January 24, 2003

Mr. Kevin Rambosk
City Manager, Naples
735 Eighth Street South
Naples, Fl 34102

Re: Storm-water Outfalls

Dear Mr. Rambosk,

The Coastal Advisory Committee and County staff are working toward the major re-nourishment of the beaches in the next year or two. As part of that project, it has been proposed to modify the existing storm-water outfalls that either cross the beach or have the potential to damage the restored beach. Attached please find a copy of an appendix from the COLLIER COUNTY BEACH RESTORATION PROJECT 6-YEAR MONITORING REPORT that documents the current conditions and provides some general concepts for potentially changing these outfalls.

All of the outfalls are within the Naples city limits and roughly half of them are City owned with the other half privately owned. In addition to ownership and funding issues, there are significant engineering challenges to modifying the outfalls.

It is requested that County and City staff meet to begin addressing the issues. My point of contact is Ron Hovell at 530-5342. He will contact you in early February to schedule the initial meeting. Thank you in advance for your attention to this request.

Sincerely,

James W. DeLony, P.E.

enclosure

cc: Jim Mudd, County Manager
Coastal Advisory Committee

APPENDIX A

DRAINAGE RECONNAISSANCE REPORT
COLLIER COUNTY BEACH RESTORATION PROJECT

I. SCOPE

Beach outfalls and drainage within the Collier County Beach Restoration Project area are visually unattractive and improvements are desired. This reconnaissance level report examines existing outfalls and potential alternatives. Photographs of each outfall are included in Sub-Appendices A-1 (primary outfalls) and A-2 (additional drainages), along with a short description of the surrounding environment and source of the runoff.

Examples of drainage modifications and alternatives used in other Florida beaches are provided. A brief description and photos from other Florida examples are included in Sub-Appendix A-3. Based on particular site conditions, the most likely alternatives are described in this appendix.

II. FIELD INVESTIGATION

A reconnaissance level field investigation was performed on July 10 and 11, 2002 to photograph the outfalls and observe the general state of the beach in Vanderbilt, Park Shore, and Naples. On northern Naples, 10 stormwater outfalls restored and extended as part of the 1996 Beach Restoration Project were located and photographed (Sub-Appendix A-1). This included one private outfall beneath a rock groin, which originates from the Mansion House Condominium and drains into the Gulf of Mexico. Table A-1 provides the approximate location of each outfall with a short description and the apparent source of runoff. The gulf end of all these outfalls with their timber supports are exposed.

In addition, several smaller private outfalls that drain directly onto the beach in Park Shore and Naples were photo-documented (Sub-Appendix A-2). No stormwater drainages were found exiting directly onto the sand or into the Gulf of Mexico along the beach in Vanderbilt, although some back-beach swales containing standing water were observed. The smaller outfalls cause ponding or swales in the beach after a discharge.

III. IMPROVEMENT ALTERNATIVES

The aesthetics and performance of the outfalls can be improved by a range of systems from costly diversion systems to a simple increase of beach grading and raking after a drainage discharge event. Based on field inspection results, review of previous studies in Collier County, and other similar systems in Florida, several alternatives are described. All options will require periodic maintenance and beach grading at varying frequencies to preserve aesthetics. The alternatives are:

1. Retention and Filtration
2. Concealment
3. Lowering and Extension of Pipeline
4. Injection Well
5. Exfiltration System
6. Comprehensive Drainage System

1. Retention and Filtration

At the exit of a stormwater drainage pipe, the water from typical small rainfall events can be contained within a small pond or retention chamber on the beach. Over time, the accumulated water will filter into the surface sediment (sand) down to the water table. Aesthetic improvements can be achieved by vegetating the edge of the pond or swale to conceal the discharged water. A large vertical concrete pipe can also contain water from runoff, as illustrated in the Panama City Beach example (page A-3.1). Similar to the retention pond, aesthetics of the pipe can be improved by painting or decorating the concrete or vegetating the site.

In times of more intense rains, the pond would overflow onto the beach and drain directly into the gulf. The resulting swales will have to be graded after large storms. This system may be the best option for the smaller (private) seawall drainpipes, where there is daily discharge from pool decks and smaller parking lots. Installation and maintenance can be the responsibility of the property owner.

2. Beach Concealment

As the beach profile adjusts, the existing pipeline extensions are becoming more exposed. This effect is illustrated on Naples Beach in Structures O-17-2 and O-17-3 (Pages A-1.2 and A-1.3) and along the coast of New Jersey where the outfalls have been exposed by erosion (page A-3.3). The exposed pipeline and supports within the dry beach can be reburied during periodic maintenance, especially the pipelines that are barely exposed as illustrated in the Naples examples above.

The existing outfall swales can be covered to conceal the flow down a swale into the Gulf of Mexico. This alternative is similar to the system in Venice, Florida (page A-3.2) and would be relatively straightforward to implement, if a concealment system was considered an improvement.

3. Lowering and Extension of Pipeline

Complete burial of the pipeline beneath the beach would improve aesthetics, but is not a common practice on open gulf beaches. The outfall pipelines would be lowered and buried beneath the sand fill and the pipeline extended into the Gulf of Mexico. At the gulf end of

each new extension, a specially designed discharge would be required to prevent backflow and clogging of the pipe in times of low flow or high sand movement. A Tideflex® type check valve would prevent backflow.

The result would be aesthetically pleasing, as the pipe discharge would be underwater and offshore with no swales formed on the beach. This alternative may be difficult to implement because water treatment associated with offshore discharge will be required by the state regulatory agencies, and this type of solution is uncommon.

4. Injection Well

An injection well moves surface water to the underground strata for discharge. The pressure head (change in elevation) between the surface and underground strata is often sufficient to move the water underground. The City of Key West currently uses a similar gravity-driven injection well system for stormwater management. The system utilizes a triple-chamber baffle box to reduce floatable debris and particulates before the stormwater enters the 100-ft injection pipe. A schematic of the Key West system is provided in Sub-Appendix A-3 (page A-3.4).

A submersible axial-flow or vortex pump installed in a collection chamber could provide the additional pressure needed to create an injection system if gravity alone were insufficient. A study of the local geology and hydrology would determine if gravity or a pump-assisted system was necessary or feasible. However, aesthetics on the beach would be greatly enhanced as the entire system can be concealed beneath a dune or the road right-of-way, if sufficient elevation is available. This system may be viewed favorably by permit agencies, since it discharges away from the gulf waters.

5. Exfiltration System

An exfiltration system is a specially designed discharge installed within the beach dune or berm system along the landward edge of the beach. A schematic depicting typical plan and profile views of an exfiltration system is provided in Figure A-1. Rather than extending the discharge pipeline seaward, the flow can be directed alongshore through perforated "exfiltration pipes" that allow the stormwater to filter into the sand beneath the beach. In times of extreme rainfalls, overflow boxes are designed to expel excess stormwater onto the beach. The overflow will create a temporary swale on the beach as the water drains into the Gulf of Mexico.

The overflow boxes would be the only visible part of the system and could be partially concealed with vegetation. Ephemeral drainage swales would be formed during design storm conditions and require post-storm grading of the beach. A similar exfiltration system is being used successfully in Panama City Beach, Florida (page A-3.5). The system has been functioning well, but the boxes and the swales require periodic maintenance.

5

6. Comprehensive Drainage System

The most complete solution involves collecting stormwater, treating it, and entirely redirecting it away from the Gulf of Mexico. The existing system would need a complete redesign and extensive reconstruction to achieve this objective. In their 1995 analysis, Coastal Engineering Consultants found this option to be impractical due to cost implications. Some regulatory agencies favor treating and redirecting stormwater away from the coast, and will use the permitting process to push this solution regardless of cost.

IV. DISCUSSION

Storms resulting in heavy rains and/or significant wave action will reshape the beach. Outfall systems that utilize drainage swales will need to be regularly maintained to ensure aesthetics and functionality, particularly after storm events. All systems need periodic maintenance to varying degrees. The simplest solutions will generally require the most periodic maintenance, while the best solutions generally have the highest cost but lower periodic maintenance. If improvements are desired by the County and a no-action alternative is not acceptable, then the following two improvements to stormwater management should be considered in more detail.

V. RECOMMENDATIONS

1. Institute a management plan for smaller discharges requiring the upland owner to maintain the aesthetics of the discharge point by periodic maintenance, a small detention swale, or a small exfiltration system.

2. Install an exfiltration or injection well system on a trial basis and determine if it meets the County's objectives in the Collier County environment.

References:

Coastal Engineering Consultants, Inc., Stormwater Management Study and Outfall Analysis for Collier County Beach Restoration and Management Plan, File No. 94001, 1414, June 1995.

TABLE A-1
DRAINAGE RECONNAISSANCE SUMMARY
COLLIER COUNTY BEACH RESTORATION PROJECT

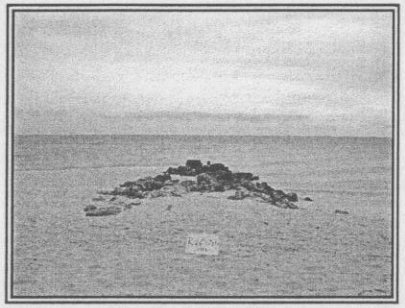
STRUCTURE DESCRIPTION			
NUMBER	**LOCATION**	**TYPE**	**DRAINAGE SOURCE**
RG-16-1	R60+265'	Private drainage in rock groin	Mansion House Condo
O-16-1	R62+650'	Double pipe extension next to rock groin	Naples Beach Club, adjacent hotel parking lots, and Gulf Shore Blvd.
O-17-1	R63+535'	Single pipe extension next to rock groin	8th Avenue North and Gulf Shore Blvd.
O-17-2	R64+000'	Single pipe extension	7th Avenue North and Gulf Shore Blvd.
O-17-3	R65+000'	Single pipe extension	6th Avenue North and Gulf Shore Blvd.
O-17-4	R65+410'	Double pipe extension in pile cluster	Residential lots between 6th and 4th Ave. North and Gulf Shore Blvd.
O-17-5	R66+415'	Single pipe extension	3rd Avenue North and Gulf Shore Blvd.
O-18-1	R67+400'	Single pipe extension	1st Avenue North and Gulf Shore Blvd.
O-18-2	R68+430'	Single pipe extension	1st Avenue South and Gulf Shore Blvd.
O-18-3	R69+000'	Single pipe extension	2nd Avenue South and Gulf Shore Blvd.

NOTE: OUTFALL LOCATIONS REPRESENT APPROXIMATE DISTANCES ALONGSHORE FROM PRIMARY PROFILE MONUMENTS.

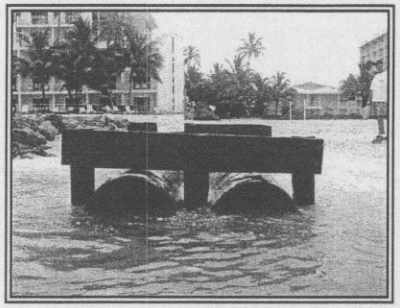
SUB-APPENDIX A-1

OUTFALL PHOTO SUMMARY

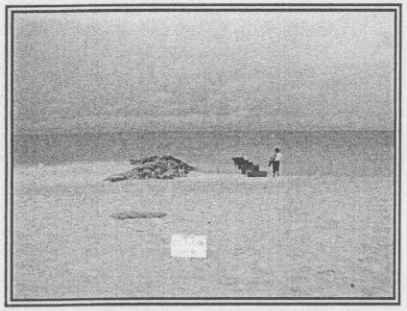
Structure: RG-16-1
Location: R60+265'
Description: Single pipe in rock groin (private drainage)
Source: Mansion House Condominium

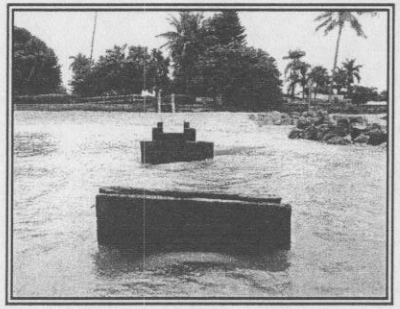


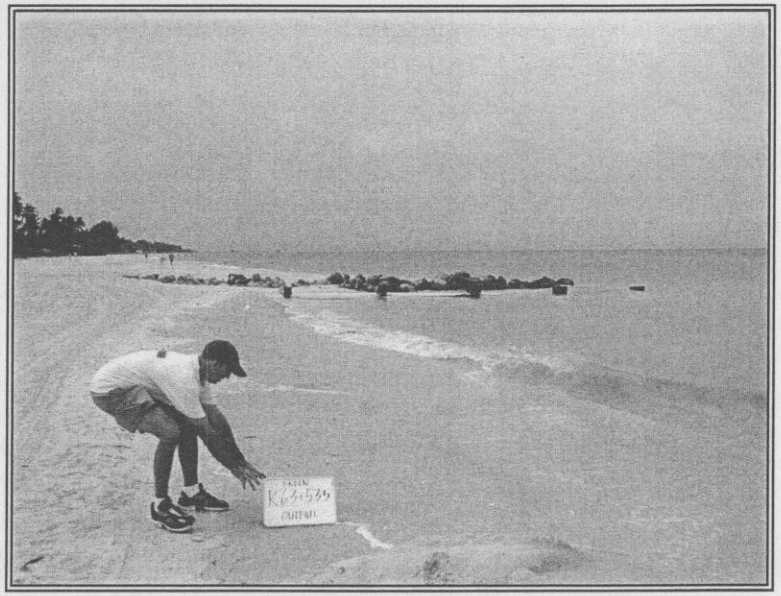
Structure: RG-16-7 / O-16-1
Location: R62+650'
Description: Double pipe extension adjacent to rock groin
Source: Naples Beach Club, adjacent hotel parking lots, and Gulf Shore Blvd



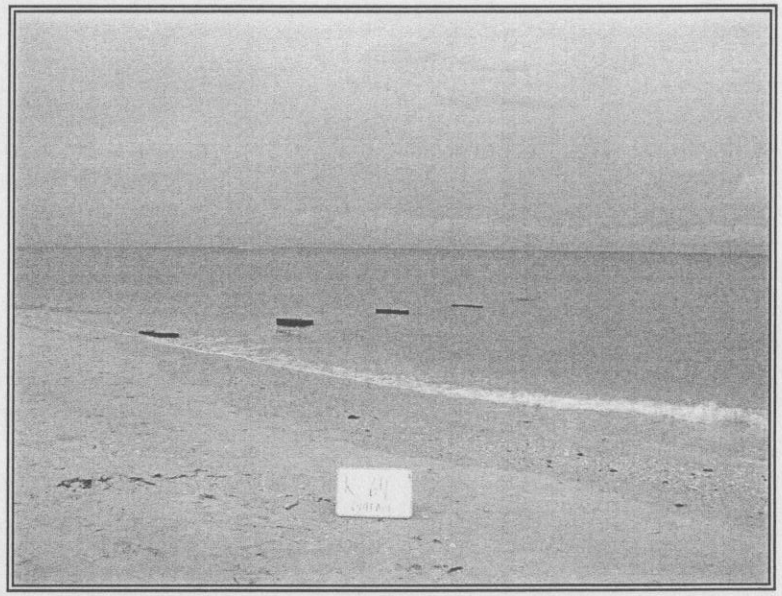
Structure: RG-17-3 / O-17-1
Location: R63+535'
Description: Single pipe extension adjacent to rock groin
Source: 8th Ave North and Gulf Shore Blvd



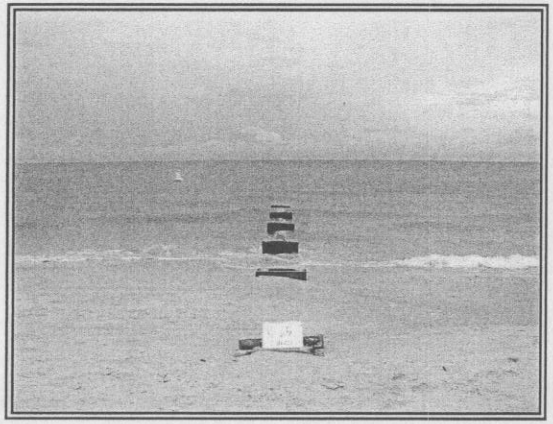




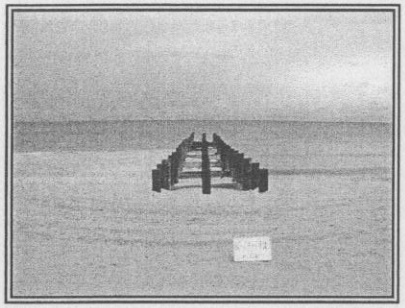
Structure: O-17-2
Location: R64
Description: Single pipe extension
Source: 7th Ave North and Gulf Shore Blvd



Structure: O-17-3
Location: R65
Description: Single pipe extension
Source: 6th Ave North and Gulf Shore Blvd

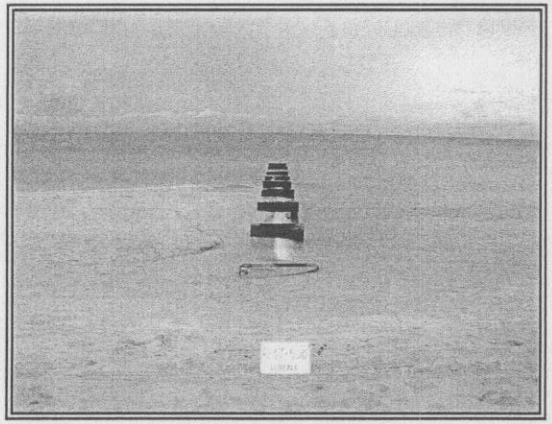


Structure: O-17-4
Location: R65+410'
Description: Double pipe extension in pile cluster
Source: Residential lots between 6th and 4th Ave North, and Gulf Shore Blvd

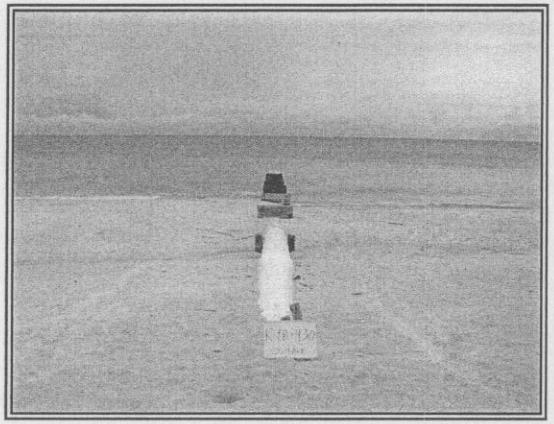


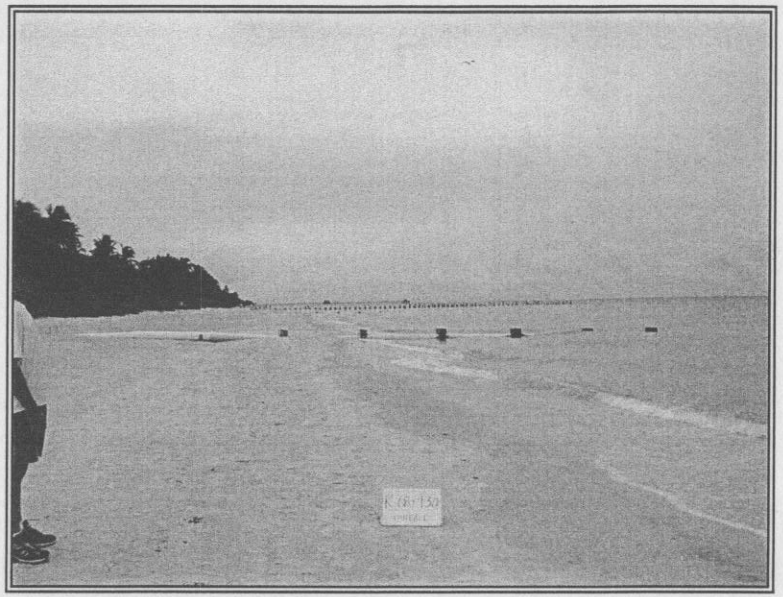
Structure: O-17-5
Location: R66+415'
Description: Single pipe extension
Source: 3rd Ave North and Gulf Shore Blvd

Structure: O-18-1
Location: R67+400'
Description: Single pipe extension
Source: 1st Ave North and Gulf Shore Blvd

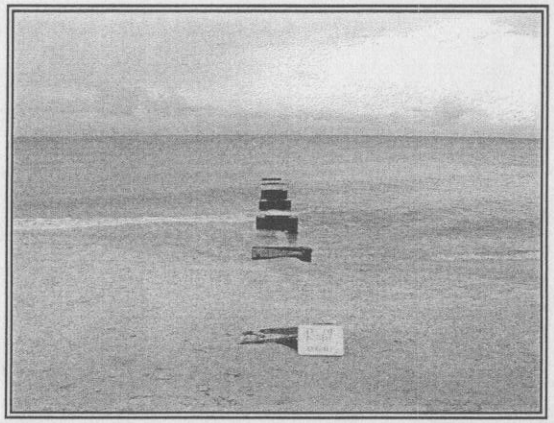


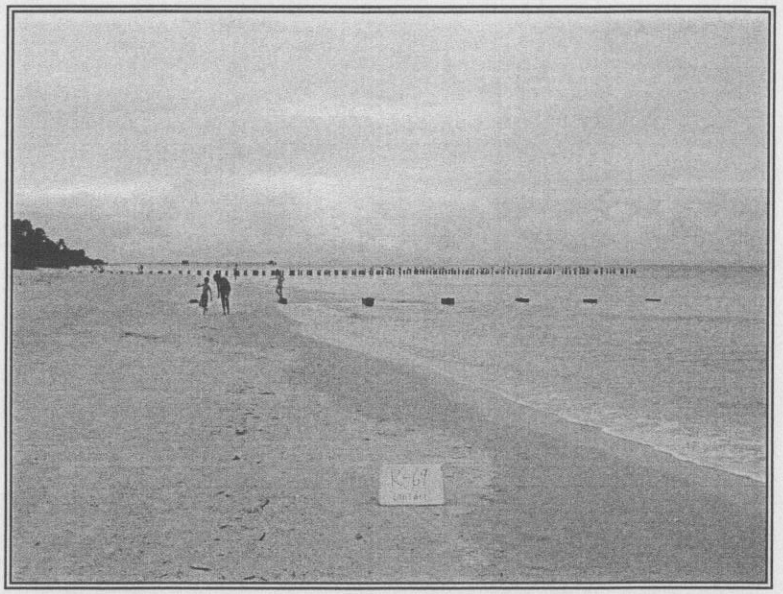
Structure: O-18-2
Location: R68+430'
Description: Single pipe extension
Source: 1st Ave South and Gulf Shore Blvd



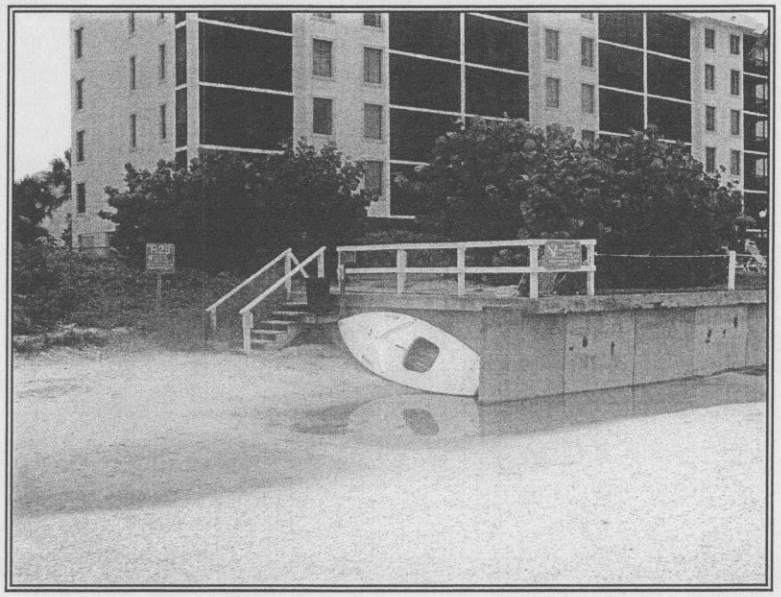


Structure: O-18-3
Location: R69
Description: Single pipe extension
Source: 2nd Ave South and Gulf Shore Blvd

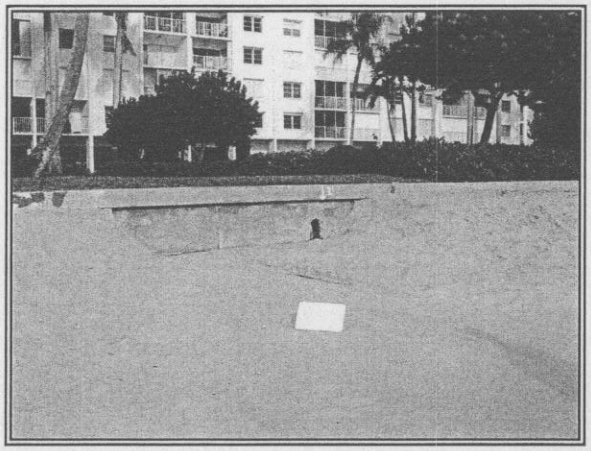


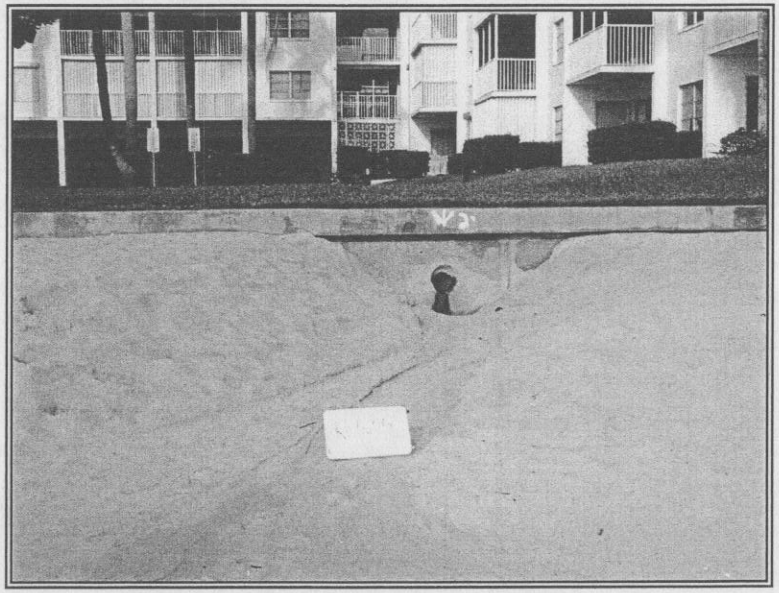


Location: Vanderbilt Beach (R28)
Description: Seawall with water filled swale
Source: Uncertain

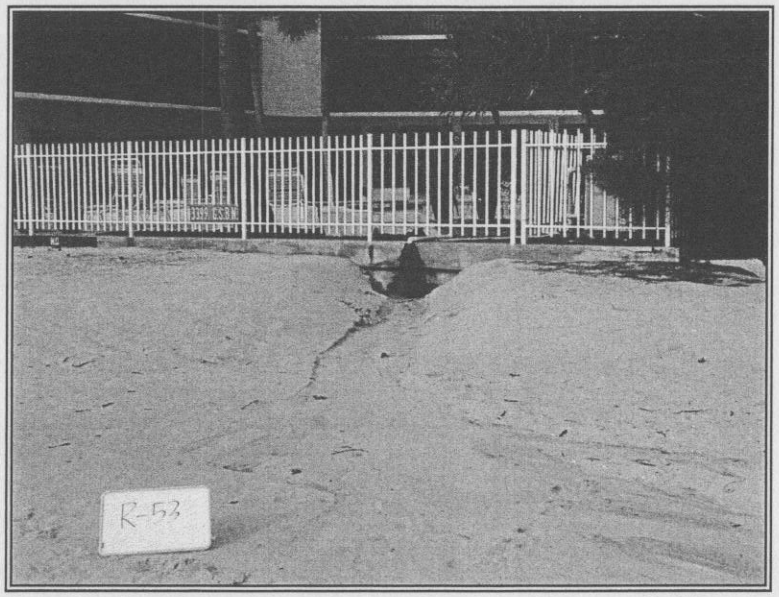


Location: Park Shore Beach (R52.5 vicinity)
Description: 2 drainage pipes in seawall with large swales
Source: Naples Continental Condominium

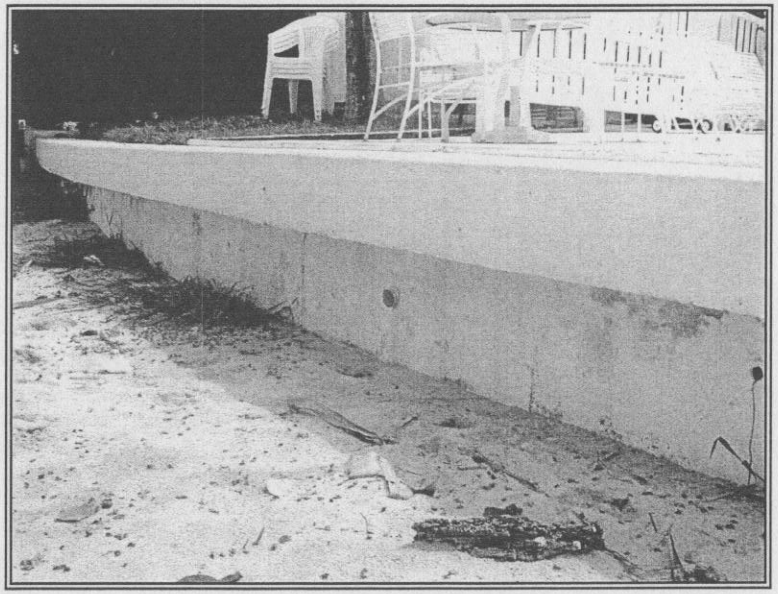




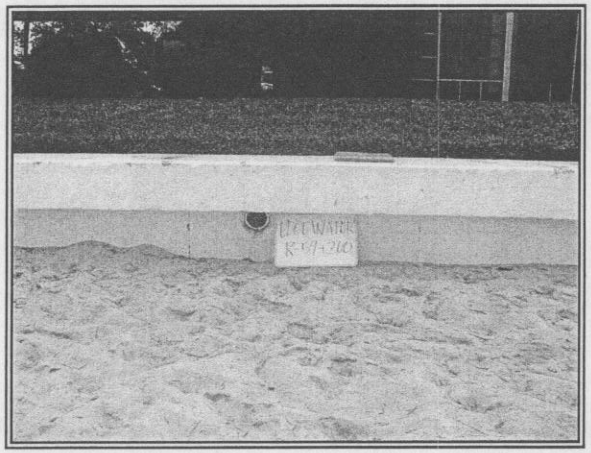
Location: Park Shore Beach (R53+200')
Description: PVC drainage pipe on seawall with swale
Source: Imperial Club Condominium

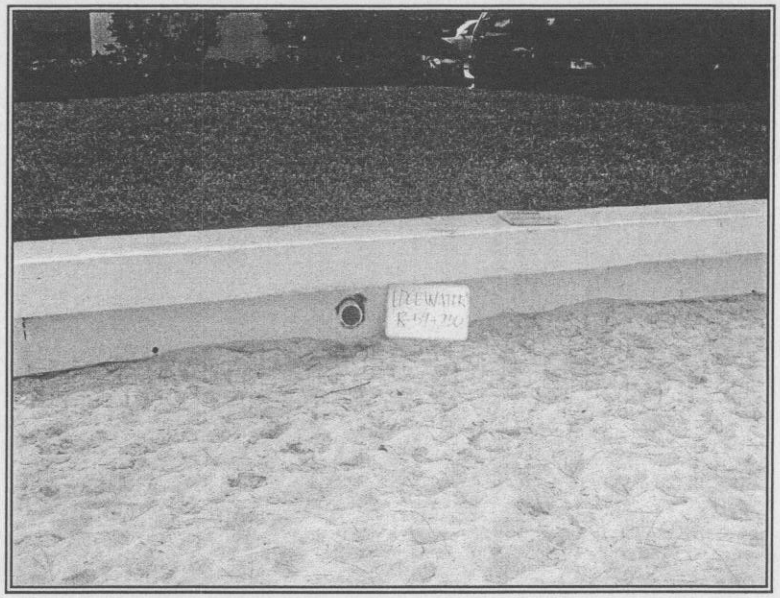


Location: Naples Beach (R59-200' vicinity)
Description: Series of small drainages in seawall
Source: Gulf Towers Condominium

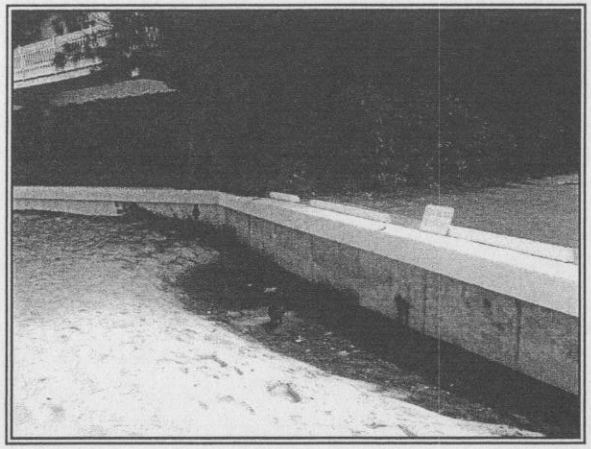


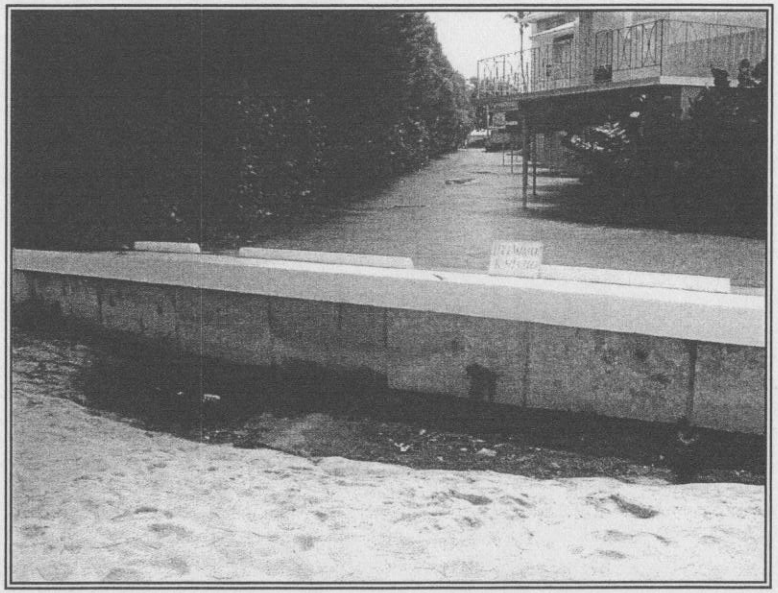
Location: Naples Beach (R59+200' vicinity)
Description: 2 drainage pipes in seawall
Source: Edgewater Beach Hotel



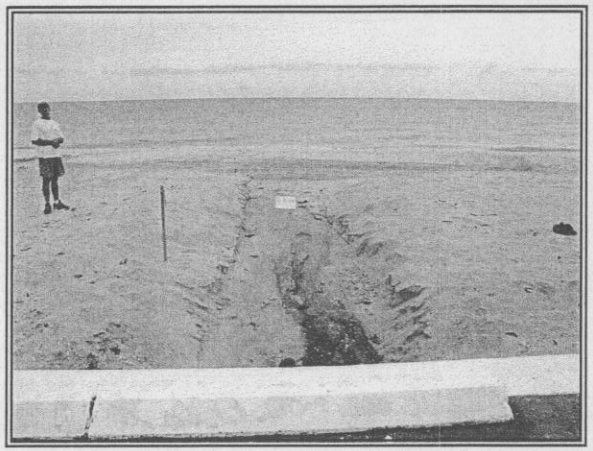


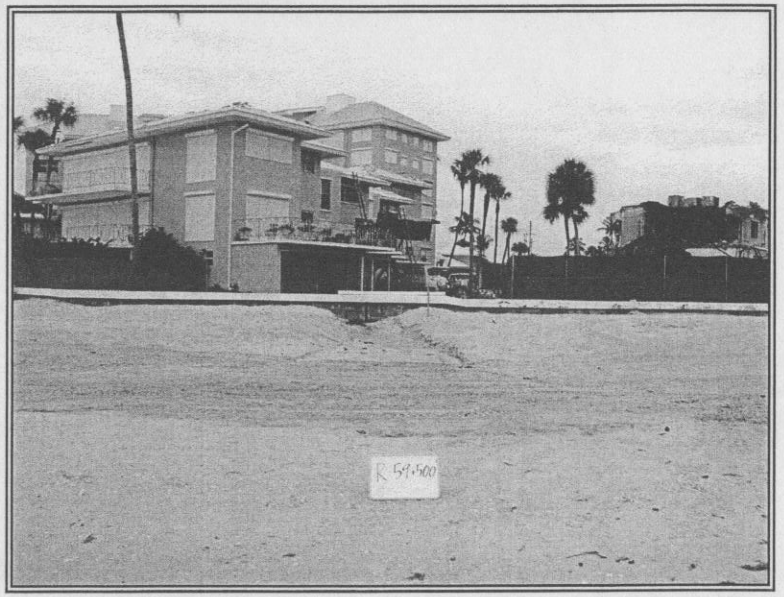
Location: Naples Beach (R59+300')
Description: Drainage pipe in seawall with water filled swale
Source: La Tour Rivage Apartments – North



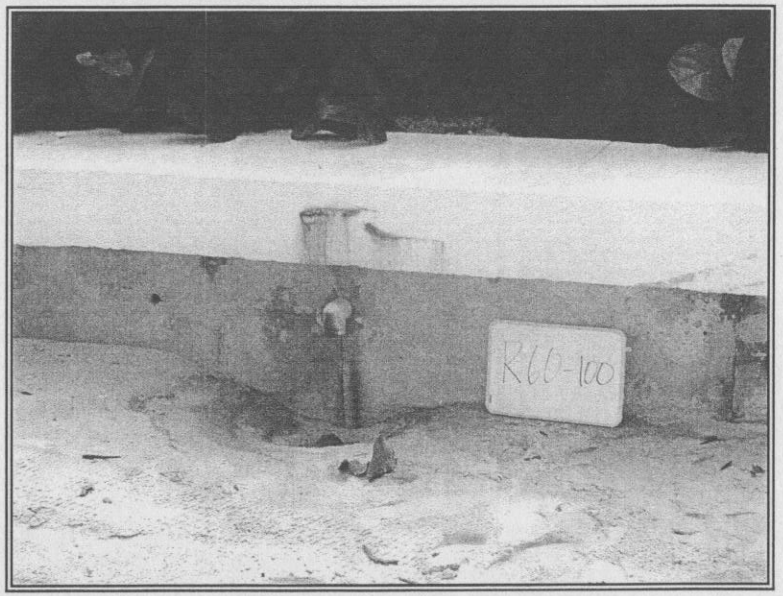


Location: Naples Beach (R59+500')
Description: Drainage pipe in seawall with large swale
Source: La Tour Rivage Apartments – South



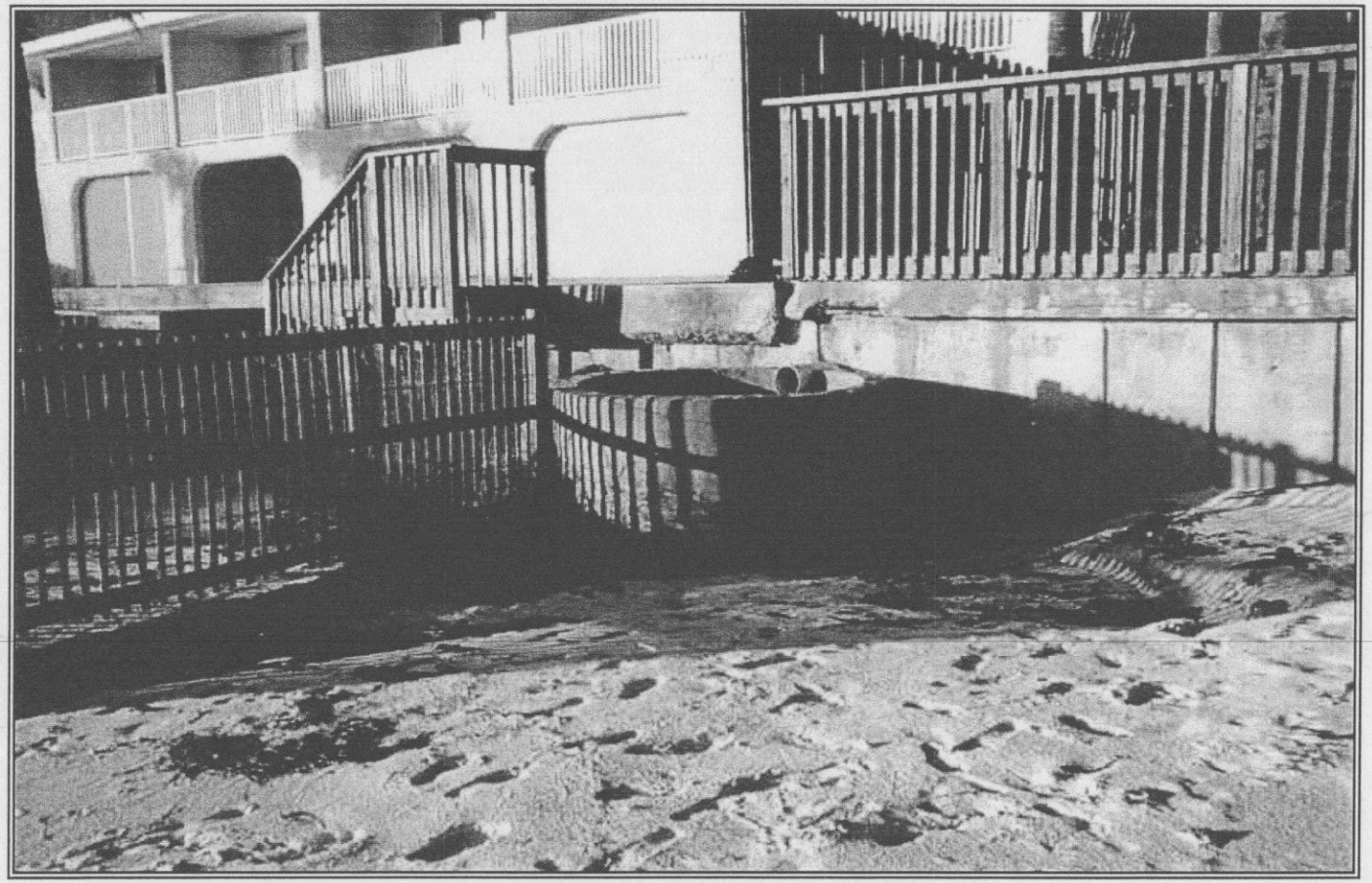


Location: Naples Beach (R60-100')
Description: PVC drainage pipe in seawall
Source: Embassy Club of Naples Condominium



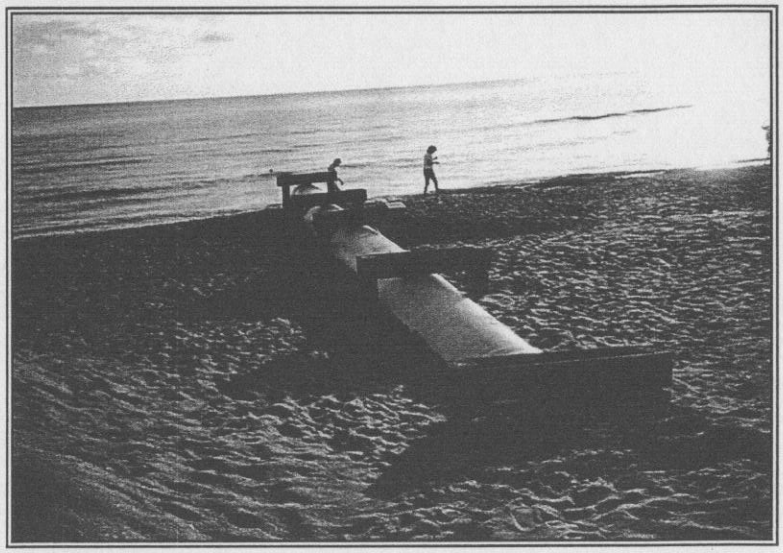
SUB-APPENDIX A-3

OUTFALL MODIFICATION ALTERNATIVES

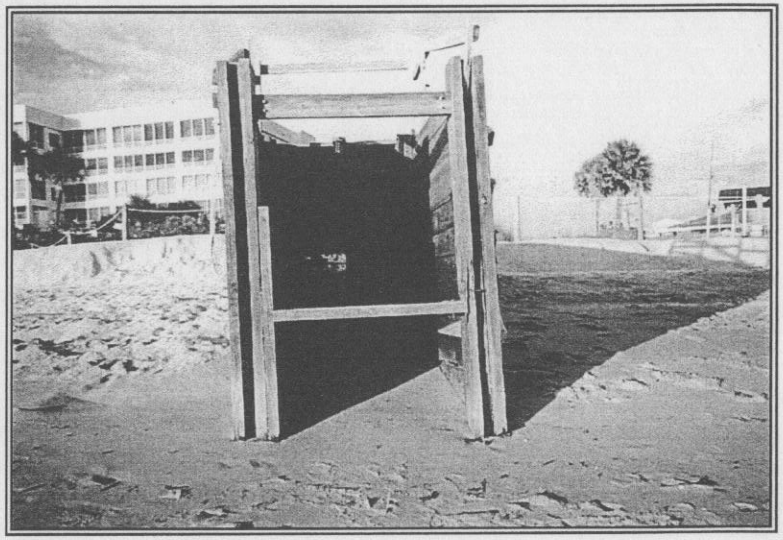


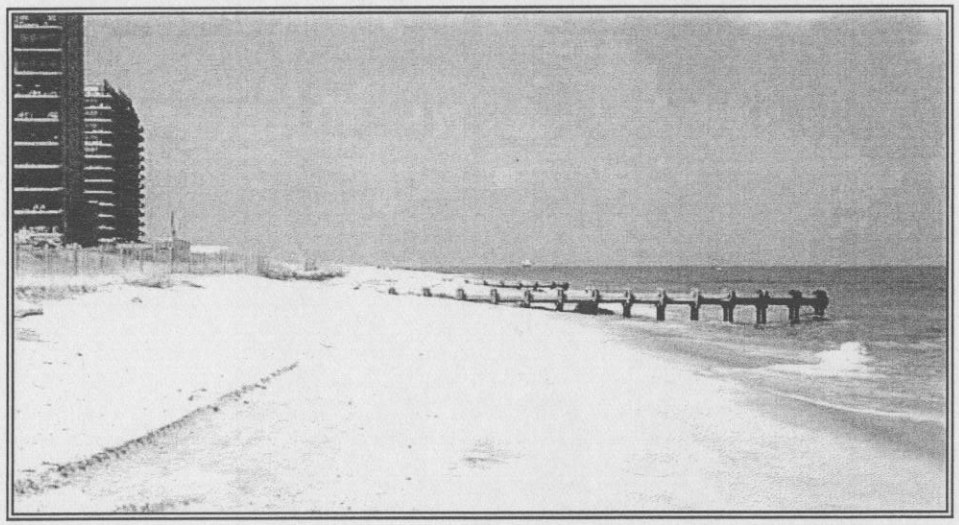
Alternative 1: Retention Chamber: Panama City Beach, FL

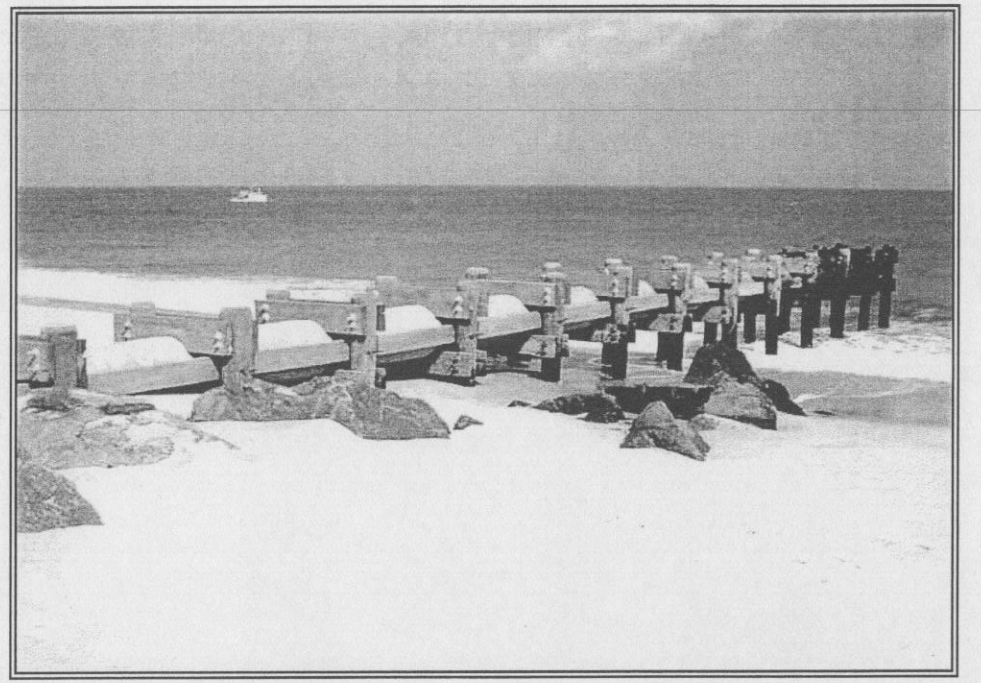
Water from typical rainfalls can be contained within a small concrete retention chamber on the beach, allowing evaporation and filtration through the surface sediment down to the water table.



Alternative 2: Beach Drainage: Venice, FL
Above: Plastic pipe outfall with discharge directed toward Gulf of Mexico.
Below: Covered wooden box culvert with open-end discharge.







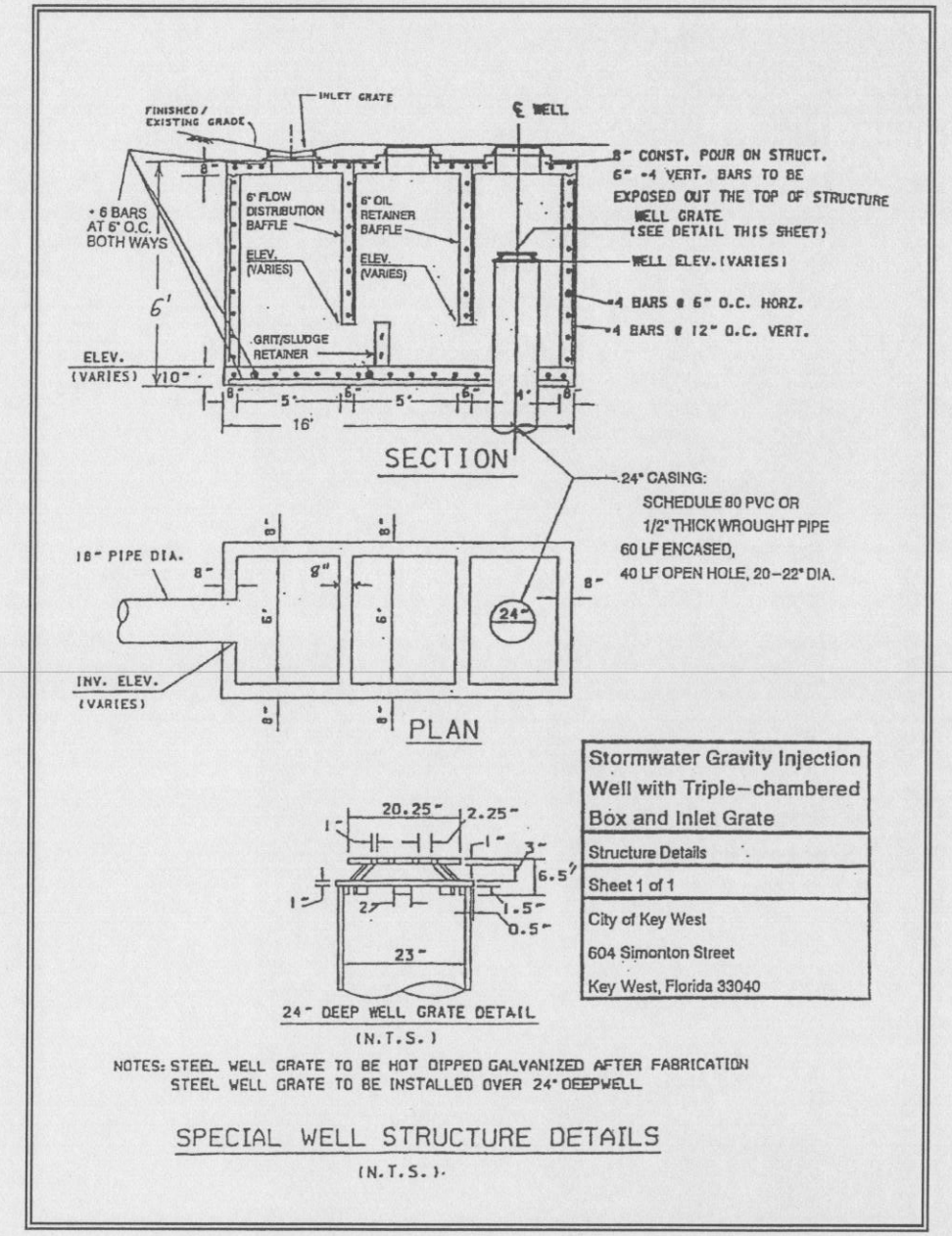
Alternative 2 (exposed): Beach Drainage: New Jersey

The system shown at left is a drainage outfall on the New Jersey coast where stormwater is discharged directly into the open ocean.

The pipeline and pile supports have been undermined by erosion leaving the system exposed and highly visible on the beach.

This system is similar to the existing system on Naples Beach, and shows how future erosion could affect aesthetics if the pipes are extended on the surface of the beach.

Lowering and burying the system with sand fill could reduce this effect because the pipeline would extend underwater and discharge further offshore.



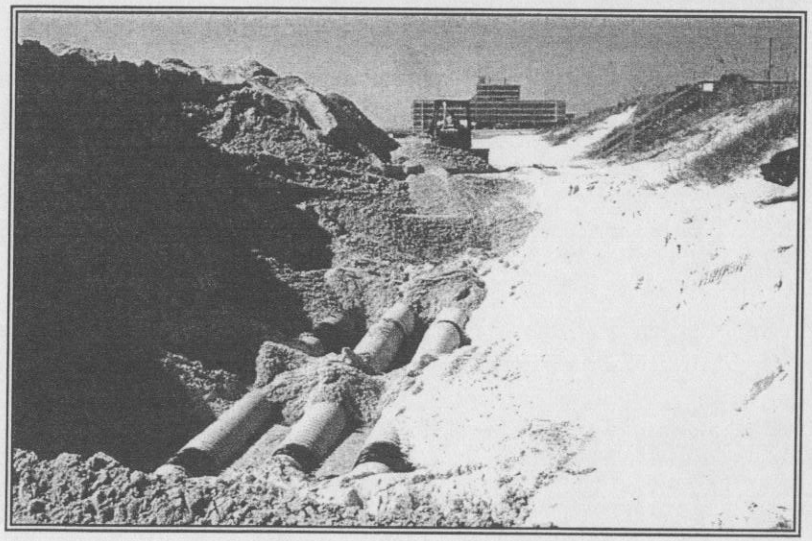
Alternative 4: Injection Well: Key West, FL

The system shown at left is a triple-chamber baffle box for a 100ft deep gravity driven injection well used by the City of Key West.

Stormwater enters through an 18" pipe or the inlet grate on the top of the primary box and passes through a series of baffles to remove floatable debris and other particulate matter that may enter the box.

The water in the third chamber is relatively free of debris and enters a 24" pipe, which "injects" the stormwater into the sub-surface aquifer.

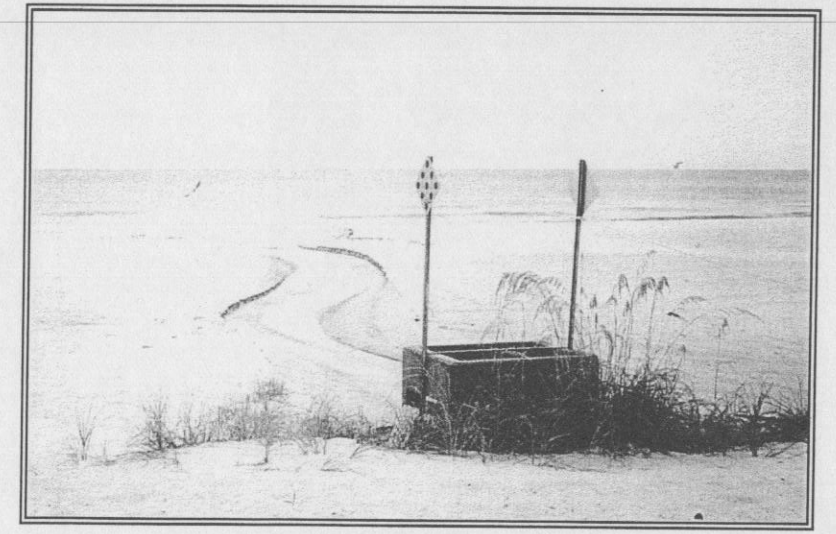
This system is gravity driven, but can be used with a pump in-line with the injection pipe to transfer the water more effectively.

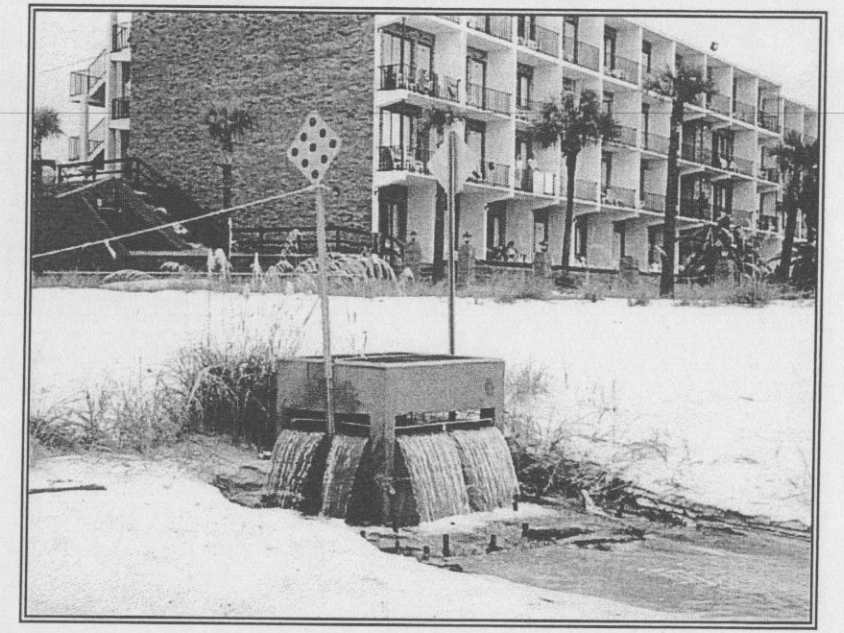


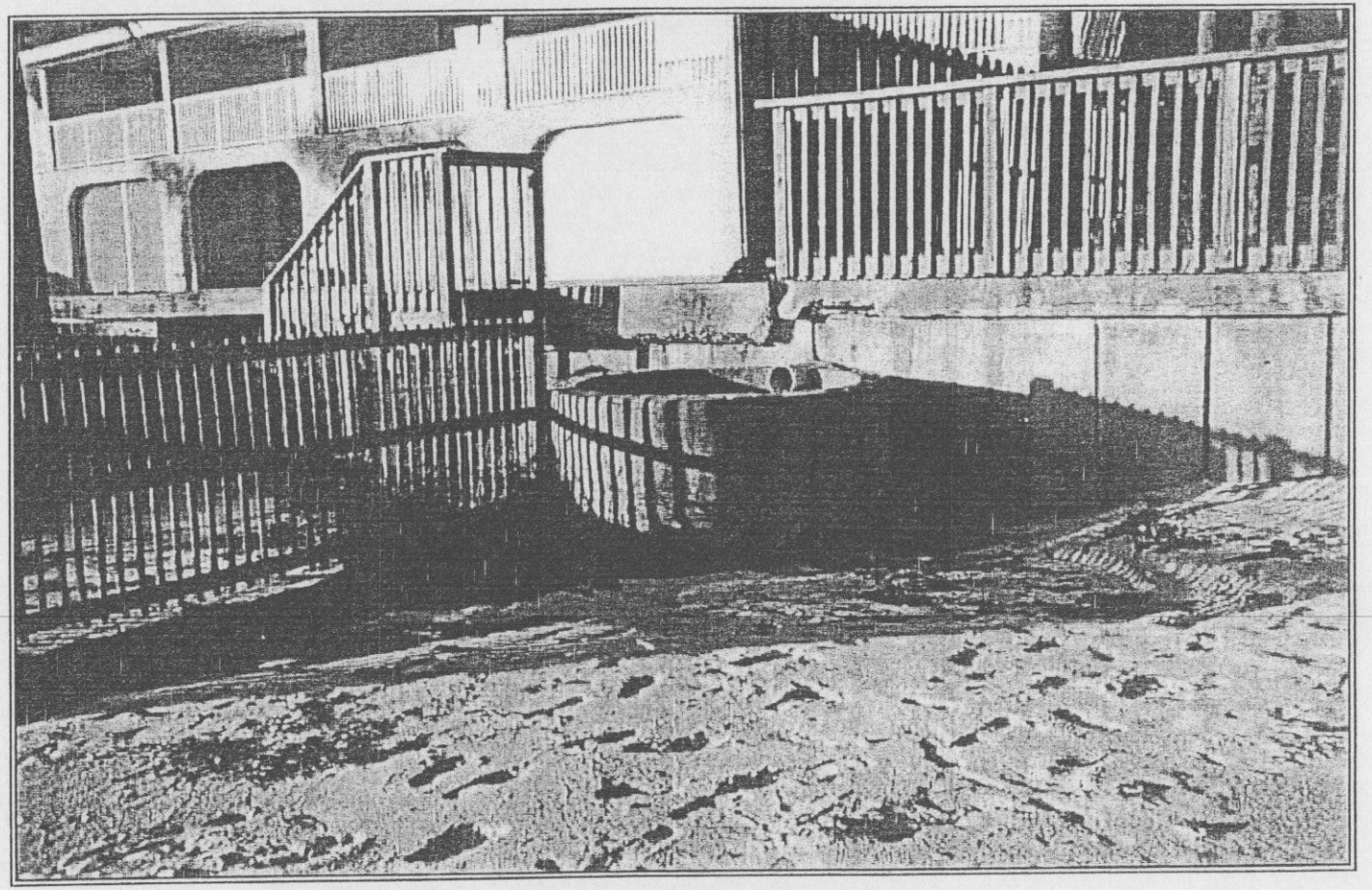
Alternative 5: Exfiltration System:
Panama City Beach, FL

Left: Perforated exfiltration pipes are wrapped in geotextile fabric and installed beneath the beach.

Below: Functioning outfalls overflow into drainage swales leading to Gulf of Mexico in times when the design storm is exceeded.

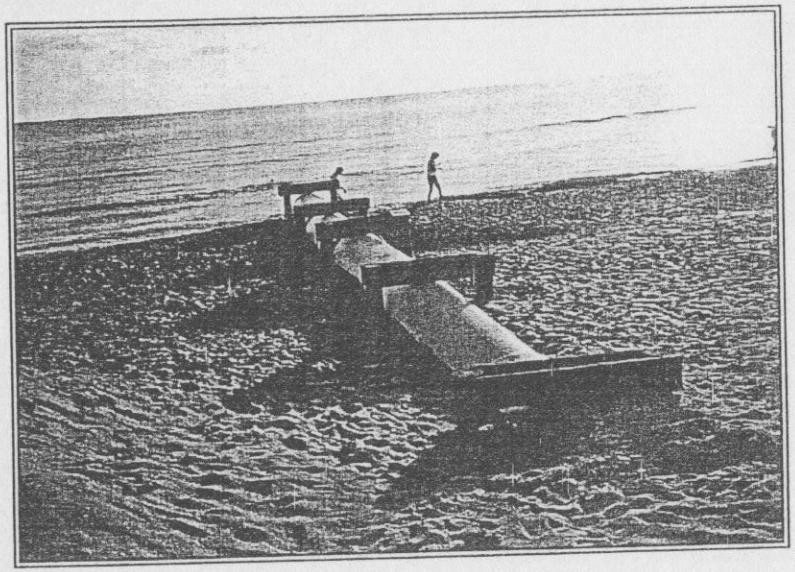






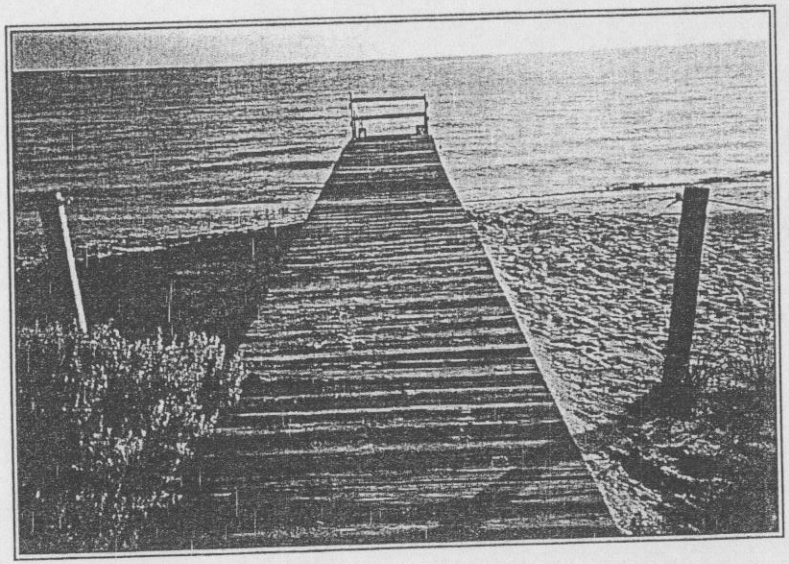
Alternative 1: Retention Chamber: Panama City Beach, FL

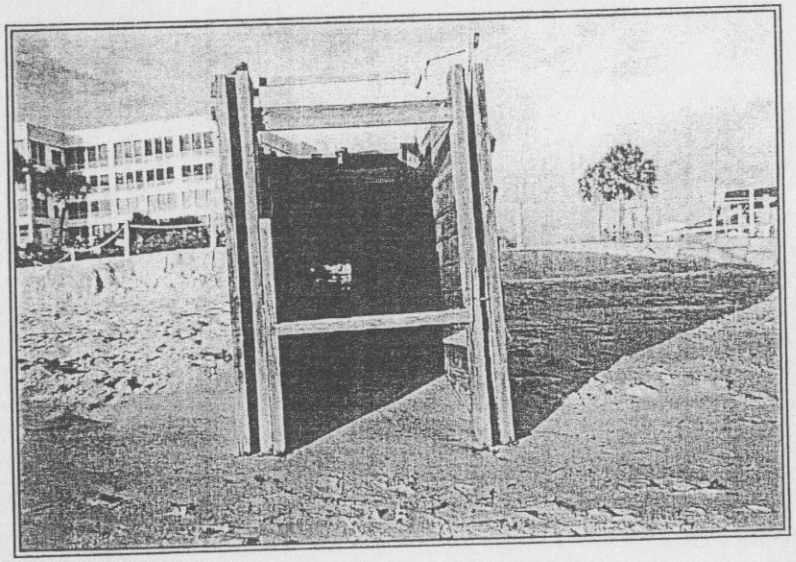
Water from typical rainfalls can be contained within a small concrete retention chamber on the beach, allowing evaporation and filtration through the surface sediment down to the water table.



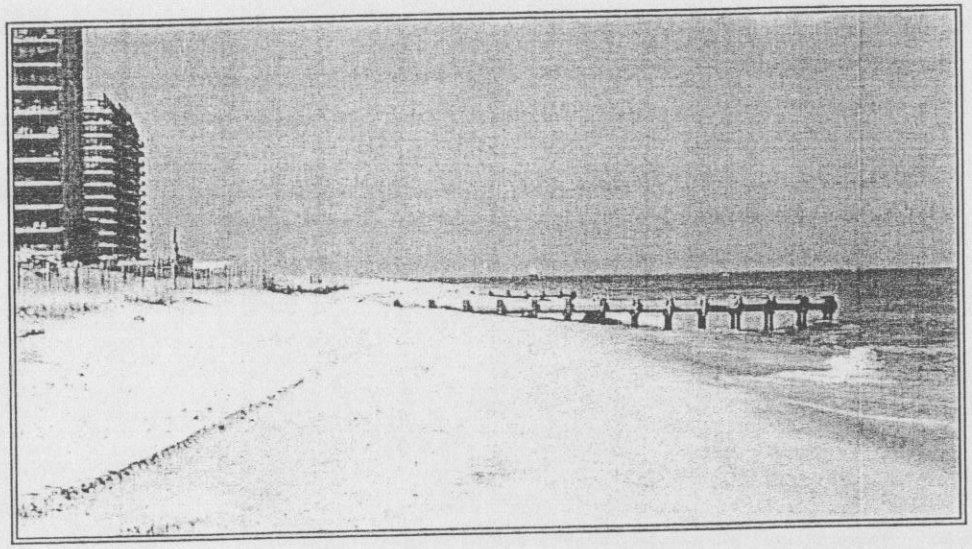
Alternative 2: Beach Drainage: Venice, FL
Above: Plastic pipe outfall with discharge directed toward Gulf of Mexico.
Below: Covered wooden box culvert with open-end discharge.

A-3.2





37



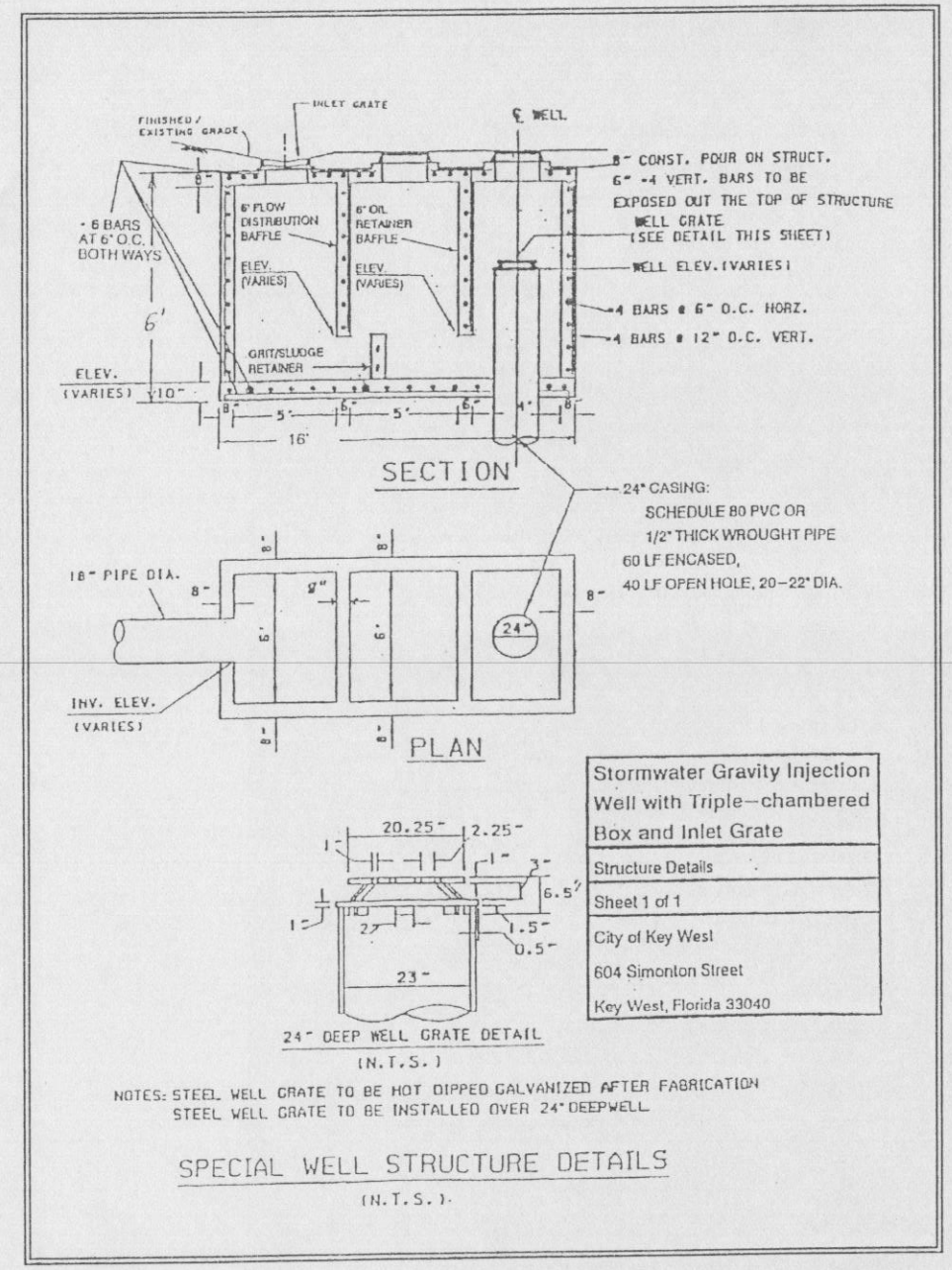
Alternative 2 (exposed): Beach Drainage: New Jersey

The system shown at left is a drainage outfall on the New Jersey coast where stormwater is discharged directly into the open ocean.

The pipeline and pile supports have been undermined by erosion leaving the system exposed and highly visible on the beach.

This system is similar to the existing system on Naples Beach, and shows how future erosion could affect aesthetics if the pipes are extended on the surface of the beach.

Lowering and burying the system with sand fill could reduce this effect because the pipeline would extend underwater and discharge further offshore.



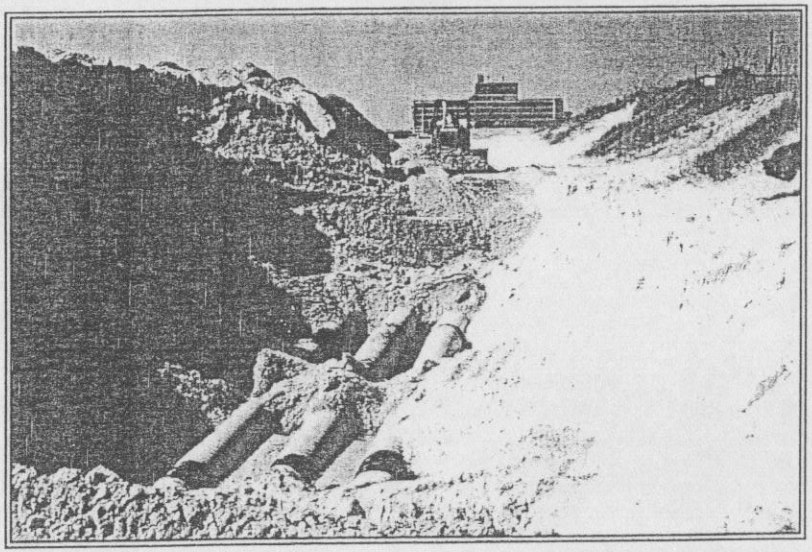
Alternative 4: Injection Well: Key West, FL

The system shown at left is a triple-chamber baffle box for a 100ft deep gravity driven injection well used by the City of Key West.

Stormwater enters through an 18" pipe or the inlet grate on the top of the primary box and passes through a series of baffles to remove floatable debris and other particulate matter that may enter the box.

The water in the third chamber is relatively free of debris and enters a 24" pipe, which "injects" the stormwater into the sub-surface aquifer.

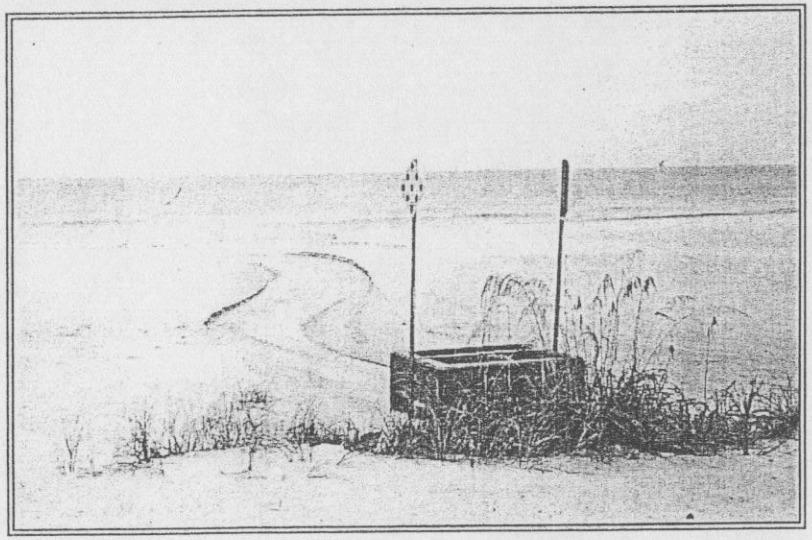
This system is gravity driven, but can be used with a pump in-line with the injection pipe to transfer the water more effectively.

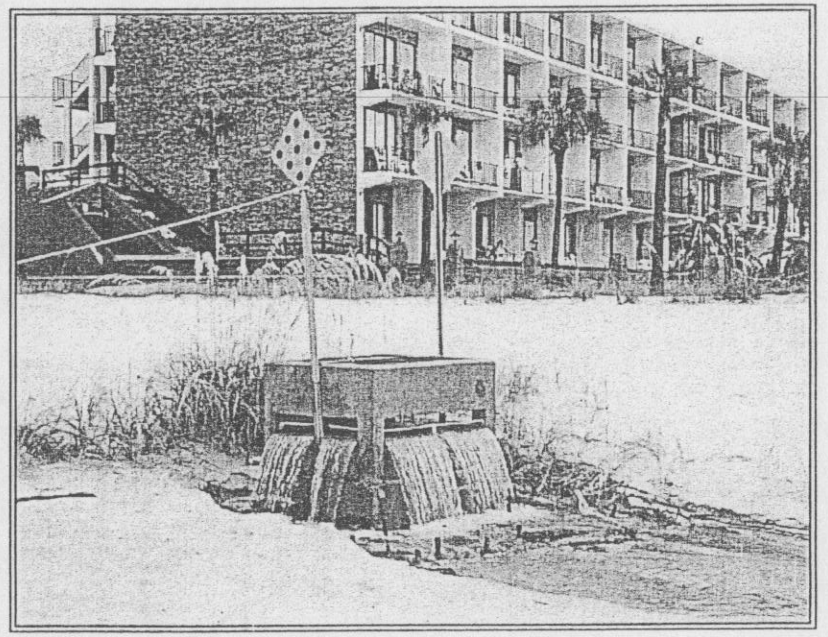


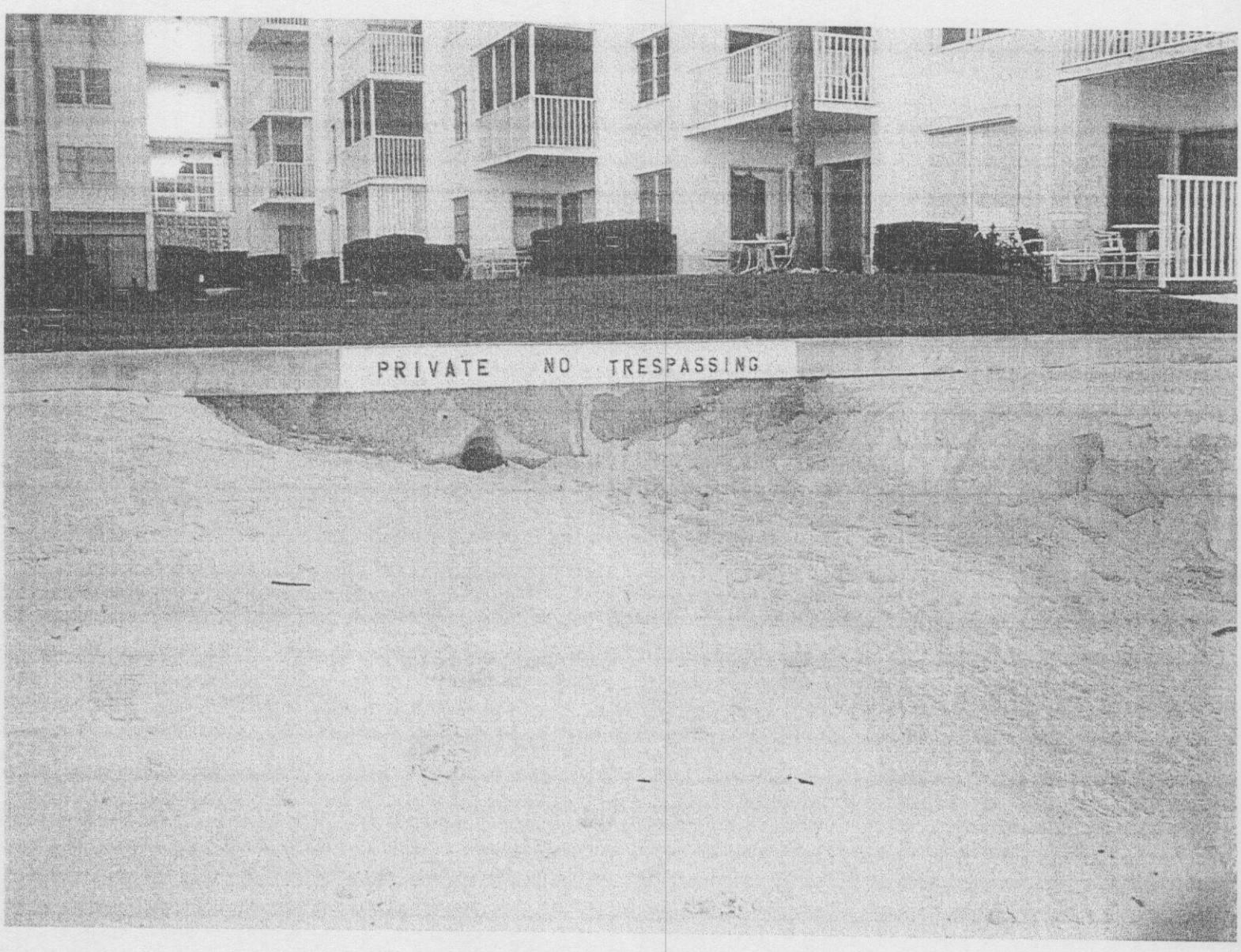
Alternative 5: Exfiltration System:
Panama City Beach, FL

Left: Perforated exfiltration pipes are wrapped in geotextile fabric and installed beneath the beach.

Below: Functioning outfalls overflow into drainage swales leading to Gulf of Mexico in times when the design storm is exceeded.






PRIVATE NO TRESPASSING

From:	**"Ron Pennington" <betty.ronpenn@comcast.net>**
To:	**"bob lee" <manager@naplesgov.com>**
Copies to:	**"john sorey" <soreysan@aol.com>, "david lykins" <dlykins@naplesgov.com>, "jon staiger" <jstaiger@naplesgov.com>, "ronald hovell" <ronaldhovell@colliergov.net>**
Subject:	**beach storm water outfalls/beachfront easements**
Date sent:	**Thu, 8 Apr 2004 22:21:02 -0400**

Bob, as a part of our discussion of City/County beach renourishment update
at today's CAC meeting the two subject items of City of Naples responsibility were matters of concern. The storm water outfalls, as addressed by the County's letter to Kevin Rambosk of January 24, 2003, and
of our recent discussion of the need, has apparently received no attention. At least not as known by Dr. Staiger or Mr. Hovell. It is necessary that action regarding beach fill around structures be included
in our contract specifications, and in the case of private outfalls determinations must be made of required action to prevent erosion of the
renourished beach originating from outfalls. It is requested we meet on
this matter soonest, including any of your staff as may be desired (suggest Dr. Jon as most knowledgeable of historic efforts) and including
Mr. Hovell, with the objective of establishing a plan-of-action and milestones. Councilman Sorey may wish to attend, which will require an
advertised public meeting since we both now serve on CAC. The beachfront
easements are required for us to obtain the renourishment project permits.
Dr, Staiger stated he received two boxes of the forms to be mailed, last
week. He hoped to get them out some time next week but wasn't sure

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he
could make it because of other priority workload and indicated he needed
help. Following getting the easement requests to the property owners, we
wish to schedule a town meeting at city hall for the public info
consultants to advise our residents of what will be occuring in the
restoration process and to advise of the need and procedures for the
easements. If the easements can be sent out next week we would like to
sched the town meeting for the following week. Dr. Staiger is to check
availability of city hall. >From the CAC we are trying to fit the many
pieces together to get this project moving on schedule. Your assistance is
greatly appreciated.....Ron

From:	**manager@naplesgov.com**
To:	**"Ron Pennington" <betty.ronpenn@comcast.net>**
Date sent:	**Fri, 09 Apr 2004 19:51:47 -0400**
Subject:	**Re: beach storm water outfalls/beachfront easements**
Send reply to:	**citymanager@naplesgov.com**
Copies to:	**dlykins@naplesgov.com, dmercer@naplesgov.com, rwallace@naplesgov.com, jstaiger@naplesgov.com**
Priority:	**normal**

Thank you Ron.

Dave,

Please have Dr. Staiger immediately schedule a meeting with Dan Mercer,
Ron Wallace, and Mr. Hovell to discuss the outfall requirements that Mr.
Pennington references below. Given Mr. Pennington's knowledge in this
area, I would like him to be invited to this meeting as well. As you recall, we discussed the response given to the CAC this week and I know
you are following up on that with Dr. Staiger. In addition, I understand the beachfront easements are going out on Monday. Finally, establishing a
timeline, as recommended by Mr. Pennington, should also be part of the
aforementioned meeting. Thanks for handling Dave. Bob

On 8 Apr 2004 at 22:21, Ron Pennington wrote:

> Bob, as a part of our discussion of City/County beach renourishment
> update at today's CAC meeting the two subject items of City of Naples
> responsibility were matters of concern. The storm water outfalls, as
> addressed by the County's letter to Kevin Rambosk of January 24, 2003,

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> attention. At least not as known by Dr. Staiger or Mr. Hovell. It is
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> including Mr. Hovell, with the objective of establishing a
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> of the forms to be mailed, last week. He hoped to get them out some time
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> next week we would like to sched the town meeting for the following
> week. Dr. Staiger is to check availability of city hall.
> >From the CAC we are trying to fit the many pieces together to get
> this project moving on schedule. Your assistance is greatly
> appreciated.....Ron

Subject:	**Drainage meeting**
Date sent:	**Tue, 4 May 2004 15:38:37 -0400**
From:	**"Steve Keehn" <Skeehn@coastalplanning.net>**
To:	**<jstaiger@naplesgov.com>**
Copies to:	**"Thomas Campbell" <tcampbell@coastalplanning.net>**

Jon

Thursday May 13 in the morning is fine for a meeting on beach drainage.

Stephen Keehn, PE

Coastal Planning & Engineering Inc.

2481 NW Boca Raton Blvd.

Boca Raton, Fl 33431

Ph 561-391-8102 (Fax 9116)

skeehn@coastalplanning.net

S/W outfall issue

28 IV '04

Dan, Ran, Ron P,
Dave, Jan Munro

City drains –
Private drains –

→ CPÉ @ MBTDAC 18 V

↓

Propsd – meeting – whof 11th

public
pvt pmp

Subject: **RE: Drainage meeting**
Date sent: **Tue, 11 May 2004 08:51:14 -0400**
From: **"Steve Keehn" <Skeehn@coastalplanning.net>**
To: **<jstaiger@naplesgov.com>**

I'll be there.

Stephen Keehn

-----Original Message-----
From: jstaiger@naplesgov.com [mailto:jstaiger@naplesgov.com]
Sent: Tuesday, May 11, 2004 8:59 AM
To: Steve Keehn
Subject: RE: Drainage meeting

Steve:
How about 1000 here at my office? I can send you the directions - attached.
Jon

On 11 May 2004 at 8:39, Steve Keehn wrote:

Jon

Has any decision been made about the time and place for the meeting.

Stephen Keehn

-----Original Message-----
From: Steve Keehn

55

Sent: Tuesday, May 04, 2004 3:39 PM
To: Jon Staiger (E-mail) (jstaiger@naplesgov.com)
Cc: Thomas Campbell
Subject: Drainage meeting

Jon

Thursday May 13 in the morning is fine for a meeting on beach drainage.

Stephen Keehn, PE

Coastal Planning & Engineering Inc.

2481 NW Boca Raton Blvd.

Boca Raton, Fl 33431

Ph 561-391-8102 (Fax 9116)

skeehn@coastalplanning.net

SC

Subject: **Naples Outfall Proposal**
Date sent: **Sun, 30 May 2004 11:39:45 -0400**
From: **"Steve Keehn" <Skeehn@coastalplanning.net>**
To: **<jstaiger@naplesgov.com>**
Copies to: **<RonaldHovell@colliergov.net>**

Jon

We had a meeting in Tallahassee on May 26, 2004 to discuss RAI @ for the beach project. The outfall issue came up based on a citizen's complaint and probably my questions on repairing the existing outfalls. The FDEP needs to review the issue, and is not ready to provide any guidance or make any permit conditions for the Renourishment Project. The recent addition to the law on drainage is impacting their position. I don't believe I can prepare a responsive proposal on this work prior to receiving FDEP guidance.

Stephen Keehn, PE

Coastal Planning & Engineering Inc.

2481 NW Boca Raton Blvd.

Boca Raton, Fl 33431

Ph 561-391-8102 (Fax 9116)

skeehn@coastalplanning.net

5)

Beach Drains

(01)

Beach Drainage Issues

13 May '04

Ron P, Steve Keehn, JCS

Ron P -

Port maint is big issue

One gen. permit for all?

City pay? get reimbursed

Whats allowable?

Existing drainage structures - OK - repairs, etc.

Most of beach 'll be built off seawalls, not up to them

Relat of ECL + drains

Can we make upland owners pay? Ck Bob Pitt

Look @ permit dwgs for project vs. ECL

2-4' dn is saturated zone -

coconut fiber mat - w perm splash apron

Aesthetics vs. safety vs drainage

58

Propsal - permit, design (prel)

02

Reviewers Vlad now, Cheryl Miller before —
↖ coral reef specialist

Project

(T-1)
~$2M more if vol equal to use Tom's Hill vs
Tom's Hill + N5

already built into budget (the $2M)

DEP is set on a 3rd RAI ?
US FWS — BO ≈ August?

Subject:	**RE: Drainage across beach**
Date sent:	**Wed, 9 Jun 2004 17:54:16 -0400**
From:	**"Steve Keehn" <Skeehn@coastalplanning.net>**
To:	**<jstaiger@naplesgov.com>**
Copies to:	**<RonaldHovell@colliergov.net>, "cox_s" <ShaneCox@colliergov.net>**

Jon

I talked briefly with James LaGrone from FDEP. He is new, and is taking over the outfall issues within FDEP BBCS. He is reviewing the outfall and groins based on existing FDEP rules from 161 and 62B41 series. Their determination will be part of the next correspondence from FDEP, and he was not able to tell me what it would say. He is looking at the safety, beach and turtle impact issues of the outfalls, and how they impede alongshore pedestrian traffic.

The newer NPDPES issue is related to the Clean Ocean Act, which he is not working on. This issue is being reviewed by Marty Seeling, and he was not aware if it would have any impact on the project.

Stephen Keehn

-----Original Message-----
From: jstaiger@naplesgov.com [mailto:jstaiger@naplesgov.com]
Sent: Tuesday, June 08, 2004 11:21 AM
To: Steve Keehn
Subject: Drainage across beach

Steve:

In your email a week ago you referenced some additional DEP rules concerning drainage. What were you referencing? Ron Pennington and I were wondering just what the rules are now.

Thanks, Jon

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[This E-mail scanned for viruses by Declude Virus]

Subject:	**FW: LaTour Rivage**
Date sent:	**Mon, 28 Jun 2004 12:26:53 -0400**
From:	**"HovellRonald" <RonaldHovell@colliergov.net>**
To:	**"Jon Staiger (E-mail)" <JStaiger@naplesgov.com>**
Copies to:	**"Madsen_a" <AlMadsen@colliergov.net>, "cox_s" <ShaneCox@colliergov.net>**

Jon,

Food for thought as you're working the stormwater outfall issues.

Ron
-----Original Message-----
From: Madsen_a
Sent: Monday, June 28, 2004 11:13 AM
To: HovellRonald
Subject: LaTour Rivage

We may want to include this information in the bid documents for the nourishment. Very few people know the outfall pipes are located below this
rock groin. Note the piling and bracing at the west end of the rock; this is where the pipe is (or was). The exposed "reinforced concrete pipe" is/was abandon.

Photo #3522 this is and abandon outfall pipe left from before the 1995 nourishment, it was believed that it would always be buried and never removed. The new (1995) outfall pipes are below the rocks. The Mansions
Condo Association paid to have the pipes covered by the rocks. I assume
the Mansions will be charged for the corrective to the pipe action during
the next nourishment.