

CITY OF ATLANTIC BEACH STORMWATER STORAGE REQUIREMENTS

What Every Property Owner and Builder or Designer Needs to Know

Why Stormwater Storage is Required

To protect our community and neighbors from flooding, water pollution, and damage to natural resources, the City requires certain construction projects to include onsite stormwater storage.

Does This Apply to You?

You must provide onsite stormwater storage if:

- If you are adding more than 400 SF of new impervious area and this project addition plus your existing lot coverage increases **impervious surface coverage to more than 35% of your total lot area**. This includes surfaces like concrete, pavers, additions, or other covered areas.
- Even if individual projects are smaller, the **square footage is cumulative**. Once your total added impervious surface reaches 400 square feet, you must provide stormwater storage for entire impervious lot area.

You do not need onsite stormwater storage if:

- You're only replacing or repairing a driveway or sidewalk without changing its size or shape.
- Your project/community is already covered under an approved stormwater permit by the St. Johns River Water Management District. (e.g. Oceanwalk, Atlantic Beach Country Club, Selva Lakes, etc.)

Your Stormwater Storage Options

 The goal of the stormwater storage requirement is to capture and store an adequate volume of runoff to prevent flooding and protect water quality. There is more than one way to achieve this goal - homeowners and developers can choose the storage method that works best for their site conditions, budget and project needs. Your plans must show how the runoff from your impervious surfaces is routed to the onsite storage areas.

Large, Shallow Depression

- Natural-looking
- Easier to maintain
- Provides increased in-ground storage credit

Deeper, Smaller Basin

- Fits better on tight lots

Infiltration Trenches

Gravel-filled trenches that let water soak into the ground. Often hidden along driveways or walkways.

Underground Chambers or Tanks

- Prefabricated systems that store water below the surface. Ideal for driveways or areas where space is limited.
- Can be placed under patios, decks, or driveways
- Must be designed by an engineer and documented carefully

Examples:

<https://www.adspipe.com/stormtech>

<https://atlantiscorporation.com.au/subsurface-drainage/>

<https://tanksdirect.com/applications/water-wastewater/stormwater-management-solutions/>

Rain Gardens

- A shallow landscaped depression that temporarily holds and filters runoff. Can be beautiful and functional.

For More Information:

<https://gardenningsolutions.ifas.ufl.edu/design/types-of-gardens/rain-gardens/>

Dry Wells

- Underground gravel-filled beds that hold and slowly drain water. Great for tight spaces or roof runoff.
- Gravel beds can be installed under driveways or other concrete/paver surfaces.

Permeable Pavers

- Hard surfaces that let water drain through them. Must be designed to handle the required storage volume underneath.

If you intend to construct a deck or other permeable or pervious feature over the top of the storage area, the deck must be constructed above the top of bank of the proposed storage area.

How Much Water Must You Store?

To figure out how much stormwater you need to store, use this formula: $V = \frac{(C \times A \times R)}{12}$

Where:

- V = Volume to store in cubic feet (This is how much water you must store)
- C = Runoff factor (typically 0.92 for new impervious surfaces)
- A = Impervious area in square feet (This is new total impervious surface area for the entire lot)
- R = Rainfall depth (use 9.3 inches)

Example: If you add an additional 500 sq. ft. to your driveway and your lot currently has 1500 sq. ft. of existing coverage:

$$V = \frac{(0.92 \times 2000 \times 9.3)}{12}$$
$$= 1426 \text{ cubic feet of stormwater must be stored onsite.}$$

The stored water must be kept:

- At least 1 foot above the wet season water table
- Below the point where water would overflow onto the road or another property

You will receive volumetric credit for the water stored in the soil below your retention area down to 1 foot above the wet season high water table. The wet season high water level may be obtained by contracting with a Geotechnical Engineering firm to conduct soil borings in the area you are proposing for onsite storage. The City uses a default value of 2 feet unless soil borings show a greater value.

Save and Plant Trees for Better Stormwater Management

Trees play a vital role in managing stormwater. Their roots absorb rainfall, reduce runoff, and help prevent soil erosion. Protecting existing trees and planting new ones in and around stormwater retention areas can greatly improve water absorption and overall environmental health.

Make an Effort to Save Existing Trees:

- Plan Around Mature Trees: Design retention areas to avoid disturbing established root systems.
- Install Tree Protection Fencing: Use barriers during construction to protect trunks and roots from damage.
- Avoid Soil Compaction: Prevent heavy equipment from driving near the base of trees to preserve soil structure and root health.

Replant with Purpose:

- Use Native Species: Choose trees adapted to your local climate and soil. Native trees typically require less maintenance and thrive better.
- Plant Strategically: Place trees around the edges of retention areas or on gentle slopes where they can intercept and absorb runoff.
- Consider Water-Tolerant Trees: Species like bald cypress and sweetbay magnolia can tolerate periodic flooding while stabilizing soil.

Trees don't just make your landscape beautiful; they act as natural stormwater filters. Make every effort to preserve and restore tree cover on your property!

What You Must Submit

When applying for a building permit:

- Completed COAB Building Permit Application with Construction Site Management Plan
- Recent property survey showing
 - o all existing structures including detached structures such as sheds
 - o all existing impervious areas including any pavers, patios, walkways, etc.
- Proposed construction plan showing
 - o all impervious surfaces, with new and existing surfaces differentiated
 - o proposed stormwater storage locations with dimensions and depth
 - o runoff path from impervious surfaces to storage areas
- Stormwater storage calculations worksheet (spreadsheet available by contacting Public Works)

Before your final inspection

- Signed and sealed post construction topographic survey. The survey must include elevations showing top of bank, bottom of retention and also identify all drains (including their elevations), pop offs, or other features of the drainage system.
- A recorded declaration of restrictive covenant describing the storage system,
- For an under-ground system, a notarized letter from the general contractor, along with as-built plans and construction photographs.

Special Flood Hazard Areas (Floodplains)

If you live in a FEMA-defined 100-year flood zone, you must replace any lost flood storage in addition to stormwater storage. Your engineer must show "no net loss of volume." Find your flood zone here: <https://coab.us/656/FEMA-Flood-Maps-Information>

Stormwater Treatment Requirements (Non-residential)

All non-residential or multi-family projects must also treat runoff from the first 1 inch of rain—or $\frac{1}{2}$ inch of runoff—to remove pollutants. This can often be included in your required stormwater storage.

Other Rules You Must Follow

- All projects must follow the City's NPDES stormwater permit
- Use Best Management Practices (BMPs) to prevent runoff and sediment pollution during construction
- Projects larger than 1 acre require a separate NPDES permit

Questions?

We're here to help you stay compliant and protect our community from flooding.  Public Works Department: 904-247-5834, [Public Works Department | The Atlantic Beach Official Website!](#)