

PELICAN BAY SERVICES DIVISION
Municipal Services Taxing & Benefit Unit

NOTICE OF PUBLIC MEETING

MARCH 29, 2021

THE **WATER MANAGEMENT COMMITTEE** OF THE PELICAN BAY SERVICES DIVISION WILL MEET AT **1:00 PM ON MONDAY, MARCH 29** AT THE COMMUNITY CENTER AT PELICAN BAY, 8960 HAMMOCK OAK DR., NAPLES, FL 34108.

AGENDA

1. Pledge of Allegiance
2. Roll call
3. Agenda approval
4. Approval of 02/01/21 meeting minutes
5. Audience comments
6. *Engineer's recommendation and cost estimates for Oakmont Lake 4-1 restoration
7. Lake bank restoration prioritization
8. Maintenance of private lakes
9. Staff progress report
10. Adjournment

**indicates possible action item*

ANY PERSON WISHING TO SPEAK ON AN AGENDA ITEM WILL RECEIVE UP TO THREE (3) MINUTES PER ITEM TO ADDRESS THE BOARD. THE BOARD WILL SOLICIT PUBLIC COMMENTS ON SUBJECTS NOT ON THIS AGENDA AND ANY PERSON WISHING TO SPEAK WILL RECEIVE UP TO THREE (3) MINUTES. THE BOARD ENCOURAGES YOU TO SUBMIT YOUR COMMENTS IN WRITING IN ADVANCE OF THE MEETING. ANY PERSON WHO DECIDES TO APPEAL A DECISION OF THIS BOARD WILL NEED A RECORD OF THE PROCEEDING PERTAINING THERETO, AND THEREFORE MAY NEED TO ENSURE THAT A VERBATIM RECORD IS MADE, WHICH INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED. IF YOU ARE A PERSON WITH A DISABILITY WHO NEEDS AN ACCOMMODATION IN ORDER TO PARTICIPATE IN THIS MEETING YOU ARE ENTITLED TO THE PROVISION OF CERTAIN ASSISTANCE. PLEASE CONTACT THE PELICAN BAY SERVICES DIVISION AT (239) 597-1749.

**PELICAN BAY SERVICES DIVISION
WATER MANAGEMENT COMMITTEE MEETING
FEBRUARY 1, 2021**

The Water Management Committee of the Pelican Bay Services Division met on Monday, February 1 at 9:00 a.m. at the Community Center at Pelican Bay, 8960 Hammock Oak Drive, Naples, FL 34108. The following members attended.

Water Management Committee

Denise McLaughlin, Chair
Tom Cravens (*absent*)

Susan O'Brien
Scott Streckenbein
Michael Weir

Pelican Bay Services Division Staff

Neil Dorrill, Administrator
Chad Coleman, Operations Manager
Darren Duprey, Associate Project Manager

Karin Herrmann, Operations Analyst
Lisa Jacob, Project Manager
Barbara Shea, Administrative Assistant

Also Present

Tom Barber, Agnoli, Barber & Brundage
Jim Carr, Agnoli, Barber & Brundage

Nick Fabregas, PBSB Board
Michael Fogg, PBSB Board

APPROVED AGENDA (AS PRESENTED)

1. Pledge of Allegiance
2. Roll call
3. Agenda approval
4. Approval of 01/23/20 meeting minutes
5. Audience comments
6. Current state and expected timing for Oakmont Lake 4-1 remediation project
 - a. Detailed plan able to be used for bidding
 - b. PBSB Board decision to proceed with Lake 4-1
 - c. Expected procurement elapsed time
 - d. Estimated timeline for construction
 - e. Methods of remediation, including mixed use of Rip Rap and Geotube
7. Criteria used to prioritize lake bank restoration
8. Incremental criteria including visibility, current functional or aesthetic problems
9. Staff progress report
10. Adjournment

ROLL CALL

Mr. Cravens was absent and a quorum was established

AGENDA APPROVAL

Mr. Streckenbein motioned, Mr. Weir seconded to approve the agenda as presented. The motion carried unanimously.

APPROVAL OF 1/23/20 MEETING MINUTES

Mr. Weir motioned, Mr. Streckenbein seconded to approve the 1/23/20 meeting minutes as presented. The motion carried unanimously.

AUDIENCE COMMENTS

Mr. Fabregas requested that PBSB staff research the possibility of obtaining easements for lakes 1 and 2 in Basin 1 (located within the Waterside Shops parcel), which would make the PBSB responsible for servicing these lakes, which are interconnected with the Pelican Bay master drainage system. He would like the PBSB to ultimately obtain BCC approval to add these easements to the list of PBSB responsibilities.

Mr. Dorrill commented that historically the PBSB has had no easements for these two lakes. He noted that he has recently had a discussion with the Waterside Shops management on this subject.

Ms. O'Brien commented that there are 13 additional private lakes, connected to the PB master drainage system, for which the PBSB has no easements. She suggested that the full board should have a discussion on whether to explore this issue and determine how much staff time should be devoted to this.

Mr. Streckenbein commented that this would be a precedent setting discussion, and that a lot more information would be needed to make any decisions.

Mr. Dorrill commented that staff will review our SFWMD permit and determine how many of the private PB lakes are interconnected with the PB master drainage system. This information will be provided at the next committee meeting for discussion.

STATUS OF OAKMONT LAKE 4-1 REMEDIATION PROJECT

Our ABB engineer, Mr. Jim Carr, reported that the survey for Oakmont Lake 4-1 has been completed. He provided the committee with segments of the survey on the display screen for discussion.

Ms. Melanie Miller, Vice President, Finance Admin. at the Pelican Bay Foundation, confirmed that the PBF is responsible for replacing the pathway along this lake as well as updating/replacing landscaping along the lake. This PBF work will be coordinated with PBSB staff, as part of the Lake 4-1 lake bank remediation project.

Ms. O'Brien suggested that we discuss our lake bank remediation plans with the homeowners who live on the west side of Lake 4-1. Ms. McLaughlin suggested that we meet with these homeowners after we have a more detailed plan. Mr. Weir commented that the PBSB needs to make a decision on the appropriate remediation method based on cost and longevity; this is not the homeowners' decision. Ms. McLaughlin added that aesthetics should also be a consideration.

Mr. Carr commented that rip rap is a good solution for the remediation of the west side of the lake, which would be 40% of the perimeter (the recommended maximum). He provided two cost estimates for two suggested remediation options (provided in the agenda packet) including: (1) Option 1: A combination of GeoWeb and rip rap estimated at \$2.0

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February 1, 2021**

million, and (2) Option 2: A combination of rip rap and re-grading estimated at \$1.4 million. Mr. Carr noted that he will be updating these estimates in the next few weeks, based on the completed survey.

Mr. Carr commented that he will be testing the lake bottom material in the next few weeks to determine whether it can be used for fill. Ms. McLaughlin expressed concerns over whether copper would be stirred up and go into solution if the lake bottom material were to be used for fill.

Mr. Carr commented that upon completion of the project, the 4 to 1 slope of the lake banks will be restored. Mr. Dorrill commented that the goal of the project is to restore the slope and holding capacity back to its original design. He also noted that the plan will provide for the connection of two drain features per household.

Ms. O'Brien commented on the timeline, included in the agenda packet, which shows November 2021 as the start of the construction of the project. She suggested that this project start after the 2021/2022 winter season. Mr. Carr discouraged completing the project in the wet season.

Mr. Dorrill commented that GeoWeb and rip rap projects require SFWMD permits, while re-grading projects do not. Ms. O'Brien suggested that we consider a re-grading project in order to save time and money.

After committee discussion, it was agreed that ABB would bring back updated cost estimates of Options 1 and 2, as well as an Option 3, which would consist of re-grading the entire perimeter. Mr. Carr suggested that the committee consider the longevity of Option 3. Mr. Dorrill suggested that Option 3 may also result in maintenance issues.

Mr. Dorrill commented that he would like to bring the planning phase of this project to a conclusion. He suggested that the committee schedules a March meeting to review the three cost options, and then bring a recommendation to the full board. Mr. Weir commented that the decision on a remediation method will set the standard for future lake bank projects.

CRITERIA USED TO PRIORITIZE LAKE BANK RESTORATION

Our ABB engineer, Mr. Tom Barber, provided an explanation and theory behind his revised prioritization formula to be used to compile a ranking list of PB lakes for lake bank restoration projects. He compared and contrasted this formula with his original formula. The revised formula includes escarpment consideration, not slope. It also gives more consideration to community exposure issues. Mr. Barber suggested that "risk of an accident" should also be a strong consideration when ranking the lakes.

Ms. O'Brien commented that per our SFWMD permit, we are responsible for maintaining the slope of the lake banks; other factors included in the revised formula are not part of our responsibility.

Mr. Fogg commented that lake visibility should be a consideration.

Ms. Miller confirmed that the PBF recently had an engineer prepare a report on the condition of the Community Center lake bank; she will provide a copy of the report to the committee.

The committee had a discussion on the pros and cons of each of the two formulas. Ms. O'Brien commented that the initial formula and ranking is more relatable to our permit (quantitative), while the revised formula and ranking is more qualitative.

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Mr. Coleman commented that he would not be in favor of working off of both ranking lists, which would only lead to confusion. He noted that the formulas were developed to “take out opinions” when choosing the order of lake bank restoration projects. Mr. Dorrill preferred that we stay with the revised formula and ranking list.

In conclusion, Mr. Fogg directed the committee to review the top five lakes on each of the ranking lists, plus any additional staff recommendations at their next committee meeting. Mr. Weir suggested that from this pool, the committee should select five or six lakes for the next lake bank restoration projects over the next five years.

ADJOURNMENT

The meeting was adjourned at 10:47 a.m.

Denise McLaughlin, Chair

Minutes approved [] *as presented* OR [] *as amended* ON _____] *date*

PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST
Agnoli, Barber & Brundage, Inc.
March 23, 2021
ABB Project No. 20-0139
LAKE REMEDIATION - PELICAN BAY LAKE 4-1
REGRADE BANKS AND INSTALL LITTORAL PLANTINGS

Item No.	Description	Unit	Quantity	Unit Cost	Pay Item Total	
1	MOBILIZATION	LS	1	\$125,000.00	\$125,000.00	
2	PROVIDE CONSTRUCTION SURVEYING AND LAYOUT	LS	1	\$35,000.00	\$35,000.00	
3	AS-BUILT RECORD DRAWINGS	LS	1	\$15,000.00	\$15,000.00	
4	EROSION CONTROL	LS	1	\$10,500.00	\$10,500.00	
5	SILT FENCE	LF	8,656	\$2.50	\$21,640.00	
6	TURBIDITY BARRIER	LF	100	\$21.00	\$2,100.00	
7	CLEARING AND GRUBBING (INCLUDING GEOTUBE REMOVAL)(1.53 AC)	LS	1	\$55,000.00	\$55,000.00	
8	GRADE LAKE BANKS	LS	1	\$50,000.00	\$50,000.00	
9	IN-PLACE COMPACTED, IMPORTED FILL	CY	10,573	\$50.00	\$528,650.00	
10	LITTORAL PLANTINGS (2FT BELOW, 3FT ABOVE CONTROL ELEV)	LF	5,645	\$10.00	\$56,448.10	
11	PERFORMANCE TURF (SOD - INCLUDES WATER, FERTILIZER & MOWING)	SY	6,784	\$12.00	\$81,408.00	
12	ADJUST VALVE BOX TO GRADE	EA	35	\$300.00	\$10,500.00	
13	IRRIGATION SYSTEM REPAIRS & RESTORATION	LS	1	\$50,000.00	\$50,000.00	
14	LANDSCAPE - TREE REMOVAL (PALM)	EA	29	\$350.00	\$10,150.00	
15	LANDSCAPE - TREE REMOVAL (HARDWOOD OAK)	EA	2	\$2,500.00	\$5,000.00	
16	LANDSCAPE - TREE REMOVAL (OTHER)	EA	7	\$2,000.00	\$14,000.00	
17	12" YARD DRAINS	EA	34	\$1,200.00	\$40,800.00	
18	8" ADS STORM PIPES	LF	1700	\$30.00	\$51,000.00	
				Subtotal	\$1,162,196.10	
SIDEWALK IMPROVEMENTS						
19	REMOVAL OF ASPHALT PAVEMENT & LIMEROCK (EXCAVATION & DISPOSAL)	SY	2,228	\$25.00	\$55,700.00	
20	REMOVAL OF EXISTING RETAINING WALL (RAILROAD TIES)	LF	2,149	\$20.00	\$42,980.00	
21	ASPHALT SIDEWALK, ON 4" LIMEROCK	SY	2,137	\$35.00	\$74,795.00	
22	3' VALLEY GUTTER RAMP & TRANSITION (INCLUDES ASPHALT PATCHING)	LF	70	\$30.00	\$2,100.00	
23	STACKED BLOCK RETAINING WALL	LF	2,175	\$80.00	\$174,000.00	
24	ROOT BARRIER (24" DEEP)	LF	400	\$30.00	\$12,000.00	
25	DETECTABLE WARNINGS (CLAY BRICK PAVERS)	SF	130	\$45.00	\$5,850.00	
				Subtotal	\$367,425.00	
					Total	\$1,529,621.10
10% CONTINGENCY					\$152,962.11	
TOTAL					\$1,682,583.21	

PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST
Agnoli, Barber & Brundage, Inc.
March 23, 2021
ABB Project No. 20-0139
LAKE REMEDIATION - PELICAN BAY LAKE 4-1
REGRADE EAST SIDE - RIP RAP WEST SIDE

Item No.	Description	Unit	Quantity	Unit Cost	Pay Item Total	
1	MOBILIZATION	LS	1	\$125,000.00	\$125,000.00	
2	PROVIDE CONSTRUCTION SURVEYING AND LAYOUT	LS	1	\$35,000.00	\$35,000.00	
3	AS-BUILT RECORD DRAWINGS	LS	1	\$15,000.00	\$15,000.00	
4	EROSION CONTROL	LS	1	\$10,500.00	\$10,500.00	
5	SILT FENCE	LF	8,656	\$2.50	\$21,640.00	
6	TURBIDITY BARRIER	LF	100	\$21.00	\$2,100.00	
7	CLEARING AND GRUBBING (INCLUDING GEOTUBE REMOVAL)(1.53 AC)	LS	1	\$55,000.00	\$55,000.00	
8	GRADE LAKE BANKS	LS	1	\$50,000.00	\$50,000.00	
9	IN-PLACE COMPACTED, IMPORTED FILL	CY	6,894	\$50.00	\$344,700.00	
10	RUBBLE RIP-RAP WITH GEOTEXTILE UNDERLAYMENT	CY	1,851	\$250.00	\$462,750.00	
11	LITTORAL PLANTINGS (2FT BELOW, 3FT ABOVE CONTROL ELEV)	LF	3,460	\$10.00	\$34,600.00	
12	PERFORMANCE TURF (SOD - INCLUDES WATER, FERTILIZER & MOWING)	SY	6,784	\$12.00	\$81,408.00	
13	ADJUST VALVE BOX TO GRADE	EA	35	\$300.00	\$10,500.00	
14	IRRIGATION SYSTEM REPAIRS & RESTORATION	LS	1	\$50,000.00	\$50,000.00	
15	LANDSCAPE - TREE REMOVAL (PALM)	EA	29	\$350.00	\$10,150.00	
16	LANDSCAPE - TREE REMOVAL (HARDWOOD OAK)	EA	2	\$2,500.00	\$5,000.00	
17	LANDSCAPE - TREE REMOVAL (OTHER)	EA	7	\$2,000.00	\$14,000.00	
18	12" YARD DRAINS	EA	34	\$1,200.00	\$40,800.00	
19	8" ADS STORM PIPES	LF	1700	\$30.00	\$51,000.00	
				Subtotal	\$1,419,148.00	
SIDEWALK IMPROVEMENTS						
19	REMOVAL OF ASPHALT PAVEMENT & LIMEROCK (EXCAVATION & DISPOSAL)	SY	2,228	\$25.00	\$55,700.00	
20	REMOVAL OF EXISTING RETAINING WALL (RAILROAD TIES)	LF	2,149	\$20.00	\$42,980.00	
21	ASPHALT SIDEWALK, ON 4" LIMEROCK	SY	2,137	\$35.00	\$74,795.00	
22	3' VALLEY GUTTER RAMP & TRANSITION (INCLUDES ASPHALT PATCHING)	LF	70	\$30.00	\$2,100.00	
23	STACKED BLOCK RETAINING WALL	LF	2,175	\$80.00	\$174,000.00	
24	ROOT BARRIER (24" DEEP)	LF	400	\$30.00	\$12,000.00	
25	DETECTABLE WARNINGS (CLAY BRICK PAVERS)	SF	130	\$45.00	\$5,850.00	
				Subtotal	\$367,425.00	
					Total	\$1,786,573.00
10% CONTINGENCY					\$178,657.30	
TOTAL					\$1,965,230.30	

PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST
Agnoli, Barber & Brundage, Inc.
March 23, 2021
ABB Project No. 20-0139
LAKE REMEDIATION - PELICAN BAY LAKE 4-1
GEOWEB EAST SIDE - RIP RAP WEST SIDE

Item No.	Description	Unit	Quantity	Unit Cost	Pay Item Total	
1	MOBILIZATION	LS	1	\$125,000.00	\$125,000.00	
2	PROVIDE CONSTRUCTION SURVEYING AND LAYOUT	LS	1	\$35,000.00	\$35,000.00	
3	AS-BUILT RECORD DRAWINGS	LS	1	\$15,000.00	\$15,000.00	
4	EROSION CONTROL	LS	1	\$10,500.00	\$10,500.00	
5	SILT FENCE	LF	8,656	\$2.50	\$21,640.00	
6	TURBIDITY BARRIER	LF	100	\$21.00	\$2,100.00	
7	CLEARING AND GRUBBING (INCLUDING GEOTUBE REMOVAL)(1.53 AC)	LS	1	\$55,000.00	\$55,000.00	
8	GRADE LAKE BANKS	LS	1	\$50,000.00	\$50,000.00	
9	IN-PLACE COMPACTED, IMPORTED FILL	CY	6,125	\$50.00	\$306,250.00	
10	RUBBLE RIP-RAP WITH GEOTEXTILE UDERLAYMENT	CY	1,851	\$250.00	\$462,750.00	
11	GEOWEB WITH GRAVEL IN-FILL	SY	4,613	\$120.00	\$553,560.00	
12	PERFORMANCE TURF (SOD - INCLUDES WATER, FERTILIZER & MOWING)	SY	6,784	\$12.00	\$81,408.00	
13	ADJUST VALVE BOX TO GRADE	EA	35	\$300.00	\$10,500.00	
14	IRRIGATION SYSTEM REPAIRS & RESTORATION	LS	1	\$50,000.00	\$50,000.00	
15	LANDSCAPE - TREE REMOVAL (PALM)	EA	29	\$350.00	\$10,150.00	
16	LANDSCAPE - TREE REMOVAL (HARDWOOD OAK)	EA	2	\$2,500.00	\$5,000.00	
17	LANDSCAPE - TREE REMOVAL (OTHER)	EA	7	\$2,000.00	\$14,000.00	
18	12" YARD DRAINS	EA	34	\$1,200.00	\$40,800.00	
19	8" ADS STORM PIPES	LF	1700	\$30.00	\$51,000.00	
				Subtotal	\$1,899,658.00	
SIDEWALK IMPROVEMENTS						
19	REMOVAL OF ASPHALT PAVEMENT & LIMEROCK (EXCAVATION & DISPOSAL)	SY	2,228	\$25.00	\$55,700.00	
20	REMOVAL OF EXISTING RETAINING WALL (RAILROAD TIES)	LF	2,149	\$20.00	\$42,980.00	
21	ASPHALT SIDEWALK, ON 4" LIMEROCK	SY	2,137	\$35.00	\$74,795.00	
22	3' VALLEY GUTTER RAMP & TRANSITION (INCLUDES ASPHALT PATCHING)	LF	70	\$30.00	\$2,100.00	
23	STACKED BLOCK RETAINING WALL	LF	2,175	\$80.00	\$174,000.00	
24	ROOT BARRIER (24" DEEP)	LF	400	\$30.00	\$12,000.00	
25	DETECTABLE WARNINGS (CLAY BRICK PAVERS)	SF	130	\$45.00	\$5,850.00	
				Subtotal	\$367,425.00	
					Total	\$2,267,083.00
10% CONTINGENCY					\$226,708.30	
TOTAL					\$2,493,791.30	

Pelican Bay Lake Ranking

Quantitative + Qualitative

Avg. Esc. + Max Esc. + Structural + Access + Community + Water Mgmt

0-4 + 0-4

4 3 2 1 weighted multiplier

Quantitative = Average of (average Escarpment + Maximum escarpment)

Qualitative = Average of (Structural proximity x 4, added to the resident Access x 3, plus the Community rank x 2, plus the Water management score)

$$\left(\frac{(E + M)}{2}\right) + \left(\frac{(S \times 4 + A \times 3 + C \times 2 + W)}{7.5}\right)$$

avg. esc. max esc. Structural resident access community water management

Basin/Lake Number	Community				Quantitative			Qualitative			Final Scores
	Average Escarpment rank	Maximum Escarpment rank	Structural Proximity (1-3)	Pedestrian/Resident Access (1-3)	Water Management (1-3)	Community Exposure (1-3)	Qualitative				
2_9	4	4	3	2	3	3	3.7	7.7			
4_1	3	3	3	3	3	3	4.0	7.0			
5_1	3	3	2	2	2	3	2.8	5.8			
5_5	2	1	3	3	3	3	4.0	5.4			
2_8	3	3	2	2	1	2	2.4	5.3			
3_3	2	3	2	2	2	2	2.7	5.1			
1_6	3	3	1	2	2	2	2.1	5.1			
2_3	2	4	2	1	1	1	1.9	4.8			
4_3	3	3	1	1	2	2	1.7	4.6			
2_5	3	1	2	2	2	2	2.7	4.5			

Equation produces a range of scores from 8 to 1. The higher the number, the greater the priority should be given to the respective lake's repair. The range from 8 to 1 will be colored red to green, the red and orange colored lakes should be the focus of the repair efforts.