



Quality Management Plan

Revision No. 7

**Florida Department of Environmental Protection
Tallahassee, Florida**

February 2014

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APPROVALS

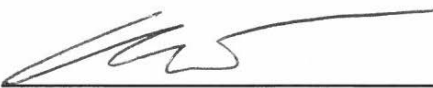
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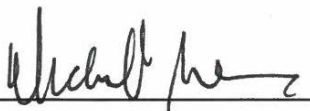
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QUALITY MANAGEMENT PLAN IDENTIFICATION FORM

Document Title: Quality Management Plan for the Water, Waste and Land & Recreation Programs of the Florida Department of Environmental Protection

Organization Title: Florida Department of Environmental Protection (DEP)

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Plan Coverage: This Quality Management Plan (QMP) addresses all monitoring and measurement activities mandated through EPA regulations and memoranda, and is applicable to all DEP programs, except those managed by the Air Resource Management Division. The purpose of the QMP is to assure that environmental data (in part or in whole) generated using funds from EPA, in part or in whole, are adequate to support scientifically valid environmental decisions. It applies to all DEP activities (*e.g.*, monitoring programs, environmental technologies) whose purpose is to prevent pollutants from entering the environment or to remove pollutants from the environment. Generally, EPA funding is administered via grants, contracts or cooperative agreements with EPA. A list of DEP programs receiving EPA funding is included in the folder of support documents accompanying the QMP.

1. INTRODUCTION

It is the policy of the United States Environmental Protection Agency (EPA)¹ that all environmental programs conducted by, or on behalf of, the EPA shall establish and implement effective quality systems to support the scientific and legal defensibility of those programs. A quality system is a structured and documented management system that functions to monitor, evaluate, and improve the quality assurance (QA) and quality control processes within an organization. Key components of the system are the QA policies and procedures that describe the processes for ensuring that work, products or services satisfy the stated expectations or specifications. Both the EPA and any organizations conducting programs on the EPA's behalf must document their quality systems in an approved Quality Management Plan (QMP).

This document is the QMP for the Florida Department of Environmental Protection (DEP or Department²). The purpose of this plan is to document the Department's quality systems and to provide a blueprint for how the Department will plan, implement, and assess its quality systems for the environmental work performed on behalf of, or funded by, the EPA.

The DEP is Florida's principal environmental and natural resources agency. The Department is involved in a wide range of environmental protection and management activities. Many of the QA policies, procedures and criteria identified in this QMP are applicable to all DEP units generating or using environmental data (see section 3.2, Organizational Units). However, this document emphasizes details of the quality systems currently in place for those programmatic activities related or of concern to the EPA. This includes programs generating environmental data for EPA-required activities conducted through monitoring programs, grants, contracts and cooperative agreements. In addition, the plan covers environmental technology funded by the EPA, in part or in whole, whose purpose is to prevent pollutants from entering the environment or to remove pollutants from the environment.

In 1998, the Florida Legislature granted the Department statutory authority to "establish, by rule, appropriate quality assurance requirements for environmental data submitted to the Department and the criteria by which environmental data may be rejected by the Department" ([Chapter 403.0623, Florida Statutes](#)). The 2008 legislature modified the statute to allow the Department to further "adopt and enforce rules to establish data quality objectives and specify requirements for training of laboratory and field staff, sample collection methodology, proficiency testing, and audits of laboratory and field sampling activities." From this statutory authority, the Department structured its QA Program for water, waste and land and recreation activities. The minimum QA requirements described in Chapter 62-160, Florida Administrative Code (F.A.C.), support the QA Program.

¹ EPA Order C10 2105.0, *Policy and Program Requirements for the Mandatory Agency-wide Quality System*, U.S. Environmental Protection Agency, Washington, D.C. (May 5, 2000).

² For the purposes of this document "DEP" or "the Department" refers to all water, waste and land and recreation programs producing or consuming environmental data, and excludes the Division of Air Resource Management.

2. DEPARTMENT QUALITY ASSURANCE POLICY AND GOALS

2.1 Department Quality Assurance Policy

The Department relies on environmental data from a variety of sources to make decisions to protect the health of the public and the environment. To ensure that these decisions are based on reliable data, the DEP requires that programs have appropriate quality systems in place. All Department programs that generate or use environmental data are subject to data quality management criteria, as specified in [Quality Plans](#) for the program or work unit.

Each quality system will be consistent with the QMP and in order to provide reasonable assurance that all environmental data are usable for their intended purpose, are scientifically valid, of known precision and accuracy, complete, representative, comparable, and where appropriate, legally defensible.

A QMP is required for the majority of the work units that are responsible for administering DEP's regulatory programs, which include the following:

- Division of Water Resource Management
 - Aquifer Protection
 - Beaches, Inlets and Ports
 - Beaches Field Services
 - Beaches, Mining and Environmental Resources Permitting Support
 - Domestic and Industrial Wastewater
 - Engineering, Hydrology and Geology
 - Environmental Resources Permitting
 - Mining and Mitigation
 - Source and Drinking Water
 - Stormwater
 - Water Compliance Assurance
- Division of Environmental Assessment and Restoration
 - Bureau of Laboratories
 - Water Quality Assessment
 - Watershed Evaluation and TMDL
 - Water Quality Restoration
 - Water Quality Standards
- Division of Waste Management
 - Hazardous Waste
- Office of Ecosystem Projects
- Florida Coastal Office

Revision and review of the DEP QMP is organized by the DEP QA Coordinator (QAC) in collaboration with the Department's designated QA Officers (QAOs). Typically, program-level management and technical staff review relevant QMP text and provide comments and information concerning appropriate revisions to the QMP. Further management review may occur at the Division or District Director level. The DEP QAC compiles and edits the submissions received from the DEP QAOs, assembles the revised QMP, and routes the document to senior DEP management for review, final editing and signatures. Department work units may differ slightly in carrying out review processes, and procedural details for QA reviews are generally described in the program or work unit [Quality Plan](#). For example, in the DEP South District office, QMP revision information is drafted for review by staff who have been designated as subject matter experts for each of the program areas. Further review is then provided by the Administrator of the Engineering and Permitting Section, the Assistant Director/Compliance Assistance Program Administrator, and the District Director. In the Northeast District, review is conducted by applicable program managers, program administrators, and the Assistant District Director. In the Central District Office, QMP revision information is prepared by the program QAOs and submitted to the District QA Coordinator for additional routing and review.

Decisions about data usability are made at the program level by the appropriate management and technical staff. Each DEP program evaluates data according to data quality objectives (DQOs) established by the program. The Department's designated QAOs serve as the point of contact for implementation of each program's quality system. The DEP QAC works with the DEP QAOs to ensure that the Department's overall quality system requirements are met. This distributed QA function is described in the [DEP QA Directive](#). Each program or work unit Quality Plan provides further details about how this function is executed at the program or work unit level, and describes procedures and criteria for data review and usability assessment. Data reviewers will follow the guidelines described in the document titled [Process for Assessing Data Usability](#), DEP-EA-001/07.

Interpretations of quality system requirements, implementation of corrective actions, and resolution of disputes about requirements and procedures, results of audits, and corrective action responses are handled at the program and work unit level whenever possible. Program-level technical staff and QAOs often possess the expertise to evaluate whether specific technical and QA requirements of the program for the use of environmental data have been satisfied. Details for these processes differ between programs and work units, and are specified in program or work unit Quality Plans.

Lead personnel and staff with final resolution authority for interpretations of requirements, implementation of corrective actions, and resolution of disputes will vary depending on the context and the organizational level within DEP in which a question, corrective procedure, dispute, or other QA issue has arisen. The process by which a given item is communicated, investigated, and resolved can largely involve "informal" exchanges with emails and phone calls, for example, until or unless more official correspondence and documentation is required. DEP district and Tallahassee project and permit managers may often be the first point of contact and lead person for initiating the resolution process. By consulting appropriate technical staff and supervisors within their work units or elsewhere in the Department who possess relevant knowledge or expertise about an issue, these frontline DEP staff may be able to quickly resolve the issue. QA and QC questions about chemistry, microbiology and other bioassessment data are often referred to the DEP QAC or the DEP laboratory staff for follow-up. Where required as part of the resolution, official letters or other standard documents may be written or completed, and signed by staff with delegated authority for signature. If necessary for permits, administrative orders and other documented changes to permits may be executed.

As an example, the DEP [South District Quality Plan](#) indicates that procedures are implemented to assure early and effective corrective action is taken when data quality falls outside established DQOs, data acceptance criteria, or QA requirements. Any problems are listed in letters addressed to the responsible party. Depending on the severity of the problem, data may be rejected. When requested, the QAC or the appropriate QAO provides feedback and suggestions for corrective actions.

Internal to DEP, the process for resolving disputes or providing interpretations and clarifications for QA procedures and requirements, including those included or proposed in DEP rules, usually starts with initial inquiries by relevant technical staff. The DEP QAC may assist with the process as described below. Technical staff and work unit QA Officers coordinate with the DEP QAC as necessary to resolve identified issues and incorporate feedback into any interpretations or revisions to QA procedures, requirements and policies.

DEP holds public workshops and invites stakeholder comments associated with specific DEP rules according to established statutory protocols (Chapter 120, Florida Statutes). These forums provide a process for input by persons affected by the relevant regulation, and may facilitate the resolution of differences and provide clarifications about policy and procedure associated with the execution of rule requirements. Typically, technical and management staff within the DEP program that is responsible for administration of the rule holds the authority for resolution of associated issues. For DEP activities specific to rulemaking, where new or revised rules are proposed, public notice is required by statute, and opportunities for clarification and resolution occur at several procedural steps, and can include public hearings. Resolutions as the result of hearings are authorized by designated hearing officers, or for specific rules, by the Florida Environmental Regulation Commission. Legal procedures may also involve litigation before courts of appropriate jurisdiction when DEP rules are challenged.

DEP auditors are typically the lead personnel responsible for the implementation of and resolution of disputes about corrective actions originating from audits of internal or external personnel, procedures and documents associated with a DEP program. Corrective actions may also be identified and initiated by technical staff as the result of routine review and evaluation of environmental data. Designated supervisory staff approve the corrective actions and any associated resolution of issues.

When questions or disputes about the Department-wide QA requirements adopted in the [DEP QA Rule](#) require further interpretation, the DEP QAC will assist program staff in resolving inquiries about applicable issues, such as approved sampling procedures and analytical methods, laboratory certification, documentation and reporting requirements, audits and data validation.

2.2 Department Quality Assurance Goals

Overall DEP quality system management goals and tasks include the following, with responsibilities for QA functions distributed throughout the Department and as specifically indicated below:

QA processes will be designed in the most cost-effective manner without compromising data quality. The Department programs will be adaptively managed to ensure continuous improvement in the quality management system.

- Quality Assurance Officers (QAO) - Each program shall have a designated QAO that coordinates and directs QA activities for the program and provides technical training to staff. This will be accomplished with assistance from the Water Quality Standards

Program (WQSP) within the Division of Environmental Assessment and Restoration (DEAR).

- All individuals with identified QA responsibilities (see 4.1) are expected to be familiar with and understand the principles, policies and procedures discussed in the QMP.
- The WQSP is responsible for coordinating the development of data quality policies for activities involving water, waste and land and recreation programs in accordance with the DEP [QA Rule](#), Chapter 62-160, F.A.C. The WQSP works with the other organizational units throughout the Department to facilitate and guide this effort. In addition, the WQSP develops QA tools and provides guidance and training for Department staff.
- For any monitoring and measurement activities required by EPA regulations, grants, contracts and cooperative agreements, the DEP will follow those QA activities specified as part of the conditions of those regulations, grants, contracts and cooperative agreements. Specific procedures required as part of these programs and projects are contained in the associated EPA-DEP agreements.
- If specifically required by agreement with EPA, QA Project Plans (QAPPs) will be prepared in accordance with [Requirements for QA Project Plans](#) (EPA QA/R-5, March 2001). These QAPPs will be reviewed and approved by the appropriate EPA office or the appropriate Department program with delegated review authority.
- DEP program and project managers will be encouraged to use a systematic planning process for all data generated by, or submitted to, the Department. In addition, they will be encouraged to identify appropriate data quality performance criteria (e.g., precision, accuracy, sensitivity, etc.) to facilitate the data assessment processes.
- Data will be validated and assessed for usability in terms of the applicable data quality performance criteria required by the DEP program or specific project. The document, [Process for Assessing Data Usability](#) (DEP-EA 001/07), outlines the general approach and criteria that will be used for typical environmental data evaluations.
- Organizations contracted by the DEP to perform environmental measurements or assessments, or to develop environmental technology, will be required to follow the DEP QMP via specific QA requirements incorporated in contract and grant agreements.
- DEP will coordinate any necessary information exchange with the Florida Department of Health (DoH) to periodically assess the effectiveness of the combined efforts of both agencies to ensure appropriate data quality. The DEP QAC will communicate with the [DoH Environmental Laboratory Certification Program](#) (ELCP) Administrator as needed to resolve issues and ensure alignment of QA policies and procedures between the two agencies. DEP programs will continuously evaluate and improve the effectiveness of their quality systems.
- All other QA requirements are specified in the Department's QA Rule, Chapter 62-160, F.A.C.

2.3 Department Quality Assurance Directive

The Department has promulgated an internal program directive for QA policy, which was signed by the DEP Secretary in September, 2009. The [QA Directive](#) (DEP #972), titled *Quality Assurance Directive for the Collection, Analysis and Interpretation of Environmental Data for the Florida Department of Environmental Protection Water, Waste and Natural Resources*

Programs, outlines the structure for implementation of the DEP QMP, and delineates staff responsibilities for carrying out procedures, developing DQOs, and ensuring data quality at all stages of data use, from generation to archival storage. The directive emphasizes that the DEP QA Program is a distributed function executed by management and technical staff at all levels of the Department. The directive does not apply to the DEP Division of Air Resources Management, which administers a separate QA program.

The Directive cites the specific authorities for the DEP QA Program, which include [Chapter 403.0623, Florida Statutes](#), the QA Rule, [Chapter 62-160, F.A.C.](#), and the QMP submitted to EPA.

The Directive establishes the Department's QA policy for implementing the QA requirements and associated activities deriving from the above authorities. The QA Policy includes ensuring the use of defensible data for decision-making; creating and adaptively managing DEP district- and program-level quality systems; training all staff responsible for every stage of data use; developing DQOs for each DEP program; evaluating the quality of data according to program-specific data quality indicators (DQIs); developing corrective actions for non-conformance issues where DQOs are not met; developing auditing procedures for internal and external generators of environmental data; implementing QA procedures for data base management; and providing an annual QA assessment report to the DEP Secretary.

The Directive assigns responsibilities for carrying out the distributed functions of the DEP QA Program at all levels of the Department. Duties are assigned to Division and District Directors, Program and Section Administrators, designated district and program QAOs, and program-level technical staff.

The Directive assigns unique QA oversight duties to the WQSP including:

- Facilitating communication amongst all DEP QAOs;
- Providing technical resources for assisting DEP staff and external stakeholders with the development of quality systems;
- Developing and maintaining [DEP Standard Operating Procedures](#), which are published as requirements for both DEP staff and external data providers;
- Performing data validations, data usability assessments, project data audits, and sampling performance audits;
- Administering and revising the DEP QA Rule;
- Revising and submitting the QMP;
- Performing quality of science reviews and related training upon the request of DEP programs;
- Coordinating on QA issues with the Florida DoH and [The NELAC Institute](#) (TNI); and,
- Assembling and submitting the annual QA assessment report to the DEP Secretary.

3. DEPARTMENT ORGANIZATION and QUALITY ASSURANCE RESPONSIBILITIES

3.1 General Organization

The Secretary of the DEP, as the Department's senior manager, is responsible for the Department's Quality Programs. The Secretary has also given the WQSP authority to establish policy for data quality issues for activities involving water, waste and land and recreation. The

QAC for these programs is Michael W. Blizzard. The WQSP has also been charged with specific QA oversight responsibilities under the [QA Directive](#) (see 3.2).

The funding for the QA effort within the Department is determined by the individual programs, however the WQSP has specifically allocated funds for auditing, training and other related activities. Costs for travel and laboratory analyses for audits conducted on behalf of a program are normally funded by the program. In addition, many programs also sponsor and fund training activities.

Upper Management (Division Directors and District Directors) have the responsibility of ensuring that the programs under their purview implement a quality system that is consistent with the QMP and support such efforts with funding, staff, and training. The QA Directive also requires directors to designate QAOs, evaluate feedback concerning data quality issues, and review each program's input to the annual [QA report](#) to the DEP Secretary.

Middle Management (Program and Section Administrators) will ensure that a quality system is implemented in conformance with this QMP and the QA Directive. They will:

- Designate QAOs at the request of the Division or District Director.
- Periodically require an evaluation of the effectiveness of QA activities within their program/section in meeting established DQOs.
- Request Quality of Science reviews and/or training from the WQSP.
- Review results of the Quality of Science reviews and audits with designated QAOs.
- Evaluate and implement corrective action measures as recommended by the QAC or QAO when DQOs have not been met.
- Review the section or program input to the annual QA Report to the Secretary, and support recommended improvements in their quality system.
- Be familiar with relevant Department and EPA requirements, rules and statutes, and ensure that all quality documents are consistent with the applicable Federal and State Requirements.

Program staff have the responsibility for:

- Routinely carrying out duties involving data collection, data usability evaluation, data interpretation, and the generation of DEP work products in a manner that ensures scientific defensibility and adherence to DEP rules and policies.
- Evaluating program data using applicable data quality performance criteria, which include DQOs and DQIs established by the program.
- Implementing corrective actions as directed by the QAO.
- Providing feedback to the program QAO for improving the program quality system.
- Understanding and implementing the requirements of the applicable program quality plan and the DEP [QA Rule](#).

QA oversight of the Department's activities is handled by the **Quality Assurance Coordinator** (QAC) with assistance from the program QAOs. The QAC has the overall responsibility for ensuring that the quality systems documented in the QMP meet statutory, contractual and assistance agreement requirements for EPA-derived work. The QAC also oversees the development, implementation, and continued operation of the Department's QA policies, and ensures that the policies and functions described in the DEP QA Directive are implemented. The QAC reports to the Program Administrator of the WQSP, and is responsible for carrying out

the QA oversight duties assigned to the WQSP according to the QA Directive. These duties include:

- Providing leadership, training, and technical assistance for all DEP QA program requirements.
- Developing and maintaining the Department's [Standard Operating Procedures](#) (DEP SOPs) for routine sample collection, field testing, field bioassessments, and laboratory taxonomic identifications. The DEP SOPs are revised concurrently with the DEP QA Rule as necessary to update the SOPs and the Rule with new requirements and information, following required State of Florida rulemaking procedures. Revisions are proposed for public comment approximately every five years or sooner, if necessary.
- Administering and revising the DEP QA Rule, Chapter 62-160, F.A.C.
- Revising and distributing the QMP.
- Ensuring that each agency program has a program-specific Quality Plan.
- Coordinating the efforts of all QAOs by holding regularly scheduled meetings and teleconferences.
- Providing guidance and training to the program QAOs.
- Independently evaluating the effectiveness of the Department's Quality System and initiating corrective actions, where warranted. This includes performing data validations, project data audits, data usability assessments, field and laboratory systems audits, and performance audits of field samplers. The QAC will also oversee Quality of Science reviews for specific DEP programs when requested by the program, or when warranted by specific data quality issues that have been identified by the QAC or other Department staff.
- Serving as a liaison with the Florida [DoH ELCP](#) and [TNI](#) for relevant QA issues.
- Coordinating the preparation of the annual QA report to the DEP Secretary on all QA activities, including recommendations for improving the Department's Quality System.

Each program in DEP has at least one designated **Quality Assurance Officer (QAO)** with the responsibility of ensuring that the QMP is implemented. The QAO has additional responsibilities under the QA Directive. The QAO:

- Is the focal point for QA questions that may arise in the programs for which he/she holds oversight responsibility and provides input on data quality and related technical issues.
- Assists program managers with implementation of the program quality system and staff QA training.
- Is responsible for understanding the contents of the QMP and coordinating the implementation of the program-specific quality plan, consistent with the requirements of the QMP.
- Has the authority to independently assess functions under their purview, evaluate the quality of program environmental data, and provide recommendations to management when improvements or other corrective actions are warranted.
- Ensures that corrective actions approved by management are implemented.
- Coordinates audits of external and internal data generators (laboratory and field-testing data).

- Coordinates performance audits of field samplers.
- Ensures that any specific QA-related requirements arising from EPA delegation grant conditions, contracts, and cooperative agreements are fulfilled.
- Documents program QA activities and provides input to the WQSP for compilation of the annual QA report to the Secretary.

3.2 Organizational Units

The following divisions and organizational units within DEP have QA responsibilities under this QMP. The organization chart for the Department's major organizational units may be found at:

<http://www.dep.state.fl.us/secretary/info/org/default.htm>

Separate document files for organization charts for DEP programs and work units are provided in support of the QMP.

3.2.1 Offices of the Secretary

Office of the Secretary - The DEP Secretary provides direction and leadership to the Department and directly oversees the Chief of Staff, Deputy Secretaries, General Counsel, and Inspector General.

Office of Inspector General - The Office of Inspector General (OIG) provides a central point for coordination of activities that promote accountability, integrity, economy, and efficiency in the Department. The OIG conducts/coordinates audits, investigations, and management reviews, which are designed to prevent and detect fraud and abuse in Department programs and operations. The OIG advises in the development of performance measures, standards, and procedures for the evaluation of programs. The OIG also assesses the reliability and validity of information provided by the Department programs on performance measures and standards.

Office of General Counsel - The Office of General Counsel (OGC) provides legal counsel and represents the Department. The office focuses on Florida's environmental priorities, such as restoring the Everglades; improving air quality; restoring and protecting the water quality in Florida's springs, lakes, rivers and coastal waters; conserving environmentally sensitive lands; and providing citizens and visitors with varied recreational opportunities.

Technology and Information Services

The Office of Technology and Information Services (OTIS) is responsible for the management and security of the systems that provide the agency with information technology (IT) solutions to promote mission success. Responsibilities for OTIS include working closely with the agency's divisions, regulatory districts, and local governments that use regulatory databases. The OTIS provides Application Development, Business Management, Customer and Infrastructure Support, Planning and Governance and Remote Technologies Services.

3.2.2 Deputy Secretaries

Deputy Secretary for Land and Recreation - Provides oversight and leadership to the Divisions of State Lands and Recreation & Parks; and to the Office of Cabinet Affairs.

Deputy Secretary for Water Policy and Ecosystem Restoration – Provides leadership and oversight to the Offices of Water Policy, Ecosystem Projects, and Coastal Projects; the Division of Environmental Assessment and Restoration; and the Florida Water Management Districts.

Deputy Secretary for Regulatory Programs - Provides leadership to the Divisions of Air Resource Management, Water Resource Management, and Waste Management, the Florida Geological Survey, the Office of Emergency Response, and DEP District Offices.

3.2.3 Land and Recreation

Division of State Lands – The Division of State Lands is Florida’s lead agency for environmental management and stewardship, serving as staff to the [Board of Trustees](#) of the Internal Improvement Trust Fund (Governor and Cabinet). The division provides oversight for the management of activities on public lands including lakes, rivers and islands. The division’s Office of Cabinet Affairs (OCA) serves as DEP’s clearinghouse for all cabinet agenda items for presentation to the Governor and Cabinet. The OCA coordinates the preparation of cabinet agenda items pertaining to the acquisition, administration, disposition and use of state lands with the DEP divisions, district offices and water management districts, and provides technical and logistical support to the DEP executive staff, cabinet-level reviews of agenda items and transmittal of these items to the Governor and Cabinet. Serving as a liaison with the Cabinet Offices, the OCA coordinates overall programmatic assignments with the Deputy Secretary of Land and Recreation or other DEP staff as needed.

Division of Recreation and Parks – The Division of Recreation and Parks manages 161 state parks, nine state trails and the Marjorie Harris Carr Cross Florida Greenway. Florida’s state parks encompass 711,215 acres and hosted 21.6 million visitors during the 2012/13 fiscal year, while Florida’s state trails welcomed more than 3.9 million visitors across 74,258 acres. The Division directs the overall development and implementation of comprehensive multipurpose outdoor recreation.

3.2.4 Water Policy and Ecosystem Restoration

Office of Water Policy - Oversees and coordinates with the state’s five regional water management districts (WMDs). Addresses statewide water management issues in coordination with the Governor’s Office, WMDs, and other agencies on issues such as the establishment of minimum flows and levels for surface waters and aquifers, water supply planning and development, and interstate water management issues. Reviews water management district rules for consistency with Florida Water Law. Produces the Florida Water Plan and the Florida Regional Water Supply Plan. Develops and updates the [Water Resource Implementation Rule](#), Chapter 62-40, F.A.C.

Office of Ecosystem Projects - Oversees the South Florida Water Management District’s South Florida Ecosystem restoration efforts. The Office of Ecosystem Projects plays a key role in carrying out the largest environmental restoration project in the world - restoring the Everglades. The office ensures effective implementation of DEP’s policy, programmatic, technical, and regulatory responsibilities under the Everglades Forever Act, the Comprehensive Everglades Restoration Plan, the Northern Everglades and Estuaries Protection Program, and related efforts, including Kissimmee River Restoration, Critical Projects Program, Herbert Hoover Dike Rehabilitation, and Modified Water Deliveries to Everglades National Park. Restoration initiatives are focused on improving water quality and restoring the hydrology and ecology of the Everglades ecosystem, which extends from the Kissimmee Chain of Lakes, to Lake Okeechobee, through the remaining Everglades and on to the waters of the Florida Bay (an area covering 18,000 square miles).

Florida Coastal Office – The Florida Coastal Office protects more than four million acres of natural and cultural resources on state-owned sovereign submerged lands and coastal uplands

through administration of the State's Aquatic Preserves, National Estuarine Research Reserves, the Florida Keys National Marine Sanctuary, and the Coral Reef Conservation Program. The Coastal Management, Outer Continental Shelf, and Deepwater Horizon Restoration programs are also administered by the Office, coordinating coastal efforts statewide and into federal waters. Additionally, the Office also administers the Florida Oceans and Coastal Council and coordinates statewide participation in the South Atlantic Alliance.

Division of Environmental Assessment and Restoration (DEAR) – Conducts extensive water quality monitoring, and implements statewide basin management programs, including the TMDL program. DEAR evaluates the water quality impacts of point source and nonpoint source discharges, reviews and analyzes mixing zone requests, and develops statewide rules pertaining to surface water quality standards ([Chapter 62-302, F.A.C.](#)), ground water quality standards ([Chapter 62-520, F.A.C.](#)), and other related rules. The division provides laboratory analysis, field sampling and technical consultation for biology and chemistry support to DEP programs through the services of the Bureau of Laboratories. Staff within DEAR also coordinate the Department's QA program.

Quality Assurance Program

The Water Quality Standards Program (WQSP), within DEAR, is responsible for establishing QA policy for the water, waste, water policy, ecosystem restoration and land & recreation programs of the agency. WQSP staff in the Aquatic Ecology and Quality Assurance (AEQA) Section perform the primary duties for management of the Department's QA program. The WQSP is charged under the DEP QA Directive to:

- Assist in the development of DQOs and DQIs;
- Develop and maintain departmental [SOPs](#) for field work, bioassessments and taxonomic identification;
- Facilitate communication between DEP QAOs;
- Perform data validations and data audits;
- Conduct laboratory and field audits;
- Make recommendations to the DEP Programs based on the results of data validations, project data audits, and other types of field and laboratory audits;
- Develop training materials and provide training to DEP stakeholders and internal programs on the proper use of the DEP SOPs, QA rule requirements, and data quality/data interpretation;
- Administer the DEP [QA Rule](#), Chapter 62-160, F.A.C.;
- Revise the QMP, as necessary;
- Serve as a liaison with TNI and the DoH ELCP;
- Perform Quality of Science reviews at the request of DEP program managers; and,
- Assemble the annual QA Report to the DEP Secretary.

3.2.5 Regulatory Programs

Division of Water Resource Management - The Department's Division of Water Resource Management (DWRM) Programs are responsible for protecting the quality of Florida's drinking water as well as its rivers, lakes and wetlands, and for reclaiming lands after they have been mined for phosphate and other minerals. This division establishes the technical basis for setting

the ground water quality standards. DWRM conducts the permitting, compliance and enforcement programs for Florida's domestic and industrial wastewater facilities, drinking water systems, and a myriad of activities in wetlands and other surface waters. The Division oversees surface water, ground water, and wetlands protection programs; construction and operation of drinking water systems, and domestic and industrial wastewater facilities, mine reclamation, beach restoration, and water facilities funding.

Division of Waste Management - The Division of Waste Management has the lead program management and implementation responsibilities for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). The Division is responsible for promoting practices that minimize solid and hazardous waste generation, ensuring proper management of generated wastes, preventing discharges of chemicals and petroleum products, and overseeing adequate and timely cleanup of environmental contamination.

District Offices - Review permit applications, conduct inspections of permitted facilities, respond to reports of environmental damage, and conduct compliance assistance and enforcement activities. The six district offices of the Department implement the policies developed by the regulatory Divisions (Water, Air and Waste).

The Florida Geological Survey (FGS) - Provides data, research and associated interpretations on solid-earth systems such as aquifer systems, geologic frameworks, landforms, energy, non-energy mineral resources, and geologic hazards. The FGS provides information and interpretive data about geologic and earth science related information to governmental agencies, land-use planners, environmental and engineering consultants, mineral owners and exploration companies, industry, and the public. The information is essential for resource conservation and protection, sustainable development issues, human health protection concerns, and implementation of successful environmental regulatory programs.

Office of Emergency Response (OER) - Responds to a wide variety of environmental pollution threats, ranging from incidents involving petroleum spills caused by vehicle accidents to chemical plant explosions to coastal oil spills, OER provides technical and on-site assistance to ensure threats to the environment and human safety are quickly and effectively addressed. In addition, OER works with local public safety officials and emergency response contractors to minimize threats to the environment.

3.2.6 External Agency Programs

Water Management Districts (WMDs) - The state's five WMDs, Northwest Florida WMD, Suwannee River WMD, St. Johns River WMD, South Florida WMD, and Southwest Florida WMD, Administer flood protection programs and perform technical investigations into water resources. The WMDs also develop water management plans for water shortages in times of drought and acquire and manage lands for water management purposes. Regulatory programs delegated to the WMDs include programs to manage the consumptive use of water, aquifer recharge, well construction, and surface water management. As part of their surface water management programs, the WMDs administer the Department's stormwater management program.

Department of Health Environmental Laboratory Certification Program (DoH ELCP) – The DoH ELCP, although not an organizational unit within DEP, administers a critical component of the Department's QMP. All laboratories providing data to DEP must be certified by the DoH ELCP. The DoH ELCP is recognized as the Florida accreditation body under the National

Environmental Laboratory Accreditation Program (NELAP). All laboratories certified by the DoH ELCP are accredited in accordance with the [TNI Standards](#) adopted by NELAP.

Delegated Programs – Rule 62-160.110, F.A.C., of the Department's QA rule extends the scope of the rule to all state and local programs that have delegated responsibilities for DEP activities. The requirements are communicated by the Department through the documents that are associated with the delegation process.

4. QUALITY ASSURANCE SYSTEM

The DEP quality system includes the following components of planning, implementation, and assessment.

4.1 Planning

Each DEP program and project manager is ultimately responsible for ensuring that data generated by, or submitted to, the Department are appropriate for any intended use. This responsibility includes establishing program- or project-specific DQOs, preparation of QA planning documents (where required), and the coordination among field, laboratory, and data assessment staff about applicable technical and data-quality issues associated with data collection activities.

4.1.1 Preliminary Planning – General Activities

During the early planning phase of any investigation or data collection activity, the project manager will clearly establish the intended use of the data, the time and resource constraints affecting the project, and, in general terms, the required data quality. The planning process also identifies and solicits input from all internal and external stakeholders involved in the project. For example, for contracted services, including assistance grant recipients, draft versions of contracts and planning documents are jointly developed by the participants, which typically include DEP staff originating the project, consumers of the project data, contractors and subcontractor staff, as well as designated QAOs for participating organizations. If Plans of Study (POS) are initiated for permitting activities, the permittee and any consultants to the permit-holder will be actively involved in the creation and revision of the POS. For special projects initiated by and internally executed by DEP, all appropriate technical and QA staff are included in the process, beginning at the earliest stages of scoping and planning activities and continuing throughout the planning phase of the project and often through completion of the project. If special areas of expertise are required, the project manager will usually request the assistance of technical experts during the planning process. The overall planning process requires effective communication among the project manager, field staff, laboratory staff, QA staff, other technical staff, and secondary data users, as appropriate. Department programs and work units further describe planning processes in applicable [Quality Plans](#). As an example, the DEP [section 106 QAPP](#), which provides detailed information about the Department's comprehensive surface water and groundwater monitoring associated with section 106 funded activities, cites a number of Quality Plans and related QA documents.

4.1.2 Data Quality Planning

For most environmental data used by DEP, the minimum data quality requirements specified in the DEP [QA Rule](#) and DEP [SOPs](#) will be applicable to data used for monitoring, evaluation, scoping, assessment, compliance, and enforcement activities. Research projects may require the use of non-routine methodologies and a uniquely specified set of DQOs.

Expected data quality is further characterized by performance goals that are specific to project or program DQOs, which are generally described below. In identifying these objectives, the

managers will consult with other DEP technical staff on data quality issues outside of their technical expertise.

- Data Quality Objectives - DQOs are the direct outcome of the process outlined in [Guidance for the Data Quality Objectives Process](#) (EPA QA/G-4, February 2006) for systematic planning. DQOs are qualitative and quantitative technical statements that define the appropriate types of data and specify tolerable levels of potential decision errors. DQOs are established and documented prior to data collection and/or assessment activities.
- Quality Control (QC) Measures – QC measures are a series of indicators that collectively define the quality of the submitted data. A baseline level of quality control is expected of any organization that provides data in support of Department programs. These measures include the essential quality control requirements as outlined in [TNI standards](#), as well as those specified or cited in the DEP QA Rule and DEP SOPs. Program managers will ensure that QC acceptance criteria, alternate QC measurement frequencies, as well as any additional QC measures specific to the project are specified.
- Many DEP regulatory activities have accompanying QC measures, such as acceptable precision, accuracy, and comparability, associated with requirements to use standardized analytical methods, as specified in the applicable administrative rules or QA planning documents. When specified, these QC acceptance criteria must be met.
- The DEP regulatory programs make decisions based on relevant concentration levels or target levels. These decision points are also a means of specifying QC performance criteria such as method sensitivity or method selection.

4.1.3 Sampling Design

The selection of sampling points and the sampling frequency are determined by the objectives of a given activity or project. For many activities, sampling locations and frequency are predetermined based on permit-specified compliance sampling locations (e.g., daily samples at the discharge point) or other requirements. Sampling locations may also be determined by other factors, such as habitat characteristics, groundwater flow, or potential areas of human disturbance. For projects that are not bound by other constraints, sampling points and sampling frequency are selected based on the project objectives and may involve the use of software tools to determine spatial homogeneity or temporal variability. Examples of designs for various types of projects can be found in the file of support documents accompanying this QMP.

4.1.4 Quality Plans

DEP documents for quality assurance planning generally fall into two categories: project-specific and program-specific.

4.1.4.1 Project-specific planning documents

DEP programs may require planning documents for special projects, contamination assessment sites, permitting activities, ambient monitoring and contracted work. These plans may take various forms, including sampling and analysis plans, contamination assessment plans, study plans, or research QA plans. Regardless of type, the plans address the elements of planning summarized in the QMP.

If specifically required by EPA for activities conducted for or funded by EPA, QAPPs are prepared in accordance with *Requirements for QAPPs*, ([EPA QA/R-5, March 2001](#)). When the work is performed by the Department, these QAPPs are reviewed and approved by the appropriate EPA office. If the grant funds are provided to a second party through a grant

agreement, the Department requires, reviews and approves the QAPP. DQOs and DQIs specific to the project are incorporated into these QAPPs, with oversight by the applicable DEP project management and QA staff.

Currently, there are two QAPPs written for specific DEP programs that require review by EPA. These programs are the Underground Injection Control Program and the surface water and groundwater monitoring and assessment activities performed with section 106 funds under DEP's Integrated Water Resources Monitoring (IWRM) Program. The section [106 QAPP](#) is a web-based format that allows timely updating of linked supporting documents and public access to the documentation for the Department's quality system for these activities.

QAPPs are also reviewed by grant managers and DEP QA staff when submitted by grantees performing treatment effectiveness monitoring for stormwater construction projects funded through section 319(h) grant assistance.

For other activities, the QA planning process and the quality expectations are documented in other Department-required documents such as rules, work plans, contracts, permits, etc.

4.1.4.2 Program-specific planning documents

The QMP and program-specific documents are used to document the Department's quality system.

DEP programs develop SOPs, manuals, quality plans, technical memos and other references specific to operations conducted by the respective programs. In addition, field organizations collecting samples to provide analytical data used by DEP must have a Quality Manual (per DEP SOP [FA 1000](#), subpart FA 3300) and, as part of their certification requirements, laboratories analyzing those samples must have a Quality Manual that conforms to [NELAC \(2003\) or TNI \(2009\)](#) requirements.

With the implementation of the Department's [QA Directive](#), all DEP organizational units generating or using environmental data have written quality plans. These plans describe the QA procedures and criteria that are specific to the organizational unit, and are another component of the quality planning process for environmental data collection. The quality plans are updated as needed to maintain ongoing quality system documentation. The plans provide an archival record for past practices and a current reference for use by all technical and management staff working in the organizational units covered under the quality plan. The quality plan also serves as a training tool for new staff requiring instruction and guidance about the quality system for the unit.

4.1.4.3 Planning Document Review and Approval

All planning documents produced by DEP or contractors/grantees are reviewed for technical accuracy and completeness and approved by the appropriate EPA office or by the DEP project, contract, or grant managers and QA staff. Other DEP managers may review the planning document, consistent with review procedures described in program or work unit Quality Plans.

Once approved, planning documents are generally reviewed and revised when necessary to ensure the relevance and effectiveness of the plan, and to incorporate changes in scope, procedures, criteria, personnel, etc. The frequency of the review is dependent on the type of document and the duration of the project. Program-specific plans may be reviewed at a frequency specified by the program in its Quality Plan. Administrative reorganizations of programs and work units will also lead to revisions to affected program Quality Plans. Project-specific plans are typically only reviewed for revision when substantial changes are made to the project, such as changes in procedures, methods, equipment, subcontractors or personnel. Project plan reviews may also occur in conjunction with the review of required progress reports.

The review will evaluate the scope and content of the document, and recommend any necessary amendments that reflect procedural changes, corrective action implementation, changes in QA criteria, or any other items that improve the overall effectiveness of the project or the program quality system.

Amendments or revisions are generally reviewed and approved in the same manner as the original approval and as specified in work unit Quality Plans. Amendments may be documented as a revision, an addendum, or other attachment to the original document, and approved amendments are circulated to the same individuals/groups as the original document.

4.1.5 Contracts and Grants

In addition to compliance monitoring and other data collection associated with permits, the environmental data used by DEP programs are collected as the result of a number of other activities (e.g., integrated water resources monitoring, impaired waters assessments, contaminated site clean-ups, special projects and research). Some of these activities are accomplished through contracts or grants administered through DEP. The grant recipient or contractor is required to follow contract-specified QA protocols and meet applicable QC performance criteria, including the following:

- (a) A citation to a document titled "[Requirements for Field and Analytical Work Performed for the Department of Environmental Protection under Contract](#)", DEP-QA-002/02, is included in all contracts or grant agreements that have field or laboratory activities associated with the proposed work. This document outlines specific data quality and reporting requirements that contractors must meet.
- (b) Contract or grant managers are provided with a [Quality Assurance Requirements](#) Template that must be inserted into the contract or grant language. This document:
 - Outlines the technical QA requirements (e.g., laboratory certification, use of the DEP SOPs, adherence to the DEP QA Rule);
 - Requires audits and planning review audits;
 - Requires a final statement of data usability;
 - Requires the submission and approval of a planning document that describes the contractor or grantee sampling and analysis procedures, equipment, and specific quality controls. This document may be a QAPP that meets the requirements of EPA [QA/R-5](#) (if required when EPA grant monies are used), a sampling and analysis plan, a research quality assurance plan (as defined by the DEP [QA Rule](#)), or other documents providing the requisite information outlined in DEP-QA-002/02;
 - Specifies QC measures, including any additional QC, measurement frequency, and acceptance limits; and
 - Identifies required QA deliverables to be submitted to the contract or grant manager. These include copies of relevant laboratory certification documents, results of recent laboratory performance test (PT) sample analyses, detailed descriptions of non-standard or research methods, reports of required internal audits, required data usability assessments, and the planning document described above. The deliverables are intended to inform the manager about the progress of project activities in meeting the QA requirements specified in the planning document and the contract or grant, and alert the contract manager to quality problems that can be

corrected and/or further investigated by audits of sampling or laboratory performance and/or field and laboratory records.

- (c) Programs or work units may include additional QA procedures and reporting requirements in applicable agreements.

4.1.6 Purchase Orders

Purchased services for sample collection or laboratory analyses are processed through an on-line system (MyFlorida Marketplace) that automatically routes requisitions for these services to the DEP QAC and the AEQA section administrator for review and approval. Once reviewed for appropriate specification of analytical services to be provided by certified laboratories (where applicable), a standard QA template is attached to the requisition by the DEP QAC or AEQA section administrator. The template imposes QA requirements on the vendor and any persons participating in the sample collection or laboratory analysis activities. The requirements are essentially the same as those required of contractors and grantees, except that no planning document is required.

4.1.7 General DEP Requirements for Procurement of Goods and Services

The general, Department-wide processes and requirements for procurement of contracted services and products are described in five [DEP directives](#): 300, 301, 315, 316, and 317. Procedures for QA review of contracted services and products are generally conducted as described below:

- (a) In addition to the review of draft contracts prior to execution at the program or work unit level, all DEP contracts are reviewed by upper management staff, usually at the division level. Any other specific procedures for review are detailed in work unit [Quality Plans](#). For example, the [Quality Plan for the DEP Watershed Management Section](#) cites a document titled [Watershed Monitoring Regional Project Manager Manual](#), which includes procedures for initiating and reviewing contracts. Draft documents are reviewed for technical accuracy and completeness for the scope of the work to be performed, the design of the project, and the QA requirements applicable to the contracted activities.

- (b) The final contract or grant agreement is reviewed and assembled by staff in the DEP Procurement Section, and routed for final review through the contract or grant manager to the DEP QAC, work unit administrators, and division management for approval prior to execution of the agreement.

- (c) The Procurement Section provides staff expertise and written guidance to contract and grant managers to assist with monitoring contractor or grantee conformance to the requirements of the executed agreement. Two separate document files, *Getting What You Paid For* and *Best Practices for Contract and Grant Management*, are provided as supporting documents to the DEP QMP. Any additional procedures for review of deliverable items or services are found in applicable DEP program or work unit Quality Plans. For example, the Quality Plan for the DEP Watershed Management Section cites a document titled [Watershed Monitoring Regional Project Manager Manual](#), which includes procedures for reviewing deliverables for agreements with Status and Trend Network sampling contractors.

4.2 Implementation

Once approved, the procedures or processes outlined in quality plans and associated quality assurance documents are implemented with respect to the elements described below.

4.2.1 Execution of Planning Documents

After the drafting, review and approval process has been completed for any quality plan or other quality document (and after any revisions to approved documents have been adopted), the project or contract manager typically retains the primary responsibility for ensuring that all aspects of the plan are implemented according to timelines established in the plan or contract/grant agreement. The project manager also ensures that copies of planning documents are distributed to all persons conducting or overseeing any aspect of operations for the project, including consumers of the project data. Quality Plans for programs or work units are implemented as part of the overall integration of QA requirements into the operations of the work unit or program, and, at the most general level, must conform to the distributed responsibilities for QA functions, as prescribed in the [DEP QA Directive](#). Typically, the QAO for the work unit or program is responsible for distributing copies of the work unit Quality Plan, and is responsible for coordinating any needed revisions to the plan. Further details about the implementation of quality planning documents are described in program or work unit Quality Plans, where applicable.

Follow-up oversight for quality plan implementation is the responsibility of project and contract managers assigned to specific projects, and includes the evaluation of whether objectives and timelines specified in the plan are met, and that satisfactory project or contract deliverables are submitted. Program or work unit QAOs are the contact point for ensuring that unit Quality Plan procedures, criteria and goals are carried out or met, consistent with the Department-wide distributed QA functions prescribed in the DEP QA Directive, as well as the specific staff responsibilities indicated in the unit [Quality Plan](#).

4.2.2 Standard Operating Procedures (SOPs) and Approved Laboratory Methods

SOPs are documents that describe the officially approved procedures for performing certain routine or repetitive tasks. SOPs are useful when it is necessary to ensure comparability among activities performed on different occasions, at different locations, or by different individuals. DEP programs and work units are encouraged to develop and utilize SOPs wherever appropriate.

Department-wide [SOPs](#) (Standard Operating Procedures for Field Activities, DEP-SOP-001/01, March 31, 2008 and Standard Operating Procedures for Laboratory Activities, DEP-SOP-002/01, March 31, 2008) are incorporated into Chapter 62-160, F.A.C., the Department's QA rule. The SOPs for field activities must be used by any organization engaged in applicable field activities (e.g., sample collection and field testing measurement and field bioassessment). The SOPs for laboratory activities are mandatory for any laboratory conducting specified bioassessment index calculations or taxonomic identification activities. Laboratories are also required to follow standardized methods approved by the Department and as specified in DEP rules. Draft revisions to the DEP SOPs (Rev. 9/19/12) will be adopted as final rules when current rulemaking procedures for the QA Rule are completed, and will also include a new document for bioassessment activities titled [Standard Operating Procedures for Selected Bioassessment Activities](#) (DEP-SOP-003/11). See the DEP webpage, [Final Revised DEP SOPs and Supporting Documents](#).

Alternate field or laboratory procedures may be proposed, and will be reviewed and approved according to requirements for the use of alternative procedures in [DEP QA Rules](#) 62-160.220

and 62-160.330, F.A.C. All reviews and approvals for alternative procedures are overseen by the DEP QAC, and require the signature of the appropriate administrator with delegated authority, typically a division director.

4.2.3 Certification and Training

All laboratory test data used by the Department shall be performed by a laboratory having accreditation for the matrix, method (or analytical technology), and analyte for each reported test result. The accreditation (or secondary accreditation) shall be from the Florida [DoH ELCP](#), which is a recognized NELAP accreditation body. This requirement applies to all laboratories, with the exception of field testing measurements, biological assessments, and taxonomic identifications as specified in DEP SOPs; laboratory analyses that are associated with the Department's Air Resource Management Programs; research methods as defined in [DEP QA Rule](#) 62-160.600, F.A.C.; and any prior, written agreements (e.g., consent orders, permits, quality assurance project plans or contracts) that specify laboratory qualifications.

Field organizations are required to maintain records of employee training. Such training must be commensurate with the employee responsibilities.

Organizations conducting biological assessments or taxonomic identifications using selected DEP bioassessment SOPs are required to have documented training, pass performance audits, and demonstrate laboratory competency using specific QC measures. DEP SOP FA 1000, subpart FA 4300, DEP SOP LQ 1000 (various subparts), LVI 1000 (various subparts), and SCI 1000 (various subparts) specify these performance and competency requirements (see [DEP Standard Operating Procedures](#)).

4.3 Assessment

Different types of assessment activities are used to verify that measurement systems are providing data of known quality and that the data generated by these systems are appropriate for their intended use. Quality of Science reviews, project data audits (records audits), laboratory and field performance audits, and systems audits will review all applicable quality documents associated with the data as the bases for evaluations. The lead auditors for any audit will have auditing experience, and, in addition to possessing technical expertise in one or more of the procedures or data categories audited, will have an understanding of quality principles, the DEP audit process, and the applicable requirements of the DEP QA program. Quality assurance assessment and oversight of the Department's environmental databases are managed at the program or work unit level, except for those computer systems oversight and control responsibilities discharged by the DEP Office of Technology and Information Services.

Each of the following assessment activities will be used alone or in conjunction to evaluate the targeted procedures or data:

4.3.1 Information Management

DEP's Office of Technology and Information Services (OTIS) is responsible for managing the hardware, software and communications components that form the foundation of the agency's information technology. OTIS has established hardware and software standards for all DEP computer resources. The agency's Information Technology Resources (ITR) and Information Resource Security Standards policies are detailed in [DEP Directives](#) 370 and 390, which are included as separate files accompanying this QMP.

QA controls are applied to DEP databases at the program or work unit level. Details about data entry checks, internal consistency checks of individual data records, metadata screening, qualification flagging, and other data verification procedures, including software functionality checks performed by designated staff on specific Department databases, are described in program or work unit [Quality Plans](#) and associated documents. Examples of these controls and checks include:

- (a) On a site-specific basis, the DEP Division of Waste Management requires the use of an automated data review and quality control software product (ADaPT) for the mandatory checking of data submitted under its regulatory programs. The division is gradually phasing in the use of this electronic data review and mandatory data delivery product across its programs as internal and external stakeholders develop expertise and capacity for use of the product. Data checked by this software are uploaded to appropriate databases. Section 4.3.3 of the [division Quality Plan](#) further describes data archival procedures and checks. The division is also coordinating with DEP's water programs in conducting trial use of the software for other water sample data. The DEP QAC participates in regular coordination meetings to facilitate the technical and QA aspects of this software implementation.
- (b) Section 6 of the DEP Office of [Watershed Services Quality Plan](#) describes current data management controls performed for Florida STORET and EPA WQX data.
- (c) Section 4 of the DEP [Central District Quality Plan](#) for the domestic and industrial wastewater programs describes database management responsibilities, including QA controls and checks, for both the district and Tallahassee wastewater staff.
- (d) The Tallahassee office for the DEP Source and Drinking Water program coordinates adherence to EPA implementation guidance for State reporting requirements. Sample analyses are submitted to and reviewed by the appropriate DEP/DoH field office where data are entered into the Public Water System (PWS) database. Various edits (controls) on data entry keep errors such as duplicate samples and incorrect samples types to a minimum. Nightly routines automate compliance decisions to ensure consistency across the state. Finally, the database automatically creates the violation record so that it conforms with the Safe Drinking Water Information System (SDWIS) reporting requirement. Every year in March all data entered for the prior calendar year are reviewed for any erroneous entries, duplicates, incorrect sample types, and other errors to ensure that data is of the highest quality for compliance determinations and protection of public health.
- (e) The DEP Office of Watershed Services is currently managing the contracted design, testing and production of the Watershed Information Network (WIN) database software, which will serve as the STORET replacement for Florida. The WIN product will apply numerous data verification and QA checks to DEP monitoring data.
- (f) The DEP Northeast District watershed monitoring, domestic wastewater, and industrial wastewater staff perform QA check procedures on 5% of data used for STORET and DMRs, in coordination with the district QAO. Errors are corrected, and all checks are documented for these selected data.

Section 62-160.405, F.A.C., of the Department's QA Rule outlines general performance standards for electronic signatures used for laboratory reports, field reports or other official documents.

4.3.2 Audits

As part of the distributed function of the Department's QA program, WQSP auditors provide audit training to DEP program QAOs and other delegated staff.

4.3.2.1 Project Data Audits (*Record Audits for Data Verification and Validation*)

Data quality audits involve evaluating the data generated in support of a program or activity with respect to appropriate quality criteria. These criteria may be established by rule, contract or some other written agreement (e.g., QAPP or DEP organizational unit [Quality Plan](#)). This evaluation process is a shared responsibility among all levels of data consumers at DEP.

To assist program staff and the public with data review, verification and validation activities, the WQSP continues to develop guidelines and training materials for presentation and distribution throughout the Department and via DEP web pages. The WQSP provides field and lab checklists for project data audits and assists DEP staff with the customizing of checklists for specific audit applications.

The 2008 revisions to the DEP QA rule incorporated a document for assessing data usability into the rule. The document, titled *Department of Environmental Protection, [Process for Assessing Data Usability](#)*, DEP-EA-001/07, (March 31, 2008), outlines the conceptual model to be used when evaluating the usability of data for a specific program or project. A hierarchal description of usability criteria is also provided for typical calibration, quality control, and other data quality indicators usually associated with laboratory analyses, field sample collection, and field-testing measurements. These indicators are those normally applied to most data in partial fulfillment of the DQOs established by the Department's regulatory and monitoring programs, and are also generally applicable to research projects initiated by DEP programs and conducted by DEP staff or by contractors.

The WQSP performs project data audits when requested by DEP project or program managers, on an as-needed basis. Audits may be performed on randomly selected DEP projects as well.

4.3.2.2 Performance Audits

Performance audits may be conducted for lab or field operations. Performance audits of laboratories involve submission of like samples, sometimes of known concentration, to laboratories generating data for the Department. Field performance audits evaluate the skill and knowledge of personnel conducting sampling or field-testing activities.

Performance Test (PT) samples are used to evaluate a laboratory's calibration or testing performance. The DoH ELCP requires laboratories seeking or holding certification to participate in PT studies. The PT samples must be obtained from commercial vendors that are recognized by [TNI](#). The results from these samples are evaluated as part of the certification process.

DEP programs are encouraged to use and consider the results from other evaluation programs, such as those conducted by the United States Geological Survey (USGS) and the National Oceanographic and Atmospheric Administration (NOAA).

Occasionally, DEP programs will request performance audit data for chemistry analysis activities not specifically addressed by routine PT studies required for laboratory certification. In this event, the WQSP may initiate or collaborate with other DEP programs in conducting a specialized inter-laboratory comparison exercise (round robin).

On an annual basis, the WQSP conducts an interlaboratory round robin test for the Department's benthic macroinvertebrate taxonomists. Previously processed bioassessment samples are exchanged between taxonomists, and the samples are re-identified by taxonomists other than the original analysts according to a round robin SOP developed by WQSP QA staff and expert taxonomists in the DEP Tallahassee biology laboratory. Analysts

must meet performance criteria and perform corrective actions to remain qualified to analyze taxonomic samples.

As part of the Discharge Monitoring Report Quality Assurance (DMR-QA) study, dischargers permitted under the National Pollutant Discharge Elimination System (NPDES) are required to purchase and analyze PT samples for the constituents identified in the permit. These samples must be analyzed by the organization that routinely provides the data for the discharge monitoring report (DMR), and may be either on-site or contracted laboratories. Coordination of the study for facilities in Florida is conducted by EPA Region 4.

4.3.2.3 *Field audits*

Field audits verify that sample collection and field testing procedures are appropriate. Typically, auditors evaluate the knowledge, skill and ability of personnel to execute specific techniques and meet performance criteria that have been published in the DEP SOPs. The DEP SOPs prescribe standard field procedures for routine water quality monitoring and contamination assessment for various matrices, in addition to procedures for bioassessment sampling and testing. These audits may be conducted as a joint effort between WQSP staff and a DEP program, and may be initiated at the request of the program. Bioassessment audits are also required for external organizations submitting data to the Department in order to ensure that field personnel are sufficiently trained to perform bioassessment procedures. As an example, water sampling, field testing, and field bioassessment audits are conducted in support of the DEP Impaired Waters Rule ([Chapter 62-303, F.A.C.](#)).

Although some audits are scheduled as a part of formal delegation agreements between the state and EPA, as well as at the request of DEP project and program managers, the WQSP may also randomly select organizations for field or laboratory audits.

Any of the performance audits described above (except DMR-QA studies) will be conducted by WQSP or designated DEP QAOs, at the request of DEP contract managers. DEP contractors will be audited according to criteria stipulated in the QA requirements contained in executed agreements. WQSP may also select contractors for audit on a random basis.

4.3.2.4 *Systems Audits*

Systems audits are on-site assessments of an organization's facilities, equipment, personnel, procedures, and QA management process. Examples of systems audits include:

- (a) The DoH ELCP conducts on-site assessments of certified laboratories every other year. The WQSP will conduct or assist with laboratory systems audits for DEP programs upon request.
- (b) Performance Audit Inspections (PAIs) of NPDES-permitted dischargers are conducted by the DEP District staff to determine if the self-monitoring data reported by permitted facilities meet established DQOs. An integral part of these audits includes visits to on-site and contracted laboratories. Audits of samplers may also be included in these inspections. These audits are conducted and reported under the terms of NPDES delegation to the state.
- (c) Internal systems audits of program and district activities are conducted by the QAO or other designated auditors for each Department program or district. These audits assess compliance with the QMP and the program, work unit, or district Quality Plan.
- (d) Any of the systems audits described above (except PAIs) will be conducted by WQSP or designated DEP QAOs, at the request of DEP contract managers. DEP contractors will be audited according to criteria stipulated in the QA requirements contained in executed agreements. WQSP may also select contractors for audit on a random basis.

4.3.2.5 *Quality of Science Reviews*

At the request of DEP program managers, the WQSP will perform Quality of Science Reviews. These reviews are comprehensive in scope and focus on study design, selection of field and laboratory parameters, collection and analysis methodology and data management, assessment and interpretation. Ultimately, these reviews are intended to determine whether management decisions made by DEP programs are adequately supported by sound environmental data. Additionally, the results of these reviews will be used to assess and improve the agency's quality systems.

4.3.2.6 *Audit Reports*

All assessment activities will result in a report. All reports are accessible under the Florida Sunshine Laws and must be retained by the lead auditor for at least five years after the completion of the audit. Auditors in different DEP programs also adhere to reporting and archival storage procedures established by their programs and as described in the respective program quality plans.

Reports for round robins are typically a summary or tabulation of the results, with an accompanying statistical analysis. The results for DoH PT samples are reported as required for the DOH ELCP, and are available to DEP as needed to support the Department's assessment of the performance of any given laboratory. Reports for specially initiated round robins are distributed to the participating laboratories and DEP program managers involved with the round robin study, and published on a Department webpage. The annual WQSP taxomomy round robin results are reported to the participating taxonomists, bioassessment managers, and the DEP QAC.

The procedure for reporting the results of a project data audit, field performance audit, or systems audit associated with data submitted to DEP for compliance with regulations or contract requirements will generally follow the procedures outlined in Rule 62-160.650, F.A.C., and will include:

- Findings, recommended corrective actions, and the responses from the audited party;
- Determination of compliance with the relevant quality documents, performance standards, or other criteria, including those listed at Rule 62-160.670, F.A.C.;
- Assessment of the audited activities as they relate to data usability, according to the process outlined in [DEP-EA-001/07](#); and
- Posting of the reported audit results on the Department's website.

Internal audits conducted by DEP district or work unit QAOs will follow audit reporting procedures described in respective Quality Plans or SOPs written by the work units. The WQSP will report the results of its internal audits by email and post the results of the audit on the Department's website. Internal audits conducted for special projects or at the request of DEP program or project managers may include additional routes of transmittal.

Results of field performance audits required by the DEP bioassessment SOPs are published in a [Searchable Registry for Bioassessment Method Proficiency](#) for tracking the qualification status of individuals and teams performing bioassessment sampling and field testing. The WQSP maintains these webpages, and issues summary reports for team assessments, such as those for Lake Vegetation Index field testing.

When an audit identifies inappropriate activities (e.g., negligence or potential fraud), the audit report emphasizes that the activities are inappropriate and requires that the activities cease. For internal situations, the conditions are brought to the immediate attention of the Office of the

Inspector General for further investigation. If needed, a root cause analysis is done, and preventative measures for all other internal quality systems are instituted immediately so that the activities are not repeated. For external situations, if warranted, the activities are reported to the applicable law enforcement agency.

4.3.2.6 *Corrective Actions*

When an audit report identifies deficiencies, the audited party is required to submit a corrective action plan for the noted deficiencies. The plan must include an implementation schedule for each corrective action. Subsequent audits of the same organization include assessing the effectiveness of the corrective action plan.

Audited parties have an opportunity to rebut any finding or corrective action. To be considered, the rebuttal must be accompanied by narratives and documentation. The auditors will review the additional information for acceptance. If further actions are necessary, the auditors will summarize the issue with their recommended resolution. The summary will be sent to the QAO and the applicable program administrator for final resolution. If external parties do not agree with the Department's findings, corrective action requirements, or recommended actions, they may file for an administrative hearing under the Administrative Procedures Act, (Title X, [Chapter 120](#)) of the Florida Statutes.

The audited party is responsible for having sufficient records to document all corrective actions and their effectiveness in improving the quality system.

4.3.3 *Annual QA Report*

The Secretary of the Department will receive an annual QA Report that is prepared by the WQSP with input from the designated Department QAOs. Individual QA reports prepared by organizational units of the Department will be used to assemble the report to the DEP Secretary. This report will summarize the Department's QA activities during the previous year, with emphasis on the evaluation of the effectiveness of the Department's QA program for the water, waste, water policy, ecosystem restoration and land & recreation programs. The report will include discussion of internal and external audits (including Quality of Science Reviews), internal and external QA training, significant QA issues, corrective actions implemented, and any other QA matters of interest identified by the DEP organizational work units covered under individual unit QA reports. Additional improvements to the QA program will be recommended, if necessary, for consideration by the Secretary and relevant management staff.

4.4 *Documentation*

Identification, preparation, review, approval, distribution, and retention of technical and QA documents and records are outlined below and elsewhere in the QMP.

Generally, DEP program and work unit Quality Plans detail the responsibilities of staff to carry out indicated procedures for the management of documents and to ensure that relevant documents accurately reflect completed work or information applicable to environmental data.

Documents applicable to all programs and work units include those QA and information technology resource procedures and requirements managed by the WQSP and OTIS. WQSP internal document management procedures and responsibilities are outlined in the WQSP Quality Plan and the DEP QA Directive. In addition, the WQSP and other work units in the Department are responsible for the administration of regulations that undergo public comment and legal review according to Florida law. Specifically, quality documents such as the DEP SOPs and QA Rule are reviewed by the WQSP periodically for effectiveness, content and

consistency with State and Federal (USEPA) requirements. Changes or amendments to the Department's SOPs and QA Rules must be made according to the process outlined in the Administrative Procedures Act (Title X, [Chapter 120](#)) of the Florida Statutes and as specified in the Florida Administrative Code.

Program or work units are responsible for ensuring that documents specific to the unit comply with applicable regulatory requirements. The originator of a document must ensure that the final version is dated, and that subsequent revisions are noted as revisions to the original document. There is no Department-wide policy for assigning a document control identifier to Department publications, and each program or work unit may adopt numbering schemes specific to program documents. As an example, published quality documents originated by the WQSP are assigned a number that identifies the year of origination, the type of document (e.g., SOP) if necessary, and a consecutive number (if more than one document of the same type is published during the same calendar year).

Confidentiality procedures for document management are described in DEP Directive 375.

The Department provides general, evidentiary chain-of-custody (COC) requirements in DEP SOP FD 1000, subpart FD 7000, and DEP FS 1000, subpart FS 1009. Evidentiary COC procedures may only be required in specific criminal investigations. Staff in the applicable program or work unit are responsible for maintaining evidentiary custody records according to these general requirements and any additional requirements or procedures developed by the work unit.

4.4.1 *Field and Laboratory Records – Internal and External*

Chapter 62-160, F.A.C., requires that all records associated with field activities (including sample collection) and laboratory analysis must be retained by the generating entity for at least 5 years after the end of the project, permit cycle or other activity. This requirement is applicable to all environmental data used by DEP, regardless of the originator of the data. There must be sufficient information in the records to allow a DEP auditor to independently reconstruct the sampling/analysis event. Lists of the types of records to be maintained are outlined in the QA Rule ([Chapter 62-160, F.A.C.](#)) and the DEP SOPs. Laboratories must also meet documentation requirements according to NELAC or TNI standards as a condition of accreditation by Florida DoH.

4.4.2 *Internal Records Archives*

The Department has general policies for archiving or retaining records. The implementation of the policies and the period of time such records are retained are dependent on the nature of the records and the anticipated future need. Organizational work units within DEP include specific storage procedures for archival records in the Quality Plans for the units, and all work units must manage documents according to the DEP Records Retention Schedule (included as a separate file supporting the QMP) and [DEP Directive 335](#). Many documents are now stored by program or work units using an OCULUS™ system for Department records.

Quality Assurance Records that are retained indefinitely include laboratory records, field records, materials associated with rulemaking activities, and all audit records, including communications with auditors and audited parties, preliminary and final audit reports, communications with the relevant program and all corrective actions.

Electronic Records are backed-up and retained per the ITR directives (OTIS).

5. QUALITY ASSURANCE COMMUNICATION

5.1 State Rules and Associated Workshops

General QA requirements for field and laboratory work conducted in support of water, waste, water policy, ecosystem restoration and land & recreation programs are identified in the DEP [QA Rule](#), Chapter 62-160, F.A.C., and apply to all internal and external projects, monitoring, studies, or other activities that are required for the generation or use of environmental data by DEP. Requirements for laboratory certification are identified in Chapter 64E-1, F.A.C., [Certification of Environmental Testing Laboratories](#). Additional QA requirements may also be identified in program-specific rules. Significant changes to these rules are discussed in public workshops that must be noticed in the [Florida Administrative Register](#).

5.2 Standard Operating Procedures

Department-wide [SOPs](#) have been developed and published by the WQSP. The documents, *Standard Operating Procedures for Field Activities* (DEP-SOP-001/01, March 31, 2008) and *Standard Operating Procedures for Laboratory Activities* (DEP-SOP-002/01, March 31, 2008) represent an effective tool for QA communication. They may be incorporated into QAPPs by reference. The [QA Rule](#), Chapter 62-160, F.A.C. requires the use of these SOPs for applicable field activities or biological assessments.

5.3 Internet/Intranet-Based Communications

DEP maintains an active presence on the World Wide Web (www.dep.state.fl.us) and on the Department's intranet (for internal communication). All quality documents originating in the WQSP (SOPs, rule, QMP, audit results, method approvals, presentations, etc.) are published on Department webpages. The WQSP also provides access to laboratory certification status and certification history through a web-based application ([NELAP Certified Laboratories](#)).

The WQSP provides a QA listserv subscription for all interested parties. Subscribers receive periodic "[Quality of Science](#)" e-Newsletters with quality related information. Archival copies of e-Newsletters may also be accessed on the web.

5.4 Technical Meetings

DEP Program Meetings - All DEP programs have periodic meetings during which QA issues may be discussed. These include annual meetings for the drinking water, groundwater, solid waste, waste cleanup, and ambient monitoring programs. The WQSP participates in program meetings at the invitation of the program managers. In addition, the WQSP organizes:

- The Department's Biocriteria Meetings; and
- Meetings and teleconferences of the Department's QAOs.

Other technical meetings that may address QA issues include:

- EPA Region 4 State Chemists, Directors, and Certification Officers Meeting - This meeting is a forum for the exchange of technical and regulatory information and updates. Attendees represent the state agencies within Region 4 that are involved in environmental testing and laboratory certification.

- Non-DEP sponsored conferences and symposia - Departmental representatives are often invited as speakers or attendees at conferences that focus on environmental issues. These meetings provide opportunities for dissemination of information and interaction among parties affected by QA decisions.
- The DEP QAC routinely participates in regularly scheduled meetings and workshops organized by the [Florida Society of Environmental Analysts](#). This forum provides the opportunity to provide the regulated environmental sampling and laboratory community with information and training on DEP QA Program topics.

6. PEER REVIEW

The purpose of peer review is to ensure that selected policy, management decisions, and technical documents reflect appropriate scientific and legal judgment. Qualified individuals or organizations independent from those responsible for the original work product conduct this review process. Individuals within DEP conduct internal peer review. External peer review relies on the insight of experts not formally associated with the Department.

All DEP programs utilize internal peer review as a quality management tool for the development of regulatory rules, resource management policy, technical reports, and other documents. Program managers are encouraged to utilize peer review extensively, but are allowed wide discretion in its application.

Many programs also incorporate external peer review into their management process. The external peer review process often involves the establishment and utilization of technical advisory committees (TACs) or formal peer review panels. External peer review may also be solicited from one or more recognized experts who evaluate Department work products independently.

7. TRAINING

Program managers are responsible for ensuring that their staff receives QA training appropriate to their job assignments. This responsibility is explicitly required in the DEP [QA Directive](#) and will be supported with the necessary resources for training by the DEP District and Division Directors. Training requirements, procedures and criteria are described in the [Quality Plans](#) written by DEP organizational work units. The Department QAOs are charged with coordinating training activities with program managers and documenting all training activities received or given by the program or work unit.

7.1 Training Needs Assessment and Implementation

The WQSP coordinates with the designated DEP QAOs, other management and technical staff, and the [DoH ELCP](#) to identify the QA training needs of field and laboratory staff, QAOs, data users and DEP managers. Based on the training needs, the WQSP develops presentations, technical guidance, and educational materials and conducts QA training workshops and meetings.

The [training presentations](#) and written materials are placed on a Department webpage for access by anyone who wants to use the presentations.

The QAOs in the Department are encouraged to attend any quality training, since these individuals are expected to be familiar with all applicable QA requirements and coordinate appropriate training for their programs.

7.2 Training Modules Developed or Offered by the Water Quality Standards Program

The WQSP conducts comprehensive “hands-on” field [SOP](#) training for monitoring stakeholders in Florida via a cooperative relationship with the University of Florida’s center for “Training, Research and Education for Environmental Occupations (TREEO)”. The DEP SOP [training course](#) is held at the TREEO Center in Gainesville, Florida.

Training courses in the use of Biological Assessment tools are offered at the Biocriteria meetings and other scheduled workshops. Training in Data Assessment and Data Usability Evaluation is offered at the request of DEP programs. The venues include annual meetings or specifically scheduled workshops.

7.3 Audit Training

Individuals that are involved with auditing the quality aspects of any activity are expected to:

- Be familiar with the Department’s general audit procedures and criteria as described in the DEP [QA Rule](#), and have working knowledge of any program-specific auditing requirements described in the relevant program Quality Plan or audit SOP and any other applicable QA documents;
- Have training and or prior experience in the technical fields (e.g. sample collection, microbiology, nutrient analysis, etc.) that are audited;
- Understand and be able to apply relevant quality principles;
- Be objective;
- Where possible, have no direct involvement with the audited activity;
- Understand the purpose of the specific audit;
- Know which project or program DQOs provide the context for the audit;
- Identify the data and analytes to be audited;
- Determine the relationship between analytical results, decision or action levels, and laboratory MDLs and PQLs;
- Evaluate calibration, quality control, and other supporting data using DQIs established by the project or program;
- Establish the pattern, frequency and magnitude of any QC failures or other deficiencies found as the result of the audit;
- Determine the extent to which the audited data fulfills the project or program DQOs;
- Evaluate corroborative data, where applicable; and
- Provide usability recommendations to the project or program data user, based on the audit findings.

The WQSP provides training on auditing techniques for specific technical areas as one of its responsibilities under the QA Directive. The WQSP will actively pursue audit training as an important tool for promoting and maintaining a distributed QA function throughout the

Department. The WQSP relies on the designated QAOs within DEP programs and organizational work units to assist with the coordination of audits and audit training.

Potential auditors (trainees), experienced auditors, and designated QAOs are regularly invited to participate in audits conducted by the WQSP to develop hands-on audit experience, exchange technical information, and develop practical auditing skills.

8. QUALITY IMPROVEMENT

The procedures and criteria described in this QMP outline the scope of the Department's quality system for environmental data collection and use. Embedded in the execution of this quality system is the ongoing effort of supervisory and technical staff to continually improve the management of the system through evaluation and revision of procedures and criteria, in order to identify, correct and prevent conditions that adversely affect data quality. The Department's QA policy relies on a distributed approach that assigns responsibilities for management of the quality system to all staff levels as specifically described in the DEP [QA Directive](#). As indicated in the Directive, it is the intent of the DEP Secretary that the QA requirements and activities outlined in [Section 403.0623, F.S.](#), [Chapter 62-160, F.A.C.](#), and the QMP will be implemented throughout the agency.

Appendix: List of Supporting Documents

The following support documents, which are discussed in the QMP, are included in a separate electronic folder. A list of references cited in the QMP is also included in the folder.

1. List of DEP Programs receiving EPA funding
2. DEP Records Retention Schedules, May 2011
3. Getting What You Pay For – Best Practices for Contract and Grant Management, Microsoft Word document, Florida Department of Financial Services
4. Getting What You Pay For – Best Practices for Contract and Grant Management, Powerpoint file, DEP Procurement Section
5. Project Sampling Design Examples
 - a. QAPP, Bay Lake Stormwater Retrofit: Performance, Management, Monitoring, July 2013, DEP Agreement No. G0336, Prepared by Geosyntec Consultants for Orange County Environmental Protection Division and DEP Nonpoint Source Management Program
 - b. Wastewater Treatment Plant Outfalls to the St. Johns River – Revised Final Plan of Study for Sampling and Analysis of Total and Dissolved Metals in the Effluent and Diluted Waste Field, Prepared by Camp, Dresser & McKee, Inc. for JEA
 - c. SE Florida Coast Numeric Nutrient Criteria Study, prepared by NOAA-AOML, June 28, 2012
 - d. Peace River Basin, Plan of Study, DEP Standards and Assessment Section
 - e. Mercury Species Fluxes and Cycling in Gulf of Mexico Estuaries, DEP Agreement No., RM 115
 - f. Wacissa River Monitoring, Plan of Study, DEP Bureau of Laboratories
 - g. Characterization of Soil Lead and Mercury Levels in Support of Risk Assessment, Anclote Key Lighthouse Study, Site Number 272-2, Anclote Key, Pinellas County, FL, SIS Report No. 2013-04, June 2013, DEP Site Investigation Section
 - h. Silver Springs Theme Park Assessment, Silver Springs, Marion County, FL, Site Investigation Report, SIS Report No. 2013-07, August 2013, DEP Site Investigation Section
 - i. The Acreage, Drinking Water & Soil Sampling, February, March & April 2010, Loxahatchee, Palm Beach County, FL, SIS Report No. 2010-04, August 2010, DEP Site Investigation Section
6. List of References for DEP QMP Rev. 7