

## SECTION E: SUPPLEMENTAL INFORMATION REQUIRED FOR WORKS OR OTHER ACTIVITIES INVOLVING A STORMWATER MANAGEMENT SYSTEM (OTHER THAN A SINGLE-FAMILY PROJECT)

Instructions: The information listed in the checklists below represents the level of information that is usually required to evaluate an application. Information can be provided within reports, plans and documents. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. The supplemental information required by this section is in addition to the information required by Section A of the ERP application.

### **PART 1: STORMWATER MANAGEMENT SYSTEM SUMMARY**

Provide drainage calculations, signed and sealed by an appropriate registered professional, and supporting documentation demonstrating that the proposed project meets the conditions for issuance under 62-330.301(1)(a),(b),(c),(e), F.A.C. The drainage calculations should include, but not necessarily be limited to, the following:

1. General Site Information:

- a.  Provide pre-development and post-development drainage map(s), as appropriate, that include drainage patterns and basin boundaries with acreage served by each hydraulically separate system, showing the direction of flows, including any off-site runoff being routed through or around the system; topographic information; and connections between wetlands and other surface waters.
- b.  Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions. Identify the wet season high water table elevations, soil profiles, and hydraulic conductivity. Include dates, datum, and methods used to determine these soil parameters.
- c.  Identify the onsite hydrologic soil classification (e.g. Type A, B/D, D). Reference the source, such as the USDA/NRCS Soil Survey, used in estimating the onsite hydrologic soil classification. Provide maps, as appropriate, with the project limits delineated.
- d.  Identify the seasonal high water or mean high tide elevation for receiving waters/wetlands into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.
- e.  Identify the name of each receiving waterbody to which the proposed stormwater management system will discharge: .
- f.  Indicate the existing land use and land cover.
- g.  Provide the acreage, and percentages of the total project, of the following:
  - 1. Impervious surfaces, excluding buildings, wetlands and other surface waters;
  - 2. Buildings;



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3. Pervious surfaces (green areas not including wetlands);
  4. Lakes, canals, retention areas, other open water areas; and
  5. Wetlands (Please refer to Section C to ensure consistency in wetland acreages).
- h.  Provide the location and description of any nearby existing offsite features (such as wetland and other surface waters, stormwater management ponds, and building or other structures) which might be affected by or affect the proposed construction or development.

2. Water Quality Analysis:

- a.  Provide a description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis.
- b.  Is the receiving waterbody known to be impaired, and/or has an established Total Maximum Daily Load (TMDL) or Basin Management Action Plan (BMAP)? If so, please provide specific descriptions of all water quality parameters for which the waterbody is known to be impaired? For more information about water quality, impaired waters, and to determine whether a TMDL has been adopted in your project area, refer to:  
<http://waterwebprod.dep.state.fl.us/basin411/downloads/Florida-Adopted-TMDLs.pdf>. To determine whether a BMAP exists, or is being developed in your project area, refer to: <http://www.dep.state.fl.us/water/watersheds/bmap.htm#rad>.  
 yes  no  don't know  
 If yes, provide calculations demonstrating that the proposed project will not contribute to violations of state water quality standards in accordance with the applicable Applicant's Handbook, Vol. II.
- c.  Does the project have a direct discharge to a Class I, Class II, Outstanding Florida Waters or Class III waters, which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting? *To determine whether your project is within, or will discharge to an OFW, or for more information about OFWs in general, refer to:* <http://www.dep.state.fl.us/water/wqssp/ofw.htm>.  
 yes  no  don't know  
 If yes, additional treatment in accordance with the applicable Applicant's Handbook, Vol. II, may be required.
- d.  Provide construction plans and calculations that address the required treatment volume and recovery, as well as stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria in the applicable Applicant's Handbook, Vol. II.

Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, and justification for model selection.

3. Water Quantity Analysis:

Provide calculations and documentations demonstrating that the project, as proposed, meets the applicable design criteria as indicated in the applicable Applicant's Handbook, Vol. II. Typically, the information would include, at a minimum, but is not necessarily be limited to, the following:

- a.  For projects requiring pre-development analysis, provide an analysis of the pre-development peak rate of discharge and / or volume of runoff, for all design storm events. Account for all onsite depressional storage and offsite contributing area. Please refer to the applicable Applicant's Handbook, Vol. II for the design storm event(s) that apply to your project.
- b.  Provide an analysis of the post-development peak rate of discharge and / or volume of runoff for all applicable design storm events. Account for all onsite storage and offsite contributing area. Please refer to the applicable Applicant's Handbook, Vol. II for the design storm event(s) and criteria that apply to your project.

These analyses should include:

- Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basins in the pre-development and post-development condition;
- Design storms used including rainfall depth, duration, frequency, and distribution;
- Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);
- Stage-storage computations for any area such as a reservoir, closed basin, detention area, or channel, used in storage routing;
- Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;
- Flood routings through on-site conveyance and storage areas;
- Water surface profiles in the primary drainage system for each required design storm event(s);
- Runoff peak rates and volumes discharged from the site for each required design storm event(s);
- Design tailwater elevation(s) for each storm event at all points of discharge (include source or method of estimate); and
- Pump specifications and operating curves for range of possible operating conditions (if used in system).

Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, input and output data, justification for model selection, and, if necessary, a description of the program.

4. Floodplain Analysis (where applicable).

- a.  If the project is in a known floodplain of a stream or other water course, identify the appropriate floodplain boundary and approximate flooding elevations of any lake, stream or other watercourse located on or adjacent to the site.
- b.  For traversing works, in accordance with the applicable Applicant's Handbook, Vol. II, provide:

- Hydraulic calculations for all proposed traversing works; and
- Water surface profiles showing upstream impact of traversing works.
- c.  For impacts to regulated floodplains, in accordance with the applicable Applicant's Handbook, Vol. II, provide:
  - Location and volume of encroachment within regulated floodplain(s); and
  - Plans and calculations for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.

**PART 2: CONSTRUCTION PLANS**

1. Provide clear, construction level detailed plans for the system. The plans must be signed and sealed by an appropriate registered professional as required by law. These plans should include cumulative information from all applicable sections; as well as the following:
  - a.  Project area boundary and total area, including distances and orientation from roads or other landmark.
  - b.  Existing topography extending at least 100 feet off the project area. All topography shall include location and description of benchmarks, reference to NGVD 1929 or NAVD 1988 along with the conversion factor.
  - c.  Proposed site plan with acreage, including the following:
    - plan view of proposed development, including impervious surfaces and water management areas;
    - land cover and natural communities\*;
    - wetlands and other surface waters\*;
    - undisturbed uplands\*;
    - aquatic communities\*;
    - proposed buffers\*;
    - proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands, (if applicable); and
    - onsite wetland mitigation areas\*.

\*Please refer to Section C.

    - For phased projects, provide a master development plan clearing delineating the limits of each phase of construction.
  - d.  Paving, Grading, and Drainage Information, which includes, but not necessarily limited to, the following:
    - Existing topography;
    - Boundaries of wetlands and other surface waters and upland buffers (see Section C);
    - Plan view of proposed development;
    - Proposed elevations and/or profiles, including:
      - roadway, parking, and pavement grades;
      - floor slabs, walkways, and other paved surfaces;
      - earthwork grades for pervious landscaped areas; and
      - perimeter site grading, tying back into existing grades.

- Location of all water management areas, including elevations, dimensions, side slopes, and design water depths;
  - Location, size, and invert elevations of existing and proposed stormwater conveyance systems;
  - Vegetative cover plan for all on-site and off-site earth surfaces disturbed by construction; and
  - Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes (including access), and rights-of-way and easements for the existing drainage system, if any.
- e.  Stormwater detail information, including but not necessarily limited to, the following:
- Cross section of all stormwater management areas, including elevations, dimensions, side slopes, and proposed stabilization measures (with location of the cross section(s) shown on the corresponding plan view);
  - Detail of all proposed control structures, including elevations, dimensions, and skimmer, where applicable; and
  - Details of proposed stormwater management systems, such as underdrains, exfiltration trenches, vaults, and other proposed Best Management Practices (BMPs).
- f.  Location and description of any nearby existing offsite features (such as wetland and other surface waters, stormwater management ponds, and building or other structures) which might be affected by or affect the proposed construction or development.

### **PART 3: CONSTRUCTION SCHEDULE AND TECHNIQUES**

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should include, as applicable, the following.

- a.  Access and staging of equipment;
- b.  Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions.
- c.  The location of disposal site(s) for any excavated material, including temporary and permanent disposal sites.
- d.  A demolition plan for any existing structures to be removed.
- e.  Dewatering plan details. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place; **Note: a Consumptive Use or Water Use permit may be required for dewatering.**
- f.  Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge;

### **PART 4: OPERATION AND MAINTENANCE AND LEGAL DOCUMENTATION:**

- a.  Describe the overall maintenance and operation schedule for the proposed system.
- b.  Identify the entity (or entities) that will be responsible for operating and maintaining the system (or parts of the system) to demonstrate that the entity (or entities) meet(s) the requirements of section 12.3 of the Applicant's Handbook, Vol. I.

- If different from the permittee, provide a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long-term maintenance.
  - If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system.
- c.  Provide drafts of all proposed conservation easements, stormwater management system easements, draft property owner's association documents, and plats for the property containing the proposed system.
- d.  Provide legal reservations for access to the treatment system for maintenance and operation by future maintenance entities for subdivided projects.
- e.  Provide indication of how water and wastewater service will be supplied.
- f.  Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled the applicant.

**PART 5: WATER USE**

- a.  Describe how irrigation will be provided to the project. Will the surface water system be used for water supply, including landscape irrigation, or recreation?
- b.  If a Consumptive Use or Water Use permit has been issued for the project, state the permit number:
- c.  If a Consumptive Use or Water Use permit has not been issued for the project, indicate if such a permit will be required.  yes  no  don't know  
If yes, please indicate when the application for a permit will be submitted:
- d.  Indicate how any existing wells located within the project site will be utilized or abandoned.

**PART 6: SPECIAL BASIN INFORMATION**

Is your project within a special basin as described in the applicable Applicant's Handbook, Vol. II?

yes  no  don't know

If yes, please demonstrate that the project will meet the applicable special basin criteria.