

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

**NOTICE OF PUBLIC MEETING**

**JULY 29, 2024**

**THE WATER MANAGEMENT AND CLAM BAY COMMITTEE OF THE PELICAN BAY SERVICES DIVISION BOARD WILL MEET AT 1:30 PM ON MONDAY, JULY 29 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 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

*\*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 COMMITTEE MEETING  
JANUARY 11, 2024**

The Water Management Committee of the Pelican Bay Services Division met on Thursday, January 11 at 1:30 p.m. at the PBSB Office in the Truist Building, 801 Laurel Oak Drive, Suite 102, Naples, FL 34108. The following members attended.

**Water Management Committee**

Michael Rodburg, Chair

Jack Cullen

Susan Hamilton

Denise McLaughlin

**Pelican Bay Services Division Staff**

Neil Dorrill, Administrator

Dawn Brewer, Ops Support Spec. II

Chad Coleman, Operations Manager

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**

Joe Lasa, Pelican Bay Foundation

**APPROVED AGENDA (AS PRESENTED)**

1. Pledge of Allegiance
2. Roll call
3. Agenda approval
4. Approval of 7/11/23 meeting minutes
5. Audience comments
6. Water quality landscaping/littoral plantings
7. Current & future projects
  - a. Pipe Reports
    - i. Ritz
    - ii. Trieste
    - iii. Golf Course
8. Adjournment

**ROLL CALL**

All members were present and a quorum was established

AGENDA APPROVAL

**Ms. Hamilton motioned, Ms. McLaughlin seconded to approve the agenda as presented. The motion carried unanimously.**

APPROVAL OF 7/11/23 MEETING MINUTES

**Ms. Hamilton motioned, Mr. Cullen seconded to approve the 7/11/23 meeting minutes as presented. The motion carried unanimously.**

AUDIENCE COMMENTS

None

WATER QUALITY LANDSCAPING/LITTORAL PLANTINGS

Mr. Rodburg commented that we have received the final revised 2022 Water Quality Report; the first version was reviewed and discussed by the Clam Bay Committee. He noted that this report recommended that the reduction in the amount of yard waste and fertilizer flowing into the water management system through public education may improve water quality in the system.

Mr. Rodburg suggested that the PBSB has responsibilities by easement and permit for 43 lakes which include, (1) to maintain the functionality of the system, (2) to maintain the condition of the lakes for safety purposes, and (3) to ensure that the lakes are not sources of pollutants to Clam Bay. Mr. Rodburg noted that PB residents have expressed algae and water clarity concerns of our lakes. He commented that although our lake bottoms contain concentrations of nutrients/pollutants, it would be extremely costly to remove these materials.

Mr. Coleman commented that water flow is key. Algae grows when there is no flow. He noted that the PBF is in the process of obtaining a quote to install a fountain in Oakmont Lake which will greatly improve water flow. The electricity cost to run a fountain is minimal. Ms. Hamilton commented that there are two fountains in her association's lake, and that as a result, she has never seen any algae growth in this lake.

Mr. Coleman commented that in the past, we have installed littorals in some lake bank areas, with little success, as weeds tend to grow in these areas, making the areas difficult to maintain.

Mr. Coleman suggested that we invite our County Pollution Control Dept. to come out to give an educational presentation (on methods to improve water quality in our lake by limiting pollutants and discussing related County ordinances) at a PBF or PBSB meeting. Mr. Trent Waterhouse suggested that it may be more effective to provide such a presentation at a Presidents Council meeting and/or a PBPOA meeting. Attendees could then bring this information back to their respective landscapers. He also suggested that it may be possible for PBF's Lisa Warren to provide some sort of enforcement. No other enforcement entity currently exists. Mr. Rodburg suggested that a first step would be to reach out to the Presidents Council to explain our goals, followed by a second step to coordinate a presentation for them by the County Pollution Control Dept.

Ms. McLaughlin commented that landscapers are required to go to training on fertilizer best practices. Mr. Coleman commented that the PBSB is changing from self-mulching of grass clippings to utilizing bag attachments to mowers to enable the clippings to be removed from the site.

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Ms. McLaughlin commented that water quality testing in the past showed that phosphorus levels in the water flowing into Clam Bay were not excessive, but that there were higher levels of phosphorus within Clam Bay, which indicates rotting vegetation within the system as a probable source.

Ms. Jacob reported that we continue to have quarterly water quality testing in 30 lakes, performed by the County Pollution Control Dept., who maintains a database of these results. Mr. Coleman suggested that Earth Tech, our Environmental Consultant, could provide some analyses on this data. Mr. Greenfield commented that there may be spikes in nutrients in the October/November and May time periods when landscapers typically fertilize. Mr. Rodburg commented that he would be interested in, (1) Are the levels of nutrients worse in some areas? and (2) Are the levels of nutrients getting better or worse over time?

Mr. Dorrill suggested that we can reach out to Ms. Beth Schultz at the PBPOA to organize a Pollution Control presentation to the homeowners at a PBPOA meeting. He also suggested that we can reach out to several willing homeowners associations to let us know when their landscapers are performing their semi-annual fertilization, so that we could “follow behind them” to review their work.

Ms. McLaughlin suggested that reaching out to the Presidents Council would be most effective. Mr. Waterhouse noted that Mr. Kim Rosenberg would be the contact for the Presidents Council. Mr. Coleman commented that roadway run-off also affects our water management system.

Mr. Coleman commented that he is not in favor of planting littorals on lake banks. Ms. Jacob commented that we have no requirement to plant littorals, as our lakes were built prior to requirements put in place which mandate these plantings (Pelican Bay is grandfathered in). Mr. Coleman commented that fountains are very effective in preventing algae. Once the first fountain in Oakmont Lake is installed, we can assess whether an additional fountain is warranted. Mr. Joe Lasa, PBF Purchasing Manager, commented that he will follow up on the status of the new fountain with the PBF.

**CURRENT AND FUTURE PROJECTS**

**NEXT LAKE UP**

Mr. Coleman commented that the Community Center Lake is at the top of the list of our prioritized lake bank projects. However, at this time, we are holding off on developing a remediation plan because of the many unknowns including (1) PBF strategic plans for the Community Center, (2) PBF preferences, and (3) possible effects to the Community Center area from the planned construction of the pickleball courts. Mr. Coleman noted that this lake bank remediation may only require regrading and relandscaping.

**PIPE REPORTS**

Mr. Coleman reported that pipe cleaning work is underway at the Ritz and the Trieste. Pipe inspection reports of current ongoing projects have been included in the agenda packet. Camera pipe inspections by Shenandoah were completed in order to identify drainage issues. Pipe reports show that minor repairs are needed to correct minor root intrusion issues. Mr. Coleman commented that FY24 pipe repairs are funded out of budgeted operating expenses; however, in the future, we may set up a project for pipe repairs for budget purposes. Mr. Coleman noted that we have learned of a “pipe separation” on the golf course (next to the Sanctuary and Chateaumere), which will be our next repair project.



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**CONTESSA/BAY COLONY CONSERVATION AREA**

Mr. Dorrill reported on a Jan. 12 scheduled meeting with the Bay Colony Association to look at an area of concern at the south end of the beach dune swale adjacent to the Contessa and a conservation area that is contiguous to the Contessa to the south that is not owned by the County. No PBSB easement nor a part of a permit exists for this area of concern. There is a fairly significant mangrove die-off in this conservation area. Mr. Dorrill noted that further work in the dune swale may be warranted.

**ADJOURNMENT**

**The meeting was adjourned at 2:19 p.m.**

\_\_\_\_\_  
Michael Rodburg, Chair

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

**PELICAN BAY SERVICES DIVISION  
CLAM BAY COMMITTEE MEETING  
MARCH 18, 2024**

The Clam Bay Committee of the Pelican Bay Services Division met on Monday, March 18 at 1:30 p.m. at the PBSO Office in the Truist Building, 801 Laurel Oak Drive, Naples, Florida 34108. In attendance were:

**Clam Bay Committee**  
Denise McLaughlin, Chair

Michael Rodburg  
Rick Swider

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

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

**Also Present**

Jack Cullen, PBSO Board  
Mohamed Dabees, Humiston & Moore  
Michael Fogg, PBSO Board

Jeremy Sterk, Earth Tech  
Michael Weir, PBSO Board

**APPROVED AGENDA (AS PRESENTED)**

1. Pledge of Allegiance
2. Roll call
3. Agenda approval
4. Approval of 10/30/2023 meeting minutes
5. Audience comments
6. Update on Clam Pass
7. 2023 Clam Bay Monitoring Report
8. Adjournment

**ROLL CALL**

All members were present and a quorum was established.

**AGENDA APPROVAL**

**Mr. Rodburg motioned, Mr. Swider seconded to approve the agenda as presented.  
The motion carried unanimously.**

**APPROVAL OF 10/30/2023 MEETING MINUTES**

**Mr. Rodburg motioned, Mr. Swider seconded to approve the 10/30/2023 meeting minutes as presented. The motion carried unanimously.**

### AUDIENCE MEMBER INTRODUCTION

PBSD Board members, PBSD staff, consultants, and audience members introduced themselves.

### AUDIENCE COMMENTS

Mr. Michael Movsovich, a representative of the Seagate Property Owners Association, commented that the 1998 Clam Pass dredge template extended from the inlet past the drawbridge. He noted that based on this precedent, and opinions of several coastal engineers, the Seagate Property Owners Association believes a return to this paradigm would enhance the tidal flushing in the system, which would improve the overall health, water quality, and stability of the Clam Bay system. Mr. Movsovich suggested that both navigation and fishing are now impaired.

Mr. Movsovich commented that Clam Bay is impaired for nitrogen, phosphorus, and dissolved oxygen. He reported that the Seagate community has started the process of water quality testing in Seagate canals. Mr. Movsovich, on behalf of the Seagate Property Owners Association, encouraged obtaining permission (from the regulatory agencies) to extend the dredging area from the end of the inlet to past the drawbridge, before the current permit expires in 2027. He urged the PBSD to consider joining the Seagate community in exploring this path.

Ms. Susan O'Brien thanked Ms. McLaughlin for her work on the Clam Bay Committee as well as the PBSD Board. She asked for an update on having the equation for water quality that impacts total phosphorus and total nitrogen, and approaching FDEP about getting that equation where it was intended to be with specific conductivity.

### UPDATE ON CLAM PASS

Dr. Mohamed Dabees, Coastal Engineer with Humiston & Moore, provided an update on Clam Pass conditions and plans for a 2024 hydraulic dredge.

- Clam Pass conditions have improved since Dec. 2023/Jan. 2024.
- February tidal ratios continue to hover above an acceptable .6 level. Data from four tidal gauges within Clam Bay are continuously monitored and reviewed (per the Clam Bay Management Plan).
- If the tidal ratios drop below .5, without recovery, the Pass will close. Whenever tidal ratios decline to this level, a survey is performed.
- The template is now at full capacity of sand. There is significant shoaling in Section B.
- Sustained waves from tropical storms cause a lot of sand to be pushed into the entrance to the Pass. However, Hurricane Irma and Ian pushed shoals out of the inlet, while Hurricane Idalia pushed sand into the inlet and eroded beaches.
- The 1999 dredge project was the only time dredging was performed up to the drawbridge. Additionally, some dredging was performed in upper and inner Clam Bay. Some of the sand removed was placed on the dune and some was hauled off-site (non-beach compatible sand).
- A recent bid request package sent out to County dredge contractors did not result in any bids (resulting from the inability to obtain the equipment necessary to perform the dredge within the next two months). We have now put out a public bid for the project which will take 3-5

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months to obtain bids, and County bid and funding approvals, before the project can begin. Hopefully the project can be deferred until just after the end of turtle nesting season.

**COMMENTS RELATING TO THE RENEWAL OF OUR DREDGING PERMIT**

Dr. Dabees provided a discussion of our plans for the renewal of our dredging permit (with the state of Florida and the U.S. Army Corps of Engineers).

- Our current permit expires in 2027. We will seek to renew our permit for an additional 15 years, and begin the renewal process 2-3 years prior.
- It is strategically recommended that we apply for and obtain our renewal permit (from the U.S.A.C.E.) prior to asking for any modifications. A “permit mod” could be requested after our permit is renewed in 2027. It is critical that we obtain authorization for corrective action, in case of an emergency situation, with no lapse in time. It is unknown how long it would take to obtain approval of a “permit mod.”
- A strong justification would be required to expand the permitted dredge area.
- In order to obtain regulatory approval, any expanded area may not have any adverse environmental impact. Seagrasses and mangroves must be protected.
- We will consider any input from the Seagate community during the permit renewal process.
- We may identify areas of concerns at our U.S.A.C.E. pre-application meeting.
- The depth, distance from the channel, and design (dead ends) of Seagate canals all prevent natural flow, impairing water quality.
- If permitted (via a “permit mod”), it may be possible to surgically dredge areas with evidence of shoaling, without interfering with the environment.
- We will continue to collaborate with the Seagate community.

**2023 CLAM BAY MONITORING REPORT**

Mr. Jeremy Sterk, Environmental Consultant with Earth Tech (ETE), provided a discussion of highlights of the ETE 2023 Annual Clam Bay Monitoring Report which included the following.

- ETE has been monitoring Clam Bay biologicals since 2016. Reports on biological monitoring activities are issued annually. The 2020-2023 reports are posted on the PBSB webpage of the Collier County website.
- Mangrove health is monitored by quantitative health scoring (in March and September each year) of the trees within each of 20 plots. These scores are tracked over time. Plots are scattered throughout Clam Bay. The number of trees per plot is tracked. Overall, we have seen an improvement in mangrove health from March 2023 – September 2023, and expect to see further improvement at the March 2024 assessment.
- Mangrove health is also monitored through drone photography, which enables us to easily identify stressed mangrove areas. Stressed areas have been compared to prior years. We continue to see negative impacts from Hurricane Irma and Ian. Increased maintenance work on the hand-dug channels over the past five years has improved the health of mangroves in stressed areas. We are now seeing red mangrove recruitment (replacing prior black mangroves).
- Dead mangroves adjacent to the Marker 36 facility have been removed and replaced with dune plantings including sea oats, railroad vines, and other ground cover. The health and growth of this area will be closely monitored.
- Seagrass fixed transects are tracked over time. We have seen a significant overall decline in mapped acreage of seagrass since 2016. The existence of macro algae negatively affects

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June/July seagrass acreage, followed by a recovery in acreage during August/September, as the algae disappears. Mr. Coleman noted that the existence of seagrass in Outer Clam Bay will make it difficult to extend the dredging template.

- It would be very difficult to transplant seagrass into Clam Bay. Also, a donor site would be required, which is currently unavailable.
- Channel marker #13 was replaced last month by the County's C.Z.M. Dept.
- The gopher tortoise population was decimated by Hurricane Ian, reducing the population from 80 to about 12 or 13. An application has been started to obtain approval to establish Clam Bay as a waif site.

Ms. McLaughlin commented that the Naples Botanical Gardens is "testing for value," a mix of dune plantings for resistance to storm damage. Mr. Sterk commented that typically there is a lack of availability of these types of plantings.

Mr. Swider suggested that it may be beneficial to spend more on adding hand-dug channels, and less on a lengthy annual report. Mr. Sterk commented that the price of the annual report has not increased over the past several years, and provides a lot of data. He also noted that over the past several years, we have increased the number of areas where hand-dug channel maintenance is performed each year. Mr. Swider questioned whether the maintenance budget should be increased to include even more areas. Mr. Coleman noted that permitting would be required to dig additional channels.

Mr. Sterk confirmed that a U.S.A.C.E. permit would be required to add hand-dug channels. Areas have been identified that would benefit from additional channels to increase drainage. Dr. Dabees commented that water percolation through the mangroves is only a small component of the flushing in the Clam Bay system, and suggested that adding more channels may not be significant enough to increase water flow out of Clam Bay.

Ms. O'Brien commented that the Annual Report cites four areas of stressed mangroves, and that three of these have improved as a result of additional hand-dug channel maintenance. She suggested that Mr. Sterk has stated that the fourth area would benefit from additional channels. Ms. O'Brien commented that two years ago, we had discussed having a pre-application meeting with S.F.W.M.D. to discuss the required process and documents needed to obtain a permit for additional channels. Exhibits had been prepared at that time. She suggested that E.T.E. may want to have that meeting to determine the feasibility of obtaining a permit for additional channels.

Mr. Sterk commented that he has not approached the D.E.P. in regard to the conductivity issue brought up by Ms. O'Brien. Ms. Jacob suggested that he checks with the County's Pollution Control Dept. as a first step. Ms. O'Brien commented that this issue may be causing 20% more exceedances of nutrient levels in our sample results.

Ms. McLaughlin commented on the "sideways trees" within the NRPA adjacent to the berm. Mr. Sterk commented that no trees may be removed from a NRPA area, unless drainage is impeded. He reported that ETE is working on removing invasives in the intermediate zone.

**OTHER COMMENTS**

Ms. McLaughlin commented that this would be her last Clam Bay Committee meeting (as she has resigned from the board effective March 19, 2024). She thanked Ms. Shea for her exceptional ability to capture what was discussed at our meetings into our meeting minutes. She also thanked Ms. Jacob, Mr. Coleman, and Ms. Herrmann for their project management, overseeing many projects over the past few years.

Pelican Bay Services Division Clam Bay Committee Meeting  
March 18, 2024

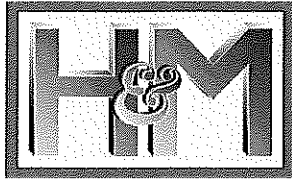
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**ADJOURNMENT**

**The meeting was adjourned at 3:26 p.m.**

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Michael Rodburg, Chair

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



**HUMISTON  
& MOORE  
ENGINEERS**

COASTAL  
ENGINEERING DESIGN  
AND PERMITTING

5679 STRAND COURT  
NAPLES, FLORIDA 34110  
FAX: 239 594 2025  
PHONE: 239 594 2021

July 16, 2024

**MEMORANDUM**

To: Neil Dorrill  
From: Mohamed Dabees  
  
Re: Clam Pass Dredging/Maintenance  
HM File 29-018

2024 Emergency maintenance of Clam Pass:

Clam Pass conditions required emergency mechanical dredging to reopen the pass in June 2024. Sand accumulation at the south bank of the inlet in the early months of 2024 created progressive channel migration northward, and spit growth across the inlet entrance that threatens inlet closure. The 2024 emergency maintenance work included grading the inlet banks and dredging of the permitted at inlet channel, Section A and part of the flood shoal template in Section B. The approximate volume of sand excavated was approximately 13,500 cubic yards. Work started on June 18, 2024, and was substantially completed by June 29, 2024. The cut and fill area were limited to the inlet channel and inlet banks to minimize work area along the adjacent beach during the sea turtle nesting season.

Pre and Post maintenance inlet conditions:

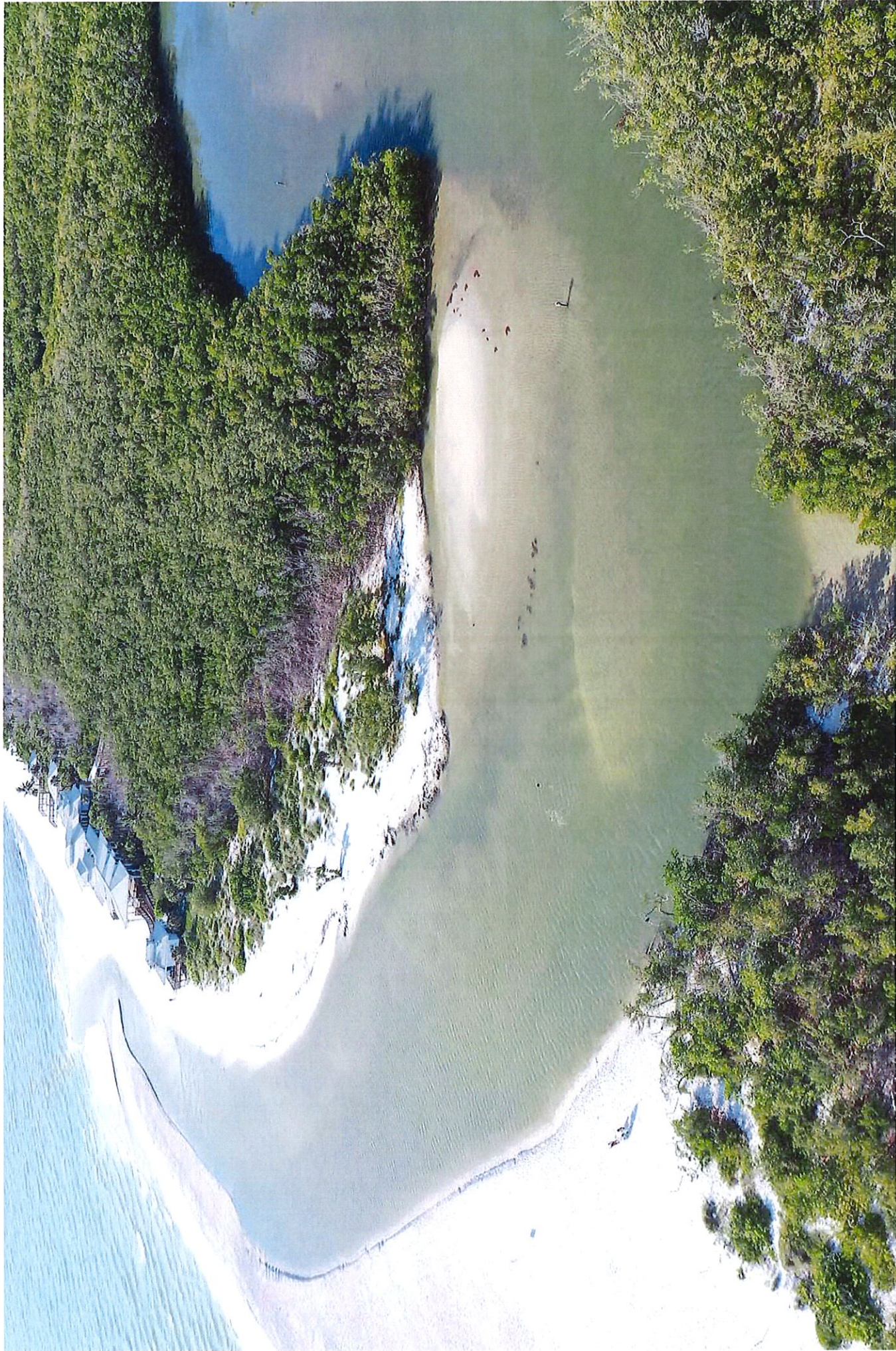
The inlet conditions preconstruction indicated poor hydraulic efficiency with tidal ratios dropping to below 0.4 relative to Gulf tide preconstruction with over 15,000 cubic yards accumulated within the inlet dredging template.

The attached exhibit shows pre and post construction conditions at Clam Pass. Post construction survey was completed on July 3, 2024. Post 2024 inlet conditions indicate restoration of the inlet to design conditions by dredging and grading over 13,500 cubic yards which represents 90% of the total shoaling volume within the dredging template. Inlet flow is restored with the tide ratios exceeding 0.8 which is significantly above the critical threshold indicated in the Clam Bay Management Plan.

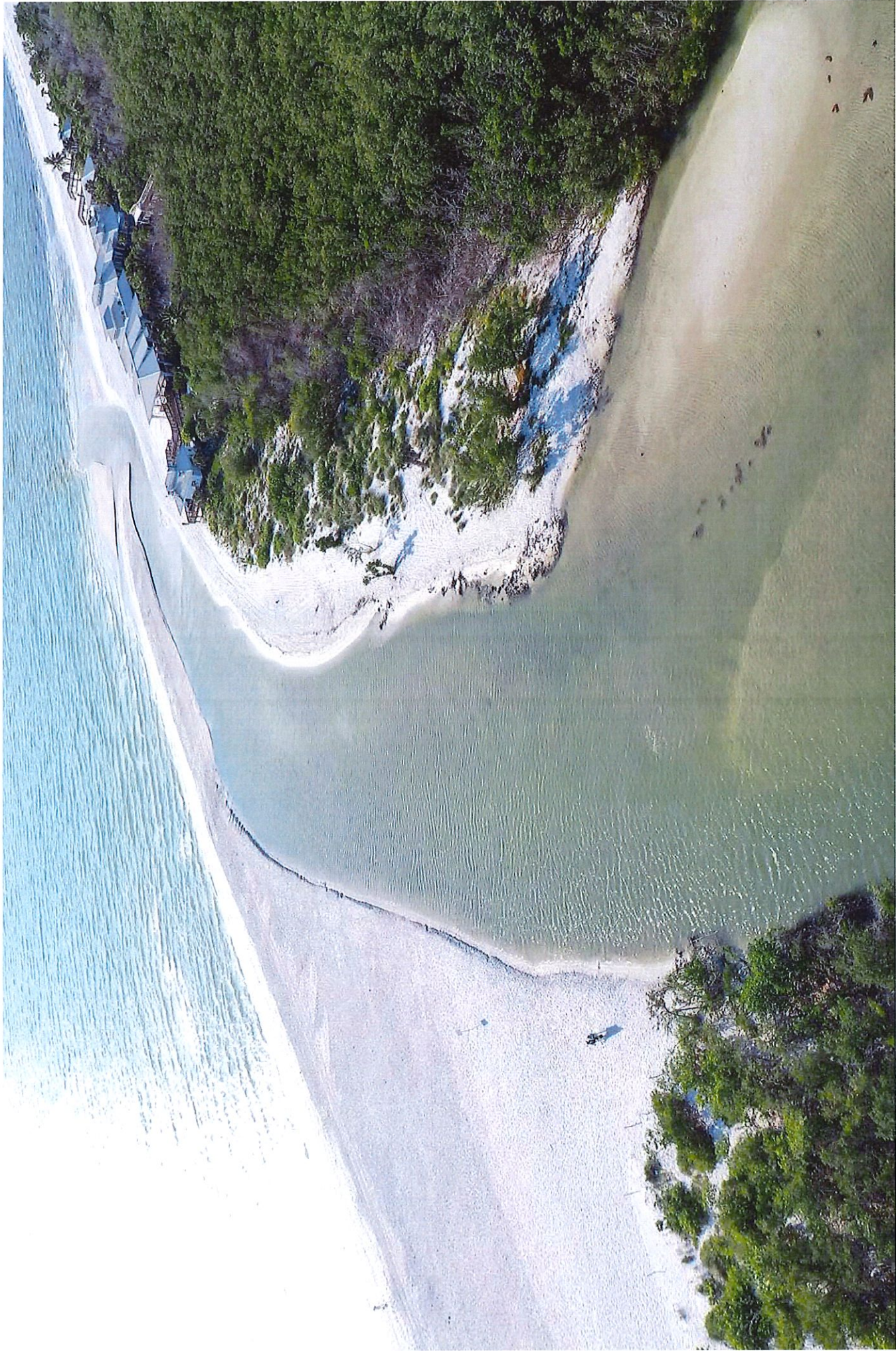
Recommendations:

Currently the inlet is restored to hydraulically stable conditions and the adjacent beaches are graded to design template. There is insufficient shoaling within the template to warrant additional dredging in 2024. Continued monitoring of the inlet and annual monitoring survey in December of 2024 is recommended to provide an update on inlet conditions.

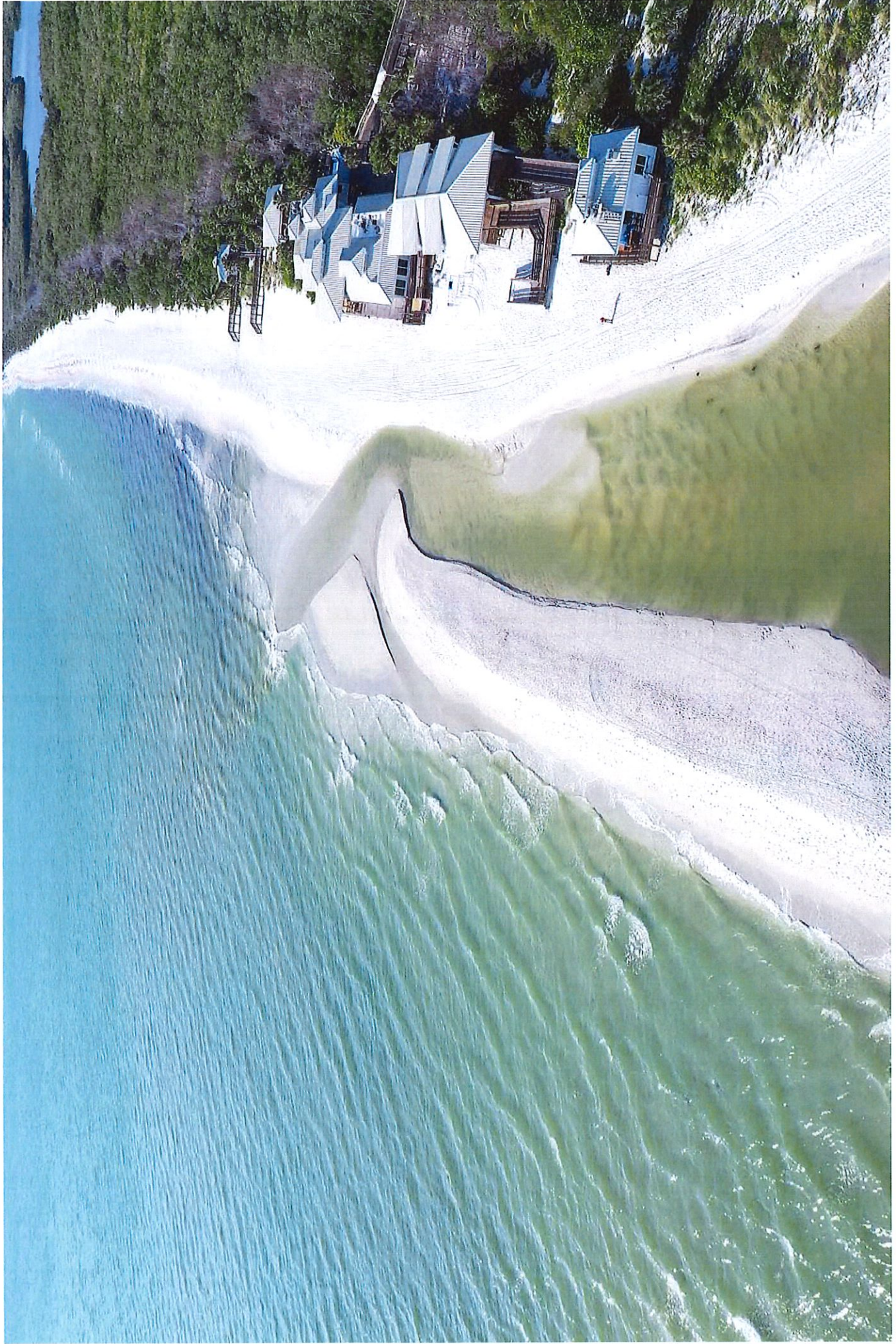




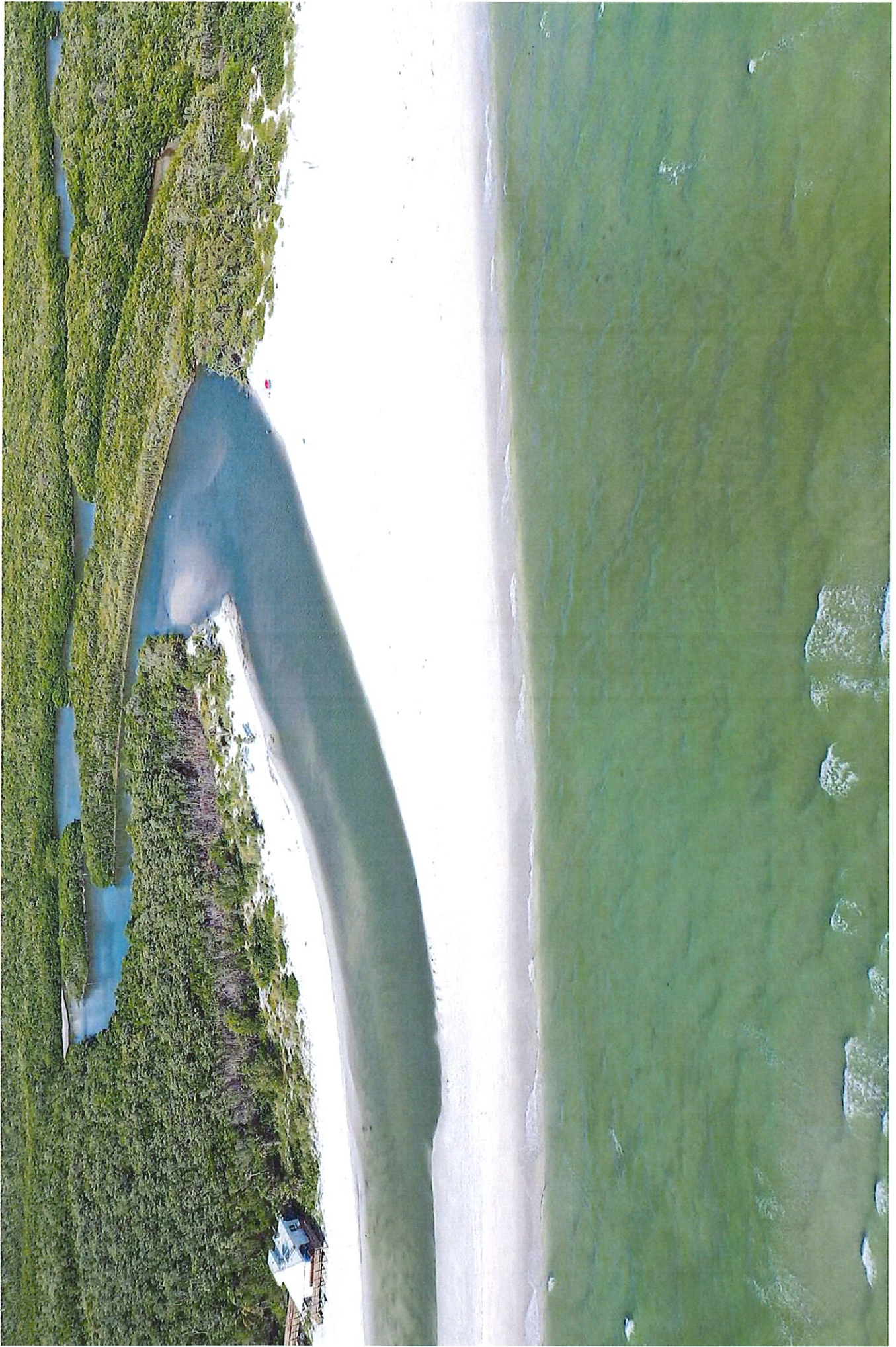




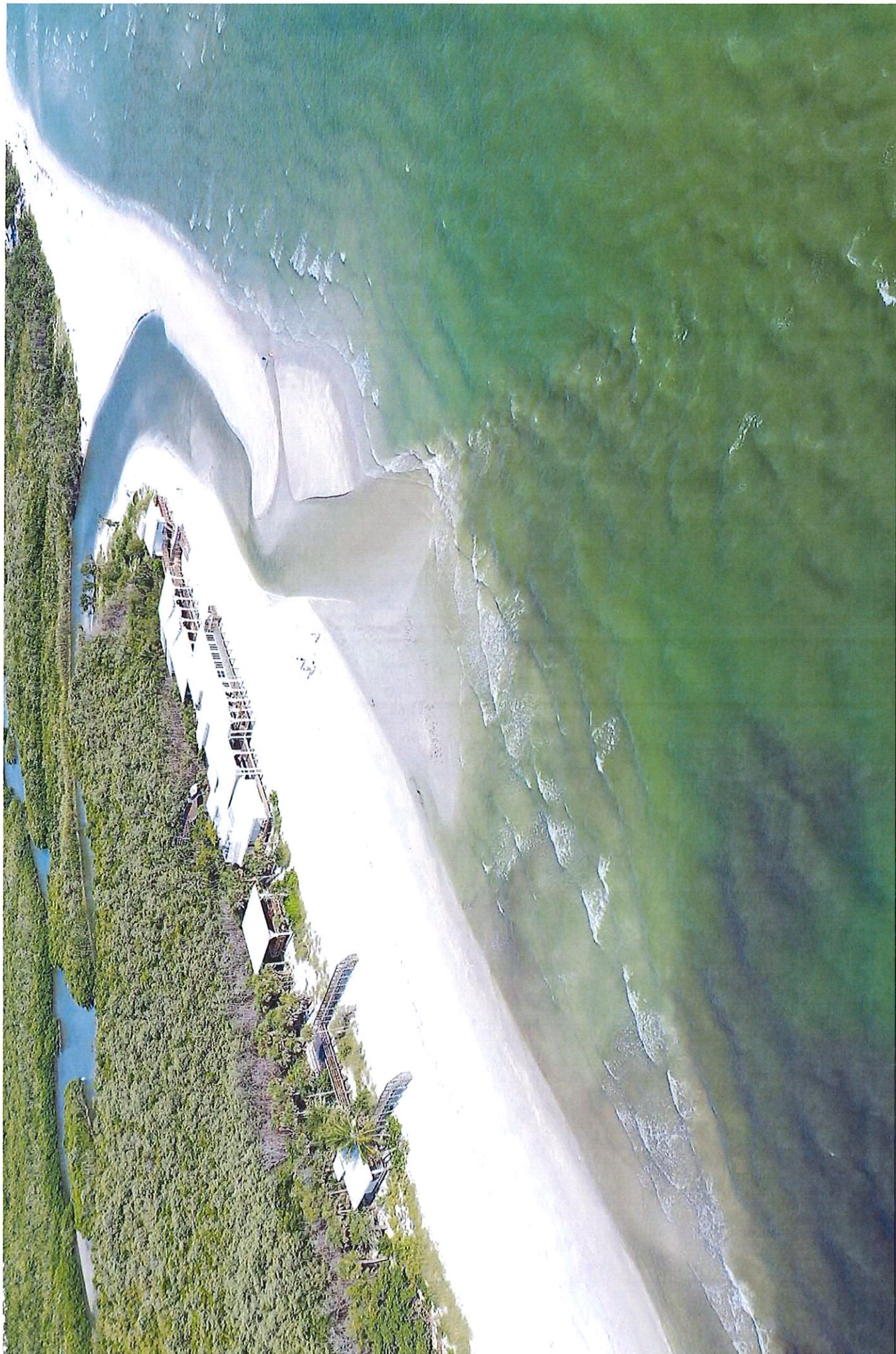




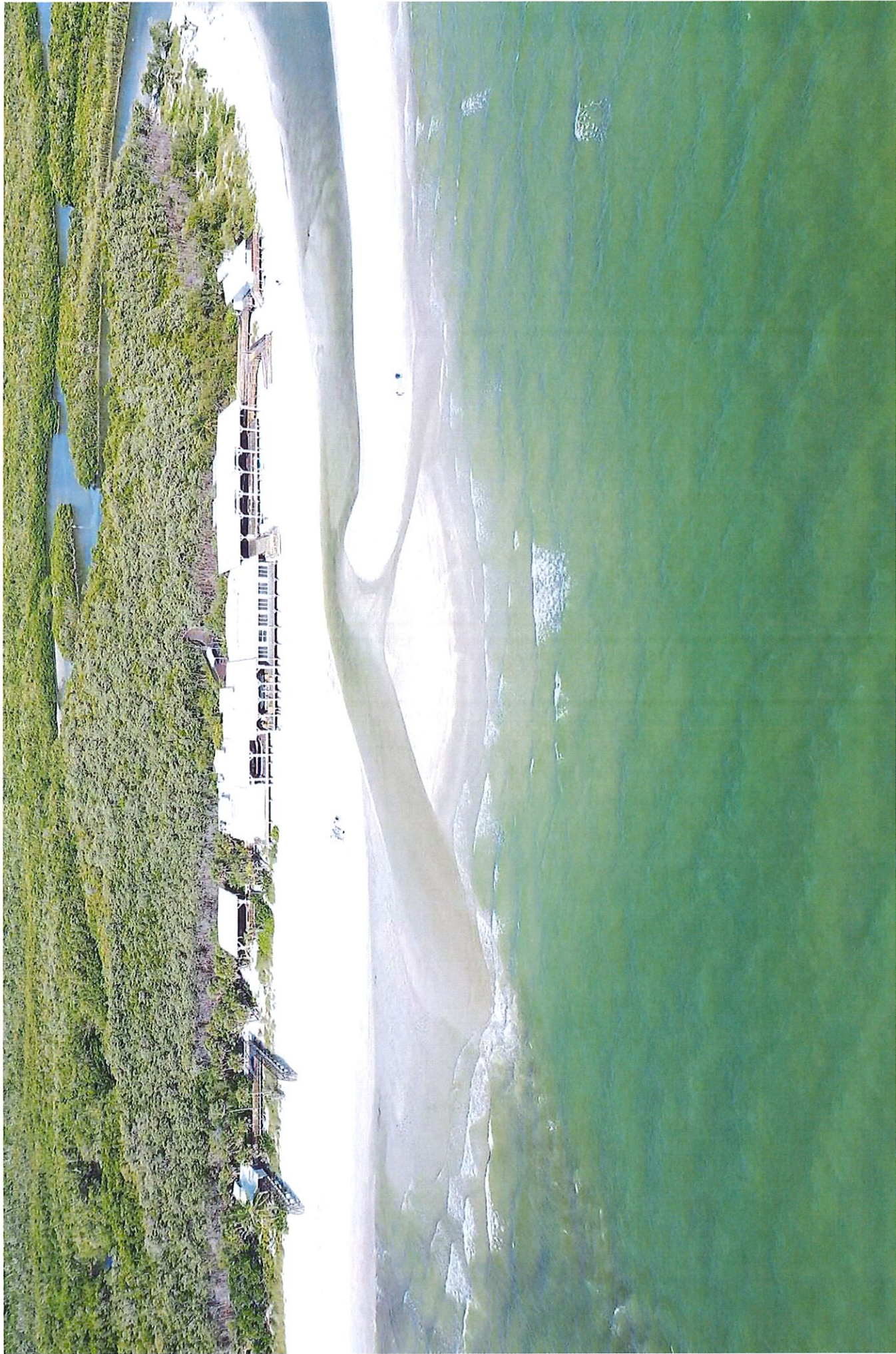








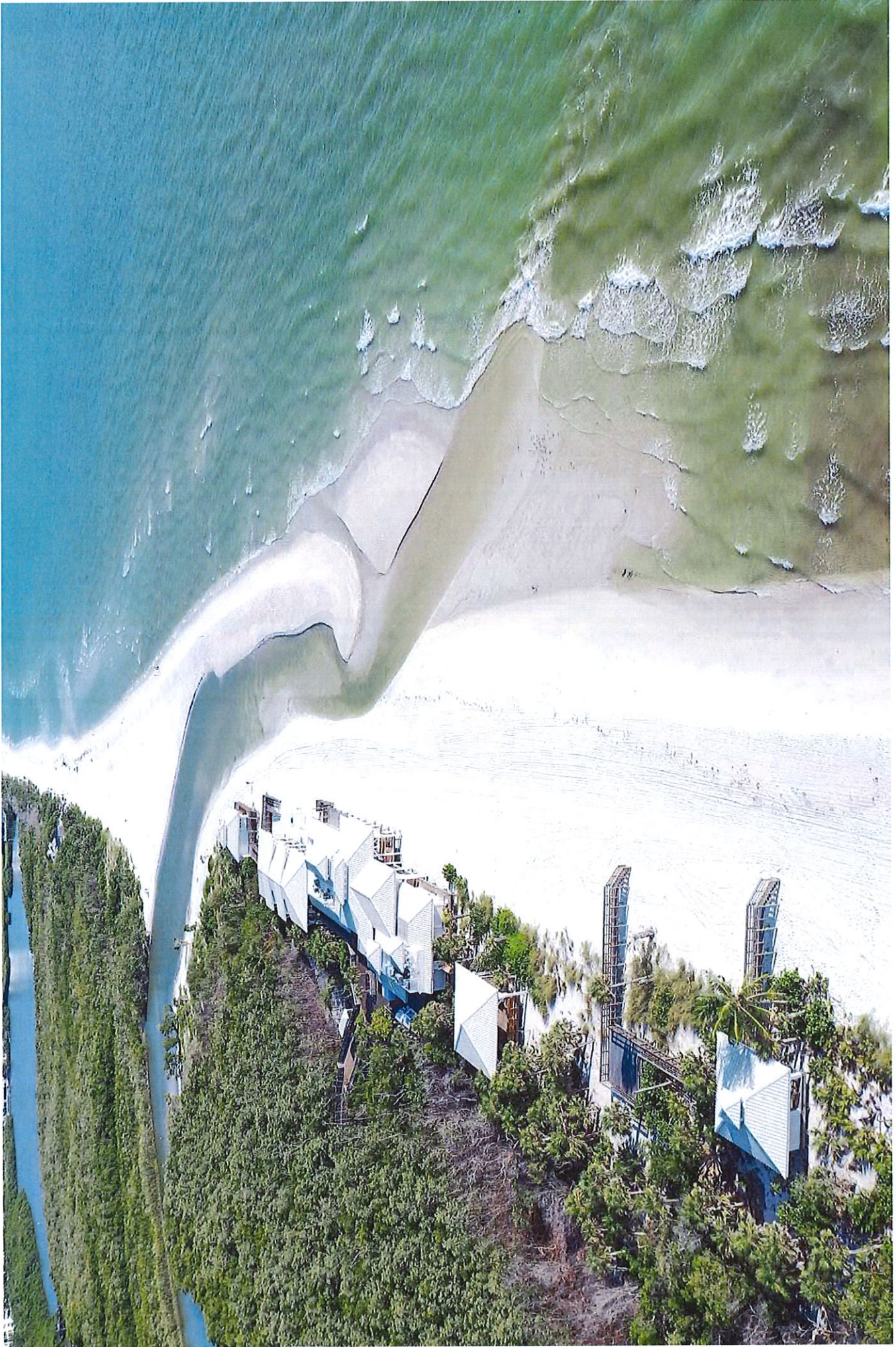




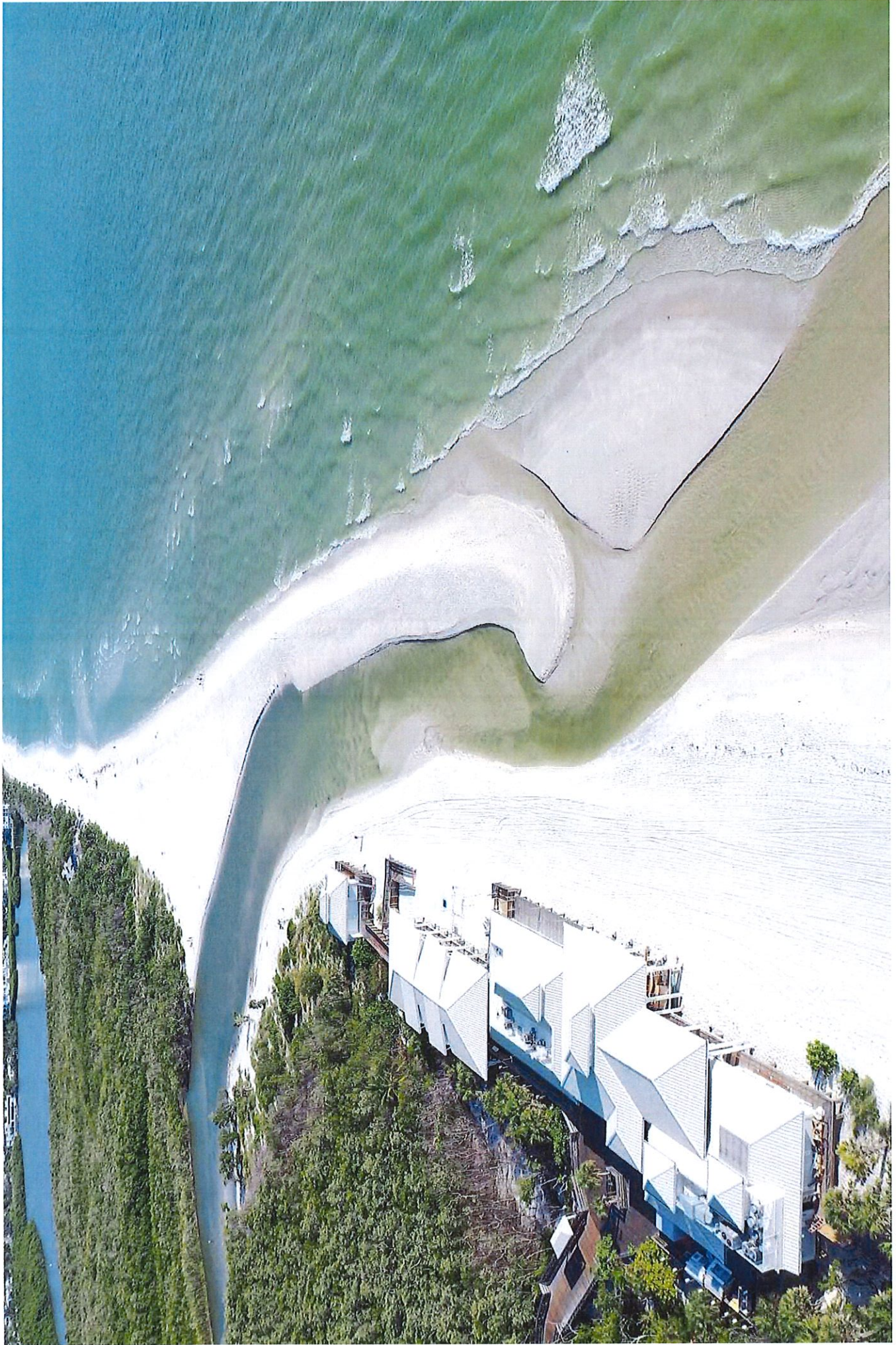




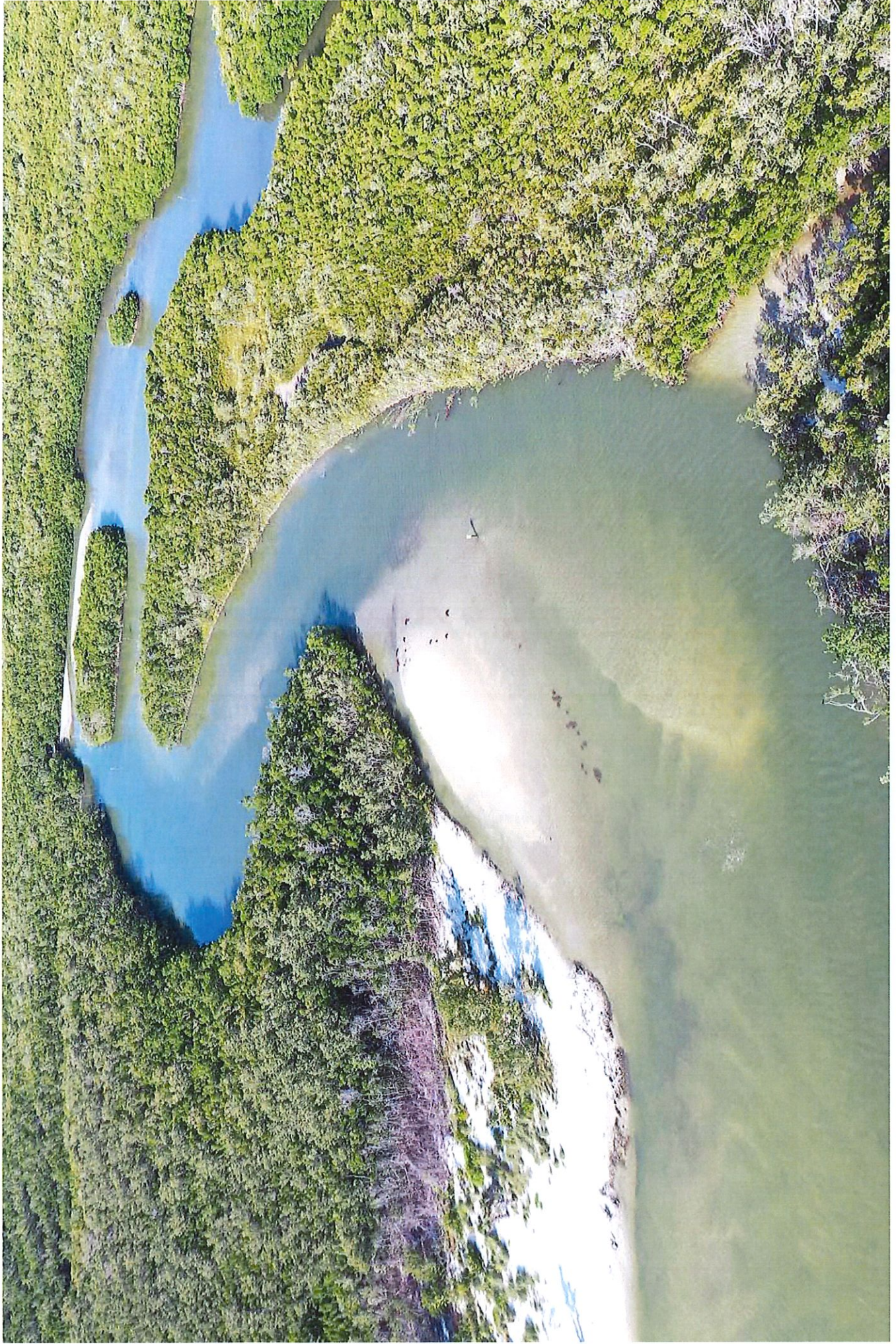




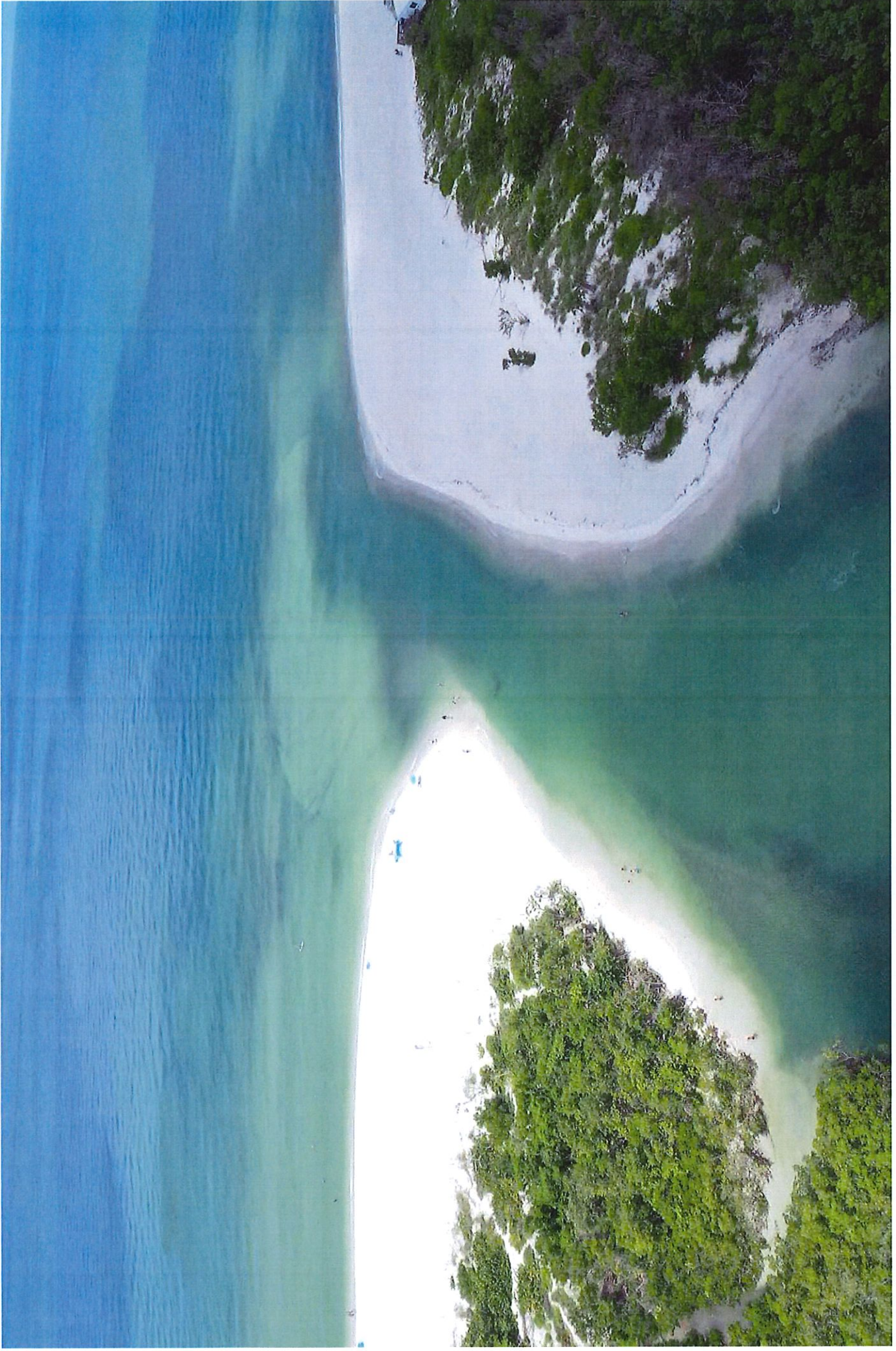




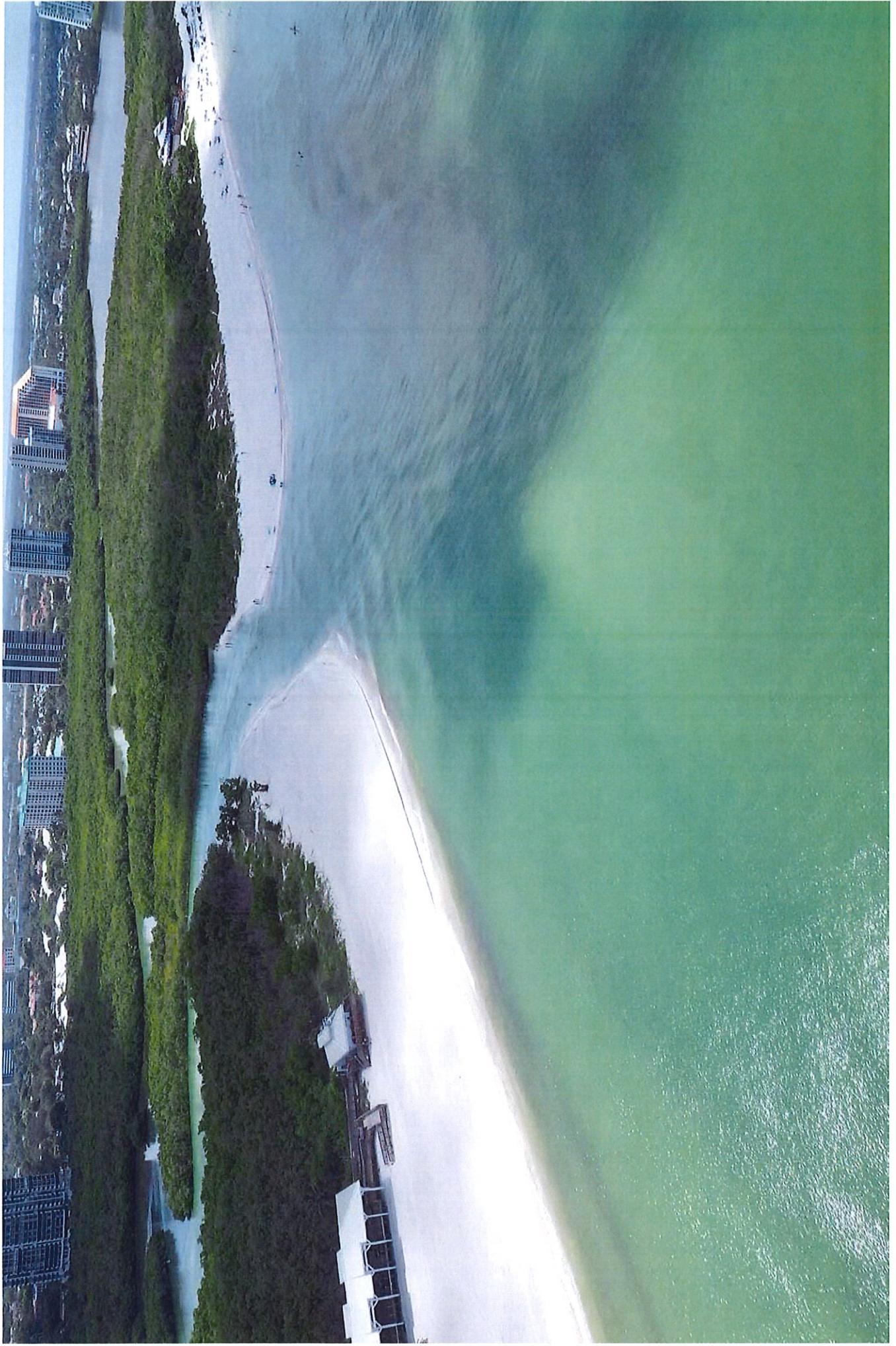




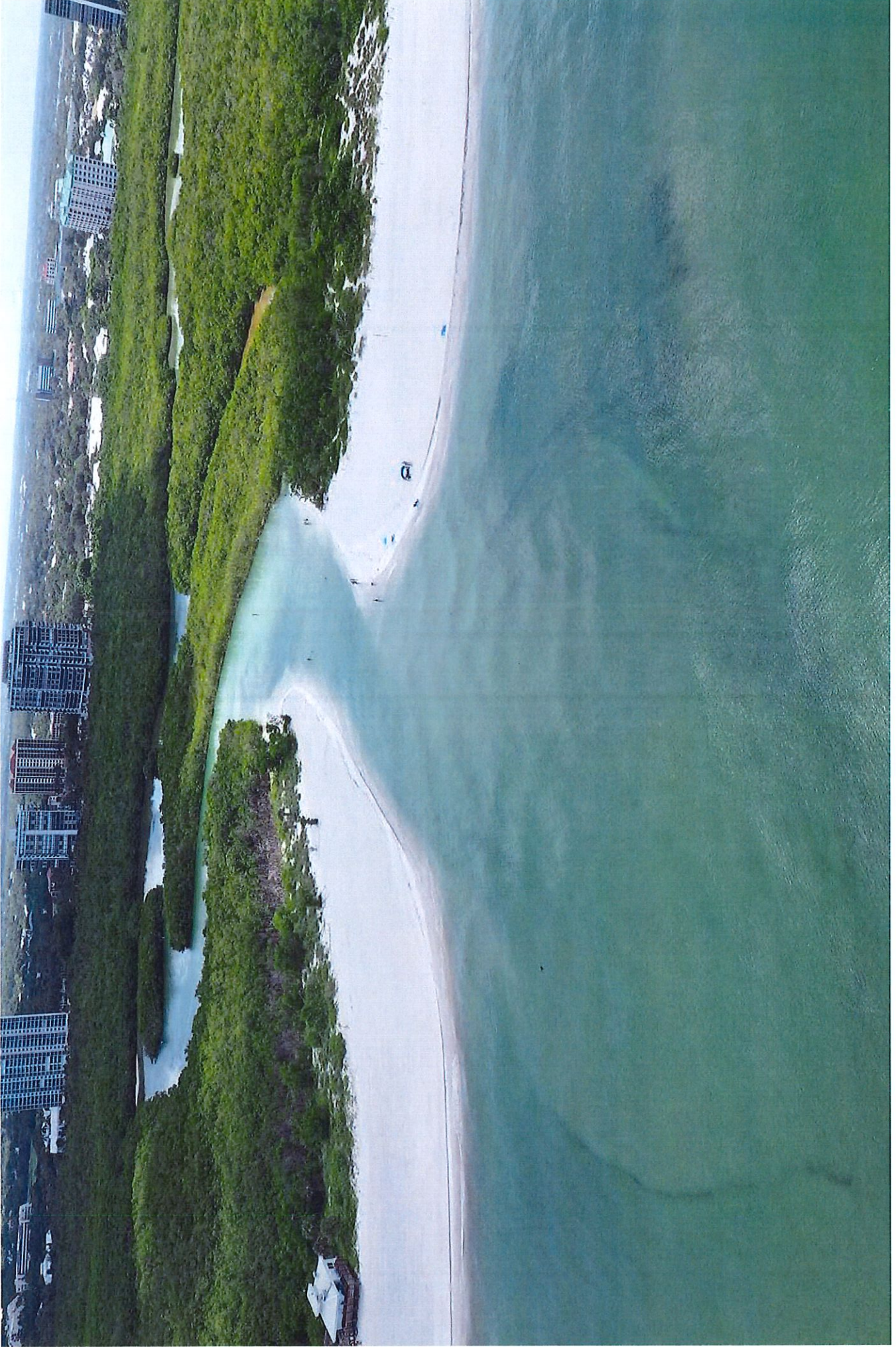




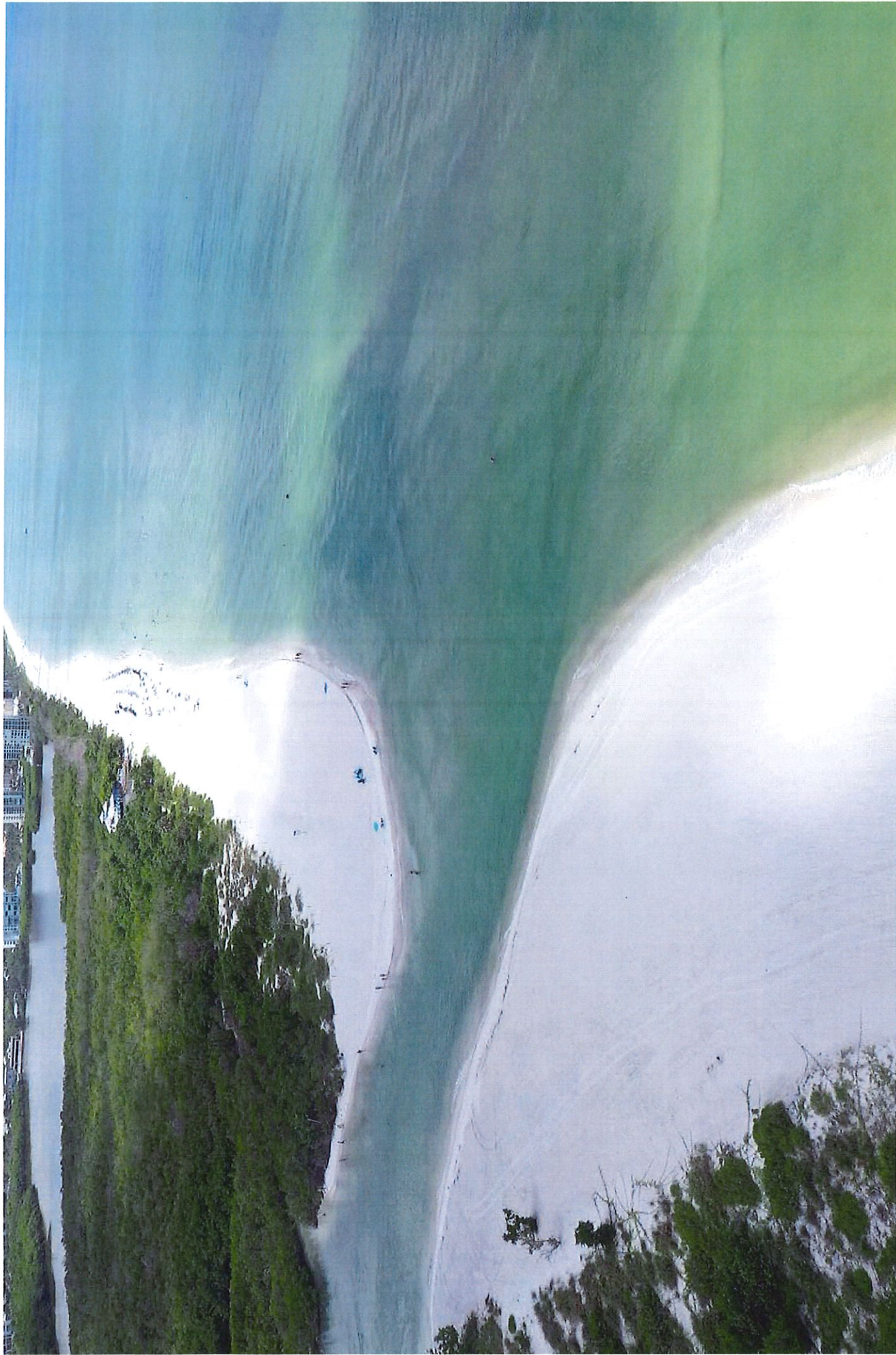




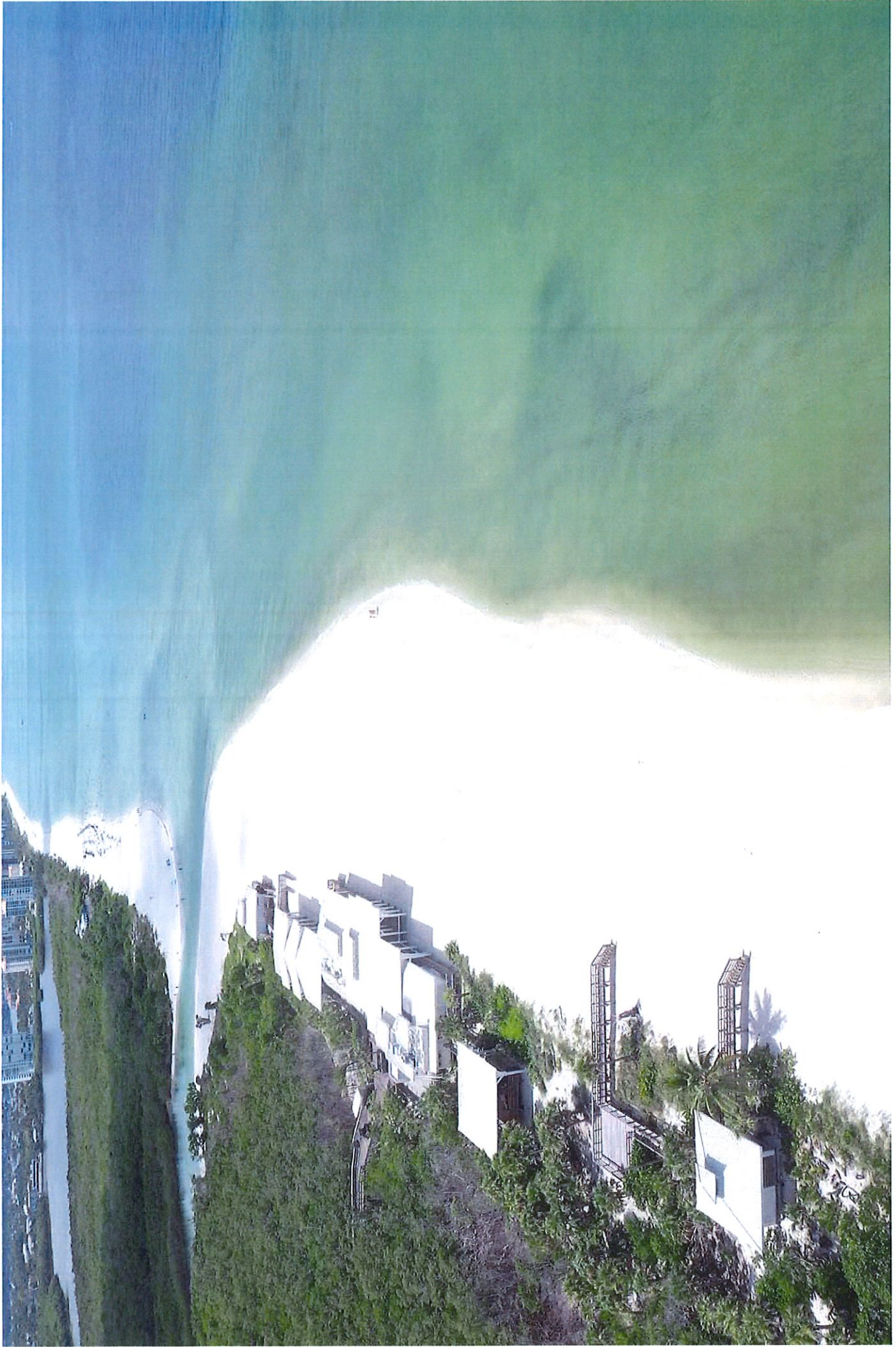




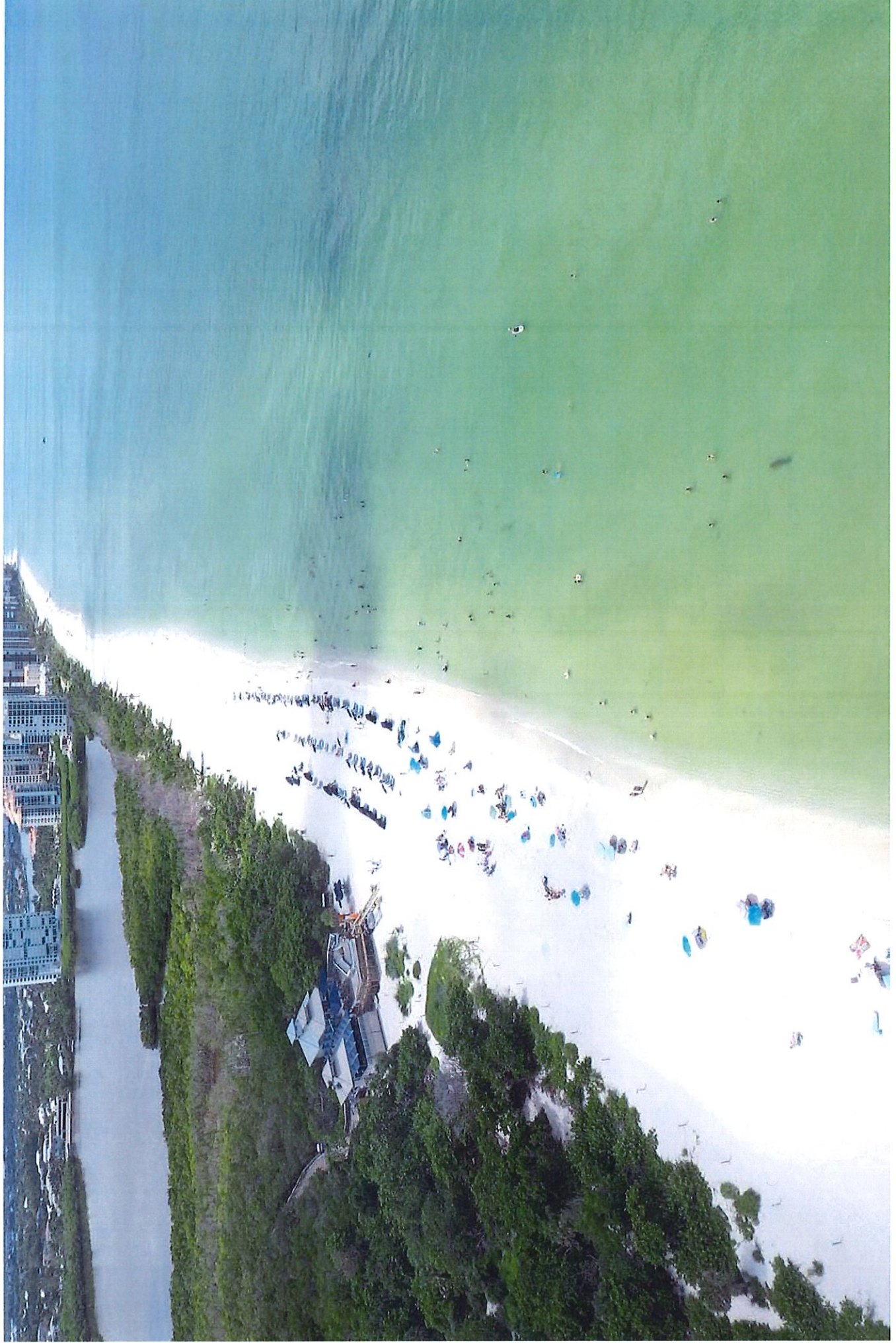




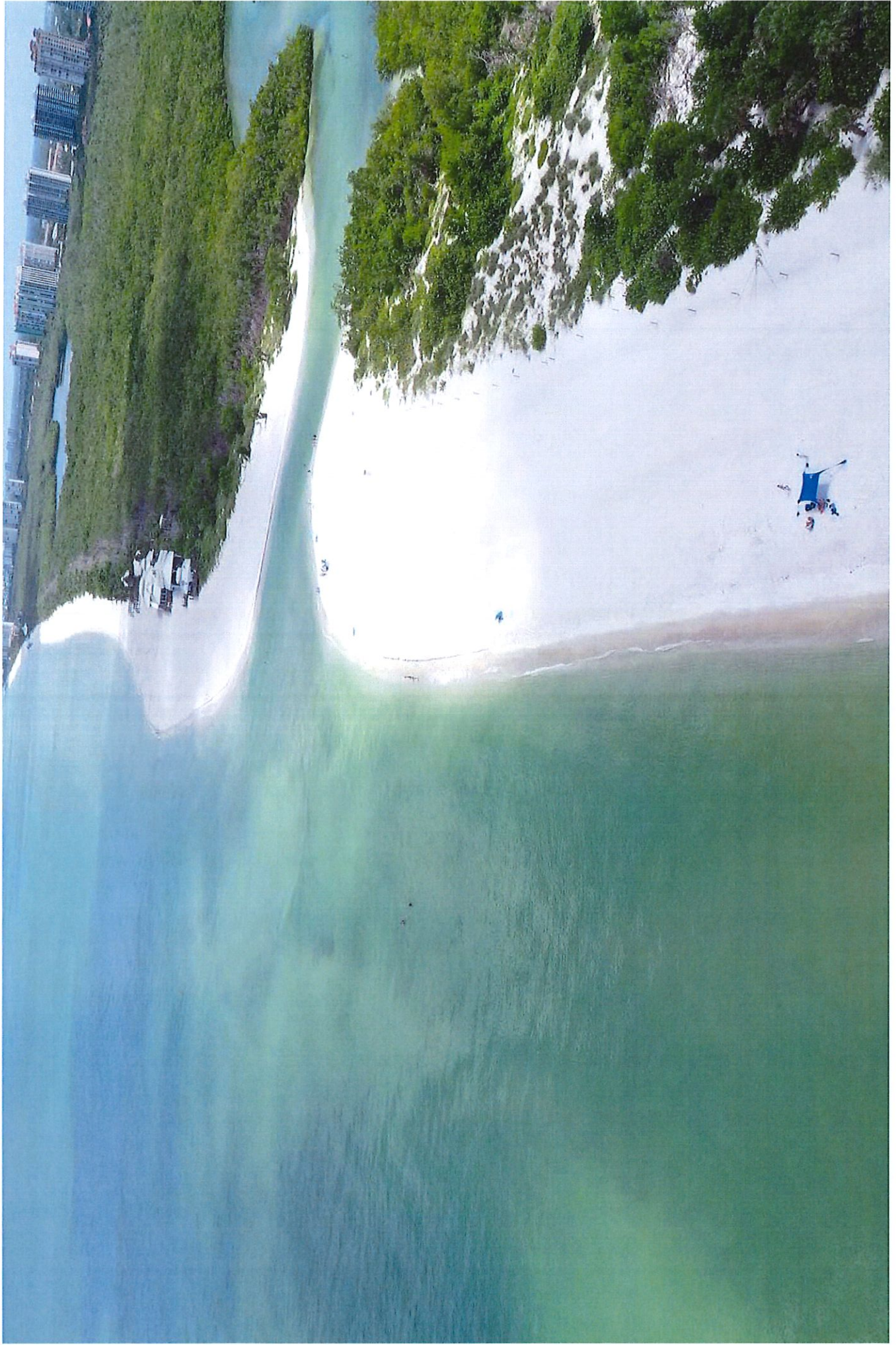




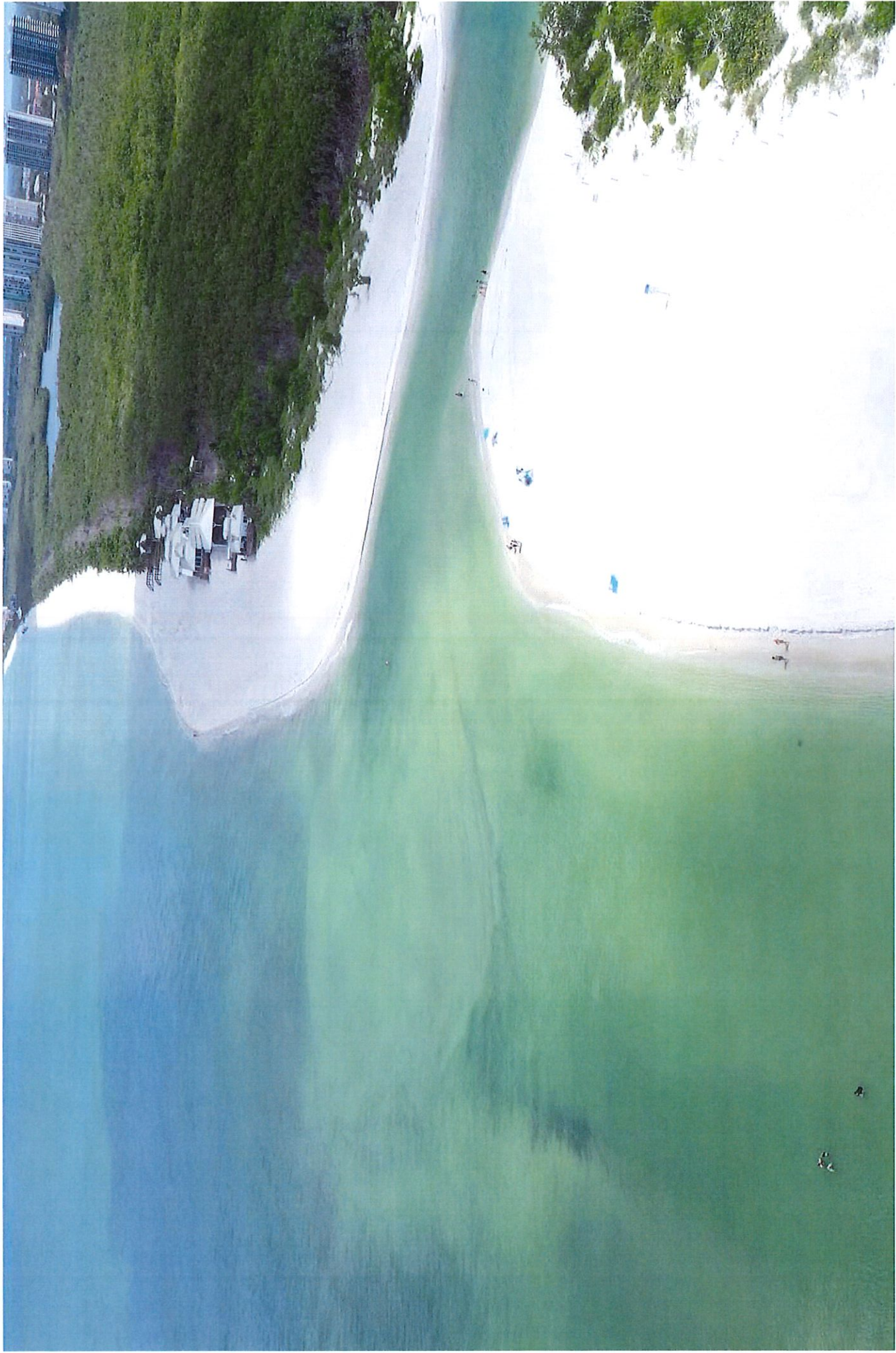




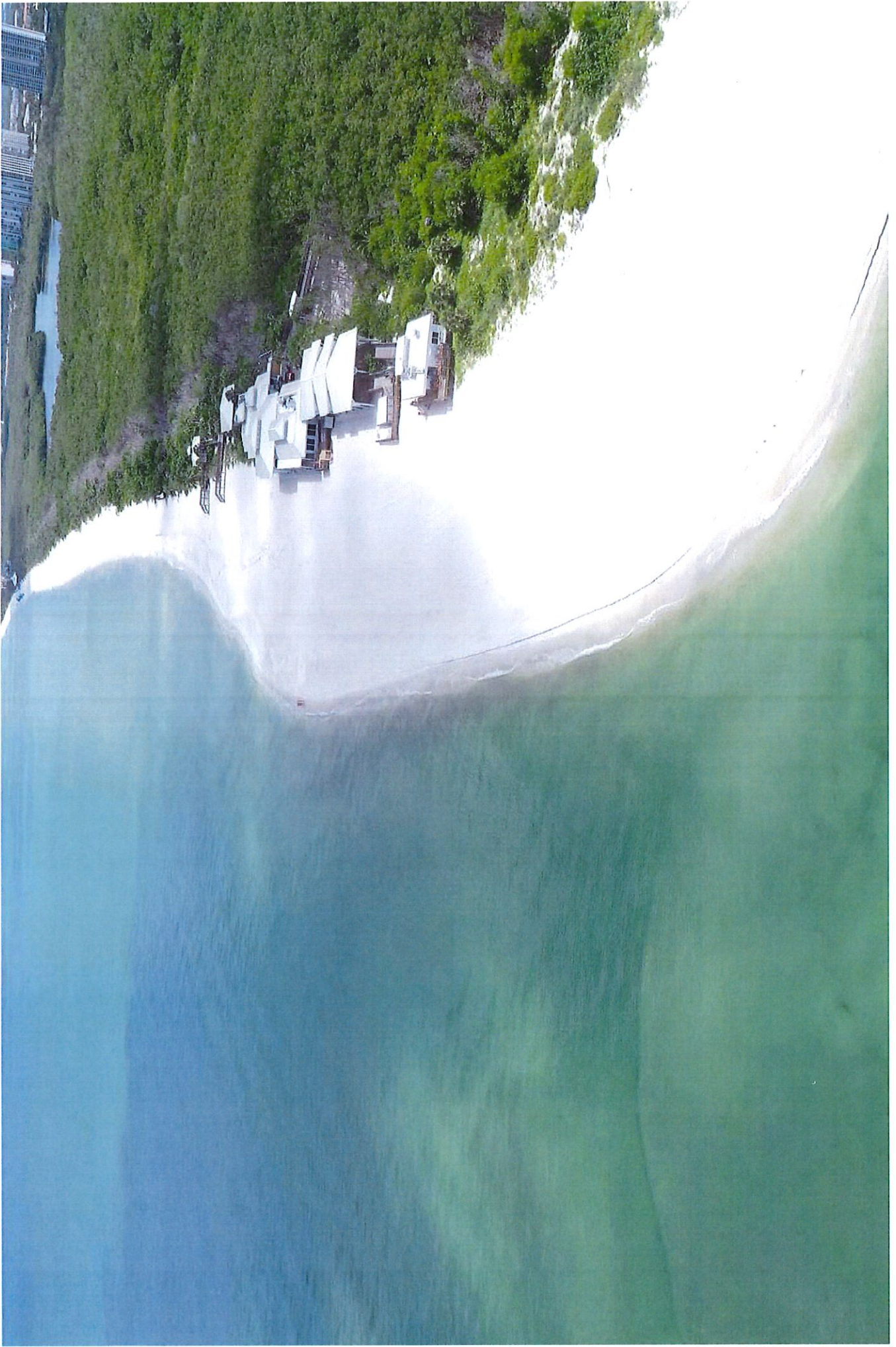




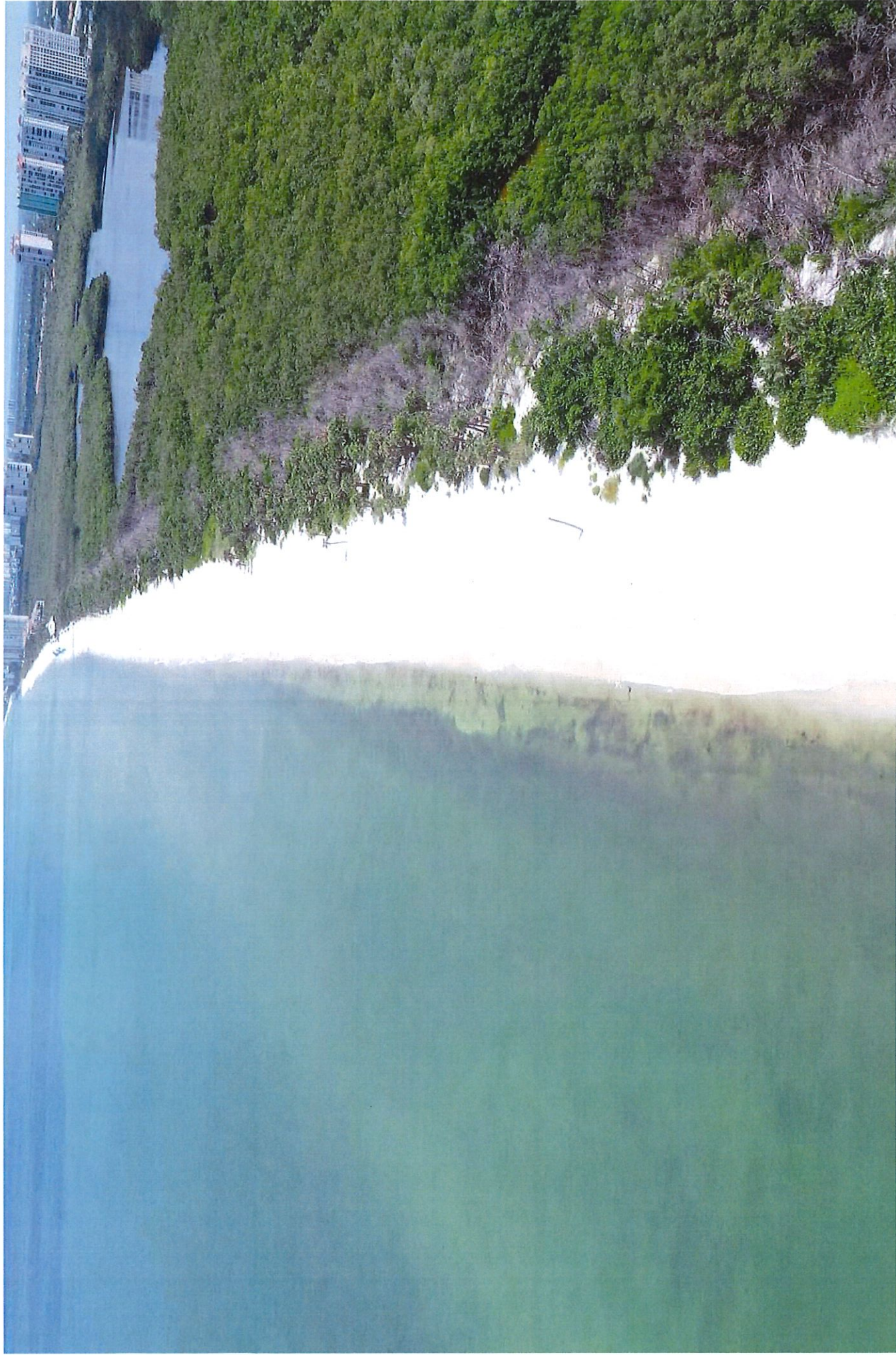




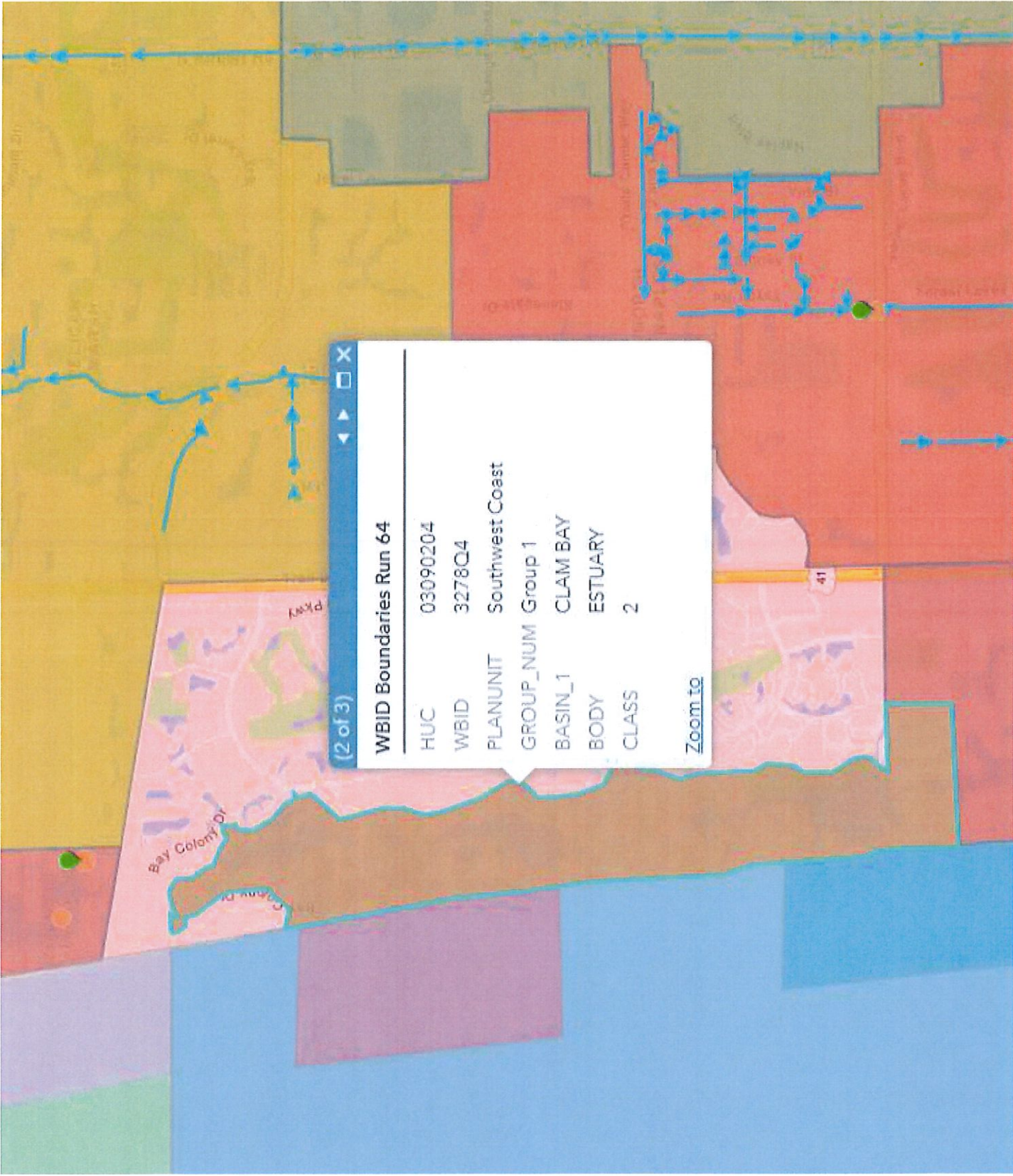




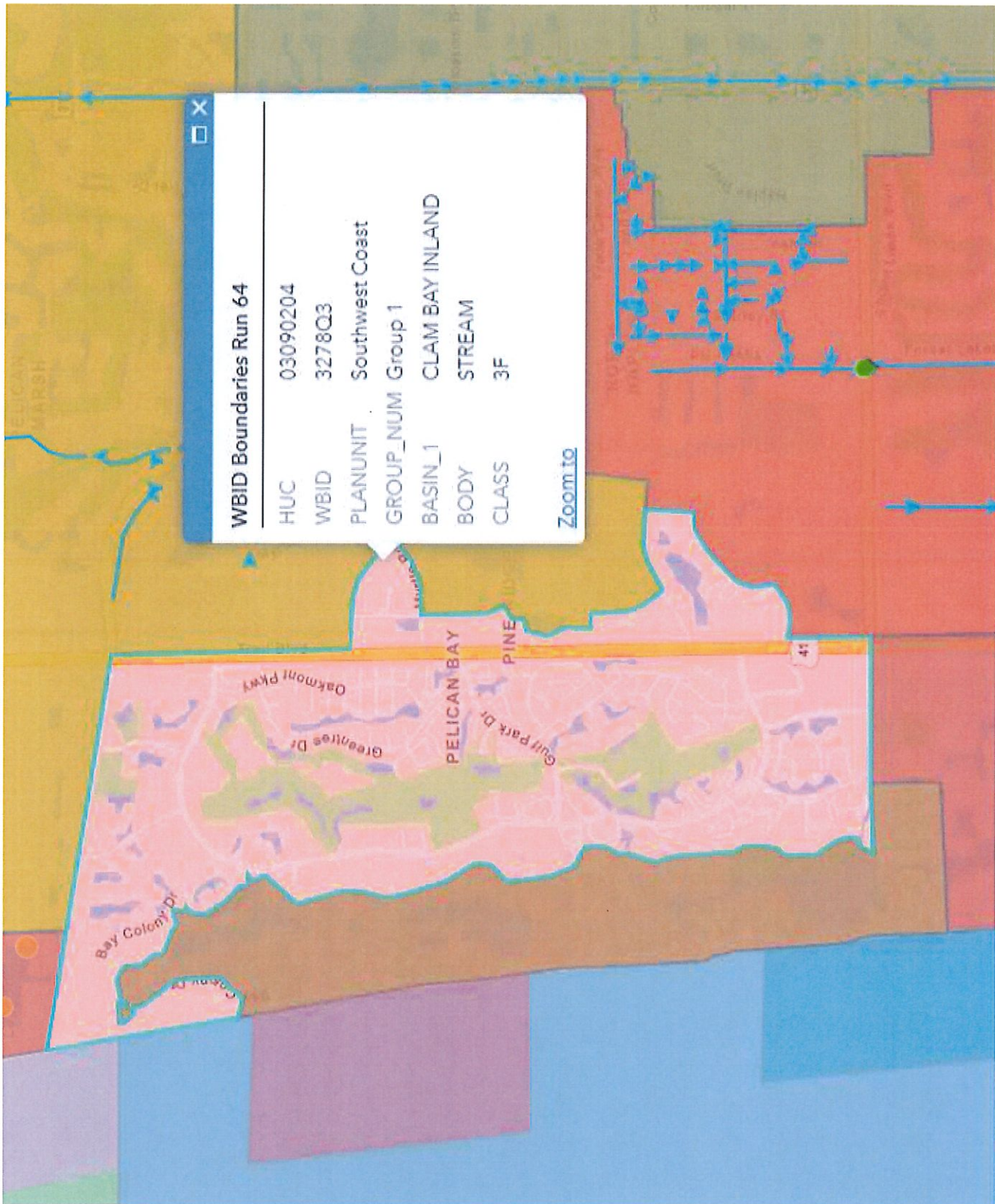












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**WBID Boundaries Run 64**

HUC 03090204  
WBID 3278Q3  
PLANUNIT Southwest Coast  
GROUP\_NUM Group 1  
BASIN\_1 CLAM BAY INLAND  
BODY STREAM  
CLASS 3F

Zoom to