

MEMORANDUM

Date: November 15, 2013

TO: Dave Bullock, Town Manager
FROM: Juan J Florensa, Public Works Director
SUBJECT: Longboat Key Canal Dredging Report

Historical Background – General

Most of the coastal water canals in Longboat Key can be classified as:

- Natural canals
- Man-made canals

Man-made canals were excavated by developers as the Town was built. The dredging of the canals provided an attractive selling/marketing feature for new homes and subdivisions. In addition, the excavated materials (also known as “spoil”) from the bay bottom served as construction filler material for the pads where the new houses would be placed. This is predominantly evident in the Country Club Shores subdivisions on the southern end of the Key.

Private vs. Public Canals

Irrespective of man-made or natural some of these canals are either private (i.e. side lot lines of abutting properties extend to the centerline of the canal) or public (i.e. lot lines do not extend to the centerline). The creation of private canals can also be associated with the dredging of private lands to create marinas, private boat basins or access to private properties.

Exempt vs. Non-exempt Canals

For permitting purposes, Florida Department of Environmental Protection (FDEP) classifies canals as exempt (i.e. requiring only a notice general permit) or non-exempt (requires specific permits). The determination on the status of canals is made by FDEP based on previous “permitted” activity on any specific canal and on the previously permitted depth versus proposed dredge depth.

Town’s Canal Project – Historical Background

Other than minor, privately funded and initiated dredging efforts, canals in Longboat Key had not been dredged or maintained until 2003. In the 1990’s, there was enough community interest in pursuing large-scale, publicly funded canal dredging that the Town Commission authorized Coastal Planning & Engineering, Inc. (CPE) to perform a canal dredging feasibility study.

The study was completed in February 1996 and included the following:

1. Reconnaissance level bathymetric survey of 53 canals
2. Collection of sediment samples
3. Engineering observations of canals and seawalls
4. Preliminary analysis of seawall stability vs. dredging
5. Engineering analysis of dredging the canals
6. Review of spoil disposal options
7. Discussion of regulatory constraints/permits
8. Development of project cost estimate

The cost for the study was \$20,000.

Canal Maintenance Financing Advisory Committee

Based on the findings of the 1996 feasibility study, the Town Commission, in early 1999, created a *Canal Maintenance Financing Advisory Committee* to obtain public advice on how to fairly and equitably select a funding mechanism that would enable the canal project to proceed.

The committee recommended that ad-valorem taxes be used in lieu of special assessments to fund this project.

Further discussions with staff and the Town Commission resulted in another task for CPE to begin the permitting process and develop a set of detailed plan and specifications for implementation purposes.

Permitting

In February 2001 and July 2002 the Town received permits from FDEP and the US Army Corps of Engineers (USACE) respectively for the dredging work to dredge approximately 47,000 cubic yards of sand and silt from specific locations in 53 canals along the east side of Longboat Key.

The Corps permit expired in June 2005. The FDEP permit is in fact a “permit exemption” with no termination date.

Construction & Project Costs

In 2003 the Town through the competitive bidding process awarded a contract to Energy Resources, Inc. for the dredging of approximately **23,000 cubic yards** of material from **30** canals. The cost for this work was **\$1.5 million (+/-)**. The second lowest bidder, Kimmins Construction bid was \$2.66 million. There were six change orders (five were additive, one deduction). Final construction cost was \$1,312,140. Dredging began in March 2003 and was completed in December 2003.

Other Costs (All costs are approximate)

In addition to the feasibility study, there were additional engineering costs associated with this project. These include preparation of plans, permitting, seagrass mitigation, survey, sediment analysis, construction administration and project management. Our records indicate that the Town paid CPE about \$501,000 from FY 98/99 through FY 03/04 for these associated costs.

During the course of the Town Canal Dredging project the Harborside homeowner and condominium associations appealed to the Town Commission to support under a separate agreement the dredging of the perimeter canal surrounding the Harborside complex. The total cost for this portion of separately permitted work the project was \$664,100 of which the Town committed and paid for a total of \$330,000.

A summary of project costs is presented below:

Feasibility	\$ 20,000
Cliff Truitt (coastal engineer)	34,335
CPE (engineering)	501,000
Sea Grass Mitigation (permit required)	129,550
Legal Fees (Town Attorney)	60,000
Permit Fees (FDEP)	13,350
Construction	1,312,140
Harborside Canal Agreement	330,000
Total	\$ 2,400,375 +/-

Funding Sources Used for this Project (All costs are approximate)

General Fund	\$ 2.3 Million
Infrastructure Surtax	300,000
WCIND Grant (Sarasota)	95,000
WCIND Grant (Manatee)	169,000
Interest	40,000
Total	\$ 2.9 Million +/-

Other Potential Funding Sources

Other municipalities throughout the State have commonly used separate taxing authorities called Municipal Separate Taxing Units (MSTU), Municipal Service Benefit Unit (MSBU), Municipal Separate Taxing Districts (MSTD) or Special Tax or Assessment Districts (STD, SAD). These are typically based more on individual needs and willingness to be taxed for property owners having immediate access and benefit of the canal.

These taxes are typically assessed at rates defined by a variety of levy, but typically by individual units combined and sharing equal amounts for having access privileges, such as a Condominium complex or Homeowners Association having canals or a boat basin with adjacent access canals or waterways. The table below presents examples of funding mechanisms or methods that other public entities have utilized.

MUNICIPALITY	Tax Authority	Tax Levy	Other
Treasure Beach FL	MSBU	Individual Unit	
City of Tampa FL	Ad Valorem	50%	50% Fed. Grant
Sanibel Island FL	MSTU	Marina 40% Residents 27%	City 33% Gen Fund
City of Naples	SAD via Resolution	Unit, pro-rata of shared costs of cu.yd. dredged	
Hilton Head Island, SC	STD	Subject to SC State Law	Public or Private
Panama City	MSBU	Individual Parcel	

Current Canal Depths

With the assistance of the Police Department Marine Unit, Public Works performed manual soundings on approximately 40 canals in March/April 2013. Electronic depth soundings were used to identify canal profiles along centerline navigational accesses. A depth measurement was taken at approximately 150 to 200 foot intervals and at canal entry points and dead-ends. The recorded depths were corrected to current (daily) tide elevations. Locations of soundings can be found on the attached maps.

Magnitude of Current Conditions

Based on our findings, the current canal depths appear to provide enough depth for local use. There seems to be minor filling in of new material except in selected canals.

Information submitted concludes there are isolated areas in canals that may require further evaluation to confirm any indication that would warrant any potential dredging or spot removal of material. If desired spot removal of materials in these areas could be accomplished without a major project.

These canal locations that are shallower are listed in the attached **Table#1**.

Specific locations of suspect elevations are identified in red and green text on the attached Canal Depth Table spreadsheet and coincide with the red and green dots on attached Survey Maps. **Green** areas are out of design specification (shallower) .3 ft. up to .7 ft, (3 ½ inches to 8 ½ inches), design tolerance was +/- .5 ft. (6 inches) **Red** areas are out of tolerance (shallower) by +.8 ft. (9 ½ inches) or more. Yellow areas are within tolerance.

Next Steps

If desired a public meeting or public survey seeking input on canal issues could be arranged to gauge the boating community desires and needs. Depending on the outcome of this meeting or survey and information collected a Committee could be formed to provide further input and commentary as to specific needs.

A more detailed bathymetric survey of the shallower areas of canals could be undertaken by a professional surveyor. Total estimated cost for these surveys is \$70,000 to \$80,000, based upon current knowledge of canal conditions. This includes \$40,000 for longitudinal hydrologic surveys and additional cost at \$3500/day for more detailed cross sectional surveys in subsequently identified shallow areas.

A fully comprehensive Canal Dredging Feasibility Study could also be considered in the next three to five year period.

The Town could also consider renewing the past practice of earmarking \$100,000 annually to the Canal Dredging Fund.

Current Available Funding for Future Projects

The Town Commission in 2005 dedicated annual resources of \$100,000 per year towards a canal dredging fund. This practice was discontinued in 2008. There is approximately \$407,000 in this fund earmarked for canal dredging.

Please let us know how you wish to proceed with this program survey or let us know if you have need of further information. I would be happy to discuss the information provided in this report.

Attachments: Table #1
Maps
Depth Tables

**Town of Longboat Key
Canal Dredging Survey**

Table #1:

	ASSOCIATED STREETS	CANAL	LOCATIONS .8 ft. to 2.5 ft.
1	Bayou Hammock / Village	Canal 2	4 locations
2	Juan Anasco / DeNarvaez	Canal 4	1 locations
3	Jungle Queen Way	Canal 16	2 locations
4	St. Judes Dr. N. / St Judes Dr. S.	Canal 19	6 locations
5	Jesmyth Dr. / Rountree Dr	Canal 29	3 locations
6	Rountree Dr. / Kingfisher Ln.	Canal 30	2 locations
7	Longview Dr. / Buttownwood Dr.	Canal 32	9 locations
8	Putter Ln. / Golf Links Ln.	Canal 34	2 locations
9	Golf Link Ln. / Chipping Ln.	Canal 35	1 Location
10	Chipping Ln. / Wedge Ln.	Canal 36	5 locations
11	Wedge Ln. / Birdie Ln.	Canal 37	3 locations
12	Birdie Ln. / Putting Green Ln.	Canal 38	4 locations
13	Yardarm Ln. / Bowsprit Ln.	Canal 40	1 locations
14	Haylard Ln. / Spinnaker Ln.	Canal 43	2 locations
15	Spinnaker Ln. / Hornblower Ln.	Canal 44	3 locations
16	Hornblower Ln. / Gunwale Ln.	Canal 45	1 locations
17	Gunwale Ln. / Outrigger Ln.	Canal 46	1 locations
18	Outrigger Ln. / Cutter Ln.	Canal 47	1 locations
19	Cutter Ln. / Yawl Ln.	Canal 48	1 locations
20	Yawl Ln. / Schooner Ln.	Canal 49	1 Location
21	Ketch Ln. / Sloop Ln.	Canal 51	1 locations
		TOTAL	54 Locations

For additional evaluation of the locations identified in Table #1 a more intensive survey including accurate full cross sectional data could be performed. These locations under current survey techniques indicate they are typically three quarters of one foot to two and one half feet shallower than permitted or constructed depth. Shallower areas other than those reported were typically observed at the end of canals, nearer to docks and seawalls in locations where dredging under the previous project may not have occurred.

North Canals Section #1



North Canals Section #2



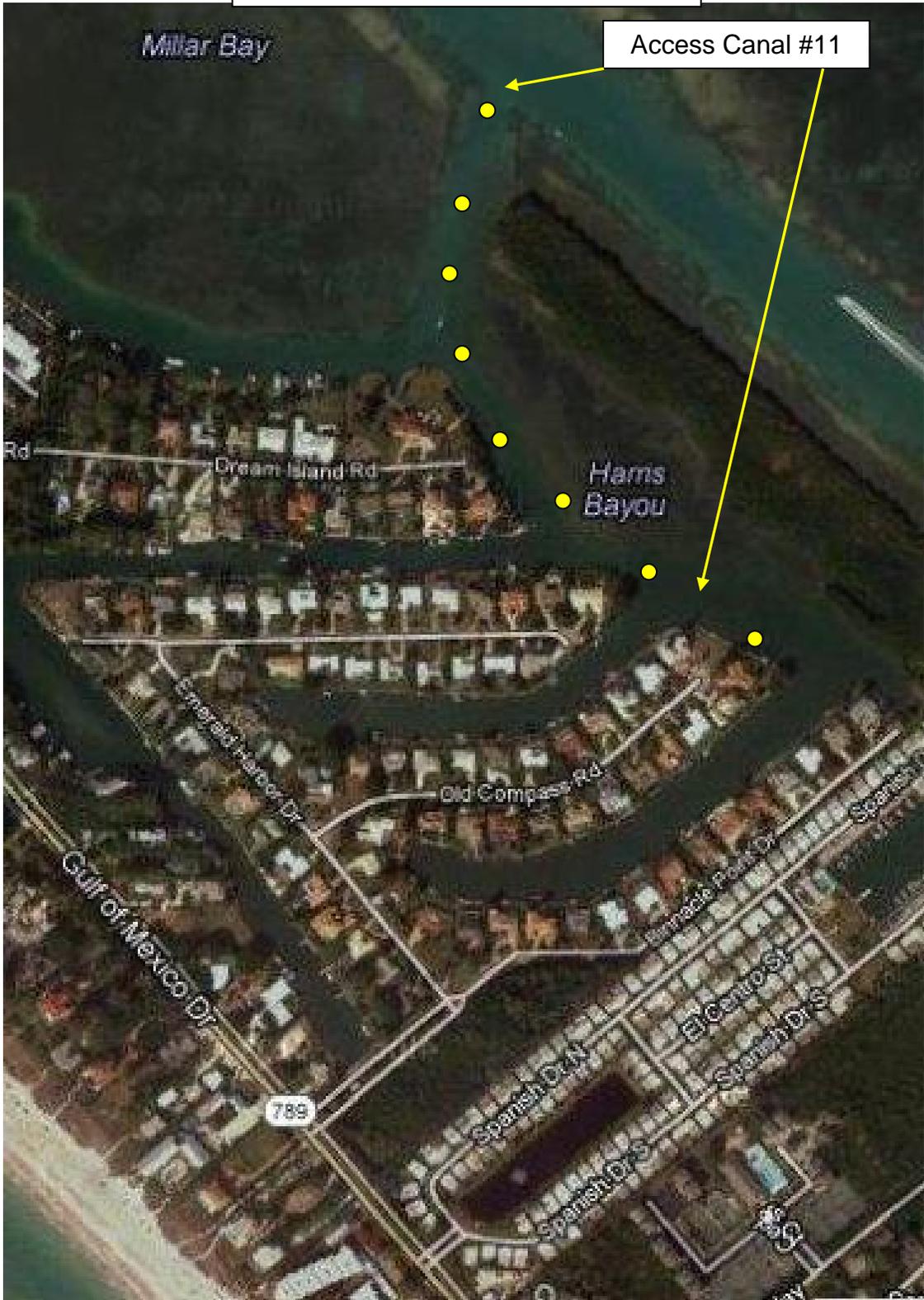
Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

North Canals Section #3



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

North Canals Section #4



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

North Canals Section #5



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

North Canals Section #6



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

South Canals Section #1



**South Canals Section #2
Perimeter Canal Section #1**



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

Perimeter Canal Section #2



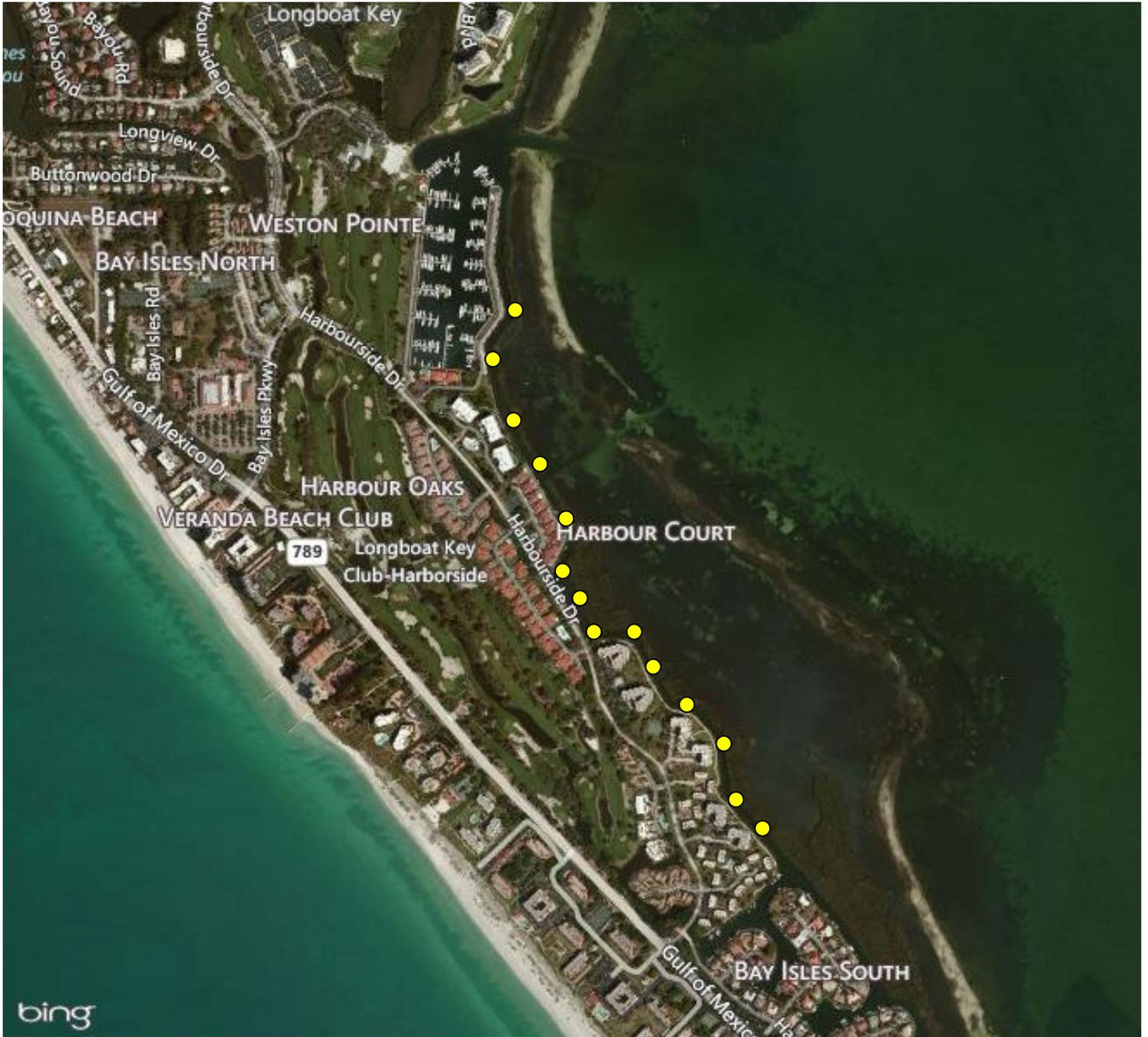
Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

Perimeter Canal Section #3



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

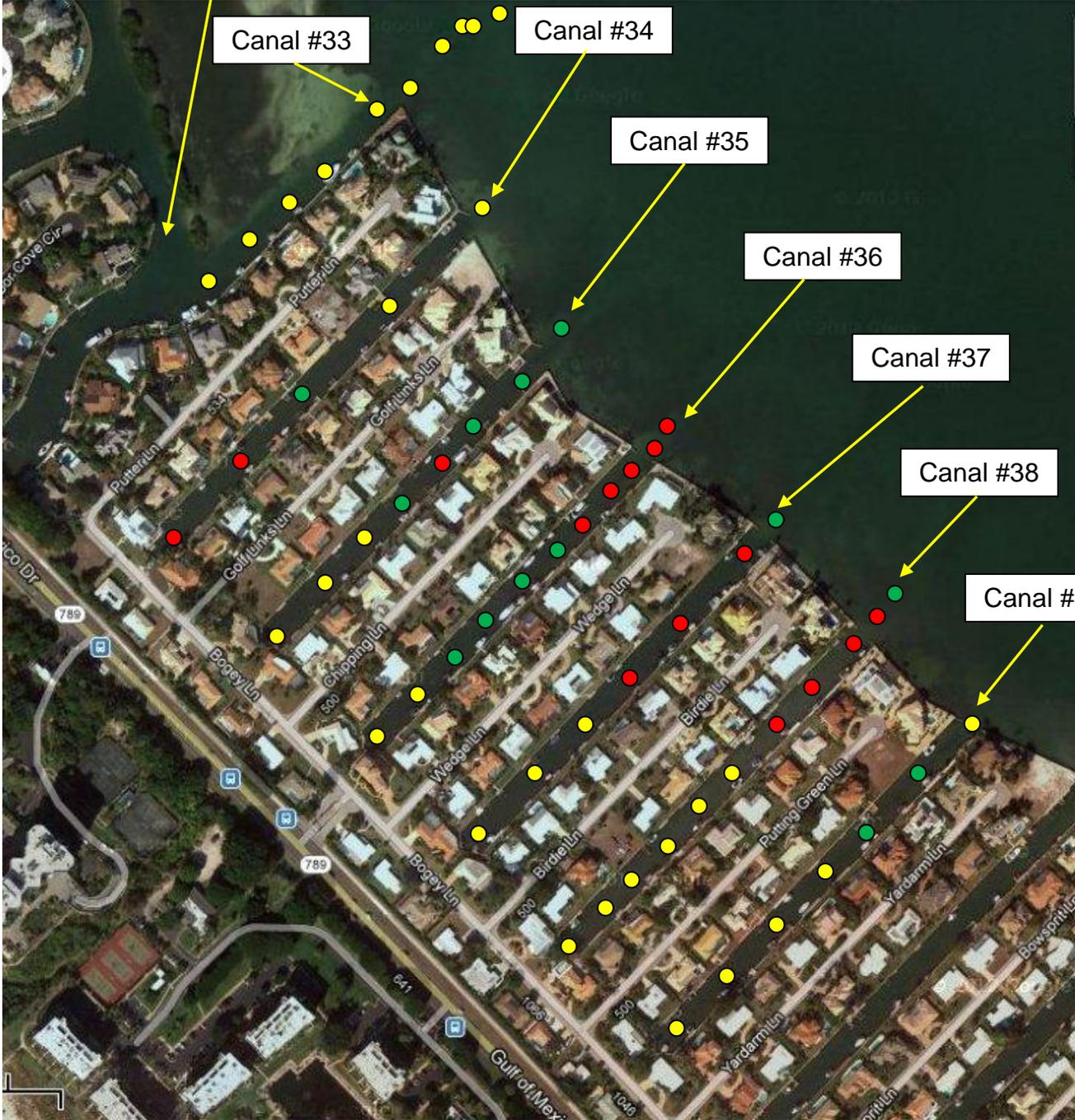
Perimeter Canal Section #4



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

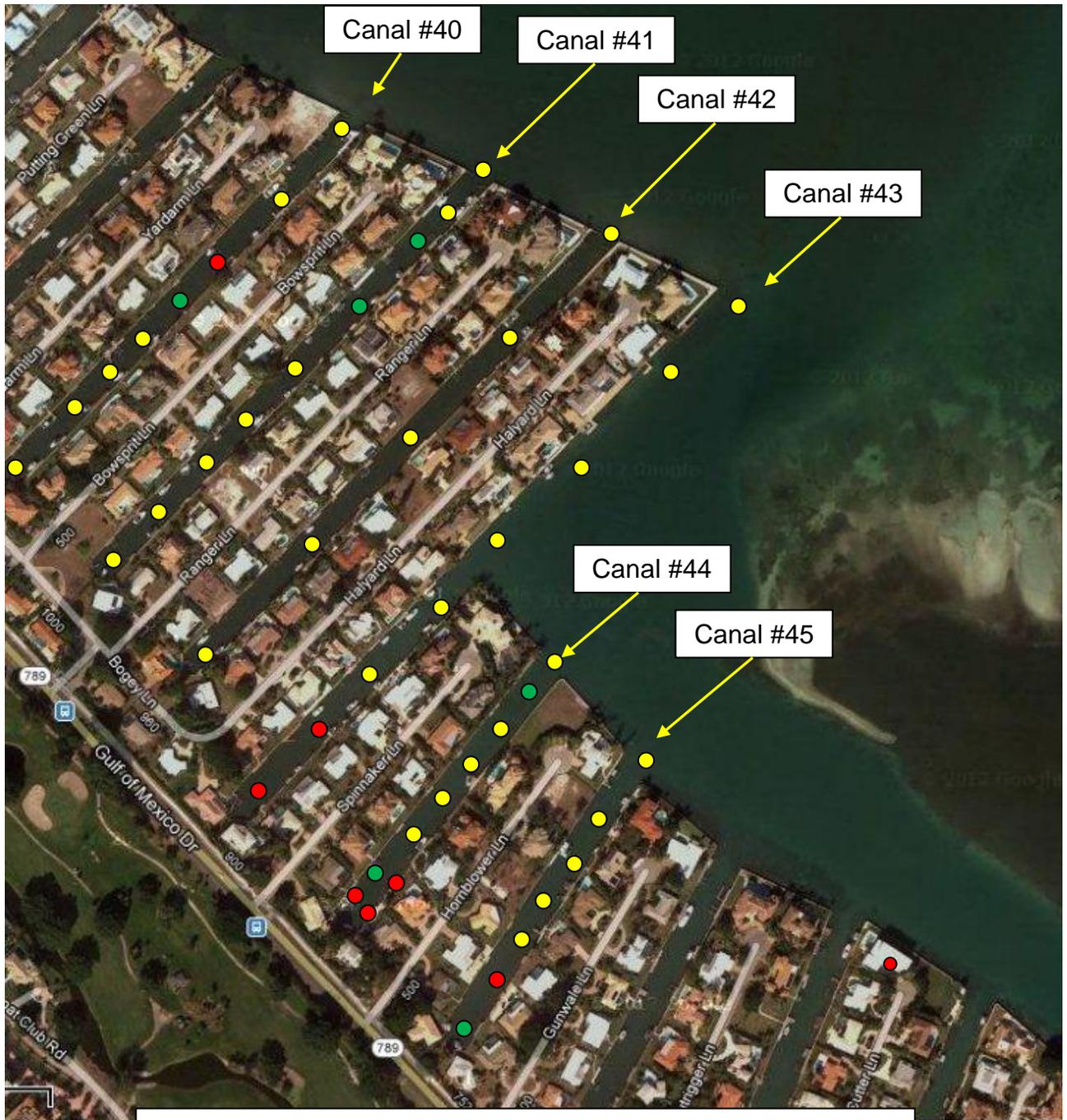
Harborside Perimeter
Canal Access

South Canals Section #3



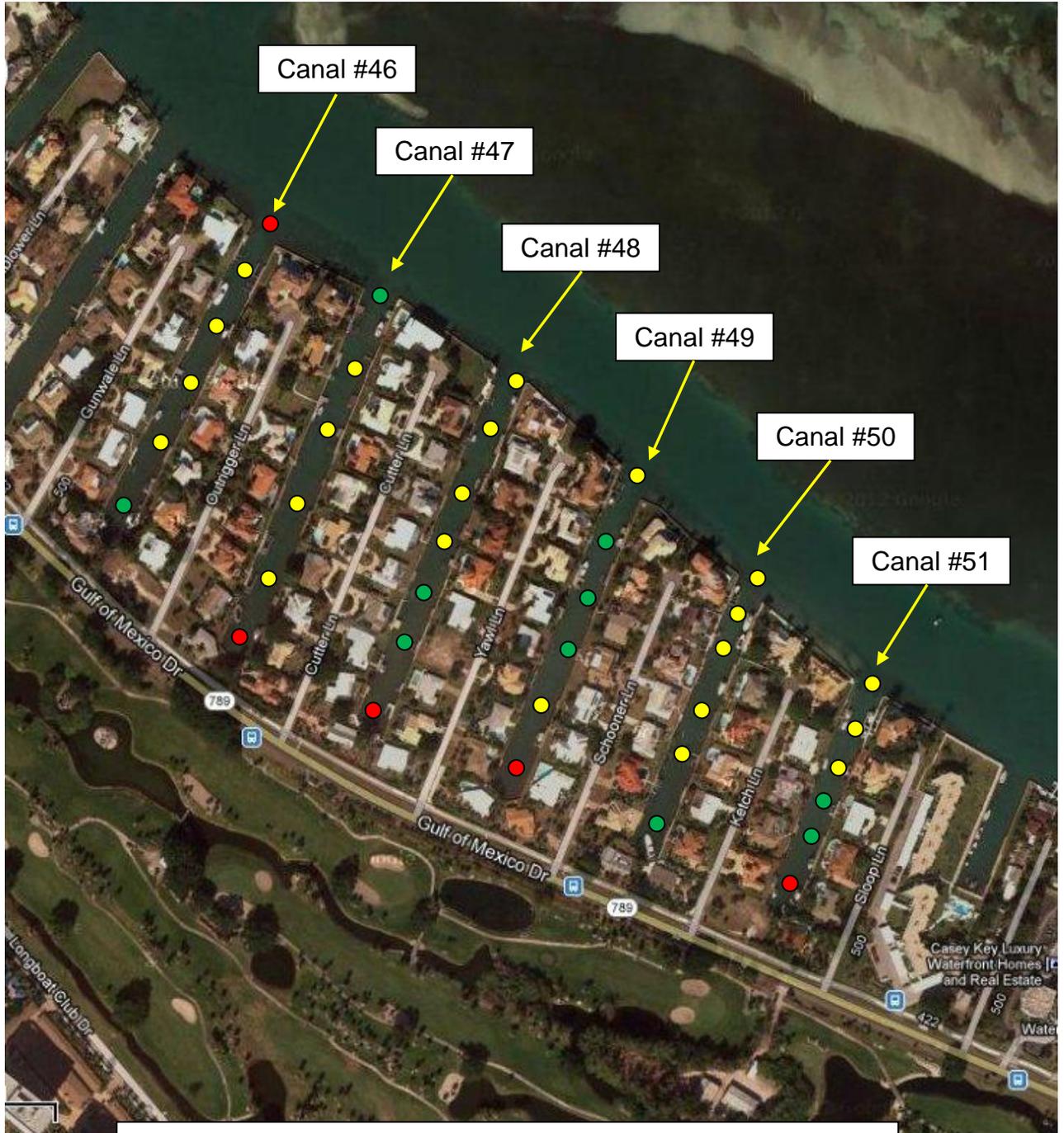
Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

South Canals Section #4



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

South Canals Section #5



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

South Canals Section #6



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

Longboat Key Canal Dredging Report
Canal Depth Table

Canal Surveys	Street to North	Street to South	Corrected Depth	Permitted/Permit Exemption Depth
Canal 2 (Inc.Access)				
2 Marker 2 red			6.3	5.4
marker 3			5.6	5.4
marker 4-5			6.1	5.4
marker 7 green (missing day-lite)			5.8	5.4
marker 9	Bayou Hammock Road		6.4	5.4
no marker 6881 LB Dr S			4	5.4
no marker 6851 LB Dr S			4.7	5.4
Center run 6841 LB Dr S to Jackson Way		Whitney Beach Association	3.9	5.4
			3.9	5.4
			4.1	5.4
Canal 3				
	Shinbone Alley	Juan Anasco Drive	3	3.4
			3.5	3.4
			4	
Canal 4				
	Juan Anasco Drive	DeNarvez Drive	5.2	5.4
			5.9	5.4
			5.6	5.4
			4.8	5.4
			4	5.4
Canal 5				
	DeNarvez Drive	Bayview Drive	4.9	5.4
Canal 6				
	Bayview Drive	Lyons Lane	5.4	4.4
			5.7	4.4
			5.3	4.4
			5.1	4.4
			4.1	4.4
			4	4.4
			3.8	4.4
			3.7	4.4
Canal 7				
	Lyons Lane	Norton Street	7	5.4
			7.4	5.4
Canal 8				
	Norton Street	Marbury Lane	5.4	5.4
			5.5	5.4
			6	5.4
			5.8	5.4
			6.6	5.4
			6.7	5.4
Canal 9				
	Marbury Lane	Penfield Street	6.2	5.4
			7.2	5.4
			7.5	5.4
Canal 10				
	Penfield Street	Wake Island	4.8's to 5's	5.4
Canal 11 (Access)				
	None	Binnacle Point	6.8	5.4
			5.2	5.4
			5.4	5.4
			5.6	5.4
			6.4	5.4
			5.3	5.4
			6.2	5.4
			5.5	5.4
Canal 12				
	Dream Island Road	Emerald Harbor Drive	N/A	UNK
Canal 13				
	Emerald Harbor Drive	Old Compass Road	N/A	UNK
Canal 14				
	Old Compass Road	Binnacle Point Drive	N/A	UNK
Canal 15 (N)				
	N/a	Dream Island Road	N/A	UNK
Canal 15 (S)				
	Gulf of Mexico Drive	Emerald Harbor Drive	N/A	UNK
Canal 16				
	Evergreen Way	Jungle Queen Way	3.6	4.4
			3.8	4.4
			4.2	4.4
			5.2	4.4
			3.2	4.4

Notes 1) N/A = Not measured, Not in Original Project.
2) UNK = Unknown permitted depth.
3) ASM = Assumed Permit Exemption Depth.

Longboat Key Canal Dredging Report
Canal Depth Table

Canal Surveys	Street to North	Street to South	Corrected Depth	Permitted/Permit Exemption Depth
Canal 17	Jungle Queen Way	Tarawitt Drive	3.7	3.4
			4	3.4
			3.9	3.4
			4.4	3.4
			4.6	3.4
			4.7	3.4
			4.4	3.4
Canal 18	Tarawitt Drive	St Judes North	2.7	3.4
			3.2	3.4
			2.9	3.4
			3	3.4
			3.1	3.4
			3.2	3.4
			3.1	3.4
			3.8	3.4
Canal 19	St Judes North	St Judes South	4.7	4.9
			3.6	4.9
			3.5	4.9
			3	4.9
			3.4	4.9
			3.7	4.9
			4.2	4.9
			3.9	4.9
			4.7	4.9
			4.7	4.9
Canal 20	Gulfbay Road	None	N/A	UNK
Canal 21	Sandhamn Place	None	N/A	UNK
Canal 22	5056 GMD	5050 GMD	N/A	-5.4
Access 22	5056 GMD	5050 GMD	N/A	-5.4
Canal 23	5000 GMD	4960 GMD	N/A	-5.4
Access 23	5000 GMD	4960 GMD	N/A	-5.4
Canal 24	4960 GMD	None	N/A	-4.4
Canal 25	4500 GMD	Exeter Drive	N/A	-4.4
Canal 26	Exeter Drive	Falmouth Drive	N/A	UNK
Canal 27	Bayfront Recreation Center	Jessmyth Way	N/A	-3.4
Canal 28	Jessmyth Way	Jessmyth Drive	N/A	-3.4
Canal 29	Jessmyth Drive	Roundtree Drive	5.4	5.4
			4.5	5.4
			4.7	5.4
			4.9	5.4
			4.6	5.4
			4.1	5.4
			4.9	5.4
Canal 30	Roundtree Drive	Kingfisher Lane	4.7	5.4
			4.4	5.4
			5.1	5.4
			5	5.4
			5.2	5.4
			5	5.4
			4.8	5.4
			3.5	5.4
Canal 31	3500 GMD	Bayou Sound	N/A	UNK
Canal 32	Access		5.4	-5.4
Buttonwood Harbor Canal 32	Longview Drive	Buttonwood Drive	4.4	5.4
			4.7	5.4
			4.5	5.4
			3.9	5.4
			3.9	5.4
			4.5	5.4
			3.4	5.4
			3.5	5.4
			3.6	5.4
			4.6	5.4
			5.4	5.4
Canal by Longboat Arms and Island Court				
	None		3- N/A	UNK

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Longboat Key Canal Dredging Report
Canal Depth Table

Canal Surveys	Street to North	Street to South	Corrected Depth	Permitted/Permit Exemption Depth
Canal 33	Harbor Cove Circle	Putter Lane		-5.4
Marker 4			6	ASM (5.4)
			6.4	ASM (5.4)
Marker 6			6	ASM (5.4)
Marker 8			6.5	ASM (5.4)
			6.6	ASM (5.4)
			6.6	ASM (5.4)
Marker 10			7	ASM (5.4)
			7.7	ASM (5.4)
			8.5	ASM (5.4)
Canal 34	Putter Lane	Golf Links Lane	9	6.4
			6.5	6.4
			5.7	6.4
			4.2	6.4
			4.2	6.4
Canal 35	Golf Links Lane	Chipping Lane	6	6.4
			5.8	6.4
			5.9	6.4
			5.6	6.4
			5.8	6.4
			6.1	6.4
			6.8	6.4
			7.4	6.4
Canal 36	Chipping Lane	Wedge Lane	5.3	6.4
			5.5	6.4
			5.5	6.4
			4.8	6.4
			5.4	6.4
			5.9	6.4
			6	6.4
			5.8	6.4
			6	6.4
			6.5	6.4
			6.8	6.4
Canal 37	Wedge Lane	Birdie Lane	5.9	6.4
			4.5	6.4
			4.2	6.4
			5.4	6.4
			6.3	6.4
			6.9	6.4
			7.5	6.4
Canal 38	Birdie Lane	Putting Green Lane	5.9	6.4
			4.9	6.4
			5.1	6.4
			5.1	6.4
			5.3	6.4
			6.1	6.4
			6.3	6.4
			6.2	6.4
			6.3	6.4
			6.3	6.4
			6.3	6.4
Canal 39	Putting Green Lane	Yardarm Lane	5.8	5.4
			4.8	5.4
			4.7	5.4
			5.3	5.4
			5.5	5.4
			5.9	5.4
			6.1	5.4
Canal 40	Yardarm Lane	Bowsprit Lane	6.4	5.4
			5.1	5.4
			4.1	5.4
			4.8	5.4
			5.2	5.4
			5.9	5.4
			5.5	5.4
			4.8	5.4

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Canal 41	Bowsprit Lane	Ranger Lane	7.2	5.4
			5.8	5.4
			4.7	5.4
			4.9	5.4
			5.5	5.4
			6.1	5.4
			6.6	5.4
			6.9	5.4
			7	5.4
Canal 42	Ranger Lane	Halyard Lane	6.1	5.4
			5.2	5.4
			5.2	5.4
			5.4	5.4
			5.6	5.4
			6.2	5.4
Canal 43	Halyard Lane	Spinnaker Lane	6.8	5.4
			5.8	5.4
			5.5	5.4
			5.2	5.4
			5.6	5.4
			5.1	5.4
			4.3	5.4
			3.8	5.4
Canal 44	Spinnaker Lane	Hornblower Lane	8.1	5.4
			5	5.4
			5.6	5.4
			5.6	5.4
			5.8	5.4
			5.6	5.4
			5.2	5.4
			4.1	5.4
			4.5	5.4
			4.1	5.4
Canal 45	Hornblower Lane	Gunwale Lane	6.7	5.4
			6.6	5.4
			7.1	5.4
			6.6	5.4
			5.7	5.4
			4.1	5.4
			4.7	5.4
Canal 46	Gunwale Lane	Outrigger Lane	4.5	5.4
			5.8	5.4
			5.3	5.4
			5.4	5.4
			5.3	5.4
			4.9	5.4
Canal 47	Outrigger Lane	Cutter Lane	5	5.4
			5.3	5.4
			5.9	5.4
			5.5	5.4
			5.6	5.4
			4.6	5.4
Canal 48	Cutter Lane	Yawl Lane	5.6	5.4
			5.5	5.4
			5.1	5.4
			5.2	5.4
			4.7	5.4
			4.8	5.4
			2.9	5.4
Canal 49	Yawl Lane	Schooner Lane	6.4	5.4
			4.9	5.4
			4.9	5.4
			5	5.4
			5.2	5.4
			2.8	5.4

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Canal Surveys	Street to North	Street to South	Corrected Depth	Permitted/Permit Exemption Depth
Canal 50	Schooner Lane	Ketch Lane	7.8	5.4
			5.6	5.4
			5.5	5.4
			5.5	5.4
			5.8	5.4
			4.9	5.4
Canal 51	Ketch Lane	Sloop Lane	6.8	5.4
			5.3	5.4
			5.4	5.4
			4.9	5.4
			5	5.4
			3.4	5.4
Canal 52	Sloop Lane	Channel Lane	N/A	N/A
Canal 53		Boathouse Marina	8.3	5.4
			5.4	5.4
			5.3	5.4
Perimeter Canal (Harbourside)		at Weston Point	7.87	4.0
		at channel markers 23-24	5.97	4.0
			5.92	4.0
			5.42	4.0
			5.57	4.0
		at channel marker 22	6.11	4.0
			5.41	4.0
			5.35	4.0
			5.85	4.0
			4.98	4.0
		at channel marker 20	5.78	4.0
			5.52	4.0
			5.76	4.0
		at channel marker 15	5.46	4.0
			5.06	4.0
			6.06	4.0
			4.96	4.0
		at channel marker 14	5.66	4.0
			4.26	4.0
			4.96	4.0
			5.28	4.0
			4.38	4.0
			4.48	4.0
			3.88	4.0
			3.98	4.0
			4.28	4.0
		at channel marker 12	4.28	4.0
		at bare pole	5.08	4.0
			4.98	4.0
		Channel Markers 9-10	5.1	4.0
Center of access channel	8.1	4.0		
Channel Marker 7 and 8	5.8	4.0		
	5.2	4.0		
	5	4.0		
	4.1	4.0		
Center of Marina Bay bldg2	5.2	4.0		
	4.8	4.0		
	4.72	4.0		
Channel Marker 6	7.22	4.0		
at ISNW Sign	5.72	4.0		
	6.02	4.0		
Channel Marker 4a	5.42	4.0		
	4.92	4.0		
	5.12	4.0		
	4.82	4.0		
at channel marker 4	6.17	4.0		
	6.47	4.0		

Notes 1) N/A = Not measured, Not in Original Project.
2) UNK = Unknown permitted depth.
3) ASM = Assumed Permit Exemption Depth.



CANAL DREDGING REPORT

Presentation

Town Commission – Regular Workshop

- **December 11, 2013**



CANAL DREDGING REPORT

Presentation Outline

- History
- Past Financial Decisions
- 2003 Canal Project
- Current Canal Conditions
- Next Steps



CANAL DREDGING SURVEY REPORT

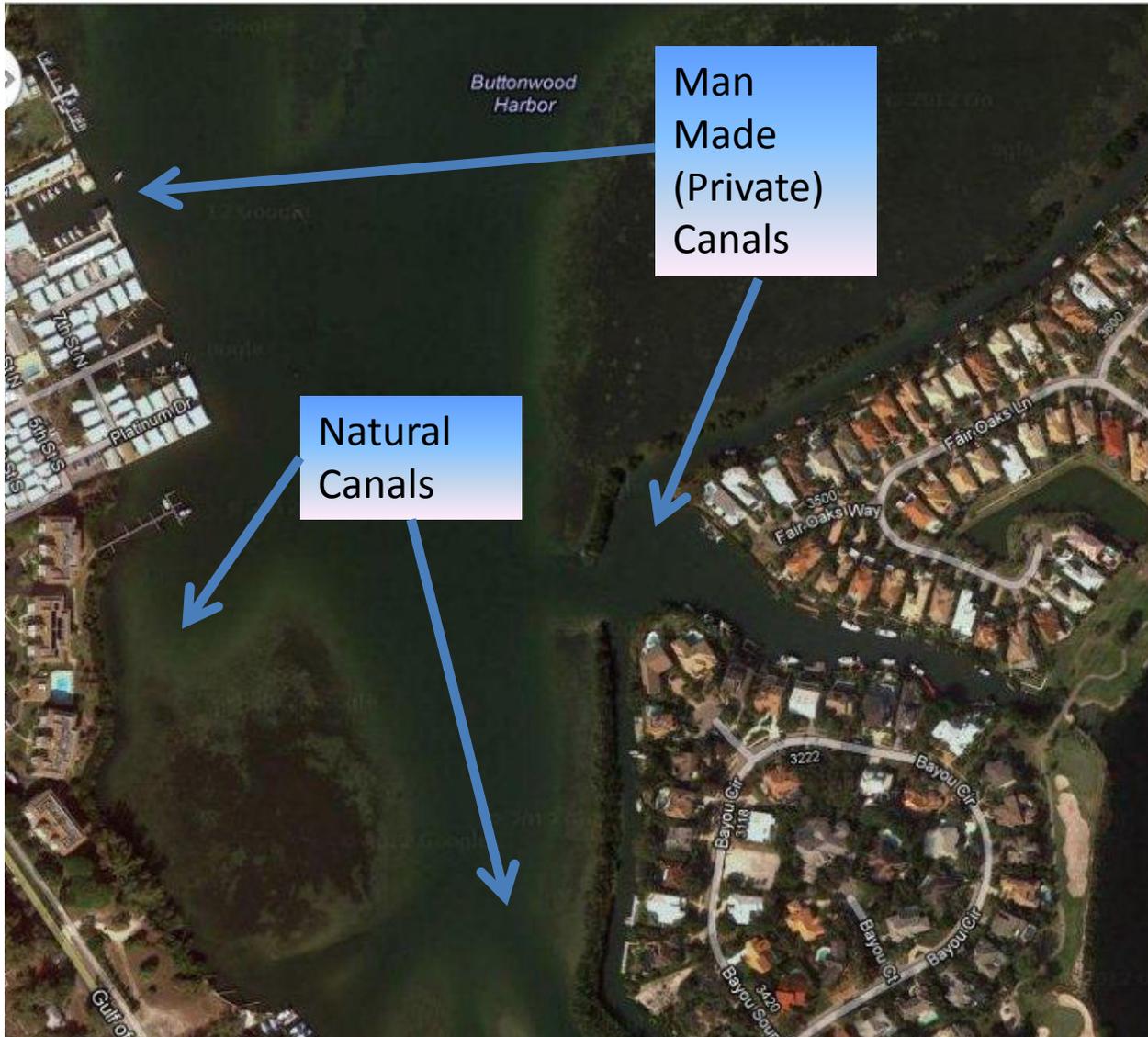
History

- Natural Canals
- Manmade Canals
- Public
- Private

TOWN OF LONGBOAT KEY



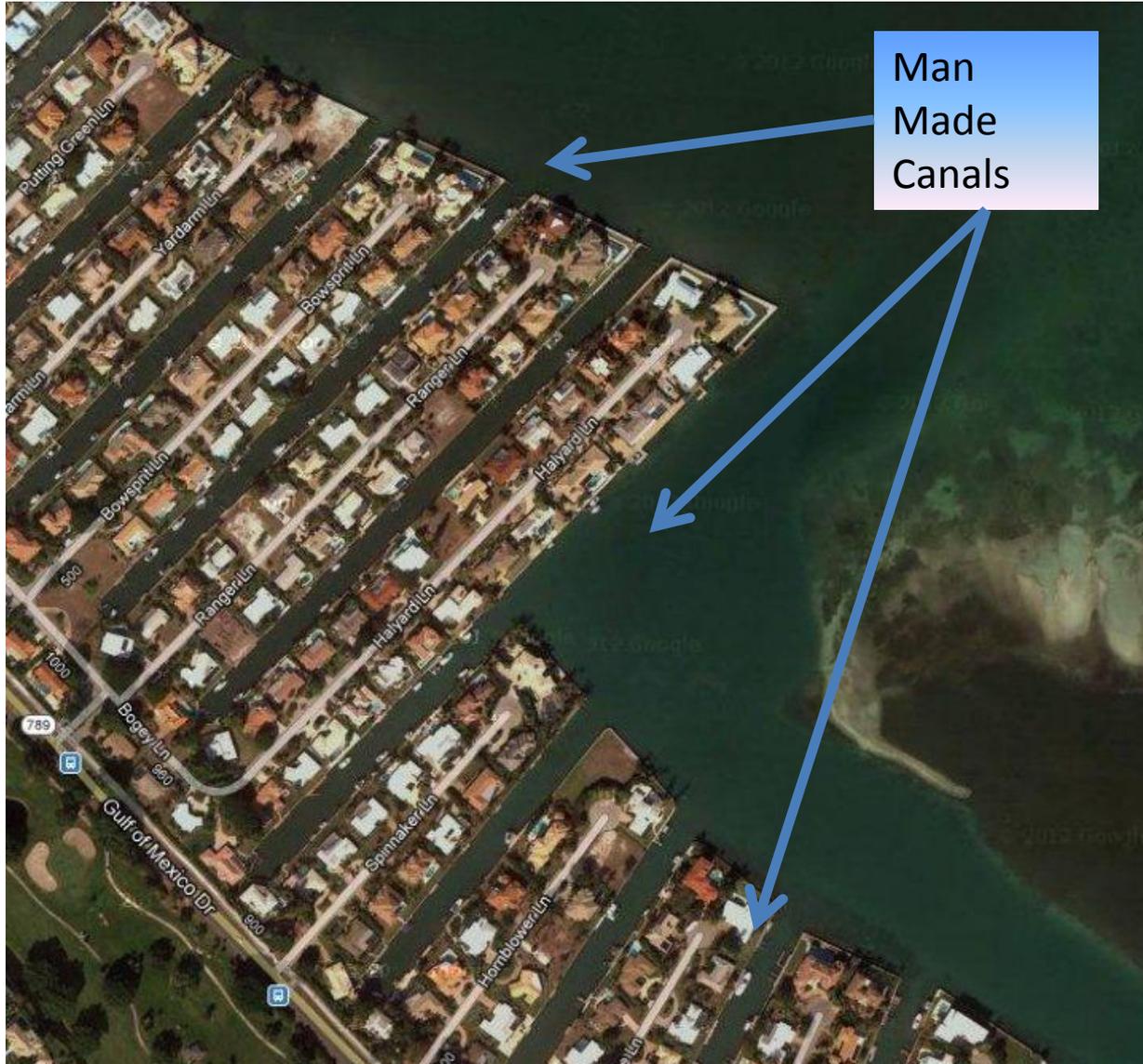
TOWN OF LONGBOAT KEY



Man
Made
(Private)
Canals

Natural
Canals

TOWN OF LONGBOAT KEY





CANAL DREDGING Planning - Financing

- 1996 Feasibility Study
- 1999 Canal Maintenance Financing Advisory Committee
 - Resulted in Engineering and Permitting task order to CPE
- Resulted in Town Wide Ad Valorem Funding mechanism



CANAL DREDGING Permitting

- Permitted via FDEP – USACE
 - Permitted Exemption
(Depths were known)
 - Non-Exempt
Additional Permitting Required
(Depths not known or permitted deeper)



CANAL DREDGING Permitting

- **USACE** has expired
- **FDEP** no termination date for exempt canals
- **2001 and 2002 Permits**
 - For 47,000 cu.yds. – 53 Canals
- **Impacts to Natural Resources**
 - Mitigate for impacts to seagrass, oyster beds



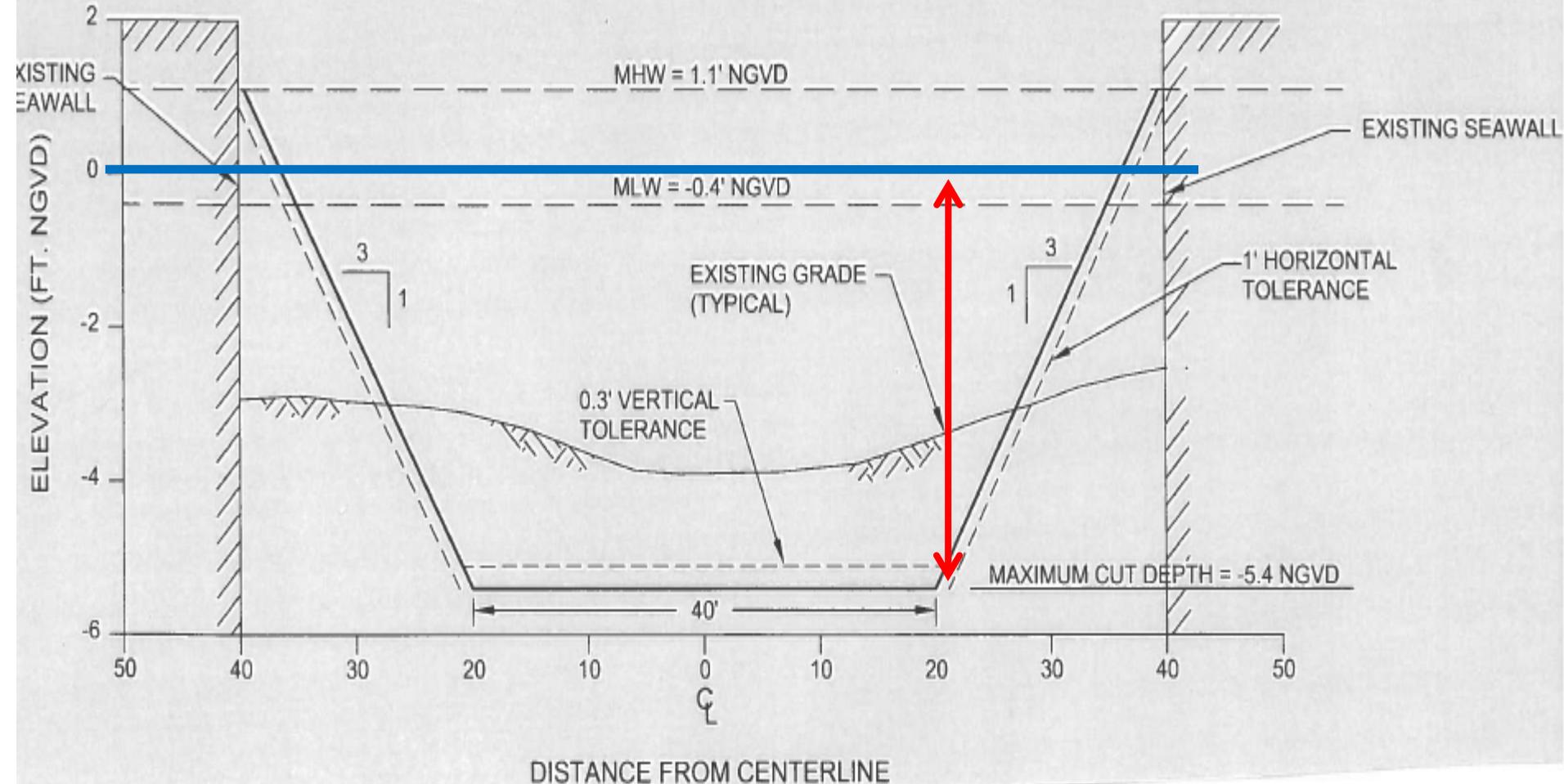
CANAL DREDGING SURVEY REPORT

Construction Project

- **Completed in 2003**
 - Bids Received to dredge 30 of the 53 Canals
 - 23,000 cubic yard project



Canal Dredging Design





CANAL DREDGING 2003 Project Costs

Feasibility	\$	20,000
Cliff Truitt (coastal engineer)		34,335
CPE (engineering)		501,000
Sea Grass Mitigation (permit required)		129,550
Legal Fees (Town Attorney)		60,000
Permit Fees (FDEP)		13,350
Construction		\$1,312,140
Harborside Canal Agreement		330,000
Total	\$	2,400,375 +/-



CANAL DREDGING 2003 Project Funding Sources

General Fund	\$ 2.3 Million
Infrastructure Surtax	300,000
WCIND Grant (Sarasota)	95,000
WCIND Grant (Manatee)	169,000
Interest	40,000
Total	\$ 2.9 Million +/-



CANAL DREDGING Potential Future Funding Sources

- **Funding as in the past project**
 - Primarily General Fund
 - WCIND – other Grants
 - Infrastructure Surtax
- **Consideration of Taxing Districts**



CANAL DREDGING

Other Community Funding Examples

<u>MUNICIPALITY</u>	<u>Tax Authority</u>	<u>Tax Levy</u>	<u>Other</u>
Treasure Beach FL	Municipal Service Benefit Unit	Individual Unit	
City of Tampa FL	Community wide Ad Valorem	50% paid for from tax fund	50% Grant
Sanibel Island FL	Municipal Service Taxing Unit	Marina 40% Residents 27%	City 33% Gen. Fund
City of Naples FL Port Royal Assessment Area	Special Assessment District via Resolution	Unit, pro-rata of shared costs of cu.yd. dredged	
Hilton Head Island, SC	Special Taxing District	Subject to S.C. State Law	Community or Private
Panama City FL	Municipal Service Benefit Unit	Individual Parcel	15



CANAL DREDGING Current Survey Results

- **Methodology**
 - Use of Police Dept. Boat and sonar
 - Compensated for sonar depth and local tide
 - Centerline of 40 canals
 - Approximately 150 to 200 foot intervals

TOWN OF LONGBOAT KEY



TOWN OF LONGBOAT KEY



TOWN OF LONGBOAT KEY



North Canals Section #1



Depth Sounding Approximate Locations
Depth within tolerance = ●
Green Indicates Potential Shallow Depth Area = ●
Red Indicates Shallow Depth area = ●

TOWN OF LONGBOAT KEY



South Canals Section #5



Depth Sounding Approximate Locations

Depth within tolerance = ●

Green Indicates Potential Shallow Depth Area = ●

Red Indicates Shallow Depth area = ●



CANAL DREDGING SURVEY REPORT

Summary

- Total locations Surveyed
 - **302 in 40 Canals**
- Total of **54** locations in **21** canals indicated approximately 1 foot shallower than constructed depth per post construction surveys



CANAL DREDGING SURVEY REPORT

Next Steps

- Solicit Public Input
- Based on results
 - Obtain Public Input for Future Funding Mechanism
 - Initiate more detailed Survey
 - Initiate full Feasibility Study
 - Consider renewing annual Canal Dredging fund



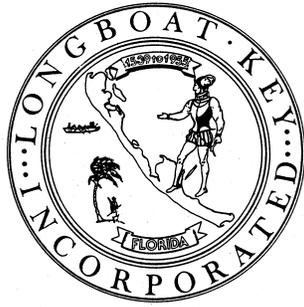
CANAL DREDGING SURVEY REPORT Funds

- **Current Available Funds**
 - Total of **\$407,000** in Capital Improvements
 - Has not received additional funding since 2008
 - **\$900,000** Budgeted from Infrastructure Surtax



CANAL DREDGING SURVEY REPORT

Questions ?



End of Agenda Item