

CHAPTER 20
WATER QUALITY

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20. WATER QUALITY

20-1 OVERVIEW

20-1.1 Purpose

The purpose of this chapter is to provide guidelines for documenting potential impacts to water quality by Department activities. The requirements of this chapter shall be accomplished through completion of a *Water Quality Impact Evaluation (WQIE)* for all projects determined to be a Type 2 Categorical Exclusion (CE), or resulting in an Environmental Assessment and Finding of No Significant Impact (EA/FONSI), an *Environmental Impact Statement (EIS)*, or for all state-funded major transportation projects. The extent of the *WQIE* depends upon the extent of potential impacts of a proposed activity on water quality.

20-1.2 Process

A water quality impact evaluation focuses on two areas; surface water and ground water. The surface water evaluation should identify and document water quality issues to produce designs that are in compliance with the goals of the *Clean Water Act*, as amended, *Public Law 92-500*. The objective of this Act is to provide guidance for developing comprehensive solutions to prevent, reduce, and eliminate pollution of waters of the United States. The ground water evaluation, in coordination with the Environmental Protection Agency (EPA) and other regulatory agencies, will be carried out consistent with the *Safe Drinking Water Act*, as amended, *Public Law 93-523*. This Act requires ground water quality to be maintained in a manner that is reasonably expected to protect human health, the environment, and ground water resources. Water quality, and other potential impacts, must be discussed in Type 2 CEs, EAs/FONSIs, and EISs, for federally funded projects. Water quality and other potential impacts must also be discussed for all state-funded major transportation projects. A *State Environmental Impact Report (SEIR)* must be produced for all state-funded major transportation projects.

The discussion of surface water and ground water impacts resulting from highway storm water runoff is located in the Environmental Consequences Section (EIS) and the Impacts Section (Type 2 CE, EA, and SEIR). When completing the *WQIE checklist*, attention should be given to federal, state, and local rules, regulations and planning aimed at maintaining and improving water quality. For surface waters, state regulations can be found in the *Florida Department of Environmental Protection's (DEP) rules, Chapters 62-25, and 62-40, Florida Administrative Code (FAC)*; in the appropriate *Water Management District rules, Chapters 40A through E, -4, -40, -42, and/or -44*; and under statutes of local entities who have regulatory authority through state legislation. The appropriate regulations for ground waters can be found in *Federal Public Law sections 1424(e) and 1427 of the Safe Drinking Water Act and DEP's rule Chapter 62-28.700, FAC*.

20-2 PROCEDURE

20-2.1 Background

The environmental impact of highway storm water runoff on surface and ground water has been an issue of national concern for many years. Numerous studies and research conducted by the Federal Highway Administration (FHWA), EPA, DEP, the Department, and the WMDs have determined that untreated storm water runoff from highways is a major contributor of pollution to storm water and can adversely affect a receiving water body. As a result of increasing national and local interest, along with strengthening federal laws, the State of Florida has passed legislation that regulates the quantity and quality of storm water. It would be necessary to collect and analyze water samples from several storm events to quantify pollutants contained in highway storm water runoff. Time constraints for supplying environmental documentation preclude a study of this magnitude for each roadway project, therefore, it is assumed that any project which modifies existing structures or adds impervious surface will have an effect on the receiving water body.

At the request of the FHWA, the Department prepared a history of the storm water legislation in Florida. A summary of that history is: the State of Florida's storm water management program was developed under the guidance of the *State Water Policy (Chapter 62-40, FAC)* integrated with the *Storm Water Rule (Chapter 62-25, FAC)*. Both of these rules were developed to meet the goals and objectives of the *Federal Clean Water Act*. There are four major points of this legislation:

1. The Clean Water Act requires all states to develop regulations related to storm water discharges.
2. The DEP developed storm water regulations and delegated the authority of the regulations to four of the five water management districts (WMDs). In the fifth WMD, storm water is currently regulated by the DEP.
3. The WMDs developed region specific regulations for the control of storm water and the design of storm water facilities.
4. These regulations require a quantity of water to be captured.

The FHWA concurred with the discussion provided by the Department. It was concluded that regulations based upon federal law which were placed upon the Department require treatment of highway storm water runoff based upon capturing a quantity of water from each storm event. Therefore, the FHWA's policy is to participate in all highway storm water runoff treatment facilities designed to meet the requirements of appropriate regulatory agencies. Furthermore, all environmental documents should contain a *WQIE*, the appropriate rule citations, copies of the regulations and the permit criteria. If there is a need or requirement placed upon the Department to provide treatment of storm water above and beyond the regulations of the regulatory agencies, the Department will have to address this requirement on a case by case basis and provide to the FHWA thorough documentation which justifies the additional treatment, or that additional treatment capacity will be determined to be federally non-participating.

To comply with the *FHWA guidelines*, the Department has developed a *WQIE checklist* to be completed for documentation of water quality. A *WQIE* must be performed for every proposed Florida Department of Transportation (FDOT) project where the Class of Action has been determined to be a Type 2 CE, EA, or EIS. The evaluation may be limited or more detailed in scope depending on the nature of the project. The *WQIE check list* is provided as a tool in guiding the water quality evaluation. The environmental impacts of FDOT projects must be evaluated and documented to comply with environmental regulations. The *WQIE* is a systematic method designed to address the requirements for documentation of water quality.

20-2.2 Policy

During development of the environmental document, the FDOT District Office should coordinate with the appropriate Water Management District, DEP District Office and/or any regional entity which has storm water regulatory authority to ensure that the project is being developed consistent with federal, state, and local rules and regulations.

20-2.3 Water Quality Impact Evaluation

A *WQIE* must be performed on all FDOT projects where the Class of Action has been determined to be a Type 2 CE, EA/FONSI, EIS, or for all state-funded major transportation projects (state-funded major transportation projects require a SEIR). This is done by completing the *WQIE Check List* (Exhibit A). The checklist serves as back-up documentation and becomes an attachment to the Environmental Document. The extent of the *WQIE* will be determined by the type of project proposed. For example, replacing a traffic signal may only require a limited *WQIE* while replacing a culvert or widening a roadway could require a more detailed *WQIE*. By completing the checklist, the evaluator will be able to determine how detailed the *WQIE* will need to be. Where a detailed *WQIE* is required, the following standard statement will be completed and placed in the appropriate section of a Type 2 CE, EA/FONSI, FEIS, or SEIR. This standard statement should be expanded to include a project specific discussion of the surface and groundwater conditions.

The proposed storm water facility design will include, at a minimum, the water quantity requirements for water quality impacts as required by the (insert agency) in Rule(s) (insert rule numbers).

The FDOT District Office, District Permit Coordinator, or District Drainage Engineer may be contacted in the event of questions pertaining to information required on the *WQIE Checklist*.

20-2.4 Coordination Compliance With The Safe Drinking Water Act

Pursuant to **Section 1424(e)** of the *Safe Drinking Water Act (PL 93-523)*, EPA has determined the Volusia-Floridan and Biscayne Aquifers, including their respective recharge and streamflow source zones, are sole or principal sources of drinking water for public supply systems and individual wells in designated areas of Florida. Once an area is designated, no subsequent commitments of Federal financial assistance may be made to projects that the EPA Administrator determines may contaminate the aquifer so as to create a significant hazard to public health. Any level of contaminant which causes or may cause the aquifer to exceed any maximum contaminant level set forth in any promulgated *National Primary Drinking Water Standard* at any point where the water may be used for drinking purposes or which may otherwise adversely affect the health of persons, or which may require a public water system to install additional treatment to prevent such adverse effect may be determined by EPA to create a significant hazard to public health. To ensure compliance with the *Safe Drinking Water Act, a Memorandum of Understanding (MOU)*, executed on January 25, 1999, among EPA, FDOT, and FHWA identifies the types of proposed projects which will be forwarded to EPA for evaluation and comment, and outlines the procedures to be followed by EPA, FHWA, and FDOT in evaluating and commenting on proposed activities. The *MOU* contains maps showing boundaries of Sole Source Aquifer designated areas, and a complete listing of the types of projects which will be subject to review and comment by EPA. The *MOU*, excluding *SSA boundary maps* and accompanying narrative boundary descriptions, is available for download from the CEMO Web site. The complete *MOU*, including *SSA boundary maps* and accompanying narrative descriptions, are available at each FDOT District Office. The appropriate District Office can provide assistance to determine exact boundaries of the SSAs and their respective recharge and streamflow source zones.

The FDOT will provide copies to the FHWA, Florida Division, Tallahassee Office, of all documents submitted to EPA for review and comment. The EPA Ground Water/Drinking Water Branch will review the FDOT submittal for the proposed project and furnish comments or request additional information within 30 days of receipt from the FDOT. As appropriate, comments by EPA will contain sufficient detail regarding concerns which should be addressed during project development. The EPA will provide copies to the FHWA, Florida Division, Tallahassee Office, of all correspondence sent to the FDOT regarding SSA review.

If the project is located within a SSA or its respective recharge or streamflow zone, the District must identify this on the *Advance Notification Fact Sheet* during the Advance Notification (AN) phase of project development, as explained in Part 1, Chapter 2. All concerns raised by EPA should be addressed in the Impacts Section (Type 2 CE and EA), or Environmental Consequences Section of an EIS. If coordination or a meeting is required with EPA, the District should initiate all activities and arrange all meetings through the FHWA. The results of any meetings should be documented in the Comments and Coordination Section of the EA and DEIS and, when applicable, the Commitments and Recommendations Section of the EA/FONSI and FEIS.

Generally, the Type 2 CE, EA, SEIR or DEIS usually serves as the sole means for coordination with EPA. Routinely, a DEIS is circulated to EPA (*Part 1, Chapter 6 and Part 2, Chapter 34, P D & E Manual*). For Type 2 CEs, EAs and SEIRs, a copy is sent to EPA by the District when warranted by coordination and requested by the FHWA. The EPA, upon review of a Type 2 CE, EA, DEIS, or SEIR should provide a letter indicating concurrence with the Department's

measures to protect the aquifer. The letter from EPA should also state that the Department has met its obligation under **Section 1424(e) of the Safe Drinking Water Act**. This letter is referenced in the text and included as an appendix of the EA or EIS, and is included in the project file for Type 2 CEs and SEIRs.

20-3 REFERENCES

- 1. Florida Department of Environmental Protection Rule Chapter 62-25, Florida Administrative Code.**
- 2. Florida Department of Environmental Protection Rule Chapter 62-40, Florida Administrative Code.**
- 3. Florida Department of Environmental Protection Rule Chapter 62-28, Florida Administrative Code.**
- 4. Public Law 92-500, Federal Water Pollution Control Act As Amended By The Clean Water Act of 1977.**
- 5. Public Law 93-523, Safe Drinking Water Act As Amended, Section 1424(e).**
- 6. U.S. Department of Transportation, Federal Highway Administration, October 30, 1987. Guidance for Preparing and Processing Environmental and Section 4(f) Documents, FHWA Technical Advisory T6640.8A.**
- 7. Letter, May 17, 1994, Florida Department of Transportation, discussing storm water issues in Florida.**
- 8. Letter, May 31, 1994, Federal Highway Administration, subject: Florida - Storm Water Evaluation in the Environmental Document.**
- 9. Memorandum of Understanding Among The United States EPA, FHWA, Florida Division, and the FDOT, January 25, 1999.**

Exhibit A

WQIE CHECK LIST

Project Name: _____

County: _____

FIN (Financial Number): _____

Federal Aid Project No: _____

Short project description: _____

PART 1: DETERMINATION OF WQIE SCOPE

Does project increase impervious surface area? Yes No

Does project alter the drainage system? Yes No

If the answer to both questions is no, complete the WQIE by checking Box A in Part 4.

Do environmental regulatory requirements apply? Yes No

PART 2: PROJECT CHARACTERISTICS

20-year design ADT: _____ Expected speed limit: _____ mi/hr

Drainage area: _____ acres _____ % Impervious _____ % Pervious

Land Use: _____ % Residential _____ % Commercial _____ % Industrial

_____ % Agricultural _____ % Wetlands _____ % Other Natural

Potential large sources of pollution (identify): _____

Groundwater receptor (name of aquifer or N/A): _____

Designated well head protection area? Yes No Name: _____

Sole source aquifer Yes No Name: _____

Groundwater recharge mechanism:

(Notify District Drainage Engineer if karst conditions expected)

WQIE CHECK LIST (Contd.)

Surface water receptor (name or N/A): _____

Classification I II III IV V

Special designation (check all that apply):

ONRW OFW Aquatic Preserve Wild & Scenic River

Special Water SWIM Area Local Comp Plan MS4 Area

Other (specify): _____

Conceptual storm water conveyances & system (check all that apply):

Swales Curb and Gutter Scuppers Pipe French Drains

Retention/Detention Ponds Other _____

PART 3: ENVIRONMENTAL REGULATORY REQUIREMENTS

Regulatory Agency (Check all that apply)	Reference citation for regulatory criteria (attach copy of pertinent pages)	Most stringent criteria (Check all that apply)
USEPA <input type="checkbox"/>		<input type="checkbox"/>
FDEP <input type="checkbox"/>		<input type="checkbox"/>
WMD <input type="checkbox"/> (Specify)		<input type="checkbox"/>
OTHER <input type="checkbox"/> (Specify)		<input type="checkbox"/>

Proceed to Part 4 and check Box C.

WQIE CHECK LIST (Contd.)

PART 4: WQIE DOCUMENTATION

- Water quality is not an issue.
- No regulatory requirements apply to water quality issues
(Document by checking the "none" box for water quality in Section 6.C.3 of the *Environmental Determination Form* or Section 5.C.3 of the SEIR.

- Regulatory requirements apply to water quality issues. Water quality issues will be mitigated through compliance with the quantity design requirements placed by _____, an authorized regulatory agency.
(Document by checking the "none" box for water quality in Section 6.C.3 of the Environmental Determination Form or Section 5.C.3 of the SEIR.

Evaluator Name (print):

Office:

Signature: _____ Date: _____