG NPFC 2010b). It is essential that the District of Columbia's IC notify a designated FOSC immediately and prior to any actions for which federal

funding assistance is being requested in order to determine if the incident warrants access to the fund. In all cases and prior to seeking federal funds, the District of Columbia must make every attempt to identify the RPs and seek their financial commitment and support for the incident. If the RPs cannot be identified, or they refuse or are unable to cover the expenses associated with incident response and cleanup, then the District of Columbia may seek access to the OSLTF. There are several types of parties eligible to access the OSLTF for compensation. These are summarized below:

- A FOSC or those authorized by the FOSC may obtain access to funding for an incident under federal control.
- States may access up to $250,000 directly through the OPA's State Access provision. FOSCs still provide coordination of the request and subsequent oversight.
- Federal Lead Administrative Trustees may submit requests to the NPFC to fund the initiation of a NRDA.
- Natural Resource Trustees may submit natural resource damage claims to the NPFC for natural resource damages not covered by a RP.
- Claimants (e.g., individuals, corporations, or government entities) can submit claims for uncompensated removal costs or certain damages if the RP does not satisfy their claims.

More information on the OLTF is available at http://www.uscg.mil/npfc/About_NPFC/osltf.asp.

Access to Funds

OSLTF funds can only be accessed by a designated FOSC. If the District of Columbia wishes to access the fund, it must make its request through the FOSC (either directly through a FOSC working at the incident site, or through the NRC if there is no federal involvement on-site) and provide all of the required information to support the request. If the District of Columbia's request is approved by the FOSC, the FOSC would first contact the NRC to seek approval of the request, and then would contact the NPFC to obtain a federal project number and a cost ceiling. It is important to keep the FOSC informed about activities and costs during all phases of incident response and cleanup. If the FOSC is on-site, this coordination can be done in person by the District of Columbia's IC. However, if there is no FOSC on-site, the IC or his designee will have to be in frequent communication with the FOSC designated by NRC to ensure that the FOSC has all of the required information about the incident. Damages or losses for which payment can be sought include:

- Damage to natural resources.
- Damage to real and personal property.
- Loss of subsistence use of natural resources.
- Loss of tax and other revenues.
- Loss of profit or earning capacity.
- Increased cost of public services.

Reimbursement requests for damages or losses must be filed within three years after the reported incident. In the case of natural resource damages, the reimbursement request must be filed within three years after the assessment is completed. Claims for uncompensated cleanup or removal costs must be filed with the FOSC and NPFC for reimbursement, preferably within thirty days after the cleanup or removal is completed.

The NPFC reviews all documented costs. If the costs are valid, NPFC will submit a payment request to the USCG Financial Center for payment to the District of Columbia. Reimbursable costs include daily expenditures for salaries, equipment, travel, per diem, miscellaneous cleanup materials, contractor costs, and administrative costs directly related to the incident. Any claim other than removal, must first be submitted to the RPs. Claims are limited to a maximum of $250,000 per incident. In instances where the District of Columbia is acting as the contractor for the FOSC and is under their direct supervision, the FOSC can issue an Oil Spill Authorization, at which time the District of Columbia may not be limited to the maximum amount of $250,000.

The following represent liability limitations that have been established for all removal costs and damages under OPA (http://www.uscg.mil/npfc/Response/RPs/limits_of_liability.asp). Table 1 shows liability limits for vessels only. Other liability limits in OPA are not relevant to incidents that might occur in the District of Columbia.

TABLE 1: LIABILITY LIMITS OF OPA

VESSEL TYPE	LIABILITY LIMIT
1.) For an oil cargo tank vessel greater than 3,000 gross tons with a single hull, including a single-hull tank vessel fitted with double sides only or a double bottom only.	The greater of $3,200 per gross ton or $23,496,000.
2.) For a tank vessel greater than 3,000 gross tons, other than a vessel referred to in (1).	The greater of $2,000 per gross ton or $17,088,000.
3.) For an oil cargo tank vessel less than or equal to 3,000 gross tons with a single hull, including a single-hull tank vessel fitted with double sides only or a double bottom only.	The greater of $3,200 per gross ton or $6,408,000.
4.) For a tank vessel less than or equal to 3,000 gross tons, other than a vessel referred to in (3).	The greater of $2,000 per gross ton or $4,272,000.
5.) For any other vessel.	The greater of $1,000 per gross ton or $854,400.

These limitations do not apply in cases of gross negligence or willful misconduct; violation of federal safety, construction, or operating regulation; or if the RPs do not report the incident, or provide reasonable cooperation and assistance.

Documentation

During incidents involving oil products, the lead agency and/or the IC/FOSC will keep and maintain documentation to support all actions outlined in the Plan. The documentation will also form the basis for cost recovery. There are no specific forms or reports to be filed in support of the claim. The NPFC website (http://www.uscg.mil/npfc/) states that claimants

"may use whatever documentation [they] believe best supports [their] claim" (USCG NPFC 2010a). OPA documentation should be sufficient enough to provide:

- Source and circumstance for the release/spill.
- Amount released.
- Identity of the RP(s).
- Response actions taken.
- Accurate accounting of state, federal, or private cost incurred for response action.
- Impacts and potential impacts to public health, welfare, and the environment.
- Records of essential dates and time (i.e., date and time of spill, notification of NRC, responses, assessments).

OPA's website lists the following examples of the types of documentation that can be submitted to show that a spill falls under OPA:

- Copy of the advertisement for claims by the RP or the NPFC.
- Reports from local, state, or federal agencies, especially from the FOSC.
- Newspaper articles describing the spill.
- Witness statements.

Reporting

The District of Columbia agency leading the response actions financed by the OSLTF should submit all supporting information and reports to the NPFC and the FOSC for processing and costs reimbursement within thirty days.

Other Available Funds

The District of Columbia maintains both the OSLTF and the UST Trust Fund, both of which can be accessed to provide cleanup funds. District of Columbia Law 5-188 and District of Columbia Official Code §8-103.09, require the Mayor to establish a financial system to account for revenues and expenses associated with removing pollutants. The District of Columbia established the OSLTF to cover reimbursable expenditures, not to exceed $250,000, for response, mitigation, and cleanup of oil or hazardous substances. District of Columbia Official Code §8-113.05 established the District of Columbia UST Trust Fund, which can be used to cleanup discharges from USTs.

In each case, all efforts must first be made to engage the support and involvement of the RPs. If the RPs cannot be located, or they refuse or are unable to provide financial support for response efforts, then these funds should be accessed to pay for required activities. A detailed description of how these funds can be accessed to pay for cleanup work follows.

Accessing the District of Columbia Oil Liability Trust Fund

The OSLTF is accessed through DDOE on a case by case basis. If funded the Water Quality Division has recommended (i.e., fund accounting, monies deposited to the fund, permissible disbursements, cost recovery procedures, etc.).

Accessing the District of Columbia UST Trust Fund

The UST Trust Fund may be used if there is a release of a regulated substance from a UST into the environment. This fund is managed by DDOE's Agency Financial Officer and can be accessed to perform certain actions related to the spill, if action is necessary to protect human health or the environment, and if/when one or more of the following conditions exist:

1. No person can be found within 90 days or less, as may be necessary to protect human health and/or the environment, who is an owner or operator; subject to corrective action rules issued pursuant to District of Columbia Official Code §8-113.12; or capable of proper of implementation of the required corrective action.
2. A situation exists that requires immediate action by the Mayor to protect human health and/or the environment.
3. Corrective action costs at a facility exceed the amount required by the Mayor pursuant to the financial responsibility requirement imposed in the rules, and expenditures from the UST Trust Fund are necessary to ensure corrective action.
4. The responsible party for the tank has failed or refused to comply with an order issued by the Mayor that requires compliance with the corrective action rules.

An action necessary to protect human health and/or the environment is warranted if any of the following conditions exist, or if a field investigation or site assessment is necessary to determine if any of the following conditions exist:

1. There is an accumulation of toxic, flammable, or explosive vapors in dwellings, sewers, or in the surrounding area.
2. There is floating free product on surface or ground water.
3. There is soil, surface water, or groundwater contamination above the maximum level permitted under District of Columbia regulations.
4. There is a spill or release of a regulated substance to the environment.
5. There is a danger of migration of the release into surface waters, ground waters, soil, or air of the District of Columbia.
6. The release poses a danger to plants or animals in the vicinity.
7. The release poses a danger to public health.

If the required conditions are met, funds may be disbursed to undertake corrective actions including site assessment, cleanup, and housing and relocation assistance. District of Columbia Municipal Regulations Title 20, §6403.1 details specific actions that can be undertaken using the fund, including preliminary investigations, initial response actions, initial abatement, free product removal, site assessment, site assessment plans, development and implementation of corrective action plans, remediation, monitoring, and well closure.

Disbursements may be made from the fund to pay for the following:

- Costs of persons or companies performing corrective actions.
- Costs related to cost recovery and enforcement procedures.
- Exposure assessments.
- Costs of restoring property after assessment or remediation.

Recovering Costs Incurred to the UST Trust Fund

If costs are incurred by the District of Columbia for undertaking any corrective or enforcement action with respect to a release of a regulated substance from a UST, the RPs shall be jointly and severally liable to the District of Columbia for the costs. In addition to any enforcement action, the Mayor may assess any reasonable costs of the correction of the condition and any related expenses.

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V. Hazardous Substance Emergency Response

V.A Background

This Section provides information on emergency response to hazardous substance spills. It includes discussions on the laws and regulations governing hazardous substance spill response (Section V.B); the proper procedures for reporting and responding to hazardous substance spills (Section V.C); general information on containing and cleaning up hazardous substance spills (Section V.C); and information on funding mechanisms that can be used to pay for costs of responding to, and cleaning up, hazardous substance spills (Section V.D).

V. B Laws and Regulations

Response to, and planning for, hazardous material release incidents is regulated under both federal and state laws and regulation. The District of Columbia Water Pollution Control Act establishes protection of water, fish and aquatic life, and habitat within the District of Columbia. It also prohibits the discharge of substances (pollutants) that could alter or interfere with the natural integrity of those resources. Likewise, the Illegal Dumping Enforcement Act of 1994 (District of Columbia Official Code 5-513), the Underground Storage Tank Act (District of Columbia Law 8-242 and 9-159), and the Hazardous Waste Management Act (District of Columbia Law 2-64 and 5-103) also address the regulation and prohibition of the release of hazardous substances, their containment, mitigation and cleanup, and cost funding and recovery.

Federal laws that provide the primary legal support and guidance for incidents involving hazard substances are found within CERCLA (42 USC, §9601-9675) which has been amended by SARA Title III. Under SARA Title III, the District of Columbia developed an emergency response plan for hazardous substances. In addition, the CWA of 1972 broadened the scope of the NCP, which provides a framework for responding to hazardous substance discharges and oil spills.

V. C Notification and Response Procedures

Each CERCLA hazardous substance has been assigned a RQ that determines the quantity at which a spill of the substance must be reported. CERCLA §103 (a) and SARA Title III §304 require notification of the appropriate local and national emergency coordinators should a spill of RQ occur. For the District of Columbia, the local emergency coordinator would be reached through the 911 system and would be either HSEMA and/or FEMS. The national contact would be NRC. The RP should report any quantity released or spilled and let the local or federal response agencies determine if response actions are necessary. This notification sets in motion the response actions as described in Section II.A Notification and Response Actions.

As described in Section II.A Notification and Response Actions, DDOE will likely be contacted by HSEMA to provide technical support to the incident response. As described in the preceding sections, HSEMA will typically be the contact for DDOE regardless of whether the response is led by local or federal responders. In the case of local response, DDOE generally has a primary role supporting the local IC in managing the response. If the incident is managed by a FOSC, DDOE will most likely serve in more of a support role with federal agencies leading the response. DDOE's specific responsibilities will vary from incident to incident and will be based on the nature of the spill and the requests of the IC/FOSC.

Federal Involvement

Federal involvement is to be expected during all hazardous substance incidents. Once an incident is reported, whether directly to the District of Columbia, the USCG National Response Center or the EPA Regional Response Center, there will be some level of federal response action. The response may involve telephone communications and coordination with the District of Columbia IC, or it may consist of full federal involvement with a lead responsibility under the command and control of a FOSC.

The authority for federal involvement is codified in federal law and regulation as well as in the contingency planning required under those laws and regulations. The first of the laws is the CWA, which prohibits the discharge or release of pollutants into navigable waters of the United States and establishes the basis for federal involvement and response. In order to broaden and strengthen federal authority, response, and coordination system for oil spills and hazardous substance discharges, Congress passed OPA and CERCLA. These laws enhanced federal authority to contain, remove pollutants, assess and seek damages, and specify emergency response actions. In addition to these laws, EPA promulgated the NCP, which provides guidance to federal, state, and local agencies for coordinated and effective action to minimize adverse impacts from oil and hazardous substance releases. The NCP established the framework for the development of the USCG and EPA Area Contingency Plans. These plans establish the roles and responsibilities of the lead federal agencies and provide comprehensive guidance for coordination among federal, state, and local government response agencies.

Response Strategies

Unlike oil products, hazardous substances can vary in physical, chemical, and biological composition. These variations often result in significant differences in the pollutant's reactivity, combustibility, corrosiveness, physical/chemical state, etc. It is difficult to plan specific responses for hazardous substance spills because the stability of the substance and response required (e.g., containment, mitigation, and cleanup actions) are unique for each substance. Essentially, each incident must be treated on a case by case basis.

V. D CERCLA COST RECOVERY

Section 9623 of CERCLA stipulates that any unit of local government for a political subdivision which is affected by a release or threatened release at any facility may apply to the President for reimbursement through CERCLA. CERCLA is administered through EPA. Therefore, in the case of an incident with an EPA FOSC, the District of Columbia would contact the FOSC directly for access to the CERCLA Fund. However, in instances where a hazardous substance incident occurs in a USCG designated area, the District of Columbia must request EPA to access the CERCLA funds that will then be administered through the NPFC. Due to the restrictions on the use of the CERCLA fund, it is essential that the local IC notifies the designated FOSC regarding any local incidents and that the IC communicates regularly with the FOSC during the incident. Without the approval of the FOSC, the District of Columbia could be at risk of not being reimbursed for funds expended responding to a hazardous substance spill.

Reimbursement is available for expenditures incurred in carrying out temporary emergency measures necessary to prevent or mitigate injury to human health or the environment associated with the release or threatened release of any hazardous substance or pollutant or contaminant. Reimbursements cannot

supplant local funds normally provided for a response. Any reimbursement to any local authority may not exceed $25,000 for a single response.

Documentation
During an incident involving hazardous substances, the lead agency and/or the local IC/FOSC will keep and maintain documentation to support all actions taken. This establishes the basis for cost recovery. General documentation should be adequate enough to provide the following:

- Source and circumstance for the release/spill.
- Amount released.
- Identity of the RP.
- Response actions taken.
- Accurate accounting of state, federal, or private costs incurred for response action.
- Impacts and potential impacts to public health, welfare, and the environment.
- Records of essential dates and time (i.e., date and time of spill, notification of NRC, responses, and assessments.

Reporting
Proper reporting must be done in order to be reimbursed through CERCLA funds. In the case of a local incident under the command of a local IC, all appropriate information and reports required for reimbursement are to be submitted to the designated EPA or USCG FOSC. If the incident involves a USCG designated area of responsibility, then the District of Columbia IC must file reports with the USCG FOSC and the NPFC for processing and cost reimbursement. CERCLA related incidents that occur in the inland zones fall under the responsibility of EPA and under the current structure would not require reporting or processing with the NPFC.

Other Available Funds

The District of Columbia has established several other funding sources that can be accessed for immediate response, mitigation, and cleanup of spills or discharges of oil or hazardous substances. Under District of Columbia Law 5-188, the District of Columbia established the OSLTF to cover reimbursable expenditures up to approximately $250,000 for response, mitigation and cleanup of oil or hazardous substances. This fund is accessed through DDOE on a case by case basis. If funded the Water Quality Division has recommended and will pursue future actions to establish regulations for the management of this fund (i.e., fund accounting, monies deposited to the fund, permissible disbursements, cost recovery procedures, etc.). The proposed regulatory structure is to be based on the current regulations adopted for the District of Columbia's UST Trust Fund. For a copy of the current regulations, see Appendix L.

The UST Trust Fund also covers similar expenditures related to spills or discharges from USTs. The UST Trust Fund excludes spills of materials listed under the District of Columbia Hazardous Waste Management Act. In each case, all efforts must first be made to engage the support and involvement of the RPs. If the RPs cannot be located, refuse, or are unable to provide financial support, then UST Trust Fund should be used.

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VI. Sewer Spill Emergency Response

VI. A Introduction

This section describes emergency response for sewage spills. Unlike oil and hazardous substance spills, sewage spills are typically the responsibility of DC Water, the operator of the municipal sewer system. Response to sewage spills will involve coordination with DC Water, which will also be responding to reports of sewage spills in its capacity of operating the sewers.

VI. B Laws and Regulations

Sewage spills are covered under the federal CWA and the District of Columbia Water Pollution Control Act (District of Columbia Law 5-188). District of Columbia Official Code §8-103.02 prohibits the discharge of pollutants (including sewage) to the waters of the District of Columbia without a proper permit. The sewage collection system in the District of Columbia is operated by DC Water. This collection system, which consists of both separate sanitary sewers (which carry sanitary sewage only) and combined sewers (which carry a combination of sewage and stormwater), conveys the sewage to the Blue Plains Advanced Wastewater Treatment Plant (Blue Plains AWTP), where it is treated and discharged to the Potomac River. DC Water has been issued a National Pollutant Discharge Elimination System (NPDES) permit for its discharges. This permit regulates the discharges from the Blue Plains AWTP, as well as permitted discharges from combined sewer overflow (CSO) points within the collection system and the Blue Plains AWTP. CSOs are planned, permitted discharge points designed within the combined sections of the collection system to provide hydraulic relief to the system by discharging flows before they reach and/or are fully treated at the Blue Plains AWTP. CSO discharges consist of mixtures of sewage and stormwater runoff, and are permitted to occur only as a result of wet weather. Dry weather discharges, and overflows of the sanitary sewer system (sanitary sewer overflows [SSOs]) are not permitted and are illegal.

The NPDES permit also requires proper operation and maintenance of the collection system and the Blue Plains AWTP to achieve compliance with the permit. Proper operation and maintenance of the entire collection system and Blue Plains AWTP should help to reduce the potential for spills and their impacts stemming from poor asset conditions or operations issues through identification and replacement of deteriorating infrastructure and the development of redundancy or contingency operations plans within the system.

Notification and Response Procedures

For the purposes of this document, sewage spills are defined as discharges not covered by DC Water's NPDES discharge permit. These discharges could include dry weather overflows from the combined sewer system; SSOs; infrastructure failures that cause spills directly from the collection system; or other unauthorized discharges of sewage from non-DC Water sources (such as sewage pumped from portable toilets, sewage hauled through the city, or other sources). For the purposes of this document, sewage spills do not include combined sewer overflows or discharges of Blue Plains AWTP effluent authorized by the NPDES permit.

Sewage spills may be the responsibility of DC Water, which operates the sewage collection system and the Blue Plains AWTP, or they may be the responsibility of others. For example, the responsibility for a sewage spill caused by a private waste hauler lies with the waste hauler, and not with DC Water. Similarly, if a sewage spill occurs on private property (e.g., through a leak in a privately-owned sewer lateral), then the spill would be the responsibility of the owner of that lateral. There are also collection systems in the District of Columbia that are not operated by DC Water (e.g.,

Bolling Air Force Base, where the collection system is operated and maintained by the Washington Suburban Sanitary Commission). Spills from DC Water owned and operated collector and interceptor pipes, pumping stations, and other assets are the responsibility of DC Water. Spills from these different sources (DC Water collection system, private property, waste hauling, etc.) will most likely be reported differently, and the responses and responding parties will be different as well.

The procedures for notification and response are straightforward for spills occurring from DC Water's system. DC Water's responsibilities for spills are dictated by the requirements of their NPDES discharge permit, and include eliminating/correcting the source of the spill, containing/cleaning up the spill, and reporting on the spill.

Once DC Water becomes aware of a spill (either through its own monitoring or through reporting by others), it sends a response crew from the Department of Sewer Services to the site of the spill. This crew communicates information about the spill to DC Water's Emergency Command Center, which is located at the O Street Pumping Station in Southeast Washington. The response crew will determine the need for resources to repair the source of the spill and contain any spilled sewage. The response crew will also inform the Emergency Command Center as to what other agencies or organizations need to be notified of the spill (e.g., DDOE, NRC). Based on the size of the spill, its location, and the resources that it is impacting or could impact, the Emergency Command Center then coordinates DC Water resources to ensure that the response crew gets the appropriate resources to mitigate the spill.

Once the spill has been reported, DC Water response crews work to eliminate the source of the spill and contain any spilled sewage. This may involve repairing broken sewer lines, correcting operational problems, re-routing flows, etc. The crew will also attempt to contain the spill. However, unlike oil, which floats on surface waters, sewage contains both dissolved and floatable components, resulting in a spill that may be difficult to contain in the traditional sense, particularly depending on where the spill has occurred. If the spill has occurred directly into surface water or into the storm drain system, containment may be impossible.

DC Water also completes several reports summarizing the spill, including a spill report form and an after action report. The spill report form, DC Water Sewage Overflow Report Form A-4 (Figure 9), includes information on the amount of material spilled, whether or not the spill reached a receiving water, and a summary of the response effort. DC Water's Sewage Overflow Report Form A-4 is submitted to EPA as required. DC Water also develops an internal after action report on the spill, which is used to learn lessons from the spill in an attempt to avoid similar spills in the future. This after action report includes summary statements from responders, photos, and other information on the spill.

DC Water is not responsible for, and does not respond to, sewage spills from other sources, such as spills by private waste haulers or spills on private property. Sewage spills by waste haulers are apt to be reported in a similar fashion to other spills (i.e., through the 911 system). With respect to spills on private property, if DC Water is contacted by a private property owner regarding a sewage spill, the DC Water customer service representative will try to determine whether the spill has been caused by DC Water infrastructure. Information that will assist in making this determination are the size of the leak/spill as well as its location. If the spill is small and appears to be originating on private property, it most likely has been caused by a sewer lateral. This is the responsibility of the property owner, and DC Water will refer the owner to a plumber to rectify the problem. However, if the leak/spill is large,

DC Water would dispatch a crew to check the situation and determine responsibility for fixing the problem. If it is determined that the spill is not DC Water's responsibility, DC Water will inform the property owner, and it is the property owner's responsibility to contact appropriate resources and/or authorities (i.e., plumbing contractors, City resource agencies such as DDOE, etc.) to mitigate the spill.

Response Strategies

The primary response strategies for spills of raw sewage are to stop the source of the leak, clean up the solid components of the sewage, and post signs warning the public of the spill. DC Water is responsible for eliminating leaks from its infrastructure and for repairing that infrastructure to prevent additional leakage and to protect human health and the environment. The same is true for private landowners – they must repair any leaks on their property. Waste haulers transporting sewage are also responsible for their own spills.

DC Water will respond to leak or spills from its infrastructure by sending a response and repair crew to the source of the leak. This crew will communicate with the DC Water Emergency Command Center to coordinate resources to stop the leak, contain the spill, and restore any lost sewer service to the area. DC Water may initiate temporary fixes to broken pipes, such as sandbags or temporary caps, and will complete permanent repairs as soon as possible after the problem is identified. DC Water may also have the capability to re-route flows to eliminate flow in a damaged pipe.

Once the source of the spill is eliminated, the next step is to address the impacts of the spill. Raw sewage contains pathogens and other pollutants that are hazardous to human health, and so the primary concern with a sewage spill is to prevent human contact with the spilled sewage. Because actual cleanup of sewage can be difficult, most response actions consist of putting up signs warning the public of the sewage spill. Sewage that has leaked into receiving waterbodies will be carried downstream and eventually discharged into the Potomac River, which is the ultimate receiving waterbody for all drainage in the District of Columbia.

DC Water has a well-established protocol for notifying the public of sewage spills that is mandated by their NPDES permit. This protocol consists of posting signs in the impacted area to warn the public of the sewage spill. DC Water can also work with regulatory authorities to issue "boil order notices" if sewage spills have the potential to impact drinking water sources.

DC Water can initiate cleanup actions, such as potentially intercepting sewage before it enters a waterbody and then pumping the sewage into a containment vessel so it can be hauled to Blue Plains AWTP or otherwise disposed. If the liquid sewage has soaked into the ground, DC Water can focus on cleaning up any solids or other debris through manual methods (e.g., shovels or backhoes if necessary for larger spills).

As discussed above, sewage spills that have already entered receiving waterbodies will be difficult to contain. In this case, most utilities focus on notifying the public of the spill. In some cases, more follow-up, including investigating the impacts of the spill and remediating the impact site, may be warranted. The roles of the RP and the regulatory agency in conducting these investigations and any further remedial action must be negotiated on a case by case basis. It is recommended that DDOE and DC Water negotiate an agreement that would guide the responsibilities and expectations of each agency for response, mitigation, and follow-up in the event of a future sewage spill.

Cost Recovery

There is no specific cost recovery mechanism or dedicated funding set aside to deal with sewage spills. All cost recovery must be negotiated with the RP. Maintaining good records of responding agencies/resources, response actions, and damages to human health and/or environment is critical to establishing the financial impacts of the sewage spill, and these types of records will serve as the basis for negotiating cost reimbursement with the RP. Many of the same reports, worksheets, and tracking data used to track oil or hazardous substance incidents will be useful in compiling records that can be used to recover costs from sewage spills as well.

FIGURE 9: DC WATER SEWAGE SPILL REPORT FORM

DC Water and Sewer Authority

Sewage Overflow Report Form A-4

Initial Report __ Final Report __ (check one)
DWO __ SSO __ (check one)

Date of Report _____ Reported By _____

1. Date/Time WASA Notified:	2. Who/How Overflow First Observed (provide phone numbers)	
3. Approximate Date(s) of Overflow		
4. Site Address/Location of Overflow		5. Property Owner Name and Phone No.
6. Map attached __yes __no Counter Map No.:	7. Overflow at MH? __yes __no MH No.:	8. At other type of structure? __yes __no Structure Name and No.:
9. Time Reported:	10. Crew Arrival Time:	
11. Time Overflow Stopped:	12. Total Time of Overflow:	
13. Receiving Water (RW):	14. Did Overflow Reach Receiving Water? __yes __no	
15. Amount of Overflow (gallons):	16. Amount that Reached RW (gallons):	
17. Description of Incident (including reason for overflow)		
18. Description of Response (including clean-up method, actions taken to restore flow, measures taken to keep overflow from happening again, steps taken to minimize adverse impacts to navigable waters, etc)		
19. Adverse Effects Noted (public health danger, damage to property, etc.)		

20.	Yes	No
a. Sign posted?		
b. Barricaded?		
c. May affect fish/wildlife?		
d. Notified public?		
e. Sample Taken?		

21.	Yes	If yes, date and time	No
a. Notified EPA Region 3?			
b. Notified D.C. DOH?			
c. Notified VDEQ?			
d. Notified Fairfax County?			
e. Notified Loudoun County?			
f. Notified MDE?			
g. Notified Montgomery County?			

Supervisor: Dunbar Regis (202) 264-3829
Manager, Inspection and Maintenance Div.

Signature _____ Date _____

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