Waterfront Property Owner's Guide

Prepared by the City of Punta Gorda
Public Works Department

Punta Gorda
FLORIDA

TABLE OF CONTENTS

INTRODUCTION

This guide is intended to familiarize property owners and prospective property owners with the canal system lying within the city limits of Punta Gorda.

The Punta Gorda canal maintenance program is a unique benefit to waterfront property owners. Under the authority of the City's Canal Maintenance Assessment Districts, the Canal Maintenance Division is responsible for the maintenance of canals, waterways and navigable channels, including the maintenance & repair of all seawalls in the canal system.

The City of Punta Gorda Chapter 6 Ordinance - Boats, Docks, and Waterways; regulates the use of all waterways in the city limits. This information can be found at http://www.ci.punta-gorda.fl.us/government/public-works/canal-maintenance.

There are two canal districts within Punta Gorda; Punta Gorda Isles (PGI) and Burnt Store Isles (BSI). PGI was constructed in the late 1950's through the mid 1970's and has approximately 45 miles of canals (or 90 miles of seawalls). BSI was constructed in the mid 1970's and has approximately 9 miles of canals (or 18 miles of seawalls).

Seawall construction methods have improved throughout the years. Today, seawall panels are built with protected rebar, stronger concrete and are 10' in length providing a superior design with an expected longer life span.

GLOSSARY OF TERMS

Berm: Ground or soil in the canal which gives support to the bottom of the seawall. Rip rap is used when the berm is inadequate.

Brackish water: A mixture of salt water and fresh water.

Cap: Concrete (usually reinforced) box structure which ties the seawall panels together at the top.

Deadman: Large concrete block buried in the yard approximately 12' to 20' from the seawall. Deadman anchors the panel and cap seawall structure by means of a tie-back rod.

Depressions: Depression formed by soil from behind the seawall escaping either under or through the seawall joints or cracks.

Dredging: Excavating sediments from the bottom of the canal to keep waterways navigable. Permitted dredging depths in PGI and BSI are typically -5 or -6 from mean low water line.

Erosion: The wearing away or loss of soil particles. Action or process of wearing away land caused by water or wind.

Hydrostatic Pressure: Invisible but constant force created from water on the landside of the seawall, alleviated through seams in the panel and weep holes.

Mangroves: Shrub or small trees that grow in coastal saline or brackish water**.**

Seawall Panel (or Slab): A reinforced, rectangle concrete slab, typically 6" thick, 6' wide, and 10' to 16' long. These are placed vertically to form the wall. The sides of the seawall panels have a tongue and

groove to form an interlock.

Rip Rap: Large size stone placed at the base of the seawall to stabilize its position and prevent or reduce erosion.

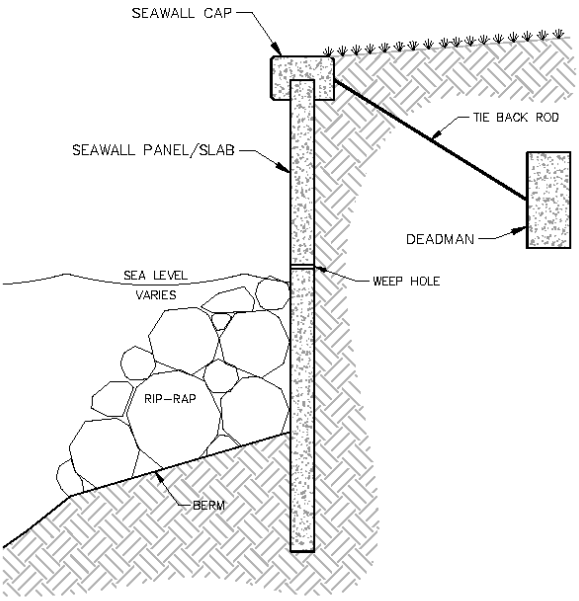
Tie-back: Steel rods connecting the seawalls to the deadman (anchor).

Spalling: Fragment of concrete broken off from the surface of concrete.

Weep Hole: 2” hole in seawall panel to facilitate drainage and reduce water pressure from the landward side of water.

WHAT IS A SEAWALL?

A seawall is a structure which separates a body of water from adjacent land. Seawalls are composed of distinct portions: a series of interlocked concrete panels installed vertically from the land elevation to below the water floor; a concrete cap which ties the panels together; and the tie-back rods which anchor the vertical structure in an upright position and prevent the wall from falling into the water. The seawall is designed with weep holes to allow water collecting behind the panels to drain and alleviate pressure from the structure. The ends of the tie-back rods are secured in concrete blocks called deadmen. The foot of the seawall is supported by a berm, and when there is an inadequate berm, rip rap is placed for additional support and to help with erosion control.



TYPICAL CROSS SECTION
N.T.S.

WHY ARE SEAWALLS IMPORTANT?

Seawalls perform multiple functions, all of which are important to property owners and the City of Punta Gorda. The most important function is to protect private property from loss of land mass into the water due to erosion, improper drainage or wave action. Seawalls also serve a navigational purpose by maintaining the proper water depth in the canal system. Furthermore, the seawall delineates the boundary between private property (the property owner's land) and public property (the water which covers sovereign lands of a government entity). The seawall is used to define the width of a waterway for dock permitting purposes. A properly maintained seawall will contribute to the stability of neighboring properties, providing structural support to roads and bridges as well as adding to the value of the property.

ANNUAL SEAWALL ASSESSMENT

Every year (typically in the winter months when the tides are low), the City performs an assessment of the seawall infrastructure. City employees motor up and down every canal and inventory the condition of the seawalls and caps. The evaluations are collected by computer utilizing Geographical Information System (GIS) and associated software and then the data is downloaded onto a mapping system. This data is used to help prioritize seawall and cap replacements, forecast work programs, track potential failures, and inventory the replacement of the infrastructure.

TYPICAL SEAWALL FAILURE CONDITIONS

City personnel are continually inspecting seawalls in an effort to correct small defects before major problems develop. Residents are encouraged to call Public Works at (941) 575-5050 to report any problems they notice or concerns they may have. A City crew will visit the site and evaluate the situation to decide the best course of action. The typical failure of seawalls is generally classified into any of the following four categories:

- Joint Separation
- Tie-Back or Seawall Cap Failure
- Toe and Berm Failure

JOINT SEPARATION OF SEAWALL PANELS

Cause: Age, settling, structural failure or perhaps insufficient berm at the foot of the seawall. A joint separation is caused when slabs move apart vertically, allowing backfill to migrate through the openings into the water. Uneven hydrostatic pressure is exerted on the slabs, particularly at low tide. This may be critical during heavy rain and low tide conditions.

Symptoms: Depressions behind the wall, visible seawall backfill in the water on the canal side seawall joints (most visible at low tide).

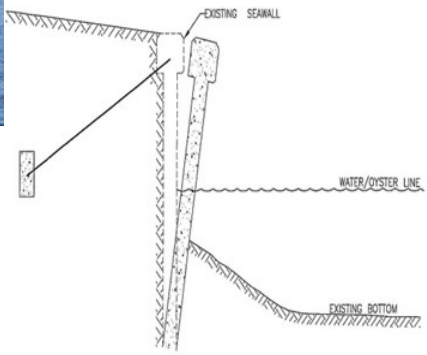
Remedies: Repairs may be as simple as patching the joint with hydraulic cement or more detailed work involving excavating behind the seawall.

TIE- BACK OR SEAWALL CAP FAILURE

Cause: This is the result of brackish water corrosion in the cap reinforcing or tie-back rods. It could also stem from movement of the structure or any illegal drilling into or attaching any object to the cap. The results are cracking or crumbling of the concrete cap and its ability to keep the slabs aligned, and/or the slabs tilting water ward.

Symptoms: A deteriorating or spalling cap and wavy or sagging panels. Often these indications occur together.

Remedies: A City crew will visit the site and evaluate the situation. Minor cap damage can be patched with hydraulic cement. However, structural damage may require replacement of the seawall cap or the entire seawall panel.

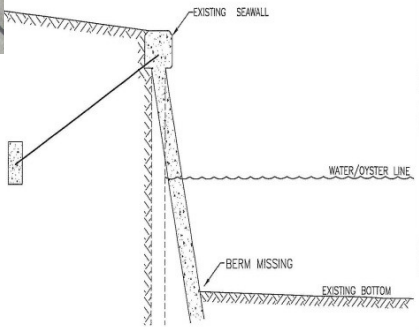


TOE AND BERM FAILURE

Cause: Loss of supporting berm at the bottom of the seawall slabs in the water. The panels tilt out and sometimes crack or cause the cap to twist or break. Loss of berm is usually associated with wave action or fast currents from tides on major inlets. Improper berm placement may be the cause of such failures.

Symptoms: Cap rotation, seawall panel movement or cracking.

Remedies: Placement of rip rap to stabilize the bottom of the structure if the foot of the seawall panel has not kicked out. In bad cases, the seawall panels may be replaced.

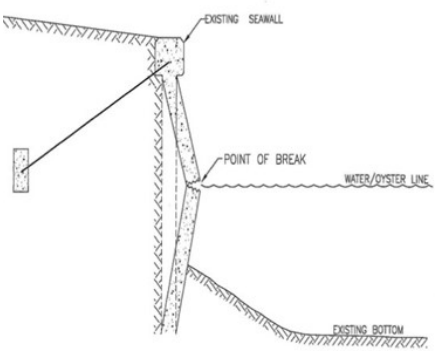


BREAK AT THE WATER LINE / OYSTER LINE

Cause: Aging, corrosion of concrete and reinforcement, and uneven hydrostatic pressure. Slabs or panels develop horizontal cracks usually along the waterline and the panels eventually break along these lines.

Symptoms: The principal symptom is cracking along the top of edge of the oyster line.

Remedies: Seawalls with minor cracks are monitored for progression. Advanced cracking and failures will require seawall replacement.



REPAIR AND REPLACEMENT PROCEDURES

When a resident calls Public Works at (941) 575-5050 to report problems or concerns - especially depressions, cracks or spalling, or even request for navigational channel dredging; a work order is generated and a City representative is sent out to the site to inspect the complaint, make the repairs, or recommend replacement by the City's contractor.

Depressions: A City crew is dedicated to repairing depressions on a daily basis. Once the work order is created for depressions, it is given to the City crew and is scheduled to perform the repair.

Caps: Caps that are cracked or spalled are inspected and determined if the damage is minor for repair or severe enough for replacement. Minor damage can be repaired by City staff by patching with hydraulic cement. Severely or structurally damaged cap is evaluated to determine if the cap or entire seawall needs replacement. Replacement work is performed by the City's contractor through the issuance of a SOW.

Seawalls: When a replacement is required a Statement of Work (SOW) is generated and submitted to the City's contractor to schedule the work. The contractor will mail a notification to the property owner making them aware of when the work is scheduled to begin. Property owners are responsible to remove all appurtenances within 10 feet of the seawall. Appurtenances can be sidewalks and brick pavers; fences; ladders; electrical wiring/ lights/outlets; plumbing/water spigots; landscaping; etc. All boats and any other watercraft or floating docks adjacent to the

property will have to be relocated until the work is completed.

By utilizing the annual seawall assessment data, the seawall replacement program is planned a year in advance (seawalls that fall into the canal unexpectedly or a seawall that is inspected and found to be at extreme risk of failure is given a priority). When a wall is designated for replacement, a SOW is furnished to the City's contractor for replacement. **Once the work is completed property owners are responsible to water the newly placed sod**.

Typically it takes 8 to 10 weeks to replace the seawall. According to City Ordinance Chapter 6 Boats, Docks and Waterways, Section 6-7 the City contractor is authorized to utilize vacant lots as construction staging areas for seawall and cap replacement only.

All new seawall panels are manufactured at the Public Works maintenance yard and stored there for future placement.

Dredging: The City is permitted through the Florida Department of Environmental Protection to maintain water depths in the navigable channel of PGI and BSI canals. However, property owners are responsible for any dock side dredging. Boaters are encouraged to call Public Works if concerned that the canals have silted in.

TIPS FOR THE WATERFRONT PROPERTY OWNER

There are a few things that a waterfront property owner may do to prolong the useful life of a seawall and thereby postpone repairs or replacement. They include:

1. Maintain the ground on the landward side of the seawall.

Refrain from planting anything but grass for at least 6' back from the cap. Avoid placement of large trees adjacent to the seawalls.

2. Keep sprinkler heads and pool water discharge six (6) feet away from seawall.

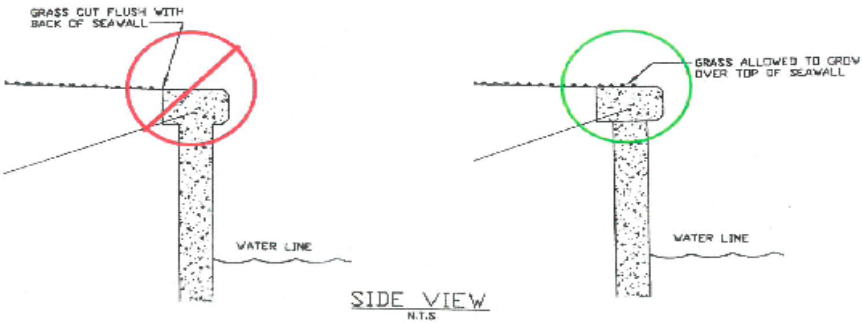
3. Avoid the use of heavy equipment traveling along seawall perimeter.

4. Ruts can be created behind the seawall when riding lawn mowers repeatedly travel next to the seawall cap. Placing two tires on the seawall caps while mowing can prevent this.

5. Property owners are encouraged to allow the grass to grow half way over the seawall cap. This will help prevent rutting and allow the water to run off into the canal.

6. Painting projects or other major boat repairs should be performed over land away from the water to prevent canal contamination.

7. Use phosphate-free and biodegradable products when cleaning your boat while on the water. Scraping and other



abrasive processes can release paint chips and metals into the water and this work should be performed over land.

8. At no time should you as a property owner take it upon yourself to do any repairs to a cap or wall. The Canal Maintenance Division will perform all repairs. Any problems should be reported immediately to Public Works at (941) 575-5050. A work order will be generated for Canal Maintenance to visit the site for evaluation, determining the necessary repair work for scheduling.

9. Periodically inspect your seawall and cap. If cracks or depressions are appearing where they were not present before or pieces of cap are falling into the water, this may be the start of something serious.

10. Fishing from private property without the consent of the property owner is prohibited.

11. Boaters are urged to obey ALL posted speed signage in the canal system, observing "Idle Speed, No Wake" and/or "Slow Speed, Minimum Wake". This protects berms securing the lower end of the slabs or panels, in addition to secured vessels. Encourage friends and neighbors with boats to do the same and report violations to City officials.

RELATED ISSUES FOR WATERFRONT PROPERTY OWNERS

As a waterfront property owner, there are responsibilities that you may not be aware of. The following topics are meant to assist you with some of those concerns.

ACTIVITIES STRICTLY PROHIBITED

Property owners cannot paint, alter, install appurtenances on or through the seawall and/or cap (i.e. cleats, hang conduit, discharge pipes, etc.).

Property owners cannot directly discharge any liquids into the canal (i.e. pool overflow, drainage pipes, etc.)

It is prohibited to throw grass clippings or other vegetation, trash or debris, fish guts, fertilizer, chemicals or any liquids, etc. in the canal.

Do not plant any trees or bushes within six (6') feet of seawall. The City cannot maintain the seawall with these obstructions in the way. These items will be removed when work is done to the seawall and sod will be installed in its place.

Damaged or broken docks, boat lifts, elevates must be repaired or removed. All broken or rotted pilings must be removed and/or replaced by the property owner.

WATER QUALITY - NPDES

In 1972 the Environmental Protection Agency (EPA) devised the National Pollutant Discharge Elimination System (NPDES) with the intent to effectively improve water quality. The City of Punta Gorda participates in this program and is required to comply with regulations set forth by the EPA.

A major contributor to contaminating our canals is polluted storm

water. Storm water is rain that has fallen and then flows across the ground and pavement collecting pollutants (fertilizers, solvents, pesticides, auto fluids, etc.) and carries them directly into our waterways. These pollutants can have a very harmful effect on the water quality.

By practicing healthy household habits, homeowners can keep common pollutants like fertilizers, pesticides, pet waste, grass clippings, debris, and automotive fluids off the ground and out of storm water.

It is required to contain and control all sediments created from areas that are disturbed during the construction process by utilizing silt fences or other Best Management Practices. Silt fences are meant to slow the velocity of water and retain sediments onsite.

For more information on the NPDES program visit: www.dep.state.fl.us/water/stormwater/npdes/

Boat Maintenance:

Painting projects or other major boat repairs should be performed over land away from the water to prevent canal contamination.

Use phosphate-free and biodegradable products when cleaning your boat while on the water. Scraping and other abrasive processes can release paint chips and metals into the water and this work should be performed over land.

ILLICIT DUMPING/DISCHARGE

Illicit dumping/discharge is defined as allowing any contaminants to enter the City's storm water system and receiving waters. It is strictly prohibited to directly discharge any fluids into the canal.

Directing down spouts from rain gutters to your lawn or flower beds away from the seawall will prevent future erosion behind the seawall or canal contamination.

The outfall pipe for pool overflows should be placed a minimum of six feet (6') behind the seawall.

FERTILIZERS AND PESTICIDES

Fertilizers and pesticides can have a negative impact on the water quality of our canals. These materials can easily wash into the canal, which will lead to problems with algae blooms and invasive plant growth.

According to City Ordinance 1710-12, no fertilizer containing nitrogen and/or phosphorus shall be applied during the rainy season (June 1 through September 30th). No fertilizer shall be applied within ten (10) feet of any canal. Do not fertilize if you anticipate rain. A heavy rain may wash most of the fertilizer off your property and into the canal.

Per City Ordinance, NO GRASS CLIPPINGS OR VEGETATIVE MATERIAL MAY BE DEPOSITED IN THE CANAL.

CANAL ODOR

As cooler weather moves into our area, you may notice an odor coming from your canal. This natural phenomenon occurs typically once a year. When the ambient temperatures start to drop the canal water 'flips' or 'turns'. This means that the bottom (including the silt, decomposing vegetation, miscellaneous debris, etc.) comes to the surface, bringing with it a smell of stagnant water and sometimes debris, while the surface water goes to the bottom. This natural occurrence typically lasts approximately two weeks then returns to normal. Keeping the canal clean and not discharging vegetation or debris in the canal can reduce, if not eliminate the odor. Please call Public Works at (941) 575-5050 if you have any concerns.

MANGROVES

Mangroves are a tropical shrub or tree that primarily grows in salt or brackish water and are a protected species. Mangroves are an extremely important link for fisheries. Prop roots provide shelter for small animals and help to stabilize shorelines. Florida Department of Environmental Protection (FDEP) regulates the maintenance, altering and permitting of mangroves. Homeowners can refer to the following website for mangrove regulations:

www.dep.state.fl.us/water/wetlands/mangroves/docs/Mangrove-Homeowner-Guide.pdf

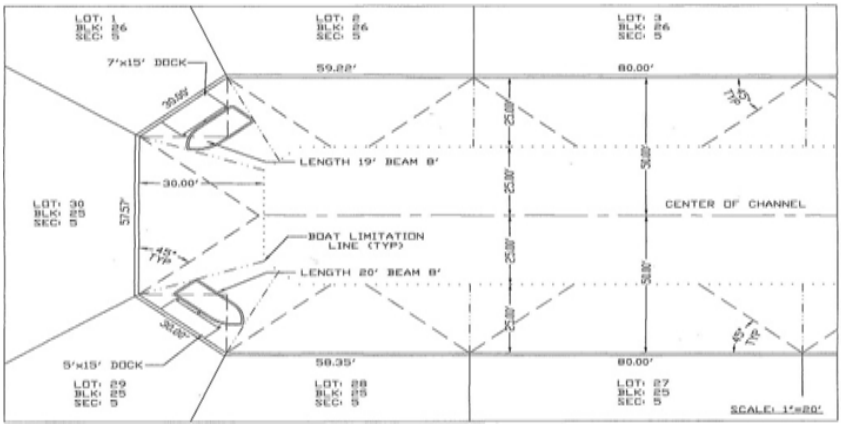
CONSTRUCTION WITHIN THE CANAL AND CODE COMPLIANCE

Permitted construction in platted canals dedicated to the public: Single family residential lots may have freestanding concrete docks protruding no more than ten (10) feet water ward of the seawall, the number of boatlifts and out pilings are determined by the length of seawall and the width of canal.

All structures must be placed within an area defined by projected lines extending water ward at a 45 degree angle from the property's seawall at the side property lines.

Fifty (50) feet of navigable channels must be maintained, except in Burnt Store Isles when only one side of the waterway is seawalled (typical perimeter canal), a passageway of forty (40) feet is required to be maintained.

To obtain information on construction within the canal, contact the Building Division at (941) 575-3324. For questions concerning waterway code compliance, please call (941) 575-3352.



Special permitting is an option for waterfront property owners who wish to construct docks or lifts outside of the requirements for permitted canal construction. The application and checklist for special permits are available through the Building Division, or online at the City's website, www.ci.punta-gorda.fl.us. Property owners are encouraged to schedule a pre-application meeting with City staff. Complete the checklist for application and site plan, including payment of the application fee. A public hearing will be held before the appropriate Canal Advisory Committee for final consideration. Contact Public Works at (941) 575-5050 for more information on special permitting.

HURRICANE PREPAREDNESS

Each boat owner needs a Hurricane Preparedness plan unique to the type of boat, the local boating environment, the severe weather conditions and the characteristics of safe havens and/or plans for protection. Plans should be made before or when a Hurricane Watch is announced and coordinated with neighbors if canals are to be blocked. If boats are to be moved through the canal system to outside hurricane moorings, it should be done at least 48 to 72 hours before the Hurricane Watch time frame.

Recommendations for Boats Remaining at Dock:

Double all lines. Rig crossing spring lines fore and aft and attach all lines to screw-in mobile home anchors which are set a minimum of twelve feet (12') back from the canal edge on both sides of the canal. All storm lines should be at least one size larger than regular lines.

Cover all lines at rough points to prevent chafing. Wrap with tape, rags, rubber hoses, etc. Install fenders to protect the boat from rubbing against the pier, pilings and other boats. The use of chains for the first fifteen feet from the anchor will prevent chaffing of the line over the seawall cap.

Batteries should be fully charged and checked to ensure their capability to run automatic bilge pumps for the duration of the storm. Consider backup batteries. Turn off all other devices consuming electricity.

Do not stay aboard. First and foremost, safeguard human life. Winds during any hurricane can exceed 100 mph, and tornadoes are often associated with these storms. In addition, when winds and seas warrant, marine agencies remove their boats from service and will be unavailable to rescue boaters.

Ensure mooring bitts and cleats are secure, and dock pilings and dolphins are in good condition.

Prior to the Hurricane

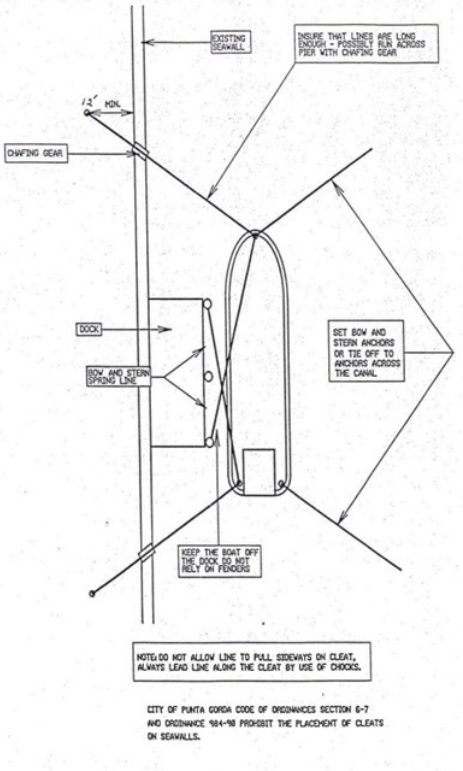
Make sure that:

- ⇒ Fuel tanks are full.
- ⇒ Fuel filters are clean.
- ⇒ Batteries are charged.
- ⇒ Bilges are clean and running.
- ⇒ Cockpit drains are free and clear.
- ⇒ Firefighting equipment is in good order
- ⇒ Lifesaving equipment is in good condition, in place and readily accessible.

remove and/or secure all deck gear, portable gear, radio antennas, outriggers, fighting chairs, deck boxes, Bimini tops and side canvas/ curtains, sails, booms, extra halyards, canister rafts, and dinghies.

Make sure that you secure all hatches, ports, doors, and sailboat rudders. The dinghy may be required to take lines ashore.

Enhance the watertight integrity of your boat, both above and below the water line. Seal windows, doors and hatches, if necessary, with duct tape. Shut sea cocks and cap off or plug un-valved through-hull fittings, such as sink drains.



If your vessel is moored at a dock, it is possible that your vessel could take a beating against the dock or even impale itself.

Do not raft vessels together at moorings or docks, especially if larger and smaller vessels are involved. The probability of damage to the vessels is greater than if they are moored separately.

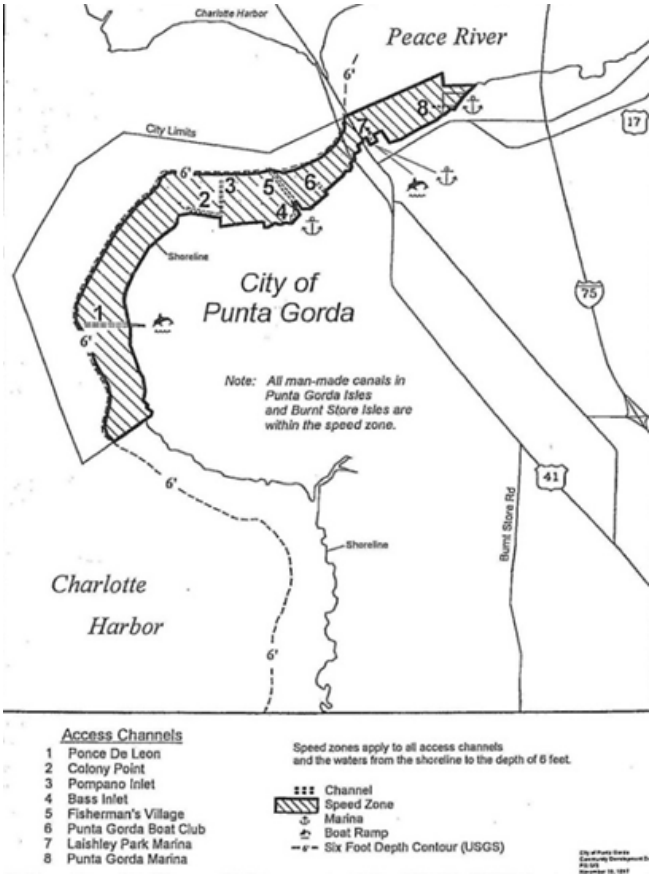
Per City Ordinance 1022-91, only in the case of an emergency when declared by the Mayor, City Council or City Manager, will securing of boats in the middle of the channel be permitted.

DO NOT use the seawall for cleats – City Ordinance Section 6-7.b-2c

prohibits any object or structure from being attached to or resting on or against the seawall or seawall cap, including cleats or anchors for the purpose of tying a vessel.

MANATEE PROTECTION SPEED ZONE PROGRAM

As a waterfront community, the City of Punta Gorda urges all boaters to be aware of the presence of manatees and observe all posted speed zones. City established speed zones apply to all access channels and the waters from the shoreline to the depth of 6 ft. Additionally, all man-made canals in Punta Gorda Isles and Burnt Store Isles are within the speed zone.



MARINE POLICING

The Punta Gorda Police Marine Officer and Volunteers in Policing (VIP) Marine Patrol, patrol all City waterways with an emphasis on public education, safety and to address issues such as:

- ⇒ Unsafe vessel operations
- ⇒ Excessive wakes & speeds
- ⇒ Depositing of waste, refuse and debris
- ⇒ Anchoring in a way that interferes with navigation
- ⇒ Illegally securing boats to markers and mangroves

Per City Ordinance Chapter 6 – Boats, Docks and Waterways; Slow Speed Minimum Wake zones are established entirely in the corporate limits of the City of Punta Gorda. This includes all canals in BSI and PGI subdivisions, Ponce De Leon, Colony Point, Fishermen's Village, Punta Gorda Boat Club, Laishley Park Marina and Punta Gorda Marina access channels; Pompano Inlet, Bass and Snook Inlet. And all other shorelines within the City limits water ward to the six foot (6') depth contour. However, there are some zones within the above mentioned areas that are posted as Idle Speed No Wake, these areas are marked with channel markers.

Slow Speed Minimum Wake requires that all vessels be completely off plane and fully settled into the water. The vessel may then proceed at a speed which is reasonable and prudent under the existing circumstances so as to avoid the creation of an excessive wake or other hazardous condition. (Florida Administrative Code 68C-22.002)

Idle Speed No Wake requires a vessel to proceed at a speed no greater than that which will maintain steerageway and headway. (Florida Administrative Code 68C-22.002)

Violations should be reported to the Punta Gorda Police Department at (941) 639-4111 for further investigation.

OTHER RESOURCES AND CONTACTS

City of Punta Gorda Public Works (941) 575-5050

City of Punta Gorda Police Dept. (941) 639-4111

City of Punta Gorda Building Division (941) 575-3324

City of Punta Gorda Code Compliance (941) 575-3352

City of Punta Gorda website www.pgorda.us

Chapter 6 Ordinance - Boats, Docks, and Waterways:

www.ci.punta-gorda.fl.us/government/public-works/canal-maintenance

For Punta Gorda, Charlotte Harbor tide charts go to: https://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=8725744

Charlotte County Public Works (941) 575-3600

Florida Department of Environmental Protection (FDEP) –
South District Office www.dep.state.fl.us/south (239) 344-5600

FDEP Mangrove Trimming Guide

www.dep.state.fl.us/water/wetlands/mangroves/docs/Mangrove-Homeowner-Guide.pdf

Florida Fish and Wildlife Conservation Commission (863)648-3200

SW Regional Office www.myfwc.com

For fish kills contact FWC (800) 636-0511

Dead or injured manatee and/or sea turtle contact:

FWC Law Enforcement (888) 404-3922

FWC Red Tide Hotline (866) 300-9399

More Red Tide information can be found at myfwc.com/research/redtide/