

**Checklist and Considerations Regarding City of North Port  
Big Slough Stormwater Management Master Plan and  
Application for a Statewide Environmental Resource Permit (SWERP)**

The City of North Port intends to apply for a Statewide Environmental Resource Permit (SWERP) from the Southwest Florida Water Management District, seeking “Conceptual Approval” of the recently completed North Port/Big Slough Stormwater Management Master Plan. Having the District’s conceptual approval of the proposed drainage improvements will allow the City to better plan and implement the work, over a time period that is consistent with the large size and expected cost of the full project, while maintaining greater certainty with regard to regulatory criteria for issuance of permits across all phases of the project.

A conceptual approval permit does not authorize construction or operation but does have an expiration date that is tied to the issuance of subsequent permits for construction activities that are consistent with the conceptual approval permit. The conceptual approval permit has a 20-year duration and it is expected that the first implementation phase would be individually permitted and constructed within 5 years of issuance. There is some flexibility in the scheduling and duration of those permit(s), however.

A conceptual approval permit is not a type of individual permit, but it is submitted using the same form(s) as an individual permit and it is processed in the same manner as an individual permit. The staff recommendation to approve the conceptual approval permit will be based upon a determination of whether reasonable assurance has been provided that the activity meets the criteria for evaluation, and whether the applicable permit fee has been submitted. Issuance of a conceptual approval permit is a determination that conceptual plans are, within the extent of detail provided in the application, consistent with applicable rules at the time of issuance. This should be a key consideration in the City’s decision regarding what level of detail to submit with the initial conceptual approval permit application.

The conceptual approval permit will very likely include a set of “conditions” which directly (or indirectly) recognize the preliminary nature of the submitted master plan concept and address the likelihood that the configuration of proposed features will change significantly during engineering design. It is expected that a more rigorous design review will be performed by the District in processing of Individual permit applications for each new phase of project implementation. In fact, the City should request that the District defer judgement of some aspects of the project until such time as an Individual Permit application is submitted for a construction phase along with a more complete definition of site conditions and system performance. Staff can make such deferment(s) through inclusion of appropriate conditions of issuance.

Materials that we plan to submit in support of the application include: application forms; project narrative; conceptual plans (drawings); model input and output; and other supporting documentation.

The project narrative will: describe, in general terms, the purpose of the project; identify planned improvements with sufficient specificity to allow regulatory review; and demonstrate hydrologic and hydraulic project performance, again, with sufficient detail and accuracy to provide reasonable assurance that the project, as generally conceived, will meet conditions of issuance. In this case, the purpose is flood reduction, and the planned improvements consist of a new bypass canal, water control structure, culverts, and weirs as well as canal widening and erosion protection to provide increased storage and conveyance

capacity in portions of the existing stormwater management system. Project performance will be demonstrated through submittal of storm event simulation results and flood mapping, employing the Governing Board-approved North Port/Big Slough WMP watershed model as best available information.

A set of Conceptual Plan drawings has been developed using available baseline information, such as LiDAR-based topographic contours, wetland features from the National Wetland Inventory (NWI) database, parcel line information from the Sarasota County property appraiser, and drainage structure information from a wide variety of sources. The drawings are not for construction but depict the planned improvements to an appropriate level of detail to describe the expected design configuration and extents. The current plan set is more fully developed than what is typically submitted with an application for conceptual approval.

Model input and output data will be submitted to demonstrate expected project performance of the fully implemented stormwater plan. It should be understood that simulation results are indicative of planning-level outcomes and are not necessarily refined to address and meet all regulatory criteria. Providing that level of refinement for a conceptual plan of this large scale would be cost-prohibitive and inadvisable. Additional modeling work will be required to support future phases of the project as site-specific data are collected to support detailed engineering design. Changes to baseline information (topography, structure geometry, etc.) will result in changes in hydraulic performance and design adjustments will undoubtedly be made to meet criteria (pre/post peak stage, minimum flows, etc.). Additionally, while proposed improvements have been carefully refined through modeling, there will be some instances where further work would be needed to completely eliminate stage increases throughout the entire model domain. Also, allowable increases to the north of the City remain to be negotiated and the submitted model reflects current expectations of what will be agreed upon through ongoing interagency coordination.

The above application materials will demonstrate that proposed improvements meet the criteria for reasonable assurance, consistent with current applicable rules, and District staff should make a recommendation to approve the conceptual permit. The approved conceptual permit should include a set of conditions which recognize the preliminary nature of some master plan concepts or supporting information and defer certain matters to applications for Individual permits, at which time a more rigorous assessment of those conditions can be made, changes incorporated into the master plan, and included in the application submittal for each future (implementation) phase of the overall project.

Figure 1 presents a checklist of items which will need to be addressed in future permit application submittals, any of which may impact final engineering design of the proposed improvements.

Site Topography. A large amount of field survey data will undoubtedly be required to support engineering design of plan components, with large amounts of topographic and other information collected along the proposed bypass alignment as well as along the R-36 ditch. Both the existing and proposed conditions models, upon which hydraulic performance and planned flood reduction is based, will be updated to reflect the more accurate ground data (as compared to LiDAR-based terrain information that was used for watershed model and conceptual design development).

This is required, in part, due to the high level of attention that will be paid to pre-project and post-project flow rates and water levels in an assessment of impacts on adjacent properties. When higher quality site-specific topographic information (traditional ground survey vs LiDAR-derived terrain) is employed in the

model, it is very likely that simulated boundary flows westward toward Deer Prairie Creek will be different than currently described by the regional watershed model. Those differences will have an important impact on design of R-36 improvements as well as on design of related stormwater management features which may be required to address secondary impacts.

Wetlands and Wildlife. With regards to wetlands and wildlife, the permit applicant must demonstrate that the project will not have an adverse effect on wetlands and surface waters and must provide reasonable assurance that the project will not impact the values of wetland and other surface water functions so as to cause adverse impacts to the abundance and diversity of fish, wildlife, listed species, and the bald eagle or to the habitat of fish, wildlife, and listed species. This has not been done.

The City will be required to: provide the limits of jurisdictional wetlands and surface waters; provide appropriate mitigation using then Uniform Mitigation Assessment Method (UMAM) for impacts, if applicable; demonstrate elimination and reduction of wetland impacts; maintain minimum wetland conservation area setbacks or address secondary impacts; determine Seasonal High Water Levels (SHWL) at pond locations, wetlands, and other surface waters (OSWs); determine normal pool elevations of wetlands; and determine 'pop-off' locations and elevations of wetlands. Additionally, a wildlife survey would be required if the project site is used by, and the project would impact the use of, listed species, considering site characteristics and the range and habitat needs of such species.

The District will no longer send a copy of an application that does not qualify for a State Programmatic General Permit (SPGP) to the U.S. Army Corps of Engineers. If a project does not qualify for a SPGP, the City will need to apply separately to the Corps using the appropriate federal application form for activities under federal jurisdiction. Also, as part of their assessment of the impacts of regulated activities upon fish and wildlife, the District provides a copy of all notices of applications for individual (including conceptual approval) permits that propose regulated activities in, on, or over wetlands or other surface waters to the Florida Fish and Wildlife Conservation Commission (FWC) for review and comment.

While a preliminary depiction of wetland impacts (based on National Wetland Inventory mapping) is provided in the set of conceptual drawings, a large amount of work remains. The City should request that matters related to wetlands and wildlife be deferred to future applications for Individual permits, at which time a more rigorous assessment of conditions can be made, necessary changes incorporated into the master plan, and included in the application submittal for areas associated with each future phase of the overall project.

Historical and Archaeological. With regards to historical/archaeological matters, the permit applicant typically must map the location and characterize the significance of any known historical or archaeological resources that may be affected by the project activity located in, on, or over wetlands or other surface waters. This has not been done. However, it is known that significant sites have been found north of the project (north of Tropicair Boulevard) and it is possible that the project may need to be modified to accommodate additional findings along the proposed bypass of Myakkahatchee Creek.

The District will evaluate whether portions of the project will impact significant historical or archaeological resources and will provide copies of the permit application to the Division of Historical Resources of the Department of State to solicit comments regarding whether the project may adversely affect significant historical and archaeological resources. The City will be required to perform an archaeological survey and

to develop and implement a plan to demarcate and protect the historical or archaeological resources, if such resources are reasonably expected to be impacted by the project.

The City should request that matters related to historical/archaeological resources be deferred to future applications for Individual permits, at which time a more rigorous assessment of conditions can be made, incorporated into the master plan, and included in the application submittal for areas associated with each future phase of the overall project.

Minimum Flows and Levels. Applicants must demonstrate that minimum flows and levels of receiving waters will not be disrupted by the proposed activity. The Water Resource Implementation Rule provides implementation goals, objectives, and guidance, including guiding principles for stormwater and surface water management programs (including the basis for minimum design criteria for the stormwater management systems), flood protection, natural systems protection and management, minimum flows and levels, and protection measures for surface water resources. Chapter 40D-8 provides minimum water level and flow requirements for specified surface waters throughout the District. The proposed project is not expected to impact minimum flows or levels of any receiving waters.

Water Quality. Applicants must provide reasonable assurance that a regulated activity will not adversely affect the quality of receiving waters such that the water quality standards, antidegradation policies, and special standards for Outstanding Florida Waters and Outstanding National Resource Waters set forth in Florida Administrative Code will be violated. Reasonable assurances regarding water quality must be provided both for the short term and the long term, addressing the proposed construction, alteration, operation, maintenance, removal and abandonment of the project. This has not been done.

The City should request that matters related to water quality be deferred to future applications for Individual permits, at which time a more rigorous assessment of short term and the long term conditions can be made, incorporated into the master plan, and included in the application submittal for areas associated with each future phase of the overall project.

Subsurface Conditions. Development of the stormwater plan took into consideration expected subsurface conditions based on preliminary site investigation, observation of surrounding drainage features, and review of general soils information contained in the NRCS Soil Survey. Proposed improvements considered subsurface constraints and impacts to the extent known from available data. However, a substantial amount of site-specific data still needs to be collected and expertise employed to address subsurface conditions during engineering design on all project components. This includes geotechnical and hydrogeological services for engineering design and project configuration.

The City should request that matters related to subsurface conditions be deferred to future applications for Individual permits, at which time a more rigorous assessment of conditions can be made, necessary changes incorporated into the master plan, and included in the application submittal for areas associated with each future phase of the overall project.

Offsite Conditions and Impacts. Through simulation of a range of design storm events for the existing and proposed conditions, using the SWFWMD Governing Board-approved model for the North Port/Big Slough watershed, it has been demonstrated that this project will provide substantial flood reduction in the I-75, Dorothy Avenue, and other areas. It is important to address constraints related to project components which involve areas outside the City of North Port.

- **Northern Offsite Impacts.** One such project component is comprised of inflow reduction at the north end of the City of North Port. Restricting high flows at the inflow point results in some flood reduction in the City. Peak flow reduction could be achieved for large events without impacting normal flows but would result in small increases in flood peak elevations to the north. Increases of about one foot in elevation are expected to be localized, short-term, and inconsequential in terms of environmental or other impacts.
- **Western Offsite Impacts.** A second component considered, but not yet directly implemented in the preliminary design, calls for flow diversion along the western boundary of the City into areas that are also managed by Sarasota County. It should be noted that historical flow patterns toward the Deer Prairie Slough/Creek system were interrupted decades ago by construction of the R-36 canal. Still, significant amounts of stormwater are discharged westward from the R-36 canal when it exceeds its bank at a number of locations during even small storm events. The proposed plan would increase and/or redistribute those flows where possible without causing adverse impacts. Some residential areas west of R-36 experience high water during storm events. Those conditions might be addressed through a coordinated effort between the City and County in developing a plan for R-36 improvements. In addition, SWFWMD has ongoing environmental restoration efforts underway in the Deer Prairie Slough/Creek system that should be addressed.

Coordination with SWFWMD and Sarasota County is required to discuss inflow reduction (i.e., controls at Power Line Road) and flow diversion (i.e., increased discharges from R-36) so that we may modify our conceptual plans to meet constraints. In the end, we would want SWFWMD and Sarasota County to be well-satisfied that any increase in stage north of the City and/or increase or redistribution of westward flow from R-36 would not have an adverse impact and thus agree to grant a permanent easement to the City for purposes of project implementation. Demonstration of no adverse impacts in offsite areas would require additional modeling (outside the Big Slough WMP model domain). That evaluation would likely be a strong candidate for funding under the SWFWMD Cooperative Funding Initiative (CFI) program.

Given that the proposed plan is conceptual, it is expected that additional rigorous evaluation of planned improvements will be performed in the future to support applications for construction permits as the project is implemented in a phased manner. Additional data will be collected to support both engineering design and modeling, and minor design changes will be forthcoming.

The City should request that matters related to offsite impacts be deferred to future applications for Individual permits, at which time a more rigorous assessment of short term and the long term conditions can be made, incorporated into the master plan, and included in the application submittal for areas associated with each future phase of the overall project.

**CHECKLIST OF ITEMS TO BE ADDRESSED IN FUTURE PERMIT APPLICATION SUBMITTALS****Surface conditions:**

- ☐ site topography – need future site-specific survey
- ☐ wetlands – need future delineation of wetland boundaries to evaluate impacts and mitigation
- ☐ wildlife – need future study
- ☐ historical/archaeological – need future study
- ☐ minimum flows and levels – need future study
- ☐ water quality – need future study

**Subsurface conditions:**

- ☐ geological – need site-specific soils information
- ☐ geotechnical – need to support engineering design of proposed features
- ☐ hydrogeological – need to support final configuration of proposed improvements

**Other:**

- ☐ Offsite Conditions and Impacts (additional modeling and agency coordination required)
  - ☐ ability to restrict inflows and store stormwater for attenuation north of City
  - ☐ ability to increase outflow to Deer Prairie Slough

**Performance:**

- ☐ Pre/Post Peak Stage – preliminary, to be updated with each Individual permit application
- ☐ Pre/Post Volume – not currently required, open basin discharges to tidal waters