

3.3 Required Storage Volume

In **Section 3.2 and 3.3** we calculated different volumes based on different requirements. You will need to design your LID SWMF to be able to hold the largest of these volumes. In our case, we have the following:

The storage volume associated with water treatment is 453.75 ft³.

The storage volume associated with flood attenuation is 52 ft³.

Therefore the required storage volume is 453.75 ft³ ~ 454 ft³ (remember to always round up)

If the storage volume associated with flood attenuation (**Section 3.2**) is significantly larger than the storage volume associated with water treatment (**Section 3.1**) it is likely, because you have poor soil conditions. In this case, it might be beneficial to consult with a licensed civil engineer regarding the design of a smaller, but more complex optimized system.

3.4 ICPAL Volume Calculation

Due to the increased flooding potential for properties located in an ICPAL, the stormwater attenuation volume must be increased to the 100-year 24-hour storm. The methodology used to determine the required treatment and attenuation volume for the SWMF are the same calculations presented in **Section 3.1 and 3.2**. The only difference is that you will substitute the rainfall amount used in the attenuation calculations from 7.13 inches to 14.7 inches (See **Appendix C**).

3.5 Dune Lake Volume Calculation

Dune lakes are a valuable environmental asset for water quality and they must be protected. Areas within a dune lake buffer zone shall increase the stormwater retention volume by 150%. The methodology used to determine the required treatment and attenuation volume for the SWMF are the same calculations presented in **Section 3.1 and 3.2**. The only difference is that once you have determined the highest volume you will multiply the number by 1.5.

3.6 Mosquito Control Ditch Volume Calculation

If your property will release water into a Walton County mosquito control ditch the stormwater attenuation volume must be increased to the 24-hour 100-year storm. The methodology used to determine the required treatment and attenuation volume for the SWMF are the same calculations presented in **Section 3.1 and 3.2**. The only difference is that you will substitute the rainfall amount used in the attenuation calculations from 8 inches to 15 inches (See **Appendix C**).