

How You Can Improve Water Quality and Shoreline Habitats



ter terr 1842)). Die feren die Große feiter Olie der felterte prosje Neurfrach Bereit verscher verscher Wertigde, bestellter Sein (1917-2010), est Gewennen Berne



Moorings Bay Water Quality and Biological Analysis Report (2021)





Trends Over Time in Bay Water Quality

- Significantly increasing concentrations of TN, TP, Chl-a
- No trend observed in DO
- Copper and Enterococci: Recent decreases in exceedances



Riprap vs. Seawall



Disadvantages of seawalls

- Reflects wave energy, resuspends sediment
- Increases turbidity and lowers water clarity
- Poor habitat for estuarine life
- Scouring can occur at base of seawall







Riprap

An Environmentally Friendly Alternative to Seawalls



What is riprap?

- Rock material placed along shorelines and in front of seawalls
- Provides shoreline protection
- Size ranges from 1 to 2 feet
- Aesthetically pleasing, naturallooking alternative that blends into the environment



Advantages of riprap

- Absorbs wave energy
- Provides habitat for flora and fauna
- Extends the life of seawall and reduces scouring







Benefits of Riprap

Protects the shoreline from erosion and absorbs wave energy

Allows mangrove seedlings to grow, creating additional upland protection and habitat

Provides habitat and protection for juvenile fish, crabs, oysters, and other aquatic species

> IIII-

Tertilizer-free zone

Habitat restoration in your backyard!

- Help oysters grow by placing riprap along your shoreline
- Improve water quality and juvenile fish habitat by allowing mangroves to recruit and grow





Who is found among mangroves and riprap?

- Crabs
- Juvenile snappers
- Sea trout
- Snook
- Tarpon
- Red drums
- Goliath grouper
- Sheepshead



Riprap, docks, and mangroves are compatible



Along your shoreline, establish a fertilizer-free zone

- Select native plants that:
 - Tolerate high salt areas
 - Provide low cover and are attractive
 - Are low maintenance (no fertilizer)
 - City code requires 10' fertilizer-free zone from any waterbody or seawall
 - Ex: Muhlygrass, Saw Palmetto, Seaside Ambrosia, Sunshine Mimosa, Black-eyed Susans, Sand Cordgrass



Can I trim mangroves? YES!

- Can be trimmed as low as 6-feet from substrate
- Permit exemptions for trimming by homeowners
 - When mangroves are kept between 6 and 10 feet in height
- Some situations require a professional mangrove trimmer
 - When mangroves are between 10 and 24 feet in height
- For more specifics, visit the Department of Environmental Protection website



Build a Rain Garden

- A landscaping feature planted with native plants
- Used to intercept stormwater runoff from impervious surfaces
- Roofs, sidewalks, and parking lots





Fertilizer use in Naples

- Check out the City of Naples website for more information and the new Fertilizer Calculator
- https://www.naplesgov.com/fertilizer



- use at least 50% slow release nitrogen fertilizer
 get a soil P-deficiency test approved by the city before applying phosphorus
- DO use a fertilizer calculator to help you
- DO apply less fertilizer when using reclaimed water for irrigation
- O plant a 10-foot buffer zone with native vegetation on waterways
- No keep fertilizer & grass clippings away from sidewalks, streets, storm drains, & waterways
- DO plant Florida-Friendly gardens—low maintenance native plants
 - If fertilize when heavy rain is predicted in the next 24 hours
 - T fertilize from June 1st September 30th
- ONT apply fertilizer within 10 feet of a waterway



Reclaimed (reuse) irrigation water contains some of the same common fertilizer nutrients, which means you can reduce or eliminate fertilizers (use the calculator to determine).



Check out our reclaimed water map, fertilizer calculator, and information on nutrient levels:



www.naplesgov.com/fertilizer



Next

City of Naples, FL Fertilizer Calculator

Welcome to the City of Naples Fertilizer Calculator

Use this calculator to determine the amount of fertilizer that can be applied in Naples, Florida per the City's <u>Fertilizer Use and Maintenance</u> of Urban Landscapes Ordinance



-	Page 1 of 6

Step 1

• Do you use reclaimed water for irrigation?

Step 1: Indicate whether reclaimed water will be used for irrigation

Reclaimed water already includes nitrogen. If you are using reclaimed water to irrigate your property, the nitrogen that is already included in your water will be factored into the maximum fertilizer rate calculations.

Will your property be irrigated with reclaimed water?*

Yes	
O No	

If you are unsure if you irrigate with reclaimed water, please check this <u>interactive map</u>. Click the layer menu icon in the top right and then check the box next to "Reclaimed Water Service Area" and locate your property using the map or address bar. If your property is within the purple shaded area you may be connected to reclaimed water, please check your recent utility bill to verify.



Step 2

• Example of a fertilizer bag label

Step 2. Enter Fertilizer Information

This can be found on the Guaranteed Analysis label on the fertilizer bag:



Step 2 cont.

- Input the numbers from your fertilizer bag
- Green font indicates the numbers comply with the standards

Total Nitrogen (%)*

1₂3 20

Total Phosphorus (%)*

12³ 0

Slow Release Nitrogen (%)*

1₂3 25

Fertilizer applied in the City of Naples must contain 50% or more slow release nitrogen:

This fertilizer contains 125% slow release nitrogen and may be applied within the City of Naples

No phosphorus is allowed without a soil test approved by the City: This fertilizer does not contain phosphorus and may be applied without a soil test

Next

Back

Step 2 cont.

- Red font indicates the nutrient numbers entered are too high and non-compliant with the code
- In this example, the fertilizer has only 40% slow release and it has to be a minimum of 50% slow release nitrogen.

Total Nitrogen (%)*

123 25

Total Phosphorus (%)*

123 0

Slow Release Nitrogen (%)*

Next

Back

123 10

Fertilizer applied in the City of Naples must contain 50% or more slow release nitrogen:

This fertilizer contains 40% slow release nitrogen and may NOT be applied within the City of Naples

Page 3 of 6

No phosphorus is allowed without a soil test approved by the City: This fertilizer does not contain phosphorus and may be applied without a soil test

Step 2 cont.

- Red font indicates the nutrient numbers entered are too high and non-compliant with the code
- In this example, in addition to the slow release percentage being too low, "2%" was entered for Total Phosphorus and fertilizers cannot contain phosphorus without an approved soil test showing deficiently. A message pops up reminding residents of this portion of the fertilizer code

Total Nitrogen (%)*

1₂3 25

Total Phosphorus (%)*

123 2

Slow Release Nitrogen (%)*

12³ 5

Fertilizer applied in the City of Naples must contain 50% or more slow release nitrogen:

This fertilizer contains 20% slow release nitrogen and may NOT be applied within the City of Naples

No phosphorus is allowed without a soil test approved by the City:

This fertilizer contains phosphorus and may NOT be applied within the City of Naples without a soil test approved by the City

Next

Back

Step 3

- Add the square footage of your yard
- To assist with this, you can click on the link which will take you to a map with a measuring tool that allows you to measure your green space.

Step 3. Determine the Size of the Area to be Fertilized

Measure the length and width of your area in feet then multiply the two numbers to determine the area in square feet:



Step 4

• If your numbers showed up red, the fertilizer cannot be used and are out of compliance with the City code. Step 4. Apply Fertilizer at a Rate Allowed by the City of Naples and State Regulations

Maximum amount of 25% N fertilizer allowed *per year* for 1200 square feet:

This fertilizer may NOT be used

Assuming you fertilize 4 times per year, the *maximum* amount allowed *per application* for 1200 square feet:

This fertilizer may NOT be used

Soil test requirement:

This fertilizer contains phosphorus and may NOT be applied within the City of Naples without a soil test approved by the City

\bigcirc

Step 4 cont.

Reminder:

- Do not apply fertilizer containing nitrogen during the rainy season (June 1 September 30)
- Do not apply phosphorus at any time unless you have a City-approved soil test showing deficiency
- Rainwater and reclaimed water already contain nitrogen, so you may not need any fertilizer!
- For more information on Florida Friendly Landscapes, check out <u>https://ffl.ifas.ufl.edu/</u>







Thank you for using the City of Naples Fertilizer Calculator

For more information regarding the fertilizer regulations in the City of Naples please visit <u>www.naplesgov.com/fertilizer</u>.

If you observe a potential regulation infraction, please contact the Code Enforcement Department at: <u>CodeEnforcement@naplesgov.com</u>

239-213-5030

If desired, you may submit your fertilizer calculator entry anonymously to the City of Naples for record keeping. Otherwise, you may now close this window.



Illicit discharge

- Help keep our waters clean!
- Report any illegal dumping to code enforcement
- Report any concerns observed at construction sites (e.g. sediment runoff, silt fence down or absent)

City of Naples Keep Our Waters Clean Prevent Illicit Discharge

Stormwater flows to Naples Bay, Moorings Bay, and the Gulf of Mexico

Keep our waters clean by allowing only rain down the drain





Any direct or indirect non-stormwater pollutant discharge to the stormwater drainage system. They are prohibited and enforcement action can be taken!
Non-permitted discharges contribute high levels of pollutants including but not limited to fertilizers, yard & pet waste, paint, oils, and grease

Keep Our Waters Clean

- Maintain a fertilizer-free zone around storm drains
- Pick up or dispose properly of pet waste and yard clippings
- Never pour paints, oils, grease, or chemicals into the storm drain - dispose of them at an approved waste facility
- Keep sprinkler spray on your yard and off the street
- Mow grass to proper height to minimize fertilizer and pesticide use
- Plant Florida-Friendly gardens or native plants that require less water and fertilizer
- Wash vehicles at car washes or on the grass at home to prevent soap and grime from entering storm drains

Only Rain Down the Storm Drain!





Please report illicit dumping: (239) 213-5030 codeenforcement@naplesgov.com