

TECHNICAL, ANALYTICAL, AND REGULATORY MISSION SUPPORT FOR THE WATER SECURITY DIVISION PERFORMANCE WORK STATEMENT

1. BACKGROUND

Reliance on clean and safe water is critical to our Nation, both from the standpoint of public health and of economic impact; therefore it is critical that the Nation's drinking water and wastewater infrastructure, collectively known as the Water Sector, is protected. All elements of the Water Sector must be informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attacks and other intentional acts, natural disasters, and other hazards (referred to as the "all-hazards" approach). The Environmental Protection Agency helps to safeguard the Nation's water supply in the case of natural disasters and catastrophic events, as evidenced by the needs and challenges posed by the aftermath of hurricanes; flood devastation to broad areas of the country due to rainfall anomalies; potential earthquakes; a national epidemic caused by pandemic illness; impacts and resulting adaptation requirements because of climate change; and other events which impact the safety and availability of our water supply.

In addition, following the terrorist events of September 11, 2001, and thereafter, the Environmental Protection Agency (EPA) mission expanded beyond safeguarding the natural environment – the air, water, and land – from traditional sources of pollution or calamity. With the Nation under a continuing threat from those who seek to harm it, EPA also has the important responsibility of protecting the environment from terrorist acts. In September 2002, EPA published a *Strategic Plan for Homeland Security (2002 Plan)*. The 2002 *Plan* reflected the deliberations of the Agency's senior leadership regarding the scope of activities that would appropriately support enhanced and challenging homeland security responsibilities. Subsequent to that plan, the Homeland Security Presidential Directives (HSPDs), the Public Health Security and Bioterrorism Preparedness and Response Act (Bioterrorism Act) of 2002, the EPA revised *Strategic Plan for Homeland Security (2006 – 2011)*, *EPA's Homeland Security Strategy (2004)*, input from the Department of Homeland Security (DHS), and other evolving information have impacted expectations and requirements related to EPA's mission and expertise, and contributed to the responsibilities and programmatic requirements of the Office of Water/Office of Ground Water and Drinking Water/ Water Security Division (WSD). Guidance concerning these initiatives and requirements is available via the web at www.epa.gov/watersecurity.

Under HSPD-7, certain Federal agencies, including EPA, are working to identify and prioritize critical national infrastructure and resources for protection from terrorist acts that could cause catastrophic health impacts or mass casualties; undermine public confidence; or disrupt essential government functions, essential services or the economy. In recognition of the distinctive characteristics of different infrastructure assets, HSPD-7 divides the national infrastructure into 18 critical infrastructure/key resources (CIKR) sectors and assigns CIKR protection responsibilities for them to selected Federal agencies, called Sector-Specific Agencies (SSAs); HSPD-7 designates EPA as the SSA for the Water Sector.

A key requirement of HSPD-7 was for DHS to develop a strategy to protect all CIKR; that strategy, finalized in 2006 is called the National Infrastructure Protection Plan (NIPP). As part

of the implementing structure for the NIPP, each SSA developed its Sector Specific Plan (SSP) that follows and supports the framework. The Water Sector Specific Plan was completed in June 2007, and updated in July 2008. The Water SSP is a broad-based critical infrastructure protection implementation strategy for drinking water and wastewater utilities, their regulatory primacy agencies, and the array of training and technical assistance partners that comprise the Water Sector. The plan describes processes and activities to assist drinking water and wastewater utilities as they strive to be better prepared to prevent, detect, respond to, and recover from terrorist attacks, other intentional acts, natural disasters, and other hazards.

The water SSP contains four goals and supporting objectives that will drive development of protective programs and measures of success. These goals are: 1) sustain protection of public health and the environment; 2) recognize and reduce risks; 3) maintain a resilient infrastructure; and 4) increase communication, outreach and public confidence. These elements of the water SSP are addressed within the Performance Work Statement of this contract.

HSPD-9, signed January 30, 2004, establishes a national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies. Among the activities that HSPD-9 requires of EPA are: (1) develop robust, comprehensive, and fully coordinated surveillance and monitoring systems, including international information, for...water quality that provides early detection and awareness of disease, pest, or poisonous agents; and (2) develop nationwide laboratory networks for...water quality that integrate existing Federal and State laboratory resources, are interconnected, and that utilize standardized diagnostic protocols and procedures. The PWS of this contract also support the goals and activities for the Agency under HSPD-9.

EPA has unique programmatic responsibilities and expertise related to the water industries ("water" as used in this contract will include source water, drinking water, wastewater, and recreational waters) and has been designated as the lead federal agency for coordinating the protection of critical infrastructure for the water sector. The Agency has also been tasked with undertaking research, development, testing, and communication/implementation of enhanced methods for detection, treatment, and containment of biological and chemical warfare agents and other contaminants and pathogens that could be intentionally introduced into water systems. In addition, in the instance of natural or accidental occurrences of threats to water sector sustainability, the Agency has the responsibility to support the continued availability of a safe water supply. This contract will support disruption prevention, preparedness, detection, and response efforts related to developing and implementing requirements involving water sector security and the continued provision of a safe water supply.

There is a need to recognize commonality of purpose within various Offices and Regions of the EPA, in order to provide for greater efficiency, more comprehensive planning, and less redundancy among entities impacted by requirements and initiatives consistent with this PWS. Although this contract will emphasize these requirements as related to EPA's OW/OGWDW/WSD, it will be available for use by other organizations within the EPA, especially the National Homeland Security Research Center (NHSRC), subject to capacity on the contract, as limited by the contract's PWS scope, and with permission from WSD.

2. SCOPE OF WORK

The purpose of this contract is to establish an on-going contracting mechanism in WSD to satisfy specific and evolving programmatic support needs related to our national homeland security as outlined in the requirements of the Water SSP, NIPP risk management framework, HSPD-7, and HSPD-9. Water sector security areas to be addressed by the contract include requirements related to: 1) critical infrastructure protection (CIKR); 2) national preparedness, response, and recovery; and 3) Agency communication, information, and program management support efforts. Unforeseen new threats to the Nation, or requirements which may evolve during the period of this contract, and which are related to the PWS of this contract (providing support services directly involved with the mission of the Water Security Division and/or our homeland security in an “all hazards” arena) and are charged through expanded Congressional or Presidential authority and mandate, court order, or management prerogative may require unanticipated services of a nature critical to the Agency. These unanticipated critical efforts, with impacts relevant to WSD’s responsibilities and related to the overall mission scope, are assumed to be part of the ongoing requirements of this contract.

The contractor shall provide technical, analytical, research and developmental, logistical, and informational technology support to the EPA in its efforts supporting the all-hazards approach to water security responsibilities. Specific requirements of the tasks will be identified in work assignments coordinated and reviewed by the EPA Project Officer (PO) and issued by the EPA Contracting Officer (CO).

The contractor shall not engage in activities of an inherently governmental nature such as formulation of Agency policy and selection of Agency priorities. EPA will review all products developed by the contractor prior to their use, and will secure any approvals necessary for information collections under the Paperwork Reduction Act.

The contractor shall handle all materials, data, and information, designated by work assignment as requiring security control, in a manner consistent with the security guidelines mandated by Executive Order 12958, as amended, and ISOO Directive No. 1, which mandate a classified National Security Information (NSI) program. The contractor shall maintain security clearances, procedures, and storage procedures for confidential business information secure, secret, sensitive, and top secret documentation and personnel consistent with the NSI requirements, other applicable regulations, and specific EPA policies and procedures outlined in the NSI Handbook and other EPA documentation. The NSI Handbook has been provided as a reference to this procurement in Attachment 6. The contractor also is required to have an approved facility clearance issued by Defense Security Service (DSS). Those personnel maintaining security clearances shall conduct performance in a manner consistent with clearance level guidelines. Clearance level guidelines for specific efforts will be identified in issued work assignments.

The contractor shall supply all necessary labor, materials, equipment and facilities in technical support of the program areas listed herein, and as further specified by written work assignments issued by the Contracting Officer (CO). The contractor shall perform multiple work assignments concurrently, and at times the work assignments will be of a quick response nature.

Each initial deliverable shall be provided to the EPA Work Assignment Manager (WAM) in draft form for review and comment. The contractor shall incorporate procedures to ensure that these drafts completely document the methodologies, use appropriate assumptions and data, are accurate and complete, are free from editorial errors, conform to any programmatic style guides supplied by EPA, and are as specified in the work assignment or written technical directions before providing them to the EPA. The contractor shall incorporate WAM review comments into revisions of the drafts. All drafts and final reports shall be approved by the WAM. The EPA PO and/or WAM reviews all contractor analyses and makes final determinations with regard to program objectives and the content of Agency regulations and policy development.

Various work assignments issued under this contract will have specific targeted audience/users for the requirements. The targeted audience/users may be federal, regional, state, tribal, territorial, water and wastewater utilities, on-scene coordinators, law enforcement officials, emergency responders, laboratories, health care providers, public health entities, research entities, international points of interest, public coalitions or educational entities, the general public, and/or other audiences as specified in work assignments.

The contractor shall perform all services under this contract in accordance with approved Agency guidance and methods and any need to deviate from the technical approach approved under the contractor's work plan shall be identified immediately and shall only be done in accordance with the Contract requirements, and Contracting Officer approval or PO/WAM technical direction, as appropriate. All confidential business information (CBI) will be handled in accordance with contractual "Section H" CBI requirements, and all potential conflicts of interest (COI) shall be identified in advance of starting work, and shall proceed in accordance with contractual "Section H" COI requirements. The contractor's personnel shall always identify themselves as a contractor whenever their EPA work brings them in contact with the public. The contractor's staff shall always wear and clearly display identification when interacting with the public. When attending meetings and conferences at the direction of EPA, contractor staff shall only attend the portion of the session that is relevant to their technical role. The contractor shall not attempt to interpret Agency policy. All data collected under this contract will be done in accordance with OMB Paperwork Reduction Act guidelines and travel will be pre-approved by the Project Officer and shall be in accordance with the contract and Government Travel Regulations.

The contractor shall have an approved Quality Management Plan (QMP) that conforms with Agency Quality Assurance/Quality Control (QA/QC) procedures in the performance of activities under this contract. An approved generic contract level Quality Assurance Project Plan shall be in place at award, and shall be supplemented with Project Specific Quality Assurance Plans when specified by work assignment. The contractor shall have in place no later than thirty days after contract award, and maintain during contract performance, adequate personnel with secret and top secret clearances to perform the PWS requirements. The specific nature of clearances required on any effort will be identified in work assignments, when issued. At times, emergency work assignments may require a 24 hour turn-around for work plan preparation, including an immediate start on work efforts. Reports will be consistent with the "Reports of Work", Attachment 3 incorporated in the contract, and deliverables will be as specified in individual work assignments. Special reporting requirements or emergency communication efforts which

may be required in emergency situations will be as designated in work assignments issued by the Agency. Special pre-testing approvals or prior inclusion on laboratory compendium listings required of laboratories providing analytical work will be as designated in work assignments issued by the Agency.

The contractor shall provide support services to the Agency that include, but are not limited to, the following general program areas:

(a) The contractor shall provide technical support to EPA in its efforts related to critical infrastructure and key resource protection. Programmatic areas of support reflect an emphasis on preparedness and security of infrastructure, strategic planning, prevention initiatives, assisting those responsible for assessing and reducing vulnerabilities, maximizing response capabilities, and developing guidance, training, tools, and technologies to improve key responders' abilities to support the nation's water sector;

(b) The contractor shall provide technical support to the Agency in its preparedness, response and recovery responsibilities, including supporting the federal preparedness for and response to any chemical, biological, radiological, or nuclear terrorist events, pandemic illness, climate change impacts, chemical security issues, and natural disasters. The contractor shall provide technical support to the Agency in strengthening response capabilities; identifying threats and developing knowledge and capabilities relative to contaminants of concern; developing new guidance and technology for sampling and analysis, decontamination, and risk assessment; clarifying roles and responsibilities to ensure an effective response through operational strategy development and consequence management planning; supporting consequence analysis planning and development; and promoting improved response capabilities across government, industry, private sector, and the public, in the areas in which the Agency has unique knowledge and expertise pertaining to the water sector, and;

(c) The contractor shall provide technical support to the Agency in developing comprehensive, accurate, well-organized, and timely information to assist the Agency in sound decision-making. Efforts will involve collecting, analyzing, coordinating, and disseminating complex information and technical expert insight related to human health, the water sector, and the environment. The contractor shall provide facilitation and technical support in managing and sharing this information, in a secure manner, within the Agency, with other governmental and tribal entities, with the water utilities, and with other public and private sectors as applicable.

Specific Task Areas Include, But Are Not Limited To, the Following:

2.1. Protection/Security Practices. Develop measurable objectives and tracking systems for water infrastructure protection efforts. Develop/provide guidance, provide outreach services, training and workshops on effective voluntary water security programs, best practices, principles, and elements. Establish current baseline of security relative to drinking water, wastewater, source water, and recreational water facilities. Facilitate measuring, quantifying, incentivizing, and implementing recommended principles and elements of a voluntary security program. Incorporate "all hazards" threat event response procedures in security practice guidance. Support the integration of security into water sector practices and training, to include

imbedding security procedures and guidance into developmental and existing water management systems for the water sector, including pretreatment, water, and wastewater operators.

2.2. Tool and Guidance Development, Dissemination and/or Training. Develop, revise, maintain and disseminate tools (such as the Event Detection Deployment Integration and Evaluation System), databases (such as the Water Contamination Information Tool), and guidance, including training and workshops, to enhance preparedness, utility and business resiliency, detection, response, and recovery efforts relative to water security initiatives, vulnerabilities, and threats if a natural calamity or incident occurs.

2.3. Support Preparedness Planning, Threat Identification, and Emergency Response Efforts. Establish, evaluate, support, facilitate, and develop training/outreach on contingency and strategic planning, infrastructure backup procedures, alternate water supply, consequence management planning, and mutual aid and assistance options for entities in emergency situations. Support strategic planning and training/communications concerning water sector interdependencies relative to other critical infrastructures and key resources, such as energy, communications, or transportation sectors. Coordinate and facilitate planning sessions and workshops for evolving mission priorities and direction. Develop and provide training and technical support to mission related emergency response teams, including audience/users identified in work assignments, such as regional emergency responders, regional on-scene coordinators, law enforcement officials, technical assistance providers, utilities, states, and public health officials. Research, develop, assess, and analyze threat, vulnerability, and incident information. Support efforts to identify and characterize threats that could be used to disrupt water systems. Develop, revise, and implement training, education, and technical assistance to federal, state, regions, tribal, utilities, stakeholders, law enforcement, laboratories, responders, public health agencies, health care providers, and other public/audience as identified in work assignments, on threat identification and vulnerabilities, and response topics as needed to support the mission. Develop, maintain, edit, and disseminate technical information, guidelines, drills, field exercises, web tools, and procedures to aid in emergency situations. Develop and maintain an analytical data management tool for emergency response data. Develop, maintain, assess, identify needs and users, facilitate, and coordinate water utility response networks to support and promote national emergency preparedness, disaster response, and mutual assistance networks for water utilities.

2.4. Consequence Analysis. Analyze and evaluate the human health and economic consequences of adverse incidents that might affect the Water Sector. These might include incidents concerning contamination, hazardous gases, cyber security, physical denial of service, or psychological issues. Systems of interest span the sector including water and wastewater, and cover systems of all sizes and types of geographies. Provide technical expertise in regional economic modeling and health analysis, including areas such as response and resiliency. Integrate analysis with related ongoing efforts such as within NHSRC and Office of Emergency Management (OEM). Develop stand-alone self-assessment tool for analysis of consequences and integrate tool with vulnerability assessment tools such as discussed in Section 2.5. Provide for upgrades and maintenance of tool as further information and lessons learned are identified. Support outreach and training for use of tool, including coordination with sector partners and stakeholders.

2.5. System Vulnerability Information Development and Maintenance. Compile, maintain, track, analyze, and protect (in accordance with relevant laws and protocols) information related to the vulnerability assessments of water systems. Systems of interest will be identified by size/type in work assignments issued under the contract. Coordinate information and implement reviews and process development related to vulnerability assessments. Develop and disseminate vulnerability self-assessment tools and training, geared to the audiences designated by work assignment. Support examination and evaluation of lessons learned by drinking water utilities in assessing their vulnerabilities and implementing countermeasures. Support refinement of the methodology for community water system vulnerability assessments, including evaluation of distribution systems.

2.6. Water Sector System Security, Cyber Security, and Surveillance Enhancement. Support data collection concerning current status and research initiatives on security design and vulnerability, contaminant detection, and distribution system monitoring. Develop, assess, and improve standards for incorporating physical and structural security measures, and develop guidance papers, summaries, and provide training on construction/design options. Support coordination with standards-setting organizations, preparation of voluntary design standards, and recommendations for new construction, reconstruction, and retrofitting with a focus on security in combination with improved operations. Develop, evaluate, and enhance models for addressing contaminant transport in drinking water distribution systems as well as wastewater collection systems, including indicators of contaminants of concern, radiologicals, biological agents, unknown contaminants, and other agents as identified in work assignments. Support assessment of existing security measures for the storage and transportation of hazardous materials at water utilities and ways to improve their security. Support integration of public health data with environmental/water utility data. Support assessment of technologies and methods for continuous monitoring and control of dangerous levels of volatile, explosive, and toxic gases in wastewater/storm water collection systems. Provide training and technology transfer as necessary to support dissemination of sensor capabilities and option guidelines if a natural calamity or threat event occurs. Enhance cyber security, including support for recommendations, training, and implementation relative to the security of water plant operation computer systems (i.e., Supervisory Control and Data Acquisition [SCADA]) and computer operating systems. Support development, installation, deployment, tech transfer, and training of remote communication and control capabilities for water system monitors.

2.7. National Planning/Preparedness Initiatives Related to Laboratory Capability and Capacity. Support a cross agency effort for identifying, prioritizing, and addressing gaps in laboratory capability and method development as determined necessary. Support an improved and expanded tiered laboratory capacity and capability to be fully prepared in responding to calamities, threats or attacks on the water sector, including development of a laboratory compendium; structuring a laboratory network (such as the Water Laboratory Alliance) to assist the laboratory sector and drinking/wastewater utilities in an emergency; preparation of a gap analysis of resources and recommending how to address identified gaps; development of an outreach and communication plan to facilitate inter-laboratory coordination and information exchange for water security; and preparation of performance criteria for methods and infrastructure that assure adequate training of field and laboratory personnel. Effort may include

coordinating single and multi-lab studies, providing training identified for or by laboratories, determining appropriate property/equipment for adequate laboratory support, and aiding in development/implementation of necessary tools, trainings, exercises, or simulation models. Support development of guidance and technical assistance tools to facilitate chemical and microbial vulnerability/performance assessments, and remediation/improvement approaches relative to optimization of the filtration and disinfection processes, ensuring proper QA/QC throughout the analytical process. Develop, test, and deploy tools for laboratory data reporting, exchange and review. Coordinate development and testing of tools with other EPA offices and other agencies.

Provide laboratory program administrative support when necessary, including: tracking of labs within a laboratory network; developing or modifying mechanisms for communication with/between members of a lab network; certifying that members of a laboratory network meet agreed upon requirements; providing clear, easy to interpret and access mechanisms for partaking in a laboratory network; tracking and storage of correspondence related to a laboratory network; and review and evaluate capability of other laboratory networks.

2.8. Laboratory and Methods Support. Support required under the contract requires expertise in the following laboratory related activities.

2.8.1. Field/Analytical and Sampling Support. Support development of guidance and protocols for field testing, sampling, and analysis for contaminants of concern. The contractor shall have an established plan in place to access laboratory capability to take and analyze samples for pollutants of concern, including conducting field sampling to support the assessment of pollutants of concern. Develop, distribute, enhance, revise, and support guidance/training for sampling kits, mobile treatment units, concentration cartridges, or other specified tools related to identifying, measuring, neutralizing, analyzing, or disposing of contaminants of concern or contaminated water. Provide support towards developing and disseminating guidance on determining appropriate placement of kits/tools for users.

2.8.2. Method Evaluation and Development. Provide technical support and coordinate laboratory effort for method development related to contaminants of concern, including single and multi-lab validation procedures. In appropriate instances, because of the critical nature of specific capabilities relative to specialized contaminant analytical techniques, usage of specific laboratories identified within the work assignment as possessing necessary capabilities will be required. Support development, validation, identification, training, and standardization of presumptive, rapid, and confirmatory methods, including, but not limited to pathogen, chemical warfare agent, biotoxin, and chemical analytical methods. Support method development and training for utilities to utilize in monitoring for and responding to contaminants of concern or security related incidents.

2.8.3. Laboratory Analysis Coordination and Support. Support coordination and distribution of samples and the tracking of collected samples throughout the entire analytical and data reporting process. Coordinate laboratory analyses and associated data, including team subcontractor effort and/or effort performed by analytical laboratories from national listings of pre-qualified, specialized laboratories as identified within the work assignment. Provide

laboratory support, including laboratory preparedness studies related to contaminants of concern, laboratory partnerships and data sharing (including Informational Technology structure necessary to facilitate data transfer amongst the laboratory/water sector) to effect the most rapid contaminant identification possible, development of protocols, developing and providing Proficiency Testing (PT) samples, and conducting laboratory reviews and audits. Support development, testing, and implementation of standard formats for transmission of laboratory related field sample information from the field to the laboratory.

2.8.4. Laboratory Documentation, Contaminant Selection, and QA Support. Support data review for completeness, compliance with quality assurance/quality control procedures, and other reporting requirements as defined by the Agency. Provide technical support during the preparation, evaluation, or revision of procedures for selecting pollutants-of-concern in water media, including a procedure for establishing the priority of the pollutants -of-concern, and document the methodology, assumptions, and rationales for the approaches. EPA will make a final decision on a procedure and the evaluation of a pollutant based on the appropriate technical information and Agency policy.

2.9. Detection/Identification/Decontamination Initiatives. Develop guidance, standards, and techniques for detection, quantification, inactivation, decontamination, and disposal of contaminants and/or contaminated materials and equipment. Support review of and updates to EPA priority water contaminant lists, and data on contaminant properties as knowledge gaps are filled. Support research, development, testing, training, and communication/implementation of enhanced methods for detection, identification, treatment, and containment of biological, radiological, and chemical warfare agents, or bulk industrial chemicals utilized as harmful agents. Support information collection, analysis, and compilation of existing analytical instrumentation and methodologies for their applicability to water security priorities. Support development of a comprehensive understanding and definition of analysis goals, (such as data quality objectives) for contamination events. Support implementation of decontamination strategy developed for the water sector, including guidance development relative to collection and disposal of decontaminated material/wastewater. Develop guidelines for safe and effective analysis, treatment, collection, neutralization, and disposal of decontaminated water and water infrastructure, including byproducts that may result from various alternatives. Perform and update economic and life-cycle analyses of detection, decontamination, containment, and disposal technologies. Coordinate sampling and analysis from contaminated sites and support evaluation and assessments of decontamination/containment/disposal processes. Provide technical support and training for initiatives for decontamination of equipment, buildings, outdoor areas, and agricultural sites. Support evaluation of “unattended operations” and how they can be protected from physical, cyber, weather change, and contamination threats and attacks. Support evaluation of intentionally introduced biological, chemical, or radiological contaminants on sewage sludge and other residuals associated with wastewater treatment. Provide technical support for the development and application of innovative methods to monitor the progress of decontamination and disposal activities.

2.10. Climate Change Initiatives. Provide review, analysis, and technical assistance related to the array of climate change impacts on the nation’s water utilities, and the adaptation countermeasures which utilities could undertake to address these potential impacts. Support the

dissemination of guidance and information related to the understanding of climate change impacts and adaptation measures within the water sector. Support incorporation of climate change impacts into existing risk assessment tools, and coordinating outreach and forums with stakeholders related to the climate change impact. Develop scenarios for tabletop exercise tools or other outreach trainings and workshops related to climate change. Support the investigation of the viability of onsite electrical generation with unconventional fuels and the review of potential funding opportunities within the governmental arena for supporting response and mitigation actions related to climate change impacts.

2.11. Technical Support for Contamination Warning Systems and Distribution System

Monitoring. Support evaluation and technical support of contamination warning system and distribution system monitoring efforts at drinking water facilities, and development of guidance related to those systems. Assist the EPA in developing materials and technology transfer for stakeholder outreach and communication in support of the Water Security initiative project, or for similar endeavors at water utilities. Support efforts related to detecting contamination incidents as well as improving the day-to-day operation of drinking water systems. Provide technical assistance in the development of guidance on the design, implementation, and operation of contamination warning systems for use by all drinking water systems in the United States. Provide technical support in system engineering, sampling and analysis, water quality monitoring, consumer complaint surveillance, enhanced security monitoring, public health surveillance, and consequence management as it relates to contamination warning systems and distribution system monitoring.

Support the development, implementation, and evaluation of consequence management plans (CMP) for water utilities. The CMP defines roles, responsibilities, and actions when a contamination incident is deemed “possible”, as determined through initial trigger validation procedures within each of the monitoring and surveillance components. Consequence management (CM) involves gathering additional incident information to determine the credibility of the incident, while also specifying response actions to protect public health and minimize damage to the system, such as isolation of contaminated water, public notification, water use restrictions, and public health intervention.

Additional related activities may include technical support related to laboratory capability and capacity issues, Water/Wastewater Area Response Network (WARN) programs, online water quality monitoring (including event detection and modeling) and program management. The contractor shall stay current and may need to provide technical input or summary of results of ongoing, relevant research in the technical areas supporting the contamination warning system project, particularly research in the areas of monitoring and detection, analytical methods, field testing, and event detection. Collaborate and coordinate communications with utilities, laboratories, local public health departments, local emergency management organizations, and other key stakeholders to implement the contamination warning system.

2.12. Pandemic Illness Initiatives. Support DHS in developing sector-specific pandemic guidance for the nation’s critical water infrastructure. Provide water sector input on pandemic vaccine and antiviral prioritization guidance. Develop tools that will help the water sector plan and prepare for a pandemic illness outbreak. Provide information to the water sector about

pandemic illnesses as they relates to the water sector. Engage in discussions with the water sector about sector needs and capabilities during a pandemic illness outbreak. Continue to meet Agency obligations in assisting water sector utilities during a pandemic illness outbreak when social distancing and other control mechanisms may be utilized.

2.13. Chemical Security Responsibilities Provide support for emerging requirements and roles for the EPA consistent with Congressional or Administration actions relative to the Chemical Facilities Anti-Terrorism Standards (CFATS) . If necessary, support development of a regulatory program for addressing chemical security in the water sector (drinking water and wastewater facilities). Provide assistance in reviews of water sector submissions pertinent to the CFATS process, including top screen analysis, site vulnerability assessments, site specific plans, and other applicable portions of CFATS. The number of water utilities which would trigger the screening threshold quantity of chemicals of concern and therefore would need to complete a top screen, the first step in the CFATS process is not known, but may be of a magnitude of 9,000 to 12,000 water systems, with about 5,000 utilities possibly covered under the CFATS (therefore needing to complete a vulnerability assessment and site specific plan). Provide assistance in information analysis and gathering, to ensure the Agency stays apprized of chemical security developments within the water sector.

2.14. Information Security, Compilation, and Coordination. Develop and revise criteria and guidance for handling and sharing sensitive information with other agencies and the public. Develop and disseminate surveillance technologies, analytical methods, and monitoring initiatives through a sharing framework between Federal, state, tribal, water utilities, and the public when needed. Support coordination of efforts within the Agency and externally in the event of, and/or in preparation for, a threat to water security. Develop, revise and maintain new technologies for enhancing communications during incidents. Develop, maintain and revise as necessary internal and external incident communications protocols. Provide training as necessary on communication initiatives. Develop and maintain secure web interfaces and communication processes, including secure database and internet connections. Support application development to cross operating system platforms.

2.15. Technology Transfer and Document Support. Support literature searches, option papers, reports, summaries, white papers, or other deliverables identified in work assignments, and related to this PWS. Review technical publications and innovative methods for data relative to detection, identification, containment, decontamination, and disposal for specific and/or new contaminants, and update data bases or summaries as necessary with information collected. Coordinate and facilitate information exchange, meetings, and workshops with identified partners, technical experts, or other identified audiences. Support review and verification of secondary and primary data. Disseminate research results and other security related information through conferences, meetings, and technical distribution means. Develop, edit, and update as necessary bulletins, advisories, reports, guidance documents, fact sheets, and other outreach materials related to the subject matter of this PWS scope. Provide program planning to support scientific workshops, meetings, trainings, and conferences; logistical support; facilitation; and technology transfer activities to inform and educate audiences in accordance with issued work assignments. Provide quality enhancement of technical documents, including preparing documents for multimedia usage (scan and format), editing for readability, utilizing clear and

concise language, and targeting materials for the appropriate audience.

2.16. Program Management Support. Support, assess, summarize, and provide reports related to status, strategic planning, cost/benefit and/or economic impact analysis, threat response options, and risk analysis for water sector security initiatives. Coordinate peer review of subject matter related to this PWS. Coordinate and facilitate technical expert reviews for projects such as, but not limited to, draft analytical methods and protocols concerning contaminants of concern. Provide cost/benefit analysis, statistical or survey support, risk assessment support, docket support, internal mission specific program evaluations and reviews, ICR preparation support (Information Collection Request) and economic impact analysis as necessary to support decision making by the Agency, relative to the scope of the PWS. Provide in house QA/QC technical editing and reviewing of any deliverables specified in work assignments. Support analyzing, reviewing, responding to and reporting on applicability of various legal requirements to security concerns, such as release of security type information (such as generated in sanitary surveys) relative to the Freedom of Information Act (FOIA) laws.

2.17. Technology Initiatives. Provide technology development, testing, and training to enhance the capability for improving and protecting the water sector and other infrastructure. Develop and implement pilot testing programs in support of innovative options relative to PWS requirements. Support development, assessment, and tracking of new technologies, including nanotechnology, for sampling and analysis, monitoring, identification, decontaminating, and risk assessment, relative to protecting the water sector and national infrastructure.

2.18 Sector-Specific Agency Responsibilities and National Infrastructure Protection Plan Implementation. As the Sector-Specific Agency (SSA) for the Water Sector, EPA takes the lead for and aligns all national and Water Sector strategic planning and program management efforts, and provides national leadership in developing and promoting security programs that enhance the sector's all-hazards approach to prevent, detect, respond to, and recover from potential terrorist attacks, other intentional acts, natural disasters, and other hazards.

Support meeting the Agency's responsibility as the SSA for the Water Sector including but not limited to: (1) collaborating with all relevant Federal departments and agencies, State and local governments, and the private sector; (2) conducting or facilitating vulnerability assessments of the sector; and (3) encouraging risk management strategies to protect against and mitigate the effects of all-hazards attacks against CI/KR. Collaborate with sector security partners and supporting sector-coordinating mechanisms to: (1) identify, prioritize, and coordinate protection of CI/KR; and (2) facilitate sharing of information and physical and cyber threats, vulnerabilities, incidents, potential protective measures, and best practices.

To implement its requirements under HSPD-7, the DHS collaborated with all SSAs and Water Sector security partners to develop the NIPP. Support responsibilities of EPA under NIPP framework by: (1) supporting NIPP concepts, (2) coordinating funding and implementation programs that enhance CI/KR protection, (3) coordinating development of the SSP in collaboration with sector security partners, (4) undertaking measures outlined in the NIPP Implementation Initiatives and Actions matrix, (5) developing and maintaining partnerships with security partners, and (6) protecting critical information according to authorities and guidelines.

Support coordination and collaboration around these NIPP-related requirements with Federal, State, tribal, and local government partners, national and State associations, and WSCC and GCC.

Support implementation of the NIPP partnership model to implement the Water Sector's security goals and objectives. Support using this partnership model to develop and refine protective programs to better prepare utilities to prevent, detect, respond to, and recover from terrorist attacks, other intentional acts, natural disasters, and other hazards.

The anticipated work to be assigned to the contractor in any of the program areas is illustrated in the following general work requirements applicable to the PWS as referenced below.

3. GENERAL WORK REQUIREMENTS

3.1 General Tasks

3.1.1 Furnishing Facilities, Materials, Equipment, Expertise, Etc. The contractor shall furnish all facilities, materials, equipment, computing systems, and necessary professional, technical, scientific, and support personnel in support of the effort in this PWS, and as further described by specific work assignments in accordance with the contract schedule. The initial submission of all documents shall be in draft form (either paper or electronic as defined in the individual work assignment) for EPA review and comment. Required revisions will be provided to the contractor by EPA for incorporation into a final document.

3.1.2 Program Manager. The contractor shall identify only one individual to serve as the Program Manager, and EPA anticipates more than one individual shall be proposed to serve as Deputy Program Managers for this contract. The Program Manager shall be the main point of contact for the contract; shall be responsible for the performance of work under this contract, and, along with each of the Deputy Program Managers, shall be designated as a key person in accordance with the Key Personnel clause at EPAAR 1552.237-72.

3.1.3 Standard Software. The contractor shall develop documents and databases using EPA standard and approved software (e.g., Microsoft Word, Internet Explorer, Access, Excel, and Lotus Notes) unless specifically requested to do otherwise in a work assignment. Software documentation for all contractor-developed or non-standard programs and models shall be accessible to the Work Assignment Manager (WAM) and other persons authorized by the EPA Project Officer (PO). Linkages between health and environmental data sources and EPA access portals will support flows, analysis, and tools necessary to monitor and respond to incidents and threats. The contractor shall support development and maintenance of secure portals, web information resources and computer linkages.

3.1.4. Laboratory Support Capabilities. To support the Agency requirements related to water sector security, at times the contractor may need to coordinate the services of an appropriately equipped lab that can analyze pollutants of concern (such as pesticides, biologic, radiological, and chemical warfare agents, or bulk industrial chemicals utilized as harmful agents) using

appropriate methods as specified in a work assignment. The contractor shall have an established plan in place to coordinate appropriate laboratory services when necessary, to access the facilities, equipment, and scientific expertise needed to conduct laboratory and field studies on presence and effects of chemicals, biological agents, radiologicals, pesticides, and other pollutants of concern, and to provide effort including developing assessments, criteria, and bioassessments. The contractor shall be capable of providing quantitative as well as qualitative review of analytical data generated from the analytical laboratories, with emphasis on quality control. For work assignments that require environmental measurements (field or lab), the contractor shall prepare a project-specific Quality Assurance Project Plan (SQAPP). For work assignments that use secondary or third party data, the contractor shall have in place a Quality Management Plan (QMP) for the contract. The QMP shall be a separate section in the contractor's proposal, and shall be prepared in accordance with the clause "Higher Level Contract Quality Requirement" in Section E of the contract.

3.1.5. Quick Response. The contractor shall provide information and expertise that will be used by EPA for quick responses and analyses of options, issues, and policy decisions as they relate to the tasks in this performance work statement. Quick responses are those that require completion in one to seven days or as specified in a work assignment. Some quick response work assignments may require effort within a 24 hour period. EPA will review the results of all contractor analyses, and make a final decision with regard to program objectives and policy decisions.

3.1.6 Required Expertise. The contractor shall provide, or have access to, senior technical experts in disciplines required to support this performance work statement, to include, but not be limited to environmental engineering (including wastewater and drinking water), toxicology, microbiology, environmental science, security management and planning, data base development and manipulation, toxicology, health science, emergency response planning, facilitation, training, chemistry, and strategic planning. The contractor shall be familiar with and able to work with the SCADA (Supervisory Control and Data Acquisition) system.

3.1.7. Security Clearances. The contractor shall have a successful process for securing secret and top secret clearances for personnel. The National Security Industrial Program Operating Manual (NISPOM) should be referred to for the processing of contractor clearances (www.dss.mil/isec/nispom.htm). The contractor shall have in place no later than 30 days after contract award, and maintain during contract performance, adequate personnel distributed throughout the disciplines required for contract performance, with secret and top secret clearances. The securing of these clearances is considered a responsibility of the contractor prior to, and during, contract performance.

3.1.8. Administrative Acts. The contractor shall comply with the requirements for studies and rule making records in the Administrative Procedures Act, the Paperwork Reduction Act, the Clean Water Act, OMB Circular A-130 for management of Federal Information Resources, the Federal Rules of Appellate Procedure (Rules 16 and 17, 28 U.S. C. A.), EPA Docket Policy and Records Management Policy (see Directives 2100 and 2160), Information Collection Request (ICR) requirements, and any other appropriate authority.

3.1.9. Regulatory, Policy, Strategy and Guidance Development Support. The contractor shall provide multi-disciplinary expertise for technical and administrative tasks related to legislative, regulatory, policy, strategy, and guidance development specific to the program areas outlined in the performance work statement. This support shall primarily consist of collecting, compiling, analyzing, and presenting data and information that the EPA may use in the regulatory and decision making processes. Typical outputs from this support may include technical reports, papers, and studies. The contractor shall collect, compile, analyze and provide data and information in support of EPA's preparation of reports to Congress. The contractor shall perform the specific tasks in the performance work statement in accordance with the appropriate EPA risk assessment guidance and science policy guidance, as specified in a work assignment. Support in developing guidance may include the use of new technologies or the modification of existing test methods to identify and develop protocols for addressing, quantifying, tracking and neutralizing contaminants of concern.

3.1.10. Foreign Language Translation. The contractor shall provide, when included in a work assignment, a complete and accurate translation of foreign language articles cited in a criteria document or technical guidance document. The contractor may have to provide translation support during international meetings, seminars, or technical transfer activities. Translations shall be performed by experienced scientific translators well-versed in chemical, toxicological, biological, or microbiological terminology, as appropriate. The contractor shall insure that there are not terminology or language usage ambiguities that make interpretation or analysis of the findings difficult. No translations shall be made without the prior written approval of the Project Officer.

3.1.11. Administrative Record Support. The contractor shall provide data and documentation to be used by EPA in the analysis of technical issues and options for proposed and final regulation, draft and final criteria, and other publications, as specified in a work assignment. Deliverables under this task include data summaries, technical reports, option papers, issue papers, and public and confidential records and files. The contractor shall describe and document the data gathering activities; display, characterize, and interpret the data and information collected; obtain copies of any references used; and describe all methodologies used. Written reports and corresponding records and files shall be prepared, organized, indexed, and cross-referenced in an administrative record for a proposed or final regulation, draft or final criteria, or other publication so that the analyses and conclusions can be reproduced based on the information in the administrative record.

3.1.12. Rulemaking, Guidance, and Technical Publication Support. The contractor shall index and summarize public and peer review comments on proposed regulations, guidance, and technical documents. Using information provided by EPA (e.g., typically public comments submitted in response to a proposed regulation, guidance, information collection request, or draft technical document publication), the contractor shall prepare an index of issues in the information provided by EPA, and cross reference those issues to the comments. For technical issues assigned by the WAM, the contractor shall, based on knowledge of the appropriate rulemaking, guidance, or draft technical publication, prepare draft technical responses to the issues in the comments including all relevant citations to the administrative record. EPA will review the draft technical responses, and prepare the final responses to the comments. The

contractor will compile final responses into a responsiveness document.

3.1.13 Outreach Materials. The contractor shall develop outreach materials in support of the tasks in this performance work statement. Those materials may include, but are not limited to, brochures, presentation boards, workbooks, camera-ready copy, talking points, electronic slide shows, fact sheets, pamphlets, posters, videos, INTERNET layouts, webcasts and websites, and models. The materials shall be developed for use in media events (e.g., press releases), training, presentations, meetings, and briefings. All materials shall be provided in accordance with the limitations set forth in the Section H clause titled "PRINTING (EPAAR 1552.208-70.) The contractor shall provide a draft of all materials for approval by the WAM, and shall prepare the final materials based on the WAM's comments on the draft materials. The contractor shall be able to translate complex scientific information into simplified, accurate public communication information, and shall also have the capability to conduct mass mailings, and mass e-mails as directed in work assignments. For print products, the contractor shall provide a camera-ready copy and a disk copy in a disk format that enables the material to be loaded onto the INTERNET. This task shall only be done in direct support of the technical requirements in this performance work statement.

3.1.14 Workshop Support. The contractor shall provide developmental, facilitation, training, and logistical support in arranging workshops, symposiums, conferences, training sessions, and public meetings, and in obtaining appropriate individuals to address various issues. Meeting support shall be limited in scope, and shall cover only those meetings required to address the requirements in this performance work statement. The contractor shall arrange travel only in accordance with the authority and limitations in the Section H clause titled "APPROVAL OF CONTRACTOR TRAVEL" (i.e., use of contract funds to reimburse travel is strictly limited to logistical support for speakers, scientists, and experts who contribute directly to the requirements specified in a work assignment issued under this PWS. The contractor shall support EPA by:

- (a) Developing and providing information for meeting agendas, including typing the agendas;
- (b) Preparing drafts of technical information for use in preparing briefing materials;
- (c) Identifying and inviting speakers and experts to participate in a workshop;
- (d) Arranging for meeting space when Government space is not available;
- (e) Arranging for the appropriate audio-visual equipment;
- (f) Providing advance announcements, registration support, on-site technical support, visual aid preparation, logistical support, case study preparation, and interactive and role-playing activity development;
- (g) Facilitating and participating in technical panel discussions;
- (h) Presenting technical papers; and
- (i) Preparing a report of the meeting, including the meeting results, for approval by the WAM.

3.1.15 Third-Party Data Review. The contractor will provide technical expertise to evaluate the quality of third- party data (journals, grey literature, non-EPA databases, etc.), including contacting authors if required, to obtain additional quality information. Quality will be compared to EPA and programmatic guidance for acceptability. Contractor will also review and verify primary and secondary data if requested by work assignment.

3.1.16. Peer Review. The contractor shall perform technical peer review of technical

documents and materials related to the topics described by the scope of work in this PWS, that were prepared by entities other than the contractor or the contractor's team members and consultants. No peer review or review of technical or analytical documents shall be undertaken by the contractor on documents, data, or studies contributed to, or completed by the contractor, contractor's team members or consultants. The number of reviewers required and their qualifications will be specified in work assignments; these qualifications may vary with the technical nature of the product. It is the responsibility of the contractor to ensure that all peer reviews are conducted in a manner to avoid all actual, potential, or apparent conflicts of interest, including the submittal of conflict of interest certifications consistent with contract requirements. When conducting peer reviews, the contractor shall follow EPA's Science Policy Council Handbook on Peer Review, (EPA 100-B-001, December 2000, 2nd Edition) or the most recent rendition of that handbook. The Handbook can be found electronically at the EPA website, <http://www.epa.gov/OSA/spc/htm/prhandbk.pdf>. The contractor shall submit peer review written comments, with all supporting materials, such as additional references or suggested approaches, to the EPA PO/WAM.

3.1.17. Database Support. The contractor shall develop and maintain databases to efficiently and systematically gather, store, and manipulate a variety of technical, environmental, statistical, scientific, security, and laboratory information. Technical support shall include but is not limited to statistical analysis, testing of functionality, retrieval of data, reporting from data, integration and normalization of information from different data bases and GIS, tracking and maintenance of information, reporting of results, training on database usage, and incorporating data and website security measures to maintain the integrity and security of the data. Data management support shall also include ability to create an electronic data deliverable (EDD) and installing EDD where needed. Database support also includes the preparation of appropriate user manuals. Database support shall be keyed to be user friendly to the audience designated in work assignments.

3.1.18. Technology Innovation and Development. The contractor shall support EPA by conducting research, field, pilot and bench-scale evaluations, and development initiatives in support of emerging technology related to climate change mitigation efforts, communication, surveillance, nanotechnology, sampling and analysis, monitoring, identification, decontaminating, and risk assessment of contaminants of concern, in actions supporting water sector and infrastructure protection, readiness and emergency response actions. Support to EPA's activities under this contract may involve field evaluations; data collection and review (including statistical assessment); bench and pilot-scale evaluations to further elucidate process capabilities and engineering parameters; treatability testing to verify compatibility of the technology with the contaminant or waste type; technology demonstrations, document and videotape preparation; and technology transfer activities.

3.1.19. Survey/Statistical Requirements. The contractor shall design and conduct surveys and provide data analysis. Consistent with the Paperwork Reduction Act, Executive Order 12291, and Office of Management and Budget requirements, the Contractor shall design draft survey instruments for collection of technical, economic, and financial data necessary to assist EPA in its guidance development, and program and policy implementation. The contractor shall use statistical procedures and methodologies in analyzing and interpreting data from chemical

analyses of environmental samples, wastewater treatment system performance data, process and production evaluations, chemical analytical methods evaluations, surveys, and other sources. The types of methodologies shall include, but not be limited to: nonparametric statistics, multivariate analysis, regression analysis, maximum likelihood estimation, analysis of variance, time series, categorical data analysis, survey statistics, inferential statistics, spatial analysis, survival analysis, and graphical analysis. The contractor shall clearly specify the methods, procedures, assumptions, relevant citations, data sources, and data that support the results and any recommendations. The contractor also shall document alternative methods, procedures, and assumptions that the contractor considered in the statistical analysis. EPA will review all outputs and provide agency input/changes. The contractor shall incorporate the changes specified by EPA.

3.1.20. Health and Safety Requirements. The contractor shall plan and implement health and safety requirements for contractor personnel engaged in the contract activities. The contractor shall support health and safety requirements related to the program scope of work requirements, such as implementing appropriated procedures to protect personnel in facilities where decontamination activities are being conducted.

3.2. Information Technology Requirements

All work performed under this contract shall adhere to clause EPAAR 1552.211-79 “Compliance with EPA Policies for Information Resources Management,” which requires the adherence to all Agency directives for performance of any IRM related work.

IRM Policies, Standards and Procedures [<http://www.epa.gov/irmpoli8/>]. The 2100 Series (2100-2199) of the Agency's Directive System contains the majority of the Agency's IRM policies, standards and procedures.

Information Technology Architecture Road Map (ITARM) [<http://www.epa.gov/epahome/hi-watersecurity/ITRoadMap>]. For development/enhancement of information resources, contractor must adhere to all technical specifications listed in the ITARM.

Environmental Information Management System (EIMS)[<http://www.epa.gov/eims>]. A contractor developing or enhancing an information resource shall first conduct a thorough search of existing information resources, through means such as EIMS, to ensure development/enhancement of information resources does not duplicate existing information resources. If duplication is determined, contractor shall consult with EPA project officer to ensure that existing information resources are optimally utilized in conjunction with information resource being developed/enhanced by the contractor. For any development/enhancement of information resources, contractor shall work with EPA on inserting/updating resource description information in EIMS.

Data Standards and Environmental Data Registry (EDR)[<http://www.epa.gov/edr>]. Any development/enhancement of information resources¹, as well as any data products flowing to or

¹ Information Resources include systems, databases, and models/web applications that

from EPA information resources, must adhere to data standards detailed in the EDR.

Monitoring information in STORET [<http://www.epa.gov/STORET>]. Any ambient water quality, chemical, physical, biological, sediment, tissue and ecological monitoring data collected as part of a contract or grant or cooperative agreement activities must be entered into STORET or made available to EPA in a STORET compatible format. National Hydrography Dataset (NHD) Indexing [<http://www.epa.gov/waters>]. Data related to OW programs that is required to meet the EPA Latitude/Longitude Standard shall also be indexed to the NHD, using EPA OW standard formats available on the WATERS website. Exceptions include groundwater data and data that is related to points greater than two miles from the United States coastline. The WATERS website describes EPA tools and training that are available for NHD indexing.

3.3. Environmental Justice

Executive Order 12898 (Environmental Justice) directs federal agencies to focus on minority and low-income populations in implementing their programs, policies, and activities. Consistent with the Agency's continuing commitment to environmental justice and for treatment of all people, the contractor shall notify the EPA project officer of minority and low-income populations, as well as populations with differential patterns of subsistence consumption of fish and wildlife, likely to be affected by a program, policy, or activity associated with work done under the contract and, when directed by EPA, shall identify any disproportionately high and adverse human health or environmental effects of the program, policy or activity of concern on these populations.

3.4. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

utilize information in OW systems and databases.