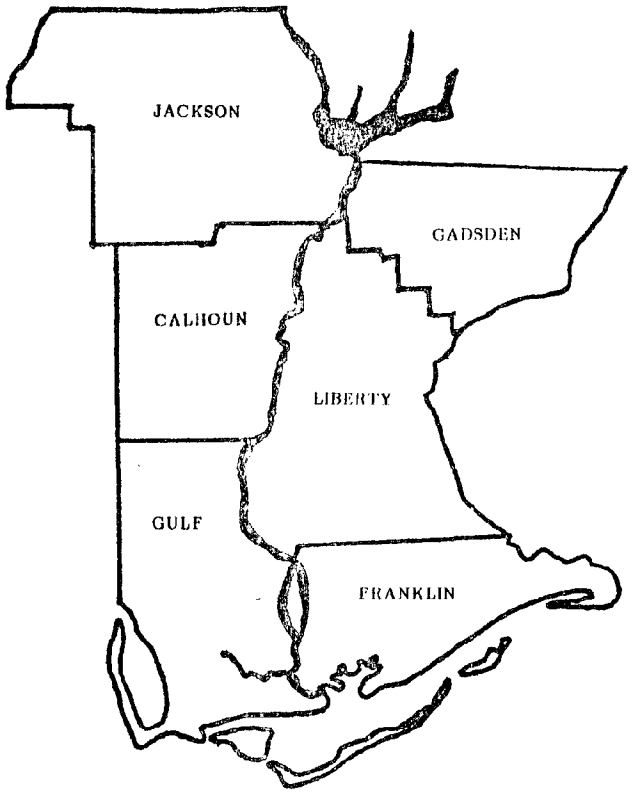
Attachment 1

OIL SPILL RESPONSE MANUAL

FOR THE APALACHICOLA RIVER

COASTAL ZONE

INFORMATION CENTER



Apalachee Regional Planning Council

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COASTAL ZONE INFORMATION CENTER

IF YOU KNOW OF AN OIL SPILL

CALL: (800) 424-8802

OIL SPILL
RESPONSE MANUAL
FOR THE
APALACHICOLA RIVER

PREPARED BY THE
APALACHEE REGIONAL PLANNING COUNCIL
March 1984

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Much of the information in this manual was adapted from the South Florida Oil Spill Response Handbook, the State of Florida Oill Spill Response Hankbook, and the Florida Coastal Pollutant Spill Contingency Plan. The Technical Report prepared as a part of this study by Research Planning Institute was the source of much of the information used in the fourth section.

Special thanks are due to the many individuals who contributed to the form, substance, and review of drafts of this Manual.

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Blountstown, Florida 32424

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ABOUT THIS MANUAL

This Manual is intended to be a practical aide to law enforcement officers, local officials, and others who live along the Apalachicola river or who are concerned with its protection. It is not a technical manual for oil spill experts, but it does put information in the hands of people who may be among the first to see or hear of a spill. By knowing whom to call a quicker response can be achieved and damage lessened.

The first section (white pages) is an "Action Summary" which tells whom to call, what to tell them, what to do while waiting for help, and how the state and federal response to an oil spill is organized.

The second section (yellow pages) is a "Directory" listing all of the federal, state, and local officials who may be involved in responding to an oil spill.

The third section (green pages) is a discussion of "Oil Spills and the Law," including jurisdictions, liability and claims information, and a summary of state and federal laws.

The fourth section (pink pages) is a discussion of "Oil and The Apalachicola River System," including ecological and commercial considerations.

The fifth section (blue pages) is a series of nineteen "Environmental Sensitivity Index Maps" covering the entire length of the Apalachicola River.

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ACTION SUMMARY

BEFORE THE SPILL: HOW LOCAL PEOPLE CAN HELP

Oil spills are a potentially serious problem in the Apalachicola River. The flow of the river, the extensive flood plain, and the high degree of environmental sensitivity of much of the valley make it imperative that a spill should be stopped and contained as rapidly as possible after it occurs.

Local officials and residents along the river valley are generally not oil spill experts, of course, but with a little bit of common sense and some preparation, they can play an important role in keeping the damage to a minimum.

* Be familiar with the material in this manual; it can save you time in the event of a real emergency.

* All oil spills should be reported immediately! Don't wait until it gets out of hand.

* Know your territory. If you know the local roads and locations of boat ramps, you can give useful guidance to oil spill responders.

UPON DISCOVERY OF AN OIL SPILL

Get Help!

If you see or hear of an oil spill on the river, the first thing you should do is to get help. All oil spills must be reported.

Call: (800) 424-8802

This is the National Emergency Response Center; it is a toll free number an there is always someone there. Once they hear from you they will begin a series of phone calls alerting various state and federal officials about the emergency.

If for any reason you cannot get through to that number, or if you want to make extra certain that the right people learn about the oil spill, there are other numbers you can call which will also trigger a response.

(904) 488-1320	Florida Emergency Center (24 hours; call collect and leave your name and number - they will call you back)
(800) 342-1829 (904) 488-5757	Florida Department of Natural Resources (24 hours: this is the agency which will send out the Marine Patrol)
(904) 488-0190	Florida Department of Environmental Regulation (daytime - other times call Emergency Center)
(205) 690-2286	U.S. Coast Guard (24 hours)
(404) 881-4062	Environmental Protection Agency (24 hours)

WHAT TO TELL THEM ON THE PHONE

When you get through to someone there is a series of questions which will help them in their response. If you don't know the answers to all of these questions, or even most of them, it is better to give some information than none at all.

* Tell who you are and where you are calling from. If you are not the one who discovered the spill, give them the name of the person who did.

* Where is the spill? What is the mile marker number?

* What time was the spill discovered? (Or when did you learn of it?)

* What is the source of the spill? Is there a vessel nearby? Does it have an identification number or other markings?

* Can you tell what might have happened to cause the spill? (e.g., a collision, a barge gone aground, a ruptured tank, etc.)

* Do you know what type of oil (or other substance) has been discharged? Can you tell how extensive the spill is?

* Have there been any injuries?

* What are the weather conditions and river conditions in the vicinity?

* Has any action been taken thus far to control the spill? If so, what, and by whom?

WHAT TO DO WHILE WAITING FOR HELP

Once you have made your phone calls and given a full report of everything you know so far, take a good look at the situation.

If you are actually at or near the spill site, there may be some steps you can take right away that will stop or limit the spill. Shutting off a leaking valve, ceasing to pump through a ruptured fuel line, or plugging a leak are examples of simple and obvious actions which might get overlooked in moments of great excitement.

You might also be able to protect some of the river shore if the spill is drifting downstream. Placing a log or brush barrier at the mouths of small streams or at the edge of low vegetated areas might prevent oil from getting into those more sensitive areas. Similarly, there might be an opportunity to contain small pools of oil with sandbags under certain circumstances.

It is true that containment of a really serious spill will require more than hastily cut brush or some sandbags, but don't forget that a little ingenuity can sometimes go a long way.

One thing that can be done even by those who are not at the site of the spill is to take notes. Notes taken on the scene may be very valuable later on to determine what actually happened and who is to blame. Don't assume that someone else is doing it.

Your notes should include all of the points you covered when you phoned in your report, but also include names of witnesses besides yourself if there are any. Note the time at which any new developments occur or when new information is reported to you by someone else.

Whenever the federal or state representative arrives on the scene, offer them your notes; this will save them time in getting oriented to the situation. Remember to put your own name and phone number on the notes for later reference.

HOW AGENCIES RESPOND TO AN OIL SPILL

As soon as the state or federal emergency offices receive a phone call telling them about an oil spill in the river their first action is to alert the other key members of their response team (see the "Directory"/yellow pages). This creates a condition of readiness should they be asked for advice later or if their presence at the site is required.

The next thing that the agency representative will need to do is to arrive on the scene and verify the report. Since federal responders are some distance from the river (the Environmental Protection Agency is in Atlanta and U.S. Coast Guard is in Mobile), they have a practicing arrangement to rely heavily on the reports of the state agency representatives, the Florida Marine Patrol (coming from Panama City) and the Florida Department of Environmental Regulation (coming from Tallahassee). Their report will determine what kind of response will be made, including the decision about whether or not a federal presence is required.

The state agency representative will assess the incident with a series of questions.

1. What is the size of the discharge?
By definition, there are three size categories for discharges in inland waters:

Minor discharge	less than 1,000 gallons
Moderate discharge	between 1,000 and 10,000 gallons
Major discharge	more than 10,000 gallons

2. What other factors are important besides size?
Size alone is not the only factor which determines the severity of a spill. Other factors are likely to be particularly important in evaluating any spill in the Apalachicola River. For example, if a minor spill occurs in or endangers a critical area or threatens public health and welfare, it is automatically upgraded. It is also upgraded if the incident becomes the focus of a law enforcement action or if it generates critical public concern.

The importance of the distinction lies primarily with determining who will be in charge. Moderate or major spills are more likely to require the actual presence of federal agencies whose On-scene Coordinator will assume responsibility for directing the overall spill response. State agency representatives will handle lesser discharges and the early stages of larger spills.

3. Has the response of the spiller been adequate?
Those responsible for the spill are required to report the incident and take such action as they can to clean it up. Shipping companies may be able to shut off a spill and contain it satisfactorily without any outside assistance. It is, in fact, in their best interest do so, as they are liable for the costs incurred by state and federal agencies. If agency representatives determine that such response has been satisfactory their role then shifts to simply monitoring the action being taken.

4. Is more help needed?
If the spiller has not successfully contained the spill, or if the origin of the spill is unknown, then the state agency representative on the scene may request that an oil spill contractor be summoned, that containment equipment be delivered to the river, or that Coast Guard assistance be requested. Any of these actions may be authorized by the State Response Team Chairman (the Executive Director of the Florida Department of Natural Resources) based on the choice which would be quickest and most effective.

CONTAINING THE SPILL

The details of containing and cleaning up an oil spill can get quite complex, but the general principles are fairly simple.

* Shut off and secure the source of the spill.

* Contain the released material to keep it from contaminating new areas.

* Clean up the contained material.

* Clean up the already contaminated areas.

While some of the equipment used in containing and cleaning up an oil spill is somewhat specialized, such as the booms, which serve to hold the oil from drifting away, and skimmers, which remove the oil which is at or near the surface, other equipment used can be as ordinary as a front-end loader or as commonplace as a shovel. The decisions about which equipment to use and where to use it are best left to experts.

It would be helpful to remember a few basic points, however.

* The highest priority for protection is to keep the oil out of the most sensitive areas: salt and fresh water marshes; cypress and hardwood swamp areas; and low lying vegetated bluffs.

* The cleanup of contaminated areas is never perfect; some damage will always be sustained. Particular care should be taken to insure that cleanup efforts do not create more damage than would be caused by letting the oil residue weather and break down on its own and natural processes restore themselves to productivity.

LIABILITY

Polluting the navigable waters of the United States, such as the Apalachicola River, is against the law, and spillers are liable for the costs of cleanup, damages, and civil penalties that may be issued by the U.S. Coast Guard. They are also in violation of state law, and subject to a third degree felony charge, if they fail to report a spill incident. If, after the incident is over, claims need to be pressed, the cooperation and reports of local people who may have been witnesses or have rendered assistance during the clean up efforts will be valuable supportive evidence in proving the state's case.

Individuals who participate in clean up efforts in good faith are free from any personal liability claims which may result from their efforts during the incident. Those who participate in clean up activities and expect to be paid or reimbursed for costs need to receive prior approval of the federal or state official in charge (the On-scene Coordinator).

Individuals who sustain damages to their property as a result of the spill may receive compensation. They should contact the Florida Marine Patrol office in Panama City (see "Directory"/yellow pages) as soon as possible for the appropriate paperwork.

For additional discussion of this topic see the section on "Oil Spills and the Law" in the green pages of this Manual.

DOCUMENTATION AND REIMBURSEMENT

Paperwork is not as important as decisive action during an oil spill, but it is an important part of the administrative and legal workings which follow. Since large amounts of money may be involved and local governmental entities may be eligible for reimbursement of expenses they incurred during the incident, good record keeping is required.

There are three particular aspects of this which are important to local officials.

First, as already mentioned, take notes of what you see and hear. Write down names of witnesses. Keep a running notation of what time new developments occur. The more complete your report, the more useful it becomes.

Second, be sure to ask for written authorization from the On-scene Coordinator to back up any verbal approval which they may give to authorize you to act. Retain any invoices or other documentation of costs (particularly personnel time sheets) you may incur.

Third, remember that reimbursement is a cooperative effort involving several state and federal agencies, local governments, individuals, and the party responsible for the spill. Be sure to coordinate your claim with and direct your questions to the State Agency Coordinator in the Department of Natural Resources (see "Directory"/yellow pages).

DIRECTORY OF PERSONNEL AND THEIR ROLES

FIRST RESPONDENTS

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Federal			
National Response Center	1-800-424-8802	Entire Apalachicola River.	Responsible for contacting appropriate agencies and personnel at the federal level.
U.S. Coast Guard Captain of the Port P.O. Box 2924 Mobile, AL 36652	(205) - 690-2286 (day or night)	Apalachicola River south of the U.S. 98 Hwy. Bridge; the Intracoastal Waterway including Jackson River and Lake Wimico.	Responsible for investigating spill, determining source, assuring appropriate cleanup action is taken.
U.S. Environmental Protection Agency 245 Courtland St. Atlanta, GA 30365	(404) - 881-4062 (day or night)	Apalachicola River north of the US Hwy. 98 Bridge.	Responsible for investigating spill. determining source, assuring appropriate action is taken.
Bureau of Emergency Management Department of Community Affairs 1720 South Gadsden Street Tallahassee, Florida 32301	(904) - 488-1320	Entire Apalachicola River	Responsible for contacting appropriate agencies and personnel at the state level.
State Agency Coordinator Department of Natural Resources 3900 Commonwealth Blvd. Tallahassee, Florida 32303	1-800-342-1829 (day or night) (904)-488-5757 (day or night)	Apalachicola River south of the Hwy 20 Bridge.	Responsible for investigating spills determining source, assuring appropriate action is taken.
Emergency Operations Coordinator Department of Environmental Regulation 2600 Blairstone Blvd. Tallahassee, Florida 32301	(904)-488-0190 (day) (904)-488-1320 (night)	Apalachicola River north of the Hwy. 20 Bridge	Responsible for investigating spills determining source, assuring appropriate action is taken.

DIRECTORY OF PERSONNEL AND THEIR ROLES

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
FEDERAL REGIONAL RESPONSE TEAM (RRT) (Members listed below)	Listed below	Unless otherwise specified, jurisdiction covers entire Apalachicola River system.	Responsible for planning and preparedness for oil and hazardous substance spills. During actual spills members are called as necessary to assist the on scene coordinator.
Co-Chairman			
Captain Delmar Smith Chief Marine Saftey Division U.S. Coast Guard Hale Boggs Federal Building 500 Camp Street New Orleans, La. 70130	(504) - 589-6271 (day) (504) - 589-6225 (night)	Apalachicola River south of the US Hwy 98 Bridge; the Intracoastal Waterway including Jackson River and Lake Wimico.	Activate the Federal Regional Response Team, contact members
Al Smith, Chief Environmental Emergency Response Branch U.S. Environmental Protection Agency, Region IV 345 Courtland Street Atlanta, Georgia 30365	(404) - 881-3931 (day) (404) - 881-4062 (day or night)	Apalachicola River north of the US Hwy. 98 Bridge.	Activate the Federal Regional Response Team, contact members.
On Scene Coordinator (OSC)			
Commander V.O. Eschenburg Captain of the Port U.S. Coast Guard, 8th District P.O. Box 2924 Mobile, Alabama 36652	(205) - 690-2286	Apalachicola River south of the US Hwy. 98 Bridge, the Intracoastal Waterway including Jackson River and Lake Wimico.	* Primary responsibilities of OSC • direct all Federal pollution control efforts. • collect all pertinent information. Including potential impacts on human health and welfare: nature, amount, location and movement of spill: natural resources and property that could be impacted: and priorities for protection. (Duties continued on next page.)

DIRECTORY OF PERSONNEL AND THEIR ROLES

FEDERAL REGIONAL RESPONSE TEAM

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Al Smith, Chief Environmental Emergency Response Branch U.S. EPA Region IV 345 Courtland St. Atlanta, Georgia 30365	(404)-881-3931 (day) (404) - 881-4062 (day or night)	Apalachicola River north of the US Hwy 98 Bridge	• provide documentation necessary for cost recovery. • consult regularly with Regional Response Team (RRT) and Scientific Support Coordinator (SSC • develop and maintain a contingency plan. • approve all disbursements for cleanup. * Actions when spill occurs • Notify responsible party of liability for spill and determine if party is taking proper removal action. • if so, monitor actions. • if not, or if responsible party is not known, initiate Federal Response action, including contracting with cleanup firm(s) and coordinating state and local agency action.
Federal Members			
Department of the Interior			
Primary: Jim Lee Regional Environmental Officer S.E. Region Department of the Interior 75 Spring Street, SW Atlanta, Georgia 30303	(404) - 221-4524 (day) (404)-939-8945 (night)		
Alternate: Waynon Johnson Senior Staff Specialist Region IV (HR/RCA) U.S. Fish and Wildlife Service 75 Spring Street, SW Atlanta, Georgia 30303	(404) - 221-6343 (day) (404) - 292-6732 (night)		

DIRECTORY OF PERSONNEL AND THEIR ROLES

FEDERAL REGIONAL RESPONSE TEAM

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Department of Health and Human Services			
Paul Roper National Institute of Occupational Safety & Health Department of Health & Human Services 101 Marrietta Tower, Suite 1007 Atlanta, Georgia 30323	(404) - 221-2396 (day or night)		
Department of Justice			
W. Thomas Dillard U.S. Attorney Hobbs Building Suite 4014 227 North Bronough Tallahassee, Florida 32301	(904) - 681-7360 (day)		
Department of Defense US Army			
Primary: Col. Tate Headquarters Second U.S. Army Fort Gillem Forest Park, Georgia 30050	(404) - 363-5551		
Alternate: Lt. Commander David Pohl	(404) - 362-3006 (day) (404) - 478-4161 (night)		
US Army Corps of Engineers			
Primary: Ronald Moore, Chief Natural Disaster Branch Emergency Management Division US Army Corps of Engineers 410 Title Building 30 Pryor St. SW Atlanta, Georgia 30303	(404) - 221-6792 (day) (404) - 981-1850 (night)		

DIRECTORY OF PERSONNEL AND THEIR ROLES

FEDERAL REGIONAL RESPONSE TEAM

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Alternate: Leo LaVinka, Chief Emergency Management Division 410 Title Buildling 30 Pryor St. SW Atlanta, Georgia 30303	(404) - 221-6792 (day) (404) - 289-8786 (night)		
Department of Energy			
John Merrick Emergency Management Specialist Savannah River Operations Office Office of External Affairs Department of Energy P.O. Box A Aiken, South Carolina 29802	(803) - 725-2889 (day) (803) - 725-3333 (night)		
Department of the Navy			
Dean Harr Disaster Preparedness Coordinator Commander Naval Base Charleston, South Carolina 29408	(803) - 743-4961 (day) (803) - 871-8322 (night)		
Federal Emergency Management Agency			
Russell Yarbrough Federal Emergency Management Agency 1375 Peachtree Street, N.E. Suite 686 Atlanta, Georgia 30309	(404) - 881-3442 (day) (404) - 881-2400 (day or night)		
Florida Members			
Department of Natural Resources Department of Environment Regulation Bureau of Emergency Management Department of Community Affairs	(refer to State Response Team for personnel and telephone numbers)		

DIRECTORY OF PERSONNEL AND THEIR ROLES

	CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
STATE RESPONSE TEAM	STATE RESPONSE TEAM (SRT) (Members Listed Below)	Listed below	Unless otherwise specified, jurisdiction includes entire Apalachicola River System.	The SRT is the State Body responsible for preparing for coastal oil spills. acting separately from but in coordination with the Federal RRT. During spills, members of the SRT are activated as necessary to assist and advise the SRT Chairman and the State Agency Coordinator (SAC).
	Co-Chairman Elton J. Gissendanner, Executive Director Department of Natural Resources Marjory Stoneman Douglas Building 3900 Commonwealth Blvd. Tallahassee, Florida 32303	(904) - 488-5757 (day or night)	South of the Hwy. 20 Bridge	Overall management and direction of SRT, including authorization to activate, direct, and deactivate; principal public spokesman for SRT Including authorization of information for the press; advises the Governor regarding the need for a Declaration of Emergency Proclamation.
	Victoria Tschinkel, Secretary Department of Environmental Regulation Twin Towers Building 2600 Blairstone Blvd. Tallahassee, Florida 32301	(904) - 488-4805 (day) (904) - 488-1320 (night)	North of the Hwy 20 Bridge	
	State Agency Coordinator (SAC) Carolann DeFord Bowen Marjory Stoneman Douglas Building 3900 Commonwealth Blvd. Tallahassee, Florida 32303	(904) - 488-5757 (day or night)		Responsible to the Chairman of the State Response Team (SRT) for coordination of the team during a coastal spill. Coordinate with the Federal OSC. Collect all information concerning the spill and transmit to the SRT. Collect and verify all support documentation for cost recovery and expenditure reimbursement. Develop and maintain the State Contingency Plan. Approve all disbursements for cleanup.

DIRECTORY OF PERSONNEL AND THEIR ROLES

STATE RESPONSE TEAM

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Members			
Department of Natural Resources			
Primary: Col. Don Ellingsen 3900 Commonwealth Blvd. Tallahassee, Florida 32303	(904) - 488-5757 (day or night)	South of the Hwy 20 Bridge	Administer Chapter 376, FS within their jurisdiction, maintain list of containment and cleanup equipment, disbursement of Florida Coastal Protection Trust Fund monies for authorized expenditures, negotiate state funded cleanup contracts, investigate discharges and damage claims. provide technical expertise.
Alternate: Floyd E. Adams	(904) - 488-5757 (day or night)		
Department of Environmental Regulation			
Primary: Jeff Taylor Twin Towers Building 2600 Blairstone Blvd. Tallahassee, Florida 32301	(904) - 488-0190 (day) (904) - 488-1320 (night)	North of the Hwy 20 Bridge.	Protect inland waters of the state. respond to oil spill report by dispatching On-Scene Coordinator. provide technical expertise. determine and approve location of pollutant disposal sites. regulate use of chemical dispersants.
Alternate: Greg Lee	(904) - 488-0190 (904) - 488-1320		
Department of Community Affairs			
Primary: Bill Lee Bureau of Emergency Management 1720 S. Gadsden St. Tallahassee, Florida 32301	(904) - 488-1320 (day or night)		Will act as chair of the State Response Team if needed: establish and maintain direct communication and coordination with local government units and/or citizens affected by a major coastal discharge or pollution incident. These actions will be taken in accordance with established DCA emergency operating procedures.
Alternate: Gordon Guthrie	(904) - 488- 1320 (day or night)		

DIRECTORY OF PERSONNEL AND THEIR ROLES

	CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
STATE RESPONSE TEAM	Department of Highway Safety & Motor Vehicles Primary: Captain Z.V. Smallwood Division of Motor Vehicles Neal Kirkman Building Apalachee Parkway Tallahassee, Florida 32301	(904) - 488-5370 (day) (904) - 222-8633 (night)		Provide traffic supervision and control for all surface transportation routes adversely affected by a coastal pollution incident. This action includes the close coordination with local public safety officials. Upon request by the State Agency Coordinator, provide security and crowd control within the affected area of a coastal pollution incident. Upon request by the State Agency Coordinator, provide vehicle escort service for heavy over-the-road shipments of containment and/or cleanup equipment. Upon request by the State Agency Coordinator, make available the use of aircraft assigned to the DHSMV.
	Alternate: Lt. Raker	(904) - 488-6557 (day) (904) - 926-3023 (night)		
	Department of Law Enforcement Primary: Willis Booth Division of Local Law Enforcement Assistance P.O. Box 1489 Tallahassee, Florida 32302	(904) -488-3231 (904) - 385-6815		Provide laboratory support for the analyzing of pollutant samples obtained during the investigation of a coastal pollution incident. Upon request of the State Agency Coordinator, provide assistance with conducting any criminal investigations that may result from a coastal pollution incident.

DIRECTORY OF PERSONNEL AND THEIR ROLES

	CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
STATE RESPONSE TEAM	Alternate: Mike O'Connell	(904) - 488-3231 (day) (904) - 893-0484		
	Department of Legal Affairs			
	Primary: Bruce Barkett Attorney General's Office The Capitol Tallahassee, Florida 32301	(904) -488-9935 (day) (904) - 224-0077		Assist and provide consultation to the State Agency Coordinator and all participating State Response Team members on legal matters pertaining to a coastal pollution incident. Direct the gathering of facts or other materials by team members for proper utilization in any civil or criminal proceedings arising from a coastal pollution incident.
	Alternate: Kent Zaiser	(904) - 488-9935 (day) (904) - 576-2464 (night)		
	Department of Military Affairs			
	Primary: Captain Jerry Vaughn P.O. Box 1008 St. Augustine, Florida 32084	(904) - 824-8461 (day) (904) - 824-5376 (night)		Upon request by the Governor. provide predetermined manpower and logistical support to the containment and manual cleanup of a coastal pollution incident.
	Alternate: Willis J. Cappo	(904) - 824-8461 (day) (904) - 471-2809 (night)		

DIRECTORY OF PERSONNEL AND THEIR ROLES

STATE RESPONSE TEAM

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Department of Transportation			
Primary: C.R. Miller Office of Safety 101 Clifton Building 2661 Executive Center Circle West Tallahassee, Florida 32301	(904) - 488-3546 (day) (904) - 877-4988 (night)		Coordinate and asssit with the containment and cleanup of any major coastal discharge that occurs on a state maintained street or highway. Upon request by the Governor, provide vehicles and drivers to be used in the transporting of pollutants from the scene of the discharge to the disposal sites that have been approved by DER. This action can only be taken through the issuance of an executive order.
Alternate: Robert A. Lavette	(904) - 488-3546 (day) (904) - 877-7967 (night)		
Game & Fresh Water Fish Commission			
Primary: Tom Goodwin Bryant Building Tallahassee, Florida 32301	(904) - 488-3831 (day) (904) - 893-2946 (night)		Upon request of the State Agency Coordinator, prepare an assessment of damage to wildlife populations and habitat resulting from a coastal pollution incident. In the event that an endangered or threatened species is affected by the incident, coordinate with the appropriate federal and state authorities to ensure the capture, cleansing, and rehabilitation of those affected wildlife as well as all other wildlife under jurisdiction of the Commission.
Alternate: Allan Egbert	(904) - 488-3831 (day) (904) - 878-4301 (night)		

DIRECTORY OF PERSONNEL AND THEIR ROLES

STATE RESPONSE TEAM

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Governor's Office			
Primary: Charles Reed The Capitol Tallahassee, Florida 32301	(904) - 488-5603 (day) (904) - 385-9382 (night)		Provide for the processing of requests for Executive Orders as required by SRT members. During a declared emergency by the Governor, supervise all press releases, interviews, and contact with the news media.
Alternate: Steve Hull	(904) - 488-4801 (day) (904) - 222-3312		
Department of Health & Rehabilitative Service			
Primary: Herman Stokes 1317 Winewood Building 1-300 Tallahassee, Florida 32301	(904) - 487-1161 (day) (904) - 878-7884 (night)		Upon request of the State Agency Coordinator, provide medical guidance to a coastal pollution incident. Provide resources of the State Health and Rehabilitative Services laboratories in response to a coastal pollutant incident. Provide epidemiological consultation where human illness is involved as a result of a coastal pollutant incident.
Alternate: Paul Charters	(904) - 488-8901 (day) (904) - 222-0571 (night)		

DIRECTORY OF PERSONNEL AND THEIR ROLES

STATE RESPONSE TEAM

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Department of Commerce			
Primary: Joe Martinez Room 510-H Collins Building Gaines Street Tallahassee, Florida 32301	(904) - 488-9377 (day) (904) - 878-1478 (night)		Upon request of the State Agency Coordinator, develop a generalized economic impact assessment of the potential or existing effects of a coastal pollution incident, relying principally upon the Agency's data bank and other readily available socio-economic data. In making such assessments, the DOC may coordinate with local governments, chamber of commerce, planning organizations, or other organizations it deems appropriate.
alternate: Dean Gaiser	(904) - 488-5530 (day) (904) - 385-4639		

DIRECTORY OF PERSONNEL AND THEIR ROLES

COUNTY CONTACTS

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Jackson County			
Sheriff Johnny McDaniel Sheriff, Jackson County Post Office Box 919 Marianna, Florida 32446	(904) - 482-3313 (904) - 482-2132	Jackson County	County contacts may serve to render local assistance as needed to designated state and federal officials.
John Madder Jackson County Civil Defense Director P.O. Drawer 510 Marianna, Florida 32446	(904) - 526-4500	Jackson County	
Gadsden County			
Sheriff W.A. Woodham Sheriff, Gadsden County Post Office Box 1126 Quincy, Florida 32351	(904) - 627-9233	Gadsden County	
Charles Betts Gadsden County Civil Defense Director P.O. Box 951 Marianna, Florida 32446	(904) - 627-9273	Gadsden County	
Liberty County			
Sheriff Harrell Revell Sheriff, Liberty County Liberty County Courthouse Bristol, Florida 32321	(904) - 643-2235	Liberty County	

DIRECTORY OF PERSONNEL AND THEIR ROLES

COUNTY CONTACTS

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
A.G. Preacher Liberty County Civil Defense Director Liberty County Courthouse Bristol, Florida 32321	(904) - 643-2339	Liberty County	County contacts may serve to render local assistance as needed to designated state and federal officials.
Calhoun County			
Sheriff William "Buddy" Smith Sheriff, Calhoun County Post Office Box 695 Blountstown, Florida 32424	(904) - 674-5049	Calhoun County	
Royce Traylor Calhoun County Civil Defense Director 425 East Central Avenue Blountstown, Florida 32424	(904) - 674-8075	Calhoun County	
Gulf County			
Sheriff Ken Murphy Sheriff, Gulf County Post Office Box 970 Port St. Joe, Florida 32456	(904) - 227-1115	Gulf County	
Bill Lamar Gulf County Civil Defense Director Gulf County Courthouse Port St. Joe, Florida 32456	(904) - 227-1735	Gulf County	

DIRECTORY OF PERSONNEL AND THEIR ROLES

COUNTY CONTACTS

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Franklin County			
Sheriff Jack Taylor Sheriff, Franklin County Franklin County Sheriff's Department Apalachicola, Florida 32320	(904) - 653-2101	Franklin County	County contacts may serve to render local assistance as needed to designated state and federal officials.
James Joyce Franklin County Civil Defense Director Franklin County Courthouse Apalachicola, Florida 32320	(904) - 653-8977	Franklin County	
Dorothy Rolstead City Clerk P.O. Box 10 Apalachicola, Florida 32320	(904) - 653-9319	Franklin County	

DIRECTORY OF PERSONNEL AND THEIR ROLES

OTHER LOCAL AND REGIONAL CONTACTS

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Steve Leitman Department of Environmental Regulation 2600 Blairstone Blvd. Tallahassee, Florida 32301	(904) - 488-4805	Through out region	Technical support for DER responders.
First Sergeant Jerry Thompson Florida Game & Fresh Water Fish Commission Rt. 4 Box 759 Panama City, Florida 32405	(800) - 342-1676 (904) - 265-3676	Through out region	Law enforcement support.
Brantley Goodson, Chief Division of Law Enforcement Florida Game & Fresh Water Fish Commission 620 South Meridian Street Tallahassee, Florida 32301	(904) - 488-6251	Through out region	Law enforcement support.
Dr. Robert Livingston Biology Department Florida State University Tallahassee, Florida 32306	(904) - 644-1466	Through out region	Consultant on riparian and estuarine ecosystems
Woody Miley National Estuarine Sanctuary Bobby Howell Building, 7th Avenue Apalachicola, Florida 32320	(904) - 653-8063 (w) (904) - 670-2981 (h)	Lower river. Apalachicola Bay	Consultant on estuarine ecosystems and wildlife.
Robbie Brunger, Regional Planner Apalachee Regional Planning Council Calhoun County Courthouse, Room 321 Blountstown, Florida 32424	(904) - 674-4571 (w) (904) - 224-7729 (h)	Throughout region	Regional coodination and information center.

OTHER LOCAL AND REGIONAL CONTACTS

DIRECTORY OF PERSONNEL AND THEIR ROLES

CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Eddie Sosebee, Resource Manager Lake Seminole P.O. 96 Chattahoochee, Florida 32324	(912) - 662-2814 (912) - 662-2865	Lake Seminole area	Technical support: Natural resources expertise
Captain Gordon McCall Florida Marine Patrol P.O. Box 4395 Panama City, Florida 32405	(904) - 763-3080	Intracoastal Waterway to the Pinhook; from the Pinhook up the Apalachicola River.	Among the first respondents in the event of a spill; law enforcement and prosecution support; technical support.
Captain Robert Lee Florida Marine Patrol P.O. Drawer P Carrabelle, Florida 32322	(904) - 697-3741	Apalachicola River below the Pinhook	Among the first respondents in the event of a spill; law enforcement and prosecution support: technical support.
J.W. McCartney Northwest Florida Water Management District Rt. 1 Box 3100 Havana, Florida 32333	(904) - 487-1770	Throughout region	Technical information on hydrologic systems.
Homer Hirt Port Director Jackson County Port Authority P.O. Box 719 Sneads, Florida 32460	(904) - 593-6495	Upper Apalachicola River	Director of port facility and prime launch site.
Bob Kreigel Department of Environmental Regulation 160 Governmental Center Pensacola, Florida 32501	(904) - 436-8300	Throughout region	Technical support for DER responders.

DIRECTORY OF PERSONNEL AND THEIR ROLES

	CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
CONTRACTORS	Jorge Sanchez Environmental Coastal Pollution Cleanup Service, Inc. 430 North Bonita Avenue Panama City, Florida 32407	(904) - 763-1717	Available to work through out the region.	Oil containment and cleanup services at the request of chief federal or state representatives on the scene
	Lt. Elmer C. Salling Navy Coastal Systems Panama City, Florida 32407	(904) - 234-4449	Through out region	Maintains oil spill equipment; assistance available through U.S. Coast Guard request only.
	Tom Pidgeon Need-A-Diver Marine Services, Inc. P.O. Box 5436 Tampa, Florida 33675	(813) - 247-1146	available to respond anywhere.	Oil containment and cleanup services at the request of chief federal or state representatives on the scene.
	Jim Fears Cape Canaveral Marine Service, Inc. 8052 Astronaut Blvd. Cape Canaveral, Florida 32920	(305) - 784-2110	Available to respond anywhere.	Oil containment and cleanup services at the request of chief federal or state representatives on the scene. This firm also manufactures oil spill equipment.
	Robert P. Cochrane Peterson Maritime Services, Inc. 1660 South Beltline Highway Mobile, Alabama 36609	(205) - 666-3500	Available to respond anywhere.	Oil containment and cleanup services at the request of chief federal or state representatives on the scene.
	Mark K. Ryckman REACT P.O. Box 27310 St. Louis, MO 63141	(800) - 325-1398 (314) - 569-0991	Available to respond anywhere.	Oil containment and cleanup services at the request of chief federal or state representatives on the scene.

DIRECTORY OF PERSONNEL
AND THEIR ROLES

WILDLIFE EXPERTS

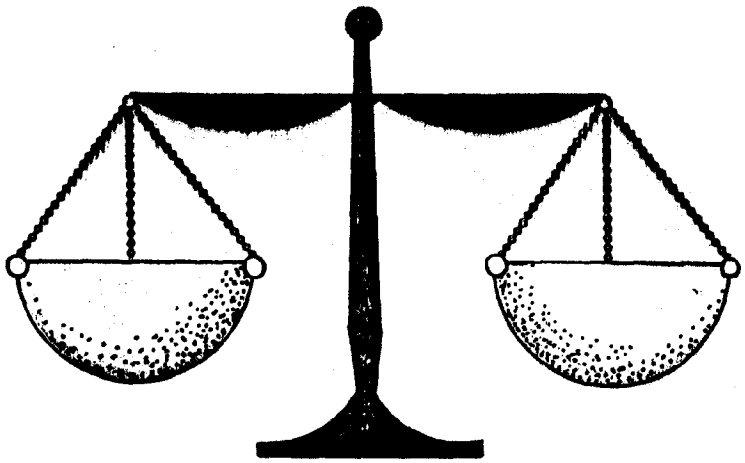
CONTACT	PHONE NUMBER	JURISDICTION	RESPONSIBILITY
Mary Jane Shaw, President St. Francis Wildlife P.O. Drawer 20248 Tallahassee, Florida 32316	(904) - 769-0552	Through out region	Technical information on wildlife. Care of injured wildlife.
Mike Brim U.S. Fish & Wildlife Service 1612 June Avenue Panama City, Florida 32405	(904) - 769-0552	Through out region	Technical information on wildlife.
Dr. Bruce Means Biology Department Florida State University Tallahassee, Florida 32306	(904) - 644-3700	Through out region	Principal authority on terrestrial wildlife in the region.
Dr. Lothian Ager Joe Budd Wildlife Management Area P.O. Box 38 Midway, Florida 32343	(904) - 487-1645	Through out region	Principal authority on fishes in the region

OIL SPILLS AND THE LAW

INTRODUCTION

The two primary laws, one federal and one state, which pertain to oil spill events are the Federal Water Pollution Control Act (PL 92-500) and the Pollutant Spill Prevention and Control Act, Chapter 376, Florida Statutes. The Federal Water Pollution Control Act states that there should be no discharge of oil or hazardous substances into or upon the navigable waters of the United States (Section 311(B)(1). Chapter 376, Florida Statutes also states that pollution of the coastal waters of the state is not prohibited. Both laws establish liabilities, responsibilities and response actions in the event of an oil spill.

What follows is a brief summary of points in these laws. For more specific information refer to the actual statutes.



LEGAL RESPONSIBILITY
OF THE PARTY CAUSING THE SPILL

Based on Section 311(C)(1) of the Federal Water Pollution Control Act the person responsible for the spill is to contact the U.S. Coast Guard to inform them of the situation. They are liable for all costs incurred during cleanup and should act to halt the flow of, contain, and remove the discharge. This action should be performed under the observation and monitoring of the Federal On-scene Coordinator.

Chapter 376, Florida Statutes, requires that the party responsible for the spill contact the Florida Department of Natural Resources. Failure to promptly report a spill could result in fines of up to $50,000 per day. The party responsible is required to pay all costs incurred during clean up and should initiate cleanup actions immediately.

A spiller is required to provide the following information to the Florida Marine Patrol and the U.S. Coast Guard:

(a) Name, occupation, title, and telephone number of person making notification.

(b) Type of pollutant spilled.

(c) Location of spill (nearest city, river, bay, mile marker, etc.)

(d) Type of installation or carrier involved in the spill.

(e) Date and time (local) of spill.

(f) Persons and agencies already contacted.

(g) Size and characteristics of area already affected by the spill.

(h) Containment and cleanup efforts to date.

(i) Cause of spill if known.

(j) Person or firm in charge of source.

FEDERAL RESPONSIBILITIES

Federal response to major oil spills involves a number of agencies. These agencies, such as the U.S. Coast Guard, the Environmental Protection Agency, Department of Interior, etc, comprise the Federal Regional Response Team (see the Directory for a listing of the Regional Agencies). The Regional Response Team is chaired by either the Chief of the Marine Safety Division at the Eighth Coast Guard District Headquarters in New Orleans (coastal spills) or a representative of the Environmental Emergency Response Branch of the Environmental Protection Agency in Atlanta (inland spills).

Both the U.S. Coast Guard and the Environmental Protection Agency have predesignated On-scene Coordinators who would be sent to the site in the event of a major spill. The On-scene Coordinator is responsible for directing prompt and appropriate action towards containment and removal of the pollutant. The responsibilities of the On-scene Coordinator are outlined by the National Contingency Plan (40 CFR 300).

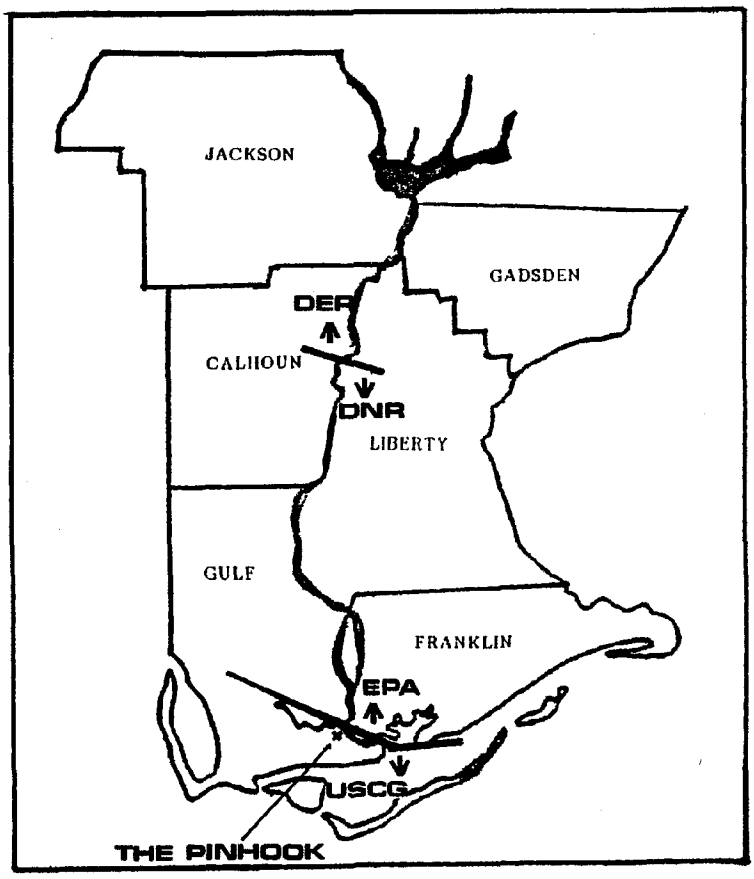
STATE RESPONSIBILITIES

The primary state agency involved with coastal oil spills is the Florida Department of Natural Resources; however, based on an agreement of cooperation between the Department of Natural Resources and the Florida Department of Environmental Regulation, The Department of Environmental Regulation has the major jurisdictional role in the upper portion of the Apalachicola River above the Highway 20 bridge. If the Federal Authorities have declined to accept responsibility in a cleanup effort the Department of Natural Resourses is responsible for assuring that appropriate clean up procedures are followed. The Department of Natural Resources is responsible for the enforcement of Chapter 376, Florida Statutes and the disbursement of funds established by the Pollutant Spill Prevention and Control Act.

JURISDICTIONS

In practice the matter of jurisdiction may become secondary to the questions of how quickly a response can be made and where oil contamination may drift before it is finally contained. The federal agencies, for example, rely to some degree on state agencies which can respond much more quickly, to help them assess the degree to which their involvement is actually needed; in some cases, the state's response may be all that is required. In other situations the agencies may freely respond on an "as needed" basis.

Nonetheless, there are established jurisdictional boundaries about which it is helpful to know. The Environmental Protection Agency responds to incidents north of the U.S. 98 bridge and up the river channel just north of the city of Apalachicola; the U.S. Coast Guard covers the Intracoastal Waterway and Apalachicola Bay. The state's boundaries are somewhat different, with the Department of Environmental Regulation covering the area north of the SR 20 bridge between Bristol and Blountstown, and the Department of Natural Resources covers the area to the south. Within DNR's area, the Carrabelle office of the Florida Marine Patrol responds to situations below the Pinhook and in Apalachicola Bay while the Panama City office responds to situations in the Intracoastal Waterway and up the main channel of the river. The map below visualizes these jurisdictional boundaries.



Map 1: Jurisdiction with regard to oil spills in the Apalachicola River system.

FUNDS AVAILABLE FOR CLEANUP

The Federal Pollution Revolving Fund was established by the Federal Water Pollution Control Act. This fund provides up to $35 million for the purpose of removing oil from the waters of the United States. This fund is to be used in the event that the discharger is unknown or the discharger's clean up actions are inadequate. The person responsible is required to reimburse the fund for monies spent for cleanup procedures. This fund is administered by the U.S Coast Guard. The State of Florida may apply for and receive monies from this fund for costs incurred during response to an oil spill (Section 311(C)(2)(H)).

The state of Florida also has a state fund upon which it may draw for financial assistance. The Florida Coastal Protection Trust Fund was established by the Pollutant Spill Prevention and Control Act (Section 376.11, Florida Statutes). Monies from this fund are to be used for administrative costs to the Department of Natural Resources for enforcement of Chapter 376, all costs expended for cleanup of all natural resources damaged by the discharge of pollutants, all costs which are the results of the discharge of pollutants, and the acquisition of spoil disposal sites in specified areas. Monies spent for cleanup are to be recovered from the party causing the spill. Persons claiming to have suffered damages as a result of coastal oil spill can apply to the Florida Department of Natural Resources for reimbursement from the Coastal Protection Trust Fund.

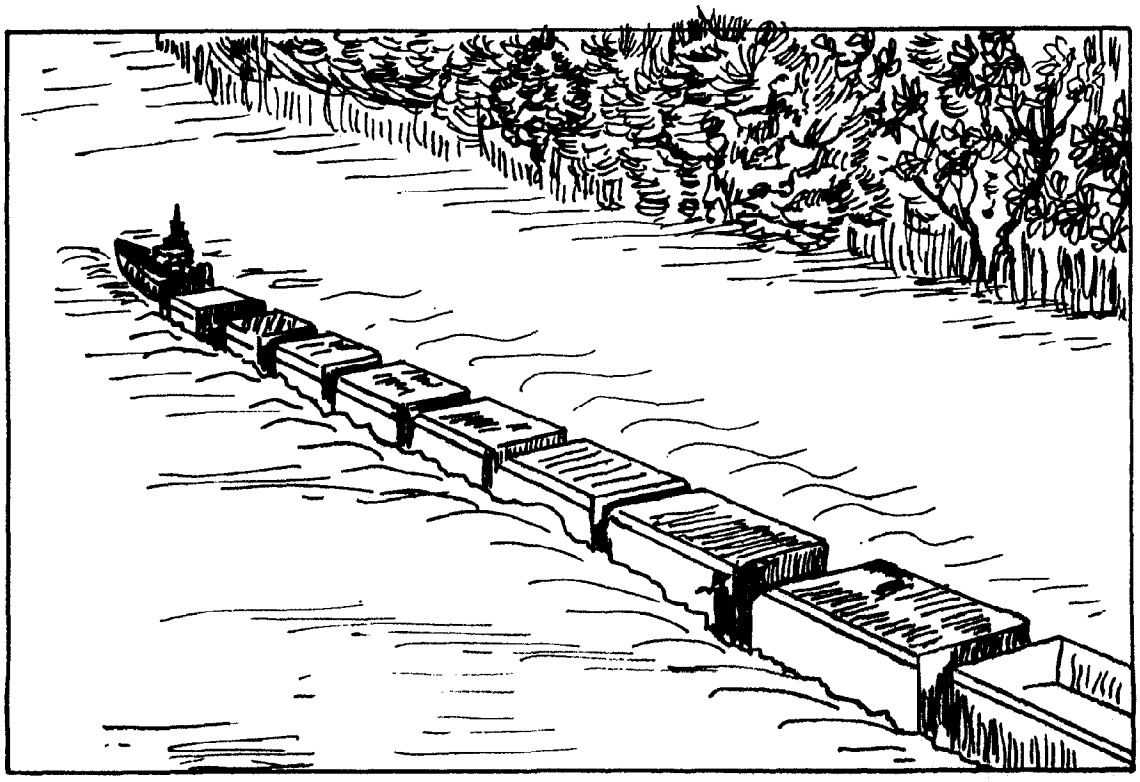
OIL AND THE APALACHICOLA RIVER SYSTEM

Introduction

The introduction of petroleum into the waters of the Apalachicola River would be an unwelcome event. In the best of situations, where the spill is quickly controlled, the pollutant effectively contained, and the spread minimized, there is still some short term and long term damage sustained by the local environment. Real life oil spills have the potential to be much worse, with a number of factors contributing to the potential severity: the size and type of the spill; prevailing weather and river conditions; the relative isolation of much of the river, contributing to a slower response time; and the very extensive stretches of highly sensitive environments along much of the river's course and the immensely productive estuarine system in Apalachicola Bay.

The inevitability of environmental damage is a discouraging prospect for those faced with the need to react to a real incident, but it is a fact that oil spill containment within the river system may present situations for which there is available only a minimally adequate response (e.g., keeping spills out of flooded hardwood swamps). In some cases nothing is known about what might actually occur (e.g., coping with a current well over three miles per hour makes containment very difficult).

It is important to understand, then, that the existence of any oil spill response manual is an effort to minimize very serious damage rather than a pat formula for erasing it. This section of the Manual discusses briefly some of what is known about the natural systems and commerce of the river and the sensitivity of riparian and estuarine environments to spilled oil in order to provide a basis for that "best effort."



The Value of Natural Systems

The Apalachicola River begins at the Georgia-Florida border where the Chattahoochee and Flint Rivers come together in an area contained by the Jim Woodruff Dam and known as Lake Seminole. For 106 miles it winds its way south until it spills out the drainage of much of Alabama and Georgia and six of Florida's counties into Apalachicola Bay. At the point of its discharge, it carries more water than any other river in Florida.

Size is not the only unique feature about the Apalachicola River. It is the only river in the state the headwaters of which arise north of the coastal plain, a feature which accounts for much of the biotic diversity in the region. The upper eastern portion of the river drains an area with the greatest physical relief in all of Florida, making that part of Liberty and Gadsden Counties a geologically unique province. Because of the relatively undeveloped nature of most of the river valley, the water quality has remained unusually high, a fact which helps explain why Apalachicola Bay is one of the most pristine estuarine systems in North America.

The value of such a collection of interlocking natural systems as are represented in the Apalachicola basin is impossible to quantify, as so much of it represents intangible and aesthetic worth. Natural scientists, who have observed that the region is as biologically distinctive as the Everglades, consider the area a living laboratory. Certain plants and animals in the area are found nowhere else in the world (e.g., Torreya tree, amphiuma salamandar), while others are uncommon, rare, or endangered (e.g., mountain laurel, bald eagle, black bear). In recent years conservation concerns have led to a variety of efforts aimed at preserving this unquantifiable, but irreplaceable, natural resource. Federal efforts, such as the National Estuarine Sanctuary, state resources, such as the Conservation and Recreation Lands program, and private organizations, such as the Nature Conservancy and the Trust for Public Land, have all contributed to these preservation efforts.

The value of a species is impossible to quantify, but there are real and measurable economic values associated with a high quality environment, most notably in the fishing and shellfishing industries of Franklin County. The county is one of the state's major seafood centers; direct catches there are worth more than $11 million annually, providing the livelihood for 70 percent of the county's workers.

The extensive wilderness reaches of the Apalachicola valley support another important local economic resource, recreational hunting, fishing, and boating. While no one has been able to calculate with certainty the amount of revenue this generates, it is clearly considerable. The number of bait and tackle shops, fish camps, boating supply stores, motels, local restaurants, and similar local businesses is such that there has been a consistently strong local opinion supportive of the preservation of the river.

Commerce on the River

It remains a challenge to the river counties to live comfortably with a strong desire to preserve the river's water quality and at the same time actively promote commercial use of the river in an effort to expand economies greatly in need of diversification. The Jackson Port Authority, near Sneads, is actively interested in promoting increases in shipping business, and Blountstown has facilities which could be used and expanded given the right commercial opportunity. Economic development planners in southwest Georgia and southeast Alabama see the river and its connection with the Gulf Intracoastal Waterway as an important component of an overall industrial expansion and commercial trade program.

Whether or not such increases will occur is a live issue for the mid 1980's. There has always been some commercial traffic on the river since territorial days, but it was not until the Army Corps of Engineers constructed the Jim Woodruff Dam in 1954 and initiated a series of channel improvements in the river shortly afterward that commerce became more than passingly important.

Commercial volume has topped one million tons annually on occasion, but not since 1977, and the cost of the system's maintenance is well in excess of its current commercial yield. It is, in fact, one of the most expensive waterways in America. Developers claim that the removal of a series of rock outcroppings in the upper river in early 1984 will encourage increased shipping volumes. Some navigational impediments remain, however, such as the winding nature of the lower river, and the natural fluctuations of the river's flow which, despite the rock's removal, make the desired nine foot channel unpredictably unavailable.

Regardless of whether the overall volume of commerce rises or not it remains highly probable that petroleum products of all sorts will be an important component of that traffic. Petroleum has historically constituted somewhat more than one-fifth of the volume of goods shipped on the river, for as much as 200,000 tons annually. Of that amount, asphalt, tars, and pitches comprise about 36 percent of the total. Gasoline comprises 28.5 percent while other petroleum products, such as distillate fuel oils, naptha, and petroleum solvents are shipped in lesser amounts.

Oil Within the River System

There are many different types of petroleum products ranging from highly refined light oils to very dense materials such as asphalt. The toxicity of oil varies according to the type, but generally there are two categories of toxicity: acute toxicity refers to the short-term (four days or less) lethal effects of harsh chemical components of the oil; chronic toxicity refers to sublethal effects occurring over a longer period of time. Chronic toxicity may be either from chemicals, such as carcinogens, or from physical effects, most notably the smothering effect that oil can have on most plants and those animal species which are unable to move away from a contaminated area. This latter effect is one of the more prominent and obvious features of an oil spill and may present further difficulties in that some of the areas most vulnerable to chronic damage may be those in which it is difficult or impossible to conduct any effective cleanup operations.

In the event of an oil spill the nature of the contaminant is one of the more important facts that responders will need to know. Nonetheless, the contaminant itself does not necessarily remain static once introduced into the flow of the river. Evaporation of some of the lighter components of oil can be very rapid and substantial; as much as one-fourth of the volume of a spill may evaporate during the first 24 hours in a relatively calm area, although within a flowing stream it would probably be much less than that. Some oil components (contrary to popular belief) may be dissolved by the water; this may lessen the volume of the oil mass, but it does not alter the toxicity of the dissolved components.

A particularly important physical reaction which would be very probable in any spill within a flowing system is the formation of an emulsion of oil and water. The evaporation or solution of some components of the oil, combined with the agitation produced by the current on the remaining oil mass, will produce an agglomerated viscous mass known as mousse. Mousse presents difficulties for cleanup, as it does not necessarily float. It may go undetected or unstopped by booms or settle in a quiet water area with a smothering effect. Moreover, once contained, the water must be separated from the oil for effective cleanup.

For a summary of the physical and chemical properties of different types of oil and their toxic effects within the river system, refer to Table 1 on the following page.

TABLE 1: Classification and properties of oil types with respect to their behaviorduring spills.

OIL TYPE	EXAMPLES	PHYSICAL/CHEMICAL PROPERTIES	TOXICOLOGICAL PROPERTIES
(1) Light, volatile oils	Distillate fuels such as gasoline, diesel, No. 2 fuel oil	o Spread rapidly o High evaporation and solubility rates o Tend to form unstable emulsions o Very toxic to biota when fresh o May penetrate substrate o Can be removed from surfaces by simple agitation and low-pressure flushing	o Acute toxicity is related to the content and concentration of the aromatic fractions o Aromatic fractions are very toxic due to the presence primarily of napthalene compounds and, to a lesser extent, benzene compounds o Heavy- molecular-weight compounds are acutely less toxic, but may be chronically toxic since many are either known or potential carcinogens o Acute toxicity of individual aromatic fractions will vary among species due to differences in the rates of uptake and release of these compounds o Marsh plants, and cypress and hardwood swamps may be chronically affected due to penetration and persistence of aromatic compounds in sediments
(2) Moderate[a] to-heavy oils	Medium-to-heavy paraffin-based refined oils and crude oils	o Moderate-to-high viscosity o Toxicity variable depending on light fraction composition o In tropical climates, rapid evaporation and sulution form less toxic weathered residue with toxicity due more to smothering o Light fractions may contaminate interstitial water o Tend to form stable emulsions under high physical energy conditions o Variable penetration, a function of substrate grain size o High potential for sinking after weathering and uptake of sediment o Generally removable from water surface when fresh o Weather to tar balls and tarry residue	o Acute and chronic toxicity in benthic organisms is likely to result from: 1) Mechanical or physical coverage - oil completely smothering organisms, often causing death 2) Chemical toxicity - results from the exposure of very toxic aromatic fractions of the oil to marine organisms 3) A combination of mechanical or physical coverage and chemical toxicity o Mechanical or physical smothering causes acute toxicity in many benthic organisms and chronic toxicity in many submerged or partially submerged plants (especially cypress)
(3) Residual oils	Asphalt, Bunker C, No. 6 fuel oil, wast oil	o Form tarry lumps at ambient temperatures o Nonspreading o Relatively nontixicdue to substrate o May soften and flow when stranded in sun o Cannot be recovered from water surface using most cleanup equipment o Easily removed manually from beaches	o Acute and chronic toxicity occurs more from smothering effects than from chemical tocicity, due to the small proportion of toxic aromatic fractions found in heavy, residual oils o Toxicity is more common in submerged or partially submerged plants (especially cypress) and sedentary organisms than in mobile organisms o Acute and chronic toxicity also results from thermal stress, due to the elevation of temperatures in oiled habitats

Sensitivity of River Environments to Spilled Oil

The shoreline of the Apalachicola River and Lake Seminole includes a wide variety of different physical types of varying degrees of environmental sensitivity. In general, the steeper the slope on bluff areas, the finer the grain of sand on spoil banks and exposed areas, and the less the amount of vegetation in lower areas, the lower the degree of sensitivity. On the other end of the spectrum, the flatter land, the wetter surrounding areas, and the heavier vegetated zones are all generally very highly sensitive to contamination. (This concept of increasing degrees of sensitivity is the basis for the map series included as the blue pages in this Manual.)

Such generalizations about sensitivity do not tell the full story about the river, however. For one thing, submerged parts of the river also vary in their sensitivity; rocky areas and snags, for example, are areas where fish tend to be concentrated. Another very important factor is the water level of the river. The flow volume of the river may vary by as much as a factor of ten during the course of a year, and at times a place usually considered to be the bank may actually be several feet under water. In the Apalachicola lowlands such flooding may extend for miles.

Vertical rocky walls and exposed bluffs, common along the upper third of the river, represent relatively low risks of contamination. The amount of oil that would adhere would be small due to the slope and the effect of the current, and the impact on plants and animals would be slight. Cleanup efforts in such places would probably not be needed, though there are exceptions in places where relatively quiet backwater eddies might tend to collect pools of oil; in such places the oil could be skimmed.

Exposed sand or gravel beaches and training dikes, found throughout the river course, vary in their sensitivity depending on the permeability of the surface. Irregular surfaces would tend to hold oil the longest and resist efforts to clean it. Although they would almost certainly be contaminated in the event of a spill, there are relatively few plant or animal species associated with them, thus limiting their sensitivity. Training dikes are a partial exception to this, as they provide fish habitat. Manual cleanup efforts can be successful if care is taken not to remove too much of the substrate.

Vegetated bluffs and vegetated low banks are considerably more sensitive owing to the greater degree of plant and animal association there. Higher banks are more resistant because they are not as exposed to the oil and because plant roots tend to run deep. Lower areas may be prone to being inundated and smothered by oil. Low pressure spraying and application of sorbent materials may be effective in helping to clean such areas after the oil has accumulated, although such methods may be limited by the ease of access, depending on the water level.

The most sensitive areas within the whole river system are the cypress and hardwood swamps and the fresh and salt water marshes. Although such areas are heavily concentrated in the lower half of the river basin, they may be found throughout the system. Fresh water marshes, for instance, are a preponderant part of the Lake Seminole area. Oil in any of these areas would not only be chronically destructive with a smothering effect and long term chemical damage, but would also be very difficult or impossible to clean.

Although some of these environmentally sensitive areas would have better flushing action than others, thus speeding the natural cleansing process somewhat, the damage that could be sustained could be substantial. In some wetland areas the use of sorbents could prove effective in limiting the spread of further contamination. Care should be taken, particularly in areas where some flushing does take place, that cleanup efforts not do more damage than the oil would.

Strategies for Minimizing Environmental Damage

Determining the most effective way to cope with an oil spill is a function of location, magnitude, types of contaminant, and river conditions. Whenever possible, booms should be deployed at the openings to backwater areas to avoid the contamination of those more sensitive zones. Multiple diversionary booms may be deployed in selected low-velocity stretches of the upper river to slow and contain a spill so that it may be collected by skimmers.

In the lower river, an area completely dominated by the most environmentally sensitive areas, the most important strategy is to keep the oil within the channel rather than allowing it to filter into the swamps. Multiple booms may be successful in containing the oil so that it can be collected. In all cases, it is best to prevent the oil from drifting into the swamps or wetlands.

The most overriding environmental consideration of all is the protection of Apalachicola Bay from contamination. The importance of the bay as a source of oysters and other seafood and as a spawning and nursery area for finfish of various types makes it vital that all possible efforts be made to prevent oil from any spill occurring in the river from ever reaching the bay. An oil spill of any magnitude in Apalachicola Bay would be a major environmental and economic catastrophe.

ENVIRONMENTAL SENSITIVITY INDEX MAPS

INTRODUCTION

The Environmental Sensitivity Index (ESI) maps have been designed to provide information to oil spill responders concerning the environmental effects of a spill. Information about wildlife, shoreline types, and river access is included. The Locator Map (p. E-2) shows how the nineteen maps cover the entire river basin from Apalachicola Bay to a point well north of the Jim Woodruff Dam.

The numbers along each side of the river channel correspond to a scaled evaluation of the relative environmental sensitivity of that particular stretch of the river. The higher the number, the greater the degree of sensitivity. Thus a section noted as number 8 (vegetated low banks) is a more sensitive area than one designated as number 4 (coarse grained sand beach). Note that opposite banks of the river are often of two differing environmental types.

The numbers adjacent to the species indicator symbols correspond to the species listed on p. E-2; these represent the oil sensitive wildlife found along the Apalachicola River.

The maps also indicate other important information, including the location of boat ramps, suggested boom deployment sites, access roads, and tributaries.

These maps are black and white versions of larger color-coded originals, a full set of which is permanently on file in the offices of the Apalachee Regional Planning Council in Blountstown.

COASTAL SENSITIVITY ATLAS – APALACHICOLA RIVER SYSTEM, FLORIDA

SPECIES LIST

SHELLFISH

4	Pink Shrimp	*Penaeus duorarum*
43	American Oyster	*Crassostrea virginica*
49	Blue Crab	*Callinectes sapidus*
50	White Shrimp	*Penaeus setiferus*
51	Brown Shrimp	*Penaeus aztecus*
71	Rock Shrimp	*Sicyonia sp.*
73	Squid	*Loligo sp.*

REPTILES

3	○ American Alligator	*Alligator mississippiensis*
6	○ Atlantic Loggerhead Turtle	*Caretta Caretta*
10	○ Alligator Snapping Turtle	*Macroclemmys temminckii*
11	○ Suwannee Cooter	*Chrysemys concinna suwanniensis*
12	Florida Red-bellied Turtle	*Chrysemys nelsoni*
13	○ Barbour's Map Turtle	*Graptemys barbouri*
14	● Four-toed Salamander	*Hemidactylium scutatum*
15	Flatwood Salamander	*Ambystoma cingulatum*

FISH

98	American Eel	*Anguilla rostrata*
102	Atlantic Sturgeon	*Acipenser oxyrhynchus*
104	Striped Bass	*Morone saxatilis*
107	Spotted Sea Trout	*Cynocion nebulosus*
109	Reddrum	*Sciaenops ocellata*
111	Southern Flounder	*Paralichthys lethostigma*
115	Menhaden	*Brevoortia tyrannus*
116	Mullet	*Mugil cephalus*
123	Croaker	*Micropogon undulatus*
124	Whiting	*Menticirrhus americanus*
125	Gulf Sturgeon	*Acipenser oxyrhychus*
142	Alabama Shad	*Alosa alabamae*
143	Skipjack Herring	*Alosa chrysochloris*
144	Hogchoker	*Trinectes maculatus*
145	Moutain Mullet	*Agonostomas monticola*
146	White Bass	*Morone chrysops*
147	Carp	*Cyminus carpro*
148	Sunshine Bass	*Morone sp.*
149	White Catfish	*Ictalurus catus*
150	Channel Catfish	*Ictalurus punctatus*
151	Yellow Bullhead	*Ictalurus natalis*
152	Brown Bullhead	*Ictalurus nebulosus*
153	Snail Bullhead	*Ictalurus brunneus*
154	Black Crappie	*Pomoxis migromaculatus*
155	Largemouth Bass	*Micropterus salmoides*
156	Bluegill	*Lepomis macrochirus*
157	Readear Sunfish	*Lepomis microlophus*
158	Chain Pickerel	*Esox niger*

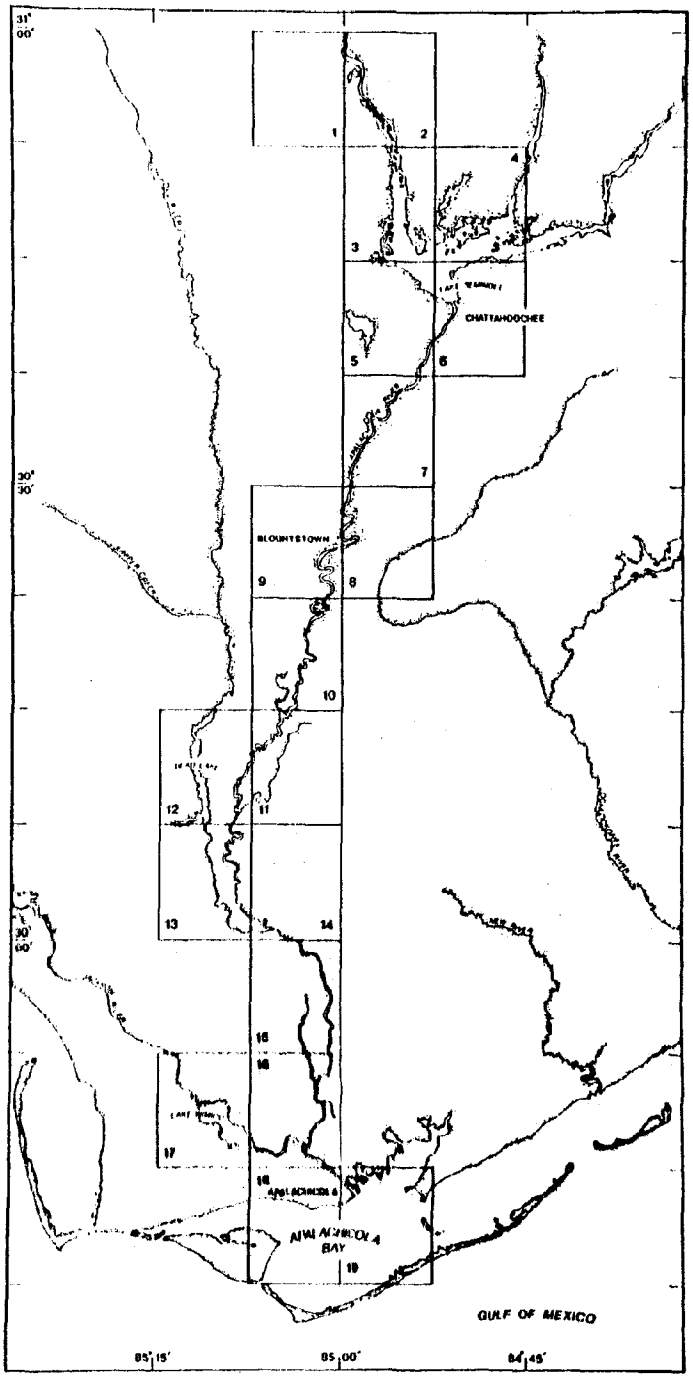
BIRDS

C	Waterfowl	
E	Wading birds	
F	Seabirds	
8	Double-crested Cormorant	*Phalacrocorax auritus*
77	○ Osprey	*Pandion haliaetus*
86	Least Tern	*Sterna albifrons*
107	Peregrine Falcon	*Falco peregrinus*
123	● Southern Bald Eagle	*Haliaeetus leucocephalus*
133	Black Skimmer	*Rynchops niger*
135	Sandwich Tern	*Sterna sandvicensis*
137	Royal Tern	*Sterna maxima*
139	Snowy Plover	*Charadrius alexandrinus*
152	American Oystercatcher	*Haematopus palliatus*
154	Wilson Plover	*Charadrius wilsonia*
182	American Kestrel	*Falco sparverius*
187	Wood Duck	*Aix sponsa*

MAMMALS

8	River Otter	*Lutra canadensis*
30	○ Roundtailed Muskrat	*Neofiber alleni*
31	Beaver	*Castor canadensis*

● - Endangered ● - Rare
○ - Threatened ○ - Special Concern



LOCATOR MAP

Apalachicola ESI Shoreline Classification

1. VERTICAL ROCKY SHORES AND SEAWALLS
2. EXPOSED BLUFFS
3. FINE-GRAINED SAND BEACHES
4. COARSE-GRAINED SAND BEACHES
5. MIXED SEDIMENT BEACHES
6. RIPRAP STRUCTURES, GRAVEL BEACHES AND CROSS LEVEES
7. VEGETATED BLUFFS

7a. EXPOSED TIDAL FLATS

8. VEGETATED LOW BANKS
9. CYPRESS AND HARDWOOD SWAMPS

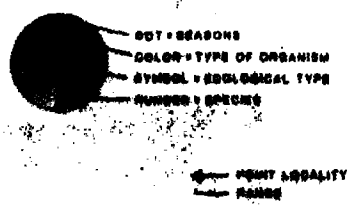
10a. FRESHWATER MARSHES

10b. SALTWATER MARSHES

Oil Sensitive Wildlife

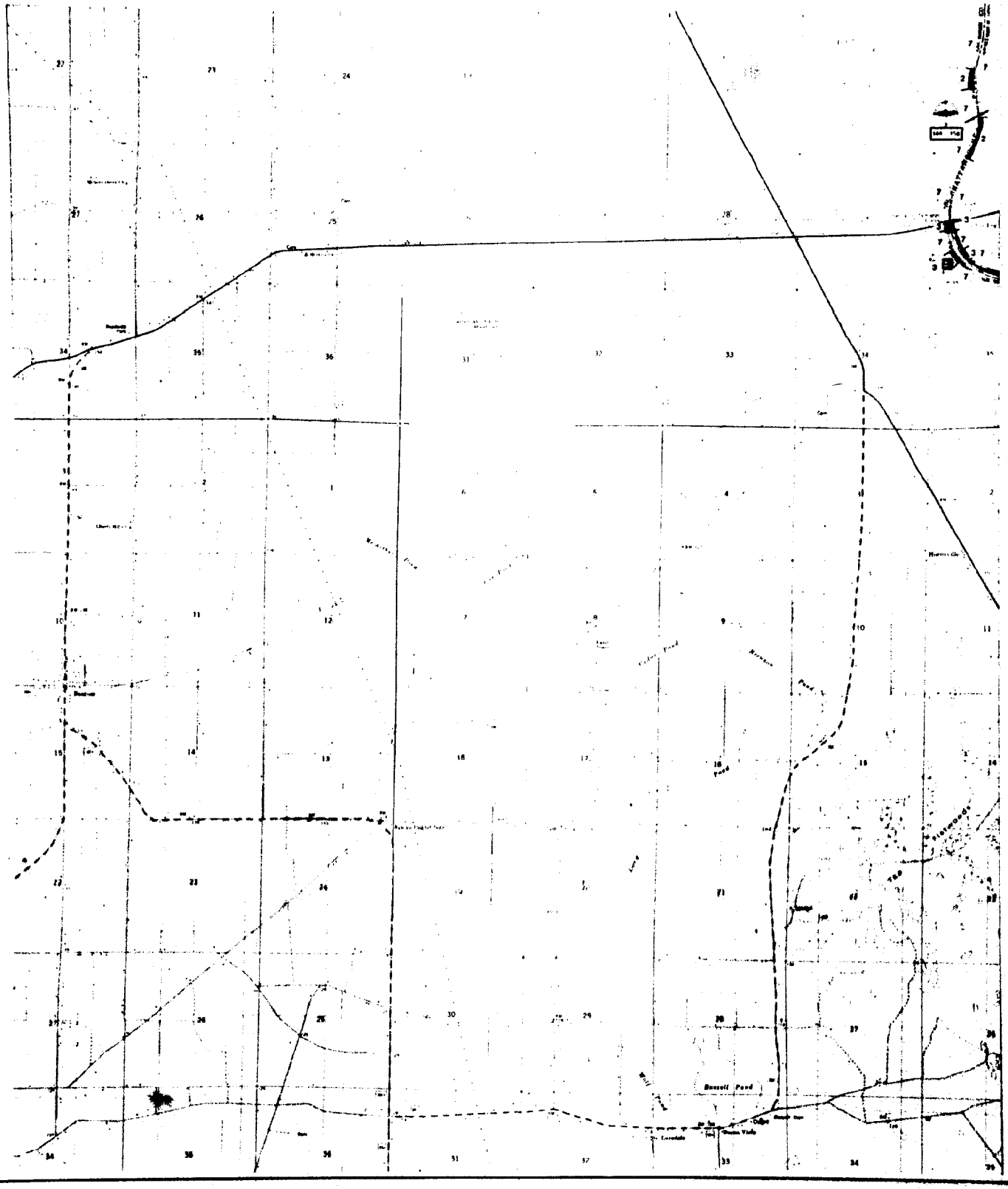
- COMMERCIAL CRABS
- COMMERCIAL SHRIMP
- OYSTER BEDS
- COMMERCIAL SQUID FISHERIES
- COMMERCIAL OR SPORT FISHES
- TURTLES, SEA TURTLE NESTING
- ALLIGATORS, LIZARDS, SALAMANDERS
- RAPTORS
- WADING BIRDS
- DIVING BIRDS
- SEABIRDS
- SHOREBIRDS
- MIGRATORY WATERFOWL
- OTTERS, BEAVERS, MUSKRATS

Key to Wildlife Markers



Access and Protection

- BOOMS
- BOAT RAMPS



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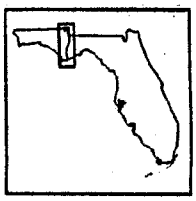

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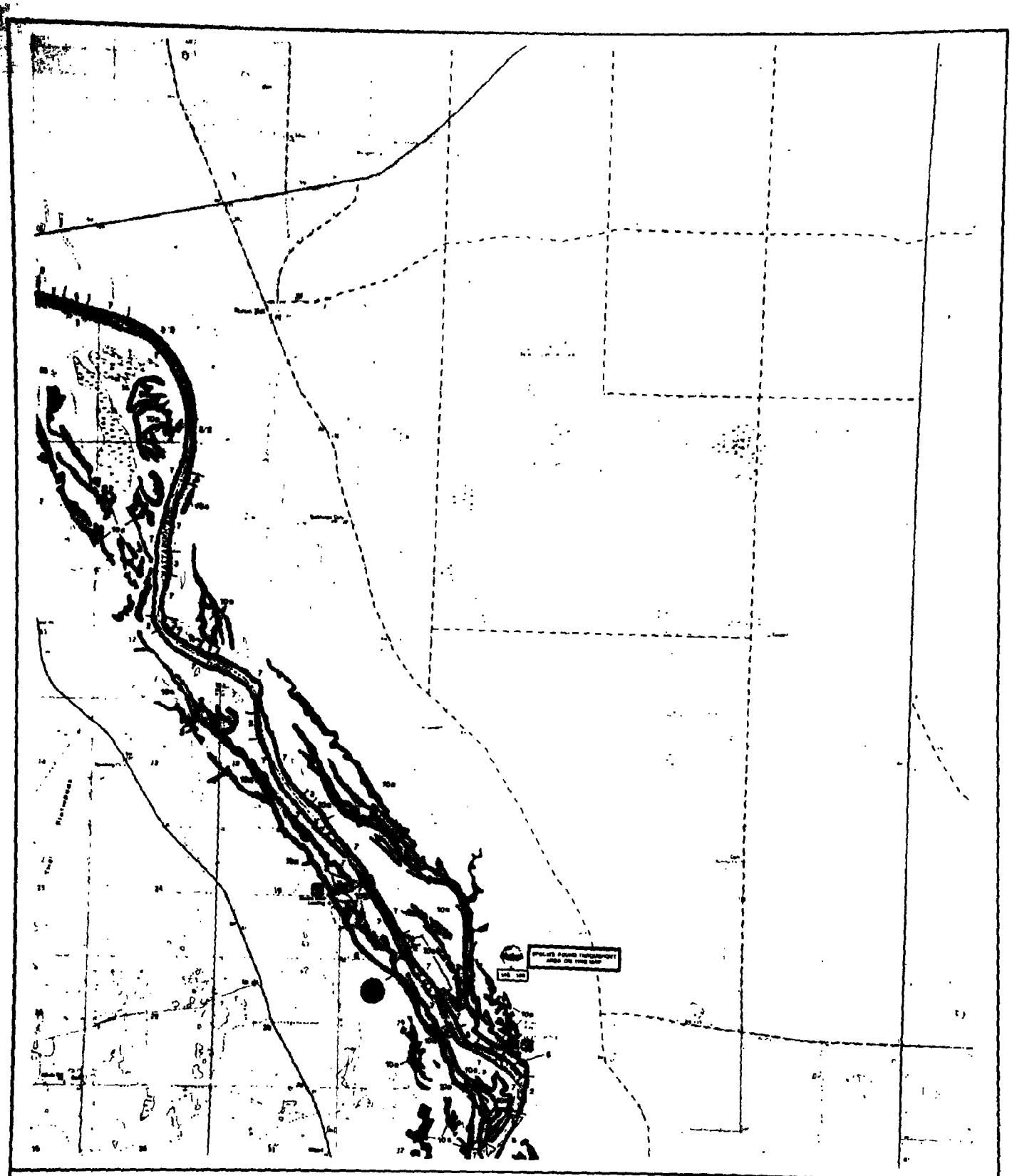

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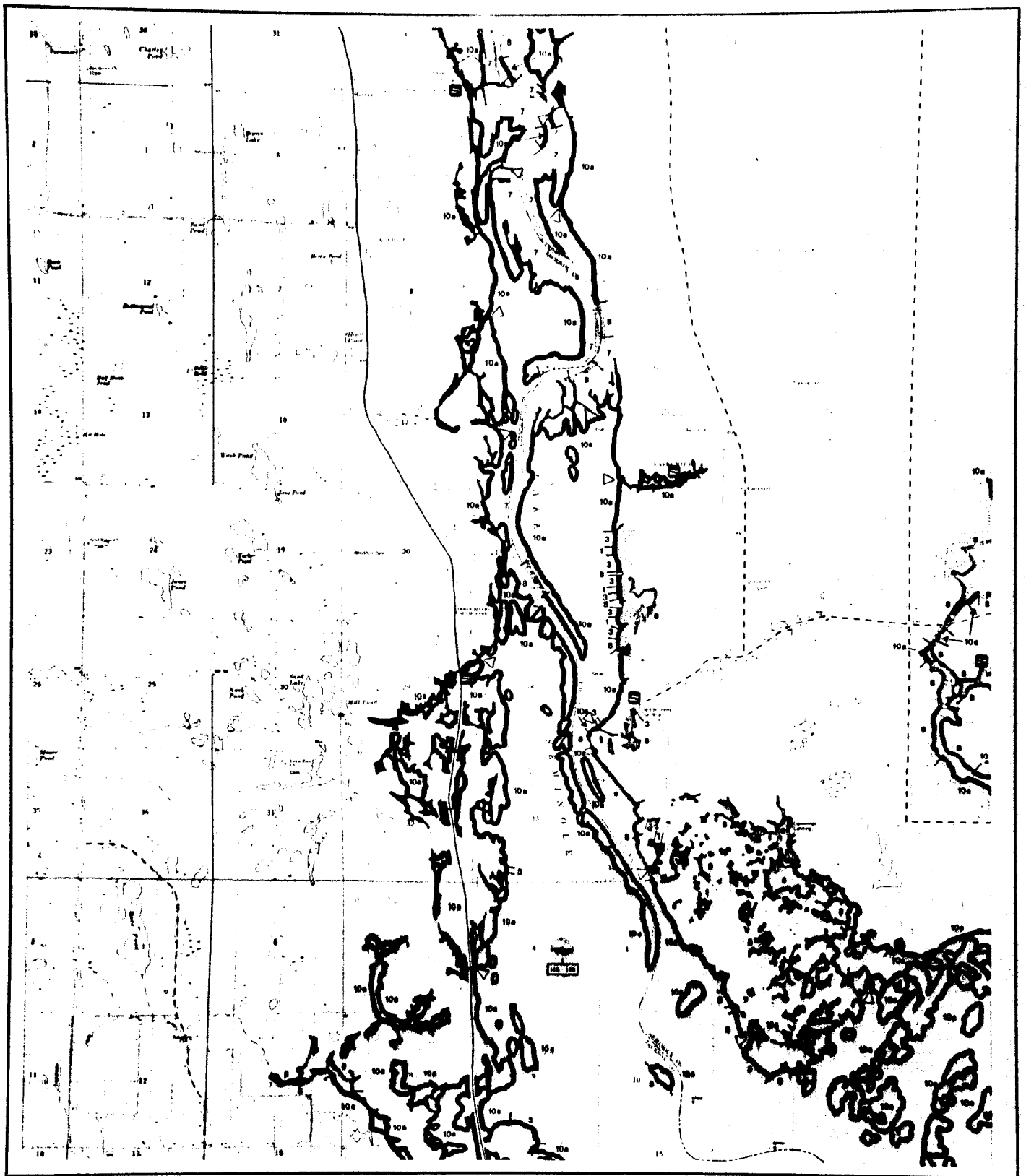

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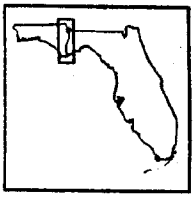

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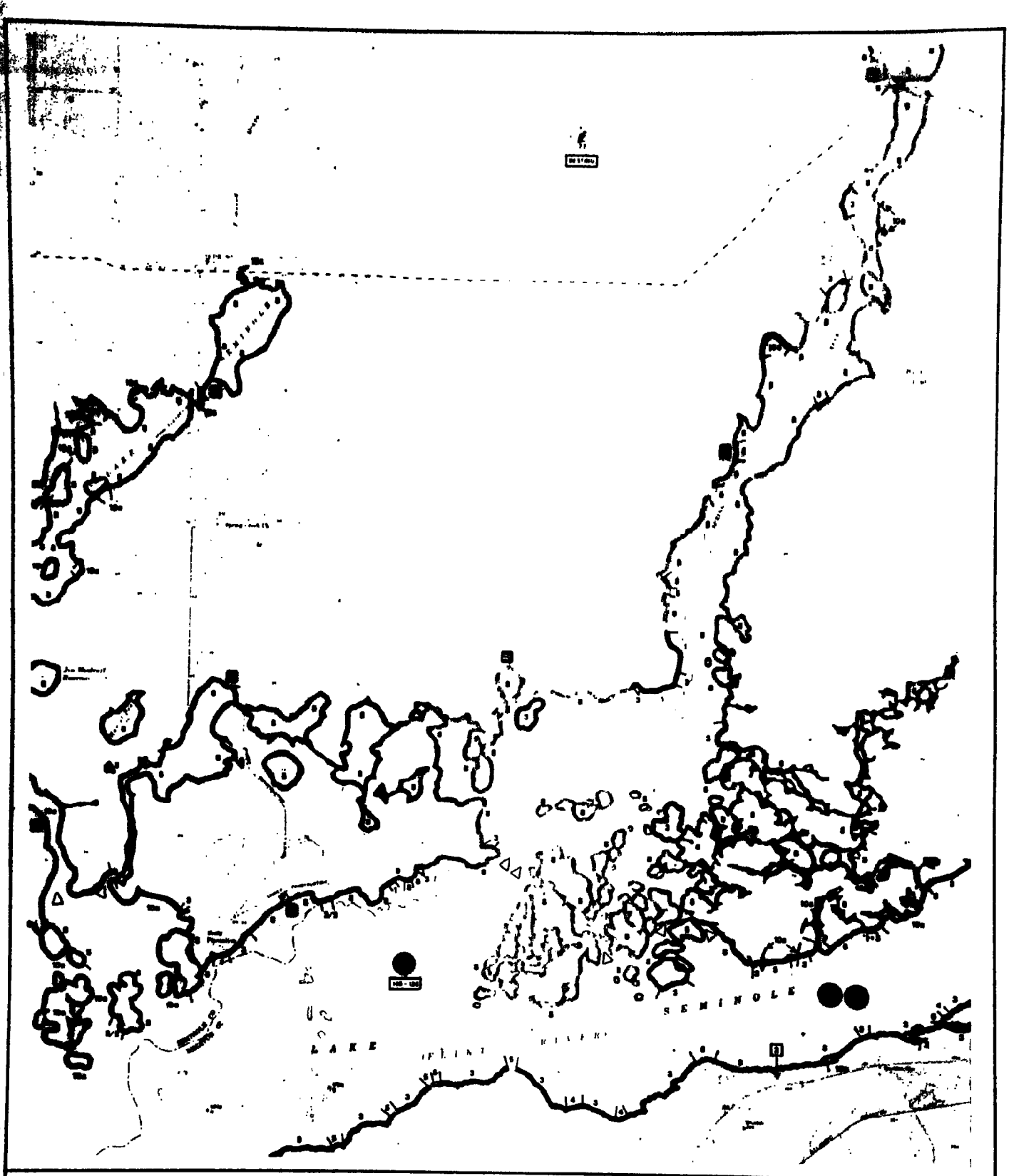

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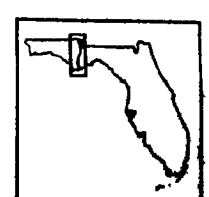

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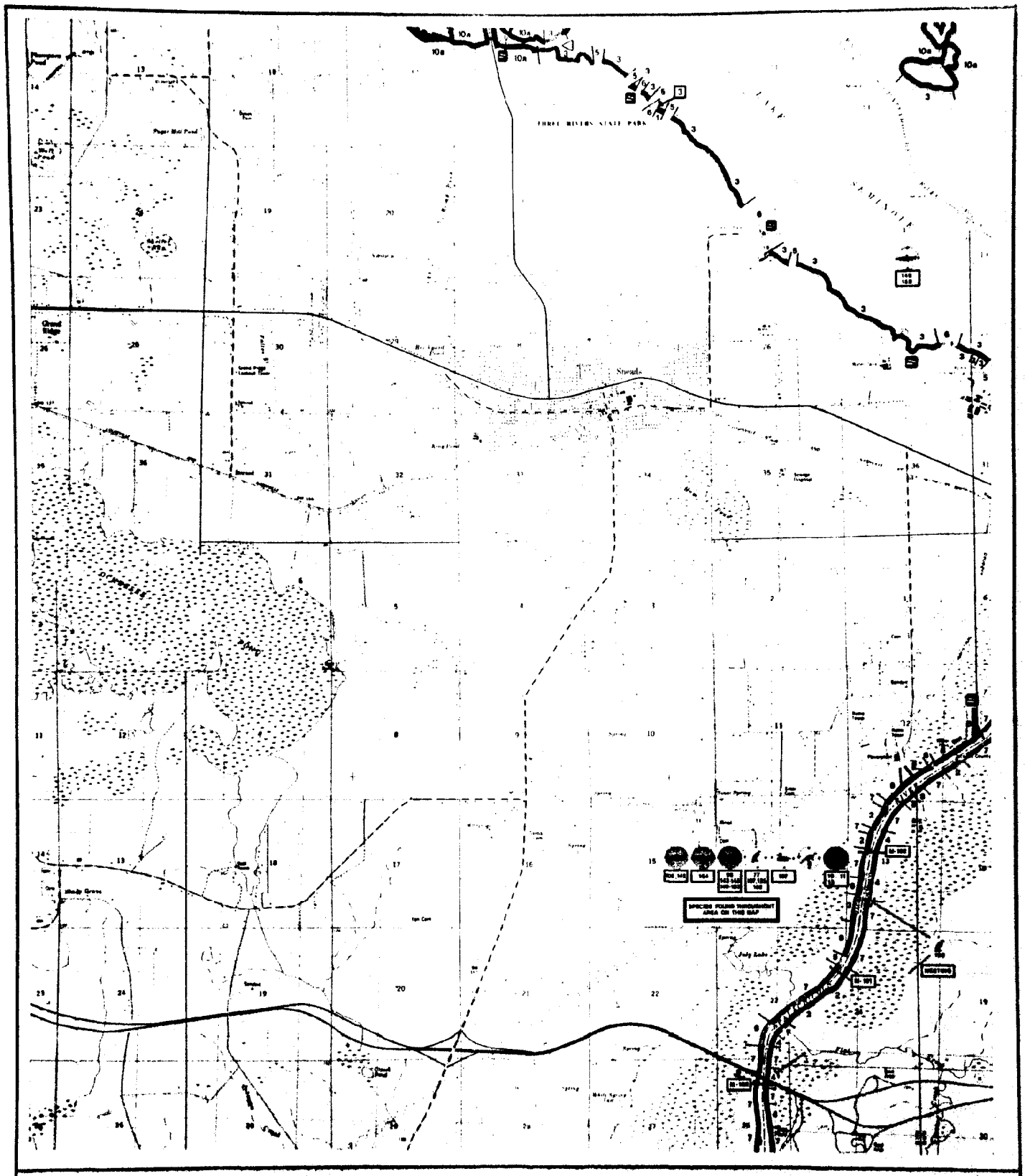

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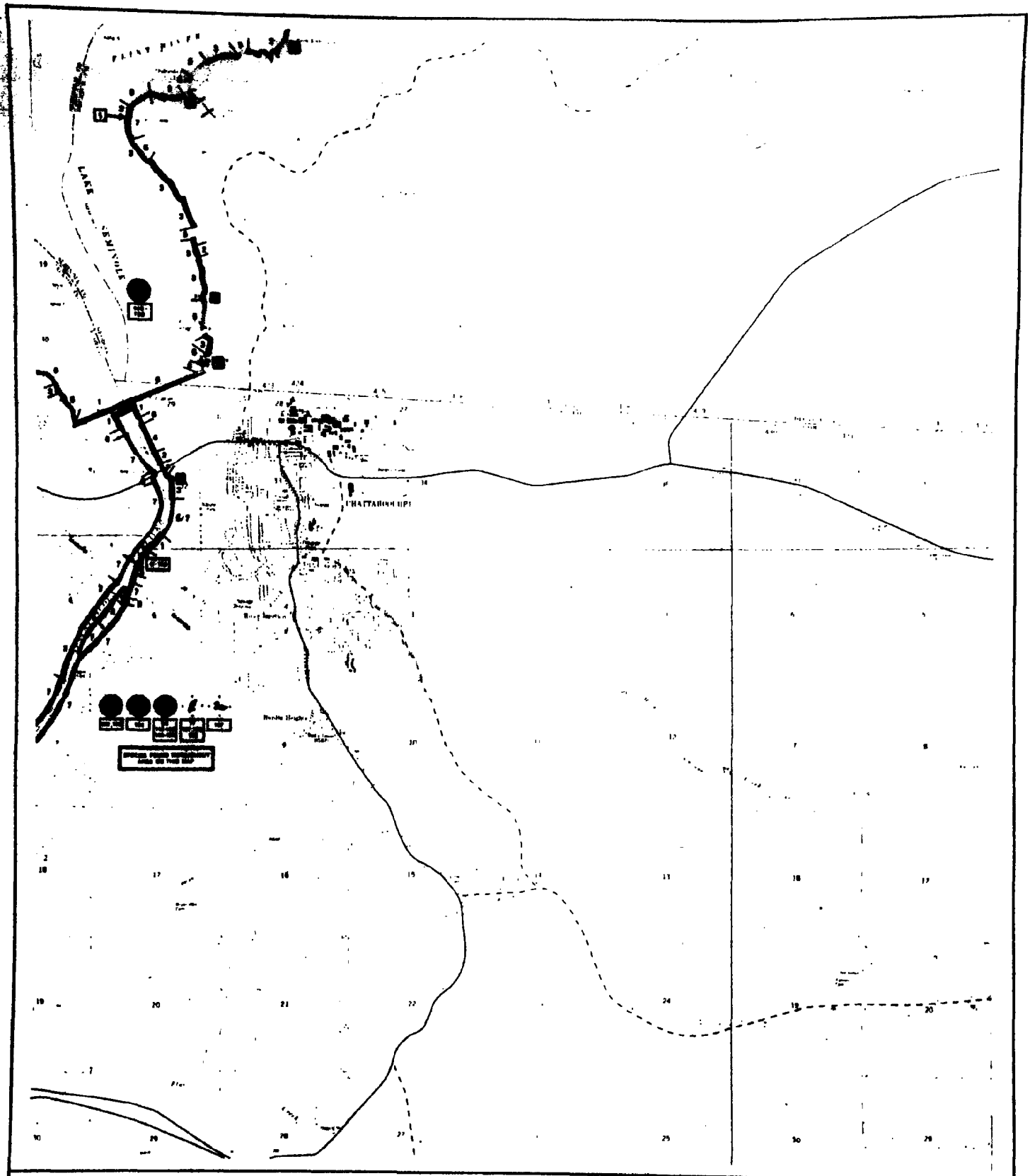

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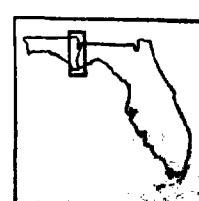

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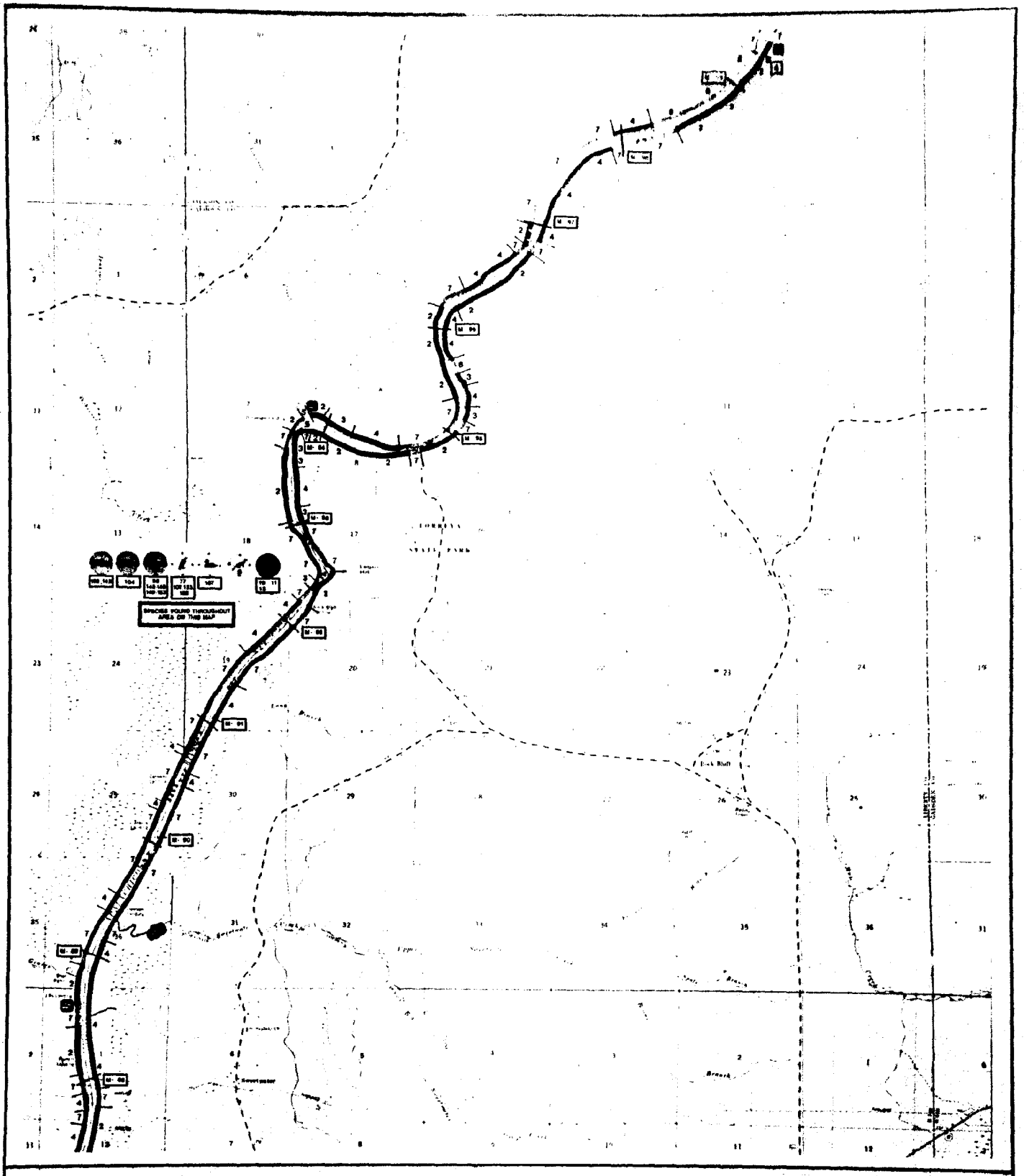

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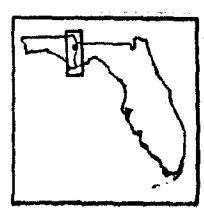

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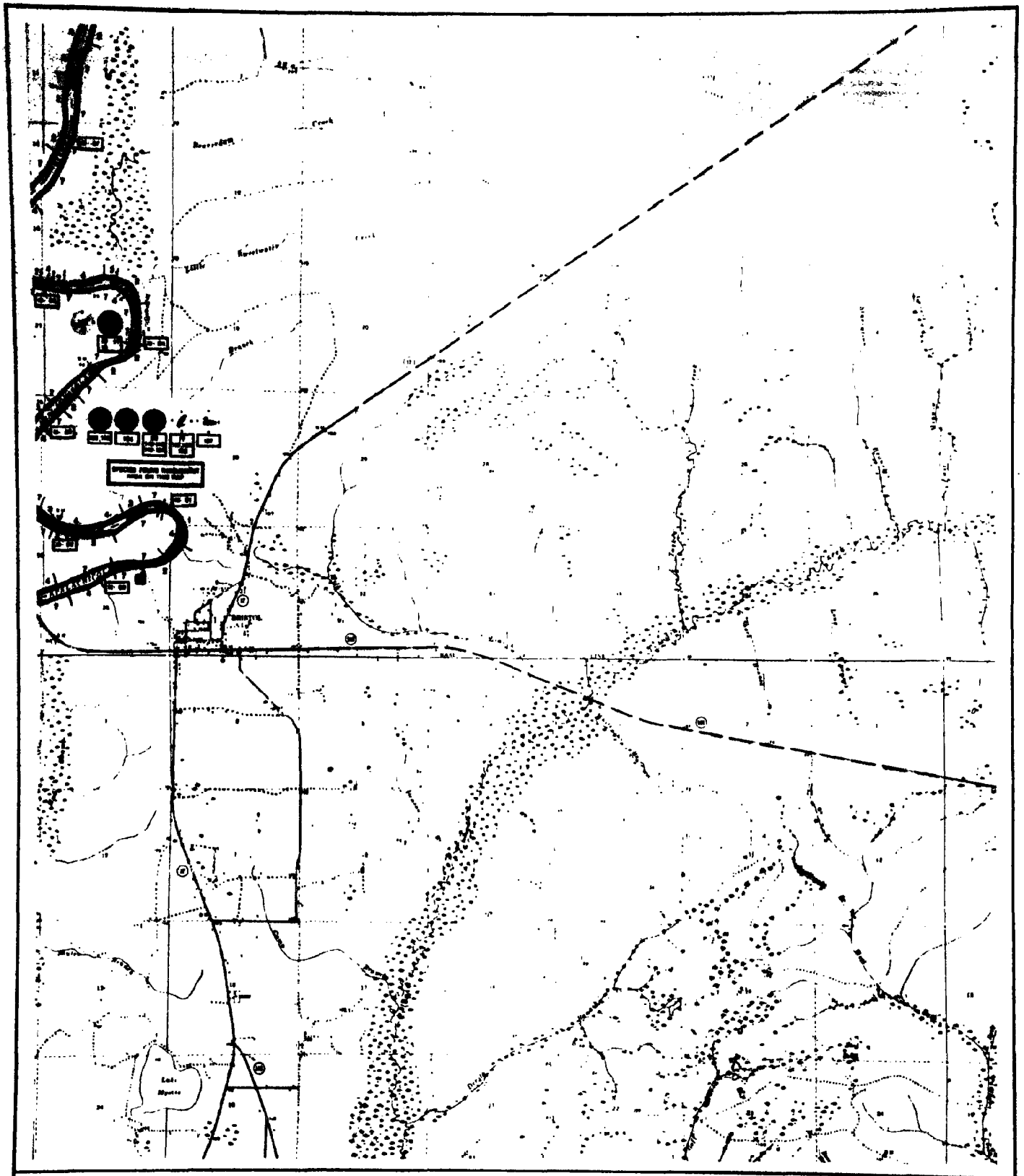

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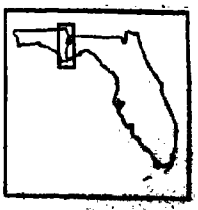

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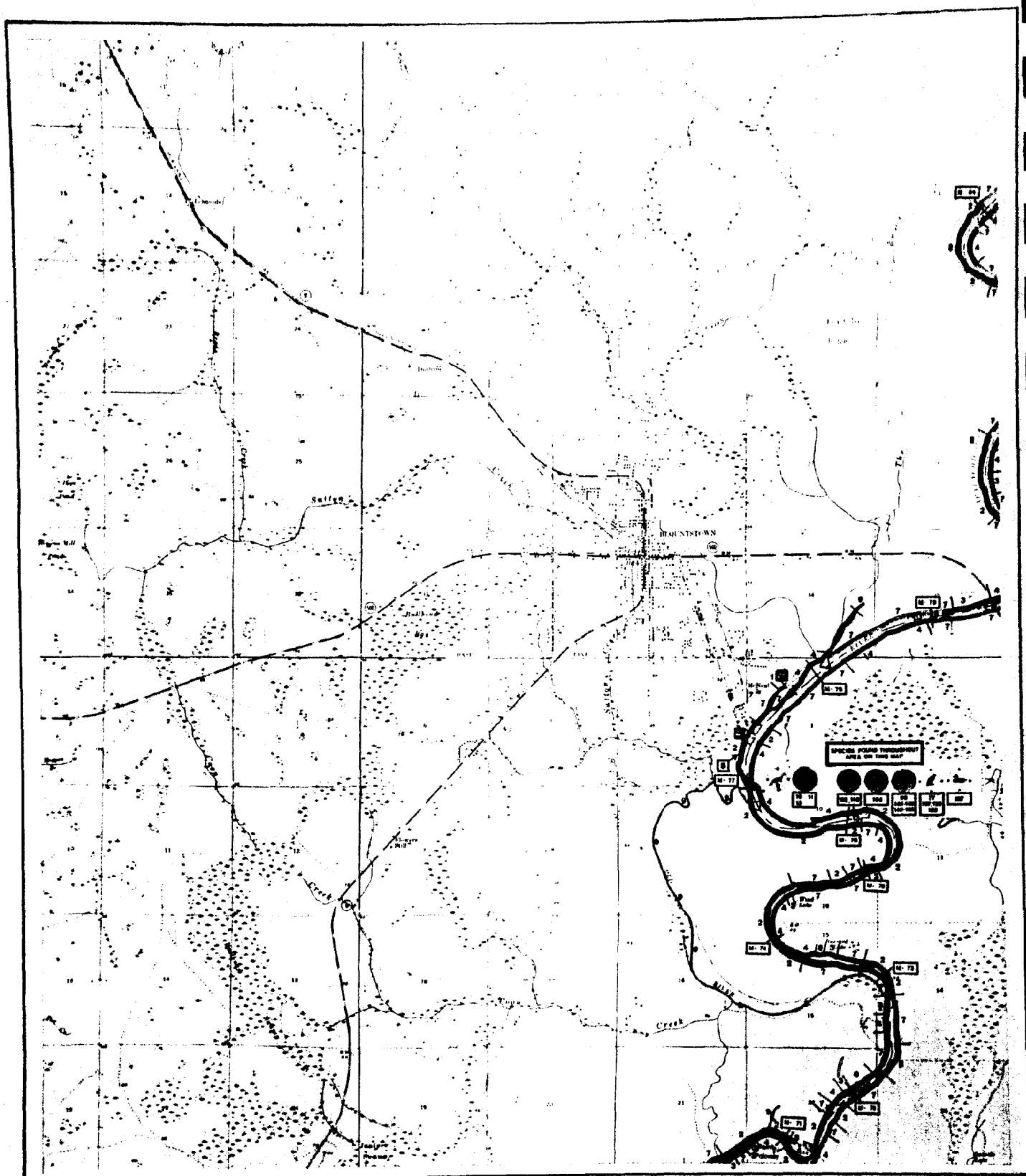

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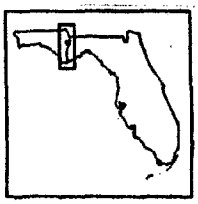

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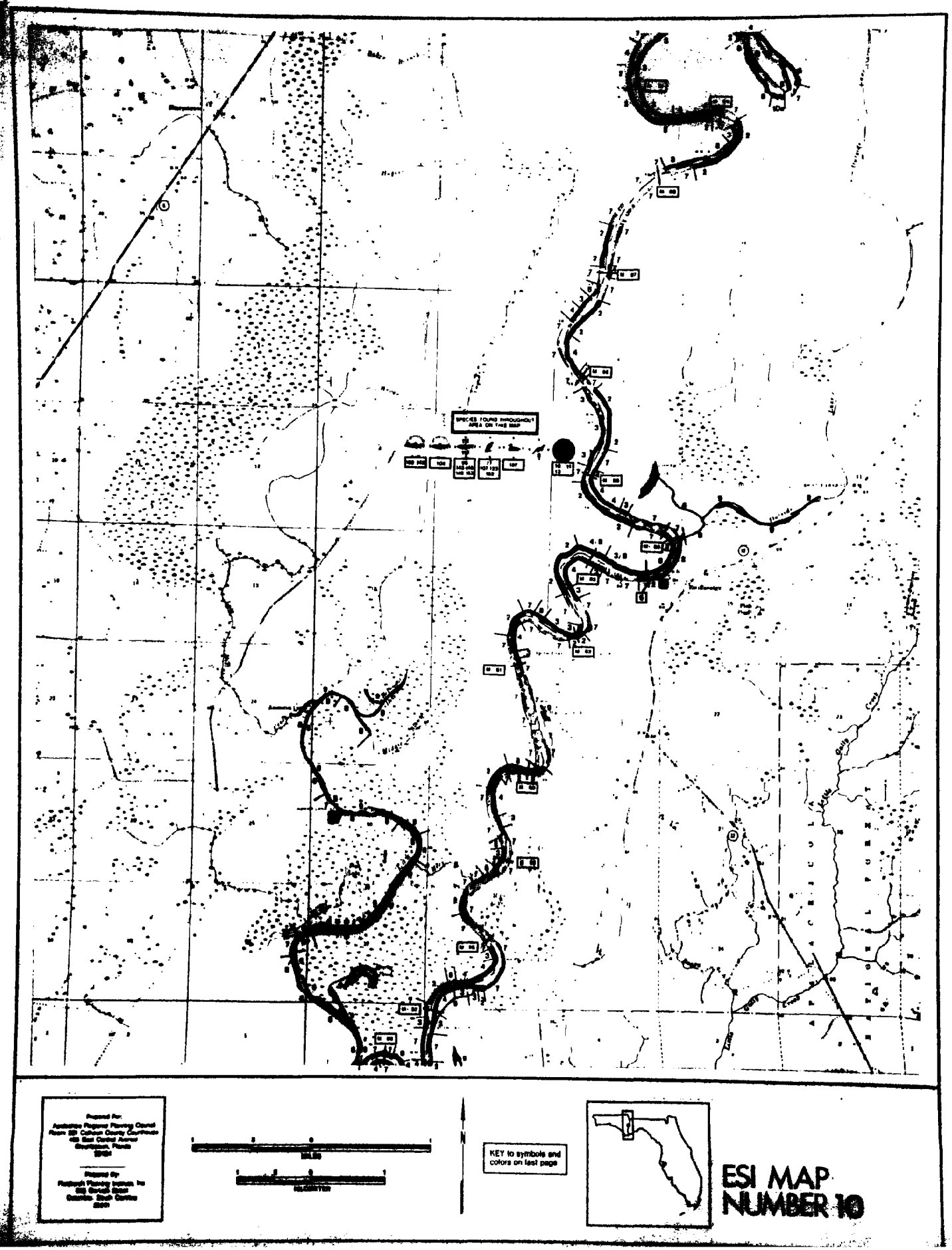
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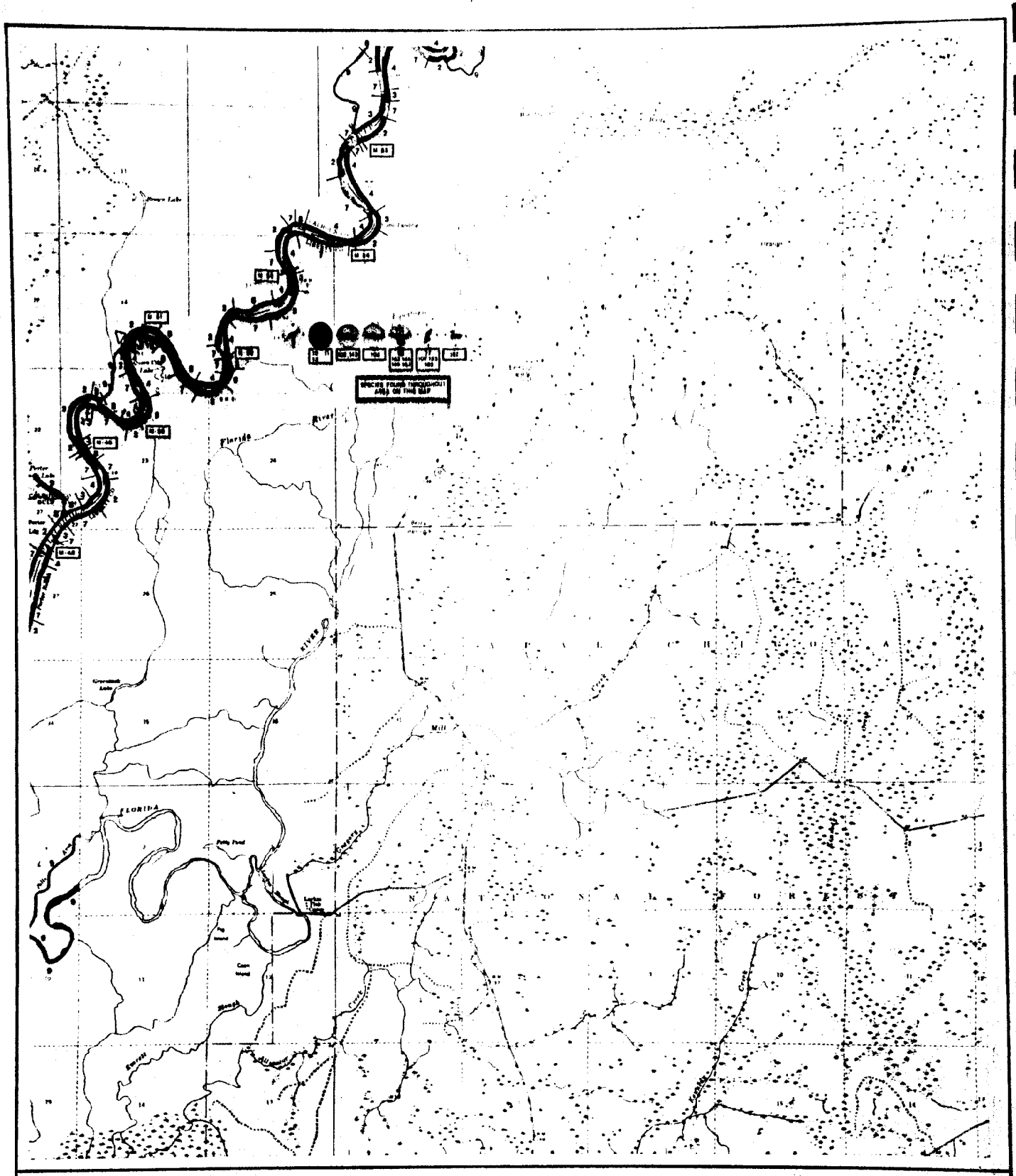

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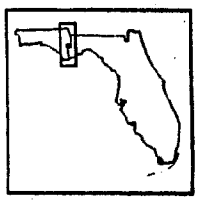

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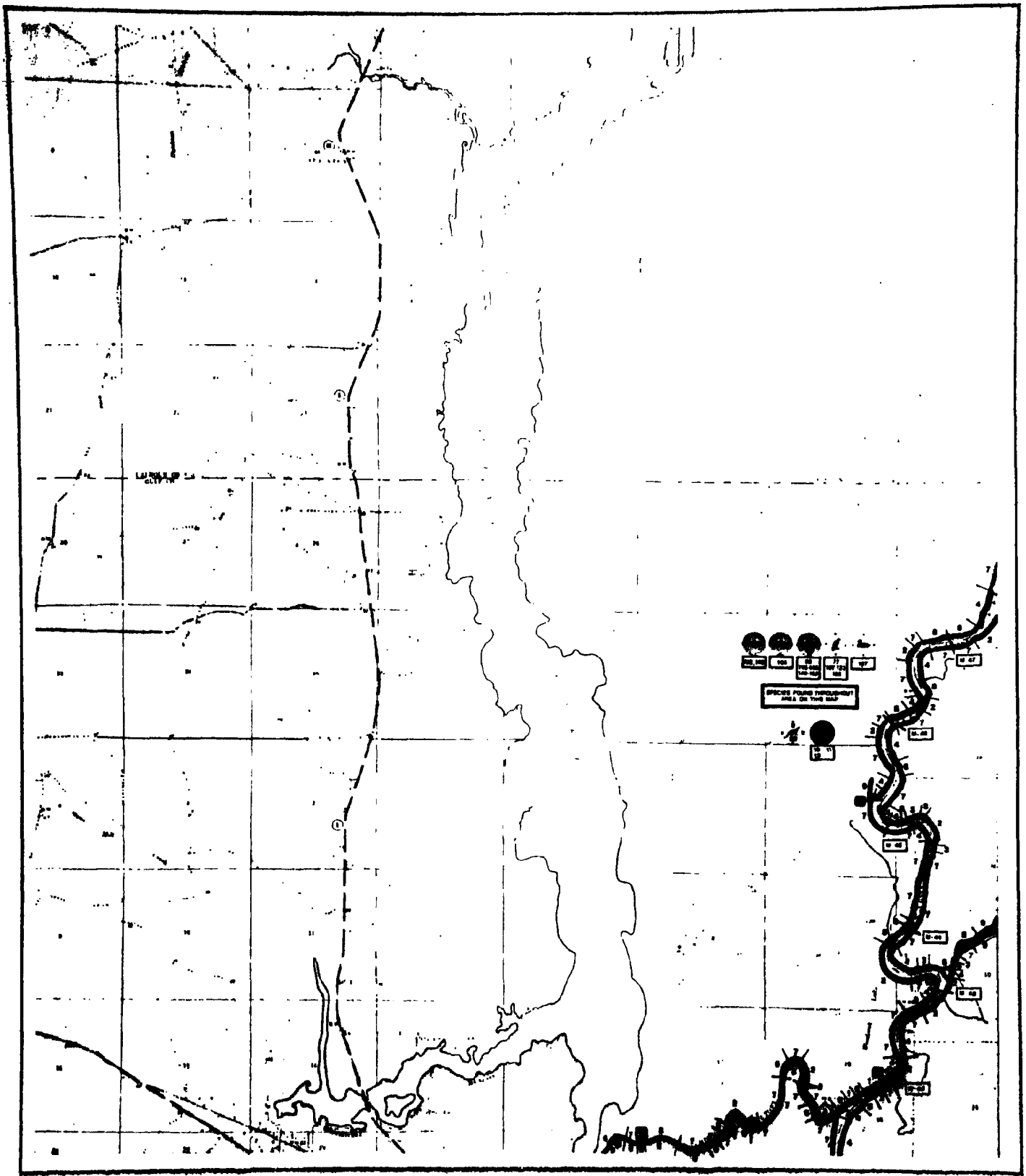

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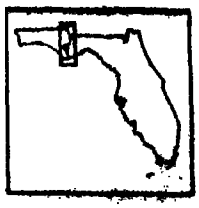

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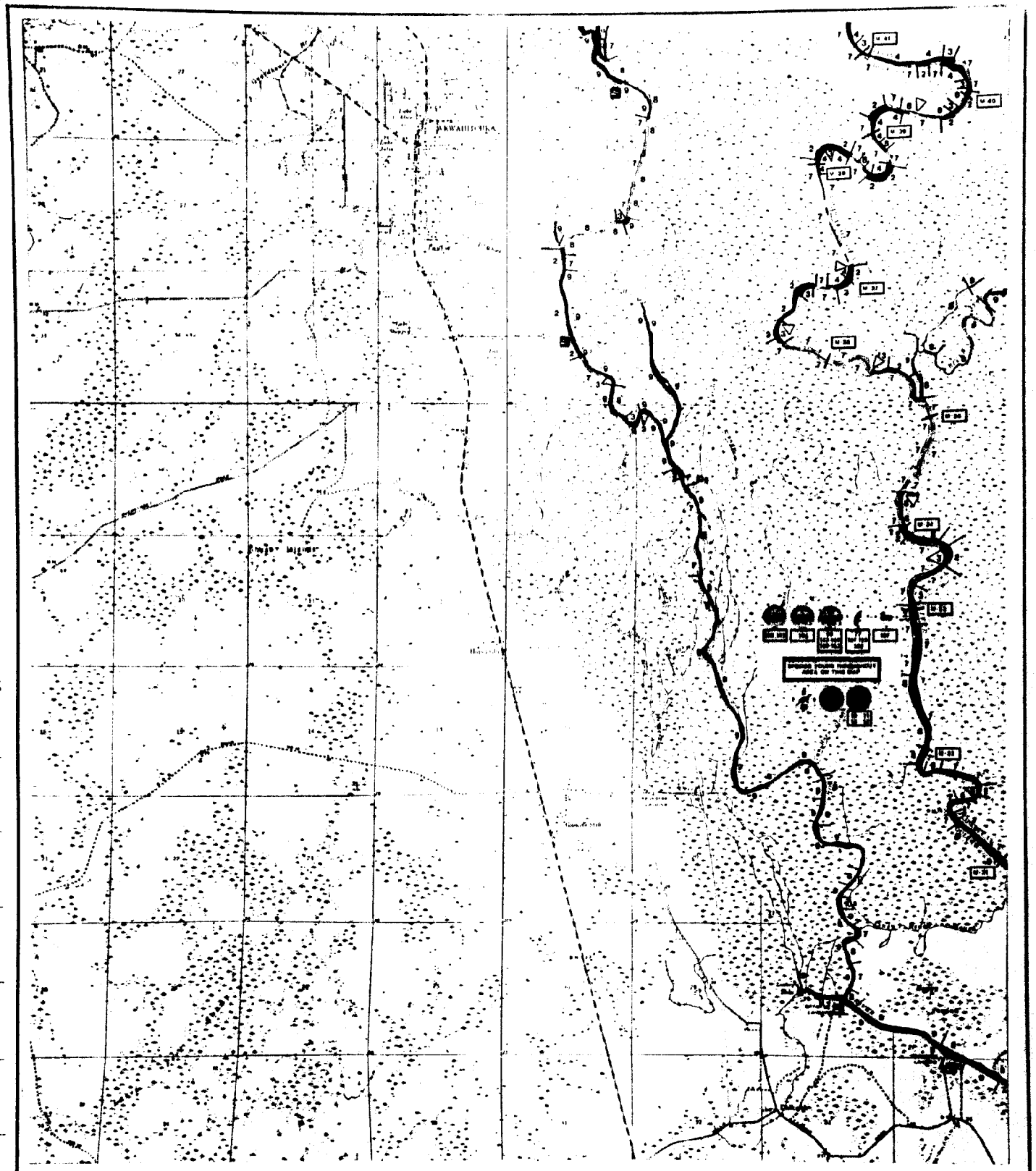

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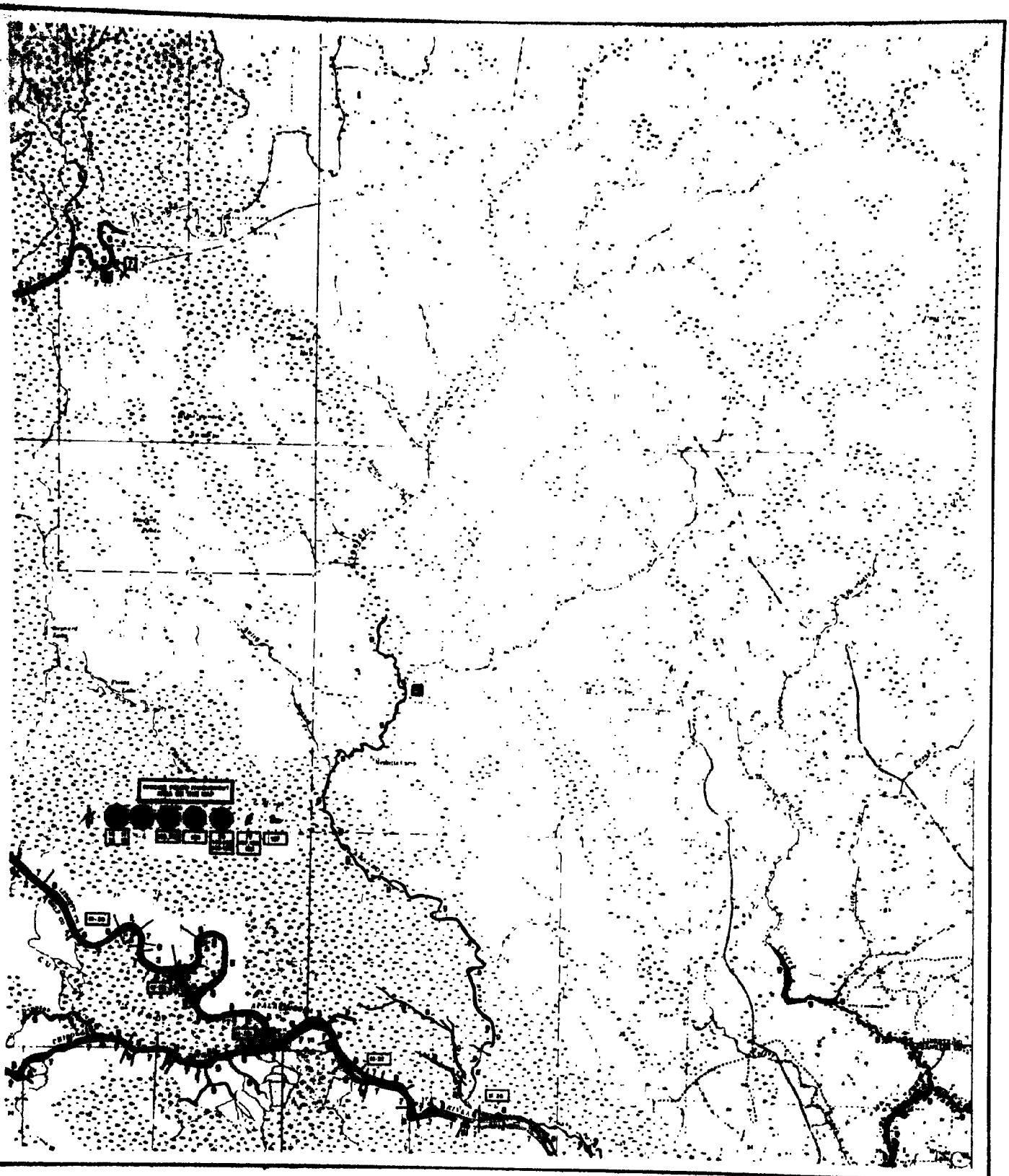

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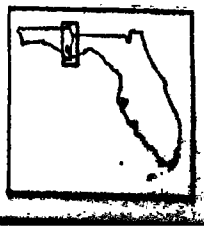

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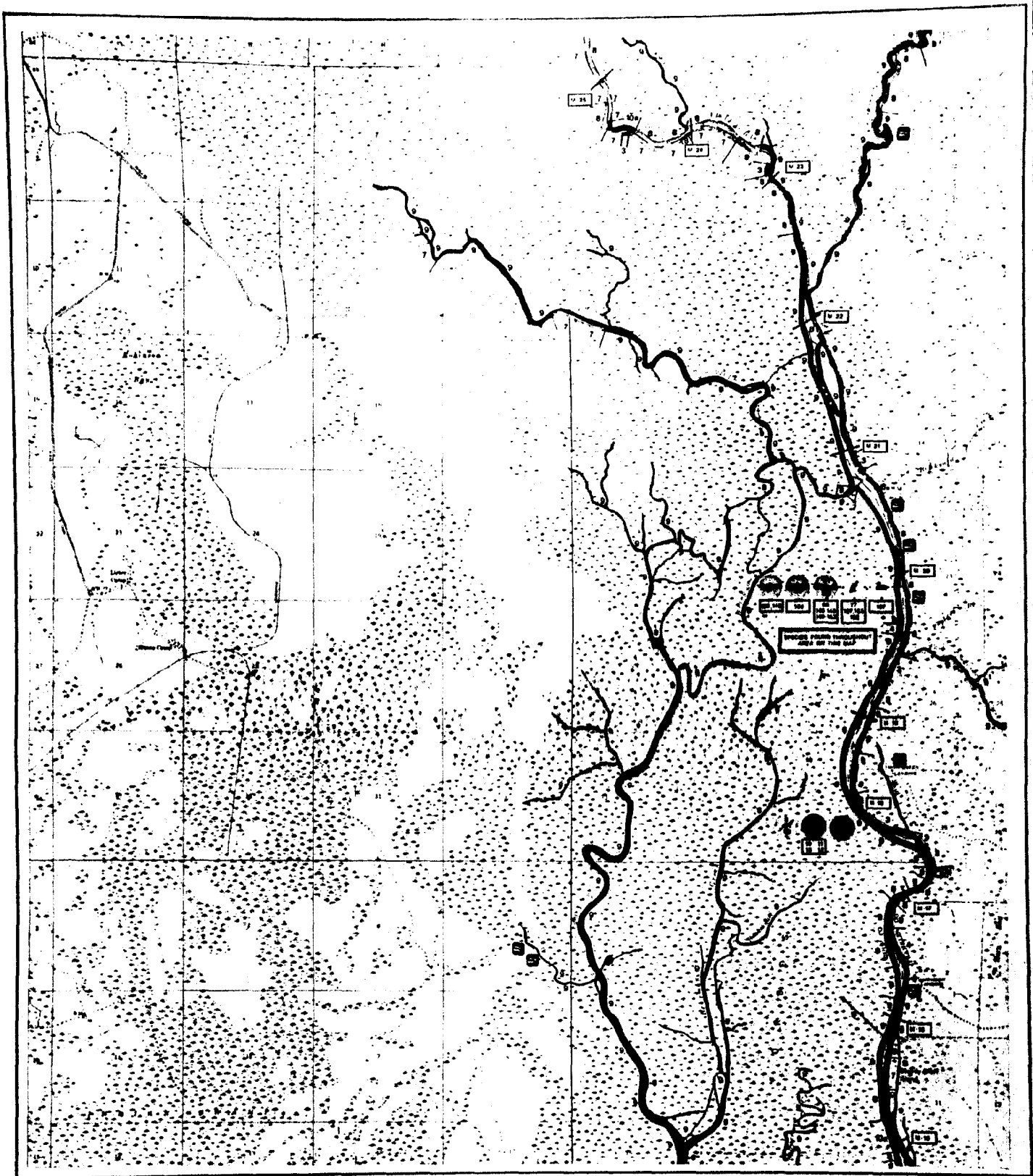

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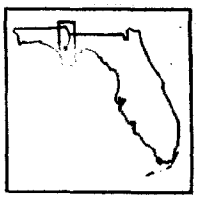

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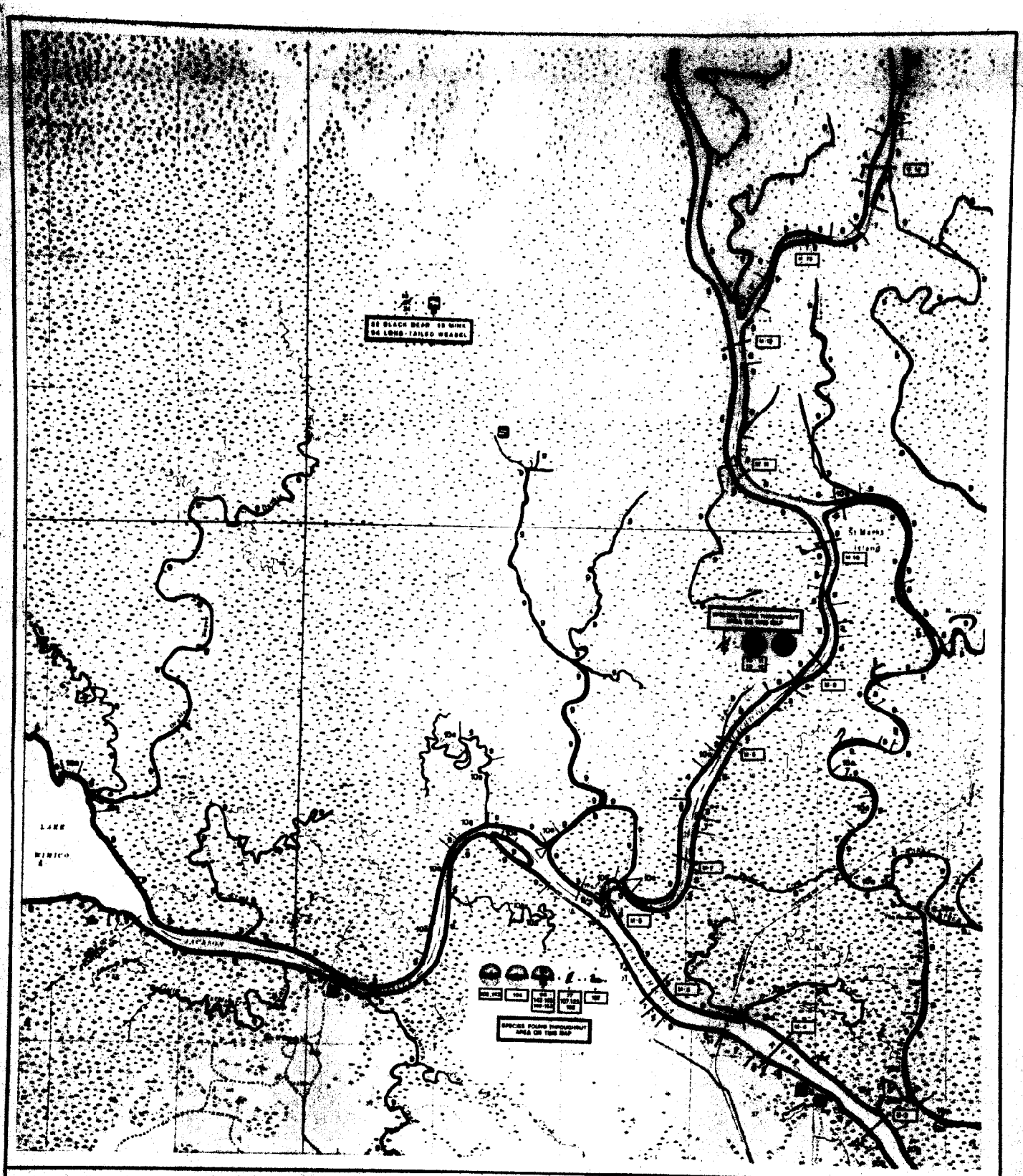

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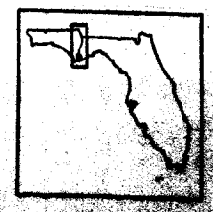

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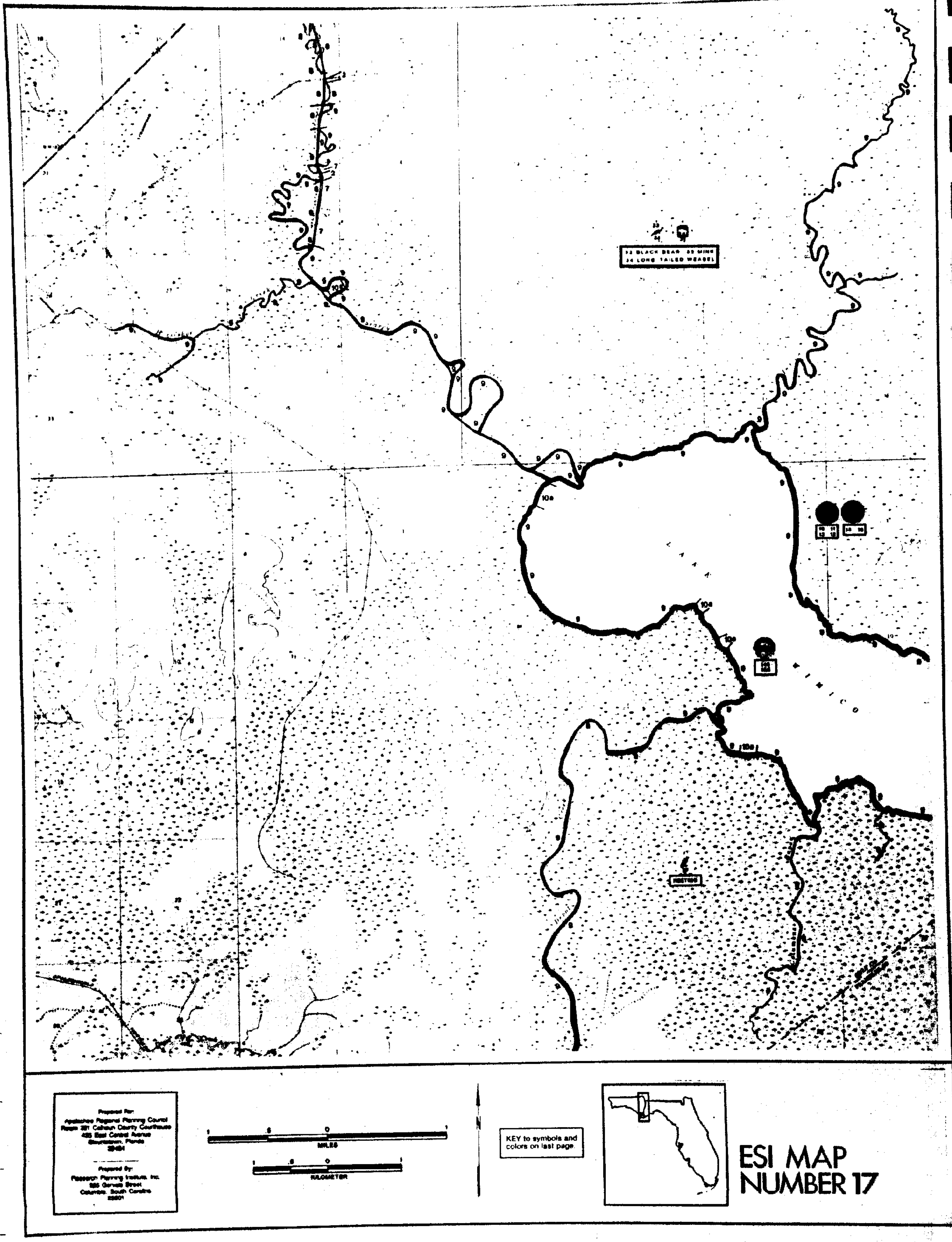

BLACK BEAR
MINK
34 LONG TAILED WEASEL
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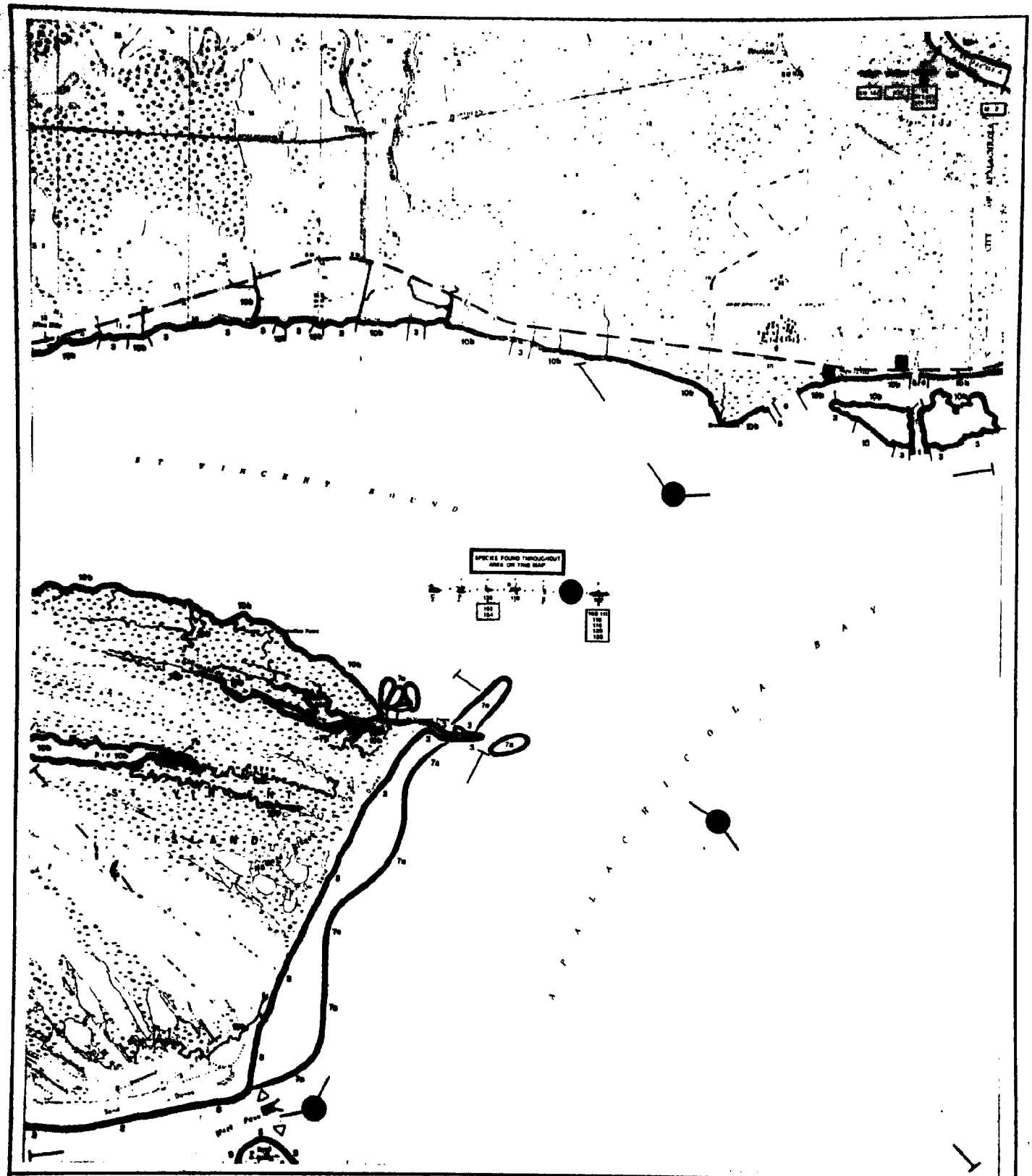
ESI MAP
NUMBER 17



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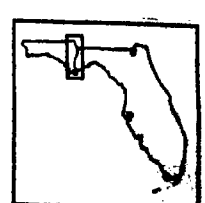

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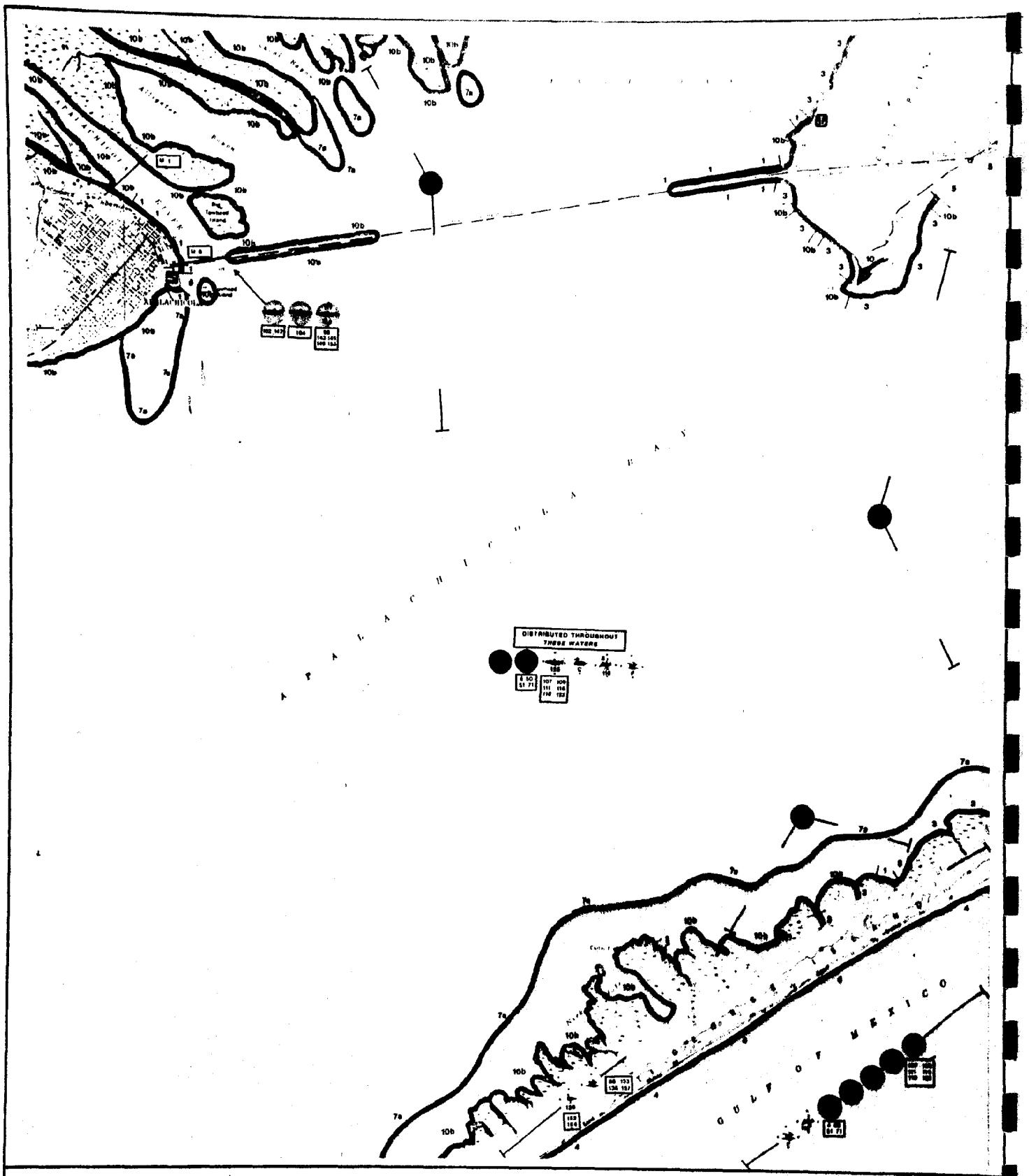

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ESI MAP NUMBER 19

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