

**PELICAN BAY SERVICES DIVISION**  
**Municipal Services Taxing & Benefit Unit**

**NOTICE OF PUBLIC MEETING**

**SEPTEMBER 9, 2024**

**THE WATER MANAGEMENT AND CLAM BAY COMMITTEE OF THE PELICAN BAY SERVICES DIVISION BOARD WILL MEET AT 1:30 PM ON MONDAY, SEPT. 9 AT THE COMMUNITY CENTER AT PELICAN BAY, 8960 HAMMOCK OAK DRIVE, NAPLES, FL 34108.**

**AGENDA**

1. Pledge of Allegiance
2. Roll call
3. Agenda approval
4. Approval of the 7/29/24 Water Management and Clam Bay Committee meeting minutes
5. Audience comments
6. Discussion of the 2023 Clam Bay Water Quality Report (Jeremy Sterk)
7. 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) 252-1355.

**PELICAN BAY SERVICES DIVISION  
WATER MANAGEMENT & CLAM BAY COMMITTEE MEETING  
JULY 29, 2024**

The Water Management & Clam Bay Committee of the Pelican Bay Services Division met on Monday, July 29 at 1:30 p.m. at the Community Center at Pelican Bay, 8960 Hammock Oak Drive, Naples, Florida 34108. In attendance were:

**Water Management and Clam Bay  
Committee**

Michael Rodburg, Chair  
Jack Cullen (*absent*)

Susan Hamilton

Rick Swider  
Michael Weir

**Pelican Bay Services Division Staff**

Neil Dorrill, Administrator  
Dawn Brewer, Ops. Support Spec. II  
Chad Coleman, Operations Manager (*absent*)  
Darren Duprey, Supervisor – Field I (*absent*)

Dave Greenfield, Supervisor - Field II  
Karin Herrmann, Project Manager I  
Lisa Jacob, Project Manager II  
Barbara Shea, Admin. Support Spec. II

**Also Present**

Mohamed Dabees, Humiston & Moore

Jeremy Sterk, Earth Tech

**APPROVED AGENDA (AS PRESENTED)**

1. Pledge of Allegiance
2. Roll call
3. Agenda approval
4. Approval of the 1/11/24 Water Management Committee meeting minutes
5. Approval of the 3/18/24 Clam Bay Committee meeting minutes
6. Audience comments
7. Review of the Clam Pass maintenance project (Mohamed Dabees)
8. Fall beach renourishment (Mohamed Dabees)
9. Discussion of Clam Bay water quality (Jeremy Sterk)
10. Adjournment

**ROLL CALL**

Mr. Cullen was absent and a quorum was established.

**AGENDA APPROVAL**

**APPROVAL OF 1/11/2024 WATER MANAGEMENT COMMITTEE MEETING MINUTES**

**Ms. Hamilton motioned, Mr. Weir seconded to approve the 1/11/2024 Water Management Committee meeting minutes as presented. The motion carried unanimously.**

**APPROVAL OF 3/18/2024 CLAM BAY COMMITTEE MEETING MINUTES**

**Mr. Weir motioned, Ms. Hamilton seconded to approve the 3/18/2024 Clam Bay Committee meeting minutes as presented. The motion carried unanimously.**

**AUDIENCE COMMENTS**

Ms. Susan DeVoe, resident of the Seagate community, commented that the Seagate community (1) is passionate about clean water, Clam Pass, and improving water quality, (2) is most interested in improving tidal flushing, (3) is looking at ways to improve water quality in Seagate canals, (4) has instituted landscaping best practices, (5) would like to collaborate with the PBSO on these issues, and (6) would like to ensure clean water today and in the future.

**CLAM PASS MAINTENANCE PROJECT**

Dr. Mohamed Dabees, Coastal Engineer with Humiston & Moore, provided an update on Clam Pass conditions which included the following.

- Clam Pass conditions were acceptable through 2023 until November 2023, when it was determined that a hydraulic dredge would be necessary. Since the bid request package sent out to County dredge contractors in early 2024 did not result in any bids, the project was tentatively postponed to November 2024. In March/April 2024, cold fronts pushed sand across the inlet, and a spit began to form. In May, staff initiated a request for a smaller scale mechanical dredge project, obtained permitting, and coordinated with the County to obtain a contractor who could mobilize quickly; the contractor was able to complete the project within 10 days in June.
- The June dredge project removed approximately 13,000 cubic yards of sand. The original plan for the Nov. 2024 hydraulic dredge specified the removal of 15,000 cubic yards of sand. The work was completed for approximately \$150,000, while a hydraulic dredge would have cost significantly more (at least \$800,000).
- Photos of the current conditions at Clam Pass, taken three days prior, were provided to the committee and meeting attendees. Current tidal flushing is as good as it has ever been.
- Four tidal gauges, which are continuously monitored, provide key data which indicates when there is insufficient flushing in the system, indicated by a tidal ratio below .5. In May, tidal ratios fell below .5, which was followed by a level of .3 in June when the Pass was close to closing. Tidal ratios immediately following the dredge project were close to .9. It is expected that these ratios will settle down into the .70 - .75 range.
- The originally planned Nov. 2024 hydraulic dredge project is no longer considered necessary, as only about 10% of the excess sand, located in Section "C," was not removed during the June dredge project. The remaining sand in Section "C" is not considered critical.
- Tidal ratios and water quality in Clam Bay will continue to be monitored.
- Areas of existing seagrasses in Outer Clam Bay were identified on a photo. Our June 2024 template did not include dredging any areas close to the seagrasses. Mr. Sterk commented that over a number of years, seagrass beds in Clam Bay have declined from 3.6 acres to less than 1

## **Pelican Bay Services Division Clam Bay Committee Meeting**

**July 29, 2024**

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acre. This is a result of multiple causes including two hurricanes, turbidity, and a reduction in flushing prior to dredge projects. The loss of seagrass acreage continues to be difficult to mitigate.

- The Clam Bay Management Plan dictates the criteria needed to obtain a permit for any dredging in Clam Bay.

Mr. Rodburg commented that the next dredging event will be dictated by nature. He suggested that there appears to be a continuous cycle of the Pass gravitating towards closure. Dr. Dabees commented that this is the result of Pelican Bay residential development and infrastructure which fixed boundaries around the Clam Bay estuary system.

Mr. Rodburg questioned whether current high tidal ratios will have a material positive effect on our mangroves. Dr. Dabees commented that there are many factors affecting the health of the mangroves and noted that Hurricane Ian had significant negative effects on the mangroves.

### **CLAM BAY WATER QUALITY**

Mr. Jeremy Sterk, Environmental Consultant with Earth Tech (ETE), provided a discussion of Clam Bay water quality which included the following.

- Mangrove health is monitored by quantitative health scoring (in March and September each year); the March 2024 scoring shows slight improvement. Almost all of the plots show improved health assessment scores as the mangroves continue to recover from the hurricanes in 2017 and 2022. Although scoring is somewhat subjective, a consistent ETE staff has been making the assessments.
- Seagrass acreage has been decreasing in Outer Clam Bay.
- Four salinity loggers have been permanently installed at each of the four tide gauge markers to measure hourly salinity levels and temperatures. Salinity level data from June 6 to July 26 at markers 4 and 14 were provided, which showed the effects of the Pass closing and the dredge project, as well as the post-dredge rhythmic data. The data from the loggers will be monitored going forward to determine influences, patterns, and effects from rain events, including effects on seagrasses.
- FDEP has decided to separate Pelican Bay into two separate WBIDs (water body id), which will now be separate sampling/study areas. This is considered a positive. Diagrams of the two separate areas were included in the agenda packet. The upland lake system works to filter out nutrients, preventing their entry into the Clam Bay estuary.
- Hand-dug channels are flowing decently again after some clogging of sand from storms. Southern hand-dug channels will be examined and maintenance records reviewed to determine whether these channels need additional maintenance work.

Ms. DeVoe commented that the Seagate community has hired a water quality consultant to collect baseline water quality data, which can be shared with the PBSB. Mr. Sterk commented that the County performs nutrient sampling all the way south to the bridge.

Ms. Jo Ann Jany, a Clam Pass Park volunteer for Collier County, commented that since Hurricane Idalia, the water level across the mangroves appears to be higher than it used to be. Mr. Sterk commented that we have three water level loggers in Clam Bay, and will provide the data collected from them at the next committee meeting.

## **Pelican Bay Services Division Clam Bay Committee Meeting**

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Mr. Sterk commented that his 2023 Water Quality Report will be available in about a week. Mr. Rodburg commented that the committee will review this report at our next committee meeting, discuss whether water quality is improving or not, and consider next steps.

### **FALL BEACH RENOURISHMENT**

Dr. Dabees reported that the County's Coastal Zone Dept. is in the planning stage of their late Fall beach renourishment project. He recommended that Pelican Bay does not need to participate in this project in light of, (1) the beach at Marker 36 was nourished after Hurricane Ian, (2) the beach at the PB South Beach facility has received sand from our recent dredge project, and (3) some dune areas between Marker 36 and the Ritz have recently been reinforced.

### **ADMINISTRATOR'S COMMENT**

Mr. Dorrill commented that about 15-20 years ago, prior to the development of the Clam Bay Management Plan or long-term maintenance permits, the inlet was overdredged, and noted that there is a perception that water quality would improve if a similar project is undertaken. PBSO engineers, scientists, and staff do not agree with that opinion. Mr. Dorrill offered to provide a presentation and meaningful discussion on what did occur at that overdredge event (to be scheduled late summer/early fall). He noted that this system is impacted by wave energy and prevailing winds, and that there was a very favorable storm season at the time of the overdredge event. Mr. Dorrill commented that there is precedence of maintenance dredge projects at Moorings Bay and Coquina Sands. He suggested that if the Seagate community is exploring maintenance dredging, we can share some modeling which would show the correlation between our system and the Moorings Bay system. Ms. DeVoe commented that the Seagate community would like to work with the PBSO in order to obtain the best possible results.

### **ADDITIONAL AUDIENCE COMMENTS**

Ms. Judy Hushon suggested that the Seagate community considers the installation of aerators in their canals to increase water flow.

Mr. Ray Bearfield, Collier County Waterkeeper, commented on our protection of Pelican Bay infrastructure, such as the South Beach Facility, which has prevented the inlet from migrating naturally.

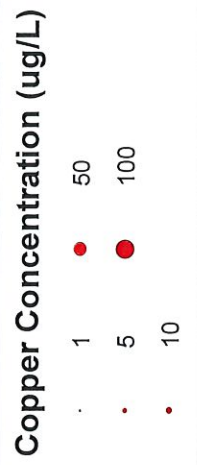
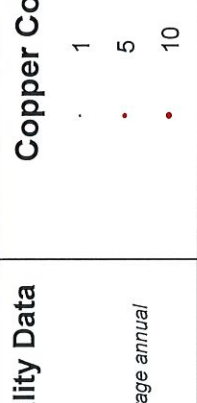
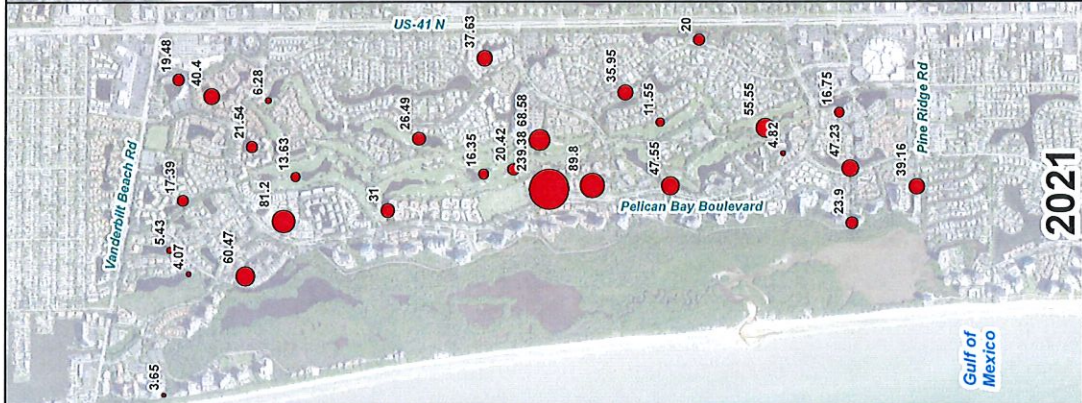
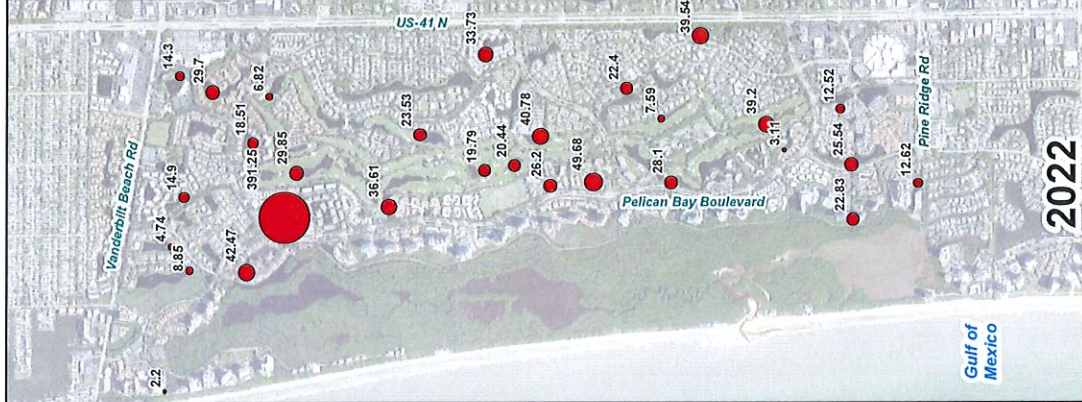
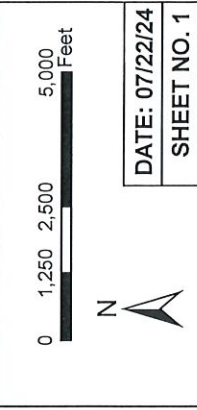
### **ADJOURNMENT**

**The meeting was adjourned at 2:51 p.m.**

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Michael Rodburg, Chair

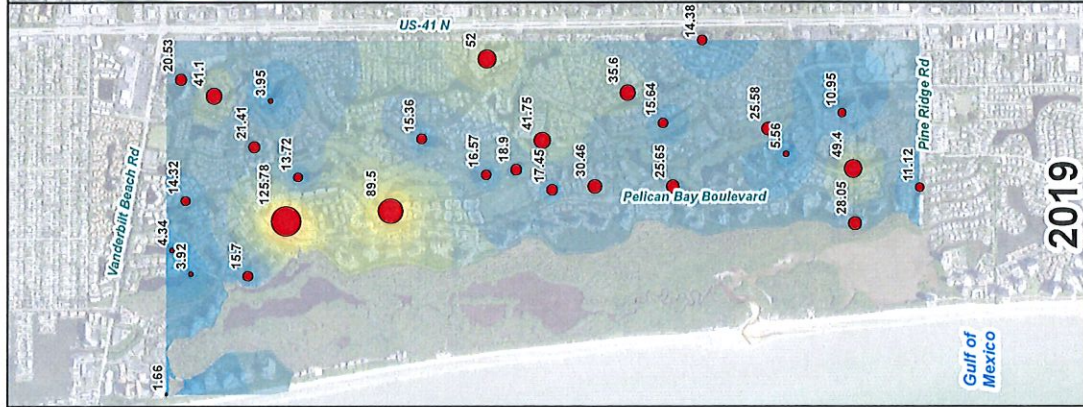
Minutes approved [ ] *as presented* OR [ ] *as amended* ON [ ] *date*



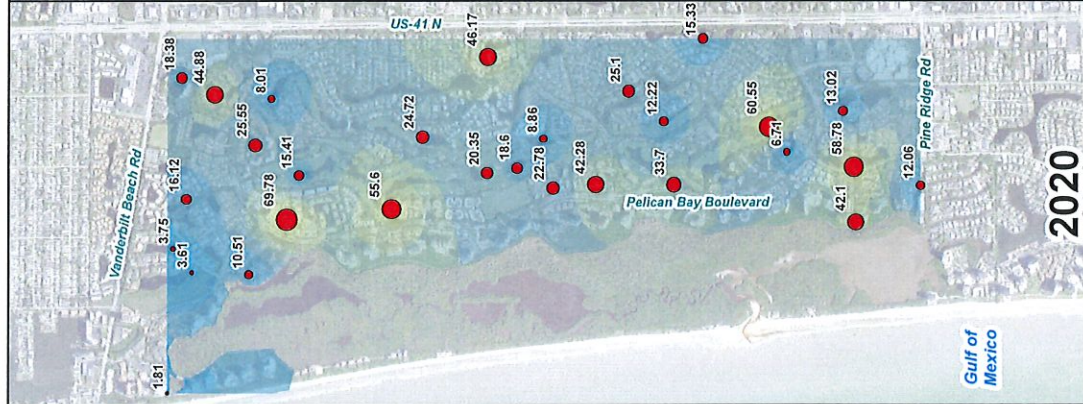
DATE: 07/22/24  
SHEET NO. 1

**Clam Bay Upland Lakes Water Quality Data**  
Average Annual Copper Concentration

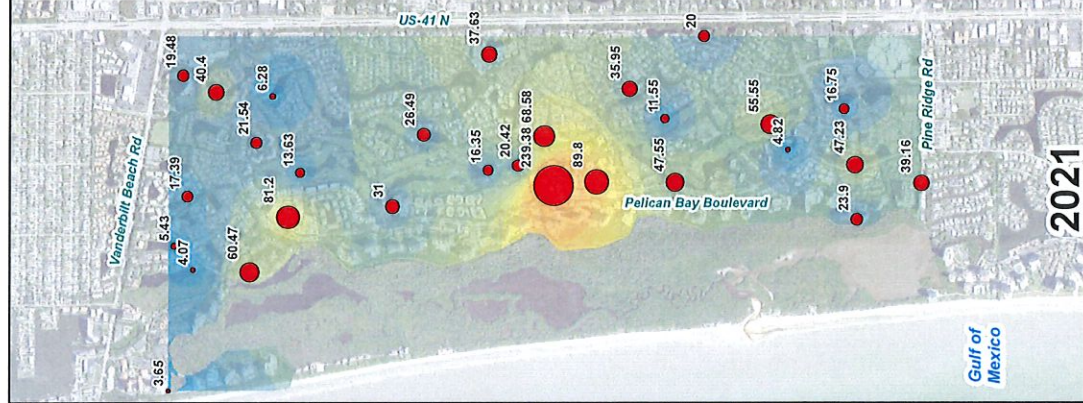
**Notes**  
1) Each point represents a monitoring location.  
2) Points displayed are proportionately sized per the average annual concentration values measured at that sampling site.



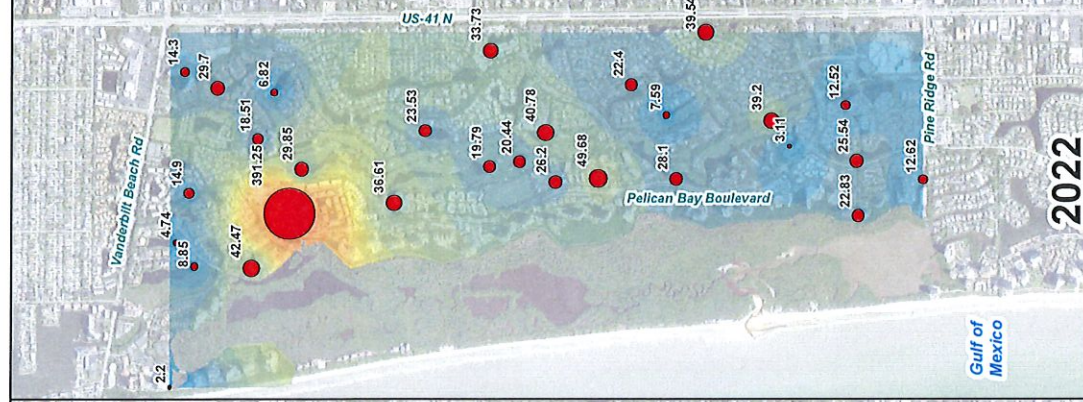
2019



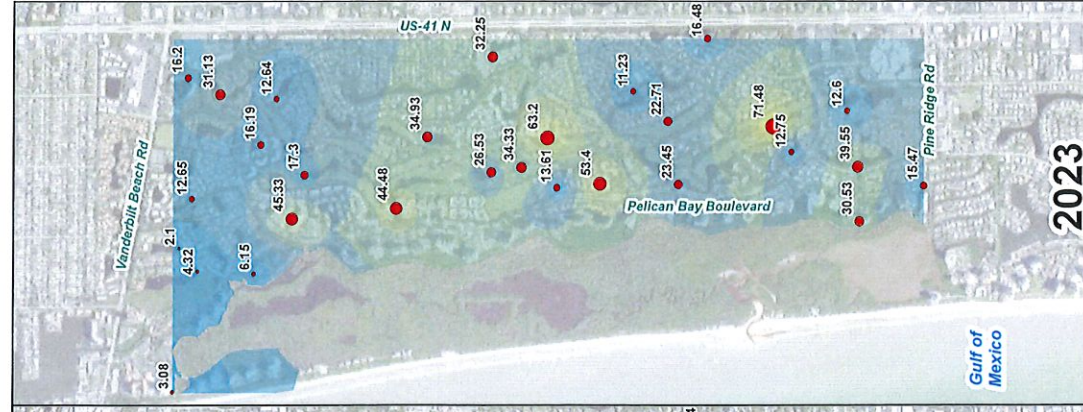
2020



2021



2022

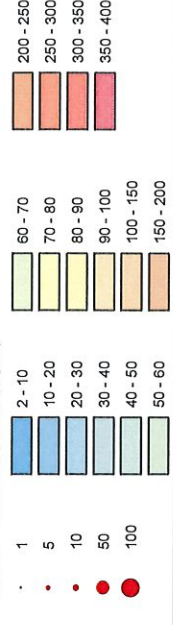


2023

**Clam Bay Upland Lakes Water Quality Data**  
Average Annual Copper Concentration

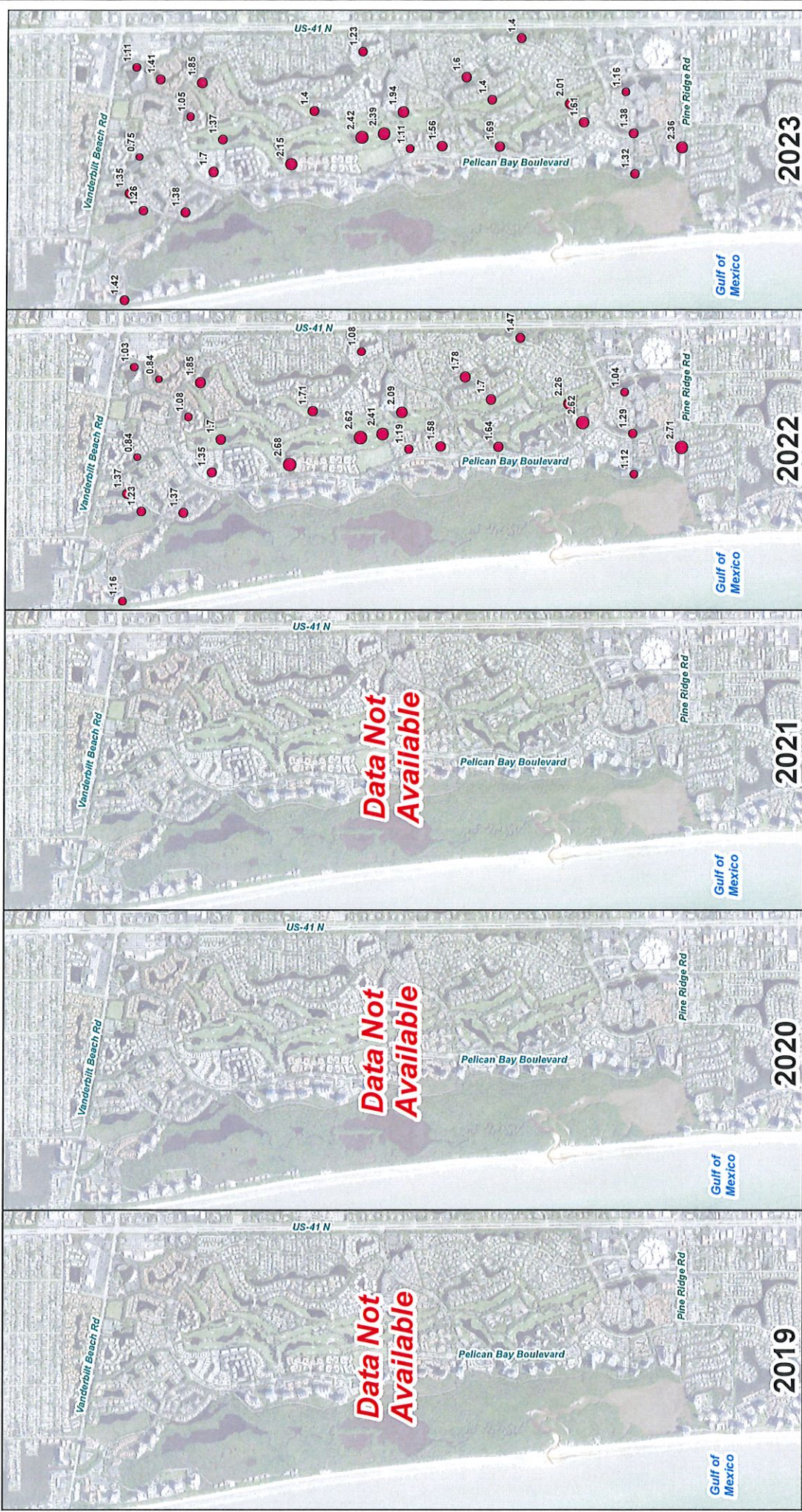
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Copper Concentration (ug/L)



DATE: 07/22/24

SHEET NO. 1

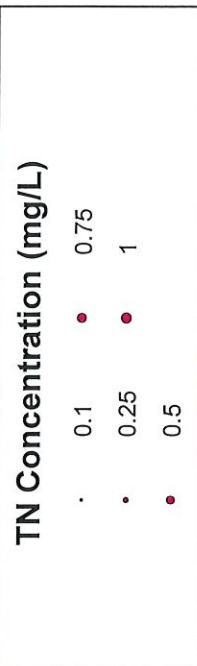


**COLLIER COUNTY**  
Pelican Bay Services Division

**AtkinsRéalis**

**Ciam Bay Upland Lakes Water Quality Data**  
Average Annual Total Nitrogen (TN) Concentration

**Notes**  
1) Each point represents a monitoring location.  
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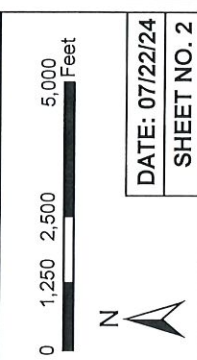
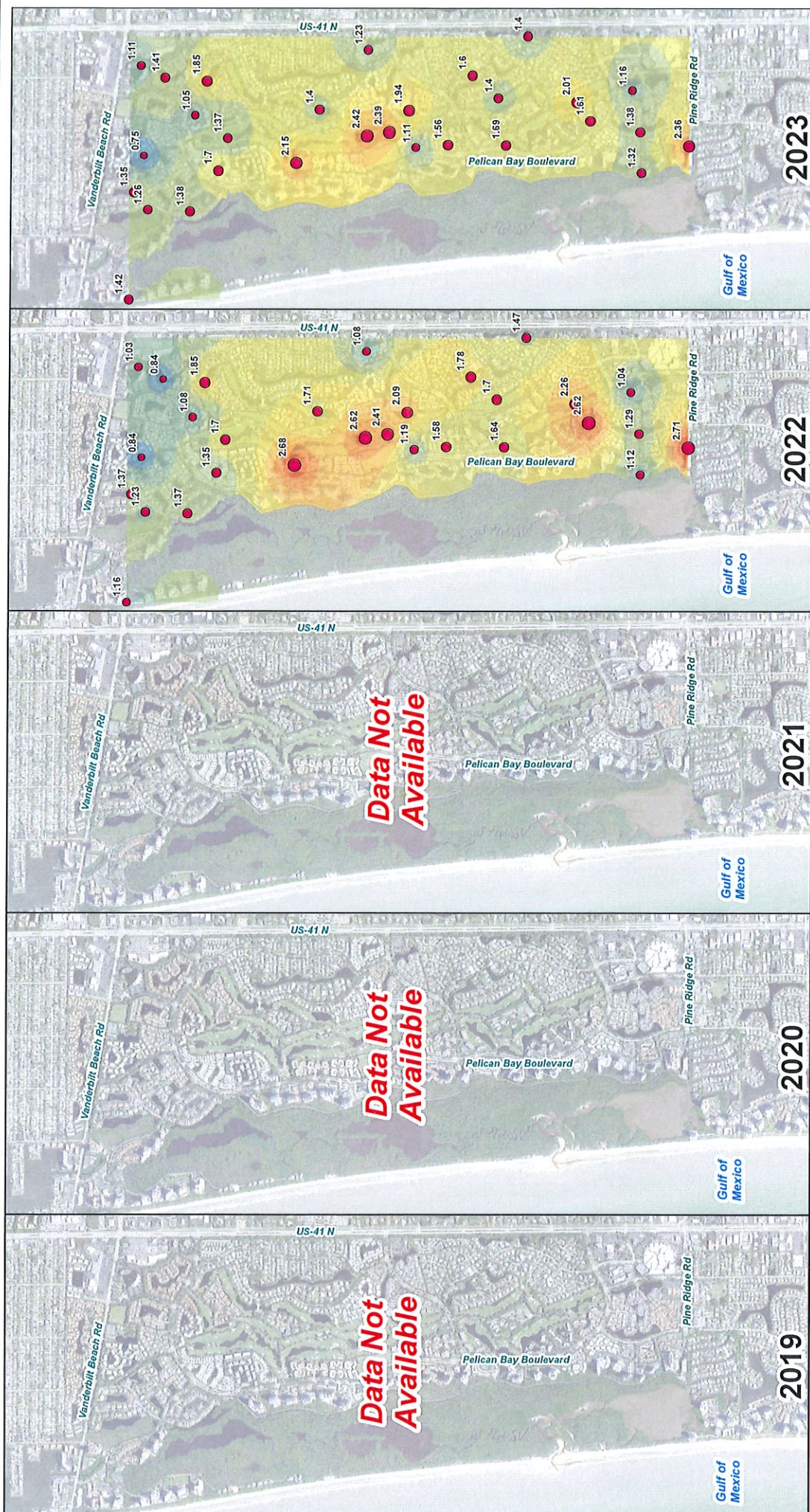


0 1,250 2,500 5,000 Feet

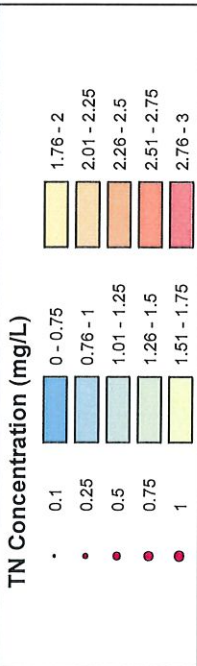
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DATE: 07/22/24  
SHEET NO. 2



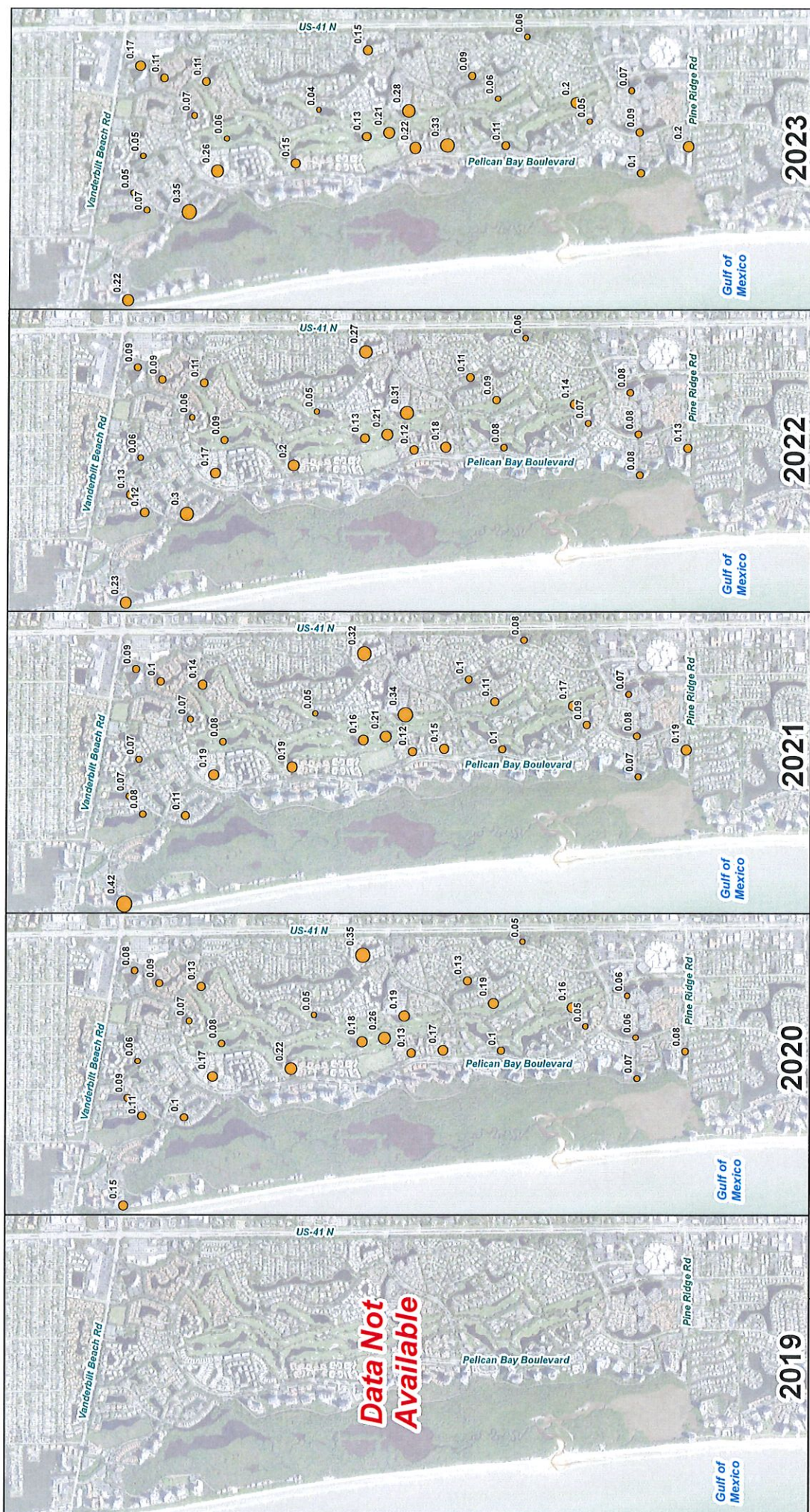


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SHEET NO. 2



**Clam Bay Upland Lakes Water Quality Data**  
Average Annual Total Nitrogen (TN) Concentration

**Notes**  
1) Each point represents a monitoring location.  
2) Points displayed are proportionately sized per the average annual concentration values measured at that sampling site.



**Clam Bay Upland Lakes Water Quality Data**  
Average Annual Total Phosphorus (TP) Concentration

**Notes**  
1) Each point represents a monitoring location.  
2) Points displayed are proportionately sized per the average annual concentration values measured at that sampling site.

**TP Concentration (mg/L)**

- 0.01
- 0.025
- 0.05
- 0.075
- 0.1

0 1,250 2,500 5,000 Feet

**2023**

**2022**

**2021**

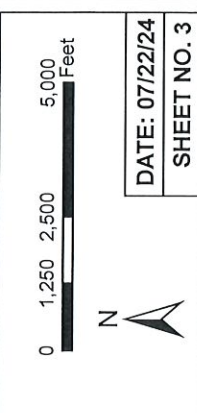
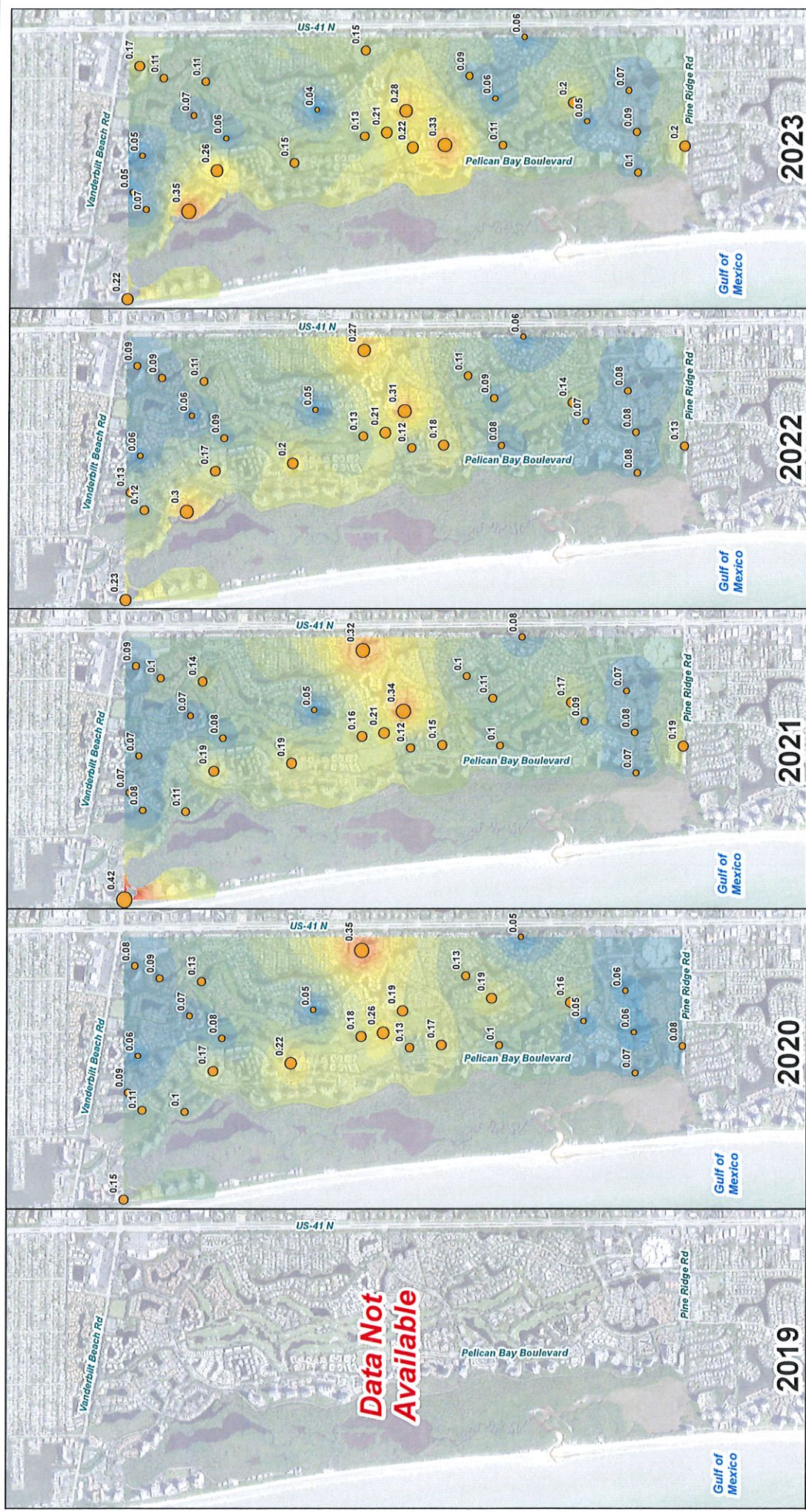
**2020**

**2019**

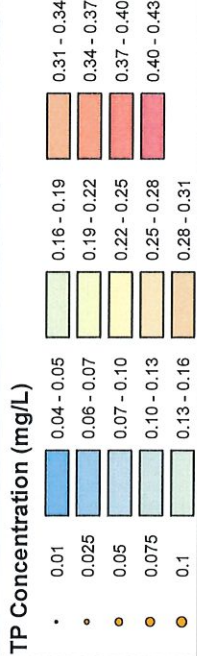
COLLIER COUNTY  
Pelican Bay Services Division  
AtkinsRéalis

**DATE: 07/22/24**

**SHEET NO. 3**



DATE: 07/22/24  
SHEET NO. 3



**Clam Bay Upland Lakes Water Quality Data**  
Average Annual Total Phosphorus (TP) Concentration

**Notes**  
1) Each point represents a monitoring location.  
2) Points displayed are proportionately sized per the average annual concentration values measured at that sampling site.

**COLLIER COUNTY**  
Pelican Bay Services Division

**AtkinsRéalis**