

RESOLUTION No. 21-282

A RESOLUTION OF THE MAYOR AND THE CITY COUNCIL OF THE CITY OF DORAL, FLORIDA, ADOPTING THE CITY OF DORAL WATERSHED MASTER PLAN (WMP); PROVIDING FOR IMPLEMENTATION; AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, a Watershed Master Plan (WMP) is developed to analyze the combined effects of the existing and expected development and redevelopment on stormwater drainage throughout the watershed and includes a plan of action to address current and expected problems; and

WHEREAS, the flood peak at a point downstream in a watershed is a result of both the quantity of upstream runoff and the time it takes for water to travel down the watershed; and

WHEREAS, the objective of this WMP is to provide the community with a tool it can use to make decisions that will reduce the increased flooding from the development on a watershed-wide basis and address existing flood problems; and

WHEREAS, the WMP allows communities within the watershed to consider future development as they work on current problems and ensure that future development does not aggravate existing conditions; and

WHEREAS, the development of a WMP follows the City's strategic goal of "Quality of Place", ensuring that adequate infrastructure is in place to help prevent flooding; and

WHEREAS, the PWD requested a proposal from BCC Engineering for the development of the WMP and Work Order No. 2 was issued as approved via Resolution 21-99; and

WHEREAS, it should also be noted that in addition of being a planning tool, the WMP

can help the City with the National Flood Insurance Program (NFIP) Community Rating System (CRS) by providing necessary points to improve the classification of the City; and

WHEREAS, the WMP has been completed and a copy of the Final Signed & Sealed WMP is attached as Exhibit "A"; and

WHEREAS, staff recommends that the Mayor and City Councilmembers adopt the City of Doral Watershed Master Plan (WMP).

NOW THEREFORE, BE IT RESOLVED BY THE MAYOR AND THE CITY COUNCIL OF THE CITY OF DORAL AS FOLLOWS:

Section 1. Recitals. The above recitals are confirmed, adopted, and incorporated herein and made part hereof by this reference.

Section 2. Approval. The Watershed Master Plan a copy which is attached as Exhibit "A", is hereby adopted.

Section 3. Authorization. The City Manager is authorized to execute the Work Order and expend budgeted funds on behalf of the City in furtherance hereof.

Section 4. Implementation. The City Manager and the City Attorney are hereby authorized to take such further action as may be necessary to implement the purpose and the provisions of this Resolution.

Section 5. Effective Date. This Resolution shall take effect immediately upon adoption.

The foregoing Resolution was offered by Councilmember Mariaca who moved its adoption. The motion was seconded by Vice Mayor Cabral and upon being put to a vote, the vote was as follows:

Mayor Juan Carlos Bermudez	Yes
Vice Mayor Digna Cabral	Yes
Councilman Pete Cabrera	Yes
Councilwoman Claudia Mariaca	Yes
Councilman Oscar Puig-Corve	Yes

PASSED AND ADOPTED this 8 day of December, 2021.



JUAN CARLOS BERMUDEZ, MAYOR

ATTEST:



CONNIE DIAZ, MMC
CITY CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY
FOR THE USE AND RELIANCE OF THE CITY OF DORAL ONLY:



LUIS FIGUEREDO, ESQ.
CITY ATTORNEY

EXHIBIT “A”

451.a. Activity Description

This activity credits four approaches to managing new development in the watershed.

(1) **S t o r m w a t e r u n e r g u l a t i o n s SMR**: Regulating development on a case-by-case basis to ensure that the peak flow and volume of stormwater runoff from each site will be no greater than the runoff from the site before it was developed or redeveloped. Other development regulations requiring developers to maximize a site's ability to absorb site runoff can be credited.

(2) **W a t e r s h e d M a s t e r W M P**: Developing and implementing a watershed management master plan that analyzes the combined effects of existing and expected development and redevelopment on drainage throughout the watershed and also includes a plan of action to address current and expected problems. A stormwater management regulation credited under Section 452.a (SMR) helps to manage increased runoff from a developing watershed, but it does not solve the problem entirely. The flood peak at a point downstream in a watershed is a result of both the quantity of upstream runoff and the time it takes for water to travel down the watershed. Development within the watershed usually has an impact on both of these characteristics.

The objective of watershed master planning under Section 452.b (WMP) is to provide the community with a tool it can use to make decisions that will reduce the increased flooding from development on a watershed-wide basis and address existing flood problems. Most communities have some way of dealing with drainage problems, through a capital improvement plan, planned flood control structures, or perhaps just by responding to complaints as they arise. A watershed master plan, like other community plans, allows communities within the watershed to consider future development as they work on current problems and ensure that future development does not aggravate existing problems.

(3) **E r o s i o n s E S C**: Regulating activities throughout the watershed to minimize erosion on construction sites that result could in sedimentation and water pollution.

(4) **W a t e r Q u a l i t y W Q**: Requiring new developments' stormwater management facilities to improve the quality of stormwater runoff.

452.b. Watershed master plan (WMP)

The maximum credit for this element is 315 points.

WMP credit is provided if the community implements stormwater management regulations through an adopted watershed master plan. Credit is also provided for watershed master plans that

- Evaluate future conditions and long-duration storms,
- Evaluate the impact of sea level rise and climate change
- Identify wetlands and natural areas,
- Address the protection of natural channels, and
- Provide a dedicated funding source for implementing the plan.

The objective of watershed master planning is to provide the community with a tool it can use to make decisions that will reduce the increased flooding from future conditions that include new development, redevelopment, and the impact of climate change and sea level rise, throughout a watershed or community. Although there is no doubt that stormwater management regulations reduce the future flood threat from a developing area, a watershed master plan goes much further in locating and dealing with existing problems and identifying potential future problems. An understanding of the watershed's behavior is necessary to ensure that established or enhanced stormwater management regulations requiring onsite control will prevent flood damage due to future development.

The only way to completely understand watershed behavior (how a watershed responds to rainfall) is to do a relatively detailed study of runoff under both present and future (fully developed) conditions. Hydrologic models simulate various rainstorms over a watershed and, based on the nature of the watershed's land cover, soils, and topography, determine the timing and total volume of peak flows. Hydrologic studies can be used to determine the appropriate amount of detention or retention necessary to prevent an increase in runoff as development occurs.

In addition to the present- and future-conditions hydrology studies, a watershed master plan should include mitigation recommendations that are appropriate for the community. These recommendations should include the entire range of mitigation activities—regulations, public information, structural control of runoff, non-structural programs (including stormwater management regulations), protection of sensitive natural areas, and acquisition of flood-prone properties.

For CRS credit, a watershed master plan must, at a minimum, address future development (new development and/or redevelopment) within the watershed and the impact of development on flows during a 100-year event. The modeling may show that different standards are needed for different watersheds, or for different parts of the watershed. Communities may also find as a result of their modeling that their existing stormwater management regulations are adequate or they may decide to make them more stringent to prevent development from increasing the frequency and severity of existing problems.

One of the prerequisites for a CRS Class 4 (see Section 211.c) is that the community receive credit for managing the impacts of a 100-year storm and/or sea level rise, where applicable, based on a watershed master plan. Most communities use various return frequencies for different design and management purposes, including onsite controls. Development of a watershed master plan does not have to change that, but it is important to understand the impact of development on runoff from the 100-year storm.

For CRS credit, development of a watershed master plan does not imply that a community must immediately address its future problems through capital drainage projects. The plan should be considered a tool to help the community identify opportunities to address problems before and as they arise.

Credit Criteria for WMP

- (1) The community must have adopted a watershed master plan that
 - (a) Evaluates the impact of future conditions for at least one watershed that drains into the community for multiple storm events, including the 100-year storm. The plan must identify the natural drainage system and constructed channels; or
 - (b) Evaluates the future conditions, including the impacts of a median projected sea level rise (based on the National Oceanic and Atmospheric Administration's (NOAA's) "intermediate-high" projection for the year 2100) on the local drainage system during multiple rainfall events, including the 100-year rainfall event. This option is for coastal communities with no natural or constructed channels. Guidance on sea level rise projections for CRS purposes can be found in Section 404.
- (2) The community must have adopted regulatory standards that require onsite management of runoff from all storms up to and including the 25-year event that receive credit under SMR in Section 452.a. The adopted regulatory standards must manage future peak flows so that they do not increase over present values. "All storms" includes at a minimum the 10-year storm in addition to the 25-year event. Management of a 2-year storm is also recommended.
- (3) For any plan that is more than five years old, the community must evaluate the plan to ensure that it remains applicable to current conditions. The evaluation must address whether the data used for the plan are still appropriate and whether the plan effectively manages stormwater runoff. The community must update a watershed master plan that become obsolete, or the WMP credit will be revised accordingly.
- (4) WMP1 credit must be received in order to receive credit for any of the other items.

Credit Points for WMP

WMP = the total of the following:

WMP1 = 90 points, if the watershed master plan meets all of the criteria listed in Section 452.b

WMP2 = 30 points, for managing the runoff from all storms up to and including the 100-year event to ensure that flood flows downstream of new development do not increase due to the development

“All storms” includes at a minimum the 10-year storm, the 25-year or the 50-year storm, and the 100-year storm.

WMP3 = 55 points, if the plan provides onsite management of future peak flows and volumes so that they do not increase over present values

If the community’s onsite development standards prevent all increases in downstream flood peaks AND VOLUMES, regardless of their location within the watershed, it will receive this credit. A community can receive the maximum credit if it requires retention of runoff from a 100-year or larger storm and discharges it to groundwater or irrigation or if it detains the runoff long enough to discharge it after the peak flow in the receiving body has subsided, so that the discharge will not increase downstream peak flows anywhere in the receiving stream.

WMP4 = 35 points, if the plan manages the runoff from all storms up to and including the 5-day event

If a community can demonstrate that an event shorter than five days is the locally appropriate “worst-case” runoff event for stormwater management, it may receive this credit if it uses that event for its regulatory standard. In some areas this may require continuous-simulation modeling. If a community, regional, state, or federal agency can demonstrate that, for example, the 72-hour event provides the “worst case” runoff for a watershed, the 72-hour event would be credited for communities in that area.

The following three credits recognize communities that preserve their remaining “natural” channels, floodplains, or upland wetlands for stormwater conveyance or storage. “Soft” or “green” approaches are encouraged, rather than “hard” or concrete measures.

WMP5 = 30 points, if the plan identifies existing wetlands or other natural open space areas to be preserved from development so that natural attenuation, retention, or detention of runoff is provided

WMP6 = 25 points, if the plan recommends prohibiting development, alteration, or modification of existing natural channels and the community has adopted a qualifying ordinance

WMP7 = 25 points, if the plan recommends that channel improvement projects use natural or “soft” approaches rather than gabions, rip rap, concrete, or other “hard” techniques, and the community has adopted appropriate design standards or ordinances

WMP8 = 25 points, if the community has a funding source dedicated to implementing the plan’s recommendations.

A community with a local funding source dedicated to implementation of the adopted watershed master plan is more likely to complete the projects and can receive additional credit. Common sources of funding include a real estate excise tax, stormwater utilities, drainage district fees, or other dedicated taxes. Developer impact fees are an uncertain source of funding and are not credited here.

Impact Adjustment for WMP

The watershed impact adjustment map for WMP is prepared, and the affected areas are calculated, in the same manner as for SMR in Section 452.a. The area covered by the credited watershed master plan (aWMP) must be the same or smaller than the area covered by the SMR regulations (aSMR).

$$rWMP = \frac{aWMP}{aW}, \text{ where}$$

aWMP = the area covered by a watershed master plan

If the total calculated impact adjustment is less than 0.15 or the community does not prepare a watershed impact adjustment map, then $rWMP = 0.15$.

Documentation for WMP Provided by the Community

(1) At each verification visit,

- (a) The needed documentation is assembled by the ISO/CRS Specialist and provided to the technical reviewer for this activity. There is a checklist to help the community identify all the needed documentation, available at www.CRSresources.org/400.
 - (i) Documentation that the plan has been adopted by the community. “Adopted by the community” means either formal approval by the community’s governing body or formal approval by another body or office of the community that has the authority and funding to implement the plan, such as a flood control district.
 - (ii) A copy of the watershed master plan(s) that shows where it meets the minimum criteria and the items to be credited. This should be an electronic copy of the plan with a description of the items to be credited and where they can be found in the plan.
 - (iii) The regulations credited under SMR in Section 452.a, (Section 452.b, credit criterion (2)).
 - (iv) [For WMP8] A copy of the ordinance adopting the dedicated funding source and a budget describing how the money was spent during the past fiscal year.
 - (v) If the plan(s) is more than five years old, an evaluation report that addresses whether the plan(s) is still based on appropriate data and effectively manages stormwater runoff. In lieu of a formal report, the community may submit a letter signed by a licensed professional engineer that addresses the following issues:
 - The “future conditions” at the time the plan was completed: Do these conditions still reasonably reflect the actual watershed conditions today?
 - The precipitation data used for the plan’s hydrology: Does the community or agency still use the same precipitation data that were used in the report?
 - Method used for the plan(s): Is the method used to develop the plan(s) considered appropriate by the agency today?
 - Construction: Has construction of stormwater infrastructure altered actual conditions in ways that make the plan(s) obsolete?
 - Other factors: Are there other aspects of the plan(s) that make it obsolete or otherwise of questionable applicability?
 - (vi) The watershed impact adjustment map.
 - (vii) [If the community determines the area covered by the watershed master plan (aWMP) to include watershed areas regulated by other communities] Documentation that watersheds outside the jurisdiction of the community are regulated to similar standards or are subject to the same plan as those within the community.