

## Exhibit

### **Chapter Four - Water Quantity**

**4.1 General** - This document refers to flood and drought frequency impacts interchangeably with rainfall frequency. The applicant is cautioned, however, that water resource impacts are of interest in the permit process, and that additional calculations may be necessary to identify other combinations of site conditions and rainfall frequencies which might result in impacts of the specified frequency.

Pursuant to the Conditions for Issuance in Rule 40D-4.301(1)(a)-(c), an applicant must provide reasonable assurance that the proposed construction, alteration, operation, maintenance, removal or abandonment of a surface water management system:

- a. Will not cause adverse water quantity impacts to receiving waters and adjacent lands;
- b. Will not cause adverse flooding to on-site or off-site property; and
- c. Will not cause adverse impacts to existing surface water storage and conveyance capabilities.

Compliance with the criteria in Sections 4.2 through 4.9 shall provide reasonable assurance of compliance with these conditions for issuance unless evidence exists that indicates that the conditions for issuance will not be met without consideration of storm events of different frequency or duration. In such cases, applicants shall be required to provide additional analyses, using storm events of different duration or frequency than those referenced below, to provide reasonable assurance of compliance with the conditions for issuance. In no case, however, shall the proposed surface water management system be required to accommodate storm events less frequent than the 100 year event.

### **4.2 Discharge (No Change)**

**4.3 Flood protection** – Flood protection for structures should be provided as follows (Flood elevations should be determined from the most appropriate information available, including Federal Flood Insurance Rate Maps):

- a. 1. Residential buildings should have the lowest floor elevated above the 100 year flood elevation for that site.
- b. 2. Industrial, commercial or other non-residential buildings susceptible to flood damage should have the lowest floor elevated above the 100 year flood elevation or be designed and constructed so that below the 100 year flood elevation the structure and attendant utility facilities are watertight and capable of resisting the effects of the regulatory flood. The design should take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effect of buoyancy and impacts from debris.

Flood proofing measures should be operable without human intervention and without an outside source of electricity.

**4.4 Flood plain encroachment** - No net encroachment into the flood plain, up to that encompassed by the 100 year event, which will adversely ~~effect~~ affect either conveyance, storage, water quality or adjacent lands will be allowed. Any required compensating storage shall be equivalently provided between the seasonal high water level and the 100 year flood level to allow storage function during all lesser flood events.

**4.4.1 Flood Level Determination**

a. Flood elevations shall be determined using the most accurate information available, which can include:

- 1. Actual data, including water level, stream flow and rainfall records, or
- 2. Hydrologic/hydraulic modeling, or
- 3. Federal Flood Insurance Rate Maps and supporting flood study data.

b. Flood elevations shall be evaluated for accuracy considering the extent to which flood elevations are validated by site specific data.

c. The 24 hour, 100 year storm shall be used to determine the 100 year flood elevation except in those circumstances where evidence exists that higher flood stages have occurred, and can be expected to re-occur, following more frequent storm events. In those cases, the 100 year flood elevation shall be determined using a 100 year storm of sufficient duration to exceed the flood stages observed following more frequent events.

**4.5 through 4.9 (No Change)**

***Chapter Seven – Design Information***

**7.2 Rainfall Volume** - ~~The Southwest Florida Water Management District's 24-hour, 25-year and 100-year rainfall isohyetal maps in Part D~~ will be used to determine rainfall amounts.