N P D E S MUNICIPAL SEPARATE STORM SEWER SYSTEM

ANNUAL REPORT FOR JANUARY 1, 1995 TO DECEMBER 31, 1995

Volume II - APPENDICES

SUBMITTED BY:

AND CO PERMITTEES:

City on the Gulf
Venice, Florida

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SARASOTA COUNTY
STORMWATER ENVIRONMENTAL UTILITY
INSPECTION REPORT

INSPECTOR: _____ INSPECTION DATE: _____

PARCEL ID#: _____ FACILITY NUMBER: _____

LOCATION: _____

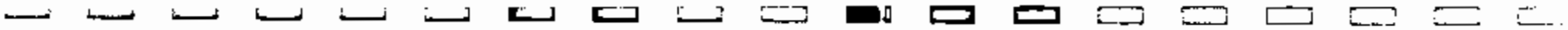
O&M ENTITY: _____

PHOTOGRAPHS: _____ CREDITS:GRANTED/REQUESTED _____

PREVIOUS RAINFALL _____ RETENTION _____ DETENTION _____

OBSERVATIONS	PASS	FAIL	NA	COMMENTS
GENERAL:				
Debris				
Side Slopes				
Erosion				
Sedimentation/Sumps				
Inflow Areas				
Outfall Channel				
Tailwater				
RETENTION SYSTEMS				
Water Levels (Relative)				
Underdrains				
Littoral Shelf				
Bleeder				
Baffle				
Swales				
Ditch Blocks				
Storage Depth/Area				
DETENTION				
Control Structure				
Storage Depth/Area				

OTHER OBSERVATIONS	YES	NO	COMMENTS
AQUATIC PLANT CONTROL			
Problems			
Biological Controls			
Herbicide Application			
MOSQUITO PRODUCTION			



ORDINANCE NO. 72-37

An Ordinance of the County of Sarasota relating to the control and regulation of air and water pollution, throughout Sarasota County, including those areas of the County lying within the boundaries of municipalities, towns and cities, including a finding that the provisions of this Ordinance provide for stricter, more extensive and more stringent regulating of pollution than provided for by the State of Florida; providing general definitions, providing for administration and enforcement; providing for the duties and powers of the Board of County Commissioners; providing for appointment and the duties and powers of a Pollution Control Officer; providing for establishment of a Hearing Board and the duties and powers thereof; providing for appointment of an Advisory Board and the duties and powers thereof; providing for appeals from actions, decisions or orders of the Pollution Control Officer; providing for immunity of the Pollution Control Officer and of the Advisory Board and individual members thereof; providing for approval of equipment and facilities; providing enforcement procedures; providing that violations shall be punishable by both civil and criminal penalties, and providing for additional remedies in case of violation; providing certain definitions in relationship to water pollution; providing for the degree of treatment of domestic and industrial waste; providing for water quality standards; providing for classification of waters for public water supply, shellfish harvesting and for recreation, propagation and management of fish and wildlife; providing discharge standards; providing ground water classification; providing certain definitions in relationship to air pollution; providing standards and for control of sulfur compound emissions, fluoride emissions, particulate emissions, visible emissions from motor vehicles, fugitive dust, incineration, particulate emissions by process industries, open burning, burning for cold or frost protection in connection with agricultural or citrus operations, burning for agricultural and/or silvicultural operations, hydro carbon emissions from stationary sources, volatile organic compounds; waste gas disposal, discharge, emissions and disposal of organic solvents, carbon monoxide emissions; providing ambient air standards; providing standards and/or control of air pollution by noise; providing for repeal of Ordinance No. 70-1 of Sarasota County referred to as the Sarasota County Air and Water Pollution Control Code; providing for repeal of Chapter 59-1843, Laws of Florida, Special Acts of 1959, as amended, relating to regulation and control of air pollution in all areas of Sarasota County lying outside the corporate limits of any municipality; providing a severability clause and a saving clause; providing an effective date.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA:

amended by
084-76

Filed 19th day of Sept. 1972
ROBERT W. ZINN - CLERK
Board County Commissioners
Sarasota County, Fla.
By Florence [illegible]

meeting the responsibility of local and County government to protect the public health, safety and welfare of the citizens of this County.

H. The Board of County Commissioners of Sarasota County, Florida, hereby finds and declares that control, regulation and abatement of the activities which are causing or may cause pollution of the air and water resources in this County, and which are or may be detrimental to human, animal, aquatic, or plant life, or to property, or unreasonably interfere with the comfortable enjoyment of life or property must be stricter and more stringent to insure conservation of natural resources, to insure continued safe environment, to insure purity of air and water, to insure domestic water supplies, to insure protection and preservation of the public health, safety, welfare, and well being, and to insure and provide for recreational and wildlife needs as the population increases and the economy expands.

I. It is the purpose of this Ordinance to promote atmospheric control and freedom of the air from specific contaminants, to control the pollution of water in the streams, bays, lakes, estuaries, Gulf, or underground waters, and to safeguard the peace, health, safety, and welfare of human, animal, marine, and plant life within the boundaries of Sarasota County against air and water pollution caused by or resulting from the emission or escape of dust, fumes, gas, mist, odor, smoke, vapor, toxic poisonous noxious chemicals, raw, or inadequately treated sewage, noise, or any combination thereof.

J. It is hereby found and declared that this Ordinance provides for stricter, more extensive and more stringent regulations of air and water pollution and the control of same than is provided and required under the provisions of Chapter 403, Florida Statutes, and the regulations promulgated and adopted thereunder as administered by the Department of Pollution Control of the State of Florida and the Pollution Control Board of the State of Florida.

Section 2. Short Title. This Ordinance is referred to as the Sarasota County Air and Water Pollution Code.

Section 3. General Definitions.

A. "Person" means any person, firm, association, organization, partnership, business, trust, corporation, company, contractor, supplier, installer, user, owner, County, district, or other political subdivision or any officer or employee thereof.

B. "Board" means the Board of County Commissioners of the County of Sarasota.

Section 4. Administration and Enforcement.

A. Board; Duties and Powers.

The Board shall have the following duties, functions, powers, and responsibilities:

selected by the Board on the basis of training, experience, or interest in the field of air and water pollution control, and successors to the present members or additions to the Advisory Board shall be residents of Sarasota County. The members of the Advisory Board shall serve at the pleasure of the Board, and without compensation.

2. The Advisory Board, immediately upon its appointment, and annually in January, shall organize by electing from their number, a Chairman, a Vice Chairman, and a Secretary.

3. The Advisory Board shall hold its annual meeting on the third Wednesday in January of each year, at which meeting it shall make recommendations as it may deem appropriate for improvement of air and water pollution control in Sarasota County. Such recommendations shall then be presented to the Board and to the Pollution Control Officer.

4. The Advisory Board shall call and hold such other meetings from time to time as may be requested by the Board or the Pollution Control Officer for the purpose of making recommendations on matters referred to the Advisory Board by the Board or the Pollution Control Officer. The Advisory Board may call and hold such other meetings from time to time as it may deem appropriate for the purpose of reviewing and making recommendations to the Board and the Pollution Control Officer on air and water pollution control.

5. Minutes shall be kept of all meetings of the Advisory Board, including the annual meeting, and a copy thereof shall be certified by the Secretary and filed with the governing body.

6. All meetings of the Advisory Board shall be open to the public, and notice of the holding of same shall be published one (1) time in a newspaper of general circulation throughout the district at least fifteen (15) days prior to the holding of such meeting. Any meeting so called and held may be adjourned to a subsequent date or dates.

7. The Pollution Control Officer shall provide temporary clerical and administrative personnel as may be reasonably required by the Advisory Board for the proper performance of its duties.

E. Pollution Control Officer; Duties and Powers.

Duties, functions, powers and responsibilities of the Pollution Control Officer shall include the following:

1. Exercise supervision of the administration and enforcement of this Ordinance.

2. Enforce the provisions of this Ordinance and all laws, rules and regulations of the State of Florida pertaining to air and water pollution.

3. Investigate complaints, study and observe environmental conditions, institute actions necessary to abate nuisances caused by violations and institute proceedings for violation of this Ordinance.

15. Encourage municipalities and other units of government to handle pollution problems within their respective jurisdictions on a cooperative basis and provide technical and consultative assistance therefor.

16. Collect and disseminate information and conduct educational and training programs relating to pollution.

17. Receive and investigate all public complaints and proceed promptly with the enforcement of this Ordinance in the event that an investigation indicates a violation of same.

18. Execute in person affidavits based on personal knowledge for the purpose of procuring a warrant for the arrest of any person violating this Ordinance or the rules and regulations hereto and authorize and instruct any subordinate employee to do likewise; and to also report to and cooperate with the criminal prosecuting attorney in order to obtain the prompt prosecution of all persons who may violate this Ordinance.

19. Cause to be performed any and all inspections, including but not limited to routine inspections and annual inspections, as may be required in order to properly administer and enforce this Ordinance, and in connection with such inspections, to enter upon any premises, structure or building, except one and two family dwellings, for the purpose of accomplishing said inspections or to prevent a violation of this Ordinance. Nothing contained herein shall authorize the entrance upon occupied dwellings without the consent of the owner or occupant thereof.

20. Compile and report to the County Administrator, and through the County Administrator to the Board, an inventory of all sources of pollution in Sarasota County, together with recommendations as to their abatement and control.

21. Refer all recommendations provided for under Section 4, Subsection E 4, 8, 9, and 10 to the Advisory Board for their review and recommendations prior to submission to the County Administrator and to the Board.

22. Transmit the recommendations of the Advisory Board, together with his recommendations, to the County Administrator, and through the County Administrator to the Board, with an explanation of why any recommendation of the Advisory Board was not accepted.

23. If he should deem advisable, request the recommendations of the Advisory Board on any order or notice issued or proposed to be issued under the provisions of Section 4, Subsection Q 2, 4, and 5, prior to notifying the County Prosecutor of a violation or initiating proceeding for civil penalties, injunctive relief, or other remedies or referral to the Hearing Board.

24. Issue written notices to alleged violators and to witnesses of alleged violations to appear before the Advisory Board.

25. Perform any other acts necessary to control and prohibit air and water pollution as defined in this Ordinance and perform such other administrative duties as may be assigned by the County Administrator.

26. Exercise additional powers to be described hereunder.

4. All tests shall be made and the results calculated in accordance with approved test procedures. All tests shall be made under the direction of persons qualified by training and/or experience in the field of air and water pollution control. If the Pollution Control Officer is not satisfied with these tests he may request that new tests be made under the direction of one or more of the following qualified professionals, and that the results thereof shall be certified by such professional:

a. Registered professional engineer;

b. Professional chemist accredited by the American Institute of Chemists;

c. Industrial hygienist certified by the American Board of Industrial Hygiene.

I. Rights to Information.

1. Any information relating to secret processes, methods of manufacture, or production which may be required, ascertained or discovered by inspection or investigation shall not be disclosed in public hearings, and shall be kept confidential by the Pillution Control Officer and his representatives. Provided that nothing herein shall be construed to prevent the use of such records in judicial proceedings in connection with the prosecution of violations of this Ordinance, when ordered to be produced by appropriate subpoena or by order of the Court. No such subpoena or order of the court shall abridge or alter the rights or remedies of persons affected in the protection of trade secrets or secret processes, in the manner provided by law, and such persons affected may take any and all steps available by law to protect such trade secrets or processes.

J. Abnormal Events to be Reported.

1. In case of breakdown or lack of proper functioning of any facility or equipment or operation causing or likely to cause pollution as herein defined, it shall be the duty of the person responsible to notify, without delay, the Pollution Control Officer or his designated agent, and to file, without delay, with the Pollution Control Officer a written report giving the cause, effect, remedial actions taken, and other pertinent and related information concerning the occurrence.

K. Operating Records Required.

1. A person responsible for the operation of any facility that may be a source of air pollution or water pollution as herein defined shall conduct such tests and maintain such records as prescribed by the Pollution Control Officer to give evidence that all emissions are in compliance with this Ordinance. Such test data and records shall include the continuous monitoring of all air contaminant emission and waste water discharges unless otherwise specified by the Pollution Control Officer or his authorized representatives. Such test data and operating records shall be available at all times for the inspection of the Pollution Control Officer or his authorized representative, and reports containing these records and data shall be filed with the Pollution Control Officer on a regular basis.

4. The Hearing Board shall not authorize a variance until it shall find that the authorization of such variance will result in substantial compliance with the intent and purpose of this Ordinance, and that no substantial detriment to the public health, safety, morals, order, comfort, convenience, appearance, prosperity, or general welfare will result from such authorization.

5. The Hearing Board may make the authorization of a variance conditional upon such alternate and additional restrictions, stipulations, and safeguards as it may deem necessary to insure compliance with the intent and purpose of this Ordinance. Violation of such conditions when made a part of the terms under which the variance is granted shall be deemed a violation of this Ordinance.

6. Issue after due public hearing cease and desist orders to adjudged violators of the provisions of this Ordinance.

7. Request recommendations from the Advisory Board.

8. Exercise additional powers to be described hereunder or as provided by the Florida Administrative Procedures Act, being Chapter 120, Florida Statutes, as same may be from time to time changed or amended.

9. Adopt such rules for the conduct of its hearings not inconsistent with the provisions of this Ordinance.

10. In exercising its powers, the Hearing Board, in conformity with the provisions of this Ordinance, may reverse, affirm or modify, in whole or in part, the order, requirement, decision or determination appealed from, and may make such order, requirement, decision, or determination as ought to be made, and to that end shall have all the powers of the Pollution Control Officer from whom the appeal is taken.

N. Appeals from Actions, Decisions, or Orders of Pollution Control Officer; Procedure.

1. Any person aggrieved by an action, decision, or order of the Pollution Control Officer may file an appeal from such action, decision, or order, except for citations issued by the Pollution Control Officer under Section 4, Subsection Q 4, within sixty (60) days after the occurrence or issuance of such action, decision, or order unless the Pollution Control Officer has already referred to the County Prosecutor for criminal prosecution and/or instituted proceedings for civil penalties and/or injunctive relief and/or other remedies under Section 4, Subsection Q or R, and the Hearing Board does not direct that such proceedings be suspended.

2. Upon filing of an appeal, or on its own initiative, the Hearing Board may direct the Pollution Control Officer not to proceed under the provisions of Section 4, Subsections Q or R, and that any proceedings or criminal prosecutions which have already been initiated but have not advanced to trial be suspended, pending the outcome of the appeal or of a review initiated by the Board. Unless the Hearing Board shall so direct, proceedings and/or criminal prosecutions already initiated shall be continued, and if not already initiated, the Pollution Control Officer shall initiate action for criminal prosecution, civil

from the manufacturer to the applicant that any equipment will meet the standards of this Ordinance and rules and regulations thereto. Said plans, specifications, and other data to be sufficient in scope to allow an engineering evaluation to be made to determine whether or not the air or water contamination source will cause or contribute to the creation of air or water pollution.

3. Each application shall be considered on its individual merit. Reports or plans and specifications shall be approved by the Pollution Control Officer only when it appears that the air or water contamination source will not cause or contribute to the creation of air or water pollution based upon the standards established by this Ordinance.

4. In addition, the applicant must obtain any permit or permits required by the State of Florida.

5. All existing industries which contribute to air or water pollution in Sarasota County, or which own or operate any air or water contamination source, including septic tanks, in Sarasota County are required to notify the Pollution Control Officer within sixty (60) days after the effective date of this Ordinance.

Q. Enforcement Procedures.

1. If the Pollution Control Officer has probable cause to believe a violation of any provision of this Ordinance has been committed, he shall cause written notice to be served on the alleged violator or violators. The notice shall specify the provision of the Ordinance alleged to be violated, and the facts alleged to constitute a violation thereof, and may include an order that corrective action be taken within a reasonable time. No such order, except as provided in Section 4, Subsection R, shall become effective except after reasonable notice and the order is served upon the person or persons named therein and, if requested, a review of the order based on affidavits submitted by the alleged violator or violators controverting the facts alleged to constitute a violation; except that injunctive relief may be sought as provided in Section 4, Subsection R.

2. If, after review, the Pollution Control Officer finds that a violation or violations have occurred, he shall affirm or modify his order previously issued, or issue an appropriate order or orders for the prevention, abatement or control of the emission or pollution involved, or for the taking of such other corrective action as may be appropriate. If corrective action is not completed on the date fixed therein, the Pollution Control Officer shall, unless otherwise directed by the Hearing Board as provided in Section 4, Subsection N, notify the County Prosecutor of such violation or violations and/or institute proceedings for civil penalties and/or for injunctive relief in a civil court of competent jurisdiction in Sarasota County, and/or for other appropriate remedies, except for violations referred to the Hearing Board under Section 4, Subsection Q 6.

3. The notice to the County Prosecutor shall contain a description of the violation or violations, the dates thereof, the locations, and the name and address of the violator or violators, and upon receipt of such notice the County Prosecutor shall institute proceedings for prosecution of the violation or violations.

8. Any one or more of the alternative enforcement procedures provided for in Section 4, Subsections Q, R, and T may be followed.

R. Injunctive Relief.

1. If preventive or corrective measures are not taken in accordance with any order of the Hearing Board, or if the Pollution Control Officer finds that a violation of the provisions of this Ordinance exist so as to create emergency, requiring immediate action to protect human health or welfare, the Pollution Control Officer shall institute proceedings in a civil court of competent jurisdiction in Sarasota County to enforce this Ordinance. Such injunctive relief shall include both temporary and permanent injunctions. A temporary injunction may be obtained without bond.

S. Violations, Penalties.

1. It is unlawful to violate this Ordinance.

2. Such violation shall be a misdemeanor, and shall be prosecuted and shall be punishable as provided by general law. Each day during any portion for which such violation occurs, constitutes a separate offense.

3. Such violation is also punishable by a civil penalty of not more than Five Thousand Dollars ($5,000.00) for the first offense, and of not more than Five Thousand Dollars ($5,000.00) for each offense thereafter. Each day during any portion of which such violation accrues constitutes a separate offense.

4. It is the intent hereof that the civil and criminal penalties and fines imposed by a court be of such amount as to insure immediate and continued compliance with this Ordinance. The imposition of either a civil or criminal penalty shall not preclude the imposition of the other penalty.

T. Additional Remedies.

1. The Hearing Board in addition to other remedies, may direct the Pollution Control Officer to institute other appropriate action, suit, or proceedings in any court of competent jurisdiction in Sarasota County to enforce the provisions of this Ordinance and the rules or regulations thereto. Such additional proceedings may include, but are not limited to, the obtaining of judgment for damages to public lands, water, or other public facilities and expenses incurred in prosecuting such legal proceedings.

15. Garbage: All putrescible animal and vegetable matter resulting from the handling, preparation, cooking, and consumption of food.

16. Gas: A formless fluid which occupies space, and which can be changed to a liquid or solid state only by increased temperature with increased or controlled pressure.

17. Hydrocarbons: Compounds of carbon and hydrogen which exist in the atmosphere in the gas phase. Excluded are suspended particulates and other solid organics.

18. Incinerator: A combustion device specifically designed for the destruction, by burning, of solid, semi-solid, liquid, or gaseous combustible wastes.

19. Industrial Process Operations: Includes any action, operation, or treatment embracing chemical, industrial, manufacturing, or processing factors, methods or forms including but not limited to furnaces, kettles, ovens, converters, cupolas, kilns, crucibles, stills, dryers, roasters, crushers, grinders, mixers, reactors, regenerators, separators, filters, reboilers, columns, classifiers, screens, quenchers, cookers, digestors, towers, washers, scrubbers, mills, condensors, or absorbers.

20. Mists: Minute droplets of liquid suspended in the atmosphere, which may be generated by condensations of volatilized liquids or by chemical reactions of gases with each other, or with normal atmospheric constituents.

21. Motor Vehicles: Powered vehicles with internal combustion engines.

22. Odor: That property of a liquid, gas, or solid air contaminant which affects the sense of smell.

23. Open Air: All space outside of buildings, chimneys, stacks, or exterior ducts.

24. Open Outdoor Fire: Any combustion of combustible materials of any type, outdoors, in the open, not in any enclosure, where all the products of combustion are not directed through a flue.

25. Owner: The person who has title to the premise; or has possession, charge, care, or control of a premise, either as agent of the owner or as administrator, administratrix, executor, executrix, or guardian of the estate of the owner, or is lessee of the premise.

26. Particulate Matter (Defined by Sampling): Material which is suspended in or discharged into the atmosphere in finely divided form as a liquid or solid at atmospheric temperature and pressure.

27. Photochemical Oxidants: Those atmospheric substances which will react in a solution of neutral-phosphate-buffered potassium iodide.

28. Process Weight: The total weight of all materials introduced into any specific process, which process may cause any discharge into the atmosphere. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not.

B. Sampling and Testing:

1. All analyses and tests shall be conducted in a manner specified by the Department. Results of analyses and tests shall be calculated and reported in a manner specified by the Department.

C. Sulfur Compound Emission:

1. No person shall burn, sell, or make available for sale for burning in fuel combustion equipment any fuels containing in excess of 0.20% sulfur by weight.

2. No person shall cause or permit the emission or combustion of any refinery product, gas stream, or any other process gas streams that contain hydrogen sulfide in concentrations greater than one grain per 100 cubic feet of gas without removal of hydrogen sulfide in excess of such concentration.

3. No person shall cause or permit sulfur dioxide tail gas emissions from sulfuric gas manufacturing plants to exceed one pound per ton of acid produced. The tail gas acid mist emissions are not to exceed 0.05 pound per ton of acid produced, and the sulfur trioxide emissions are not to exceed 0.05 pound per ton of acid produced.

4. No person shall cause or permit sulfur oxide emissions from a sulfur recovery plant to exceed 0.001 pound per pound of sulfur processed.

5. In none of the above cases shall the stack gas contain more than 5 PPM of sulfur oxide.

D. Fluoride Emissions.

1. Rate of total fluoride emissions from any phosphate plant premise shall not exceed at any time 0.01 pound of contained fluoride per hour for every ton of P_2O_5 or equivalent processed per hour.

E. Particulate Emissions.

1. Visual Emission Restrictions for Stationary Sources:

No person shall discharge into the atmosphere from any single source of emission whatsoever any air contaminants of a shade or density equal to or darker than designated as #1 on the Ringlemann Chart, or 20% opacity.

2. Visible Emissions from Motor Vehicles:

a. No person shall cause or permit the emission of visible air contaminants from any gasoline powered motor vehicle for longer than five (5) consecutive seconds, of a shade or density equal to or darker than designated as #1 on the Ringlemann Chart, or 20% opacity.

b. No person shall cause or permit the emission of visible air contaminants from any diesel powered motor vehicle of a shade or density equal to or darker than designated as #1 on the Ringlemann Chart, or 20% opacity for longer than five (5) consecutive seconds.

H. Incineration.

1. No incinerators with a capacity of less than 1,000 pounds per hour shall be permitted in Sarasota County, except upon the granting of a variance, which variance shall be obtained in accordance with the provisions of the Sarasota County Pollution Control Ordinance.

2. Pathological incinerators, and incinerators used in hospitals for the destruction of various wastes associated with their operation are permitted.

3. Incinerators larger than 1,000 pounds per hour shall be allowed.

4. No person shall cause or permit to be emitted into the open air from any incinerator or crematory particulate matter in the exhaust gases to exceed 0.10 pounds per 100 of refuse burned.

I. Process Industries; General.

1. No person shall cause, suffer, allow, or permit the emission of particulate matter in any one hour from any source in excess of the amount shown on Table I for the process weight rate allocated to such source or in excess of 0.03 grains per standard cubic foot of exhaust gas.

TABLE I

Process Weight Rate (pounds per hour)	Emission Rate (pounds per hour)
50	0.03
100	0.55
500	1.53
1,000	2.25
5,000	6.34
10,000	9.73
20,000	14.99
60,000	29.60
80,000	31.19
120,000	33.28
160,000	34.85
200,000	36.11
400,000	40.35
1,000,000	46.72

2. Interpolation of the data in Table I for the process weight rates up to 60,000 pounds per hour shall be accomplished by the use of the equation: $E=3.59P^{0.62}$, P less than or equal to 30 toms per hour and interpolation and extrapolation of the data for process weight rates in excess of 60,000 pounds per day shall be accomplished by use of the equation: $E=17.31P^{0.16}$, P is greater than 30 tons per hour. Where E = Emissions in pounds per hour. P = Process weight rate in tons per hour. Application of mass emission limitations on the basis of all similar units at a plant is recommended in order to avoid unequal application of this type of limitation to plants with the same total emission potential, but different size units. Upon establishing the total mass limitation, individual source emissions will be determined by pro rating the mass emission total on the basis of the percentage weight input to each source process.

2. Any new outdoor heating device must have approval of the Pollution Control Officer prior to use.

3. After June 1973, any outdoor heating device must have approval prior to use.

3. List Required - Approved Fuels and Outdoor Heating Devices. The Pollution Control Officer shall compile and maintain a list of approved fuels and outdoor heating devices. The list shall include conditions upon which approval was granted. The list shall be available to the public, and may be published from time to time.

4. Approval - Fuels and Outdoor Heating Devices. Procedure. Requirements. Fuels and outdoor heating devices shall be approved in the following manner:

a. Fuels for open burning:

(1) Any person desiring to have a fuel approved may submit an application. The application shall contain the following information:

a) Name, address and telephone number of applicant.

b) Trade name or other designation of fuel.

c) Chemical composition of fuel.

d) Composition and quality of air contaminants given off per unit of fuel.

e) Expected use of the fuel.

(2) The Pollution Control Officer may require that samples be taken by the applicant and may require that samples of the fuel be submitted for testing to the Pollution Control Officer or the Division of Standards of the Department of Agriculture and Consumer Services.

(3) The Pollution Control Officer shall not approve any fuel which emits excessive visible emissions when burned in the proper manner of a shade or density equal to or darker than designated as #1 on the Ringlemann Chart, or 20% opacity.

(4) The Pollution Control Officer may approve a fuel on condition that it be used for certain specified purposes and in certain specified manners.

b. Outdoor Heating Device:

(1) Any person desiring to have an outdoor heating device approved may submit an application. The application shall contain the following information:

a) Name, address, and telephone number of applicant.

b) Trade name or other designation of the device.

c) Brief description of the device.

d) Type of fuel that is used in the device.

e) The composition and quantity of air contaminants given off by the device when in operation.

d. No person shall place, store, or hold in any stationary storage vessel of more than 250 gallons capacity any volatile organic compound unless such vessel is equipped with a permanent submerged fill pipe, or is a pressure tank, or is fitted with a vapor recovery system.

2. Volatile Organic Materials Loading Facilities. No person shall load any volatile organic compounds into any tank, truck, or trailer from any loading facility unless such loading facility is equipped with a loading arm with a vapor collection adaptor, pneumatic, hydraulic, or other mechanical means shall be provided to force a vapor-tight seal between the adaptor and the hatch. A means shall be provided to prevent liquid organic compounds drainage from the loading device when it is removed from the hatch of any tank, truck, or trailer, or to accomplish complete drainage before such removal. When loading is effected through means other than hatches, all loading and vapor lines shall be equipped with fittings which close automatically when disconnected.

3. Volatile Organic Compound Water Separation. No person shall use any compartment of any single or multiple compartment volatile organic compound water separation unit which compartment receives effluent water containing 200 gallons a day or more of any equipment processing, refining, treating, storing, or handling volatile organic compounds unless such compartment is equipped with one of the following vapor loss control devices, properly installed, and in good working order and operation:

a. A container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling devices shall be gas tight except when gauging or sampling is taking place.

b. A container equipped with a floating roof, consisting of a pontoon type, double deck type roof or internal floating cover, which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and container wall. All gauging and sampling devices shall be gas tight except when gauging or sampling is taking place.

c. A container equipped with a vapor recovery system consisting of a vapor gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing such hydrocarbon vapors and gases so as to prevent their emission to the atmosphere, and with all container gauging and sampling devices gas tight except when gauging or sampling is taking place.

d. A container having other equipment of equal efficiency for purposes of air pollution control as may be approved by the Pollution Control Officer.

4. Pumps and Compressors. All pumps and compressors handling volatile organic compounds shall have mechanical seals or other equipment of equal efficiency for purposes of air pollution control as may be approved by the Board.

5. Waste Gas Disposal.

a. No person shall emit a waste gas steam from any ethylene producing plant into the atmosphere unless the waste

f. Emissions of organic materials into the atmosphere required to be controlled by Section 5, Subsection K.6 a, b, and c, shall be reduced by:

1) Incineration, provided that 90 percent or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide, or

2) adsorption, or

3) processing in a manner determined by the Pollution Control Officer to be not less effective than 1) or 2), above.

g. A person incinerating, adsorbing, or otherwise processing organic materials pursuant to this Ordinance shall provide, properly install, and maintain in calibration, in good working order and in operation, devices as specified in the authority to construct, or the permit to operate, or as specified by the Pollution Control Officer, for indicating temperatures, pressures, rates of flow, or other operating conditions necessary to determine the degree and effectiveness of air pollution control.

h. Any person using organic solvents or any materials containing organic solvents shall supply the Pollution Control Officer, upon request, and in the manner and form prescribed by him, written evidence of the chemical composition, physical properties, and amount consumed for each organic solvent used.

i. The provisions of this Subsection shall not apply to:

1) The manufacture of organic solvents, or the transport or storage of organic solvents or materials containing organic solvents.

2) The use of equipment for which other requirements are specified by 1, 2, and 3, or which are exempt from air pollution control requirements by said rules.

3) The spraying or other employment of insecticides, pesticides, or herbicides.

4) The employment, application, evaporation, or drying of saturated halogenated hydrocarbons or perchlorethylene.

j. For the purpose of this Ordinance, organic solvents include dilutents and thinners, and are defined as organic materials which are liquids at standard conditions, and which are used as dissolvers, viscosity reducers, or cleaning agents.

k. For the purposes of this Ordinance, a photochemically reactive solvent is any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below, or which exceed any of the following individual percentage composition limitations, referred to the total volume of solvent:

1) A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cyclo olefinic type of unsaturation: 5 percent;

2. No person shall emit carbon monoxide waste gas streams from any catalyst regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the waste gas stream is burned at 1300 degrees F. for 0.3 seconds, or greater, in a direct flame afterburner or boiler equipped with an indicating pyrometer which is positioned at the operator's eye level.

M. Ambient Air Standards.

1. Odor. Performance standard in regulating odorous material. In any area of the County no odor shall be permitted at any lot line exceeding the lowest amount set forth in Table III "Odor Thresholds" of Chapter V - "Physical Effects of the Air Pollution Ambient Manual" of the Manufacturing Chemist Association, according to the latest edition of such table for compounds therein described.

For compounds not described in Table III, odor thresholds may be established by methods indicated in Chapter V of the Manual, and no odor shall be emitted at any lot line in excess of the amount determined by the application of such methods.

2. Performance Standard for Ambient Fluoride. The emission from any plant or area will be such that the ambient air concentration of fluorides at or beyond the property lot line of the plant or area will not exceed 1 ppb by volume whenever sampled. This applies both to the manufacturing operation at the plant, and any emission from gypsum or cooling ponds at the plant, or any other source of fluoride emission located on the premises.

N. Noise Pollution.

1. Performance Standards Regulation. For the purposes of this Subsection, certain terms are defined as follows:

a. Decibel is a unit of measurement of intensity of sound (the sound pressure level).

b. Sound level meter is an instrument, for which criteria have been established by the American Standards Association used for the measurement of the intensity of sound, and calibrated in decibels.

c. Octave Band is a means of dividing the range of sound frequencies into octaves, in order to classify sound according to pitch.

d. Octave Band Filter is an instrument for which criteria have been established by the American Standards Association, used in conjunction with a sound level meter to make measurements in specific octave bands.

2. Method of Measurement. General.

a. For the purpose of measuring the intensity and frequencies of sound, sound level meters and octave band filters meeting the criteria of the American Standards Association shall

limit for the category of motor vehicle based on a distance of fifty (50) feet from the center of the lane of travel within the speed limits specified in this Section:

	Speed Limit of 35 mph or less	Speed Limit of more than 35 mph
1. Any motor vehicle with a manufacturer's gross vehicle weight rating of 6,000 pounds or more, and any combination of vehicles towed by such motor vehicle:		
a. Before January 1, 1973.....	88 dbA	90 dbA
b. On and after January 1, 1973.	86 dbA	90 dbA
2. Any motorcycle other than a motor driven cycle.....	82 dbA	86 dbA
3. Any other motor vehicle and any combination of vehicles towed by such motor vehicle.....	76 dbA	82 dbA

b. The department shall adopt regulations establishing the test procedures and instrumentation to be utilized.

c. This Section applies to the total noise from a vehicle or combination of vehicles and shall not be construed as limiting or precluding the enforcement of any other provisions of this Ordinance relating to motor vehicle exhaust noise.

d. For the purpose of this Section, a motor truck, truck tractor, or bus, that is not equipped with an identification plate or marking bearing the manufacturer's name and manufacturer's gross vehicle weight rating shall be considered as having a manufacturer's gross vehicle weight rating of 6,000 pounds or more if the unladen weight is more than 5,000 pounds.

e. No person shall have a cause of action relating to the provisions of this Section against a manufacturer of a vehicle or a component part thereof on a theory based upon breach of express or implied warranty unless it is alleged and proved that such manufacturer did not comply with noise limit standards of the Vehicle Code applicable to manufacturers and in effect at the time such vehicle or component part was first sold for purposes other than resale.

5. Water Pollution: is the introduction into water of such substances of such character in such quantity that they render it objectionable in appearance, taste, or odor, or may render it harmful as a result of the introduction into water of human or animal wastes or chemical poisons.

E. Water Quality Standards.

1. The criteria of water quality hereinafter provided will be applied only after reasonable opportunity of mixing of the waste with the receiving waters has been afforded. The reasonableness of the opportunity for mixing of the waste and the receiving waters shall be determined on the basis of physical characteristics of the receiving stream and the methods in which the discharge is physically made shall be approved by this department. The following minimum conditions are applicable to all waters at all places at all times within the territorial limits of Sarasota County. All such waters shall be free from:

a. Settleable substances. Substances attributed to municipal, industrial, agricultural, or other discharges that will settle to form putrients or otherwise objectionable sludge deposits, including inorganic silt.

b. Floating substances. Floating debris, oil, scum, or other floating material attributable to municipal, industrial, agricultural, or other discharges in sufficient amounts to be unsightly or deleterious.

c. Deleterious substances. Materials attributable to municipal, industrial, agricultural, or other discharges producing color, odor, or other conditions in such a degree as to create a nuisance.

d. Toxic substances. Substances attributable to municipal, industrial, agricultural, or other discharges in concentrations or combinations which are toxic or harmful to humans, animals, plants, or aquatic life.

2. The following Water Quality Standards shall be criteria for pollution when concentrations exceed the following limitations:

a. Aluminum: Aluminum shall not exceed 0.01 PPM in fresh water. In non-fresh water, a sample, after filtering through Whatman #42 filter paper or the equivalent, shall not exceed the referenced limit for fresh water.

b. Ammonia, non-ionic: Non-ionic ammonia shall not exceed the following limits:

1. 20 PPM in non-fresh water with a pH of 7.0 or less.

2. 2 PPM in non-fresh water with a pH greater than 7.0.

3. 2 PPM in fresh water with a pH of 7.0 or less.

4. 0.5 PPM in fresh water with a pH between 7.0 and 7.5.

5. 0.2 PPM in fresh water with a pH greater than 7.5.

r. Oils and Greases. No oils or greases shall exceed 15 PPM, or be in such a concentration as to be visible to the naked eye on the receiving waters; nor visible on absorptive material immersed in the water for test purposes, nor detectable by taste and/or odor.

s. Permanganate ion. Permanganate ion shall not exceed 0.1 PPM in fresh water. In non-fresh water a sample, after filtering through Whatman #42 filter paper or the equivalent, shall not exceed the referenced limit for fresh water.

t. pH. The pH value of the receiving fresh water shall not be caused to vary more than one pH unit above or below normal pH value of the water, and the pH shall not be caused to drop below 6.0, nor to exceed 8.5 in any case. The pH value of the receiving non-fresh waters shall not be caused to drop below 6.7 or raised above 8.7.

u. Phenolic Compounds. Phenolic type compounds calculated or reported as phenol shall not exceed 0.001 PPM.

v. Radioactive Substances. Radioactive substances beyond the normal background level will not be discharged into streams, lakes, bays, estuarine, or the Gulf of Mexico.

w. Silver. Silver shall not exceed 0.01 PPM in fresh water. In non-fresh water a sample, after filtering through Whatman #42 filter paper or the equivalent, shall not exceed the referenced limit for fresh water.

x. Specific Conductance. Specific conductance shall not be increased more than 100% above background levels, or to a maximum level of 500 microohm per centimeter for streams considered to be fresh water streams.

y. Temperature. The temperature shall not be increased so as to cause any damage or harm to the aquatic life or vegetation of the receiving stream, nor interfere with any beneficial use assigned to such waters.

z. Total Dissolved Solids. The total dissolved solids content of the receiving fresh water shall not be caused to increase more than 100 PPM above natural level. The total dissolved solids content of non-fresh water shall not be caused to increase 10% above the natural content.

aa. Turbidity. The turbidity content of the waters shall not exceed 25 Jackson Units as related to the standard candle turbometer above background.

bb. Zinc. Zinc shall not exceed 0.01 PPM.

b. Class II Waters - Shellfish Harvesting. The following criteria are for classification of waters in areas to be utilized for shellfish harvesting:

1) Bacteriological Quality, Coliform Group - areas classified for shellfish harvesting, the median coliform MPN (Most Probable Number) of water cannot exceed seventy (70) per hundred (100) ml., and not more than ten (10) per cent of the samples ordinarily exceed an MPN of two hundred and thirty (230) per one hundred (100) ml. in those portions of areas most probably exposed to fecal contamination during most unfavorable hydrographic and pollutional conditions.

2) Sewage, Industrial Wastes, or Other Wastes - any industrial wastes or other wastes shall not be discharged into Class II waters.

3) pH - of receiving waters shall not be caused to vary more than one (1.0) unit above or below normal pH of the waters; and the lower value shall be not less than six (6.0), and the upper value not more than eight and one-half (8.5).

4) Temperature - shall not be increased so as to cause any damage or harm to the aquatic life or vegetation of the receiving waters, or interfere with any beneficial use assigned to such waters.

5) Dissolved Oxygen - shall not be artificially depressed below the values of four (4.0) PPM (unless background information available to the Pollution Control Officer indicates prior existence under unpolluted conditions of lower values).

6) Toxic Substances - free from substances attributable to municipal, industrial, agricultural, or other discharges in concentrations or combinations which are toxic or harmful to humans, animal, or aquatic life.

7) Odor - threshold odor number not to exceed 24 at 60° C. as a daily average.

c. Class III Waters - Recreation - Propagation and Management of Fish and Wildlife. The following criteria are for classification of waters to be used for recreational purposes, including such body contact activities as swimming and water skiing; and for the maintenance of a well balanced fish and wildlife population. All coastal and beach waters, including off shore waters, not otherwise classified, shall be classified as Class III; however, waters of the open ocean shall be maintained at a dissolved oxygen of not less than five (5.0) PPM. Streams specifically listed in Section 17-3.21 of the Rules and Regulations of the Florida Department of Pollution Control, by a separate listing designated as "Special Stream Classification" shall similarly be maintained at a minimum dissolved oxygen of five (5.0) PPM.

1) Bacteriological Quality, Coliform Group - not to exceed 1,000 per 100 milliliter as a monthly average (either MPN or MF counts); nor to exceed this number in more than 20% of the samples examined during any month; nor exceed 2,400 per 100 milliliters (MPN or MF count) on any day. This criteria shall apply only to waters used for body contact activities.

Class A. All fresh ground waters (primarily public and private water supplies, including domestic, industrial, and agricultural uses).

Class B. All brackish ground waters (secondary public and private wells water supplies,including domestic, industrial, and agricultural uses).

Class C. All saline ground waters - miscellaneous and other than Class A and Class B above, but not inclusive of brine.

Class D. Brine - concentrated salinity beyond that of open sea water, in totally confined systems where a confinement is to ponds or leeching systems, and the liquid would tend to leech into Class A ground waters. The waters being confined must meet the criteria set out in Class II surface water criteria.

2. In areas of Class C ground water discharge, the water characteristic being discharged to this aquifer must meet the minimum criteria as set up in Class III surface water criteria.

3. Should the effluents be used for irrigation, these waters and the irrigation system must be approved and meet the requirements as defined by the appropriate governing agency to protect public health.

Section 7. Area of Application.

The provisions of this Ordinance shall be applicable and enforceable throughout the entire area of Sarasota County including those areas of the County lying within the boundaries of municipalities,towns and cities.

Section 8. Repeal of Ordinance No. 70-1, and Chapter 59-1843, Florida Laws, Special Acts of 1959.

Sarasota County Ordinance No. 70-1, referred to as the Sarasota County Air and Water Pollution Control Code and Chapter 59-1843, Florida Law, Special Acts of 1959, relating to regulation and control of pollution in all areas of Sarasota County lying outside the corporate limits of any municipality, as amended by Chapter 61-2811, Florida Laws, Special Acts of 1961, and Chapter 65-2246, Florida Laws, Special Acts of 1965, are hereby repealed.

Section 9. Construction of Ordinance in Relation to Other Laws.

It is the purpose of this Ordinance to provide additional and cumulative remedies for the prevention, abatement, and control of the pollution of the air and waters of this County. Nothing contained herein shall be construed to impair or restrict the enforcement of stricter, more extensive, and more stringent regulations should same be determined to be applicable to Sarasota County through adoption by any unit of Federal, State, local, or municipal government.

ORDINANCE NO. 93-038

AN ORDINANCE OF SARASOTA COUNTY, FLORIDA RELATING TO THE CONTROL OF STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY, AS DEFINED UNDER 40 CFR SECTION 122.26(b)(14), ILLICIT DISCHARGE AS DEFINED UNDER 40 CFR SECTION 122.26(b)(2) AND SPILLS AND DUMPING; AMENDING SECTION 6 OF SARASOTA COUNTY ORDINANCE NO. 72-37 RELATING TO WATER POLLUTION; AMENDING SUBSECTION 4(H) OF SARASOTA COUNTY ORDINANCE NO. 72-37 RELATING TO ENFORCEMENT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODING OF AMENDMENTS; PROVIDING FOR AN EFFECTIVE DATE.

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA:

SECTION 1. Amendment to Section 6 of Ordinance No. 72-37.

Section 6 of Sarasota County Ordinance No. 72-37 is amended to add the following:

CLERK OF CIRCUIT COURT
SARASOTA COUNTY, FLA.
BOARD RECORDS
93 MAY 10 PM 3:41

J. Storm Water

1. Definitions:

a) Illicit Discharge: any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

b) NPDES: is an acronym for National Pollutant Discharge Elimination System. NPDES is the National program for issuing, modifying, revoking, etc., permits under Sections 307, 318, 402, and 405 of the Clean Water Act (CWA).

c) Separate Storm Sewer System or Storm Sewer: means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other

wastes, including special districts under State law such as a sewer district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR Section 122.2.

d) Site of Industrial Activity: is any area or facility used for manufacturing, processing or raw materials storage, as defined under 40 CFR Section 122.26(b)(14) of regulations of the U. S. Environmental Protection Agency and includes construction activity subject to clearing, grading and excavation activities.

e) Storm Water: means storm water runoff, snow melt runoff, and surface runoff and drainage.

2. Prohibited Discharges:

a) Sites of Industrial Activity: Any direct or indirect discharge from a Site of Industrial Activity to a storm sewer owned by the County which does not comply with, or is not pursuant to, a valid NPDES permit is prohibited.

b) Illicit Discharges and Illicit Connections:

i) Except as specifically authorized by a valid federal, state, or local permit, the discharge of sewage, industrial waste, or other wastes, whether through runoff, piping connections, seepage or leaks, into the separate storm sewer is prohibited.

ii) No person may maintain, use or establish any direct or indirect connection to any storm sewer owned by the County that results in any illicit discharge which does not comply with, or is not pursuant to, a valid NPDES permit.

c) Spills and Dumping: No person shall spill or dump, or cause to be spilled or dumped, into a separate storm sewer system owned by the County, any materials other than those composed entirely of storm water.

3. Enforcement:

a) If the Pollution Control Officer or designee determines that storm water or other matter is being discharged in violation of this Ordinance, then the Pollution Control Officer may order the immediate cessation of such discharge.

b) The provisions of this subsection 6(J) may be enforced through proceedings before the Sarasota County Code Enforcement Special Master or through any other remedy available to Sarasota County in law or in equity, including injunctive relief. Sarasota County shall recover its court costs and a reasonable attorney's fee in any legal proceedings commenced to enforce this ordinance.

SECTION 2. Amendment to Subsection 4(M) of Ordinance No. 72-37.

Subsection 4(M) of Sarasota County Ordinance No. 72-37 is amended to read:

M. Violations resulting in issuance of a Notice of Violation which are not corrected within a reasonable time specified in the Notice of Violation, shall result in a hearing before a Special Master pursuant to Ordinance ~~90-62~~ 93-06, as may be amended from time to time, or initiation of any other action available by law in a court of competent jurisdiction.

SECTION 3. Severability.

Should any portion of this ordinance be declared by a court of competent jurisdiction to be unconstitutional or invalid, such decision shall not affect the validity of this ordinance as a whole, or any portion thereof other than the portion so declared to be unconstitutional or invalid.

The Board of County Commissioners, sitting as the Sarasota County Land Development Regulation Commission, has reviewed the proposed regulations provided herein and has found and recommended that the regulations are consistent with the Sarasota Comprehensive Plan.

SECTION 4. Coding of Amendments.

In this ordinance, language added to an existing ordinance is underscored and language deleted is typed in ~~strike-through~~ type.

SECTION 5. Effective Date.

This Ordinance shall take effect immediately upon receipt of official acknowledgement from the office of the Secretary of State of Florida that this Ordinance has been filed with said office.

PASSED AND DULY ADOPTED by the Board of County Commissioners of Sarasota County, Florida this 27th th day of April, A.D., 1993.

BOARD OF COUNTY COMMISSIONERS
OF SARASOTA COUNTY, FLORIDA

By _____
Chairman

ATTEST:

KAREN E. RUSHING, Clerk of the Circuit Court and ex-officio Clerk of the Board of County Commissioners of Sarasota County, Florida.

Paula J. Ulentsman
Deputy Clerk

STATE OF FLORIDA)
COUNTY OF SARASOTA)
I HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF THE ORIGINAL FILED IN THIS OFFICE. WITNESS MY HAND AND OFFICIAL SEAL THIS DATE 5/10/93
KAREN E. RUSHING, CLERK OF THE CIRCUIT COURT
EX-OFFICIO CLERK TO THE BOARD OF COUNTY COMMISSIONERS, SARASOTA COUNTY, FLORIDA
BY: Susan Kay Gatland
DEPUTY CLERK

Summarized Scope and Course Of Action
for
The Phillippi Creek Basin Master Plan

Chapter 1
INTRODUCTION

1.1 Purpose

The Phillippi Creek Basin is the third largest watershed in Sarasota County. The basin drains 57 square miles of residential, commercial and agricultural areas located in the northern half of the County.

The Phillippi Creek Basin experiences some of the most severe flooding conditions in Sarasota County primarily due to the flat hydraulic slopes in the basin, the make-up of the local soils, the location of development within the floodplain and the large size of the basin. Being one of the most heavily populated basins in the County, the Phillippi Creek Basin is also one of the major sources of stormwater pollutants to Sarasota Bay.

The primary objective of the *Phillippi Creek Basin Master Plan* is to address the location and magnitude of the existing flood problems in the basin, to recommend a water quantity level of service for the County, and to recommend Capital Improvement Projects that will bring the stormwater conveyance systems within the basin into compliance with the recommended level of service criteria. A secondary objective of the study is to address the need for water quality enhancements within the basin, so as to reduce the pollutant loadings to Sarasota Bay, which has been identified by the U.S. Environmental Protection Agency (EPA) as a National Estuary Program (NEP) waterbody. Additional objectives of the study deal with the potential use of stormwater as a nonpotable water supply and the possible retrofitting of existing County-owned stormwater facilities for water quality and habitat enhancement purposes.

1.2 Scope

The scope of services for the Phillippi Creek Basin Master Plan is divided into eleven major tasks.

- Data Collection

  This task consists of a literature review of all existing reports and data that would aid in the study. All existing data was evaluated and any

conflicting data was analyzed to determine the appropriate method of obtaining the needed data to resolve the conflict.

- Regulatory Constraints

All local, state and federal agencies were contacted that have stormwater management criteria in place for the Phillippi Creek Basin. Close coordination of the Basin Master Planning effort was made with the Southwest Florida Water Management District (SWFWMD).

- Existing System Stormwater Analysis

The existing open channel reaches of Phillippi Creek, as shown in Chapter 2 of this report were analyzed utilizing EPA's modified Stormwater Management Model (SWMM 4.05) and the Corps of Engineers HEC-2 (Version 4.5) computer model. Flood flow, time history of flows, flood elevations and hydraulic grade lines were computed for the existing stormwater system based upon rainfall associated with a 2-year, 24-hour; 5-year, 24-hour; 10-year, 24-hour; 25-year, 24-hour and 100-year, 24-hour design storm events.

- SWMM and HEC-2 Model Verification

The SWMM and HEC-2 models are to be verified by utilizing the recorded high water marks from the June 25 and 26, 1992 storm event. The June 1992 flood profile was matched as closely as possible by utilizing rainfall volumes for the storm event that was supplied by Sarasota County. SWMM and HEC-2 input parameters modified in the verification procedure were applied to the design storm computer runs.

- Level of Service

A flooding level of service is to be established based upon review of the existing system stormwater modeling and worksbops witb the County. A level of service was not established for water quality. However, all flooding projects developed shall incorporate water quality improvement design criteria where appropriate.

- Stormwater Management Facility Inventory

  The existing stormwater management facilities including County maintained and man-made facilities (retention and detention ponds) and natural facilities (wetlands) were inventoried. The facilities were characterized by the size of the facility, the size of the contributing watershed and the hydrologic characteristics. The wetlands inventory was obtained from SWFWMD through Sarasota County.

- Selected Alternatives

  Three selected alternatives were developed for the basin which addressed the County's proposed level of service criteria. Each alternative was analyzed utilizing the SWMM and HEC-2 computer models. Flood flows, time history of flows, flood elevations and hydraulic grade lines were determined for each alternative based upon rainfall associated with a 2-year, 24-hour; 5-year, 24-hour; 20-year, 24-hour; 25-year, 24-hour and 100-year, 24-hour storm event. Preliminary cost estimates were prepared for each alternative and a worksbop conducted with County staff to select the preferred alternative.

- Public Meetings

  Two public workshops were held at locations within the Phillippi Creek Basin to present the selected alternative analysis for the basin and to gather public input. Also, at the conclusion of the study effort, the Master Plan document was presented to the Sarasota County Board of Commissioners for approval.

- Report Document

  Preparation of a report document whicb details the stormwater modeling procedures, level of service criteria, project selections, cost estimates and recommended improvements.

Chapter 8
RECOMMENDED BASIN MASTER PLAN

8.1 Recommended Plan

As previously mentioned in Chapter 6, upon completion of the stormwater modeling of the 3 alternatives, a meeting was conducted with Sarasota County to select a recommended plan for Phillippi Creek.

Cost comparisons of the 3 alternatives indicate that Alternative No. 1 is approximately $11.6 million less expensive than Alternative No. 2 and $17 million less expensive than Alternative No. 3. Further comparisons indicate that Alternative No. 2 would be difficult to permit because of Project C-2 which involves the diversion of Phillippi Creek stormwater into the APAC Borrow Pits which discharges to another watershed. Alternative No. 3 would also be difficult to permit because of Project A-5 which involves maintenance dredging of the lower reaches of Phillippi Creek.

An analysis of the projects contained in Alternatives No. 1, No. 2 and No. 3 indicates that while all three alternatives lower the 100-year floodstage throughout the basin, the projects in Alternative No. 1 are the most effective in reducing floodstages. Alternative No. 1 is also expected to provide the most water quality improvement, primarily due to the celery fields project (C-1) and the channel widening and stabilization projects (A-1 and AA-1).

Based upon water quality improvement benefits, hydraulic effectiveness and cost, Alternative No. 1 is selected as the Recommended Plan for the Phillippi Creek Basin. Table 8-1 indicates the project descriptions and costs associated with the Recommended Plan. The location of the proposed projects in the Recommended Plan are shown on Figure 8-1.

The recommended plan addresses channel improvement projects on Phillippi Creek Main A, Branch AA and Clark Lake Tributary. The recommended plan also addresses the construction of regional stormwater management facilities on Phillippi Creek Main B, Branch BA and Main C. Culvert replacement projects are proposed on Phillippi Creek Main B and Clark Lake Tributary.

Project No. A-1 of the Recommended Plan is a major channel widening project on Phillippi Creek Main A. This project is 8500 feet in length beginning at the easternmost crossing of Bahia Vista Street upstream to the confluence with Branch AA. The proposed channel widening will incorporate a maintenance travel way that is 6 feet above the stream bed. Typical sections for the channel will consist of a 20-foot bottom width with 4:1 side slopes.

Project No. AA-1 in the Recommended Plan involves the reshaping of the channel banks and the clearing of existing vegetation in the channel on Branch AA from its confluence upstream to Cattlemen Road.

Project No. B-1 of the Recommended Plan is a regional stormwater attenuation facility located on Phillippi Creek Main B just upstream of 47th Street. The surface area of the stormwater facility will be approximately 20 acres with a land purchase of 30 acres required. This project will reduce flooding of structures between Fruitville Road and Hadfield Road.

Project No. BA-1 in the Recommended Plan is a replacement of the existing triple 36-inch by 38-inch CMP at Gocio Road with a triple 54-inch RCP. This project results in flood reductions upstream of Gocio Road.

Project No. BA-2 of the Recommended Plan is a regional stormwater attenuation facility located on Phillippi Creek Branch BA downstream of Desoto Road and west of Minks Road. The surface area of the stormwater facility is approximately 18 acres with a land purchase of 30 acres required. This project is required so as to reduce the rise in floodstages downstream of Gocio Road due to Project No. BA-1. This project also results in a reduction in structure flooding in the vicinity of Desoto Road.

Project No. C-1 of the Recommended Plan is a regional stormwater attenuation facility located on Phillippi Creek Main C upstream of its confluence with Main A. The facility is approximately 260 acres in size and will reduce flooding downstream on Main A and will serve as a multi-use facility which will provide water quality treatment and will also serve as a possible source of nonpotable water supply. The project is located south of Fruitville Road and east of Interstate 75.

Project No. CK-1 of the Recommended Plan is a channel widening project in the lower reaches of the Clark Lake Tributary. The project is 3000 feet in length beginning at the

confluence with Main A upstream to the Woodbridge Drive crossing. This project is needed in order to reduce flooding upstream of Wilkinson Road. The proposed typical section for the channel improvement has a channel bottom width of 20 feet with 4:1 side slopes. Approximately 5 acres of land purchase is required for the construction of this project.

Project No. CK-2 of the Recommended plan involves the replacement of the double 42 inch RCPs on Clark Road over Clark Lake Tributary. The existing culverts are to be replaced with the same size structures at an invert level that is one foot lower. The lowered flowline is necessary to reduce flooding upstream of Clark Road.

Table 8-2 indicates the 2-year, 5-year, 10-year, 25-year and 100-year floodstages for the Recommended Plan at selected locations. The flood profile plots are shown in Appendix B of this report.

8.2 Recommended Plan LOS

Table 5-2 in Chapter 5 describes the LOS area of deficiencies within the Phillippi Creek Basin based upon water quantity attainment goals. Tables 8-3 through 8-7 indicate the water quantity LOS as it relates to the Recommended Plan projects.

As stated in Chapter 5, Phillippi Creek was divided into 47 stream reaches for the purpose of the LOS analysis. Under existing conditions, the Phillippi Creek Basin met the County's water quantity LOS criteria of no building floor below the 100-year floodstage in approximately 50 percent of the stream reaches. Table 8-3 indicates that when the projects contained in the Recommended Improvement Plan are constructed and put into operation that approximately 75% of the Phillippi Creek Basin will be in compliance with the LOS criteria.

The Recommended Improvement Plan improves flooding conditions significantly on Main A in the vicinity of Branch AA by removing 36 homes located in the Colonial Gable Subdivisions from the 100-year floodplain. Floodstage reduction in this area is approximately 1.60 feet for a 100-year storm event. Another significant reduction in buildings located in the 100-year floodplain occurred on Main B where the LOS improved from 24 buildings in the floodplain to 7 buildings in the floodplain. The most significant reduction of buildings located in the 100-year floodplain occurs on Branch BA where the

construction of Projects No. BA-1 and BA-2 will result in a net removal of 69 buildings from the 100-year floodplain.

A comparison of all of the tributaries within Phillippi Creek indicates that under existing conditions there are 244 buildings with their lowest floors located below the 100-year floodstage. Upon completion of the construction of the 8 structural projects listed in the Recommended Improvement Plan, 75 buildings will remain in the 100-year floodplain. Of these 75 remaining structures, 60 of them are located upstream of the Bahia Vista Street (west) crossing of Phillippi Creek. Lowest floor elevations for most of these homes are 1 to 4 feet below the Recommended Improvement Plan 100-year floodstage.

In order for the County to meet their proposed water quantity level of service criteria, several options are available to address the remaining 75 structures subject to flooding in the 100-year event. These options include:

1. Elevating the structures.
2. Floodproofing the structures.
3. Purchasing the structures.
4. Purchase flood easements
5. Adopt a lower LOS

8.3 Flood Abatement Program

As previously mentioned, there will still be approximately 75 buildings subject to lowest floor flooding during a 100-year storm event. Most of these structures are single family residences and involve a depth of flooding of up to 4 feet.

The recommended Basin Plan has been selected to balance capital improvements and possible residential structure modifications to minimize social, economic and environmental impacts on the community. Removal of all residential structures from the threat of potential future flooding from a 100-year storm through drainage improvements is not feasible without causing excessive social and economic impacts to the residents of Sarasota County. In some areas it is not practical to remove the threat of flooding due to lack of areas for retrofit projects or due to prohibitive costs of retrofitting.

An alternative to using drainage improvements to prevent future flood damages is to eliminate or modify those existing structures subject to flooding. It is recommended that

the County develop and implement a Flood Damage Abatement Program which would provide several options to residents of houses still subject to flooding in the 100-year, 24-hour storm. Those options might include:

- do nothing
- raise the house
- flood proof the house
- purchase a flood easement
- purchase and remove the house

Selection of an option would be made at the discretion of the owner.

For the homes where the 100-year depth of flooding is less than 1 foot, certain floodproofing techniques could be employed for these structures to alleviate damages during a 100-year event. One such technique would be the construction of a contiguous berm around the outside perimeter of the house. This would entail reconstruction of driveway accesses to incorporate a speed bump type design. A berm 1.5 feet in height around the house would protect it from flooding and if properly landscaped would not be that noticeable.

For those homes that are more than 1 foot below the 100-year floodstage, the most effective means of floodproofing would be the actual elevating of the house above the 100-year floodstage. Purchase or relocation of these homes would be a second option.

The above-mentioned flood abatement measures are required in addition to the Recommended Plan construction projects in order to bring the Phillippi Creek Basin into compliance with the County's proposed water quantity level of service criteria.

The estimated cost of a flood abatement program is approximately 5.7 million dollars. The estimated cost is based on a presumption of which option would be applied to each house as indicated in the following table:

	Total No. of Houses	No. of Houses to Flood Proof	No. of Houses Purchase Flood Easement	No. of Houses to be Raised	No. of Houses to be Purchased
Main "A"	68		8	46	14
Branch "AA"	1			1	
Main "C"	0				
Branch "AE"	0				
Main "B"	5	1		3	1
Branch "BA"	1			1	
Totals	75	1	8	51	15
Unit Cost		$20,000	$20,000	$50,000	$200,000
Total Cost	$5,730,000	$20,000	$160,000	$2,550,000	$3,000,000

It is recommended that a cost for a flood abatement program be included in the Phillippi Creek Capital Improvements Program. The cost reflected in the above table are approximate. Prior to proceeding with a flood abatement program, the lowest floor elevation of all 75 structures should be field surveyed and the abatement cost more accurately developed.

8.4 Water Quality Improvements

As stated in Chapter 3 of this report, a detailed water quality assessment of the pollutants associated with stormwater runoff from the Phillippi Creek Basin was not included as part of the scope of work for this report. However, water quality improvements are part of the recommendation of this report.

All channel improvement projects should incorporate weirs in the stream bottom for sediment accumulation and incorporate bank protection measures to reduce erosion of sedimentation. Sedimentation is considered one of the major water quality problems in Phillippi Creek since heavy metals, such as zinc and lead attach themselves to sediment particles which are then transported to Sarasota Bay. Sedimentation problems are prevalent in the lower reaches of Phillippi Creek. Increased sediment deposition in the areas north of Proctor Road have resulted in a reduced navigatability of the stream.

The most significant water quality improvement project in the Recommended Plan is Project No. C-1 which is a 260 acre regional stormwater treatment and attenuation

facility. The project will reduce pollutant loadings in the Phillippi Creek Basin and Sarasota Bay, specifically nutrients and heavy metals. The proposed stormwater facility would serve to retrofit, from a water quality standpoint, approximately 10 percent of the Phillippi Creek Basin. The stormwater facility will feature a 4 cell design with the most upstream cell being a desiltation basin and the subsequent cells to be used for a polishing effect on the stormwater, removing additional metals and nutrients. Figure 8-2 depicts a planimetric view of the facility. Figures 8-3 through 8-6 depict typical cross-sectional views of each of the 4 cells in the facility.

The regional stormwater facilities proposed on Phillippi Creek Main B (Project No. B-1) and Branch BA (Project No. BA-2) will also incorporate water quality features. Both sites will contain littoral shelf designs for biological uptake of nutrients in the stormwater runoff. Being fairly large facilities, both sites will also serve to trap sediments, thus reducing the heavy metal wash-off rates downstream from the facilities.

As stated previously in Chapter 3, three other water quality studies were ongoing concurrently with the development of the *Phillippi Creek Basin Master Plan*. The *Characterization of Ecological Conditions and Impacts of Stormwater Runoff For Hudson Bayou and Phillippi Creek* report prepared by Mote Marine Laboratories for PBS&J addresses several mitigation measures for water quality improvement in Phillippi Creek. These measures include:

- Creation of wetlands in association with stormwater facilities, or on the banks of Phillippi Creek where space is available for regrading of steep slopes.
- Replacement of seawalls with rip-rap or artificial reef material.
- Removal of instream salinity barriers.
- Installation of aerators in tidal basins.
- Removal of brazilian pepper, australian pine, punk trees and other exotic plants species that invade natural and man-made wetlands.
- Elimination of point source discharges to Phillippi Creek.

- Diversion of runoff from bridges and bridge approaches.

- Education of boat owners in tidal basins on proper use and disposal of petroleum products and boat paints.

- Education of stream-side property owners on proper use and disposal of household and landscape chemicals, yard wastes and plantings.

The *Framework For Action* report prepared by the Sarasota Bay NEP gives both general and specific recommendations to improve the quality of stormwater runoff in the basin. Some of the recommendations of the report are as follows:

- Establish zones near the Bay and its tributaries for priority action to improve water and sediment quality.

- Eliminate nitrogen loads from septic tanks.

- Sarasota County should develop a centralized wastewater treatment system to serve areas on septic systems and package treatment plants, particularly near the Bay and tributaries.

- Establish natural wildlife corridors or greenbelts to slow stormwater runoff, improve treatment and provide habitat opportunities.

- Promote improved landscape maintenance practices.

- Review the potential for implementing physical alterations for water quality improvements in manmade, non-navigable portions of state waters such as Phillippi Creek.

- Reduce impervious surfaces where possible.

- During road expansions, seek to treat all stormwater runoff from the roadway where possible.

The Comprehensive Stormwater Quality Management Plan that was developed as part of Sarasota County's NPDES permit program also requires proposed improvements to the

water quality in the County. The management plan as proposed in the permit requires the development of source controls, the screening of illicit discharges, regular inspections of industries regulated by NPDES regulations and the review of all proposed construction activities to ensure that adequate erosion and sediment controls have been included in the plan.

The proposed management program from the NPDES permit when combined with the recommendations of the Sarasota Bay NEP, Mote Marine Laboratories and the water quality features associated with the Recommended Plan will result in an overall improvement to the water quality of Sarasota Bay.

8.5 Proposed Regulations

Sarasota County Ordinance 89-85, Land Development Regulations, provide regulations which guide new development as it pertains to attenuation and drainage of stormwater runoff. Those land development regulations regulate development activities in the 25-year floodplain. The County has recently adopted an amendment to their Comprehensive Plan. The amended Chapter 4 of the Comprehensive Plan addresses stormwater quantity level of service criteria which is based upon a 100-year storm event.

Based upon the County's recent adoption of stormwater level of service criteria based on a 100-year storm event, Ordinance 94-004 was adopted to require runoff conttol criteria associated with a 100-year storm in lieu of the 25-year storm. The purpose of the regulations are to protect and maintain the existing stormwater level of service in a basin.

The *Phillippi Creek Basin Master Plan* has identified numerous areas in the basin which do not meet the 100-year level of service criteria. The master plan for Phillippi Creek proposes a combination of construction projects and flood abatement projects that will bring the basin into compliance with the newly adopted Comprehensive Plan level of service criteria.

The construction of these projects will take several years. In the interim, additional regulations are recommended for Phillippi Creek until such time that the projects are completed. The method proposed for adoption in the basin would limit 100-year discharge rates from development sites based upon the critical lowest floor elevation of homes throughout the basin. The limiting discharge per acre (CFS/acre) requirement for Phillippi Creek was computed and ranges from 0.10 CFS/acre for any proposed site in the

Main A Basin upstream of Beneva Road to 0.63 CFS/acre for any proposed site in the Main B Basin. The varying limited discharge per acre requirements are shown on Figure 8-7 and apply to all projects greater than 5 acres in size. For projects of 5 acres or less an allowable post-development discharge of 0.50 CFS/acre should be stipulated.

As previously stated, the limiting discharge requirement of 0.10 CFS/Acre for the Phillippi Creek Basin is based upon the critical lowest floor elevations of homes throughout the basin. The floor elevations of the lowest homes in specific reaches of Phillippi Creek were identified and their HEC-2 stationing recorded. HEC-2 stage and flow data were utilized for all critical reaches with the exception of the upstream portion of the Clark Lake Tributary. For the Clark Lake Tributary, flow and stage data from the SWMM EXTRAN model were utilized. Flow rates for each critical reach were then computed based upon the lowest habitable floor elevation in that reach. The rates were computed based upon a linear interpretation of the stage flow data for that reach of stream. Flow rates were then divided by the upstream drainage area and resulting limiting discharge (CFS/Acre) rates established. The controlling house elevation for the entire Phillippi Creek Basin is located on Main A at Station 263+40. The resulting limited discharge for this site was computed to be 0.09 CFS/Acre. Therefore, it is recommended that a limiting discharge value of 0.10 CFS/Acre be utilized for the regulation of new development in the Phillippi Creek Basin. The limiting discharge criteria is based upon a 100-year storm event.

8.6 Supplemental Water Supply

The potential exists for the utilization of the regional stormwater facilities in this basin master plan as supplemental water supply sources. The facilities could possibly be used for non-potable sources thus alleviating some of the demand on potable sources. A prime example of this would be the utilization of the Celery Field Stormwater Facility (Project No. C-1) as a potential future water supply source. Where land is available, other sites could be constructed to hold stormwater for use as a water supply source.

One difficulty associated with using a stormwater facility as a potential re-use source involves the availability of re-use water during dry periods and the lack of need for re-use during wet periods. The primary function of a stormwater facility is to maximize storage capability for stormwater attenuation during the wet season. Conventional control structures for the facilities would not store a large enough volume of water in the facility for use in the dry season. One possible solution to the problem would be the use of

operable control structures on the stormwater facilities. This would allow the facility to function properly in the wet season and would also allow the storage of large volumes of water in the facility prior to the dry season.

As previously stated, a detailed assessment of the use of the proposed stormwater facilities in the master plan as an alternative water supply source was not included as part of the scope of work for this project. However, when the individual projects are in their design phases, the potential for use as a supplemental water supply source should be investigated in more detail.

8.7 Facilities For Future Development

Project No. A-2 in Alternative No. 2, as shown in Chapter 6, consists of a proposed 100 acre regional stormwater facility on Phillippi Creek Main A just upstream of Palmer Boulevard. This project was not chosen as part of the Recommended Plan since it basically gives the same flood reduction results as Project No. C-1. However, this project or a variation of it, should be considered by the County for use as a water supply reservoir or as a regional system which new development could tie into in lieu of constructing smaller facilities.

Project No. C-1 of the Recommended Plan presently consists of a 260 acre stormwater facility located on a 300 acre tract of land. Due to the rural nature of the surrounding parcels of land, the potential exists for the County to purchase additional tracts of land that are adjacent to the site. This would allow for expansion of the site for flood control purposes and would also serve as a more efficient cell system for water quality treatment. Figure 8-8 shows a planimetric view of an expanded Project No. C-1.

8.8 Summary of Public Meetings

Two public meetings were conducted to present the results of the *Phillippi Creek Basin Master Plan*. The meetings were held on September 20 and 22, 1993 at two separate locations in the basin. The first meeting was held in the vicinity of Phillippi Creek Branch AA and Main A near the Colonial Gables Subdivision which received extensive flooding in the June 1992 storm event. A total of 14 people attended the public meeting held on September 20, 1993.

The second meeting was conducted near the mouth of Phillippi Creek Main A near U.S. Highway 41 on September 22, 1993. A total of 24 people attended this meeting. Only 5 people commented in writing concerning the results of the *Phillippi Creek Basin Master Plan*. Several people expressed their concerns over the lack of projects in the lower portion of the basin and also recommended the inclusion of projects for dredging the lower reaches of the creek and to extend Project No. A-1 downstream to the Railroad Bridge. Several people also praised the results of the master plan effort. They specifically pointed out the merits of Project No. C-1 and the potential future project at the Barton Farms site.

Summarized Scope and Course Of Action
for
The Hudson Bayou Basin Master Plan

Chapter 1
INTRODUCTION

1.1 Purpose

The Hudson Bayou Basin is the second largest drainage basin within the City of Sarasota. The basin drains 1545 acres of residential and commercial areas located within the downtown area of the City. The basin has experienced street, yard and house flooding in the past and the stormwater runoff from the basin is one of the major sources of pollutants to Sarasota Bay.

The objectives of the *Hudson Bayou Basin Master Plan* are (1) to address the location and magnitude of the existing flooding problems in the basin, (2) to recommend Capital Improvement Projects that will bring the stormwater conveyance systems within the basin into compliance with the City of Sarasota's stormwater level of service objectives, and (3) to address the need for water quality enhancements within the basin so as to reduce the pollutant loadings to Sarasota Bay. Sarasota Bay has been identified by the U.S. Environmental Protection Agency (EPA) as a National Estuary Program (NEP) waterbody.

1.2 Scope

The scope of services for the *Hudson Bayou Basin Master Plan* is divided into 9 major tasks.

- Data Collection

  This task consists of a literature review of all existing reports and data that would aid in the study. All existing data was evaluated and any conflicting data was analyzed to determine the appropriate method of obtaining the needed data to resolve the conflict.

- Regulatory Constraints

  All local, state and federal agencies were contacted, that have stormwater management criteria in place for the Hudson Bayou Basin. Close coordination of the Basin Master Planning effort was made with the Southwest Florida Water Management District (SWFWMD).

- Mapping

  A 1:200, 1 foot contour interval aerial base map was prepared for the 840 acres in the western half of the Hudson Bayou Basin.

- Existing System Stormwater Analysis

  The existing stormwater conveyance systems for Outfalls No. 1, No. 2 and No. 3 as shown in Chapter 2 of this study were analyzed utilizing EPA's modified Stormwater Management Model (SWMM 4.05). Flood flow, time history of flows, flood elevations and hydraulic grade lines were computed for the existing stormwater system based upon rainfall associated with 2-year, 24-hour; 5-year, 24-hour; 10-year, 24-hour; 25-year, 24-hour and 100-year, 24-hour design storm events.

- Level of Service

  The existing stormwater conveyance system was analyzed against the City of Sarasota's flooding level of service as addressed in the *Sarasota City Plan*. A level of service was not established for water quality. However, projects developed in the master plan incorporate water quality improvement design criteria where appropriate.

- Selected Alternatives

  Two selected alternatives were developed for the basin which meet the City's adopted flooding level of service criteria. Each alternative was analyzed utilizing the SWMM computer model. Flood flows, time history of flows, flood elevations and hydraulic grade line plots were determined for each alternative based upon the rainfall associated with 2-year, 24-hour; 5-year, 24-hour; 10-year, 24-hour; 25-year, 24-hour and 100-year, 24-hour storm events. Preliminary cost estimates were prepared for each alternative and a workshop was conducted with County and City staff and the Stormwater Environmental Utility Advisory Committee to select the preferred alternative.

- Public Meeting

  One public workshop was conducted at a location within the Hudson Bayou Basin

to present the recommended improvement plan for the basin and to gather public input. Also, at the conclusion of the study effort, the master plan document was presented to the City of Sarasota Council and the Sarasota County Board of Commissioners for approval.

- Report Document

  Preparation of a report document which details the stormwater modeling procedures level of service criteria, project selection, cost estimates and recommended improvements.

- FEMA Map Revision Submittal

  The required mapping and study data needed to obtain a map revision from the Federal Emergency Management Agency (FEMA) for the City of Sarasota Flood Insurance Rate Maps (FIRM) Panels No. 9 and No. 10 was prepared in accordance with FEMA submittal requirements. The map revision package will be submitted to FEMA by the City of Sarasota.

1.3 Authorization

Preparation of the *Hudson Bayou Basin Master Plan* was authorized by Contract No. C91-421 (dated July 9, 1991) between Sarasota County and Post, Buckley, Schuh and Jernigan, Incorporated.

Chapter 7
RECOMMENDED BASIN MASTER PLAN

7.1 Recommended Plan

Upon completion of the stormwater modeling of the three alternatives described in Chapter 6, a meeting was conducted with Sarasota County and the City of Sarasota to select a recommended plan for the Hudson Bayou Basin. The selected plan would need to address the water quantity LOS deficiencies outlined in Chapter 5 and the water quality concerns identified by the Sarasota Bay National Estuary Program (NEP) and Mote Marine Laboratory's *Characterization of Ecological Conditions and Impacts of Stormwater Runoff for Hudson Bayou and Phillippi Creek.*

Cost comparisons of the three alternatives indicates that Alternative No. 3 is approximately $944,000 less expensive than Alternative No. 1 and $292,000 less expensive than Alternative No. 2. Further comparisons indicate that the inclusion of project numbers 1-3, 2-2 and 2-3 into Alternative No. 3 results in water quality improvements to Hudson Bayou in the form of sediment removal, that Alternative No. 1 and No. 2 do not provide.

Also, Project No. 3-4 in Alternative No. 3 provides additional water quality benefits through sediment removal and biological uptake of the nutrients associated with stormwater runoff. The location of the facility allows it to treat runoff from approximately 37 percent of the entire Hudson Bayou Basin. Based on the non-point Source Loading Model developed for Sarasota County's NPDES permit application, the desiltation facility will provide for an estimated reduction in total suspended solids (TSS) from the entire basin of 29.8 percent. The high estimated reduction in TSS is believed to be indicative of the reductions in the metals that are such a problem in Hudson Bayou. Metals are usually attached to sediments and therefore are removed along with the sediments. The project is located entirely on Sarasota School Board property and will include educational facilities for the students and the general public. A comparison of the computed floodstages and flows for each alternative can be found in Section 5 of *Appendix A Stormwater Modeling Technical Supplement.*

Upgrading the storm sewer systems for Outfall No. 1 and No. 2 is expensive. The approximate cost of project numbers 1-1, 1-2 and 2-1 is $2 million, including engineering and contingency charges, and thus comprises about 40 percent of the total Recommended Plan Cost. Existing flood condition level of service for Outfall No. 1 and No. 2 is

difficult to define since most of the conveyance systems in these two outfalls are storm sewer pipes that surcharge with excess flooding being conveyed by streets and yards. Replacement of the system in Outfall No. 1 and No. 2 is therefore recommended based upon the depth of flooding that occurs above the ground elevation of the systems during the occurrence of the 25-year, 24-hour storm event. However, since there are no reported flood complaints in these areas, it is recommended that these pipes be upgraded when replacement of the system is necessitated due to the deterioration of the existing system.

Based upon water quality improvement benefits, LOS effectiveness and cost, Alternative No. 3 is selected as the Recommended Plan for the Hudson Bayou Basin. Table 7-1 indicates the project descriptions and costs associated with the Recommended Plan. The locations of the proposed projects in the Recommended Plan are shown on Figures 7-1 and 7-2.

The Recommended Plan addresses channel improvement projects on the tidal portion of Hudson Bayou, and the Arlington Drainage Canal. Project No. 3-1 on the tidal portion of Hudson Bayou is the most downstream channel improvement project in Outfall No. 3. This project is required so adverse flooding conditions will not occur due to the improvement projects in the upstream end of the basin. Figure 7-3 indicates the typical cross-section required for this project. The cross-section is plotted as if you were looking in a dowostream direction, therefore the channel excavation occurs on the north bank of Hudson Bayou. Environmental permitting of this project could require re-establishment of mangrove plants, if mangroves are found in the area.

As stated previously, Project No. 3-4 in the Recommended Plan is a multi-use facility which results in stormwater attenuation and water quality benefits to Hudson Bayou and Sarasota Bay. A typical section for each of the two stormwater cells in this project is shown on Figure 7-4. This typical section is oriented in the downstream direction of flow and indicates the section at the widest portion of the two stormwater cells. The typical section on Figure 7-4 indicates that the bottom of the new stormwater cells will be shifted approximately 50 feet to the south in order to accommodate a 4:1 side slope. A description of the two outfall control structures for the stormwater facility are given in Chapter 6. Any deviation to these control structures could affect flooding conditions upstream and downstream resulting in changes to other project sizes.

Project No. 3-17 of the Recommended Plan involves the widening of the Arlington Drainage Canal between the two culverts on the bus loop lanes at the Sarasota County High School. The extra conveyance and storage area gained from the channel widening

is necessary in order not to create adverse flooding conditions in the area resulting from the increased flows from the upstream improvement projects on the Arlington Drainage Canal. Figure 7-5 shows the typical section of the proposed channel widening with the widening taking place on the south bank of the canal.

Project No. 3-18 of the Recommended Plan involves the widening of the Arlington Drainage Canal for the 300 feet of the canal downstream of the Bahia Vista Street culvert. This project is also required in order not to create adverse flooding conditions due to increased flows from the improvement projects in the upstream portion of the basin. Figure 7-6 indicates the typical section required for this channel reach with most of the excavation occurring on the east bank of the canal. Some filling will need to take place on the west bank of the canal in order to accommodate 4:1 side slopes.

Project No. 3-19 of the Recommended Plan involves the widening of the Arlington Drainage Canal for 680 feet of the canal on the upstream side of the Bahia Vista Street culvert. Drainage easement purchase will be required for this project. The extra conveyance and storage area resulting from the channel widening is necessary in order to not create adverse flooding conditions due to increased flows from upstream improvement projects. Figure 7-7 indicates the typical section for this reach of channel improvement. Some filling could be required on the east bank of the canal in order to accommodate 4:1 side slopes.

Section 6.3 of the previous chapter contains the descriptions of the remaining projects associated with the Recommended Plan. The above mentioned descriptions pertain to open channel conveyance or storage projects only.

Table 7-2 indicates the 2-year, 5-year, 10-year, 25-year and 100-year floodstages for the Recommended Plan on Outfall No. 3 at selected locations. The hydraulic grade line plots for the Arlington Drainage Canal, the Euclid Drainage Canal and the Fruitville Drainage Canal are shown in Section 5 of the *Appendix A Stormwater Modeling Technical Procedures Manual*.

7.2 Recommended Plan LOS

Table 5-3 in Chapter 5 describes the LOS area of deficiencies within the Outfall No. 3 portion of the Hudson Bayou Basin based upon water quantity attainment goals. Table 7-3 shows the improvement in water quantity LOS if the Recommended Plan projects are implemented.

As stated in Chapter 5, Outfall No. 3 of Hudson Bayou was divided into 24 stream reaches in order to perform the LOS analysis. Under existing conditions, Outfall No. 3 of Hudson Bayou meets the City's water quantity LOS criteria in approximately 75 percent of the stream reaches. Table 7-3 indicates that when the projects contained in the Recommended Plan are constructed and put into operation that all of the Outfall No. 3 portion of Hudson Bayou will be in compliance with the City's LOS criteria.

The Recommended Plan improves flooding conditions significantly on the Arlington Canal. The recommended plan results in all homes in the Arlington Canal basin being above the 25-year floodstage. A comparison of all the canals associated with Outfall No. 3 of Hudson Bayou indicates that under existing conditions there are 30 buildings with their lowest floors below the 25-year floodstage. Upon completion of the 12 projects listed in the Recommended Plan for Outfall No. 3, all homes will have their lowest floors above the 25-year floodstage.

7.3 Water Quality Improvements

As stated in Chapter 3 of this report, a detailed water quality assessment of the pollutants associated with stormwater runoff from the Hudson Bayou Basin was not included as part of the scope of work for this report. However, water quality improvements are part of the recommendation of this report.

All channel improvement projects should incorporate weirs in the stream bottom for sediment accumulation and incorporate bank protection measures to reduce erosion of sedimentation. Sedimentation is considered one of the primary water quality problems in Hudson Bayou, since heavy metals such as zinc and lead attach themselves to sediment particles which are then transported to the tidal basin of Hudson Bayou and eventually into Sarasota Bay. Figures 7-8 and 7-9 depict the extent of the sedimentation problem in Hudson Bayou. Figure 7-8 shows the planimetric view of the Hudson Bayou channel between the Osprey Avenue crossing and the US 41 crossing. This reach is tidal and considered to be navigable. Figure 7-9 indicates the extent of the sediment accumulation in Hudson Bayou Basin. An approximate 6 foot depth of silt has built up in this area over the years, which does not impact drainage, but does create navigation, aesthetic, property value and water quality concerns.

Water quality projects that could be implemented throughout the Hudson Bayou Basin would be such projects as the construction of Water Quality Inlets (WQI) on the closed storm sewer systems. Water Quality Inlets (also known as Oil-Grit Separators, OGS)

were developed in Maryland in 1984. The typical WQI, as shown on Figure 7-10, contains three chambers. Stormwater runoff passes through the three chambers, which are modified to separate out sediment, grit and oil before exiting the inlet. Sarasota County is presently in the process of constructing two WQI's on the Aqualane Canal at an estimated cost of $40,000. Location of proposed WQI's in the Hudson Bayou Basin are not addressed in this report. The total recommended plan cost of $4,812,000 includes the installation of 2 WQI's on Outfall No. 2.

The most significant water quality improvement project in the Recommended Plan is Project No. 3-4 which is a regional stormwater treatment and desiltation basin on the Euclid Canal. This project consists of a 2000 foot long linear stormwater facility that covers approximately 6 surface acres between School Avenue and the intersection of the Euclid Avenue and Courtland Street. The linear pond will feature a two cell design with the eastern most cell being a desiltation basin and the western or downstream cell a wetland system for biological uptake of nutrients in the stormwater. This facility will serve to treat the stormwater runoff from approximately 37 percent of the entire Hudson Bayou basin. Sediment removal efficiency of the facility is expected to be 80 percent or more. The facility will result in a 30 percent reduction in total sediment loadings to Sarasota Bay. Figure 7-11 depicts a planimetric view of the facility along with the location of some proposed educational facilities associated with the site.

As stated previously in Chapter 3, three other water quality studies were ongoing concurrently with the development of the *Hudson Bayou Basin Master Plan*. The *Characterization of Ecological Conditions and Impacts of Stormwater Runoff For Hudson Bayou and Phillippi Creek* report prepared by Mote Marine Laboratories for PBS&J addresses several mitigation measures for water quality improvement in Hudson Bayou. These measures include:

- Replacement of seawalls with rip rap or artificial reef material.
- Diversion of runoff from bridges and bridge approaches.
- Education of boat owners in tidal basins on proper use and disposal of petroleum products and boat paints.
- Education of stream side property owners on proper use and disposal of household and landscape chemicals, yard wastes and plantings.

The *Framework For Action* report prepared by the Sarasota Bay NEP gives both general and specific recommendations to improve the quality of stormwater runoff in the basin. Some of the recommendations of the report are as follows:

- Establish zones near the Bay and its tributaries for priority action to improve water and sediment quality.
- Eliminate nitrogen loads from septic tanks.
- The City of Sarasota should optimize the treatment capacity of its wastewater treatment operation to allow for expansion.
- Establish natural wildlife corridors or greenbelts to slow stormwater runoff, improve treatment and provide habitat opportunities.
- Promote improved landscape maintenance practices.
- Review the potential for implementing physical alterations for water quality improvements in man made, non-navigable portions of state waters such as Hudson Bayou.

The Comprehensive Stormwater Quality Management Plan that was developed as part of the City of Sarasota's NPDES permit program also requires proposed improvements to the water quality in the City. The management plan as proposed in the permit requires the development of source controls, the screening of illicit discharges, regular inspections of industries regulated by NPDES regulations and the review of all proposed construction activities to ensure that adequate erosion and sediment controls have been included in the plan. The stormwater quality management plan includes a monitoring program for the Hudson Bayou Basin to identify the source of lead and sediments.

The proposed management program from the NPDES permit when combined with the recommendations of the Sarasota Bay NEP, Mote Marine Laboratories and the water quality features associated with the Recommended Plan will result in an overall improvement to the water quality of Sarasota Bay.

7.4 Summary of Public Meeting

A public meeting was held on June 9, 1994, to present the results of the *Hudson Bayou Basin Master Plan*. The meeting was held in the media center of the Sarasota High School. A total of 18 people attended the meeting.

Four written comments were received as a result of the workshop. One of the comments from a person who lives in the floodplain of Arlington Canal, was in support of the proposed improvements, including the water quality improvement projects. Two comments concerned the projects for Outfall No. 1. It was pointed out that there is a proposed beautification and water main project on Osprey Avenue between Ringling Boulevard and Alderman Street and that possibly an upgrade of the storm sewer system in Osprey would be preferably to the recommended project for Outfall No. 1. Also, the present location of the Outfall No. 1 storm sewer system traverses through a new city park that the local residents do not want disturbed. Consideration of upgrading the storm sewer line on Osprey Avenue south of Ringling Boulevard would not serve to relieve the flooding conditions on Outfall No. 1, since the systems are independent of each other. Also, the storm sewer system on Osprey Avenue south of Ringling Boulevard was analyzed and did not require replacement. The fourth written comment was from a citizen whose residence is on Browning Street. Browning Street is located north of and adjacent to the proposed desiltation facility (Project No. 3-4) on the Euclid Canal. Concern was expressed over the loss of trees in their backyard due to construction of Project No. 3-4. Proper landscaping of the proposed desiltation facility should enhance their property, not detract from it.

TABLE 7-1
RECOMMENDED IMPROVEMENT PLAN
PROJECT DESCRIPTION AND COST
OUTFALL NO. 3

Project	Project Description	Type	Size	Length	Cost
	OUTFALL #1				
1–1	Replace existing storm sewer from Osprey Ave. to outfall	RCP BC BC	48" 4'x 5' 4'x 6'	590 ft 660 ft 1100 ft	$149,000 $216,000 $392,000
1–2	Replace existing storm sewer from intersection of Alderman St and Rawls to ditch outfall	ERCP	34"x 53"	30 ft	$7,000
1–3	Install sediment trap at outlet	Concrete			$250,000
	OUTFALL #2				
2–1	Replace existing storm sewer from Osprey to Lime on Ringling and on Lime from Ringling to Fruitville	RCP RCP	48" 60"	610 ft 3870 ft	$149,000 $1,161,000
2–2	Install sediment trap at outlet	Concrete			$250,000
2–3	Install 2 water quality inlets	Concrete			$80,000
	OUTFALL #3				
Hudson Bayou					
3–1	Channel improvements from the confluence of the Euclid and Arlington Drainage Canals to US 41	Excavation Wetland Plantings	2100 CY 1 Ac.	400 ft	$15,000 $20,000
Euclid Drainage Canal					
3–3	Diversion from School Ave. to Arlington Canal	BC	48"	1600 ft	$385,000
3–4	Stormwater Facility at Sarasota High School (Linear Pond)	Excavation Control Structures Educational Features Plants/Landscaping	80,000 CY		$648,000 $67,500 $67,500 $41,000
3–5	Replacement of drainage structure at Euclid and Courtland (Existing double 42" pipe)	RCP RCP	42" 48"	70 ft 70 ft	$14,800 $16,800
3–7	Replacement of drainage structure at railroad (Existing 54" pipe)	BC	4'x 7'	100 ft	$38,300

TABLE 7-1 (CONTINUED)
RECOMMENDED IMPROVEMENT PLAN
PROJECT DESCRIPTION AND COST
OUTFALL NO. 3

Project	Project Description	Type	Size	Length	Cost
Euclid Drainage Canal Cont.					
3–12	Activate existing 54" culvert under Fruitville on Euclid Drainage Canal	RCP	54"	N/A	$6,700
Arlington Canal					
3–16	Replacement of drainage structures at Sarasota High School Bus Entrance Lanes (Existing 7'x 7' BC)	BC	7'x 10'	100 ft	$62,000
3–17	Channel Improvements between the Sarasota High School Bus Entrance Lanes	Excavation	560 CY	250 ft	$8,000
3–18	Channel Improvements downstream of Bahia Vista	Earthwork Maintenance	875 CY	300 ft	$9,400
3–19	Channel Improvements upstream of Bahia Vista	Excavation Easement	630 CY 6750 sq. ft.	680 ft	$8,000 $10,000
3–21	New storm sewer system from Waldmere to School Ave to Floyd St	BC	5'x 10'	1300 ft	$675,000
3–22	Replacement of drainage structure at Hawthorne St	RCP	Dbl 72"	90 ft	$65,000
ESTIMATED TOTAL COST					$4,812,000

Note: 35% Engineering and contingencey included in project cost.

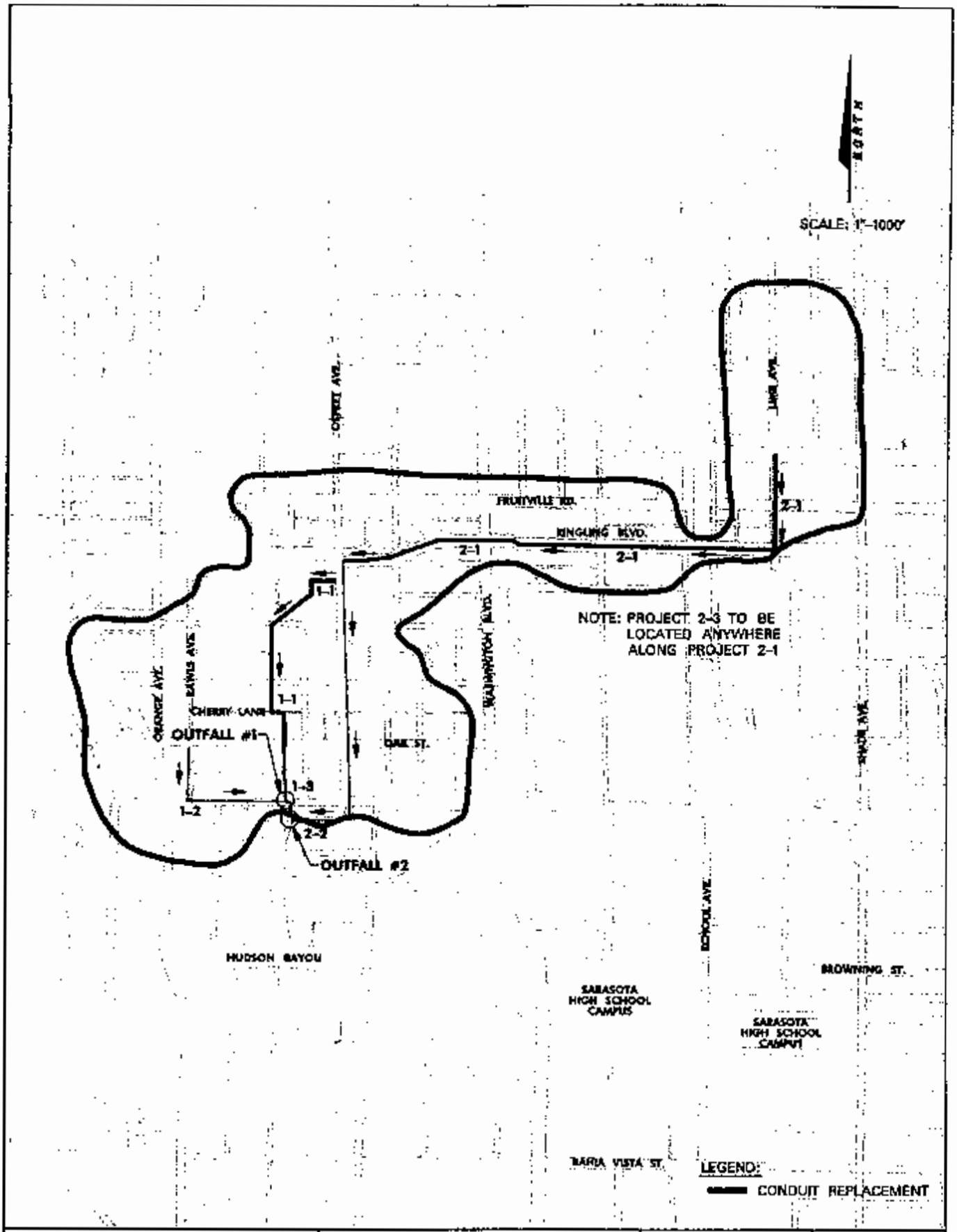
TABLE 7-2
RECOMMENDED PLAN
COMPUTED FLOODSTAGES
OUTFALL NO. 3

Location	2 yr/24 hr (ft)	5 yr/24 hr (ft)	10 yr/24 hr (ft)	25 yr/24 hr (ft)	100 yr/24 hr (ft)
Arlington Drainage Canal					
Arlington St & Shade Ave Int	10.31	11.40	12.21	12.64	13.87
Hawthorne St	9.05	10.24	11.40	12.50	13.73
Waldemere St	6.99	8.12	10.57	11.82	13.16
Floyd St	5.81	6.63	7.05	7.36	7.84
Bahia Vista St	3.51	4.23	4.72	5.11	5.91
Sarasota High Bus Lane	3.27	3.85	4.39	4.79	5.50
Sarasota High Bus Lane	3.13	3.74	4.18	4.59	5.19
Euclid Drainage Canal					
Colorado St	26.93	28.08	28.61	28.99	29.56
Belvoir Blvd	26.86	28.04	28.59	28.97	29.54
Davis Blvd	26.45	27.60	28.17	28.34	28.53
Sydelle St	26.26	27.46	28.02	28.10	28.10
SGL Railroad	25.90	26.98	27.49	27.63	27.78
Wood St	24.89	25.80	26.27	26.54	26.94
Euclid Ave & Courtland St	24.50	25.55	26.02	26.29	26.71
Shade Ave	20.00	20.18	20.27	20.35	20.52
School Ave	13.56	14.74	15.45	16.00	16.99
Sarasota High	10.88	11.29	11.47	11.62	12.03
Weir at Sarasota High	8.83	8.83	8.83	8.83	8.83
Fruitville Drainage Canal					
Ringling Blvd	30.00	30.00	30.00	30.00	30.00
Oak St	28.28	28.78	29.00	29.00	29.00
Popular St	26.18	26.93	27.30	27.48	27.74
SCL Railroad	26.18	26.93	27.30	27.48	27.74
Tuttle Ave	25.33	26.16	26.58	26.82	27.19

Note: Floodstages shown at upstream face of structures.

TABLE 7-3
WATER QUANTITY LOS
RECOMMENDED PLAN
OUTFALL NO. 3

Reach Number	Description	Level of Service		
		Current	Recommended Plan	Remaining Houses
Arlington Canal				
HBB-20-0045 &0055	Floyd St to Waldemere St	D	C	0
HBB-20-0065	Waldemere St to Hawthorne St	D	C	0
HBB-20-0075	Hawthorne St to Arlington St	D	C	0
HBB-20-0085	Arlington St to Shade St	D	C	0
HBB-20-0095	Upstream Shade St	D	C	0
Euclid Canal				
HBB-00-0105	Sydelle St to Belvoir Blvd	C	C	0
HBB-00-0115	Belvoir Blvd to Colorado St	C	C	0
Fruitville Canal				
HBB-10-0015	Confluence w/Euclid Canal to Tuttle Ave	C	C	0
HBB-10-0045	Oak St to Michigan St	C	C	0
HBB-10-0075	Sequoia St to Armory	C	C	0
Total				0

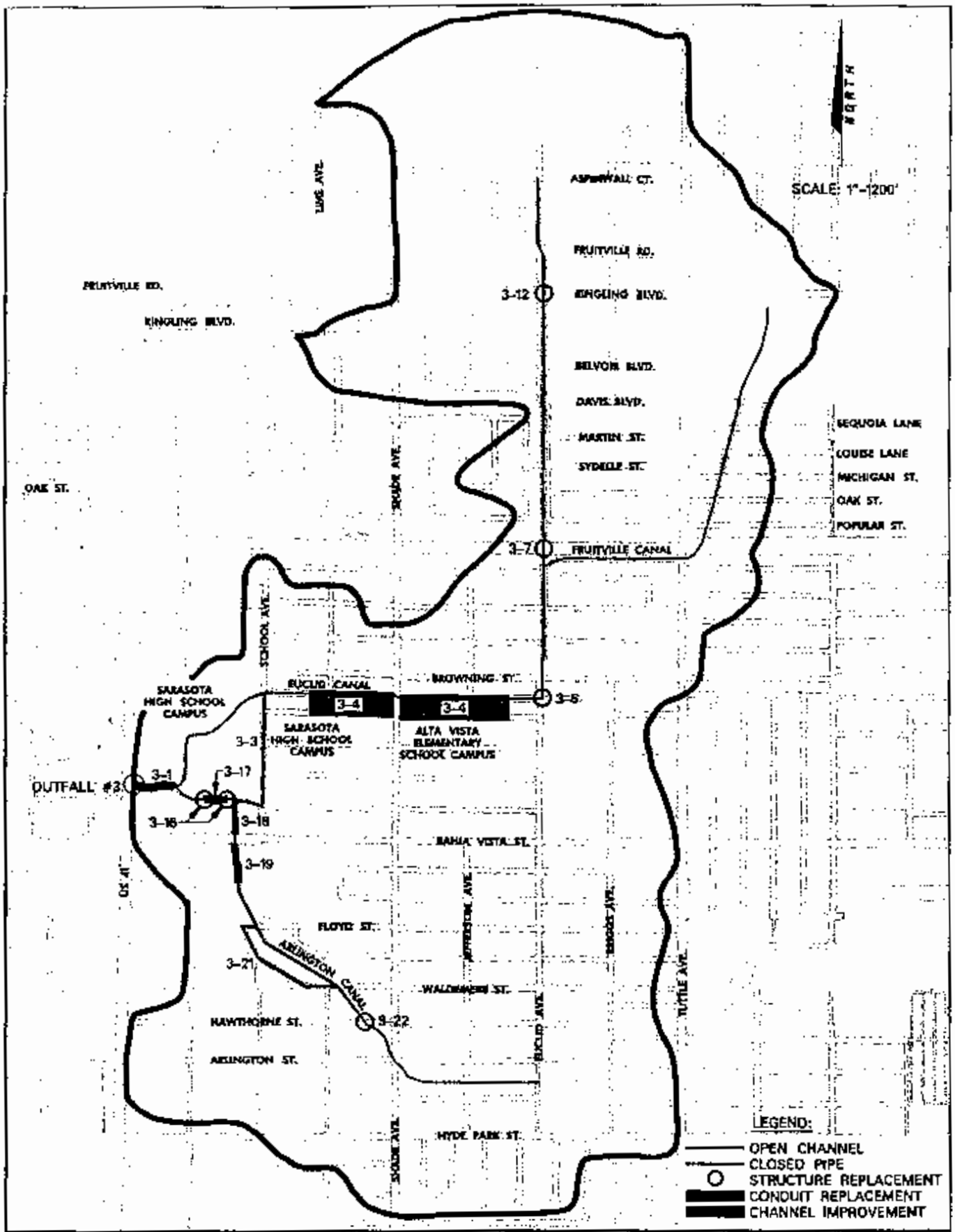


PBSJ

5300 WEST CYPRESS STREET
SUITE 300
TAMPA, FLORIDA 33607
PH: (813) 275-7275

OUTFALL #1 AND #2
RECOMMENDED PLAN PROJECT LOCATIONS

FIGURE 7-1



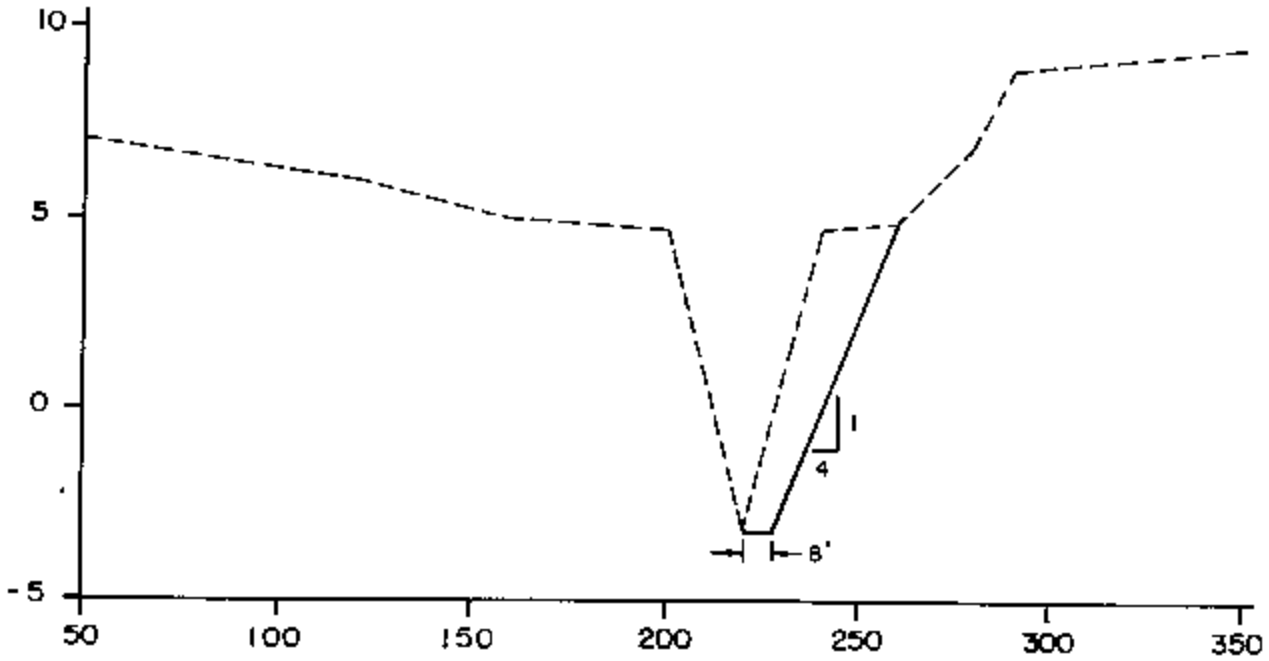
PBSJ

5300 WEST CYPRESS STREET
SUITE 300
TAMPA, FLORIDA 33607
PH. (813) 877-7275

OUTFALL #3
RECOMMENDED PLAN PROJECTS LOCATIONS

FIGURE 7-2

HUDSON BAYOU (TIDAL)



LEGEND

EXISTING GRADE

PROPOSED GRADE

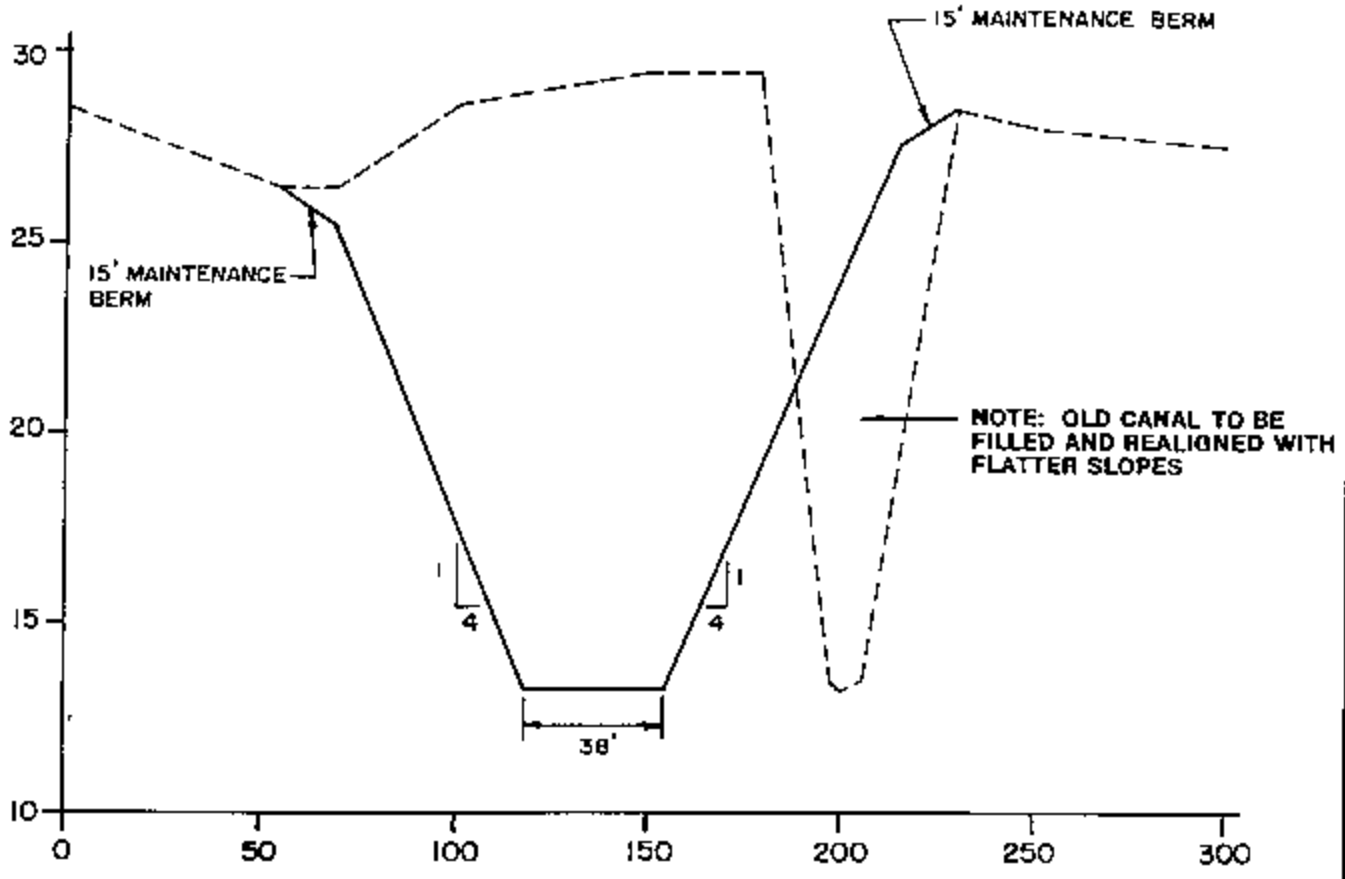
SCALE:
1" = 50' HORIZONTAL
1" = 5' VERTICAL

PBSJ POST, BUCKLEY, SCHUH & JERNIGAN, INC.
RECOMMENDED PLAN
PROJECT NO. 3-1

FIGURE 7-3

REPRO PRODUCTS INC 7A

EUCLID DRAINAGE CANAL



LEGEND

- – – – – – EXISTING GRADE
- ——— PROPOSED GRADE

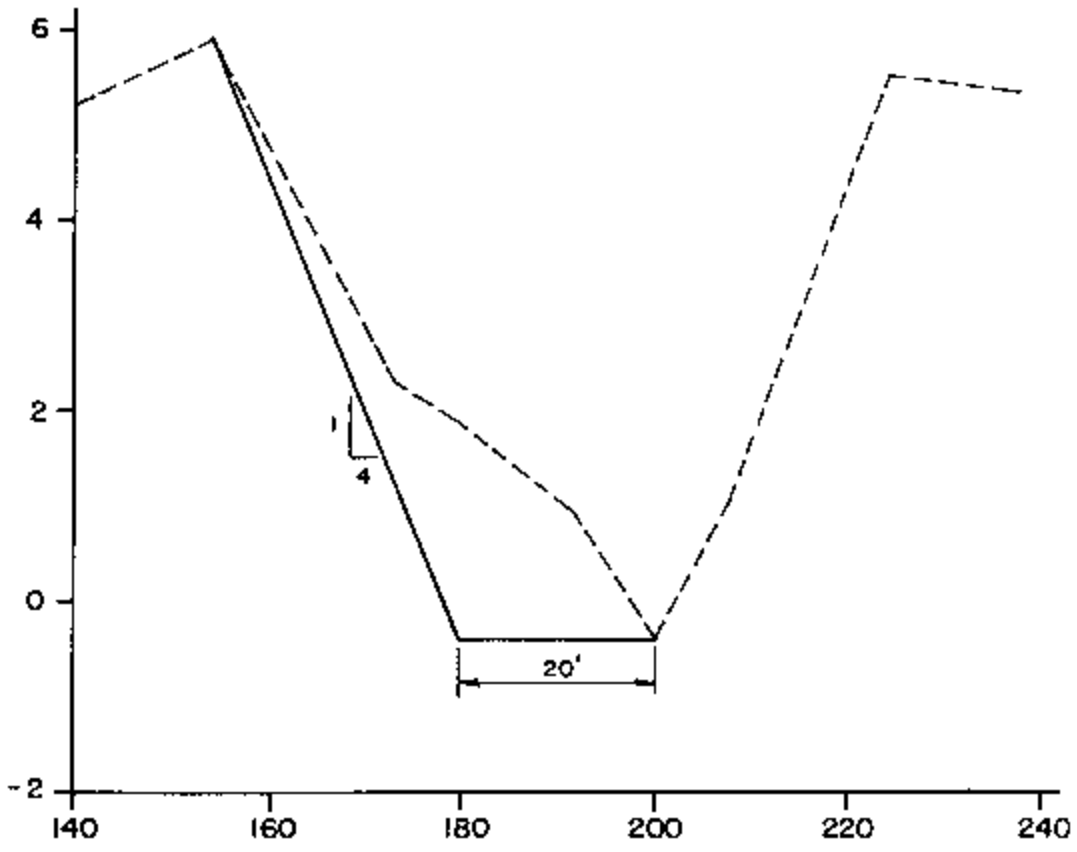
SCALE:
1" = 50' HORIZONTAL
1" = 5' VERTICAL

PBSJ POST, BUCKLEY, SCHUH & JERNIGAN, INC.
RECOMMENDED PLAN
PROJECT NO. 3-4

FIGURE 7-4

REPRO PRODUCTS INC 7A

ARLINGTON DRAINAGE CANAL



LEGEND

EXISTING GRADE

PROPOSED GRADE

SCALE:
1" = 20' HORIZONTAL
1" = 2' VERTICAL

PBSJ POST, BUCKLEY, SCHUH & JERNIGAN, INC.

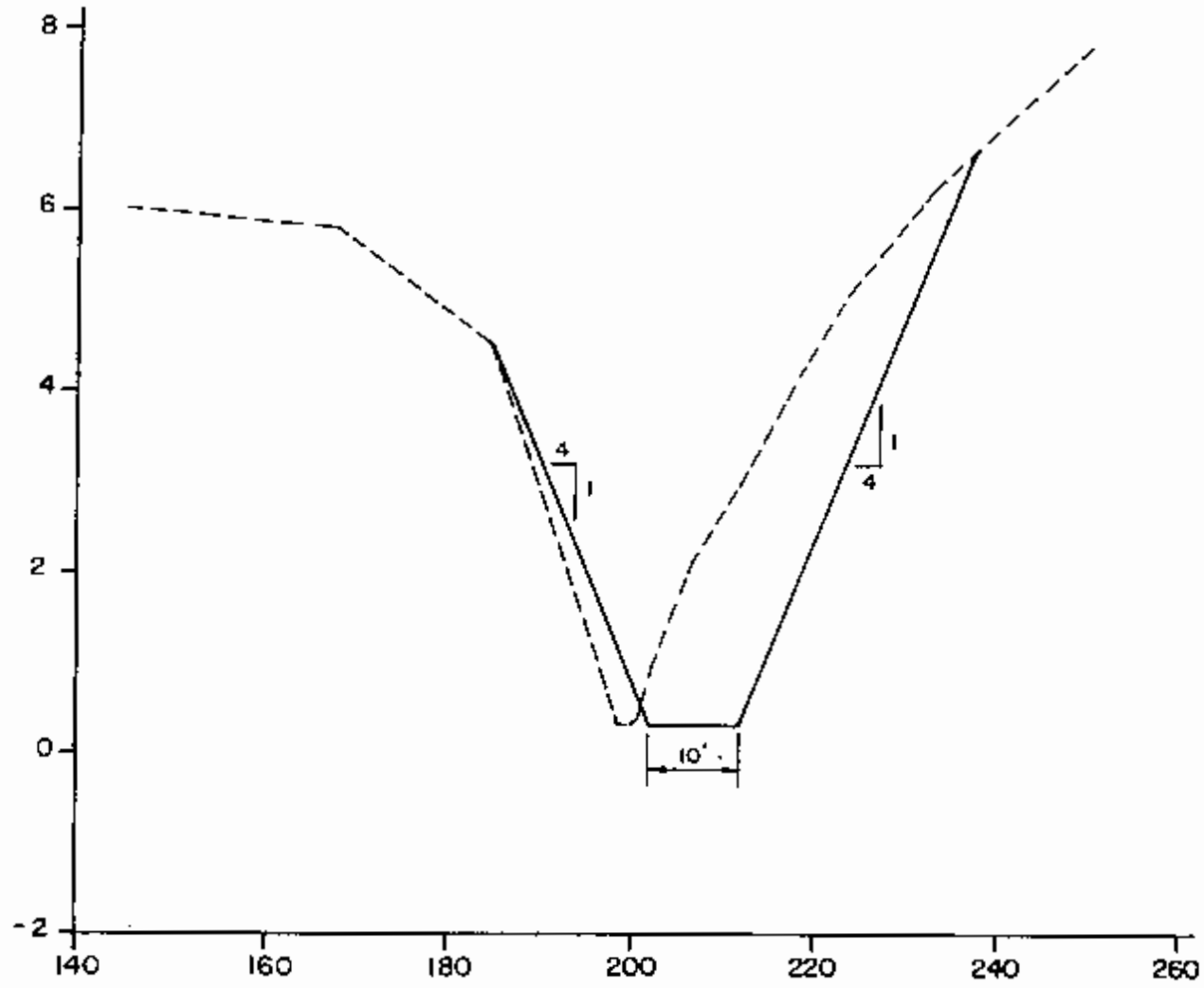
RECOMMENDED PLAN

PROJECT NO. 3-17

FIGURE 7-5

REPRO PRODUCTS INC 7A

ARLINGTON DRAINAGE CANAL



LEGEND

- – – – – – EXISTING GRADE
- ——— PROPOSED GRADE

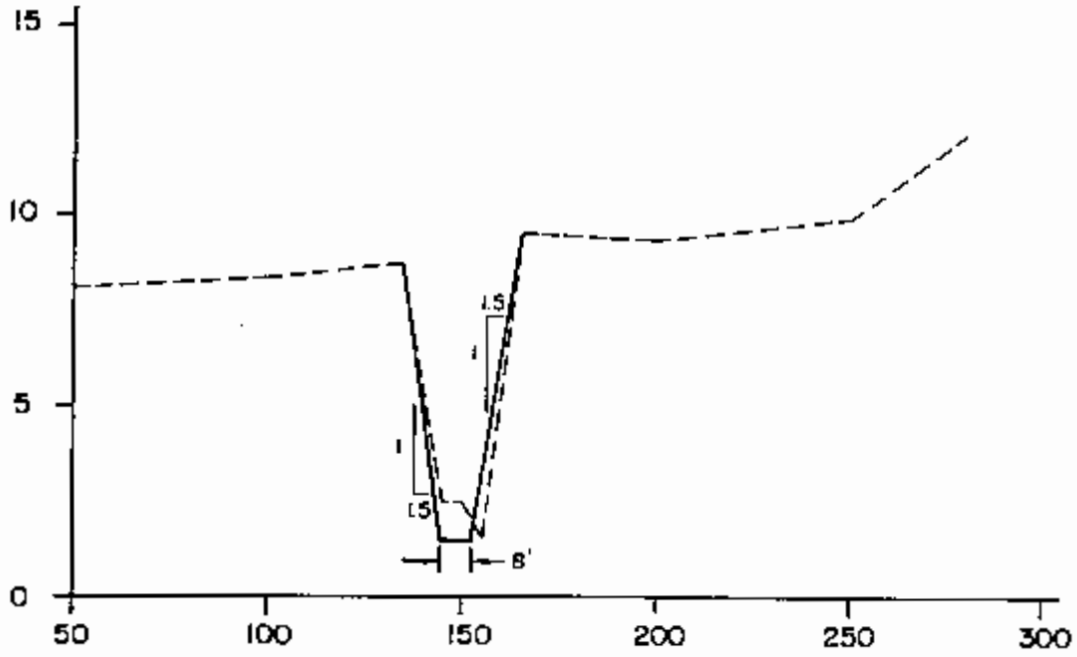
SCALE:
1" = 20' HORIZONTAL
1" = 2' VERTICAL

PBSJ POST, BUCKLEY, SCHUH & JERNIGAN, INC.
RECOMMENDED PLAN
PROJECT NO. 3-18

FIGURE 7-6

REPRO PRODUCTS INC 7A

ARLINGTON DRAINAGE CANAL



LEGEND

EXISTING GRADE

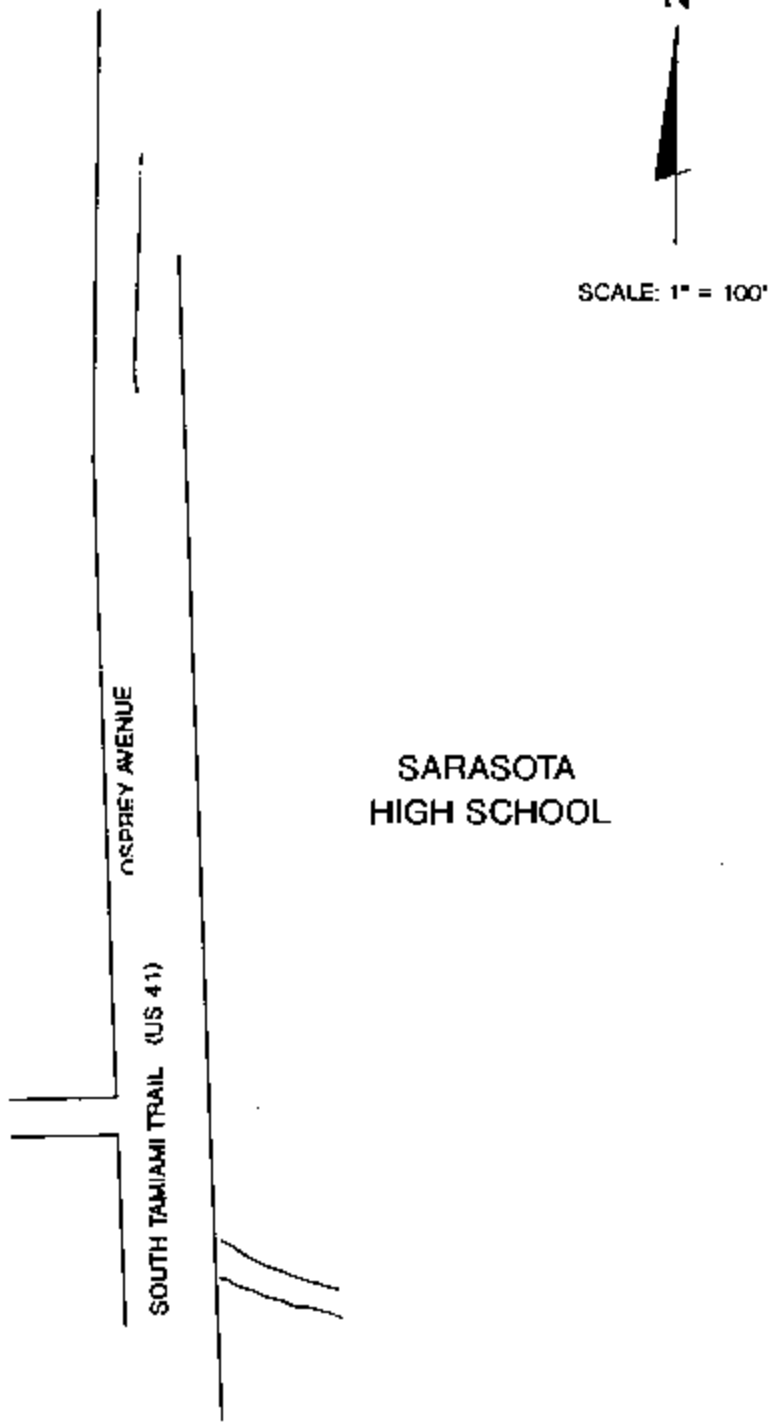
PROPOSED GRADE

SCALE:
1" = 50' HORIZONTAL
1" = 5' VERTICAL

PBSJ POST, BUCKLEY, SCHUH & JERNIGAN, INC.
RECOMMENDED PLAN
PROJECT NO. 3-19

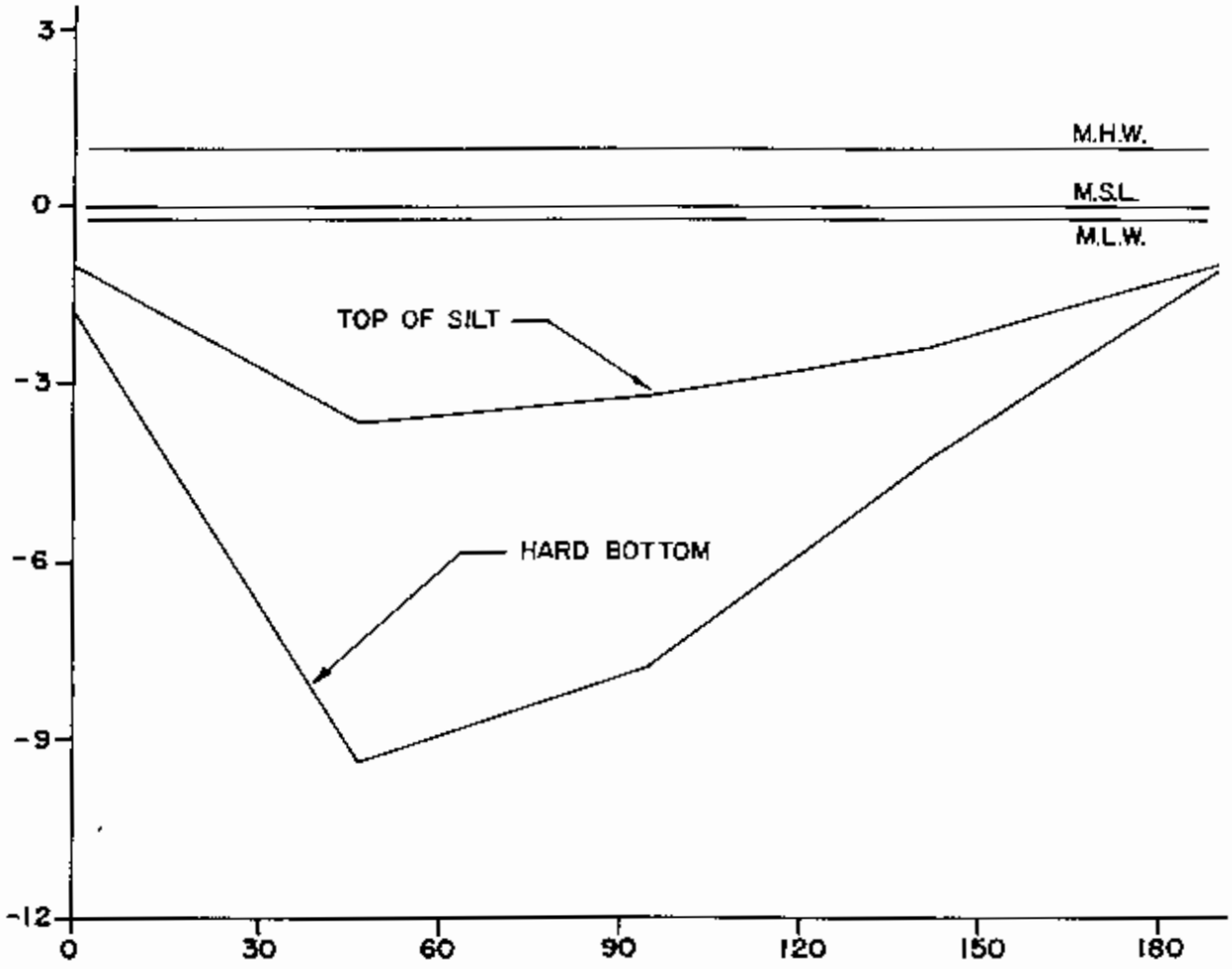
FIGURE 7-7

REPRO PRODUCTS INC. 7A



PBSJ POST, BUCKLEY, SCHUH & JERNIG

FIGURE 7-8



SCALE:
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

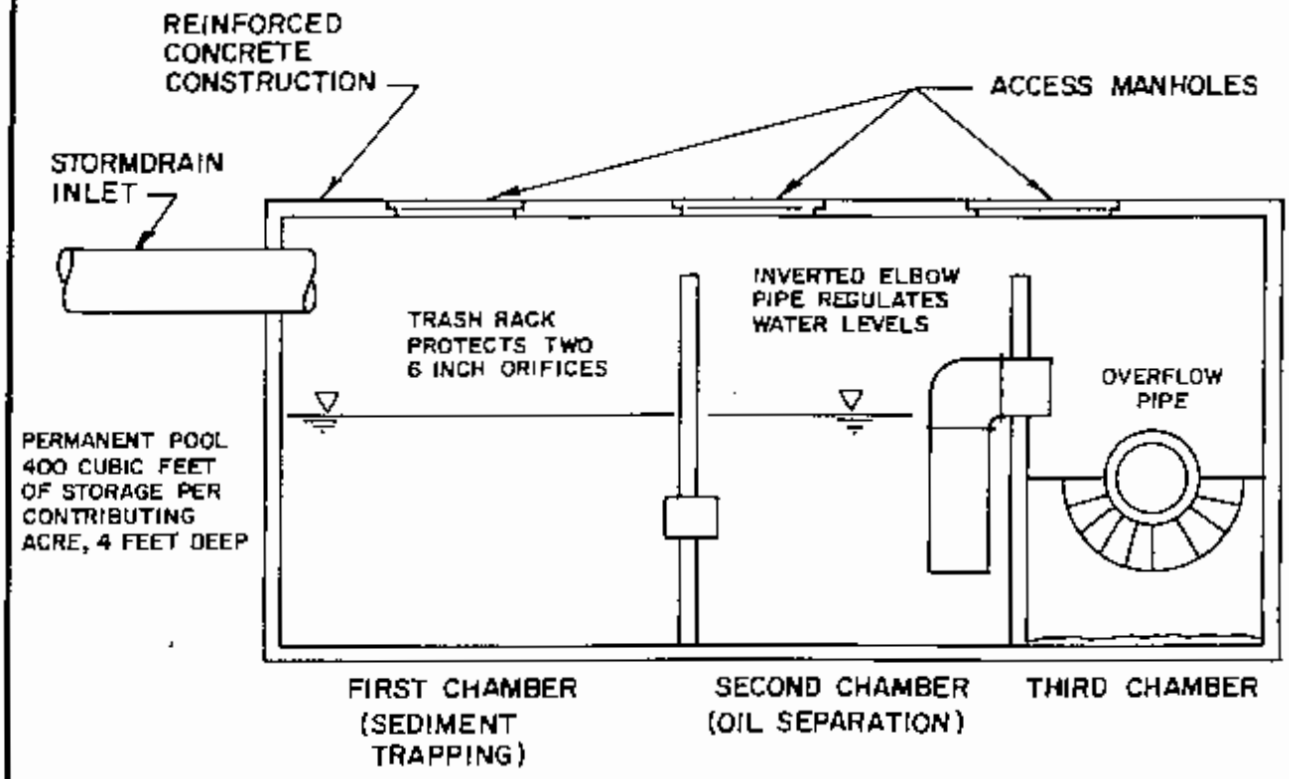
SECTION B-B

PBS&J POST, BUCKLEY, SCHUH & JERNIGAN, INC.

HUDSON BAYOU SILTATION AREA

FIGURE 7-9

REPRO PRODUCTS INC 7A



SIDE VIEW

SCHEMATIC OF WATER QUALITY INLET

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

FIGURE 7-10

REPRO PRODUCTS INC 7A

Summarized Scope and Course Of Action
for
The Elligraw Bayou Basin Master Plan

1.0 EXECUTIVE SUMMARY

1.1 OVERVIEW

The Elligraw Bayou basin contains 460 acres which ultimately empty into Little Sarasota Bay. The study area generally extends from the tidal confluence of the Elligraw Bayou Main at U.S. 41, east to the entrance to Marbelle Subdivision. The Elligraw Bayou basin is bordered by the Matheny Creek basin to the north, the Catfish Creek basin to the east, and the Holiday Bayou basin to the south.

Drainage from the basin is serviced by two major conveyance systems referenced herein as the Elligraw Bayou Main which extends easterly to the headwaters of the basin from U.S. 41, and the Gulf Gate Lateral which extends north from its confluence with the Elligraw Bayou Main south of Curtiss Avenue to Gulf Gate Drive. Three water level control structures (EB-1, EB-2 and EB-3) are located in the Elligraw Bayou Main and one water level control structure (GGL-1) is located in the Gulf Gate Lateral.

At present, the Elligraw Bayou basin is essentially 100% developed. Existing land uses within the basin include 242.52 acres of medium density residential (53%), 88.48 acres of high density residential (19%), 82.87 acres of open spaces (18%), 12.95 acres of commercial (3%), 16.50 acres of office (4%), and 16.33 acres of major public roads with closed drainage (4%). Of the total basin area, approximately 198.36 acres (43.2%) are impervious and 122.78 acres (26.7%) are directly connected impervious.

The surface waters within the Elligraw Bayou basin are classified as Class III waters (i.e. recreation and the propagation and management of fish and wildlife). Under existing conditions, an estimated 36% of the Elligraw Bayou basin is effectively serviced by stormwater treatment best management practices, BMPs.

1.2 BACKGROUND

Historically, the basin was frequented by numerous isolated wetlands. The extent of these wetlands contracted and expanded throughout the year in response to rainfall. During periods of heavy rainfall, many of these wetlands extended well into upland areas where they may have become hydraulically connected to similarly extended wetlands. Over the years, dredge and fill activities drained and altered most of the wetlands within the basin.

The Sarasota Board of County Commissioners authorized a flood control plan for the basin in 1969. This study was adopted by the County in 1970 pursuant to Resolution No. 70-110. Right-of-way and cross-sectional area requirements for the Elligraw Bayou Main were established as part of this study. The adopted improvements were primarily implemented by subsequent developments located along these drainage courses with public drainage right-of-ways and/or easements being dedicated upon their

completion. However, the actual improvements in the lower Elligraw Bayou subbasin are somewhat less than those specified in the adopted study.

1.3 ASSESSMENT

As an initial activity of this study, extensive research was conducted relative to flood protection and water quality in the Elligraw Bayou basin. This research included: (1) the review of all development drainage plans and correspondence available from the Sarasota County Transportation Department; (2) the review of previous authoritative studies relative to the Elligraw Bayou drainage basin; (3) the review of information from the June, 1992 flood; (4) review of field survey data and field reconnaissances; (5) review of citizen's complaints; (6) interviews with residents in the Elligraw Bayou drainage basin; (7) interviews with Sarasota County Stormwater Maintenance personnel; and (8) coordination with other agencies.

One-foot contours aerials, field surveying, and development plan information were used to define the hydrologic and hydraulic characteristics of the Elligraw Bayou basin. In all, 34 subbasin areas were delineated for the analyses. A listing of the hydrologic characteristics for all 34 subbasin areas is provided within APPENDIX A. However, for the sake of simplicity and evaluation, these subbasin areas were aggregated into one of three (3) subbasins as summarized in TABLE 1.3.

SUBBASIN SUMMARY

SUBBASIN NAME	AREA (acres)	Directly Connected Impervious Area (acres/%)	Total Impervious Area (acres/%)
LOWER ELLIGRAW BAYOU	177.82	17.6%	43.2%
UPPER ELLIGRAW BAYOU	204.77	31.2%	41.4%
DENHAM ACRES LATERAL	77.07	35.8%	47.7%
TOTAL	459.66	26.7%	43.2%

TABLE 1.3

An inventory of structures located within the study reaches is also presented in APPENDIX A.

Land use designations; best management practices (BMP) type and coverage were determined for each of the 34 subbasin areas as required to conduct the pollutant loading analysis. A listing of these land use and BMP quantities for all 34 subbasin areas is provided within APPENDIX C.

An overview of three primary subbasins is provided below:

Lower Elligraw Bayou Subbasin

The lower Elligraw Bayou subbasin encompasses 177.82 acres and is defined by the area which drains directly to that portion of the Elligraw Bayou Main located upstream of U.S. 41 and downstream of Beneva Road. This subbasin contains approximately 31.28 acres of directly connected impervious areas (17.6%) and 76.79 acres of total impervious coverage (43.2%). This subbasin is essentially built-out and consists of an estimated 164.61 acres of medium density residential (92.6%), 11.66 acres commercial (7.1%), and 1.55 acres of high density residential (1%). Approximately 5.17 acres (3%) are presently serviced by stormwater best management practices (BMP's).

Upper Elligraw Bayou Subbasin

The upper Elligraw Bayou subbasin is defined by the area which drains directly to that portion of the Elligraw Bayou Main located upstream and including Beneva Road. It contains 204.77 acres. Directly connected and total impervious coverage within this subbasin are 64.00 acres (31.3%) and 84.84 acres (41.4%), respectively. Existing land uses within the subbasin include 45.95 acres of medium density residential (22%), 1.58 acres of office/light industrial (1%), 14.56 acres of major public roadways with closed drainage systems (7%), 77.75 acres of high density residential (38%), and 76.76 acres of open spaces (37%). An estimated 161.83 acres (79%) are presently serviced by stormwater best management practices (BMP's).

Gulf Gate Lateral Subbasin

The Gulf Gate Lateral Subbasin is defined by that area which drains directly to the Gulf Gate Acres Lateral. This area constitutes 77.07 acres. The directly connected and total impervious coverages for the 77.07 acre basin total 27.61 acres (35.8%) and 36.73 acres (47.7%), respectively. This subbasin area is made up of 31.96 acres of medium density residential (41%), 9.18 acres of high density residential (12%), 14.92 acres of office/light industrial (19%), 1.29 acres of commercial (2%), 17.94 acres of open space (23%), and 1.77 acres of major public roadways with closed drainage systems (2%). Although the majority, if not all of this subbasin drains through a system of interconnected lakes and ditches, the pollutant removal efficiency is suspect with respect to both design and maintenance. Therefore, it was assumed that this basin is not effectively serviced by stormwater best management practices.

1.3.1 FLOOD PROTECTION DEFICIENCIES

The existing conditions assessment identified numerous floodprone areas within the Elligraw Bayou drainage basin. In order to evaluate and prioritize these problem areas, proposed Flood Protection Level of Service (FPLOS) objective criteria was established. This FPLOS objective criteria is consistent with that adopted by Sarasota County pursuant to Comprehensive Plan Amendment RU-24. It is also consistent with that conceptually developed by the five Florida Water Management Districts and the Florida Department of Environmental Protection in 1993

for possible Statewide application. Specifically, this FPLOS objective criteria considers both structural and roadway flood protection up to and including the 100-year flood.

With respect to structural flooding, an estimated 8, 22, 26, and 50 habitable structures are susceptible to flooding from the 5, 10, 25, and 100 year floods, respectively. One (1) employment/service center structure was identified to be flood prone during the 10, 25, and 100 year floods. Based upon the analysis, areas identified as most susceptible to flooding from the 100 year storm include portions of Pinehurst Park, Gulf Gate Woods and Captiva Gardens. These areas are all located in the Lower Elligraw Bayou subbasin. The estimated number of habitual structures susceptible to flooding by subbasin are inventoried in TABLE 1.3.1.a.

HABITABLE STRUCTURES SUBJECT TO FLOODING BY SUBBASIN

SUBBASIN NAME	2-YR	5-YR	10-YR	25-YR	100-YR
LOWER ELLIGRAW BAYOU	0	8	22	26	50
UPPER ELLIGRAW BAYOU	0	0	0	0	0
GULF GATE LATERAL	0	0	0	0	0
TOTAL	0	8	22	26	50

TABLE 1.3.1.a.

Since the susceptibility of structure flooding was estimated from interpretation of 1" = 200' and 1" = 30' scale, 1 foot contour aerials, the final determination of structure flood susceptibility should be based on actual field survey measurements of finished floor elevations.

With respect to roadways, designated arterials within the basin include U.S. 41 and Beneva Road. Segments of Gulf Gate Drive and Palmer Ranch Parkway are located within the Elligraw Bayou basin and are designated collector roads.

Under existing conditions, portions of U.S. 41, Doud Street, Pinehurst Street, Kai Drive, Pine View Circle, Marianna Drive, Biltmore Way, Coventry Way, Biltmore Drive, Hardee Drive, Tuckerstown Drive, Curtiss Avenue, and Antiqua Way were determined to be susceptible to flooding to the extent that they do not meet the adopted FPLOS. The frequency and depth of this flooding for these roads are identified in TABLE 1.3.1.b.

EVACUATION/ARTERIAL/COLLECTOR ROAD FPLOS DEFICIENCIES

ROAD	2-YR	5-YR	10-YR	25-YR	100-YR
U.S. 41	-	-	1.5'	1.9'	2.4'
Doud Street	-	-	1.3'	1.7'	2.2'
Pinehurst Street	0.4'	0.6'	1.5'	2.2'	3.1'
Kai Drive	-	-	0.6'	1.3'	2.3'
Pine View Circle	-	1.2'	1.4'	1.5'	1.6'
Marianna Drive	0.7'	1.9'	2.1'	2.2'	2.3'
Biltmore Way	-	1.9'	2.1'	2.2'	2.3'
Coventry Way	0.8'	2.0'	2.2'	2.3'	2.4'
Biltmore Drive	-	0.5'	0.7'	0.8'	0.9'
Hardee Drive	-	0.9'	1.1'	1.3'	1.6'
Tuckerstown Drive	0.2'	1.1'	1.3'	1.5'	1.8'
Curtiss Avenue	0.4'	1.3'	1.5'	1.7'	2.0'
Antiqua Place	0.2'	1.1'	1.3'	1.5'	1.8'

TABLE 1.3.1.b

1.3.2 WATER QUALITY DEFICIENCIES

Under existing conditions, an estimated 36% of the Elligraw Bayou basin is serviced by stormwater treatment best management practices (BMPs). Based upon the pollutant loading analysis, these BMP's have between a 12% and 29% removal efficiency of gross pollutant loadings (not considering total dissolved solids, TDS). Removal efficiencies are based upon the assumption that existing BMP's are maintained and functioning properly. In actuality, older facilities may be operating somewhere below the design efficiency. Quantifying the degree of efficiency of existing BMP's for the purpose of the pollutant loading analysis would be at best subjective without extensive field investigations and sampling. However, this does underscore the extreme importance of assuring that existing BMP systems are being properly operated and maintained.

Pollutant loading analyses were also conducted for the three primary subbasins. A summary of existing BMP coverage and removal efficiencies by primary subbasin is provided in TABLE 1.3.2.

SUBBASIN	BMP COVERAGE(%)	*REMOVAL EFFICIENCY(%)
LOWER ELLIGRAW BAYOU	3	2 - 16
UPPER ELLIGRAW BAYOU	79	24 - 63
GULF GATE LATERAL	0	0
TOTAL	36	12 - 26

* Not considering total dissolved solids, TDS

TABLE 1.3.2

1.4 ALTERNATIVE ANALYSES

1.4.1 FLOOD PROTECTION ALTERNATIVES

Three alternative solutions were evaluated to address the existing flood protection level of service deficiencies.

Alternative 1 involved only those conveyance improvements necessary to address downstream restrictions at the Pinehurst Street outfall and at Biltmore Drive to the extent that FPLOS deficiencies could be resolved.

Alternative 2 resolved the same FPLOS deficiencies by considering the reduction in downstream conveyance improvements resulting from the enhancement of available storage capacity in the upper portions of the drainage basin.

Alternative 3 improvements are identical as those proposed under Alternative 2 with addition of a low-flow bleeder at the basin outfall to divert stormwater associated with the 'first-flush' of runoff to the historical Elligraw Bayou swale.

TABLE 1.4.1.a compares the associated 100-year flood elevations for the three (3) alternatives with those under existing conditions. Similarly, TABLE 1.4.1.b compares the 100-year peak discharge rates of the three (3) alternatives with those under existing conditions. With respect to cost, it is estimated that alternatives 2 and 3 would be approximately $400,000 below that of alternative 1.

COMPARISON OF 100-YEAR WATER SURFACE ELEVATION (NGVD)

Location	Existing Conditions	Alternative No. 1	Alternative No. 2	Alternative No. 3
Upstream of U.S. 41	2.12	2.91	2.37	2.34
Downstream end of Elligraw Bayou Swale	12.68	9.23	9.25	9.40
Upstream of Pinehurst Street	14.24	11.26	11.69	11.74
Upstream end of Elligraw Bayou Swale	14.57	11.84	12.04	12.13
Downstream of Biltmore Drive	14.71	13.27	13.25	13.42
Upstream of Biltmore Drive	15.49	14.10	13.97	14.10
Downstream of Beneva Road	15.58	14.62	14.21	14.31
Upstream of Beneva Road	15.63	14.79	15.92	15.95
Upstream of Ballantrae Drive	15.74	14.99	15.95	15.96
Upstream of S. Curtiss Avenue	16.18	15.62	15.57	15.62
Upstream of N. Curtiss Avenue	16.52	16.15	16.13	16.15

TABLE 1.4.1.a

COMPARISON OF 100-YEAR DISCHARGE RATES (CFS)

Location	Existing Conditions	Alternative No. 1	Alternative No. 2	Alternative No. 3
Upstream of U.S. 41	338	527	405	398
Downstream end of Elligraw Bayou Swale	303	85	86	93
Upstream Pinehurst Street	283	52	51	58
Upstream end of Elligraw Bayou Swale	293	53	51	58
Downstream of Biltmore Drive	322	443	318	312
Upstream of Biltmore Drive	243	335	203	201
Downstream of Beneva Road	223	308	179	177
Upstream of Beneva Road	150	199	130	143
Upstream of Ballantrae Drive	113	153	61	64
Upstream of S. Curtiss Avenue	47	65	65	64
Upstream of N. Curtiss Avenue	37	48	49	48

TABLE 1.4.1.b

1.4.2 WATER QUALITY ALTERNATIVES

Although no water quality level of service (WQLOS) criteria has been established for developed areas such as the Elligraw Bayou basin, an interim water quality capital improvement program (WQCIP) was conceptually developed and evaluated. This WQCIP is intended to improve water quality by reducing pollutant loads from stormwater. The effectiveness of the WQCIP in reducing stormwater pollutant loads was evaluated by conducting a pollutant loading analysis and comparing the results with those of the existing conditions analysis. TABLE 1.4.2 summarizes the WQCIP in terms of BMP coverage and removal efficiencies for each of the primary subbasins as well as the total watershed.

Comparison of TABLE 1.4.2 with TABLE 1.3.2 indicates that the proposed WQCIP will increase BMP coverage from 36% to 58%. Pollutant removal efficiency will also increase from between 12% and 26% to between 19% and 54% (depending on parameter of interest), from a basin wide perspective.

BASIN	BMP COVERAGE (%)	*REMOVAL EFFICIENCY (%)
LOWER ELLIGRAW BAYOU	4%	4 - 29
UPPER ELLIGRAW BAYOU	88%	28 - 72
GULF GATE LATERAL	100%	30 - 80
TOTAL	58%	19 - 54

* Not considering total dissolved solids, TDS.

TABLE 1.4.2.a

1.5 CONCLUSIONS AND RECOMMENDATIONS

With respect to flood protection, significant level of service deficiencies exist within the Lower Elligraw Bayou basin. These level of service deficiencies were fully realized in late June of 1992 when over 18 inches of rainfall fell in a three day period. As such, an immediate need exists to implement a FPCIP to resolve these FPLOS deficiencies.

No widely accepted WQLOS currently exists for developed watersheds such as Elligraw Bayou. Proposed revisions to State Water Policy would require the Southwest Florida Water Management District to establish pollutant load reduction goals for Elligraw Bayou. In addition, the National Estuary Program for Sarasota Bay is expected to reveal specific stormwater pollutant load deduction goals and/or level of service criteria by July of 1994. It may be prudent to wait until guidance is provided by SWFWMD and the SBNEP prior to adoption and implementation of a WQCIP.

Therefore, it is recommended that Sarasota County proceed with the implementation of the FPCIP identified under alternative no. 3 but wait for further guidance from SWFWMD and SBNEP before proceeding with modification and/or implementation of the proposed WQCIP. Discussions with the Sarasota County Stormwater Environmental Utility and the Southwest Florida Water Management District has yielded a consensus that FPCIP Alternative No. 3 is preferred because it also contains the most significant provisions to enhance water quality. Implementation of this proposed FPCIP and its interim water quality enhancement components are not expected to compromise the development and implementation of a subsequent WQCIP. Alternative No. 3 is also considered as cost effective as alternative 2 and more cost effective than alternative L.

Summarized Scope and Course Of Action
for
The Matheny Creek Basin Master Plan

1.0 EXECUTIVE SUMMARY

1.1 OVERVIEW

The Matheny Creek basin contains 1,724 acres which ultimately empty into Little Sarasota Bay. The study area generally extends from the tidal confluence of the Matheny Creek Main at U.S. 41, east to McIntosh Road and north to Ashton Road. The Matheny Creek basin is bordered by the Phillippi Creek basin to the north, the Catfish Creek basin to the east, and the Elligraw Bayou basin to the south.

Drainage from the basin is serviced by two major man-made canals referenced herein as the Matheny Creek Main, which extends easterly from U.S. 41 to the headwaters of the basin and the Denham Acres Lateral which extends north from U.S. 41 to Clark Road. Two water level control structures (MC-1 and MC-2) are located in the Matheny Creek Main and one water level control structure (DL-1) is located in the Denham Acres Lateral. A network of other laterals, branches and feeder ditches in the basin conduct stormwater into these two primary drainage systems. These other man-made ditches are referenced herein as the Breakwater Lateral, the Coral Lakes Branch, the Gulf Gate Branch, the Williamsburg Branch and the Shadow Lakes Feeder.

At present, the Matheny Creek drainage basin is approximately 94% developed. Existing land uses within the basin include 966.20 acres of medium density residential (56%) 205.75 acres of high density residential (12%), 171.00 acres of open spaces (10%), 143.23 acres of commercial (8%), 129.49 acres of office (8%), 69.64 acres of low density residential (4%), and 37.91 acres of major public roads with closed drainage (2%). Of the total basin area, approximately 759.28 acres (44%) are impervious and 457.15 acres (27%) are directly connected impervious.

The surface waters within the Matheny Creek basin are classified as Class III waters (i.e. recreation and the propagation and management of fish and wildlife). An estimated 34% of the Matheny Creek drainage basin is presently serviced by stormwater treatment best management practices, BMP's.

1.2 BACKGROUND

Historically, the basin was serviced by a small coastal creek extending from Little Sarasota Bay to just downstream (west) of U.S. 41. The remainder of the basin was frequented by numerous isolated wetlands. The extent of these wetlands contracted and expanded throughout the year in response to rainfall. During periods of heavy rainfall, many of these wetlands extended well into upland areas where they may have become hydraulically connected to similarly extended wetlands. Most notably, three (3) large isolated wetlands of more than 40 acres each were situated within the basin area. These three wetland systems were flanked by large bands of mesic hammock areas which provided a typical transition from large wetland habitat to pine flatwood habitat. Over the

years, dredge and fill activities drained and altered most of the wetlands within the basin. It is speculated that the basin may have been named after the Matheny brothers, who operated the first commercial dredge in the area in the early 1900's. Initial drainage ditches were likely dug either during or shortly after that period in response to agricultural and/or mosquito control needs.

It was not until the mid 1960's that development pressures in the area mandated the need for greater drainage measures. In response to these pressures, the Sarasota Board of County Commissioners authorized a flood control plan for the basin. This study was completed in 1967 and established right-of-way and cross-sectional area requirements for the Matheny Creek Main and the Denham Acres Lateral. Subsequent improvements were based upon this 1967 study. The construction plans for most of these improvements are available in the public records of Sarasota County and serve to document the original design section for maintenance and restoration purposes. Those improvements not constructed by Sarasota County were implemented by subsequent developments located along these drainage courses with public drainage right-of-ways and/or easements being dedicated upon completion.

1.3 ASSESSMENT

As an initial activity of this study, extensive research was conducted relative to flood protection and water quality in the Matheny Creek basin. This research included: (1) the review of relevant development drainage plans and correspondence files available from the Sarasota County Transportation Department; (2) the review of previous authoritative studies relative to the Matheny Creek drainage basin; (3) review of FDOT plans for improvements to Clark Road currently underway; (4) the review of information from the June, 1992 flood; (5) review of field survey data and field reconnaissances; (6) review of citizen's complaints; (7) interviews with residents in the Matheny Creek drainage basin; (8) interviews with Sarasota County Stormwater Maintenance personnel; and (9) communications with other agencies.

Flood Protection

One-foot contours aerials, field surveying, and development plan information were used to define the hydrologic and hydraulic characteristics of the Matheny Creek basin. In all, 154 subbasin areas were delineated for the analyses. A listing of the hydrologic characteristics for all 154 subbasin areas is provided within APPENDIX A. However, for the sake of simplicity and evaluation, these subbasin areas were aggregated into one of six (6) subbasins as summarized in TABLE 1.3.

The general condition of existing major structures located in the Matheny Creek basin was visually assessed. Major structures include water level control structures and bridges (i.e. area > 20 square feet). Many of these structures are pictured in APPENDIX D. An inventory of structures located

within the study reaches of the Matheny Creek watershed is presented in APPENDIX A.

Concrete structures in good condition include: (1) double box culverts at U.S. 41; (2) double box culverts at Beneva Road; (3) 78" x 48" elliptical culvert at St. Thomas Moore Catholic Church entrance; and (4) span bridge at Bispham Road. Concrete structures in fair condition include: (1) water level control structure MC-1. Concrete structures in poor condition include: (1) water level control structure DL-1 which is in need of immediate repair or replacement.

In addition, numerous corrugated metal bridge structures were installed in association with the development of Gulf Gate. These structures were constructed in the early to mid nineteen seventies. Corrugated metal structures in fair condition include: (1) arch culverts at Gulf Gate Drive; (2) arch culvert at Mall Drive; and (3) sheet metal water level control structure MC-2.

EXISTING SUBBASIN SUMMARY

SUBBASIN NAME	AREA (acres)	Directly Connected Impervious Area (acres/%)	Total Impervious Area (acres/%)
U. S. 41	72.64	0.00/ 0%	35.60/49%
LOWER MATHENY CREEK	332.60	62.53/19%	118.96/36%
UPPER MATHENY CREEK	456.46	140.40/31%	190.31/42%
DENHAM ACRES LATERAL	511.44	137.69/27%	224.87/44%
CORAL LAKES	93.65	49.45/53%	63.32/64%
CLARK ROAD	257.02	81.99/32%	119.48/46%
TOTAL	1,723.81	471.54/27%	749.54/43%

TABLE 1.3

Water Quality

Land use designation and best management practices (BMP) type and coverage were determined for each of the 154 subbasin areas as required to conduct the pollutant loading analysis. A listing of these land use and BMP quantities for all 154 subbasin areas is provided within APPENDIX C.

Surface water and sediment samples were taken on 10/07/93 and 10/13/93, respectively to obtain a snapshot indication of existing water quality conditions following a 1 inch rainfall event. These samples were taken at the three existing water level control structures located in the drainage basin.

Two of these water level control structures are located in the Matheny Creek Main (MC-1 and MC-2)

and one is located at the southern end of the Denham Acres Lateral (DL-1). A sediment sample was also taken east of U.S. 41, downstream of MC-1 and DL-1. The lab results from these samples discussed in detail in Section 4.1.2. of this report and generally indicate relatively good water quality in the Matheny Creek basin.

Subbasin Overview

An overview of these six primary subbasins is provided below:

- Subbasin No. 1 - U.S. 41

  This basin contains 72.64 acres which drain directly or ultimately to U.S. 41. Existing land uses in this basin consist of 32.38 acres of commercial (45%), 28.59 acres of medium density residential (39%), 8.33 acres of open space (11%), and 3.34 acres of office (5%). This basin has an estimated 35.60 acres of total impervious coverage (49%) with only an estimated 3.50 acres (5%) serviced by stormwater best management practices (BMP's).

  The proposed widening and closed drainage system currently being planned and designed for U.S. 41 will significantly increase the directly connected impervious coverage within the basin. As a result, corresponding increases in pollutant loads will especially need to be mitigated.

- Subbasin No. 2 - Lower Matheny Creek

  The lower Matheny Creek basin encompasses 332.60 acres and is defined by the area which drains directly to that portion of the Matheny Creek Main located upstream of Water Level Control Structure No. 1 (WLCS MC-1) and downstream of Water Level Control Structure No. 2 (WLCS MC-2). This basin contains approximately 62.53 acres of directly connected impervious areas (19%) and 118.96 acres of total impervious coverage (36%). This basin is essentially built-out and consists of an estimated 266.93 acres of medium density residential (80%), 54.94 acres of open spaces (17%), 7.26 acres of major public roadways with closed drainage systems (2%) and 3.47 acres of high density residential (1%). Approximately 120.31 acres (36%) are presently serviced by stormwater best management practices (BMP's).

  Drainage facilities lying within this basin include the Lower Matheny Creek Main and the Breakwater Lateral. When combined with the upper Matheny Creek basin, the total basin area serviced by the Matheny Creek Main is 769.06 acres or 46% of the total study area.

- Subbasin No. 3 - Upper Matheny Creek

  The upper Matheny Creek basin is defined by the area which drains directly to that portion of the Matheny Creek Main located upstream of WLCS MC-2 and contains 456.46 acres. Directly connected and total impervious coverage within this basin are 140.40 acres (31%) and 190.31 acres (42%), respectively. Existing land uses within the basin include 182.87 acres of medium density residential (40%), 107.05 acres of office/light industrial (23%), 69.64 acres of low density residential (15%), 17.08 acres of major public roadways with closed drainage systems (4%), 5.86 acres of commercial (1%), 2.30 acres of high density residential (1%), and 71.66 acres of open spaces (16%). An estimated 217.60 acres (48%) are presently serviced by stormwater best management practices (BMP's).

- Subbasin No. 4 - Denham Acres Lateral

  The Denham Acres Lateral Basin is defined by that area which drains either directly to the Denham Acres Lateral or via the Williamsburg Branch, the Gulf Gate Branch, or the Shadow Lakes Feeder. This area constitutes 511.44 acres and excludes the area serviced by the Coral Lakes Branch and the Clark Road drainage system. When these drainage conveyance systems are considered, the total area serviced by the Denham Acres Lateral is 862.11 acres or 50% of the entire study area.

  The directly connected and total impervious coverages for the Denham Acres Lateral basin total 137.69 acres (27%) and 224.87 acres (44%), respectively. This basin area is essentially built-out and is made up of 348.19 acres of medium density residential (68%), 88.63 acres of high density residential (17%), 14.42 acres of office/light industrial (3%), 34.36 acres of commercial (7%), 20.32 acres of open space (4%), and 7.02 acres of major public roadways with closed drainage systems (1%). Approximately 139.85 acres (27%) are presently serviced by stormwater best management practices (BMP's).

- Subbasin No. 5 - Coral Lakes

  This basin is serviced by the Coral Lakes Branch which ultimately discharges to the Denham Acres Lateral. The basin contains 93.65 acres of which 49.45 acres (53%) and 63.32 acres (64%) are directly connected and total impervious surfaces, respectively. Existing land uses in this basin consist of 45.58 acres of commercial (49%), 26.94 acres of high density residential (29%), 17.68 acres of medium density residential (19%), and 3.45 acres of major public roadways with closed drainage systems (4%). Approximately 44.23 acres (47%) are presently serviced by stormwater best management practices (BMP's).

- Subbasin No. 6 - Clark Road

This basin contains 257.02 acres and ultimately discharges to the Denham Acres Lateral via the Clark Road drainage conveyance system and cross drains. Within this basin, it is estimated that directly connected and total impervious surfaces are 81.99 acres (32%) and 119.48 acres (46%), respectively. Existing land uses within the basin consist of 25.05 acres of commercial (10%), 84.41 acres of high density residential (33%), 121.94 acres of medium density residential (48%), 4.68 acres of office/light industrial (2%), 3.10 acres of designated major public roadways with closed drainage systems (1%), and 15.75 acres of open spaces (6%). Approximately 65.29 acres (26%) are presently serviced by stormwater best management practices (BMP's).

The Florida Department of Transportation is currently modifying Clark Road from a two-lane rural section to a six lane urban section (i.e. closed drainage). These Clark Road improvements include the segment contained within the Matheny Creek watershed. Since this work is currently underway, the proposed Clark Road was considered in the existing conditions analysis.

1.3.1 FLOOD PROTECTION DEFICIENCIES

The existing conditions assessment identified numerous floodprone areas within the Matheny Creek drainage basin. In order to evaluate and prioritize these problem areas, proposed Flood Protection Level of Service (FPLOS) objective criteria was established. This FPLOS objective criteria is consistent with the FPLOS adopted by Sarasota County as part of Comprehensive Plan Amendment RU-24. This criteria is also consistent with that conceptually developed by the five Florida Water Management Districts and the Florida Department of Environmental Protection in 1993 for possible Statewide application. Specifically, this FPLOS objective criteria considers both structural and roadway flood protection up to and including the 100-year flood.

With respect to structural flooding, the existing conditions assessment indicated that all emergency shelters/essential services located within the Matheny Creek drainage basin are at or above the 100-year flood. However, an estimated 5, 10, 13, 17, and 53 habitable structures are susceptible to flooding from the 2, 5, 10, 25, and 100 year floods, respectively. An estimated 2, 3, 3, and 12 employment/service center structures are flood prone during the 5, 10, 25, and 100 year floods, respectively. Based upon the analysis, areas indicated to be most susceptible to flooding from the 100 year storm include portions of Woodside South Condominium and Gulf Gate Subdivision, Unit No. 10 in the Lower Matheny Creek subbasin; Colonial Terrace Subdivision in the Denham Acres Lateral

Subbasin; Coral Lake Condominium and Gulf Gate Manor in the Coral Lakes Branch Subbasin; and Mohawk Lake and an area along the north side of Clark Road generally from Swift Road to Murdock Avenue in the Clark Road Subbasin. The estimated number of habitual structures susceptible to flooding by subbasin are inventoried in TABLE 1.3.1.a.

ESTIMATED HABITABLE STRUCTURES SUBJECT TO FLOODING BY SUBBASIN

BASIN NAME	2-YR	5-YR	10-YR	25-YR	100-YR
U.S. 41	0	0	0	0	0
LOWER MATHENY CREEK	0	1	2	3	13
UPPER MATHENY CREEK	0	0	0	0	0
DENHAM ACRES LATERAL	0	0	0	1	7
CORAL LAKES BRANCH	0	0	0	0	14
CLARK ROAD	5	9	11	13	19
TOTAL	5	10	13	17	53

TABLE 1.3.1.a.

The susceptibility of structure flooding was initially estimated from interpretation of 1" = 200', 1 foot contour aerials, and verified with subsequent field survey measurements of finished floor elevations.

With respect to roadways, Clark Road and Lockwood Ridge Road (from Clark Road south to Gulf Gate Elementary School) are designated evacuation routes. Designated arterials within the basin include U.S. 41 and Beneva Road. Segments of Gulf Gate Drive, Lockwood Ridge Road, Sawyer Road, and Gateway Avenue located within the Matheny Creek drainage basin are designated collector roads.

Under existing conditions, portions of several designated arterial and collector roadways including Gulf Gate Drive, Lockwood Ridge Road, Gateway Avenue and Clark Road were determined to be susceptible to flooding to the extent that they do not meet the adopted FPLOS. The frequency and depth of flooding for these roads are identified in TABLE 1.3.1.b.

EVACUATION/ARTERIAL/COLLECTOR ROAD FPLOS DEFICIENCIES

ROAD	LOCATION	FLOOD DEPTH @ EDGE OF PAVEMENT				
		2-YR	5-YR	10-YR	25-YR	100-YR
Gulf Gate Drive	East of Markridge Road	-	-	-	0.4'	0.9'
	West of Markridge Road	-	0.6'	0.9'	1.3'	1.7'
Lockwood Ridge Road	South of Gulf Gate Elementary School	-	-	-	0.7'	1.0'
	North of Gulf Gate Elementary School	-	-	-	-	0.6'
Gateway Avenue		-	-	0.4'	1.1'	2.0'
Clark Road	West of Swift Road	-	0.6'	0.7'	0.7'	0.8'
	West of Colonial Dr.	-	0.3'	0.5'	0.7'	0.8'
	*Entrance to Ashton Lakes	0.2'	0.7'	0.9'	1.2'	1.3'
	*Between Nutmeg Ave. and Murdock Ave.	0.7'	1.1'	1.2'	1.3'	1.4'
	Between Lockwood Ridge Rd. & Blount Ave.	-	-	-	0.1'	0.4'
	Between Blount Ave. and Westwind Lane	-	0.2'	0.4'	0.5'	0.7'

* Road over topped (i.e. entire width flooded)

TABLE 1.3.1.b

- Exceeds Adopted FPLOS Criteria

In addition, an estimated 39 neighborhood or local roadways were determined not to meet the adopted FPLOS under existing conditions.

1.3.2 WATER QUALITY DEFICIENCIES

The Sarasota Bay National Estuary Program (SBNEP) has indicated that baywide, the contributions of nutrients and toxins from existing stormwater discharges should be reduced 7% and 27%, respectively.

Since the Matheny Creek drainage basin lies within the SBNEP watershed, these baywide pollutant load reduction goals (PLRG's) were utilized as a benchmark in determining the effectiveness of water quality improvement projects and/or in quantifying water quality level of service deficiencies (WQLOS). For the parameters of interest to the SBNEP, TABLE 1.3.2 identifies the existing pollutant loads determined as part of Sarasota County's NPDES permit application, the resulting PLRG's for the Matheny Creek drainage basin, and the existing pollutant loads determined as part of the Matheny Creek Basin Master Plan (MCBMP).

PARAMETER	POLLUTANT LOAD (in lbs/yr)		
	Existing (NPDES)	PLRG	Existing (BMP)
TKN	13,800	13,386	11,220
NO_2 + NO_3	3,100	3,007	2,081
TSS	1,198,300	874,759	982,659
Lead	910	664	774
Copper	380	277	315
Zinc	730	533	562
Cadmium	20	15	16

TABLE 1.3.2

As revealed in TABLE 1.3.2, the existing conditions analyses for the Matheny Creek Basin Master Plan indicates that only metal loadings exceed the baywide PLRGs.

1.4 ALTERNATIVE ANALYSES

Various capital improvements were considered in alternative analyses, to address existing level of service deficiencies. Some of the projects anticipated to be effective are discussed in this section.

1.4.1 FLOOD PROTECTION ALTERNATIVES

Capital improvement projects developed to address FPLOS deficiencies were prioritized into one of three levels. The first priority level projects were selected as those believed to result in the most dramatic reductions in flood levels in areas where habitable structure flooding has been identified. The second priority level projects were categorized as those anticipated to provide additional reductions in flood elevations, extending the intended relief

to arterial and collector roads access. Third priority level projects were intended to further extend flood level reductions to include neighborhood road access. The three (3) alternative analyses correspond to the three priority levels and build upon one another.

To address FPLOS deficiencies, the capital improvement projects considered generally either improve the movement (conveyance) of water or, where acceptable, enhance the ability of the basin to temporarily detain (store) water. The cumulative effectiveness of these improvements with respect to habitable structure FPLOS deficiencies would be to remove an estimated 39 of 53 habitable structures from the 100-year floodplain as reflected in TABLE 1.4.1.a. In addition, 4 of 12 service center structures would be removed from the 100-year floodplain. All roads within the basin are anticipated to meet the FPLOS access standards for the 100-year design storm, with the exception of segments of Breakwater Circle, Concord Street, Valley, Forge Street, Nelson Avenue, Gateway Avenue, Terry Lane, Mall Drive, Clark Road, Nutmeg Avenue and Mohawk Street.

ESTIMATED EXISTING AND PROPOSED HABITABLE STRUCTURE FPLOS DEFICIENCIES

Matheny Creek Subbasin	2-Year		5-Year		10-Year		25-Year		100-Year	
	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Lower Matheny Creek	0	0	1	0	2	0	3	0	13	0
Upper Matheny Creek	0	0	0	0	0	0	0	0	0	0
Denham Acres Lateral	0	0	0	0	0	0	1	0	7	2
Coral Lakes Branch	0	0	0	0	0	0	0	0	14	0
Clark Road	5	2	9	5	11	7	13	8	19	12
Total	5	2	10	5	13	7	17	8	53	14

TABLE 1.4.1.a

Not considering additional property acquisition costs, the estimated construction cost for the Matheny Creek FPCIP is $2,650,000. TABLE 1.4.1.b provides a breakdown of the estimated construction cost by subbasin.

FPCIP CONSTRUCTION COST ESTIMATE

Matheny Creek Subbasin	Estimated Construction Cost
Lower Matheny Creek	$ 800,000
Upper Matheny Creek	$ 400,000
Denham Acres Lateral	$ 750,000
Coral Lakes Branch	$ 200,000
Clark Road	$ 500,000
Total	$2,650,000

TABLE 1.4.1.b

An overview of the flood protection capital improvement program is presented below for each major subbasin.

1.4.1.1 SUBBASIN NO. 2 - LOWER MATHENY CREEK

Of first priority in the subbasin, the existing 36" RCP outfall culvert for the Breakwater Branch should be enlarged. A 4' x 7' RCBC was considered in the alternative analyses. This improvement is expected to provide the largest contribution to resolving habitable structure FPLOS deficiencies in the subbasin as well as addressing existing cross-basin flows from the Matheny Creek basin to the Elligraw Bayou basin.

Other recommended improvements considered effective in addressing road access FPLOS deficiencies in the lower Matheny Creek subbasin include:

- Replace and enlarge the existing corrugated metal culverts within the Breakwater Branch drainage system. Reinforced concrete culverts or structures with equivalent service life and hydraulic capacity should be used.

- Replace and enlarge the existing bridge structure at Gulf Gate Drive and Matheny Creek.

- Modify water level control structure MC-1 to provide more efficient flood conveyance while enhancing normal ground water levels.

- Enhance storage in Gulf Gate Golf Course lakes.

1.4.1.2 SUBBASIN NO. 3 - UPPER MATHENY CREEK

Although no habitable structure flooding is suspected within the Upper Matheny Creek subbasin, cross basin flows from the Catfish Creek drainage basin are anticipated during major storm events. It is recommended that either this drainage divide be established when McIntosh Road is designed and constructed or that these flows be accommodated and coordinated with the Catfish Creek Basin Master Plan.

Other recommended improvements considered effective in addressing road access FPLOS deficiencies in the Upper Matheny Creek subbasin include:

- Remove excess sediment build-up in the Upper Matheny Creek Main.

- Modify water level control structure MC-2 to enhance storage within the historical Upper Matheny Creek floodplain and reduce downstream discharges.

- Enhance floodplain storage capacity within the open space of the historical Upper Matheny Creek floodplain along the south side of the Main.

- Redirect storm-sewer outfall for Roxbury Drive to the downstream side of water level control structure MC-2.

- Replace and enlarge, as appropriate, the existing corrugated metal equalizer culverts within the Gulf Gate East subdivision.

1.4.1.3 SUBBASIN NO. 4 - DENHAM ACRES LATERAL

The Denham Acres Lateral services the entire Denham Acres Lateral subbasin as well as the Coral Lakes and Clark Road subbasins. Therefore, improvements in this subbasin may also benefit FPLOS deficiencies in these dependent upstream subbasins.

A major component of the capital improvement program for the subbasin includes the construction of an overflow by-pass canal along the east side of St. Thomas Moore. This canal would be hydraulically connected to the Lower Matheny Creek

Main to provide additional relief to areas draining to the Gulf Gate Branch. Another major component intended to ultimately address upstream FPLOS deficiencies is the modification of water level control structure DL-1. The modifications to DL-1 are intended to both improve flood conveyance and enhance normal groundwater levels similar to the modifications proposed for water level control structure MC-1. It is recommended that these two weir modification projects be designed and constructed concurrently.

Other recommended improvements considered effective in address FPLOS deficiencies in the Denham Acres Lateral subbasin include:

- Replace and enlarge crossings within the Denham Acres Lateral at Gulf Gate Drive and Mall Drive.
- Replace and enlarge culverts within Williamsburg Branch.
- Replace and enlarge culverts within the Gulf Gate Branch.
- Improve upper stage conveyance in the lower segments of the Denham Acres Lateral, the Williamsburg Branch and the Gulf Gate Branch.
- Create a flood storage enhancement area along the east side of the Gulf Gate Branch within the western portion of Gulf Gate Elementary School.
- Replace and enlarge outfall culvert for the Shadow Lakes Feeder along the north side of the Gulf Gate Elementary School.

1.4.1.4 SUBBASIN NO. 5 - CORAL LAKES BRANCH

Improvements considered in this subbasin are expected to remove all 14 habitable structures and 4 of 8 service center structures from the 100-year floodplain. In addition, to the improvements proposed downstream of the Coral Lakes Branch within the Denham Acres Lateral, three (3) general improvements are recommended for consideration to address FPLOS deficiencies in the subbasin:

- Modify outfall for Coral Lakes to prevent backwater from the Coral Lakes Branch.

- Replace and enlarge the equalizer culvert between Coral Lakes. Direct all runoff from Gateway Avenue north of Mall Drive to Coral Lakes.

- Increase flood storage for the Gulf Gate Mall by expanding the existing lake, and/or allowing flooding in the lower portions of the parking lot. The berm along the east side of the existing lake/property line should also be elevated to prevent over-topping of the lake and flooding of adjacent properties.

1.4.1.5 SUBBASIN NO. 6 - CLARK ROAD

This entire subbasin drains to the upstream end of the Denham Acres Lateral via Clark Road. Based upon the Matheny Creek analyses, the drainage improvements currently underway by Florida Department of Transportation (FDOT) in association with the widening of Clark Road are expected to result in the more efficient transfer of water from east to west. Runoff from Clark Road itself will be conveyed by a storm sewer collection system to a retention/detention pond proposed in the northwest quadrant of the intersection of Clark Road and Swift Road. Runoff from other areas in the subbasin which drain to Clark Road will be conveyed directly to the upper end of the Denham Acres Lateral by a separate storm sewer collection system. However, during major storm events such as those considered in Matheny Creek Basin Master Plan, it is anticipated that the by-pass storm sewer system will become overloaded resulting in the sheet flow of the excess runoff onto Clark Road and into its associated storm sewer collection system. This in term will over load the storm sewer collection system for Clark Road and is expected to cause two FPLOS deficiencies. First, Clark Road, a designated evacuation route, will be subjected to estimated flooding depths between 0.4 and 1.4 feet for the 100-year design storm. The second consequence of the introduction of additional water to the Clark Road storm sewer collection system is the additional volume which will be ultimately conveyed to the proposed retention/detention pond for Clark Road. Based upon the analyses, this additional volume will result in significantly higher flood stages in the pond than anticipated by the FDOT design. In fact, the analyses indicate the proposed pond top-of-bank will be exceeded during the 100-year design storm resulting in the flooding of adjacent lands.

To address these anticipated FPLOS deficiencies, the expansion of the proposed FDOT pond, to the extent that the additional volume can be accommodated at a pond elevation which will alleviate or minimize the flooding of Clark Road (and

adjacent lands) was considered. Since the FDOT pond discharges to the upstream end of the Denham Acres Lateral, it is also important that any solution for the Clark Road area not result in adverse flood stages downstream. Specifically, it is recommended that the proposed FDOT pond be hydraulically connected to existing ponds such as Bernice Lake and Sunnyside Lake, and that adjacent properties south of the intersection of Clark Road and Swift Road be acquired and converted into part of this expanded regional stormwater system.

Other recommended improvements considered effective in addressing FPLOS deficiencies in the Clark Road subbasin include:

- Provide definitive outfalls from Phillippi Shores and area south of Gypsy Street to the Phillippi Creek drainage basin. Although these areas are currently hydraulically connected to the Matheny Creek drainage basin, they are both indicated as being within the Phillippi Creek drainage basin in the Phillippi Creek Basin Master Plan and were in fact historically contained within that basin. Based upon the alternative analyses it is expected that FPLOS deficiencies in these areas could be addressed in this manner.

- Enhance the storage capacity of Lily Pond and Sunnyside Lake by expanding these facilities into adjacent open spaces.

- Create a storage facility north of Ashton Road and east of McCallum Terrace in an existing open space area. Equalize this facility with the existing lake south of Gypsy Street and increase conveyance to the south, under Ashton Road.

- Increase conveyance from Mohawk Lake and investigate an emergency outfall to Lockwood Ridge Road and/or establishment of a lower lake overflow elevation.

- Direct upper portion of Nutmeg Avenue to Sunnyside Lake.

1.4.2 WATER QUALITY ALTERNATIVES

Opportunities to improve water quality by stormwater retrofit were quantified and assessed

through application of the Sarasota County Pollutant Loading Model to the Matheny Creek drainage basin. Together these proposed water quality improvements constitute a water quality capital improvement program (WQCIP) for the Matheny Creek drainage basin. The effectiveness of the WQCIP was evaluated by comparison to the previously identified PLRG's in TABLE 1.3.2. TABLE 1.4.2 compares the established pollutant load reduction goals (based upon the Sarasota County NPDES analysis for Matheny Creek and the NEP reductions) with those generated by the Basin Master Plan for existing and proposed conditions.

PARAMETER	POLLUTANT LOAD (in lbs/yr)		
	PLRG*	BASIN MASTER PLAN	
		Existing Conditions	Proposed WQCIP
TKN	13,386	11,220	10,160
NO_2 + NO_3	3,007	2,081	1,526
TSS	874,759	982,659	756,996
Lead	664	774	677
Copper	277	315	235
Zinc	533	562	466
Cadmium	15	16	13

* Based on 7% reduction for nutrients and 27% reduction for toxins.

TABLE 1.4.2

As revealed in TABLE 1.4.2, the existing conditions analyses for the Matheny Creek Basin Master Plan indicates that only metal loadings exceed the baywide PLRGs and the proposed WQCIP can be expected to be effective in meeting or exceeding the SBNEP baywide PLRGs for all parameters except lead.

1.5 CONCLUSIONS AND RECOMMENDATIONS

Since the Matheny Creek drainage basin is essentially developed, the effectiveness of watershed management strategies other than capital improvements may be somewhat limited. However, the following additional watershed management strategies are recommended:

- Require that all new public and private development within the Matheny Creek drainage basin be consistent with the Level of Service objectives of the Matheny Creek Basin Master

Plan. Specifically, new development should be required to provide the Sarasota County Stormwater Environmental Utility with all required input data needed to update both the basin flood protection and water quality models. This will enable the Stormwater Environmental Utility to update the basin models to ensure that development proposals will not result in reductions to the adopted level of service standards, both on-site and off-site.

- Encourage regional common-use stormwater management facilities over small single-use facilities wherever feasible.

- Develop a basin-wide maintenance program. To this end, schedules for sediment removal and vegetation harvesting should be established for stormwater management facilities.

- Contingent upon documentation confirming its effectiveness, Sarasota County should pro-actively participate in the Florida Yards and Neighborhoods programs.

- Prohibit the piping of open swales where open swales can be reasonably maintained.

- Based upon the analyses performed, it is estimated that upon completion of the Flood Protection Capital Improvement Program, 14 habitable and 8 service center structures will not meet the adopted FPLOS for the 100-year storm. A point of diminishing returns is reached relative to the unit cost of further reductions in flood levels to the extent that these units would be removed from the 100-year floodplain. Therefore, a commitment to comprehensive floodplain management should consider floodproofing or the negotiation of either the purchase of real property or a flood easement with owners of the remaining 14 habitable and 8 service center structures which will not meet the adopted FPLOS upon completion of the FPCIP.

- Implement the NPDES program.

With respect to flood protection, the existing level of service deficiencies were fully realized in late June of 1992 when over 18 inches of rainfall fell on the Matheny Creek drainage basin in a three day period. As such, a demonstrated need exists to implement a Flood Protection Capital Improvement Program (FPCIP) to resolve the FPLOS deficiencies.

State Water Policy requires that the Southwest Florida Water Management District establish pollution load reduction goals for Matheny Creek. In addition, the National Estuary Program for Sarasota Bay is expected to reveal specific stormwater pollutant load reduction goals (PLRG's) by the end of the

1994. Preliminary discussions with the SBNEP, it is anticipated that baywide PLRG's for nitrogen and toxins of 7% and 27%, respectively, are to be proposed for stormwater. It is expected that these PLRG's will establish a baseline WQLOS standard for the entire SBNEP watershed, which contains the Matheny Creek drainage basin. It may be prudent to wait for implementation of a WQCIP until such PLRG's are formally proposed by SBNEP, adopted by SWFWMD, and assessed within the context of the entire SBNEP Watershed by the Sarasota County Pollutant Loading Model.

Therefore, it is recommended that Sarasota County proceed with the implementation of the FPCIP identified in TABLES 1.5.a - 1.5.e but wait for final adoption of the PLRG's before proceeding with the implementation of the proposed WQCIP. Implementation of the proposed FPCIP and its storage enhancement components are expected to compliment the subsequent WQCIP. In fact, some of the projects proposed in the FPCIP are also projects considered in the WQCIP.

MATHENY CREEK BASIN MASTER PLAN - PRELIMINARY FPCIP

SUBBASIN LOCATION	PROJECT DESCRIPTION	PRIORITY
Major Subbasin No. 2: Lower Matheny Creek Preliminary Construction Estimate - $600,000	1. Replace existing 36" RCP outfall for Breakwater Branch with a 4' x 7' RCBC±.	1
	*2. Modify water level control structure MC-1.	1
	3. Replace and enlarge the existing CMP culverts within the Breakwater Branch drainage system with RCP culverts or equivalent.	1
	4. Replace and enlarge existing bridge structure at Gulf Gate Drive and Matheny Creek.	2
	*5. Enhance storage in Gulf Gate Golf Course Lakes.	2
	*6. Increase conveyance between and from Mirror Lakes and provide overflow storage area.	3

* Denotes flood protection project included in Water Quality Capital Improvement Program and potentially beneficial from a water supply perspective.

NOTE: Projects 1, 4, and 6 will require additional public drainage right-of-way or easements.

TABLE 1.5.a

MATHENY CREEK BASIN MASTER PLAN - PRELIMINARY FPCIP

SUBBASIN LOCATION	PROJECT DESCRIPTION	PRIORITY
Major Subbasin No. 3: Upper Matheny Creek Preliminary Construction Estimate - $400,000	1. Address cross - basin flows between Matheny Creek and Catfish Creek at McIntosh Road	2
	*2. Remove excess sediment build-up in the Upper Matheny Creek Main upstream of water level control structure MC-2.	2
	*3. Modify water level control structure MC-2 to enhance upstream storage.	2
	*4. Enhance floodplain storage capacity within the open space of the historical Upper Matheny Creek floodplain along the south side of the Main.	2
	5. Replace and enlarge, as appropriate, the existing CMP culvert equalizes within Gulf Gate East subdivision.	3
	6. Re-direct storm sewer outfall for Roxbury Drive to downstream side of water level control structure MC-2.	3

* Denotes flood protection project included in Water Quality Capital Improvement Program and potentially beneficial from a water supply perspective.

NOTE: Projects 4, 5, and 6 may require additional public right-of-way or easements.

TABLE 1.5.b

MATHENY CREEK BASIN MASTER PLAN - PRELIMINARY FPCIP

SUBBASIN LOCATION	PROJECT DESCRIPTION	PRIORITY
Major Subbasin No. 4: Denham Acres Lateral Preliminary Construction Estimate - $750,000	*1. Modify water level control structure MC-2.	1
	2. Construct a secondary outfall from the Gulf Gate Branch to the lower Matheny Creek Main along the east side of St. Thomas Moore Church.	2
	3. Replace and enlarge Denham Acres Lateral crossings at Gulf Gate Drive and Mall Drive.	1
	4. Improve flood conveyance in the lower segment of Denham Acres Lateral.	1
	5. Replace and enlarge culverts in the Gulf Gate Branch, regrade the upper ditch segment to drain south, and improve flood conveyance in the lower segment.	2
	*6. Replace and enlarge the existing 24" CMP outfall culvert for the Shadow Lakes Feeder along the north side of Gulf Gate Elementary School. Create a flood storage area in the eastern portion of Gulf Gate Elementary School.	2
	7. Replace and enlarge culverts within Williamsburg Branch, improve flood conveyance in downstream segments.	2

* Denotes flood protection project included in Water Quality Capital Improvement Program and potentially beneficial from a water supply perspective.

NOTE: Projects 2 and 6 may require additional public right-of-way or easements.

TABLE 1.5.c

MATHENY CREEK BASIN MASTER PLAN - PRELIMINARY FPCIP

SUBBASIN LOCATION	PROJECT DESCRIPTION	PRIORITY
Major Subbasin No. 5: Coral Lakes Branch Preliminary Construction Estimate - $200,000	1. Modify outfall for Coral Lakes to prevent backwater from the Coral Lakes Branch.	1
	2. Replace and enlarge the equalizer culvert between Coral Lakes. Direct runoff from Gateway Avenue north of Mall Drive to Coral Lakes.	1
	3. Elevate berm along the east side of Gulf Gate Mall.	1
	*4. Increase flood storage for the Gulf Gate Mall by expanding the existing lake and/or allowing flooding in the lower portions of the parking lot.	2

* Denotes flood protection project included in Water Quality Capital Improvement Program and potentially beneficial from a water supply perspective.

NOTE: Projects 3 and 4 may require additional public right-of-way or easements.

TABLE 1.5.d

MATHENY CREEK BASIN MASTER PLAN - PRELIMINARY FPCIP

SUBBASIN LOCATION	PROJECT DESCRIPTION	PRIORITY
Major Subbasin No. 6: Clark Road Preliminary Construction Estimate - $500,000	*1. Create a regional stormwater system to include the proposed FDOT pond, Sunnyside Lake, Bernice Lake and Floodprone areas south of Clark Road and east and west of the Denham Acres Lateral.	1
	2. Increase Mohawk Lake outfall and improve downstream conveyance.	1
	3. Provide outfall from lake south of Gypsy Street to Phillippi Creek.	3
	*4. Create a regional stormwater facility north of Ashton Road and east of McCullum Terrace and connect to Lake south of Gypsy Street.	3
	5. Provide outfall from Britannia Road to Phillippi Creek	3
	6. Replace and enlarge Ashton Road outfall culverts.	3
	*7. Expand Sunnyside Lake into adjacent open space areas and direct runoff from northern portion of Nutmeg Avenue to Sunnyside Lake.	3
	*8. Expand Lily Pond to the south into existing open space areas and modify outfall weir to take advantage of additional storage created.	3

* Denotes flood protection project included in Water Quality Capital Improvement Program and potentially beneficial from a water supply perspective.

NOTE: Projects 1, 4, 3 and 7 may require additional public right-of-way or easements.

TABLE 1.5.e

Summarized Scope and Course Of Action
for
The Clower Creek Basin Master Plan

SECTION 7.0
SUMMARY AND RECOMMENDATIONS

7.10 Introduction

The purpose of the Clower Creek Stormwater Study was to develop improvements that would improve the quality and reduce the quantity of stormwater runoff entering Little Sarasota Bay. Early on in the study it was realized that significant reduction in quantity would be very difficult considering lack of available undeveloped land and the presence of a high water table. However, a significant improvement of water quality could be accomplished with several cost-effective alternatives.

Our recommendations include physical improvements, such as channel improvement, routing through water quality treatment systems, system maintenance and best management practices. Each of these matters are important elements to improve the quality of stormwater discharging into Little Sarasota Bay.

7.20 Findings and Conclusions

A number of pertinent findings and conclusions were made during the course of this study. Briefly those are:

1. Limited water quality data indicates existing stormwater detention/treatment facilities are having a positive effect.

2. Limited settleable solids and suspended solids data indicates that the silation problem may have been largely due to construction activities.

3. The stormwater runoff reaching the Clower Creek basin from Pelican Cove, Park East Mobile Home Park and from the U.S. Highway 41 and Vamo Road areas receives no detention/treatment.

4. Significant improvements in stormwater quality and limited reductions in stormwater runoff can be effected by programmed maintenance of existing facilities and by construction of new facilities.

Development of the proposed stormwater management system is the first step toward solving the existing and future siltation problem in the Clower Creek basin. This Basin is typical in Sarasota County and elsewhere with a natural waterway conveying poor quality runoff from a highly urbanized area to a protected water body. Many of the improvements recommended for this Basin can be used in similar areas.

7.30 Recommended Improvements

We recommend that the County proceed with construction of the following improvements:

Recommended Improvement	Total Cost
1. Improve 1300-ft. of Clower Creek stabilizing the channel banks and providing a littoral zone	$33,000.00
2. Install sodded ditch checks in the swales along U.S. 41 and Vamo Road	3,600.00
3. Route the runoff from Park East Mobile Home Park into the existing detention pond	30,000.00
4. Utilize the existing Creek bed weirs	75,000.00 *

* Dredging every 5 years for 20 years.

Recommended Program Cost	$141,600.00

7.40 Other Recommendations

We further recommend that Sarasota County undertake the following:

1. Allocate additional resources to stormwater management system maintenance.

2. Implement a Best Management Practices program.

7.50 Summary

This plan develops a program which will provide for the removal of settleable solids from the stormwater entering and transversing Clower Creek. The result is that siltation in the Creek Basin will be reduced, and the quality of water entering Little Sarasota Bay will be improved. The recommendations are cost effective and the benefits of protecting the Bay warrant the expenditure.

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10 - North County Mowing Contract.....#10
11 - South County In-House Quarterly Drainage Canal Mowing List.....#11
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COUNTY GOVERNMENT
OWNED AND MAINTAINED
LAKE INVENTORY

Monthly Maintenance
401.9835 Acres maintained monthly x12=4,823.80 annually.

County crews maintain 3,137.32 acres annually.

Sarasota County Contracts 1,686.48 annually.

Bid #4163R
Contractor :Lee Square,Inc.
Location: South Venice Dist #2.
Acres Treated Annually :469.20.
Cost Per Acre : $12.88.
Total Annual Cost :$6,045.24

Bid # 3097F
Contractor :Aquatic Systems.
Location :Venice Gardens/Sorrento East.
Acres Treated Annually:1,217.28.
Cost Per Acre : $8.59.
Total Annual Cost :$10,452.00.

Bid # 4163R is in its first year.
Bid # 3097F is in its second year.

New Bid FY 96
Claw Lake and McNerie Canal will be added to the total for FY 96 .
(66.82 X 12 = 801.84 more acres to maintain annually in FY 96.)

4/3/95 LM

ESTIMATED IN-HOUSE COST

LAKE MAINTENANCE

County crews maintain 3,823.80 acres annually.
Three weeks to complete an inspection cycle, 90 working hrs. monthly.

CREW SIZE

AQUATIC PLANT CONTROL SPEC I	8.4851 hr. x 90 hrs = 763.659
AQUATIC PLANT CONTROL SPEC II	9.5173 hr. x 90 hrs = 855.557
SPRAY TRUCK W/ SPRAY RIG	11.49 hr. x 90 hrs = 1,034.10
AIRBOAT	14.20 hr. x 90 hrs = 1,278.00
	TOTAL 3,932.316

3,932.316 x 12 months = 47,187.792

47,187.792 / 3,137.36 = $15.04 per acre for inspections only, this does not include the use of herbicides for treatments of any type.

4/4/95 LM

COUNTY OWNED AND MAINTAINED
LAKE INVENTORY

	LAKE #	LAKE NAME	ACREAGE	MAINTAINED BY THE COUNTY	CONTRACTS	MONTHLY MAINTENANCE	TYPE OF MAINTENANCE	UTILITIES POWER	AERATION	SOLAR POWER	OZONE AERATION	GRASS CARP	FISH BARRIERS	ROOKERY	WEIR	BOAT RAMP	COUNTY ACCESS	PUBLIC ACCESS	UNIMPROVED BOAT RAMP	MITIGATION	REVEGETATE	LITTORAL SHELF	TYPE OF OUTLET
1	L1-69	UPLANDS OUTFALL	1.90												X						X		
2	L3-11	CROWN	7.40	X		X						X			X		X	X	X				
3	L3-27	LAKE RIDGE	10.90	X		X									X		X		X				
4	L3-41	RAVENWOOD #1	5.30	X		X											X						
5	L3-42	RAVENWOOD #2	2.00	X		X									X		X						
6	L4-2	BERMUDA BROOK	3.00	X		X						X			X	X	X				X		
7	L4-10	LAKE CRANE	0.28	X		X																	
8	L4-19	LAKE GULL	0.44	X		X																	
9	L4-21	TERN LAKE	2.60	X		X						X	X		X		X		X				
10	L4-23	LAKE FLAMINGO	1.40	X		X											X	X	X				
11	L4-33	MYSTIC LAKE	5.50	X		X																	
12	L4-34	LAKE SECLUSION		X		X																	
13	L4-35	LAKE PELICAN	1.40	X		X										X	X						
14	L4-54	TAMARON #1	0.92	X		X						X	X				X		X				

COUNTY OWNED AND MAINTAINED
LAKE INVENTORY

	LAKE #	LAKE NAME	ACREAGE	MAINTAINED BY THE COUNTY	CONTRACTS	MONTHLY MAINTENANCE	TYPE OF MAINTENANCE	UTILITIES POWER	AERATION	SOLAR POWER	OZONE AERATION	GRASS CARP	FISH BARRIERS	ROOKERY	WEIR	BOAT RAMP	COUNTY ACCESS	PUBLIC ACCESS	UNIMPROVED BOAT RAMP	MITIGATION	REVEGETATE	LITTORAL SHELF	TYPE OF OUTLET
15	L4-53	TAMARON #2	3.60	X		X						X	X				X		X				
16	L4-55	TAMARON #3	1.30	X		X		X	X			X	X				X		X				
17	L4-56	TAMARON #4	1.00	X		X											X						
18	L4-57	TAMARON #5	2.00	X		X											X		X				
19	L5-37	RACIMO #1	1.80	X		X						X	X				X						
20	L5-38	RACIMO #2	2.20	X		X						X	X		X		X						
21	L5-39	RACIMO #3	1.60	X		X						X					X						
22	L5-40	RACIMO #4	2.20	X		X						X	X		X		X						
23	L6-45	ACKERMAN	20.00	X		X											X	X	X				
24	L6-46	SHADOW OAKS #1	1.90	X		X						X					X						
25	L6-47	SHADOW OAKS #2	0.90	X		X						X	X				X						
26	L6-48	SHADOW OAKS #3	1.00	X		X						X					X						
27	L10-1	ASHTON LAKES	0.37	X		X																	
28	L10-8	CLARK LAKE EAST	10.00	X		X						X	X			X	X	X					

COUNTY OWNED AND MAINTAINED
LAKE INVENTORY

	LAKE #	LAKE NAME	ACREAGE	MAINTAINED BY THE COUNTY	CONTRACTS	MONTHLY MAINTENANCE	TYPE OF MAINTENANCE	UTILITIES POWER	AERATION	SOLAR POWER	OZONE AERATION	GRASS CARP	FISH BARRIERS	ROOKERY	WEIR	BOAT RAMP	COUNTY ACCESS	PUBLIC ACCESS	UNIMPROVED BOAT RAMP	MITIGATION	REVEGETATE	LITTORAL SHELF	TYPE OF OUTLET
29	L10-14	GUILL LAKE	1.27	X		X						X	X			X	X	X					
30	L10-16	PINKNEY LAKE	1.20	X		X										X	X						
31	L10-21	SHADOW LAKE	1.70	X		X											X				X		
32	L10-32	MIRROR LAKE	6.00	X		X								X		X	X			X			
33	L10-36	PHILLIPPI SHORES PK	3.30	X		X						X					X	X					
34	L10-43	RED BUG SLOUGH	26.00	X		X									X	X	X						
35	L10-44	RIVER FOREST	0.54	X		X		X	X			X			X		X		X				
36	L10-45	LAKE IRENE	3.30	X		X						X	X				X	X					
37	L10-64	WRIGHT LAKE	4.90	X		X		X	X			X	X				X						
38	L11-15	GULF GATE #1	0.40	X		X						X	X				X				X		
39	L11-16	GULF GATE #2	2.10	X		X						X	X				X						
40	L11-17	GULF GATE #3	1.90	X		X									X		X	X					
41	L11-18	GULF GATE #4	0.73	X		X									X		X	X			X		
42	L12-1	TWIN LAKE #1	4.20	X		X			X								X	X					

COUNTY OWNED AND MAINTAINED
LAKE INVENTORY

	LAKE #	LAKE NAME	ACREAGE	MAINTAINED BY THE COUNTY	CONTRACTS	MONTHLY MAINTENANCE	TYPE OF MAINTENANCE	UTILITIES POWER	AERATION	SOLAR POWER	OZONE AERATION	GRASS CARP	FISH BARRIERS	ROOKERY	WEIR	BOAT RAMP	COUNTY ACCESS	PUBLIC ACCESS	UNIMPROVED BOAT RAMP	MITIGATION	REVEGETATE	LITTORAL SHELF	TYPE OF OUTLET
43	L12-2	TWIN LAKE #2 *	8.25	X		X											X	X					
44	L12-3	TWIN LAKE #3 *	3.10	X		X											X						
45	L12-21	MAUNA LOA	4.50	X		X									X								
46	L12-25	LAKE LANAI	2.20	X		X						X	X		X		X						
47	L12-26	LAKE MALOKAI	3.50	X		X										X	X						
48	L12-27	BENT TREE	0.25	X		X						X	X				X						
49	L12-28	LAKE SARASOTA	28.70	X		X								X		X	X	X					
50	L12-29	KNOLLS - BENT TREE	0.25	X		X																	
51	L17-24	LAKE-IN-THE-WOODS	7.40	X		X						X	X		X		X		X				
52	L17-27A	SORRENTO UTILITY A	0.75		X	X											X						
53	L17-27B	SORRENTO UTILITY B	1.30		X	X											X						
54	L17-271	LAKE SORRENTO	7.50		X	X											X						
55	L17-271A	BIRD LAKE	3.00		X	X											X						
56	L17-271B	LAKE DA VINCI	4.60		X	X											X						

COUNTY OWNED AND MAINTAINED
LAKE INVENTORY

	LAKE #	LAKE NAME	ACREAGE	MAINTAINED BY THE COUNTY	CONTRACTS	MONTHLY MAINTENANCE	TYPE OF MAINTENANCE	UTILITIES POWER	AERATION	SOLAR POWER	OZONE AERATION	GRASS CARP	FISH BARRIERS	ROOKERY	WEIR	BOAT RAMP	COUNTY ACCESS	PUBLIC ACCESS	UNIMPROVED BOAT RAMP	MITIGATION	REVEGETATE	LITTORAL SHELF	TYPE OF OUTLET
57	L17-272	LAKE RUBENS	2.80		X	X											X						
58	L19-48	SHIRE LAKE	1.70	X		X									X		X						
59	L27-49	SNYDER LAKE	0.82	X		X																	
60	L27-50	S. CO. LANDFILL LK #1	8.00	X		X											X	X	X		X		
61	L27-51	S. CO. LANDFILL LK #2	32.30	X		X											X	X	X				
62	L28-26	SO. COUNTY ANNEX	0.75	X		X			X	X		X					X	X			X		
63	L28-27	VENICE FHP LK #2	1.00	X		X											X	X					
64	L28-28	VENICE FHP LK #1	0.70	X		X																	
65	L28-29	LOVELAND SCHOOL	2.50	X										X			X	X					
66	L28-37A	VENICE GARDENS #1	50.76		X	X										X	X						
67	L28-37B	VENICE GARDENS #2	10.35		X	X										X	X						
68	L28-37C	VENICE GARDENS #3	19.88		X	X									X		X		X				
69	L28-60	VENICE EAST LAKE	2.40	X		X											X	X	X				
70	L28-63	GENEVA LAKE DIST #2	0.80		X	X										X	X	X					

COUNTY OWNED AND MAINTAINED
LAKE INVENTORY

	LAKE #	LAKE NAME	ACREAGE	MAINTAINED BY THE COUNTY	CONTRACTS	MONTHLY MAINTENANCE	TYPE OF MAINTENANCE	UTILITIES POWER	AERATION	SOLAR POWER	OZONE AERATION	GRASS CARP	FISH BARRIERS	ROOKERY	WEIR	BOAT RAMP	COUNTY ACCESS	PUBLIC ACCESS	UNIMPROVED BOAT RAMP	MITIGATION	REVEGETATE	LITTORAL SHELF	TYPE OF OUTLET
71	L28-64	FAUN LAKE DIST #2	2.30		X	X										X	X	X					
72	L28-66	CLEMATIS LAKE DIST #2	1.40		X	X											X	X					
73	L28-67	ARGYLE LAKE DIST #2	3.60		X	X										X	X	X					
74	L28-68	SERPULA LAKE DIST #2	2.90		X	X											X	X	X				
75	L28-71A	SHASTA LAKE DIST #2	3.50		X	X											X	X	X				
76	L28-71B	MORNINGSIDE DIST #2	0.70		X	X						X	X				X	X					
77	L28-71C	ONEIDA LAKE DIST #2	1.50		X	X											X	X	X				
78	L28-72	RIGEL LAKE DIST #2	2.50		X	X											X	X	X				
79	L28-73	LK. MOHEGAN DIST #2	6.50		X	X										X	X	X					
80	L28-89	TARPON LAKE DIST #2	4.50		X	X										X	X	X					
81	L28-90	MARLIN LAKE DIST #2	4.40		X	X										X	X	X					
82	L28-91	DOLPHIN LAKE DIST #2	3.80		X	X										X	X	X					
83	L30-61	WRM MNRL SPRG #1	0.80	X		X											X	X					
84	L30-62	WRM MNRL SPRG #2	0.30	X		X											X	X					

COUNTY OWNED AND MAINTAINED
LAKE INVENTORY

	LAKE #	LAKE NAME	ACREAGE	MAINTAINED BY THE COUNTY	CONTRACTS	MONTHLY MAINTENANCE	TYPE OF MAINTENANCE	UTILITIES POWER	AERATION	SOLAR POWER	OZONE AERATION	GRASS CARP	FISH BARRIERS	ROOKERY	WEIR	BOAT RAMP	COUNTY ACCESS	PUBLIC ACCESS	UNIMPROVED BOAT RAMP	MITIGATION	REVEGETATE	LITTORAL SHELF	TYPE OF OUTLET
85	L30-63	WRM MNRL SPRG #3	0.40	X		X											X	X					
86	L35-13	ENGLEWOOD ISLES	2.64	X		X						X	X		X		X						
87	L35-39	BATES LAKE DIST #2	1.20		X	X											X		X				
88	L36-1	ELM LAKE	0.25	X		X											X						
89	CL21-1	TAHITI LAKE	0.30	X		X											X				X		
90	CL26-2	PALM LAKE	0.60	X		X						X					X				X		
91	CL32-3	GILLESPIE PARK	0.28	X		X			X								X					X	
92	CL56-4	ARLINGTON PARK	0.60	X		X		X	X						X		X						
		TOTAL ACRES MAINTAINTED FOR THE YEAR (ACRES X 12) =	364.76																				
		CLAW LAKE - FY '96	37.82		X																		
		MCNERIE CANAL- FY '96	29.00		X																		

LAKE MAINTENANCE
COUNTY, CITY AND CONTRACT

TYPE OF MAINTENANCE	ACRES ANNUALLY	ANNUAL CONTRACT COST	ESTIMATED CONTRACT COST	COUNTY ANNUAL COST	COST PER ACRE	TOTAL ANNUAL COST
COUNTY WIDE MAINTAINED LAKES	3,137.32				$15.04	$47,186.00
CITY LAKE MAINTENANCE	21.36				$15.04	$321.26
CONTRACT #1 - VENICE GARDENS/SORRENTO EAST	1,217.28	$10,452.00	$10,452.00		$8.59	$10,452.00
CONTRACT #2 - SOUTH VENICE DISTRICT #2	469.20	$6,045.00	$6,045.00		$12.88	$6,045.24
CONTRACT #3 - VENICE GARDENS/JACARANDA FY '96	801.84		$10,327.70		$12.88	$10,327.70

RETENTION/DETENTION POND MAINTENANCE CONTRACT

BID#3142R MOWING CONTRACT
CONTRACTOR: CREATIVE LANDSCAPE MANAGEMENT, INC.
CONTRACT COST : $53,529.48

CREATIVE LANDSCAPE MANAGEMENT, INC. mows all the retention and detention pond areas ,also the water line and fence lines are cleared and cleaned with weedeaters as needed ,debris build up from stormwater run off located with in the areas to be maintained by the contractor will be cleared and hauled away by the contractor.

COUNTY CREWS:
Mosquito/Plant Control will maintain the water surface area monthly. Ponds with under drain will be cleared of debris once a year.
Mosquito/Plant Control will clean and haul away debris from with in the water area.

4/4/95LM

Retention/Detention Pond Maintenance

Zone #1-Between Manatee County Line and Webber Street.

a-Monthly Inspections and Maintenance of water acres by County Crews.
Water acres 16.12x12=193.44 acres maintained annually.

b-Monthly Mowing by contract.
Mower acres 7.06x12=84.72 acres maintained annually.

Zone #2-Webber Street to Clark Road and Stickney Point Road .

a-Monthly Inspections and Maintenance of water acres by County Crews.
Water acres 2.27x12=27.24 acres maintained annually.

b-Monthly Mowing by contract.
Mowing acres 2.26x12=27.12 acres annually.

Zone #3-Clark Road and Stickney Point south to the Charlotte County Line.

a-Monthly Inspections and Maintenance of water acres by County crews.
Water acres 10.08x12=120,96 acres maintained annually.

b-Monthly Mowing by contract.
Mowing acres 9.54x12=114.48 acres annually.

Zone #4-City of Sarasota.

a-Monthly Inspection and Maintenance of water acres by County crews.
Water acres 6.32x12=75.84 acres maintained annually.

b-Monthly Mowing by contract.
Mowing acres 6.32x12=28.08 acres annually.

TOTALS

A-Total water acres maintained annually.....417.48
B-Total mowing acres maintained annually.....254.40

ZONE 1

DP3-1	47th Industrial Park Industrial Blvd.
DP3-2	East side of Lockwood Ridge Road between Monica Pkwy. and 27th Street
DP3-3	West side of Lockwood Ridge Road at Rusty's Mobile Home Park
DP3-4	East side of Lockwood Ridge Road north of Gocio Road
DP3-5	East side of Lockwood Ridge Road next to 46th Street
DP3-6	East side of Lockwood Ridge Road at 49th Street
DP3-7	Lockwood Ridge Road and DeSoto Road
DP3-8	Springs Oaks, between canal #3-5 and the Spring Oaks Subdivision north of Seward Drive
DP3-9	Springs Oaks Subdivision south side of Seward Drive between canal #3-5 and house
DP3-18	17th Street entrance to new ball field and old softball field
DP3-21	Miss Sarasota Softball (pond located at the end of canal #3-37A, north side of softball field)
DP4-17	Bahia Vista/Sara Lake M.H.P.
DP4-18	Bahia Vista/Phillippi Creek
DP4-20	S.E. McIntosh/Bahia Vista
DP4-21	N.E. McIntosh/Bahia Vista
DP4-22	McIntosh/Nottingham
DP4-101	Cattleman Complex
DP6-11	Par Place on Golf Course
DP 12-15	Bee Ridge Landfill
DP12-16	Bee Ridge Landfill

ZONE #1

DP #	LAST MAINTENANCE DATE	NEXT MAINTENANCE DATE	ACTUAL DATE COMPLETED	WATER ACRES	MOWER ACRES	FENCED	ACCESS	MITIGATED	PLANTED	
DP3-1	1/23/95	3/3/95		0.49	0.5		X			
DP3-2	1/23/95	3/3/95		0.5	0.31	X	X	X		
DP3-3	1/19/95	3/1/95		0.08	0.14	X	X			
DP3-4	1/19/95	3/1/95		0.21	0.25	X	X			
DP3-5	1/19/95	3/1/95		0.42	0.27	X	X			
DP3-6	1/23/95	3/3/95		0.38	0.19	X	X			
DP3-7	1/23/95	3/3/95		0.38	0.26	X	X			
DP3-8	1/23/95	3/3/95		0.41	1.37		X			
DP3-9	1/23/95	3/3/95		0.03	0.11		X			
DP3-18	1/20/95	3/2/95		0.54	0.25		X	X		
DP3-21	1/24/95	3/4/95		0.03	0.2		X			
DP4-17	1/24/95	3/4/95		2.25	0.75		X			
DP4-18	1/24/95	3/4/95		0.16	0.27		X			
DP4-20	1/24/95	3/4/95		0.72	0.77		X			
DP4-21	1/24/95	3/4/95		1.7	0.84		X			
DP4-22	1/23/95	3/3/95		0.41	0.58		X			
DP4-101	1/24/95	3/4/95		0.05			X	X		
DP6-11	1/24/95	3/4/95		0.16			X			
DP12-15	1/24/95	3/4/95		5.8			X			
DP12-16	1/24/95	3/4/95		1.4			X			

ZONE 2

DP4-2 Tuttle/Phillippi Creek

DP4-19 MacIntosh Road/MacIntosh Lane

DP4-100 Spainwood Drive north of Hayden Blvd.

DP10-3 Austin Street west of Beneva Road

DP10-4 Bee Ridge Road/Phillippi Creek

DP10-5 Campbell Street east of Lockwood Ridge Road

DP10-7 Proctor Road north side west of Cattleman Road

DP10-8 Center Point Drive south side east of Center Gate Blvd.

DP10-9 Elmer Street east of Lockwood Ridge Road

DP10-14 Shade Avenue south of Bee Ridge Road

DP #	LAST MAINTENANCE DATE	NEXT MAINTENANCE DATE	ACTUAL DATE COMPLETED	WATER ACRES	MOWER ACRES	FENCED	ACCESS	MITIGATED	PLANTED	
DP4-2	1/24/95	3/2/95		0.02	0.23	X	X			
DP4-19	1/20/95	3/1/95		0.26	0.31		X			
DP4-100	1/24/95	3/2/95		0.57	0.13		X			
DP10-3	1/20/95	3/1/95		0.26	0.25		X			
DP10-4	1/20/95	3/1/95		0.58	0.24	X	X			
DP10-5	1/20/95	3/1/95		0.07	0.04		X			
DP10-7	1/24/95	3/2/95		0.1	0.65		X	X		
DP10-8	1/24/95	3/2/95		0.17	0.08		X			
DP10-9	1/20/95	3/1/95		0.03	0.02		X			
DP10-14	1/20/95	3/1/95		0.21	0.31	X	X			

ZONE 3

DP11-7	Beneva Road and Curtis Avenue
DP11-8	Vamo Road/Vamo Way
DP17-1	Shore Road
DP17-2	Shore Road
DP17-3	Shore Road
DP19-28	Knights Trail
DP27-2	Auburn Road
DP27-10	Venice Avenue/Jacaranda Blvd.
DP27-12	Peach Street
DP28-1	Behind South County Annex
DP28-2	Jacaranda Blvd./Library
DP28-4	Jacaranda Blvd./Alligator Creek
DP28-5	Jacaranda Blvd./US 41
DP28-6	Alligator Place and Seaboard Avenue
DP35-1	Englewood Isles/Oakwood
DP36-8	Dearborn Street
DP38-1	River Road - West/Pine Street
DP38-2	River Road - East/Pine Street
DP38-3	North side River Road/Pine Street
DP38-4	S.E. Corner River Road/Pine Street
DP38-13	Pine Street - South River Road

ZONE #3

DP #	LAST MAINTENANCE DATE	NEXT MAINTENANCE DATE	ACTUAL DATE COMPLETED	WATER ACRES	MOWER ACRES	FENCED	ACCESS	MITIGATED	PLANTED	
DP11-7	1/20/95	3/1/95		0.13	0.22		X			
DP11-8	1/24/95	3/3/95		0.18	0.2	X	X			
DP17-1	1/24/95	3/3/95		0.003	0.12		X			
DP17-2	1/24/95	3/3/95		0.001	0.11		X			
DP17-3	1/24/95	3/3/95		0.001	0.07		X			
DP19-28	1/27/95	3/5/95		0.3	0.13		X	X		
DP27-2	1/24/95	3/3/95		1.65	2.1	X	X			
DP27-10	1/26/95	3/4/95		0.38	0.26	X	X			
DP27-12	1/27/95	3/5/95		0.51	0.37	X	X			
DP28-1	1/26/95	3/4/95		0.01		X	X			
DP28-2	1/26/95	3/4/95		0.43	0.25		X	X		
DP28-4	1/26/95	3/4/95		0.35	0.15		X	X		
DP28-5	1/26/95	3/4/95		0.045	0.11		X	X		
DP28-6	1/24/95	3/3/95		0.21	0.11		X			
DP35-1	1/24/95	3/3/95		0.88	1.45		X			
DP36-8	1/23/95	3/2/95		0.07	0.25	X	X			
DP38-1	1/23/95	3/2/95		0.27	0.18		X			
DP38-2	1/26/95	3/4/95		0.95	0.47		X			
DP38-3	1/26/95	3/4/95		1.32	0.98		X			
DP38-4	1/23/95	3/2/95		0.27	0.24		X			
DP38-13	1/26/95	3/4/95		2.12	1.77	X	X			

ZONE 4

CDP3-8	10th Street/Orange Avenue
CDP3-9	DeSoto Road and the Dog Track
CDP3-10	DeSoto and US 41
CDP3-11	Old Bradenton Road and DeSoto Road
CDP3-12	University and 301
CDP3-13	University and 301
CDP3-14	University and 301
CDP3-15	Tuttle/17th Street
CDP3-19	10th Street and Tuttle Avenue
CDP3-20	Shade Avenue right-of-way at canal #3-2 and in back of the building
CDP3-21	Little League/BMX Track
CDP3-23	West side of Beneva just south of 17th street
CDP3-24	Beneva Road and Fruitville Road
CDP3-25	17th Street west of H.R.S.
CDP3-26	15th Street and Zacchin Avenue
CDP3-27	Payne Park
CDP9-1	Siesta Key

ZONE #4

DP #	LAST MAINTENANCE DATE	NEXT MAINTENANCE DATE	ACTUAL DATE COMPLETED	WATER ACRES	MOWER ACRES	FENCED	ACCESS	MITIGATED	PLANTED	
CDP3-8	1/24/95	3/4/95		0.49	0.2		X			
CDP3-9	1/24/95	3/4/95		0.85	0.33		X			
CDP3-10	1/24/95	3/4/95		1.35	0.1		X	X		
CDP3-11	1/20/95	3/1/95		0.14			X	X		
CDP3-12	1/20/95	3/1/95		0.24	0.2	X	X			
CDP3-13	1/20/95	3/1/95		0.32	0.08		X			
CDP3-14	1/20/95	3/1/95		0.14	0.26		X			
CDP3-15	1/20/95	3/1/95		0.02			X		X	
CDP3-19	1/24/95	3/4/95			0.01		X			
CDP3-20	1/23/95	3/2/95		0.12	0.25		X			
CDP3-21	1/20/95	3/1/95		0.11			X			
CDP3-23	1/23/95	3/2/95		0.26	0.14	X	X			
CDP3-24	1/20/95	3/1/95		0.38	0.32		X			
CDP3-25	1/24/95	3/4/95		0.47	0.17	X	X	X		
CDP3-26	1/24/95	3/4/95		0.05	0.28		X			
CDP3-27	1/24/95	3/4/95		1			X		X	
CDP9-1	1/24/95	3/4/95		0.38			X			

FY 94 HAND CLEANING CONTRACT

BID # 3144R
CONTRACTOR: Ecological Clearing .

This contract will expire September 1996, the cost of this contract is $98,525.00. Revise this contract and rebid June of 1996.

TOTALS

Total acres cleared annually	64.49
Total miles cleared annually	13.08

4/4/95 LM

ANNUAL HAND CLEARING CONTRACT
FOR FY '94

CANAL	OCT	NOV	DEC	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT
10-196								\\\\\\\\				
19-288							\\\\\\\\					
16-271					\\\\\\\\							
10-199											\\\\\\\\	
4-62.												\\\\\\\\
10-191											\\\\\\\\	
10-198				\\\\\\\\								
27-327									\\\\\\\\			
10-179				\\\\\\\\								
10-183	\\\\\\\\											
10-185A	\\\\\\\\											
17-271					\\\\\\\\							
17-274								\\\\\\\\				
11-214		\\\\\\\\										
28-366									\\\\\\\\			
4-105						\\\\\\\\						
4-62D						\\\\\\\\						
28-371			\\\\\\\\									
27-327A		\\\\\\\\										
28-365A				\\\\\\\\								
3-32.												\\\\\\\\
3-33.												\\\\\\\\

FY 95 ANNUAL HAND CLEARING CONTRACT

BID # 4166R
CONTRACTOR: Storm Tect .

This contract will expire September 1997,the cost of this contract is $92,655.00.
Revise this contract and rebid June 1997.

TOTALS

Total acres cleared annually	55.51
Total miles cleared annually	14.95

4/4/95LM

MONTHLY SCHEDULE

1995 Annual Hand Clearing and Hauling of Drainage ways

	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
10-193	//////////											
4-121		//////////										
10-203		//////////										
10-203A		//////////										
30-100		//////////										
30-100A		//////////										
4 97			//////////									
4 84			//////////									
4-102				//////////								
3 50				//////////								
3-5E				//////////								
3-5F				//////////								
17-276				//////////								
17-281				//////////								
C7-13					//////////							
C9-15					//////////							
28-367					//////////							
28-396						//////////						
28-397						//////////						
28-396A						//////////						
28-369						//////////						
28-370A						//////////						
28-340						//////////						
28-396C						//////////						
10-180							//////////					
10 63							//////////					
4 68								//////////				
36-462								//////////				
36-463								//////////				
35-461								//////////				
10-115									//////////			
4 56									//////////			
4 57									//////////			
10-186										//////////		
10-111										//////////		
12-239											//////////	
38-461											//////////	
38-456											//////////	
4 64												//////////

PRISON CREW VEGETATION REMOVAL
FOR FY '94/'95

Total acres hand cleared..... 50.35
Total miles hand cleared..... 16.83

FOR FY '95/'96

Total acres hand cleared..... 69.77
Total miles hand cleared..... 16.76

FOR FY '96/'97

Total acres hand cleared..... 61.49
Total miles hand cleared..... 20.27

FOR FY '97/'98

Total acres hand cleared..... 63.59
Total miles hand cleared..... 14.93

FOR FY '98/'99

Total acres hand cleared..... 56.76
Total miles hand cleared..... 18.77

PRISON CREW VEGETATION REMOVAL
FOR FY '94/'95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-75	B	10/94		3,000		2.41			P26 D1
10-184	A	10/94		4,450	7,450	5.41	7.82	1.41	P25 C3
12-211	B	11/94		400	400	0.14	0.14	0.08	P36 F1
9-251	B	1/95		1,750		0.40			P33 B11
4-101	B	1/95		2,500	4,250	1.37	1.77	0.80	P26 E2
4-51	B	2/95		5,310		7.31			P15 B3,4
10-185B	B	2/95		2,110		0.82			P26 D3
27-332	B	2/95		2,000		2.20			P64 E4, F4
28-370	B	2/95		50	9,470	0.01	10.34	1.79	P70 E2
4-74A	B	3/95		1,975		1.31			P25 C1
4-45	B	3/95		1,000	2,975	1.01	2.32	0.56	P17 B2
10-109	B	4/95		2,400		0.99			P25 A3
10-189	B	4/95		2,000		0.45			P26 F3
10-189A	B	4/95		900		0.16			P26 F3
10-189B	B	4/95		1,200	6,500	0.27	1.87	1.23	P26 F3
3-1	B	5/95		13,200	13,200	5.05	5.05	2.50	P 3 C3,4
3-1	B	6/95		13,200		5.05			P 3 C3,4
10-182	C	6/95		700	13,900	0.32	5.37	2.63	P34 E1
3-1	B	7/95		13,200	13,200	5.05	5.05	2.50	P 3 C3,4
35-171A	B	8/95		500		0.14			P81 B1
35-171	B	8/95		250		0.08			P81 B1
35-171	B	8/95		2,700		0.86			P81 B1
35-371B	B	8/95		350		0.08			P81 A1
16-270A	B	8/95		1,100	4,900	0.55	1.71	0.93	P43 B3
4-83	B	9/95		1,000		1.07			P15 C1
5-119A	B	9/95		1,000		0.91			P18 D2
10-116	B	9/95		200		0.04			P26 D3

PRISON CREW VEGETATION REMOVAL
FOR FY '94/'95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
35-448	A	9/95		6,600		3.93			P75 C2
35-449	B	9/95		3,800	12,600	2.96	8.91	2.39	P76 D3, E3
	GRAND TOTAL =				**88,845**		**50.35**	**16.83**	

PRISON CREW VEGETATION REMOVAL
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-5B	C	10/95		3,400		2.65			P 4 D3
3-5A	C	10/95		1,400		1.09			P 4 D3
10-184	A	10/95		4,450		5.41			P25 C3
26-326	B	10/95		2,800	12,050	2.50	11.65	2.28	P69 C1
3-5C	B	11/95		1,500		1.20			P 4 D2,3
11-208	B	11/95		750		0.24			P35 A3
28-383	B	11/95		6,600		7.27			P71 B3, C4
28-385	B	11/95		4,500		2.47			P71 B4
28-385A	B	11/95		5,300		4.38			P71 B4
28-385B	B	11/95		2,900		1.86			P71 B3,4
28-385C	B	11/95		2,400	23,950	1.70	19.12	4.54	P71 C3,4
10-110	C	12/95		120		0.01			P25 A3
10-194	B	12/95		4,000		2.20			P34 F1
10-210	C	12/95		200		0.04			P25 A2
28-386	B	12/95		500		0.32			P71 B4, C4
28-388	B	12/95		1,100		0.90			P71 C4
28-389	B	12/95		2,600	8,520	3.58	7.05	1.61	P71 C4
4-62A	B	1/96		700		0.72			P26 D2
17-282	B	1/96		500	1,200	0.33	1.05	0.23	P63 B2
10-188	B	2/96		5,280		5.21			P26 E4
C7-14	B	2/96		750	6,030	0.55	5.76	1.14	P 3 B3,C3
4-110	B	3/96		1,000		0.8			P27 A2
19-289	C	3/96		1,000		0.78			P64 D1
27-347A	C	3/96		375		0.19			P65 B3
27-347B	C	3/96		600		0.35			P65 A3
27-347C	C	3/96		550		0.15			P65 B3,4
27-347D	C	3/96		1,200		0.57			P65 B3
27-347E	C	3/96		200		0.13			P65 B3
27-347F	C	3/96		1,000		0.39			P65 B3
17-274A	B	3/96		525	6,450	0.15	3.51	1.22	P53 C3

PRISON CREW VEGETATION REMOVAL
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-34	B	4/96		5,280		4.96			P 5 B3
3-35C	C	4/96		300	5,580	0.08	5.04	1.06	P 5 B2
5-122	B	5/96		4,000		2.66			P18 D2
5-123	B	5/96		1,800		0.78			P18 D2
5-124	B	5/96		1,500	7,300	0.61	4.05	1.38	P18 D1
4-119A	B	6/96		1,000		0.36			P17 B3
10-178	B	6/96		3,200	4,200	3.67	4.03	0.80	P25 B3
17-278	B	7/96		2,400		1.76			P63 B1
28-387	B	7/96		2,200	4,600	1.21	2.97	0.87	P71 B3,4
35-448	A	9/96		6,600		3.93			P75 C2
3-35B	C	9/96		600		0.3			P 5 B3
4-118	B	9/96		1,400	8,600	1.31	5.54	1.63	P17 B4
		GRAND TOTAL =			**88,480**		**69.77**	**16.76**	

PRISON CREW VEGETATION REMOVAL
FOR FY '96/'97

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-75	B	10/96		3,000		2.41			P26 D1
10-184	A	10/96		4,450	7,450	5.41	7.82	1.41	P25 C3
4-93A	C	11/96		125		0.05			P17 A3
12-211	B	11/96		400	525	0.14	0.19	0.10	P36 F1
10-107	C	12/96		125		0.05			P27 A2
17-277	C	12/96		100		0.05			P54 D4
26-327	C	12/96		1,200	1,425	1.4	1.5	0.27	P69 C2
9-251	B	1/97		1,750		0.40			P33 B1
11-208A	C	1/97		1,200		0.49			P34 F3
17-273	C	1/97		500		0.21			P53 C2
4-101	B	1/97		2,500	5,950	1.37	2.47	1.13	P26 E2
4-51	B	2/97		5,310		7.31			P15 B3,4
10-185B	B	2/97		2,110		0.82			P26 D3
C64-10	C	2/97		630		0.21			P25 A2
27-332	B	2/97		2,000		2.20			P64 E4, F4
28-370	B	2/97		50	10,100	0.01	10.55	1.91	P70 E2
4-74A	B	3/97		1,975		1.31			P25 C1
3-4	C	3/97		2,000		1.51			P14 A1
4-118A	C	3/97		400		0.13			P27 B1
6-156	C	3/97		200		0.08			P28 E1
6-157	C	3/97		430		0.19			P18 E4
6-158	C	3/97		200		0.05			P28 E1
4-45	B	3/97		1,000	6,205	1.01	4.28	1.18	P17 B2
10-109	B	4/97		2,400		0.99			P25 A3
10-189	B	4/97		2,000		0.45			P26 F3
10-189A	B	4/97		900		0.16			P26 F3
10-189B	B	4/97		1,200	6,500	0.27	1.87	1.23	P26 F3
4-103	C	5/97		4,500		3.51			P26 E2
3-1	B	5/97		13,200	17,700	5.05	8.56	3.35	P 3 C3,4

PRISON CREW VEGETATION REMOVAL
FOR FY '96/'97

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-1	B	6/97		13,200	13,200	5.05	5.05	2.50	P25 D3, E3
3-1	B	7/97		13,200		5.05			P 3 C3,4
19-178	C	7/97		5,480	18,680	2.76	7.81	3.54	P63 C1
35-171	B	8/97		250		0.08			P81 B1
35-171	B	8/97		2,700		0.86			P81 B1
35-171A	B	8/97		500		0.14			P81 B1
35-171B	B	8/97		350		0.08			P81 A1
16-270A	B	8/97		1,100	4,900	0.55	1.71	0.93	P43 B3
3-35A	C	9/97		400		0.14			P 5 B2
4-83	B	9/97		1,000		1.07			P15 C1
5-119A	B	9/97		1,000		0.91			P18 D2
10-108A	C	9/97		350		0.08			P26 F4
10-111A	C	9/97		720		0.49			P25 B4
10-116	B	9/97		200		0.04			P26 D3
26-325E	C	9/97		175		0.03			P63 C3
27-325F	C	9/97		150		0.03			P63 C3
35-448	A	9/97		6,600		3.93			P75 C2
35-449	B	9/97		3,800	14,395	2.96	9.68	2.73	P76 D3, E3
		GRAND TOTAL =			**107,030**		**61.49**	**20.27**	

PRISON CREW VEGETATION REMOVAL

FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
26-326	B	10/97		2,800		2.50			P69 C1
L12-21	C	10/97		600		0.23			P27 B2
10-184	A	10/97		4,450	7,850	5.41	8.14	1.49	P25 C3
3-5C	B	11/97		1,500		1.20			P 4 D2, 3
11-208	B	11/97		750		0.24			P35 A3
28-383	B	11/97		6,600		7.27			P71 B3, C4
28-385	B	11/97		4,500		2.47			P71 B4
28-385A	B	11/97		5,300		4.38			P71 B4
28-385B	B	11/97		2,900		1.86			P71 C3, 4
28-385C	B	11/97		2,400	23,950	1.70	19.12	4.54	P71 C3, 4
10-194	B	12/97		4,000		2.20			P34 F1
28-386	B	12/97		500		0.32			P71 B4, C4
28-388	B	12/97		1,100		0.90			P71 C4
28-389	B	12/97		2,600	8,200	3.58	7.00	1.55	P71 C4
4-62A	B	1/98		700		0.72			P26 D2
17-282	B	1/98		500	1,200	0.33	1.05	0.23	P63 B2
10-188	B	2/98		5,280		5.21			P26 E4
C7-14	B	2/98		750	6,030	0.55	5.76	1.14	P 3 B3,C3
4-110	B	3/98		1,000		0.8			P27 A2
17-274A	B	3/98		525	1,525	0.15	0.95	0.29	P53 C3
3-34	B	4/98		5,280	5,280	4.96	4.96	1.00	P 5 B3
5-122	B	5/98		4,000		2.66			P18 D2
5-123	B	5/98		1,800		0.78			P18 D2
5-124	B	5/98		1,500	7,300	0.61	4.05	1.38	P18 D1
4-119A	B	6/98		1,000		0.36			P17 B3
10-182	C	6/98		700		0.32			P34 E1
10-178	B	6/98		3,200	4,900	3.67	4.35	0.93	P25 B3

PRISON CREW VEGETATION REMOVAL
FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
17-278	B	7/98		2,400		1.76			P63 B1
28-387	B	7/98		2,200	4,600	1.21	2.97	0.87	P71 B3,4
35-448	A	9/98		6,600		3.93			P75 C2
4-118	B	9/98		1,400	8,000	1.31	5.24	1.52	P17 B4
		GRAND TOTAL =			**78,835**		**63.59**	**14.93**	

PRISON CREW VEGETATION REMOVAL
FOR FY '98/'99

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-5A	C	10/98		1,400		1.09			P 4 D3
3-5B	C	10/98		3,400		2.65			P 4 D3
4-75	B	10/98		3,000		2.41			P26 D1
10-184	A	10/98		4,450	12,250	5.41	11.56	2.32	P25 C3
12-211	B	11/98		400	400	0.14	0.14	0.08	P36 F1
10-110	C	12/98		120		0.01			P25 A3
10-210	C	12/98		200	320	0.04	0.05	0.06	P25 A2
9-251	B	1/99		1,750		0.40			P33 B1
4-101	B	1/99		2,500	4,250	1.37	1.77	0.80	P26 E2
4-51	B	2/99		5,310		7.31			P15 B3,4
10-185B	B	2/99		2,110		0.82			P26 D3
27-332	B	2/99		2,000		2.20			P64 E4, F4
28-370	B	2/99		50	9,470	0.01	10.34	1.79	P70 E2
4-74A	B	3/99		1,975		1.31			P25 C1
4-45	B	3/99		1,000		1.01			P17 B2
19-289	C	3/99		1,000		0.78			P64 D1
27-347A	C	3/99		375		0.19			P65 B3
27-347B	C	3/99		600		0.35			P65 A3
27-347C	C	3/99		550		0.15			P65 B3,4
27-347D	C	3/99		1,200		0.57			P65 B3
27-347E	C	3/99		200		0.13			P65 B3
27-347F	C	3/99		1,000	7,900	0.39	4.88	1.50	P65 B3
3-35C	C	4/99		300		0.08			P 5 B2
10-109	B	4/99		2,400		0.99			P25 A3
10-189	B	4/99		2,000		0.45			P26 F3
10-189A	B	4/99		900		0.16			P26 F3
10-189B	B	4/99		1,200	6,800	0.27	1.95	1.29	P26 F3
3-1	B	5/99		13,200	13,200	5.05	5.05	2.50	P 3 C3,4
3-1	B	6/99		13,200	13,200	5.05	5.05	2.50	P25 D3, E3

PRISON CREW VEGETATION REMOVAL
FOR FY '98/'99

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-1	B	7/99		13,200	13,200	5.05	5.05	2.50	P 3 C3,4
35-171	B	8/99		250		0.08			P81 B1
35-171	B	8/99		2,700		0.86			P81 B1
35-171A	B	8/99		500		0.14			P81 B1
35-171B	B	8/99		350		0.08			P81 A1
16-270A	B	8/99		1,100	4,900	0.55	1.71	0.93	P43 B3
3-35B	C	9/99		600		0.3			P 5 B3
4-83	B	9/99		1,000		1.07			P15 C1
5-119A	B	9/99		1,000		0.91			P18 D2
10-116	B	9/99		200		0.04			P26 D3
35-448	A	9/99		6,600		3.93			P75 C2
35-449	B	9/99		3,800	13,200	2.96	9.21	2.50	P76 D3, E3
		GRAND TOTAL =			**99,090**		**56.76**	**18.77**	

SATELLITE CREW
FROM THE
PRISON CREW

FOR FY '94/'95
Total acres..... 2.30
Total miles..... .49

FOR FY '95/'96
Total acres..... .92
Total miles..... .35

FOR FY '96/'97
Total acres..... .02
Total miles..... .01

FOR FY '97/'98
Total acres..... .03
Total miles..... .03

PRISON CREW VEGETATION REMOVAL SCHEDULE
FOR SMALL PRISON CREW

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES	ATLAS
4-73	C	5/95	5/92	1,200		1.70			P25 C1
4-119B	B	5/95		475		0.24			P17 B3
35-448A	B	8/95	8/91	950		0.36			P76 D2
35-460	B	1/96	1/94	500		0.46			P82 E4
36-464	B	5/96	5/94	900		0.30			P82 E4
L12-25	C	6/96	6/93	350		0.10			P27 C2
L12-28	C	7/96	7/93	150		0.06			P27 D3
35-448B	B	3/97	3/95	100		0.02			P76 D2
10-210B	C	3/98	3/95	200		0.03			P25 A2

MENZI MOWING VEGETATION REMOVAL
FOR FY '94/'95

Total acres hand cleared..... 271.72
Total miles hand cleared..... 48.18

FOR FY '95/'96

Total acres hand cleared..... 269.01
Total miles hand cleared..... 47.10

FOR FY '96/'97

Total acres hand cleared..... 208.25
Total miles hand cleared..... 34.93

FOR FY '97/'98

Total acres hand cleared..... 271.72
Total miles hand cleared..... 48.18

MENZI MUCK MOWING

ESTIMATED COST PER MILE:
Based on a 6 hour work day.
300 feet a day.
5,280 in a mile.
17.6 days to complete a mile.

Equipment operator.....13.0505 hr.
Pickup Truck.....14.00 hr.
Menzi Muck w/Mower.....75.00 hr.
102.0505 hr. = 10,776.48 mile

Based on a 6 hour day.
600 feet a day.
5,280 feet in a mile.
8.8 days to complete a mile.

Equipment Operator.....13.0506 hr.
Pickup Truck.....14.00 hr.
Menzi Muck w/Mower.....75.00 hr.
102.0505hr. = 5,388.24 mile

Based on a 6 hour day.
1,000 feet a day.
5,280 feet in a mile.
5.28 days to complete a mile.

Equipment Operator.....13.0505 hr.
Pickup Truck.....14.00 hr.
Menzi Muck w/Mower.....75.00 hr.
102.0505 hr.= 3,232.94 mile

The above figures do not include a 30% for Personal Services.

4/4/95lm

MENZI MOWING VEGETATION REMOVAL SCHEDULE FOR FY '94/'95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-113A	B	10/94	94	1,525		0.63			P27 A1
4-118	B	10/94	94	3,880		1.33			P27 B1
10-184	A	10/94	93	9,050		10.59			P25 C3
14-243	B	10/94	94	800	15,255	0.60	13.15	2.89	P40 D2
12-143A	B	11/94	94	1,000		0.41			P28 D2
14-242	B	11/94	94	574		0.42			P40 D2
14-246	B	11/94	94	1,010		0.69			P40 D1
14-267	B	11/94	94	2,700	5,284	1.23	2.75	1.00	P39 C2
4-85	B	12/94	12/94	4,350		7.58			P15 C3
4-96	B	12/94	12/94	5,280		5.45			P26 F1
17-280	A	12/94	12/93	5,200	14,830	3.46	16.49	2.81	P54 E2
3-2	B	1/95		10,560		11.87			P14 F1
4-66	B	1/95	1/93	6,500		5.67			P25 B1
28-365	A	1/95	91	10,560	27,620	14.06	31.60	5.23	P70 E3
3-2A	C	2/95		1,200		0.68			P15 B2
3-7A	B	2/95	92	600		0.64			P 4 D1
4-51	B	2/95	92	5,250		7.23			P15 B3
4-53	B	2/95	92	1,210		1.36			P15 B3
4-109	B	2/95	93	2,000		1.10			P26 F1
28-372	B	2/95	93	4,200		5.68			P71 A3
28-391	A	2/95	93	4,000	18,460	4.22	20.91	3.50	P75 C1

MENZI MOWING VEGETATION REMOVAL SCHEDULE FOR FY '94/'95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-12	B	3/95		3,560		4.74			P16 D2
4-14	B	3/95	92	7,920		13.27			P16 E2
28-390	B	3/95		5,280		2.90			P76 D1
28-393	B	3/95	91	2,700	19,460	2.10	23.01	3.69	P76 E2
3-37	B	4/95		4,500		5.06			P16 F2
27-346	B	4/95	93	11,880	16,380	17.45	22.51	3.10	P65 A3
4-90	B	5/95	91	4,000		4.22			P16 F4
4-91	B	5/95	91	1,200		1.07			P17 A4
4-92	C	5/95	91	2,675		2.39			P16 F3
4-93	B	5/95	91	3,000		2.20			P16 F3
4-94	B	5/95	91	1,500		1.27			P16 F3
4-95	B	5/95	91	700		0.62			P16 F3
38-473	B	5/95	91	3,300	16,375	3.25	15.02	3.10	P83 B3
3-17	B	6/95	93	8,280		10.64			P16 D1
4-119	C	6/95		2,000		2.06			P17 A3
38-475	C	6/95	91	2,640		0.90			P83 B4
38-476	C	6/95	92	3,000	15,920	1.03	14.63	3.02	P83 C4
3-18	B	7/95	93	1,000		0.73			P16 D2
3-20	B	7/95	92	1,300		1.43			P16 D1
10-192	B	7/95	93	2,600		2.86			P34 F2
12-229	C	7/95	92	2,800		2.31			P36 F1
12-230	C	7/95		1,000		0.55			P36 F1

MENZI MOWING VEGETATION REMOVAL SCHEDULE
FOR FY '94/'95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
12-232	B	7/95		3,400		2.34			P27 C4
12-233	B	7/95		2,000		1.60			P28 D4
12-234	B	7/95		400	14,500	0.15	11.97	2.75	P36 F1
3-14A	C	8/95		1,850		1.52			P 5 C4
3-14B	C	8/95		1,400		1.15			P 5 C3
12-237	B	8/95		5,280		3.39			P36 F1
12-238	B	8/95		1,500		1.03			P37 B1
12-240	C	8/95		5,280		10.30			P28 E2
27-335	B	8/95	93	3,000	18,310	4.47	21.86	3.47	P64 E4
3-5	A	9/95	94	18,480	18,480	29.69	29.69	3.50	P 3 C4
	GRAND TOTAL =				**200,674**		**223.59**	**38.04**	

MENZI MOWING VEGETATION REMOVAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-23	B	10/95	93	2,500		1.83			P16 E1
4-98	B	10/95	93	5,280		6.18			P26 F1
4-111	B	10/95	93	2,400		1.10			P27 A2
6-143A	B	10/95		2,350		2.53			P28 E2
6-144	B	10/95		1,400		1.54			P28 D2
10-184	A	10/95	93	9,050		10.59			P25 C3
19-279	B	10/95	93	11,880	34,860	12.27	36.04	6.60	P54 F3
3-7	B	11/95		10,560		11.39			P 3 C3
4-70	B	11/95	93	3,000		3.51			P25 D1
4-112	B	11/95	93	2,800		3.08			P27 A1
11-208	B	11/95	93	12,450	28,810	12.86	30.84	5.46	P35 B2
4-74	B	12/95		2,000		1.42			P25 C1
17-280	A	12/95	93	5,200		3.46			P54 E2
27-336	B	12/95	93	15,840		15.63			P64 E4
27-337	B	12/95		5,280	28,320	5.21	25.72	5.36	P70 F1
10-209	B	1/96		1,195		0.46			P34 F1
10-209A	B	1/96		1,000		0.34			P34 F1
14-245	B	1/96		2,800		1.28			P39 C1
28-365	A	1/96		10,560	15,555	14.06	16.14	2.95	P70 E3

MENZI MOWING VEGETATION REMOVAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-22	B	2/96		3,200		1.61			P16 E1
3-29	B	2/96		2,200		1.41			P16 E1
4-99	B	2/96		2,000		1.74			P26 E1
4-107	B	2/96		3,800		2.87			P26 F1
10-211	B	2/96		1,000		0.55			P34 F2
28-363	B	2/96		1,400		1.06			P70 E4
28-391	A	2/96		4,000	17,600	4.22	13.46	3.33	P75 C1
4-45	C	3/96		3,000		3.51			P17 B2
10-190	B	3/96		6,480		9.66			P34 F1
28-392	B	3/96	94	5,280	14,760	8.48	21.65	2.80	P76 E2
3-9	B	4/96		1,200		1.04			P 4 E4
3-10	B	4/96		2,000		1.92			P 4 E4
3-14	B	4/96		14,520		23.33			P 5 C3
3-31	B	4/96		2,700	20,420	2.54	28.83	3.87	P16 E1
4-89	B	5/96	94	2,500		2.18			P16 F4
30-438	B	5/96		14,520	17,020	8.00	10.18	3.22	P74 E4
3-6	B	6/96		2,400		1.48			P 4 F3
3-10A	B	6/96		1,537		1.09			P 4 E4
3-16	B	6/96	6/94	18,480	22,417	26.30	28.87	4.25	P 4 E1

MENZI MOWING VEGETATION REMOVAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-19	B	7/96	94	700		0.69			P16 D1
3-21	B	7/96	94	2,300		1.53			P16 D1
4-113B	B	7/96		1,800		1.65			P27 A1
30-440	B	7/96	7/94	1,500		1.37			P74 E4
30-442	B	7/96	7/94	4,800		4.73			P74 F3
30-443	B	7/96	7/94	1,400		0.99			P74 F3
30-441	B	7/96	7/94	1,300	13,800	1.22	12.18	2.61	P74 F4
3-11	B	8/96	94	2,000		1.60			P 4 F4
4-106	B	8/96	94	7,920		8.00			P26 F2
4-113	B	8/96		3,200		3.89			P27 A1
6-119A	B	8/96	8/94	3,500	16,620	1.92	15.41	3.15	P17 C3
3-5	A	9/96	9/94	18,480	18,480	29.69	29.69	3.50	P 3 C4
	GRAND TOTAL =				**248,662**		**269.01**	**47.10**	

MENZI MOWING VEGETATION REMOVAL
FOR FY '96/'97

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-113A	B	10/96	94	1,525		0.63			P27 A1
4-118	B	10/96	94	3,880		1.33			P27 B1
10-184	A	10/96		9,050		10.59			P25 C3
14-243	B	10/96	94	800	15,255	0.60	13.15	2.89	P40 D2
10-62B	C	11/96	93	2,200		2.02			P26 D2
12-143A	B	11/96	94	1,000		0.41			P28 D2
14-242	B	11/96	94	574		0.42			P40 D2
14-246	B	11/96	94	1,010		0.69			P40 D1
14-267	B	11/96	94	2,700	7,484	1.23	4.77	1.42	P39 C2
4-40	C	12/96	12/93	800		0.64			P17 F2
4-85	B	12/96	12/94	4,350		7.58			P15 C3
4-96	B	12/96	12/94	5,280		5.45			P26 F1
17-280	A	12/96	12/94	5,200	15,630	3.46	17.13	2.96	P54 E2
3-2	B	1/97		10,560		11.87			P14 F1
4-66	B	1/97		6,500		5.67			P25 B1
28-365	A	1/97		10,560	27,620	14.06	31.60	5.23	P70 E3
3-7A	B	2/97		600		0.64			P 4 D1
4-51	B	2/97		5,250		7.23			P15 B3
4-53	B	2/97		1,210		1.36			P15 B3
4-109	B	2/97		2,000		1.10			P26 F1
28-372	B	2/97		4,200		5.68			P71 A3
28-391	A	2/97		4,000	17,260	4.22	20.23	3.27	P75 C1

MENZI MOWING VEGETATION REMOVAL
FOR FY '96/'97

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-12	B	3/97		3,560		4.74			P16 D2
4-14	B	3/97		7,920		13.27			P16 E2
28-390	B	3/97		5,280		2.90			P76 D1
28-393	B	3/97		2,700	19,460	2.10	23.01	3.69	P76 E2
3-37	B	4/97		4,500		5.06			P16 F2
4-117	C	4/97		1,000		1.69			P27 B2
27-346	B	4/97		11,880	17,380	17.45	24.20	3.29	P65 A3
4-90	B	5/97		4,000		4.22			P16 F4
4-91	B	5/97		1,200		1.07			P17 A4
4-93	B	5/97		3,000		2.20			P16 F3
4-94	B	5/97		1,500		1.27			P16 F3
4-95	B	5/97		700		0.62			P16 F3
36-460	C	5/97		3,400		3.20			P82 D2
38-473	B	5/97		3,300	17,100	3.25	15.83	3.24	P83 B3
3-17	B	6/97		8,280	8,280	10.64	10.64	1.57	P16 D1
3-18	B	7/97		1,000		0.73			P16 D2
3-20	B	7/97		1,300		1.43			P16 D1
10-192	B	7/97		2,600		2.86			P34 F2
12-232	B	7/97		3,400		2.34			P27 C4
12-233	B	7/97		2,000		1.60			P28 D4
12-234	B	7/97		400	10,700	0.15	9.11	2.03	P36 F1

MENZI MOWING VEGETATION REMOVAL
FOR FY '96/'97

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
12-237	B	8/97		5,280		3.39			P36 F1
12-238	B	8/97		1,500		1.03			P37 B1
27-335	B	8/97		3,000	9,780	4.47	8.89	1.85	P64 E4
3-5	A	9/97		18,480	18,480	29.69	29.69	3.50	P 3 C4
	GRAND TOTAL =				184,429		208.25	34.93	

MENZI MOWING VEGETATION REMOVAL
FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-23	B	10/97		2,500		1.83			P16 E1
4-98	B	10/97		5,280		6.18			P26 F1
4-111	B	10/97		2,400		1.10			P27 A2
6-143A	B	10/97		2,350		2.53			P28 E2
6-144	B	10/97		1,400		1.54			P28 D2
10-184	A	10/97		9,050		10.59			P25 C3
19-279	B	10/97		11,880	34,860	12.27	36.04	6.60	P54 F3
3-7	B	11/97		10,560		11.39			P 3 C3
4-70	B	11/97		3,000		3.51			P25 D1
4-112	B	11/97		2,800		3.08			P27 A1
11-208	B	11/97		12,450	28,810	12.86	30.84	5.46	P35 B2
4-74	B	12/97		2,000		1.42			P25 C1
17-280	A	12/97		5,200		3.46			P54 E2
27-336	B	12/97		15,840		15.63			P64 E4
27-337	B	12/97		5,280	28,320	5.21	25.72	5.36	P70 F1
10-209	B	1/98		1,195		0.46			P34 F1
10-209A	B	1/98		1,000		0.34			P34 F1
14-245	B	1/98		2,800		1.28			P39 C1
28-365	A	1/98		10,560	15,555	14.06	16.14	2.95	P70 E3
3-2A	C	2/98		1,200		0.68			P15 B2
3-22	B	2/98		3,200		1.61			P16 E1
3-29	B	2/98		2,200		1.41			P16 E1

MENZI MOWING VEGETATION REMOVAL
FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-99	B	2/98		2,000		1.74			P26 E1
4-107	B	2/98		3,800		2.87			P26 F1
10-211	B	2/98		1,000		0.55			P34 F2
28-363	B	2/98		1,400		1.06			P70 E4
28-391	A	2/98		4,000	12,200	4.22	10.44	2.31	P75 C1
10-190	B	3/98		6,480		9.66			P34 F1
28-392	B	3/98		5,280	11,760	8.48	18.14	2.23	P76 E2
3-10	B	4/98		2,000		1.92			P 4 E4
3-14	B	4/98		14,520		23.33			P 5 C3
3-31	B	4/98		2,700		2.54			P16 E1
3-9	B	4/98		1,200	20,420	1.04	28.83	3.87	P 4 E4
4-89	B	5/98		2,500		2.18			P16 F4
4-92	C	5/98		2,675		2.39			P16 F3
30-438	B	5/98		14,520	19,695	8.00	12.57	3.73	P74 E4
3-6	B	6/98		2,400		1.48			P 4 F3
3-10A	B	6/98		1,537		1.09			P 4 E4
3-16	B	6/98		18,480		26.30			P 4 E1
4-119	C	6/98		2,000		2.06			P17 A3
38-475	C	6/98		2,640		0.90			P83 B4
38-476	C	6/98		3,000	30,057	1.03	32.86	5.69	P83 C4
3-19	B	7/98		700		0.69			P16 D1
3-21	B	7/98		2,300		1.53			P16 D1

MENZI MOWING VEGETATION REMOVAL
FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-113B	B	7/98		1,800		1.65			P27 A1
12-229	C	7/98		2,800		2.31			P36 F1
12-230	C	7/98		1,000		0.55			P36 F1
30-440	B	7/98		1,500		1.37			P74 E4
30-441	B	7/98		1,300		1.22			P74 F4
30-442	B	7/98		4,800		4.73			P74 F3
30-443	B	7/98		1,400	17,600	0.99	15.04	3.33	P74 F3
3-11	B	8/98		2,000		1.60			P 4 F4
4-106	B	8/98		7,920		8.00			P26 F2
4-113	B	8/98		3,200		3.89			P27 A1
6-119A	B	8/98		3,500	16,620	1.92	15.41	3.15	P17 C3
3-5	A	9/98		18,480	18,480	29.69	29.69	3.50	P 3 C4
	GRAND TOTAL =				**254,377**		**271.72**	**48.18**	

MENZI MOWING VEGETATION REMOVAL
OVER AND BEYOND

Sarasota County Government can not meet it's obligations in canal and drainage maintenance by mowing. This attached list is for the canals over and beyond our maintenance capability.

The county is in need of at least two spare mower heads. This would cut down on a lot of down time.

FOR FY '95/'96

Total acres hand cleared..... 594.05
Total miles hand cleared..... 108.41

FOR FY '96/'97

Total acres hand cleared..... 39.37
Total miles hand cleared..... 7.72

FOR FY '97/'98

Total acres hand cleared..... 257.81
Total miles hand cleared..... 51.86

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-15.	C	10/95	1/94	4,000		3.30			P 5 C2
3-2D	C	10/95	'91	1,500		0.79			P15 A1
3-8.	B	10/95		1,200		0.66			P15 C1
3-12.	C	10/95		2,000		3.44			P15 C2
3-13.	B	10/95		1,200		1.34			P15 C2
3-24.	B	10/95	'92	2,000		1.88			P16 D1
3-25.	B	10/95	'91	2,100		2.02			P 5 A4
3-26.	C	10/95	'92	1,000		1.05			P 5 A3
3-27.	B	10/95	'91	4,850		4.11			P 5 A3
3-28.	C	10/95	'91	2,100		1.68			P 5 A3
3-35.	B	10/95		2,500		2.64			P 5 B3
27-349	C	10/95	'94	5,280		4.72			P65 C3
27-350	C	10/95	'94	4,000	33,730	4.59	32.22	6.39	P65 C3
6-46.	C	11/95		1,600		2.57			P17 B2
3-36.	C	11/95	'91	3,000		2.82			P 5 B4
3-42.	C	11/95		10,560		7.51			P 6 D2
3-43.	B	11/95		1,500		0.75			P 6 B3
4-52.	B	11/95	'92	3,900		3.84			P15 B3
4-54.	B	11/95		3,200		2.42			P15 C3
4-62B	B	11/95		2,700		2.23			P26 D2
3-2C	C	11/95		1,273		0.61			P15 B2
4-108	B	11/95	'92	2,000		2.38			P26 F2
4-115	B	11/95		2,200		2.37			P27 B2
5-125	B	11/95		800		0.47			P18 F2
5-126	C	11/95		7,920		6.36			P18 F2
5-127	C	11/95		2,400	43,053	1.21	35.54	8.15	P18 A2

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-14A	C	12/95		1,500		1.79			P16 D2
4-37.	B	12/95		5,808		7.60			P16 F2
4-78.	B	12/95		3,000		3.16			P16 D2
4-87.	C	12/95		2,000		1.83			P16 E2
4-88.	B	12/95		1,400		1.41			P16 E2
6-114	C	12/95		26,990		37.18			P27 B1
6-116	C	12/95		500		0.82			P27 B2
3-2B	B	12/95		400		0.09			P15 B2
6-117	C	12/95		2,500		5.39			P27 B1
6-118	C	12/95		2,000		2.70			P17 B4
6-119	C	12/95		11,325		23.39			P17 C2
6-125	C	12/95		5,280		5.57			P18 F3
6-126	C	12/95		5,280	67,983	7.39	98.32	12.88	P19 A3
3-37A	B	1/96		1,300		1.85			P16 F2
3-30.	C	1/96		1,300		0.74			P16 E1
3-38.	B	1/96		2,000		0.24			P16 F2
3-39.	B	1/96		1,300		1.39			P16 F2
3-41.	B	1/96		1,400		2.21			P16 E2
3-41A	B	1/96		1,200		1.46			P16 F2
4-47.	B	1/96		2,400		2.20			P17 A2
6-128	C	1/96		22,400		31.88			P19 A4
6-129	B	1/96		1,000		0.25			P19 C2
6-147	B	1/96		4,100		4.89			P18 E2
6-148	B	1/96		4,800		2.89			P28 E1
6-149	C	1/96		5,280		5.45			P19 A4
6-149A	C	1/96		6,600	55,080	7.12	62.57	10.43	P29 A1

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
6-149B	C	2/96		4,000		2.20			P29 A2
6-150	C	2/96		2,700		3.34			P18 F4
6-151	C	2/96		2,300		2.00			P18 F3
6-152	C	2/96		2,270		2.70			P19 A4
6-153	C	2/96		10,560		15.51			P18 F3
6-154	C	2/96		4,500		6.51			P19 A3
10-86.	B	2/96		1,000		0.50			P27 B2
10-108	B	2/96	'92	5,475		6.41			P26 F2
10-185	B	2/96		5,280		5.45			P26 D3
10-187	B	2/96		4,000		3.85			P26 D4
10-200	B	2/96	'92	10,560		17.45			P26 F4
10-201	B	2/96		1,000		0.64			P26 F4
10-202	B	2/96		4,000		1.92			P35 C1
10-213	B	2/96		1,200	58,845	0.28	68.76	11.14	P27 A3
10-208	C	3/96		1,200		0.41			P35 B2
4-46.	C	3/96	'91	7,680		12.34			P17 A3
4-49.	B	3/96		1,900		1.74			P17 B3
4-50.	C	3/96		1,600		1.02			P17 B3
6-227	C	3/96		4,000		4.59			P27 B2
10-204	B	3/96		3,000		0.82			P27 B4
10-204A	B	3/96		1,000		0.50			P27 B3
10-205	B	3/96		2,000		0.45			P36 D2
10-206	B	3/96		1,800		1.03			P36 E2
10-207	B	3/96		1,800		1.23			P36 E2
11-212	B	3/96	'91	4,000	29,980	4.77	28.90	5.68	P35 A3

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
12-206	B	4/96		3,000		2.20			P36 E2
12-228	B	4/96		3,000		1.92			P27 B3
12-243	C	4/96		10,560		8.00			P38 D2
14-260	C	4/96		10,560		16.96			P39 C1
27-330	B	4/96		21,120		33.93			P64 E2
27-332	B	4/96		1,500		1.65			P64 D4
27-332A	B	4/96		2,000		2.29			P64 D4
27-333	B	4/96		5,280		5.33			P64 E3
27-339	B	4/96		2,500		2.58			P64 E2
27-340	C	4/96		3,400		2.96			P71 A2
27-341	B	4/96		2,300		2.48			P71 B1
27-342	B	4/96		3,500		2.00			P64 F1
27-344	B	4/96		1,400	70,120	0.99	83.29	13.28	P65 B2
27-352	B	5/96		2,200		2.52			P65 C2
27-353	B	5/96		3,700		3.22			P66 D2
27-358	C	5/96		5,280		4.48			P72 D1
27-358A	C	5/96		3,900		3.13			P66 E4
27-359	B	5/96		4,545		3.44			P70 E1
28-380	B	5/96		6,600		6.06			P72 D2
28-381	B	5/96		5,280		4.60			P72 D2
28-382	B	5/96		7,920		9.09			P72 E3
28-384	B	5/96		1,700		1.17			P71 C3
19-290	B	5/96		3,000		2.75			P54 E3
14-263	B	5/96		5,500		3.53			P39 C2
14-269	B	5/96		654		0.33			P39 C2
14-268	B	5/96		925	51,204	0.29	44.61	9.70	P40 D2

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-44.	B	6/96	9/93	2,650		2.31			P17 A2
4-44.	B	6/96	9/93	2,400		2.09			P17 A2
5-119	B	6/96		10,560		11.15			P17 C2
6-132	B	6/96		7,920		9.09			P17 C2
6-133	C	6/96		1,000		1.14			P18 E2
6-134	C	6/96		1,000		0.82			P18 D2
6-135	C	6/96		600		0.61			P18 D2
6-136	C	6/96		5,925		5.03			P17 C3
6-137	C	6/96		800		0.95			P17 C3
6-138	B	6/96		6,600		8.48			P18 D4
6-139	B	6/96		3,000		3.65			P17 C4
6-140	B	6/96		3,000	45,455	3.99	49.31	8.61	P18 D4
4-114	C	7/96		4,000		6.42			P27 B1
6-141	C	7/96		2,400		2.25			P27 C1
6-142	B	7/96		4,800		5.06			P27 C1
6-146	B	7/96		5,280		5.21			P28 E1
11-209	B	7/96	10/93	3,000		1.10			P34 F2
11-210	B	7/96	10/93	3,000		2.96			P35 A2
12-143	B	7/96		1,855		2.04			P28 D2
12-204	B	7/96		5,280		4.60			P27 B4
12-227	B	7/96		15,840		14.90			P27 B2
6-143	B	7/96		5,000		5.50			P28 D2
14-240	B	7/96		700		0.32			P40 D2
14-241	B	7/96		700		0.40			P40 D2
14-270	B	7/96		3,900	55,755	1.61	52.37	10.56	P39 C1

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '95/'96

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
14-247	B	8/96		640		0.23			P39 C1
14-261	B	8/96		4,500		2.47			P30 F4
14-262	B	8/96		155		0.14			P30 F4
14-279	B	8/96		940		0.45			P30 F4
14-252	B	8/96		176		0.07			P30 F4
14-251	B	8/96		201		0.06			P30 F4
14-278	B	8/96		1,230		0.34			P30 F3
14-275	B	8/96		322		0.12			P30 F4
14-250	B	8/96		1,068		0.63			P30 F4
14-253	B	8/96		419		0.13			P30 F4
14-249	B	8/96		530		0.19			P31 A1
14-248	B	8/96		458		0.14			P31 A4
14-277	B	8/96		2,200		1.21			P31 A4
14-273	B	8/96		1,000	13,839	0.50	6.68	2.62	P31 A4
4-48.	B	9/96	12/93	3,000		3.30			P17 A2
14-276	B	9/96		3,100		0.92			P31 B4
14-168	C	9/96		5,400		3.71			P31 B4
14-274	B	9/96		358		0.16			P31 A4
14-280	C	9/96		2,400		1.10			P31 B4
15-245	B	9/96		6,500		3.73			P39 B3
15-265	B	9/96		5,800		3.46			P39 B3
15-266	B	9/96		2,000		0.96			P40 D2
19-287	B	9/96		2,500		0.80			P64 E1
27-345	B	9/96		2,000		2.29			P65 A2
27-354	C	9/96		5,280		4.24			P66 D3
27-355	C	9/96		3,200		2.42			P66 E2
27-356	C	9/96		5,800	47,338	4.39	31.48	8.97	P66 E3
	GRAND TOTAL FOR FY '95/'96 =				572,382		594.05	108.41	

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '96/'97

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-8.	B	10/97		1,200		0.66			P15 C1
3-13.	B	10/97		1,200		1.34			P15 C2
3-24.	B	10/97		2,000		1.88			P16 D1
3-25.	B	10/97		2,100		2.02			P 5 A4
3-27.	B	10/97		4,850		4.11			P 5 A3
3-35.	B	10/97		2,500	13,850	2.64	12.65	2.62	P 5 B3
3-43.	B	11/97		1,500		0.75			P 6 B3
4-52.	B	11/97		3,900		3.84			P15 B3
4-54.	B	11/97		3,200		2.42			P15 C3
4-62B	B	11/97		2,700		2.23			P26 D2
4-108	B	11/97		2,000		2.38			P26 F2
4-115	B	11/97		2,200		2.37			P27 B2
5-125	B	11/97		800	16,300	0.47	14.46	3.09	P18 F2
4-37.	B	12/97		5,808		7.60			P16 F2
4-78.	B	12/97		3,000		3.16			P16 D2
4-88.	B	12/97		1,400		1.41			P16 E2
3-2B	B	12/97		400	10,608	0.09	12.26	2.01	P15 B2
	GRAND TOTAL FOR FY '96/'97 =				40,758		39.37	7.72	

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-37A	B	1/98		1,300		1.85			P16 F2
3-38.	B	1/98		2,000		0.24			P16 F2
3-39.	B	1/98		1,300		1.39			P16 F2
3-41.	B	1/98		1,400		2.21			P16 E2
3-41A	B	1/98		1,200		1.46			P16 F2
4-47.	B	1/98		2,400		2.20			P17 A2
6-129	B	1/98		1,000		0.25			P19 C2
6-147	B	1/98		4,100		4.89			P18 E2
6-148	B	1/98		4,800	19,500	2.89	17.38	3.69	P28 E1
10-86.	B	2/98		1,000		0.50			P27 B2
10-108	B	2/98		5,475		6.41			P26 F2
10-185	B	2/98		5,280		5.45			P26 D3
10-187	B	2/98		4,000		3.85			P26 D4
10-200	B	2/98		10,560		17.45			P26 F4
10-201	B	2/98		1,000		0.64			P26 F4
10-202	B	2/98		4,000		1.92			P35 C1
10-213	B	2/98		1,200	32,515	0.28	36.50	6.16	P27 A3
4-49.	B	3/98		1,900		1.74			P17 B3
10-204	B	3/98		3,000		0.82			P27 B4
10-204A	B	3/98		1,000		0.50			P27 B3
10-205	B	3/98		2,000		0.45			P36 D2
10-206	B	3/98		1,800		1.03			P36 E2
10-207	B	3/98		1,800		1.23			P36 E2
11-212	B	3/98		4,000	15,500	4.77	10.54	2.94	P35 A3

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
12-206	B	4/98		3,000		2.20			P36 E2
12-228	B	4/98		3,000		1.92			P27 B3
27-330	B	4/98		21,120		33.93			P64 E2
27-332	B	4/98		1,500		1.65			P64 D4
27-332A	B	4/98		2,000		2.29			P64 D4
27-333	B	4/98		5,280		5.33			P64 E3
27-339	B	4/98		2,500		2.58			P64 E2
27-341	B	4/98		2,300		2.48			P71 B1
27-342	B	4/98		3,500		2.00			P64 F1
27-344	B	4/98		1,400	45,600	0.99	55.37	8.64	P65 B2
27-352	B	5/98		2,200		2.52			P65 C2
27-353	B	5/98		3,700		3.22			P66 D2
27-359	B	5/98		4,545		3.44			P70 E1
28-380	B	5/98		6,600		6.06			P72 D2
28-381	B	5/98		5,280		4.60			P72 D2
28-382	B	5/98		7,920		9.09			P72 E3
28-384	B	5/98		1,700		1.17			P71 C3
19-290	B	5/98		3,000		2.75			P54 E3
14-263	B	5/98		5,500		3.53			P39 C2
14-269	B	5/98		654		0.33			P39 C2
14-268	B	5/98		925	36,124	0.29	31.26	6.84	P40 D2
3-44.	B	6/98		2,650		2.31			P17 A2
4-44.	B	6/98		2,400		2.09			P17 A2
5-119	B	6/98		10,560		11.15			P17 C2

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
6-132	B	6/98		7,920		9.09			P17 C2
6-138	B	6/98		6,600		8.48			P18 D4
6-139	B	6/98		3,000		3.65			P17 C4
6-140	B	6/98		3,000	36,130	3.99	40.76	6.84	P18 D4
6-142	B	7/98		4,800		5.06			P27 C1
6-146	B	7/98		5,280		5.21			P28 E1
11-209	B	7/98		3,000		1.10			P34 F2
11-210	B	7/98		3,000		2.96			P35 A2
12-143	B	7/98		1,855		2.04			P28 D2
12-204	B	7/98		5,280		4.60			P27 B4
12-227	B	7/98		15,840		14.90			P27 B2
6-143	B	7/98		5,000		5.50			P28 D2
14-240	B	7/98		700		0.32			P40 D2
14-241	B	7/98		700		0.40			P40 D2
14-270	B	7/98		3,900	49,355	1.61	43.70	9.35	P39 C1
14-247	B	8/98		640		0.23			P39 C1
14-261	B	8/98		4,500		2.47			P30 F4
14-262	B	8/98		155		0.14			P30 F4
14-279	B	8/98		940		0.45			P30 F4
14-252	B	8/98		176		0.07			P30 F4
14-251	B	8/98		201		0.06			P30 F4
14-278	B	8/98		1,230		0.34			P30 F3
14-275	B	8/98		322		0.12			P30 F4
14-250	B	8/98		1,068		0.63			P30 F4

MENZI MOWING VEGETATION REMOVAL
CANALS OVER AND BEYOND ORIGINAL SCHEDULE
FOR FY '97/'98

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH	TOTAL FOOTAGE FOR THE MONTH	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
14-253	B	8/98		419		0.13			P30 F4
14-249	B	8/98		530		0.19			P31 A1
14-248	B	8/98		458		0.14			P31 A4
14-277	B	8/98		2,200		1.21			P31 A4
14-273	B	8/98		1,000	13,839	0.50	6.68	2.62	P31 A4
4-48.	B	9/98		3,000		3.30			P17 A2
14-276	B	9/98		3,100		0.92			P31 B4
14-274	B	9/98		358		0.16			P31 A4
15-245	B	9/98		6,500		3.73			P39 B3
15-265	B	9/98		5,800		3.46			P39 B3
15-266	B	9/98		2,000		0.96			P40 D2
19-287	B	9/98		2,500		0.80			P64 E1
27-345	B	9/98		2,000	25,258	2.29	15.62	4.78	P65 A2
	GRAND TOTAL FOR FY '97/'98 =				**273,821**		**257.81**	**51.86**	

NORTH COUNTY CONTRACT MOWING SCHEDULE FOR FY 95,96,97

BID # 5016R
CONTRACTOR: Ecological Clearing.

North County Mowing is being contracted,this contract was set up for quarterly mowing cycles. The first three (3) weeks of each quarter this mowing will be completed, in the past Drainage Operations maintained this area two times a year, to date Sarasota County has doubled the mowing cycle by contracting the North County area.

TOTALS

Sites being mowed.....133
Total acres.....408.18
Total length 302.142
Total miles.....57.22
Total cost of this contract.....$77,666.00

COST PER ACRE

Slope acres $129.00
Travelway acres $24.50

This contract expires the end of Sept 1997. Revise this contract and rebid June 1997.

4/4/95LM

NORTH COUNTY CONTRACT MOWING SCHEDULE FOR FY '95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
3-5	Q	6/1-21/95		2,031		2.94			3 C4
3-5	Q	6/1-21/95		3,761		5.44			4 D3
3-5	Q	6/1-21/95		5,700		4.97			4 D3
3-5	Q	6/1-21/95		1,600		1.40			4 F4
3-5A	Q	6/1-21/95		1,066		1.30			4 D3
3-5E	Q	6/1-21/95		968		0.91			4 E3
3-7	Q	6/1-21/95		2,000		2.48			3 C3
3-7	Q	6/1-21/95		1,500		1.72			4 E4
3-7	Q	6/1-21/95		3,580		4.11			15 B1
3-7A	Q	6/1-21/95		2,004		0.92			4 D4
3-9	Q	6/1-21/95		1,165		1.26			4 E4
3-10	Q	6/1-21/95		1,966		2.21			4 E4
3-10A	Q	6/1-21/95		1,537		1.76			4 E4
3-11	Q	6/1-21/95		2,000		1.65			4 F4
3-16	Q	6/1-21/95		900		0.62			5 A3
3-16	Q	6/1-21/95		2,873		2.90			5 A3
3-16	Q	6/1-21/95		5,745		5.80			5 A4
3-16	Q	6/1-21/95		350		0.42			5 A4
3-16	Q	6/1-21/95		1,700		1.99			16 D1
3-21	Q	6/1-21/95		2,200		1.57			16 D1
3-22	Q	6/1-21/95		600		0.34			16 E2
3-22	Q	6/1-21/95		2,600		1.49			16 E2
3-24	Q	6/1-21/95		2,000		2.34			16 D1
3-25	Q	6/1-21/95		468		0.50			5 B4
3-26	Q	6/1-21/95		1,800		2.15			5 A3
3-27	Q	6/1-21/95		650		0.66			5 A3
3-28	Q	6/1-21/95		1,600		1.29			5 A3
3-37	Q	6/1-21/95		1,250		1.41			16 F2
3-37A	Q	6/1-21/95		1,300		1.58			16 F2
3-38	Q	6/1-21/95		1,400		1.45			16 F2
3-41	Q	6/1-21/95		1,275		1.35			16 E2
4-46	Q	6/1-21/95		4,180		6.62			17 A3
4-46	Q	6/1-21/95		3,500		5.22			17 B2
4-48	Q	6/1-21/95		700		0.74			16 F2

NORTH COUNTY CONTRACT MOWING SCHEDULE FOR FY '95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
4-48	Q	6/1-21/95		700		0.51			16 F2
4-48	Q	6/1-21/95		1,450		1.96			16 F2
4-49	Q	6/1-21/95		1,900		1.66			17 B3
4-50	Q	6/1-21/95		1,600		1.54			17 B3
4-58	Q	6/1-21/95		1,115		3.28			15 C4
4-58	Q	6/1-21/95		1,000		0.96			16 D4
4-62	Q	6/1-21/95		400		0.37			26 D1
4-62	Q	6/1-21/95		2,950		2.91			25 C2
4-63	Q	6/1-21/95		1,800		1.98			26 D2
4-70	Q	6/1-21/95		1,835		2.27			26 D1
4-74	Q	6/1-21/95		2,000		1.38			25 C1
4-75	Q	6/1-21/95		1,125		0.72			25 C1
4-86	Q	6/1-21/95		4,100		5.27			27 A1
4-86	Q	6/1-21/95		300		0.45			16 E4
4-86	Q	6/1-21/95		200		0.30			16 E4
4-86	Q	6/1-21/95		8,700		16.38			16 E4
4-89	Q	6/1-21/95		1,500		1.45			16 F4
4-90	Q	6/1-21/95		1,800		1.90			16 F4
4-94	Q	6/1-21/95		1,500		1.27			16 F3
4-96	Q	6/1-21/95		1,800		1.49			26 E1
4-96	Q	6/1-21/95		2,000		1.93			26 E1
4-98	Q	6/1-21/95		1,090		1.40			26 F1
4-103	Q	6/1-21/95		1,730		1.67			26 E2
4-106	Q	6/1-21/95		3,125		3.37			26 F2
4-106	Q	6/1-21/95		1,300		1.40			27 A1
4-108	Q	6/1-21/95		1,825		1.93			26 F2
4-111	Q	6/1-21/95		1,600		1.47			27 A2
4-114	Q	6/1-21/95		3,100		5.69			27 A1
4-114	Q	6/1-21/95		500		0.71			27 A1
4-115	Q	6/1-21/95		2,200		2.53			27 B2
4-118	Q	6/1-21/95		2,500		2.70			17 B4
4-119	Q	6/1-21/95		2,000		1.93			17 A3
4-119B	Q	6/1-21/95		475		0.26			17 B3

NORTH COUNTY CONTRACT MOWING SCHEDULE FOR FY '95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
5-118A	Q	6/1-21/95		808		0.59			18 D1
5-119	Q	6/1-21/95		2,000		2.30			18 D1
5-119A	Q	6/1-21/95		808		0.93			18 D1
5-122	Q	6/1-21/95		868		0.74			18 D1
6-114	Q	6/1-21/95		5,200		22.08			27 B1
6-114	Q	6/1-21/95		15,840		31.27			27 C1
6-114	Q	6/1-21/95		600		0.91			28 E1
6-114	Q	6/1-21/95		5,350		19.16			18 F4
6-117	Q	6/1-21/95		2,230		4.61			27 B1
6-118	Q	6/1-21/95		1,900		2.44			17 B4
6-119	Q	6/1-21/95		3,600		7.11			17 C2
6-119	Q	6/1-21/95		3,225		4.81			17 C4
6-119	Q	6/1-21/95		2,300		5.02			17 C3
6-119	Q	6/1-21/95		2,200		6.82			17 C3
6-128	Q	6/1-21/95		8,000		14.69			19 A4
6-136	Q	6/1-21/95		5,800		6.12			17 C3
6-138	Q	6/1-21/95		2,460		3.05			18 D4
6-139	Q	6/1-21/95		1,520		1.61			17 C4
6-140	Q	6/1-21/95		1,150		1.24			18 D4
6-142	Q	6/1-21/95		3,400		4.45			27 C2
6-142	Q	6/1-21/95		1,400		1.29			27 C1
6-143	Q	6/1-21/95		4,720		4.98			28 D1
6-143	Q	6/1-21/95		1,700		1.80			28 D2
6-146	Q	6/1-21/95		200		0.17			28 E1
6-146	Q	6/1-21/95		1,800		1.65			18 E4
6-146	Q	6/1-21/95		200		0.21			18 E4
6-149	Q	6/1-21/95		3,950		4.17			18 F4
6-149A	Q	6/1-21/95		6,540		7.81			29 A1
6-150	Q	6/1-21/95		1,990		2.65			18 F4
6-152	Q	6/1-21/95		2,270		2.71			18 F4
6-153	Q	6/1-21/95		8,000		12.49			19 A4
10-63	Q	6/1-21/95		900		0.41			26 D2
10-108	Q	6/1-21/95		1,000		0.67			26 F2
10-115	Q	6/1-21/95		1,650		1.17			27 B2

NORTH COUNTY CONTRACT MOWING SCHEDULE FOR FY.'95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
10-179	Q	6/1-21/95		600		0.52			27 B3
10-179	Q	6/1-21/95		1,225		1.07			25 B3
10-179	Q	6/1-21/95		1,200		0.77			25 B3
10-183	Q	6/1-21/95		975		0.76			25 B4
10-184	Q	6/1-21/95		2,080		3.44			25 B2
10-185A	Q	6/1-21/95		3,100		2.13			26 D3
10-186	Q	6/1-21/95		1,765		1.90			26 E3
10-187	Q	6/1-21/95		2,700		2.17			26 D4
10-187	Q	6/1-21/95		2,100		3.04			26 D4
10-188	Q	6/1-21/95		2,600		2.15			26 E4
10-200	Q	6/1-21/95		225		0.14			26 F4
10-200	Q	6/1-21/95		1,195		1.10			35 C1
10-203	Q	6/1-21/95		300		0.40			26 F4
10-203	Q	6/1-21/95		1,250		0.69			26 F4
10-209	Q	6/1-21/95		1,195		0.55			34 F1
12-86	Q	6/1-21/95		200		0.28			27 B2
12-128	Q	6/1-21/95		14,000		31.50			29 A3
12-143	Q	6/1-21/95		1,855		2.73			28 D2
12-204	Q	6/1-21/95		1,600		1.25			27 C4
12-227	Q	6/1-21/95		300		0.33			27 C4
12-227	Q	6/1-21/95		5,000		5.51			27 C4
12-229	Q	6/1-21/95		2,800		2.25			27 C4
12-239	Q	6/1-21/95		600		0.28			37 C1
12-240	Q	6/1-21/95		3,500		3.62			28 E2
14-260	Q	6/1-21/95		5,030		3.23			39 C1
14-267	Q	6/1-21/95		2,511		2.25			39 C2
14-268	Q	6/1-21/95		623		0.29			40 D2
14-270	Q	6/1-21/95		2,890		1.33			39 C1
14-275	Q	6/1-21/95		325		0.21			30 F4
14-278	Q	6/1-21/95		1,230		0.51			30 F3
14-280	Q	6/1-21/95		2,400		1.10			31 B4
		GRAND TOTAL			302,142		408.18		

SOUTH COUNTY IN-HOUSE MOWING

South County is being maintained in-house by LANDSCAPE OPERATIONS,by contracting the North County mowing our crews can complete four (4) cycles a year in the South County area. We have increased the mowing from two to four mowings annually.

TOTALS

Total acres.....334.16 annually
Total miles.....87.12 annually
Total slope acres.....118.84 annually
Total travelway acres.....215.23 annually

ESTIMATE FOR IN-HOUSE CREW AND EQUIPMENT COST

Equipment Operator II.....$9.5173 per hr. x 288 hrs = 2,740.9824
Equipment Operator II.....$9.5173 per hr. x 288 hrs = 2,740.9824
Equipment Operator II.....$9.5173 per hr. x 288 hrs = 2,740.9824
Pickup Truck .....$14.00 per hr. x 288 hrs = 4,032.00
Pickup Truck.....$14.00 per hr. x 288 hrs = 4,032.00
Pickup Truck.....$14.00 per hr. x 288 hrs = 4,032.00
Tractor Boom Mower.....$21.12 per hr. x 288 hrs = 6,082.56
Tractor Bushhog Mower.....$15.00 per hr. x 288 hrs = 4,320.00
Tractor Bushhog Mower.....$ 15.00 per hr. x 288 hrs = 4,320.00
35,041.5064

TOTALS

Total Acres.....334.16
Total Cost.....$35,041.51
Total Cost Per Acre.....$ 104.86

NOTE

To contract the remainder of mowing using the existing contract it would cost $20,605.70, this would free up equipment and personnel for right-of-way mowing and etc.

4/4/95LM

SOUTH COUNTY MOWING SCHEDULE
FOR FY '95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
30-442	Q	6/1-21/95		2,880		2.98			74 F3
30-443	Q	6/1-21/95		1,770		1.46			74 F3
30-438	Q	6/1-21/95		9,893		8.18			74 E3
30-440	Q	6/1-21/95		900		0.93			74 E4
30-441	Q	6/1-21/95		1,030		1.06			74 F4
38-474	Q	6/1-21/95		1,830		1.09			87 B1
38-460	Q	6/1-21/95		1,130		1.06			86 F1
36-460	Q	6/1-21/95		1,575		1.08			82 D2
35-460	Q	6/1-21/95		1,575		1.08			81 C2
36-461	Q	6/1-21/95		1,680		1.2			82 E1
35-448	Q	6/1-21/95		2,525		1.68			76 D3
35-449	Q	6/1-21/95		1,330		0.89			76 D3
35-458A	Q	6/1-21/95		345		0.25			81 A1
28-393	Q	6/1-21/95		3,500		3.05			76 E2
28-389	Q	6/1-21/95		2,200		3.03			71 C4
28-375	Q	6/1-21/95		2,509		1.5			71 B4
28-375	Q	6/1-21/95		860		0.69			71 B4
28-375	Q	6/1-21/95		5,910		5.29			71 B4
28-387	Q	6/1-21/95		670		0.45			71 B4
28-385	Q	6/1-21/95		2,770		3.37			71 B4
28-383	Q	6/1-21/95		3,145		2.89			71 C3
28-390	Q	6/1-21/95		490		0.27			71 B4
28-385A	Q	6/1-21/95		3,900		3.94			71 B4
28-372	Q	6/1-21/95		4,000		5.51			71 A3
28-365	Q	6/1-21/95		2,530		3.14			70 F4
28-365	Q	6/1-21/95		2,530		2.56			70 E4

SOUTH COUNTY MOWING SCHEDULE
FOR FY '95

CANAL #	FREQUENCY OF MAINTENANCE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE	LENGTH (FT)	TOTAL LENGTH FOR THE MONTH (FT)	ACRES	TOTAL ACRES FOR THE MONTH	TOTAL MILES FOR THE MONTH	ATLAS
28-397	Q	6/1-21/95		580		0.47			70 F4
27-353	Q	6/1-21/95		2,790		2.5			66 D2
27-346	Q	6/1-21/95		985		0.75			65 C4
27-346	Q	6/1-21/95		4,600		4.65			65 B4
27-346	Q	6/1-21/95		2,400		3.2			65 A3
27-347A	Q	6/1-21/95		500		0.37			65 A3
27-347B	Q	6/1-21/95		1,440		1.12			65 A3
27-335	Q	6/1-21/95		3,300		3.33			64 E4
27-359	Q	6/1-21/95		4,545		5.63			70 E1
27-347	Q	6/1-21/95		1,100		0.86			65 B3
27-337	Q	6/1-21/95		3,000		4.27			70 E1
19-289	Q	6/1-21/95		500		0.44			64 D1
19-288	Q	6/1-21/95		440		0.38			64 E2
19-279	Q	6/1-21/95		3,880		7.13			54 F3
13-128	Q	6/1-21/95		8,000		12.12			38 D2
11-212	Q	6/1-21/95		3,220		3.99			35 A3
11-210	Q	6/1-21/95		200		0.15			35 A3
11-210	Q	6/1-21/95		1,090		0.75			35 A3
10-199	Q	6/1-21/95		3,300		5.53			35 A2
10-198	Q	6/1-21/95		1,600		1.18			35 A2
10-198	Q	6/1-21/95		1,500		3.06			34 F2
10-192	Q	6/1-21/95		2,500		2.18			34 F1
		GRAND TOTAL =		114,927		122.69			

CONTROL STRUCTURES
CITY/COUNTY

Implement Quarterly Inspections for NPDES permit requirements, weir inventory and facility inspection report attached.

Inventory
Control Structures (weirs)
City/County

W5-01	End of Del Sol Blvd. (part Griffon Circle in Griffon Woods off Longwood Meadows. Canal 3-15
W5-02	DeSoto Road - Ravenwood outlet
W15-03	Lake Ridge outfall @ Lockwood Ridge Road
W15-04	Lockwood Ridge R/W South of Fruitville Road
W15-05	Sarasota High School - Canal 4-51
W17-06	Deer Hollow outlet @ Richardson Road
W17-07	Fruitville Road @ Coburn Road - Canal 6-119 (old 52)
W17-08	Coburn and E. Sawgrass @ the bridge
W17-09	Apex south of E. Sawgrass
W18-10	Palmer Rd and Debrecken Rd - Canal 6-114
W25-11	Arlington Park
W25-12	Grove St. and Brink - Phillippi Creek - Canal 4-69
W25-13	Tanglewood and Rose - Phillippi Creek - Canal 4-62
W25-14	Tuttle Circle - Phillippi Creek weir - Canal 4-58
W25-15	Bermuda Brook @ Tuttle Avenue - L4-2
W25-16	Bermuda Brook (center weir) - L4-2
W25-17	Lockwood Ridge Road and Homassasa Road
W25-18	River Forest - Camilfra outlet for L10-44
W25-19	Redbug Slough - Canal 10-184
W26-20	Ashton Road R/W West of Beneva - Lake Arrowhead Apts. Canal 10-187
W27-21	West of Raymond Road @ Canal 6-119 (old 52)
W27-22	The Paddocks - Porter Road - Canal 6-119 (old 52)
W27-23	Center Gate - Bee Ridge Road - Canal 10-115
W27-24	Lake Mauna Loa - Bikini Road - L12-21
W28-25	Hidden Glens - Bee Ridge Road - Canal 12-143
W34-26	Denham Branch - U.S. 41 - Canal 11-190
W34-27	Metheny Creek - U.S. 41 - Canal 10-198
W34-28	Pinehurst and Dale Avenue
W35-29	Gulf Gate East - Kingston Way and Kingston Blvd.
W35-30	Palmer Ranch #1 - Canal 10-200
W35-31	Palmer Ranch #2
W35-32	Metheny Creek - Beneva Road - Canal 10-198
W35-33	Curtis Avenue - Beneva Road - DP# 11-7 - Canal 11-208
W35-34	Tuckerstown - Gulf Gate Lake #3 - L-11-18
W35-35	Eugene Street - Canal 11-212
W35-36	Sarasota Square Blvd. and Deer Creek Blvd.
W35-37	Pelican Cove - Clower Creek Drive #1 - Canal 11-213

W35-38	Pelican Cove - Clower Creek Drive - #2 downside - Canal 11-213
W37-39	Cowpen Slough #2 - Hi-Hat Ranch - Canal 13-128
W43-40	Sarasota Central Pkwy. and McIntosh Lake outlet
W43-41	Target and U.S. 41 - Central Sarasota Pkwy. - Canal 11-214
W55-42	Cowpen Slough #1 - Canal 18-128
W64-43	Waterford - Pinebrook Road - Canal 27-342
W64-44	Pinebrook Way to Featherbed - Canal 27-331
W64-45	Capri Isles - East of Bridle Oaks - Gulf Course Lake
W71-46	East Village Drive
W71-47	East Village Drive
W71-48	Jacaranda
W81-49	Englewood Isles outlet - L35-13

SARASOTA COUNTY
TRANSPORTATION DEPARTMENT
WEIR INVENTORY

WEIR #	LOCATION	TYPE OF CONSTRUCTION	BOARD SIZE	PIPE SIZE	CANAL LOCATION	TYPE OF MAINTENANCE	ACCESS	PHOTOGRAPHS	QUARTERLY INSPECTIONS			
									1	2	3	4
W5-01	End of Del Sol Blvd past Griffon Circle in Griffon Woods off Longwood Meadow Canal	CONCRETE			3-15	C						
W2-02	DeSoto Road/Ravenwood Outlet	SOIL CEMENT/CONCRETE			3-34	C		X				
W15-03	Lake Ridge outlet	CONCRETE			3-12	C	X	X				
W15-04	Lockwood Ridge R/W south of Fruitville Road	CONCRETE			3-12	C	X	X				
W15-05	Mote/Sara High School Canal	CONCRETE			4-51		X	X				
W17-06	Deer Hollow Outlet	CONCRETE			4-45		X	X				
W17-07	Fruitville Rd/Coburn Rd Canal	CONCRETE	M		6-119		X	X				
W17-08	Coburn Rd/Sawgrass-@ Bridge	CONCRETE	3.5" x 117.5"		6-136		X	X				
W17-09	Apex south of E. Sawgrass	CONCRETE	44"		6-119		X	X				
W18-10	Palmer & Debrechen Canal	CONCRETE	3.5"x10'		6-114		X	X				
W25-11	Arlington Park	CONCRETE	3.5" x 125"				X	X				
W25-12	Grove St & Brink/Phillippi Creek	CONCRETE			4-69		X	X				
W25-13	Tanglewood/Rose St/Phillippi Creek	CONCRETE			4-62		X	X				
W25-14	Tuttle Circle/Phillippi Creek	CONCRETE			4-58		X	X				
W25-15	Bermuda Brook at Tuttle Avenue	CONCRETE	36"		L4-2		X	X				
W25-16	Bermuda Brook-Center	CONCRETE			L4-2			X				
W27-17	Lockwood Ridge							X				

C - CLEARING
M - MULTIPLE

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SARASOTA COUNTY
TRANSPORTATION DEPARTMENT
WEIR INVENTORY

WEIR #	LOCATION	TYPE OF CONSTRUCTION	BOARD SIZE	PIPE SIZE	CANAL LOCATION	TYPE OF MAINTENANCE	ACCESS	PHOTOGRAPHS	QUARTERLY INSPECTIONS			
									1	2	3	4
W25-18	River Forest Outlet	CONCRETE			L10-44			X				
W25-19	Redbug Slough	SOIL CEMENT BAGS			10-184		X	X				
W26-20	Ashton Rd R/W west of Beneva	ALUMINUM		18"	10-187		X	X				
W27-21	West of Raymond Road	CONCRETE			6-119 / 6-138			X				
W27-22	The Paddocks/Porter Road	CONCRETE			6-119		X	X				
W27-23	Center Gate/Bee Ridge	CONCRETE			10-115		X	X				
W27-24	Lake Mauna Loa Outlet	CONCRETE			L12-21		X	X				
W28-25	Hidden Glen/Bee Ridge				12-143							
W34-26	Denham Branch, US 41	CONCRETE		24"	11-190			X				
W34-27	Matheny Creek, US 41	CONCRETE			10-198			X				
W34-28	Pinehurst & Dale	CONCRETE			11-208		X	X				
W35-29	Gulf Gate East	CONCRETE			10-199		X	X				
W35-30	Palmer Ranch #1	CONCRETE			10-200		X	X				
W35-31	Palmer Ranch #2	CONCRETE			10-200		X	X				
W35-32	Matheny Creek West of Beneva	ALUMINUM			10-198		X	X				
W35-33	Curtiss Ave/Beneva Road	CONCRETE			11-208		X	X				
W35-34	Tuckerstown/Gulf Gate	METAL			L11-18		X	X				
W35-35	Eugene Street	ALUMINUM			11-212		X	X				
W35-36	Sarasota Square Blvd./Deer Creek	CONCRETE			11-200		X	X				
W35-37	Pelican Cove/Clower Creek Dr. #1	CONCRETE			11-213		X	X				
W35-38	Pelican Cove/Clower Creek Dr. #2	CONCRETE			11-213		X	X				
W37-39	Cowpen Slough #2 - Hi Hat	CONCRETE			13-128		X					
W43-40	Sarasota Central Pkwy/McIntosh											
W43-41	Target & US 41/Central Sarasota	CONCRETE			11-200		X	X				

C - CLEARING
M - MULTIPLE

SARASOTA COUNTY
TRANSPORTATION DEPARTMENT
WEIR INVENTORY

WEIR #	LOCATION	TYPE OF CONSTRUCTION	BOARD SIZE	PIPE SIZE	CANAL LOCATION	TYPE OF MAINTENANCE	ACCESS	PHOTOGRAPHS	QUARTERLY INSPECTIONS			
									1	2	3	4
W55-42	Cowpen Slough #1	CONCRETE			18-128		X	X				
W64-43	Waterford/Pinebrook				27-342							
W64-44	Pinebrook Way to Featherbed				27-331							
W64-45	Capri Isles/Bridle Oaks											
W71-46	East Village Drive											
W71-47	East Village Drive											
W71-48	Jacaranda	CONCRETE			MCNERIE		X	X				
W91-49	Englewood Isles Outlet	CONCRETE			L35-13			X				

C - CLEARING
M - MULTIPLE

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QUARTERLY WEIR INSPECTION

Weir Name or Number: _____ Date: _____

Location: _____

Type of Debris and Blockage, if any: _____

_____

Type of Repair needed:

Concrete: _____
Erosion: _____
Cable: _____
Boards: _____
Paint: _____
Pipe: _____
Metal: _____

Comments: _____

_____

_____

_____

Inspection Completed By: _____

CANAL INVENTORY

The inventory program out lines the drainage areas being maintained by Sarasota County at this time,we will be adding to this list as we go along right-of-way and drainage easements will play a major part in the canals that are added to this program.
Please note columns titled City, R/W,Easements,Non-Maintained,From and To,these columns will be completed when the new computer program is installed and up and running.

BY:
Engineering/Production/Scheduling

A = ONCE A YEAR
B = EVERY TWO YEARS
C = EVERY THREE YEARS
Q = QUARTERLY
M = MONTHLY

mngmtinv.xls

CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
3-1							13200	13200	25	7.58	15.15			15.15	P/C			B			3 C3	5/95	
3-2							10560	10560	24.5	5.94	11.88			11.88	M/M			B			14 F1	1/95	
3-2A							1200	1200	12.5	0.34	0.69			0.69	M/M			C			15 B2	2/95	
3-2B							400	400	5	0.05	0.09			0.09	M/M	X		B			15 B2		
3-2C							1273	1273	10.5	0.31	0.61			0.61	M/M	X		C			15 B2		
3-2D							1500	1500	11.5	0.40	0.79			0.79	M/M	X		C			15 A1		91
3-4							2000	2000	16.5	0.76	1.52			1.52	P/C			C			14 A1	3/97	
3-5							18480	18480	35	14.85	29.70			29.70	M/M			A			3 C4	9/95	94
3-5							2031		19	0.89	1.77	25	1.17	2.94	MW			Q	X		3 C4		
3-5							3761		19	1.64	3.28	25	2.16	5.44	MW			Q	X		4 D3		
3-5							5700		12	1.57	3.14	14	1.83	4.97	MW			Q	X		4 D3		
3-5							1600		12	0.44	0.88	14	0.51	1.40	MW			Q	X		4 F4		
3-5A							1400	1400	17	0.55	1.09			1.09	P/C			C			4 D3	10/95	
3-5A							1066		10	0.24	0.49	33	0.81	1.30	MW			Q	X		4 D3		
3-5B							3400	3400	17	1.33	2.65			2.65	P/C			C			4 D3	10/95	
3-5C							1500	1500	17.5	0.60	1.21			1.21	P/C			B			4 D2	11/95	
3-5D							1000	1000	12	0.28	0.55			0.55	H/C			A	X		4 E3	1/96	95
3-5E							1675	1675	12.5	0.48	0.96			0.96	H/C			A	X		4 E3	1/96	95
3-5E							968		8	0.18	0.36	25	0.56	0.91	MW			Q	X		4 E3		
3-5F							200	200	9	0.04	0.08			0.08	H/C			A	X		4 E3	1/96	95
3-6							2400	2400	13.5	0.74	1.49			1.49	M/M			B			4 F3	6/96	
3-7							10560	10560	23.5	5.70	11.39			11.39	M/M			B			3 C3	11/95	
3-7							2000		17	0.78	1.56	20	0.92	2.48	MW			Q	X		3 C3		
3-7							1500		13	0.45	0.90	24	0.83	1.72	MW			Q	X		4 E4		
3-7							3580		13	1.07	2.14	24	1.97	4.11	MW			Q	X		15 B1		
3-7A							2004	2004	10	0.48	0.92	17		0.92	MW			Q	X		4 D4		
3-7A							800		23.5	0.32	0.65			0.65	M/M			B			4 D1	2/95	92

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4/7/95 9:43 AM

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mtcanlinv.xls

CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
3-8							1200	1200	12	0.33	0.66			0.66	M/M	X		B			15 C1		
3-9							1200	1200	19	0.52	1.05			1.05	M/M			B			4 E4	4/96	
3-9							1165		11	0.29	0.59	25	0.67	1.26	MW			Q	X		4 E4		
3-10							2000	2000	21	0.96	1.93			1.93	M/M			B			4 E4	4/96	
3-10							1966		14	0.63	1.26	21	0.95	2.21	MW			Q	X		4 E4		
3-10A							1537	1537	15.5	0.55	1.09			1.09	M/M			B			4 E4	6/96	
3-10A							1537		11	0.39	0.78	28	0.99	1.78	MW			Q	X		4 E4		
3-11							2000	2000	17.5	0.80	1.61			1.61	M/M			B			4 F4	8/96	94
3-11							2000		8	0.37	0.73	20	0.92	1.65	MW			Q	X		4 F4		
3-12							2000	2000	37.5	1.72	3.44			3.44	M/M	X		C			15 C2		
3-13							1200	1200	24.5	0.67	1.35			1.35	M/M	X		B			15 C2		
3-14							14520	14520	35	11.67	23.33			23.33	M/M			B			5 C3	4/96	
3-14A							1650	1650	18	0.76	1.53			1.53	M/M			C			5 C4	8/95	
3-14B							1400	1400	16	0.58	1.16			1.16	M/M			C			5 C3	6/95	
3-15							4000	4000	19	1.65	3.31			3.31	M/M	X		C			5 C2		1/94
3-16							18480	18480	31	13.15	26.30			26.30	M/M			B			4 E1	5/96	6/94
3-16							900		9	0.19	0.37	12	0.25	0.62	MW			Q	X		5 A3		
3-16							2873		16	1.06	2.11	12	0.79	2.90	MW			Q	X		5 A3		
3-16							5745		16	2.11	4.22	12	1.58	5.80	MW			Q	X		5 A4		
3-16							350		16	0.13	0.26	20	0.16	0.42	MW			Q	X		5 A4		
3-16							1700		18	0.70	1.40	15	0.59	1.99	MW			Q	X		16 D1		
3-17							8280	8280	28	5.32	10.64			10.64	M/M			B			16 D1	6/95	93
3-18							1000	1000	16	0.37	0.73			0.73	M/M			B			16 D2	7/95	93
3-19							700	700	21.5	0.35	0.69			0.69	M/M			B			16 D1	7/96	94
3-20							1300	1300	24	0.72	1.43			1.43	M/M			B			16 D1	7/95	92
3-21							2300	2300	14.5	0.77	1.53			1.53	M/M			B			16 D1	7/96	94
3-21							2200		9	0.40	0.81	15	0.76	1.57	MW			Q	X		16 D1		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
3-22							3200	3200	11	0.81	1.62			1.62	M/M			B			16 E1	2/96	
3-22							600		6	0.08	0.17	13	0.18	0.34	MW			Q	X		16 E2		
3-22							2600		6	0.36	0.72	13	0.78	1.49	MW			Q	X		16 E2		
3-23							2500	2500	16	0.92	1.84			1.84	M/M			B			16 E1	10/95	93
3-24							2000	2000	20.5	0.94	1.88			1.88	M/M	X		B			16 D1		92
3-24							2000		13	0.60	1.19	25	1.15	2.34	MW			Q	X		16 D1		
3-25							2100	2100	21	1.01	2.02			2.02	M/M	X		B			5 A4		91
3-25							468		12	0.13	0.26	23	0.25	0.50	MW			Q	X		5 B4		
3-26							1000	1200	23	0.53	1.06			1.06	M/M	X		C			5 A3		92
3-26							1800		13	0.54	1.07	26	1.07	2.15	MW			Q	X		5 A3		
3-27							4650	4650	18.5	2.06	4.12			4.12	M/M	X		B			5 A3		91
3-27							550		10	0.15	0.30	24	0.36	0.66	MW			Q	X		5 A3		
3-28							2100	2100	17.5	0.84	1.69			1.69	M/M	X		C			5 A3		91
3-28							1600		11	0.40	0.81	13	0.48	1.29	MW			Q	X		5 A3		
3-29							2200	2200	14	0.71	1.41			1.41	M/M			B			16 E1	2/96	
3-30							1300	1300	12.5	0.37	0.75			0.75	M/M	X		C			16 E1		
3-31							2700	2700	20.5	1.27	2.54			2.54	M/M			B			16 E1	4/96	
3-32							4200	4200	20	1.93	3.86			3.86	H/C			A	X		16 F1	9/95	9/94
3-33							2600	2600	14	0.84	1.67			1.67	H/C			A	X		5 C4	9/95	9/94
3-34							5280	5280	20.5	2.48	4.97			4.97	P/C			B			5 B3	4/95	
3-35							2500	2500	23	1.32	2.64			2.64	M/M	X		B			5 B3		
3-35A							400	400	8	0.07	0.15			0.15	P/C			C			5 B2	9/97	
3-35B							600	600	11	0.15	0.30			0.30	P/C			C			5 B3	9/96	
3-35C							300	300	6.5	0.04	0.09			0.09	P/C			C			5 B2	4/96	
3-36							3000	3000	20.5	1.41	2.82			2.82	M/M	X		C			5 B4		91
3-37							4500	4500	24.5	2.53	5.06			5.06	M/M			B			16 F2	4/95	
3-37							1250		13	0.37	0.75	23	0.66	1.41	MW			Q	X		16 F2		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
3-37A							1300	1300	31	0.93	1.85			1.85	M/M	X		B			16 F2		
3-37A							1300		15	0.45	0.90	23	0.69	1.58	MW			Q	X		16 F2		
3-38							2000	2000	24.5	1.12	2.25			2.25	M/M	X		B			16 F2		
3-38							1400		13	0.42	0.84	19	0.61	1.45	MW			Q	X		16 F2		
3-39							1300	1300	21	0.63	1.25			1.25	M/M	X		B			16 F2		
3-41							1400	1400	34.5	1.11	2.22			2.22	M/M	X		B			16 E2		
3-41							1275		15	0.44	0.88	16	0.47	1.35	MW			Q	X		16 E2		
3-41A							1200	1200	26.5	0.73	1.46			1.46	M/M	X		B			16 F2		
3-42							10560	10560	15.6	3.76	7.52			7.52	M/M	X		C			6 D2		
3-43							1500	1500	11	0.38	0.76			0.76	M/M	X		B			5 B3		
3-44							2650	2650	19	1.16	2.31			2.31	M/M	X		B			17 A2		
4-12							3560	3560	29	2.37	4.74			4.74	M/M			B			16 D2	3/95	
4-14							7920	7920	36.5	6.64	13.27			13.27	M/M			B			16 E2	3/95	92
4-14A							1500	1500	26	0.90	1.79			1.79	M/M	X		C			16 D2		
4-37							5808	5808	28.5	3.80	7.60			7.60	M/M	X		B			16 F2		
4-40							800	800	17.5	0.32	0.64			0.64	M/M			C			17 F2	12/96	12/93
4-44							2400	2400	19	1.05	2.09			2.09	M/M	X		B			17 A2		
4-45							3000	5400	25.5	1.76	3.51			3.51	M/M			C			17 B2	3/96	
4-45							1000		22	0.51	1.01			1.01	P/C			B			17 B2	3/95	
4-46							7580	7580	35	6.17	12.34			12.34	M/M	X		C			17 A3		91
4-46							4180		20	1.92	3.84	29	2.78	6.62	MW			Q	X		17 A3		
4-47							3500		20	1.61	3.21	25	2.01	5.22	MW			Q	X		17 B2		
4-48							2400	2400	20	1.10	2.20			2.20	M/M	X		B			17 A2		
4-48							3000	3000	24	1.65	3.31			3.31	M/M	X		B			17 A2		
4-48							700		10	0.16	0.32	28	0.42	0.74	MW			Q	X		16 F2		
4-48							700		10	0.16	0.32	12	0.19	0.51	MW			Q	X		16 F2		
4-48							1450		15	0.50	1.00	29	0.97	1.96	MW			Q	X		16 F2		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
4-49							1900	1900	20	0.87	1.74			1.74	M/M	X		B			17 B3		
4-49							1900		13	0.57	1.13	12	0.52	1.66	MW			Q	X		17 B3		
4-50							1600	1600	14	0.51	1.03			1.03	M/M	X		C			17 B3		
4-50							1600		10	0.37	0.73	22	0.81	1.54	MW			Q	X		17 B3		
4-51							5250	6850	30	3.62	7.23			7.23	M/M			B			15 B3	2/95	92
4-51							5310		30	3.66	7.31			7.31	P/C			B			15 B3	2/95	
4-52							3900	3900	21.5	1.92	3.85			3.85	M/M	X		B			15 B3		92
4-53							1210	1210	24.5	0.68	1.38			1.38	M/M			B			15 B3	2/95	92
4-54							3200	3200	16.5	1.21	2.42			2.42	M/M	X		B			15 C3		
4-56							4500	4500	23	2.38	4.75			4.75	H/C			A	X		15 B4	8/95	94
4-57							1200	1200	16	0.44	0.88			0.88	H/C			A	X		15 B4	8/95	94
4-58							1115	13200	22	0.56	1.13	84	2.15	3.28	MW			Q	X		15 C4		
4-58							1000		13	0.30	0.60	16	0.37	0.96	MW			Q	X		16 D4		
4-62							6600	6600	35.5	5.38	10.76			10.76	H/C			A	X		25 C2	9/95	9/94
4-62							400		10	0.09	0.18	20	0.19	0.37	MW			Q	X		28 D1		
4-62							2950		13	0.88	1.76	17	1.15	2.91	MW			Q	X		25 C2		
4-62A							700	700	22.5	0.36	0.72			0.72	P/C			B			26 D2	1/96	
4-62B							2700	2700	18	1.12	2.23			2.23	M/M	X		B			26 D2		
4-62D							2400	2400	17	0.94	1.87			1.87	H/C			A	X		26 D2	2/96	2/95
4-63							3500	3500	14	1.12	2.25			2.25	H/C			A	X		25 D2	9 95	9/94
4-63							1800		10	0.41	0.83	28	1.16	1.98	MW			Q	X		25 D2		
4-64							1300	1300	18.5	0.55	1.10			1.10	H/C			A	X		26 D1	9/95	92
4-66							6500	6500	19	2.84	5.67			5.67	M/M			B			25 B1	1/95	1/93
4-68							1500	1500	17	0.59	1.17			1.17	H/C			A	X		25 B1	5/95	94
4-70							3000	3000	25.5	1.76	3.51			3.51	M/M			B			25 D1	11/95	93
4-70							1635		20	0.84	1.69	14	0.58	2.27	MW			Q	X		26 D1		
4-73							1200	1200	31	0.85	1.71			1.71	SM P/C			C			25 C1	95	

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
4-74							2000	2000	12	0.55	1.10	6	0.28	1.38	MW			Q	X		25 C1		
4-74							2000		15.5	0.71	1.42			1.42	M/M			B			25 C1	12/97	
4-74A							1975	1975	14.5	0.66	1.31			1.31	P/C			B			25 C1	3/95	
4-75							3000	3000	17.5	1.21	2.41			2.41	P/C			B			26 D1	10/96	
4-75							1125		10	0.26	0.52	8	0.21	0.72	MW			Q	X		25 C1		
4-78							3000	3000	23	1.58	3.17			3.17	M/M	X		B			15 D2		
4-83							1000	1000	23.5	0.54	1.08			1.08	P/C			B			15 C1	9/95	
4-84							2500	2500	27	1.55	3.10			3.10	P/C			A	X		15 C4	12/95	94
4-85							4350	4350	38	3.79	7.59			7.59	M/M			B			15 D3	12/96	12/94
4-86							4100	13300	18	1.69	3.39	20	1.88	5.27	MW			Q	X		27 A1		
4-86							300		25	0.17	0.34	16	0.11	0.45	MW			Q	X		16 E4		
4-86							200		25	0.11	0.23	16	0.07	0.30	MW			Q	X		16 E4		
4-88							6700		27	5.39	10.79	28	5.59	16.38	MW			Q	X		16 E4		
4-87							2000	2000	20	0.92	1.84			1.84	M/M	X		C			15 E2		
4-88							1400	1400	22	0.71	1.41			1.41	M/M	X		B			15 E2		
4-89							2500	2500	19	1.09	2.18			2.18	M/M			B			15 F4	5/96	
4-89							1500		13	0.45	0.90	18	0.55	1.45	MW			Q	X		15 F4		
4-90							4000	4000	23	2.11	4.22			4.22	M/M			B			16 F4	5/95	91
4-90							1800		15	0.62	1.24	16	0.56	1.80	MW			Q	X		16 F4		
4-91							1200	1200	19.5	0.54	1.07			1.07	M/M			B			17 A4	5/95	91
4-92							2875	2875	19.5	1.20	2.39			2.39	M/M			C			16 F3	5/95	91
4-93							3000	3000	15	1.10	2.20			2.20	M/M			B			16 F3	5/95	91
4-93A							125	125	9	0.03	0.05			0.05	P/C			C			17 A3	11/96	
4-94							1500	1500	18.5	0.64	1.27			1.27	M/M			B			16 F3	5/95	91
4-94							1500		10	0.34	0.69	13	0.45	1.14	MW			Q	X		16 F3		
4-95							700	700	19.5	0.31	0.63			0.63	M/M			B			16 F3	5/95	91
4-96							5280	5280	22.5	2.73	5.45			5.45	M/M			B			26 F1	12/96	12/94

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CANAL INVENTORY

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4-96							1800		10	0.41	0.83	16	0.66	1.49	MW			Q	X		26 E1		
4-98							2000		13	0.60	1.19	18	0.73	1.93	MW			Q	X		26 E1		
4-97							1000	1000	13	0.30	0.60			0.60	H/C			A	X		26 E1	12/95	94
4-98							5280	5280	25.5	3.09	6.18			6.18	M/M			B			26 F1	10/95	93
4-98							1090		18	0.45	0.90	20	0.50	1.40	MW			Q	X		26 F1		
4-99							2000	2000	19	0.87	1.74			1.74	M/M			B			25 E1	2/96	
4-101							2500	2500	12	0.69	1.38			1.38	P/C			B			26 E2	1/95	
4-102							1500	1500	10	0.34	0.69			0.69	H/C			A	X		25 E2	1/96	95
4-103							4500	4500	17	1.76	3.51			3.51	P/C			C			26 E2	5/97	
4-103							1730		13	0.52	1.03	16	0.64	1.67	MW			Q	X		26 E2		
4-105							500	500	9.5	0.13	0.26			0.26	H/C			A	X		26 E2	2/96	2/95
4-106							7920	7920	22	4.00	8.00			8.00	M/M			B			26 F2	8/96	94
4-106							3125		15	1.08	2.15	17	1.22	3.37	MW			Q	X		26 F2		
4-106							1300		15	0.45	0.90	17	0.51	1.40	MW			Q	X		27 A1		
4-107							3800	3800	16.5	1.44	2.88			2.88	M/M			B			26 F1	2/96	
4-108							2000	2000	26	1.19	2.39			2.39	M/M	X		B			25 F2		92
4-108							1825		15	0.63	1.26	16	0.67	1.93	MW			Q	X		26 F2		
4-109							2000	2000	12	0.55	1.10			1.10	M/M			B			26 F1	2/95	93
4-110							1000	1000	17.5	0.40	0.80			0.80	P/C			B			27 A2	3/96	94
4-111							2400	2400	10	0.55	1.10			1.10	M/M			B			27 A2	10/95	93
4-111							1600		10	0.37	0.73	20	0.73	1.47	MW			Q	X		27 A2		
4-112							2800	2800	24	1.54	3.09			3.09	M/M			B			27 A1	11/95	93
4-113							3200	3200	26.5	1.95	3.89			3.89	M/M			B			27 A1	8/96	
4-113A							1525	1525	9	0.32	0.63			0.63	M/M			B			27 A1	10/96	94
4-113B							1800	1800	20	0.83	1.65			1.65	M/M			B			27 A1	7/96	
4-114							4000	4000	35	3.21	5.43			5.43	M/M	X		C			27 B1		
4-114							3100		25	1.78	3.56	30	2.13	5.69	MW			Q	X		27 A1		

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4/7/95 9:40 AM

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CANAL INVENTORY

mvcanlinv.xls

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
4-114							500		23	0.26	0.53	16	0.18	0.71	MW			Q	X		27 A1		
4-115							2200	2200	23.5	1.19	2.37			2.37	M/M	X		B			27 B2		
4-115							2200		16	0.81	1.62	18	0.91	2.53	MW			Q	X		27 B2		
4-117							1000	1000	37	0.85	1.70			1.70	M/M			C			27 B2	4/97	
4-116							3880	4880	7.5	0.67	1.34			1.34	M/M			B			27 B1	10/96	94
4-118							2500		14	0.80	1.61	19	1.09	2.70	MW			D	X		17 B4		
4-118							1400		20.5	0.66	1.32			1.32	P/C			B			17 B4	9/96	
4-118A							400	400	7.5	0.07	0.14			0.14	P/C			C			27 B1	3/97	
4-119							2000	2000	22.5	1.03	2.07			2.07	M/M			C			17 A3	6/95	
4-119							2000		13	0.60	1.19	16	0.73	1.93	MW			Q	X		17 A3		
4-119A							1000	1000	8	0.18	0.37			0.37	P/C			B			17 B3	6/96	
4-119B							475	475	6	0.07	0.13	12	0.13	0.26	MW			D	X		17 B3		
4-119B							475		11.5	0.13	0.25			0.25	SM P/C			B			17 B3	95	93
4-121							1150	1150	15.5	0.41	0.82			0.82	H/C			A	X		16 E4	11/95	94
5-118A							808	808	8	0.15	0.30	16	0.30	0.59	MW			Q	X		18 D1		
5-119							10560	10560	23	5.58	11.15			11.15	M/M	X		B			17 C2		
5-119							2000		17	0.78	1.56	16	0.73	2.30	MW			Q	X		18 D1		
5-119A							1000	1000	20	0.46	0.92			0.92	P/C			B			18 D2	9/95	
5-119A							808		17	0.32	0.63	16	0.30	0.93	MW			Q	X		18 D1		
5-122							4000	4000	14.5	1.33	2.66			2.66	P/C			B			18 D2	5/96	
5-122							868		5	0.10	0.20	27	0.54	0.74	MW			Q	X		18 D1		
5-123							1800	1800	9.5	0.39	0.79			0.79	P/C			B			18 D2	5/96	
5-124							1500	1500	9	0.31	0.62			0.62	P/C			B			18 D1	5/96	
5-125							800	800	13	0.24	0.48			0.48	M/M	X		B			18 F2		
5-126							7920	7920	17.5	3.18	6.36			6.36	M/M	X		C			18 F2		
5-127							2400	2400	11	0.61	1.21			1.21	M/M	X		C			18 A2		
6-45							1600	1600	35	1.29	2.57			2.57	M/M	X		C			17 B2		

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4/7/95 9:43 AM

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mxcanlinv.xls

CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	TOW WIDTH (FT)	TOW ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
6-114							5350	26990	27	3.32	6.63	102	12.53	19.16	MW			Q	X		18 F4		
6-114							24818		30	17.09	34.18			34.18	M/M	X		C			27 B1		
6-114							5200		20	2.39	4.78	145	17.31	22.08	MW			Q	X		27 B1		
6-114							15840		25	9.09	18.18	38	13.09	31.27	MW			Q	X		27 C1		
6-114							600		25	0.34	0.69	16	0.22	0.91	MW			Q	X		28 E1		
6-115							500	500	36	0.41	0.83			0.83	M/M	X		C			27 B2		
6-117							2500	2500	47	2.70	5.39			5.39	M/M	X		C			27 B1		
6-117							2230		27	1.38	2.76	36	1.84	4.61	MW			Q	X		27 B1		
6-118							2000	2000	29.5	1.35	2.71			2.71	M/M	X		C			17 B4		
6-118							1900		18	0.70	1.40	24	1.05	2.44	MW			Q	X		17 B4		
6-119							11325	11325	45	11.70	23.40			23.40	M/M	X		C			17 C2		
6-119							3600		23	1.90	3.80	40	3.31	7.11	MW			Q	X		17 C2		
6-119							3225		14	1.04	2.07	37	2.74	4.81	MW			Q	X		17 C4		
6-119							2300		15	0.79	1.58	65	3.43	5.02	MW			Q	X		17 C3		
6-119							2200		12	0.61	1.21	111	5.61	6.82	MW			Q	X		17 C3		
6-119A							3500	3500	12	0.96	1.93			1.93	M/M			B			17 C3	8/96	8/94
6-125							5280	5280	23	2.79	5.58			5.58	M/M	X		C			18 F3		
6-126							5280	5280	30.5	3.70	7.39			7.39	M/M	X		C			19 A3		
6-128							22400	22400	31	15.94	31.88			31.88	M/M	X		C			19 A4		
6-128							8000		26	4.78	9.55	28	5.14	14.69	MW			Q	X		19 A4		
6-129							1000	1000	5.5	0.13	0.25			0.25	M/M	X		B			19 C2		
6-132							7920	7920	25	4.55	9.09			9.09	M/M	X		B			17 C2		
6-133							1000	1000	25	0.57	1.15			1.15	M/M	X		C			18 E2		
6-134							1000	1000	18	0.41	0.83			0.83	M/M	X		C			18 D2		
6-135							600	600	22.5	0.31	0.62			0.62	M/M	X		C			18 D2		
6-136							5925	5925	18.5	2.52	5.03			5.03	M/M	X		C			17 C3		
6-136							5800		17	2.26	4.53	12	1.60	6.12	MW			Q	X		17 C3		

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4/7/95 9:43 AM

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
6-137							800	800	26	0.48	0.96			0.96	M/M	X		C			17 C3		
6-138							6600	6600	26	4.24	8.48			8.48	M/M	X		B			18 D4		
6-138							2460		16	0.90	1.81	22	1.24	3.05	MW			Q	X		18 D4		
6-139							3000	3000	26.5	1.83	3.65			3.65	M/M	X		B			17 C4		
6-139							1520		13	0.45	0.91	20	0.70	1.61	MW			Q	X		17 C4		
6-140							3000	3000	29	2.00	3.99			3.99	M/M	X		B			18 D4		
6-140							1150		15	0.40	0.79	17	0.45	1.24	MW			Q	X		18 D4		
6-141							2400	2400	20.5	1.13	2.26			2.26	M/M	X		C			27 C1		
6-142							4800	4800	23	2.53	5.07			5.07	M/M	X		B			27 C1		
6-142							3400		17	1.33	2.65	23	1.80	4.45	MW			Q	X		27 C2		
6-142							1400		16	0.51	1.03	6	0.26	1.29	MW			Q	X		27 C1		
6-143							5280	5280	24	2.91	5.82			5.82	M/M	X		B			26 D2		
6-143							3720		15	1.28	2.56	16	1.37	3.93	MW			Q	X		26 D1		
6-143							1000		15	0.34	0.69	16	0.37	1.06	MW			Q	X		26 D2		
6-143A							2350	2350	23.5	1.27	2.54			2.54	M/M			B			28 E2	10/95	
6-144							1400	1400	24	0.77	1.54			1.54	M/M			B			26 D2	10/95	
6-146							5280	5280	21.5	2.61	5.21			5.21	M/M	X		B			28 E1		
6-146							200		14	0.06	0.13	6	0.04	0.17	MW			Q	X		28 E1		
6-146							1800		12	0.50	0.99	16	0.66	1.65	MW			Q	X		18 E4		
6-146							200		14	0.06	0.13	18	0.08	0.21	MW			Q	X		T8 E4		
6-147							4100	4100	26	2.45	4.89			4.89	M/M	X		B			18 E2		
6-148							4800	4800	13	1.43	2.87			2.87	M/M	X		B			28 E1		
6-149							5280	5280	22.5	2.73	5.45			5.45	M/M	X		C			19 A4		
6-149							3950		15	1.36	2.72	16	1.45	4.17	MW			D	X		18 F4		
6-149A							6600	6600	20.5	3.56	7.12			7.12	M/M	X		C			29 A1		
6-149A							6540		15	2.25	4.50	22	3.30	7.81	MW			Q	X		29 A1		
6-149B							4000	4000	12	1.10	2.20			2.20	M/M	X		C			29 A2		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
5-150							2700	2700	27	1.67	3.35			3.35	M/M	X		C			18 F4		
5-150							1990		15	0.69	1.37	28	1.28	2.65	MW			Q	X		18 F4		
5-151							2300	2300	19	1.00	2.01			2.01	M/M	X		C			18 F3		
5-152							2270	2270	25	1.35	2.71			2.71	M/M	X		C			19 A4		
5-152							2270		18	0.94	1.88	16	0.83	2.71	MW			Q	X		18 F4		
5-153							10560	10560	32	7.78	15.52			15.52	M/M	X		C			18 F3		
5-153							8000		26	4.78	9.55	16	2.94	12.49	MW			Q	X		19 A4		
5-154							4500	4500	32.5	3.36	6.71			6.71	M/M	X		C			19 A3		
5-156							200	200	9	0.04	0.08			0.08	P/C			C			28 E1	3/97	
5-157							430	430	10	0.10	0.20			0.20	P/C			C			18 E4	3/97	
5-158							200	200	6	0.03	0.06			0.06	P/C			C			28 E1	3/97	
5-227							4000	4000	25	2.30	4.59			4.59	M/M	X		C			27 B2		
9-251							1750	1750	5	0.20	0.40			0.40	P/C			B			33 B1	1/95	
10-62B							2200	2200	20	1.01	2.02			2.02	M/M			C			26 D2	11/96	93
10-63							4000	4000	15.5	1.42	2.85			2.85	H/C			A	X		26 D2	4/95	93
10-63							900		6	0.12	0.25	8	0.17	0.41	MW			Q	X		26 D2		
10-66							1000	1000	11	0.25	0.51			0.51	M/M	X		B			27 B2		
10-107							125	125	9	0.03	0.05			0.05	P/C			C			27 A2	12/98	
10-108							5475	5475	25.5	3.21	6.41			6.41	M/M	X		B			28 F2		
10-108							1000		8	0.18	0.37	13	0.30	0.67	MW			Q	X		28 F2		
10-108A							350	350	5.5	0.04	0.09			0.09	P/C			C			28 F4	9/97	
10-109							2400	2400	9	0.50	0.99			0.99	P/C			B			25 A3	4/95	
10-110							120	120	2	0.01	0.01			0.01	P/C			C			25 A3	12/95	
10-111							1600	1600	7	0.26	0.51			0.51	H/C			A	X		25 B4	7/95	94
10-111A							720	720	15	0.25	0.50			0.50	P/C			C			25 B4	9/97	
10-115							5000	5000	30	3.44	6.89			6.89	H/C			A	X		27 B2	6/95	94
10-115							1650		8	0.30	0.61	15	0.57	1.17	MW			Q	X		27 B2		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
10-176							200	200	5	0.02	0.05			0.05	P/C			B			26 D3	8/95	
10-178							3200	3200	25	1.84	3.67			3.67	P/C			B			25 B3	6/96	
10-179							2000	3025	15.5	0.71	1.42			1.42	H/C			A	X		25 B3	1/96	1/95
10-179							500		12	0.17	0.33	14	0.19	0.52	MW			Q	X		27 B3		
10-179							1225		12	0.34	0.67	14	0.39	1.07	MW			Q	X		25 B3		
10-179							1200		8	0.17	0.33	16	0.44	0.77	MW			Q	X		25 B3		
10-180							1200	1200	12.5	0.34	0.69			0.69	H/C			A	X		25 B3	4/95	94
10-182							700	700	10	0.16	0.32			0.32	P/C			C			34 E1	5/95	
10-183							3200	3200	16	1.18	2.35			2.35	H/C			A	X		25 B4	11/95	11/94
10-183							975		10	0.22	0.45	14	0.31	0.76	MW			Q	X		25 B4		
10-184							9050	10025	25.5	5.30	10.60			10.60	M/M			A			25 C3	10/95	93
10-184							2080		14	0.67	1.34	44	2.10	3.44	MW			Q	X		25 B2		
10-184							4450		26.5	2.71	5.41			5.41	P/C			A			25 C3	10/95	
10-185							5280	5280	22.5	2.73	5.45			5.45	M/M	X		B			26 D3		
10-185A							3100	3100	12.5	0.89	1.78			1.78	H/C			A	X		26 D3	11/95	11/94
10-185A							3100		8	0.57	1.14	14	1.00	2.13	MW			Q	X		26 D3		
10-185B							2110	2110	8.5	0.41	0.82			0.82	P/C			B			26 D3	2/95	
10-186							4000	4000	16.5	1.52	3.03			3.03	H/C			A	X		26 E3	7/95	93
10-186							1785		12	0.49	0.97	23	0.93	1.90	MW			Q	X		26 E3		
10-187							4000	4800	21	1.93	3.86			3.86	M/M	X		B			26 D4		
10-187							2700		11	0.66	1.36	13	0.81	2.17	MW			Q	X		26 D4		
10-187							2100		15	0.72	1.45	33	1.59	3.04	MW			Q	X		26 D4		
10-188							2600	5280	14	0.84	1.67	8	0.48	2.15	MW			Q	X		26 E4		
10-188							5280		21.5	2.61	5.21			5.21	P/C			B			26 E4	2/96	
10-189							2000	2000	5	0.23	0.46			0.46	P/C			B			26 F3	4/95	
10-189A							900	900	4	0.08	0.17			0.17	P/C			B			26 F3	4/95	
10-189B							1200	1200	5	0.14	0.28			0.28	P/C			B			26 F3	4/95	

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
10-190							6480	6480	32.5	4.83	9.67			9.67	M/M			B			34 F1	3/96	
10-191							1700	1700	14	0.55	1.09			1.09	H/C			A	X		34 E2	8/95	94
10-192							2600	2600	24	1.43	2.87			2.87	M/M			B			34 F2	7/95	93
10-192							2500		13	0.75	1.49	12	0.69	2.18	CMC			Q			34 F1		
10-193							3500	3500	15	1.21	2.41			2.41	H/C			A	X		34 F1	10/95	94
10-194							4000	4000	12	1.10	2.20			2.20	P/C			B			34 F1	12/95	
10-195							3300	3300	19.5	1.48	2.95			2.95	H/C			A	X		34 F1	2/96	2/95
10-196							6000	6000	28.5	3.93	7.85			7.85	H/C			A	X		34 F2	1/96	1/95
10-198							1500		10	0.34	0.69	69	2.38	3.06	CMC			Q			34 F2		
10-198							1500		12	0.44	0.88	8	0.29	1.18	CMC			Q			35 A2		
10-199							3000	3000	20.5	1.41	2.82			2.82	H/C			A	X		35 A2	1/96	1/95
10-199							3300		13	0.98	1.97	47	3.56	5.53	CMC			Q			35 A2		
10-200							10560	10560	36	8.73	17.45			17.45	M/M	X		B			26 F4		
10-200							225		10	0.05	0.10	8	0.04	0.14	MW			Q	X		26 F4		
10-200							1195		12	0.33	0.66	16	0.44	1.10	MW			D	X		35 C1		
10-201							1000	1000	14	0.32	0.64			0.64	M/M	X		B			26 F4		
10-202							4000	4000	10.5	0.98	1.93			1.93	M/M	X		B			35 C1		
10-203							800	4000	12	0.22	0.44			0.44	H/C			A	X		26 F4	11/95	94
10-203							300		4	0.03	0.06	50	0.34	0.40	MW			Q	X		26 F4		
10-203							1250		6	0.17	0.34	12	0.34	0.69	MW			Q	X		26 F4		
10-203A							1300	1300	10	0.30	0.60			0.60	H/C			A	X		26 F1	11/95	94
10-204							3000	3000	6	0.41	0.83			0.83	M/M	X		B			27 B4		
10-204A							1000	1000	11	0.25	0.51			0.51	M/M	X		B			27 B3		
10-205							2000	2000	5	0.23	0.46			0.46	M/M	X		B			35 D2		
10-206							1600	1600	12.5	0.52	1.03			1.03	M/M	X		B			35 E2		
10-207							1900	1800	15	0.62	1.24			1.24	M/M	X		B			35 E2		
10-208							1200	1200	7.5	0.21	0.41			0.41	M/M	X		C			35 B2		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
10-209							1195	1195	8.5	0.23	0.47			0.47	M/M			B			34 F1	1/96	
10-209							1195		6	0.16	0.33	8	0.22	0.55	MW			Q	X		34 F1		
10-209A							1000	1000	7.5	0.17	0.34			0.34	M/M			B			34 F1	1/98	
10-210							200	200	4.5	0.02	0.04			0.04	P/C			C			25 A2	12/95	
10-210B							200	200	4.5	0.02	0.04			0.04	SM P/C			C			25 A2	95	
10-211							1000	1000	12	0.28	0.55			0.55	M/M			B			34 F2	2/96	
11-208							12450	13450	22.5	6.43	12.86			12.86	M/M			B			35 B2	11/95	93
11-208							750		7	0.12	0.24			0.24	P/C			B			35 A3	11/95	
11-208A							1200	1200	9	0.25	0.50			0.50	P/C			C			34 F3	1/97	
11-209							3000	3000	8	0.55	1.10			1.10	M/M	X		B			34 F2		93
11-210							3000	3000	21.5	1.48	2.96			2.96	M/M	X		B			35 A2		93
11-210							1000		11	0.28	0.55	8	0.20	0.75	CMC			Q			35 A3		
11-210							200		12	0.06	0.11	8	0.04	0.15	CMC			Q			35 A3		
11-212							4000	4000	26	2.39	4.78			4.78	M/M	X		B			35 A3		91
11-212							3220		15	1.11	2.22	24	1.77	3.99	CMC			Q			35 A3		
11-214							500	500	38	0.44	0.87			0.87	H/C			A	X		43 B1	11/95	11/94
12-66							200	200	20	0.09	0.18	21	0.10	0.28	MW			Q	X		27 B2		
12-128							14000	14000	30	9.64	19.28	38	12.21	31.50	MW			Q	X		29 A3		
12-143							1855	1855	24	1.02	2.04			2.04	M/M	X		B			28 D2		
12-143							1855		21	0.89	1.79	22	0.94	2.73	MW			Q	X		28 D2		
12-143A							1000	1000	9	0.21	0.41			0.41	M/M			B			28 D2	11/96	94
12-204							5280	5280	19	2.30	4.61			4.61	M/M	X		B			27 B4		
12-204							1600		8	0.29	0.59	18	0.66	1.25	MW			Q	X		27 C4		
12-206							3000	3000	16	1.10	2.20			2.20	M/M	X		B			36 B2		
12-211							400	400	9	0.07	0.15			0.15	P/C			B			36 F1	11/98	
12-227							15840	15840	20.5	7.45	14.91			14.91	M/M	X		B			27 B2		
12-227							300		14	0.10	0.19	20	0.14	0.33	MW			Q	X		27 C4		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
12-227							5000		14	1.61	3.21	20	2.30	5.51	MW			Q	X		27 C4		
12-228							3000	3000	14	0.96	1.93			1.93	M/M	X		B			27 B3		
12-229							2800	2800	18	1.16	2.31			2.31	M/M			C			36 F1	7/95	92
12-229							2800		10	0.64	1.29	15	0.96	2.25	MW			Q	X		27 C4		
12-230							1000	1000	12	0.28	0.55			0.55	M/M			C			36 F1	7/95	
12-232							3400	3400	15	1.17	2.34			2.34	M/M			B			27 C4	7/95	
12-233							2000	2000	17.5	0.80	1.61			1.61	M/M			B			28 D4	7/95	
12-234							400	400	8.5	0.08	0.16			0.16	M/M			B			36 F1	7/95	
12-237							5280	5280	14	1.70	3.39			3.39	M/M			B			36 F1	8/95	
12-238							1500	1500	15	0.52	1.03			1.03	M/M			B			37 B1	8/95	
12-239							3125	3125	16.5	1.18	2.37			2.37	H/C			A	X		37 C1	8/95	92
12-239							600		8	0.08	0.17	8	0.11	0.28	MW			Q	X		37 C1		
12-240							5280	5280	42.5	5.15	10.30			10.30	M/M			C			28 E2	8/95	
12-240							3500		11	0.88	1.77	23	1.85	3.62	MW			Q	X		28 E2		
12-243							10560	10560	16.5	4.00	8.00			8.00	M/M	X		C			39 D2		
13-128							8000	8000	25	4.59	9.18	16	2.94	12.12	CMC			Q			36 D2		
14-168							5400	5400	15	1.86	3.72			3.72	M/M	X		C			31 B4		
14-240							700	700	10	0.16	0.32			0.32	M/M	X		B			40 D2		
14-241							700	700	12.5	0.20	0.40			0.40	M/M	X		B			40 D2		
14-242							574	574	16	0.21	0.42			0.42	M/M			B			40 D2	11/96	94
14-243							800	800	16.5	0.30	0.61			0.61	M/M			B			40 D2	10/96	94
14-245							2800	2800	10	0.64	1.29			1.29	M/M			B			39 C1	8/96	
14-245							1010	1010	15	0.35	0.70			0.70	M/M			B			40 D1	11/96	94
14-247							640	640	8	0.12	0.24			0.24	M/M	X		B			39 C1		
14-248							458	458	7	0.07	0.15			0.15	M/M	X		B			31 A4		
14-249							530	530	8	0.10	0.19			0.19	M/M	X		B			31 A4		
14-250							1068	1068	13	0.32	0.64			0.64	M/M	X		B			30 F4		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
14-251							201	201	7	0.03	0.06			0.06	M/M	X		B			30 F4		
14-252							176	176	9	0.04	0.07			0.07	M/M	X		B			30 F4		
14-253							419	419	7	0.07	0.13			0.13	M/M	X		B			30 F4		
14-260							10560	10560	35	8.48	16.97			16.97	M/M	X		C			39 C1		
14-260							5030		5	0.58	1.15	16	2.08	3.23	MW			Q	X		39 C1		
14-261							4500	4500	12	1.24	2.48			2.48	M/M	X		B			30 F4		
14-262							155	155	20	0.07	0.14			0.14	M/M	X		B			30 F4		
14-263							5500	5500	14	1.77	3.54			3.54	M/M	X		B			39 C2		
14-267							2700	2700	10	0.62	1.24			1.24	M/M			B			39 C2	11/96	94
14-267							2511		6	0.46	0.92	23	1.33	2.25	MW			Q	X		39 C2		
14-268							925	925	7	0.15	0.30			0.30	M/M	X		B			40 D2		
14-268							623		3	0.04	0.09	14	0.20	0.29	MW			Q	X		40 D2		
14-269							554	554	11	0.17	0.33			0.33	M/M	X		B			39 C2		
14-270							3900	3900	9	0.81	1.61			1.61	M/M	X		B			39 C1		
14-270							2890		6	0.40	0.80	8	0.53	1.33	MW			Q	X		39 C1		
14-273							1000	1000	11	0.25	0.51			0.51	M/M	X		B			31A4		
14-274							358	358	10	0.08	0.16			0.16	M/M	X		B			31A4		
14-275							325	325	8.5	0.06	0.13			0.13	M/M	X		B			30 F4		
14-275							325		5	0.04	0.07	18	0.13	0.21	MW			Q	X		30 F4		
14-276							3100	3100	6.5	0.46	0.93			0.93	M/M	X		B			31 B4		
14-277							2200	2200	12	0.61	1.21			1.21	M/M	X		B			31 A4		
14-278							1230	1230	6	0.17	0.34			0.34	M/M	X		B			30 F3		
14-278							1230		5	0.14	0.28	8	0.23	0.51	MW			Q	X		30 F3		
14-279							940	940	10.5	0.23	0.45			0.45	M/M	X		B			30 F4		
14-280							2400	2400	10	0.55	1.10			1.10	M/M	X		C			31 B4		
14-280							2400		6	0.33	0.66	8	0.44	1.10	MW			Q	X		31 B4		
15-245							6500	6500	12.5	1.87	3.73			3.73	M/M	X		B			39 B3		

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CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	TAW WIDTH (FT)	TAW ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
16-265							5800	5800	13	1.73	3.46			3.46	M/M	X		B			39 B3		
16-266							2000	2000	10.5	0.48	0.96			0.96	M/M	X		B			40 D2		
16-270A							1100	1100	11	0.28	0.56			0.56	P/C			B			43 B3	8/95	
16-271							600	600	19	0.26	0.52			0.52	H/C			A	X		53 C2	2/96	95
17-271							5280	5280	19	2.30	4.61			4.61	H/C			A	X		53 C2	2/96	2/95
17-273							500	500	9.5	0.11	0.22			0.22	P/C			C			53 C2	1/97	
17-274							3800	3800	13	1.13	2.27			2.27	H/C			A	X		53 C2	2/96	2/95
17-274A							525	525	6.5	0.08	0.16			0.16	P/C			B			53 C3	3/96	
17-276							1500	1500	16	0.55	1.10			1.10	H/C			A	X		53 C3	1/95	94
17-277							100	100	11	0.03	0.05			0.05	P/C			C			54 D4	12/96	
17-278							2400	2400	16	0.88	1.76			1.76	P/C			B			63 B1	7/96	
17-280							5200	5200	14.5	1.73	3.46			3.46	M/M			A			54 E2	12/96	12/93
17-281							1085	1085	11	0.27	0.55			0.55	H/C			A	X		63 B1	1/95	94
17-282							500	500	14.5	0.17	0.33			0.33	P/C			B			63 B2	1/96	
19-178							5480	5480	11	1.38	2.77			2.77	P/C			C			53 C1	7/97	94
19-279							11880	11880	22.5	6.14	12.27			12.27	M/M			B			54 F3	10/95	93
19-279							3880		15	1.34	2.67	50	4.45	7.13	CMC			Q			54 F3		
19-287							2500	2500	7	0.40	0.80			0.80	M/M	X		B			64 E1		
19-288							5280	5280	13	1.58	3.15			3.15	H/C			A	X		64 E1	2/95	2/95
19-288							440		13	0.13	0.26	12	0.12	0.38	CMC			Q			64 E2		
19-289							1000	1000	17	0.39	0.78			0.78	P/C			C			64 D1	3/96	
19-289							500		15	0.17	0.34	8	0.09	0.44	CMC			Q			64 D1		
19-290							3000	3000	20	1.38	2.75			2.75	M/M	X		B			54 E3		
26-325A							8600	8600	10	1.52	3.03			3.03	H/C			A	X		63 B2	9/95	94
26-325E							175	175	4	0.02	0.03			0.03	P/C			C			63 C3	9/97	
26-326							2800	2800	19.5	1.25	2.51			2.51	P/C			B			69 C1	10/95	
26-327							1200	1200	25.5	0.70	1.40			1.40	P/C			C			69 C2	12/96	

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CANAL INVENTORY

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27-325F							150	150	5.5	0.02	0.04			0.04	P/C			C			63 C3	9/97	
27-327							4000	4000	32	2.94	5.88			5.88	M/C			A	X		59 C2	2/96	2/95
27-327A							2500	2500	28	1.61	3.21			3.21	M/C			A	X		70 D2	12/95	12/94
27-330							21120	21120	35	16.97	33.94			33.94	M/M	X		B			64 E2		
27-332							1500	22620	24	0.83	1.65			1.65	M/M	X		B			64 D4		
27-332							2000		24	1.10	2.20			2.20	P/C			B			64 E4	2/95	
27-332A							2000	2000	25	1.15	2.30			2.30	M/M	X		B			64 D4		
27-333							5280	5280	22	2.67	5.33			5.33	M/M	X		B			64 E3		
27-335							3000	3300	32.5	2.24	4.48			4.48	M/M			B			64 E4	8/95	93
27-335							3300		15	1.14	2.27	14	1.06	3.33	CMC			Q			64 E4		
27-335							15840	15840	21.5	7.82	15.64			15.64	M/M			B			64 E4	12/95	93
27-337							5280	5280	21.5	2.61	5.21			5.21	M/M			B			70 F1	12/95	
27-337							3000		20	1.38	2.75	22	1.52	4.27	CMC			Q			70 E1		
27-339							2500	2500	22.5	1.29	2.58			2.58	M/M	X		B			64 E2		
27-340							3400	3400	19	1.48	2.97			2.97	M/M	X		C			71 A2		
27-341							2300	2300	23.5	1.24	2.48			2.48	M/M	X		B			71 B1		
27-342							3500	3500	12.5	1.00	2.01			2.01	M/M	X		B			64 F1		
27-344							1400	1400	15.5	0.50	1.00			1.00	M/M	X		B			65 B2		
27-345							2000	2000	25	1.15	2.30			2.30	M/M	X		B			65 A2		
27-346							11880	11880	32	8.73	17.45			17.45	M/M			B			66 A3	4/95	93
27-346							955		9	0.18	0.35	18	0.40	0.75	CMC			Q			55 C4		
27-346							4600		12	1.27	2.53	20	2.11	4.65	CMC			Q			65 B4		
27-348							2400		22	1.21	2.42	14	0.77	3.20	CMC			Q			65 A3		
27-347							1100	1100	10	0.25	0.51	14	0.35	0.86	CMC			D			65 B3		
27-347A							375	500	11.5	0.10	0.20			0.20	P/C			C			65 B3	3/96	
27-347A							500		10	0.11	0.23	12	0.14	0.37	CMC			Q			65 A3		
27-347B							600	1440	13	0.18	0.36			0.36	P/C			C			65 A3	3/96	

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
27-347B							1440		10	0.33	0.66	14	0.46	1.12	CMC			Q			65 A3		
27-347C							550	550	6	0.08	0.15			0.15	P/C			C			65 B3	3/96	
27-347D							1200	1200	10.5	0.29	0.58			0.58	P/C			C			65 B3	3/96	
27-347E							200	200	14.5	0.07	0.13			0.13	P/C			C			65 B3	3/96	
27-347F							1000	1000	8.5	0.20	0.39			0.39	P/C			C			65 B3	3/96	
27-349							5280	5280	19.5	2.36	4.73			4.73	M/M	X		C			65 C3		94
27-350							4000	4000	25	2.30	4.59			4.59	M/M	X		C			65 C3		94
27-352							2200	2200	25	1.26	2.53			2.53	M/M	X		B			65 D2		
27-353							3700	3700	19	1.61	3.23			3.23	M/M	X		B			66 D2		
27-353							2790		12	0.77	1.54	15	0.98	2.50	CMC			Q			66 D2		
27-354							5280	5280	17.5	2.12	4.24			4.24	M/M	X		C			66 D3		
27-355							3200	3200	16.5	1.21	2.42			2.42	M/M	X		C			66 E2		
27-356							5800	5800	16.5	2.20	4.39			4.39	M/M	X		C			66 E3		
27-358							5280	5280	18.5	2.24	4.48			4.48	M/M	X		C			72 D1		
27-358A							3900	3900	17.5	1.57	3.13			3.13	M/M	X		C			66 E4		
27-359							4545	4545	16.5	1.72	3.44			3.44	M/M	X		B			70 E1		
27-359							4545		10	1.04	2.09	34	3.55	5.63	CMC			Q			70 E1		
28-340							500	500	15	0.17	0.34			0.34	H/C			A	X		71A2	3/95	92
28-363							1400	1400	16.5	0.53	1.06			1.06	M/M			B			70 E4	2/96	
28-365							10560	10560	29	7.03	14.06			14.06	M/M			A			70 E3	1/95	
28-365							2530		15	0.87	1.74	24	1.39	3.14	CMC			Q			70 F4		
28-365A							2530		10	0.58	1.16	24	1.39	2.56	CMC			Q			70 E4		
28-366							1200	1200	13.5	0.37	0.74			0.74	H/C			A	X		70 E3	1/96	1/95
28-367							1200	1200	13	0.36	0.72			0.72	H/C			A	X		70 F4	6/95	94
28-368							1400	1400	9	0.29	0.58			0.58	H/C			A	X		70 E3	2/95	
28-369							4000	4000	12	1.10	2.20			2.20	H/C			A	X		70 F3	7/95	93
							300	300	21	0.14	0.29			0.29	H/C			A	X		70 E2	3/95	

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CANAL INVENTORY

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CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	TAW WIDTH (FT)	TAW ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
28-370							50	50	8.5	0.01	0.01			0.01	P/C			B			70 E2	2/95	
28-370A							300	300	7.5	0.05	0.10			0.10	H/C			A	X		70 F3	3/95	
28-371							5280	5280	16.5	2.00	4.00			4.00	H/C			A	X		70 F3	2/96	2/95
28-372							4200	4200	29.5	2.84	5.69			5.69	M/M			B			71 A3	2/95	93
28-372							4000		18	1.85	3.31	24	2.20	5.51	CMC			Q			71 A3		
28-375							2509	9279	13	0.75	1.50	15	0.86	1.50	CMC			Q			71 B4		
28-375							660		10	0.20	0.39	15	0.30	0.69	CMC			Q			71 B4		
28-375							5910		12	1.63	3.26	15	2.04	5.29	CMC			Q			71 B4		
28-380							6600	6600	20	3.03	6.06			6.06	M/M	X		B			72 D2		
28-381							5280	5280	19	2.30	4.61			4.61	M/M	X		B			72 D2		
28-382							7920	7920	25	4.55	9.09			9.09	M/M	X		B			72 E3		
28-383							6600	6600	24	3.64	7.27			7.27	P/C			B			71 B3	11/95	
28-383							3145		14	1.01	2.02	12	0.87	2.89	CMC			Q			71 C3		
28-384							1700	1700	15	0.59	1.17			1.17	M/M	X		B			71 C3		
28-385							4500	4500	12	1.24	2.48			2.48	P/C			B			71 B4	11/95	
28-385							2770		15	0.95	1.91	23	1.46	3.37	CMC			Q			71 B4		
28-385A							5300	5300	18	2.19	4.38			4.38	P/C			B			71 B4	11/95	
28-385A							3900		12	1.07	2.15	20	1.79	3.94	CMC			Q			71 B4		
28-385B							2900	2900	14	0.93	1.86			1.86	P/C			B			71 C3	11/95	
28-385C							2400	2400	15.5	0.85	1.71			1.71	P/C			B			71 C3	11/95	
28-386							500	500	14	0.16	0.32			0.32	P/C			B			71 B4	12/95	
28-387 H							2200	2200	12	0.61	1.21			1.21	P/C			B			71 B3	7/96	
28-387							570		8	0.12	0.25	13	0.20	0.45	CMC			Q			71 B4		
28-388							1100	1100	18	0.45	0.91			0.91	P/C			B			71 C4	12/95	
28-389							2600	2600	30	1.79	3.58			3.58	P/C			B			71 C4	12/95	
28-389							2200		20	1.01	2.02	20	1.01	3.03	CMC			Q			71 C4		
28-390							5280	5280	12	1.45	2.91			2.91	M/M			B			76 D1	3/95	

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
28-390							480		6	0.07	0.13	12	0.13	0.27	CMC			Q			71 B4		
28-391							4000	4000	23	2.11	4.22			4.22	M/M			A			75 C1	2/95	93
28-392							5280	5280	35	4.24	8.48			8.48	M/M			B			76 E2	3/95	
28-393							2700	2700	17	1.05	2.11			2.11	M/M			B			76 E2	3/95	91
28-393							3500		12	0.86	1.93	14	1.12	3.05	CMC			Q			76 E2		
28-394							625	625	15.5	0.22	0.44			0.44	H/C			A	X		76 E2	7/95	94
28-396							1100	1100	10	0.25	0.51			0.51	H/C			A	X		71 A4	3/95	
28-396A							1100	1100	6.5	0.16	0.33			0.33	H/C			A	X		70 F4	3/95	94
28-396C							1000	1000	10	0.23	0.46			0.46	H/C			A	X		71A4	3/95	
28-397							500	580	8	0.09	0.18			0.18	H/C			A	X		70 F3	3/95	
28-397							580		10	0.13	0.27	15	0.20	0.47	CMC			Q			70 F4		
30-100							1950	1950	12	0.54	1.07			1.07	H/C			A	X		79 C1	11/95	94
30-100A							500	500	7.5	0.10	0.21			0.21	H/C			A	X		79 C1	11/95	94
30-438							14520	14520	12	4.00	8.00			8.00	M/M			B			74 E1	5/96	
30-438							9893		8	1.82	3.63	20	4.54	8.18	CMC			Q			74 E3		
30-440							1500	1500	20	0.69	1.38			1.38	M/M			B			74 E4	7/96	7/94
30-440							900		15	0.31	0.62	15	0.31	0.93	CMC			Q			74 E4		
30-441							1300	1300	20.5	0.61	1.22			1.22	M/M			B			74 F4	7/96	7/94
30-441							1030		15	0.33	0.71	15	0.35	1.06	CMC			Q			74 F4		
30-442							4800	4800	21.5	2.37	4.74			4.74	M/M			B			74 F3	7/96	7/94
30-442							2880		15	0.99	1.98	15	0.99	2.98	CMC			Q			74 F3		
30-443							1400	1400	15.5	0.50	1.00			1.00	M/M			B			74 F3	7/96	7/94
30-443							1770		8	0.33	0.65	20	0.81	1.46	CMC			Q			74 F3		
35-171							250	2700	7.5	0.04	0.09			0.09	P/C			B			81 B1	8/95	
35-171							2700		7	0.43	0.87			0.87	P/C			B			81 B1	8/95	
35-171A							500	500	6.5	0.07	0.15			0.15	P/C			B			81 B1	8/95	
35-171B							350	350	5.5	0.04	0.09			0.09	P/C			B			81 A1	8/95	

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35-448							6600	6600	13	1.97	3.94			3.94	P/C			A			75 C2	9/95	
35-448							2525		8	0.46	0.93	13	0.75	1.68	C/C			Q			76 D3		
35-448A							950	950	8.5	0.18	0.37			0.37	SM P/C			B			76 D2	95	
35-448B							100	100	5.5	0.01	0.03			0.03	SM P/C			B			76 D2	97	95
35-449							3800	3800	17	1.48	2.97			2.97	P/C			B			76 D3	9/95	
35-449							1330		6	0.18	0.37	17	0.52	0.89	CMC			Q			76 D3		
35-458A							345	345	9	0.07	0.14	14	0.11	0.25	CMC			Q			81 A1		
35-460							1575	1575	15	0.54	1.08	20	0.72	1.08	CMC			Q			81 C2		
35-460							500		20.5	0.24	0.47			0.47	SM P/C			B			82 E4	97	94
35-461							3400	3400	11.5	0.90	1.80			1.80	H/C			A	X		76 D3	5/95	94
35-460							3400	3400	20.5	1.80	3.20			3.20	M/M			C			82 D2	5/97	94
35-460							1575		15	0.54	1.08	20	0.72	1.08	CMC			Q			82 D2		
35-461							1680	1680	8	0.31	0.62	15	0.58	1.20	CMC			Q			82 E1		
38-462							210	210	12.5	0.06	0.12			0.12	H/C			A	X		82 E4	5/95	94
38-463							205	205	13	0.06	0.12			0.12	H/C			A	X		82 E4	5/95	94
38-464							900	900	7.5	0.15	0.31			0.31	SM P/C			B			82 E4	95	
38-460							1130	1130	13	0.34	0.67	15	0.39	1.06	CMC			Q			86 F1		
38-461							3400	3400	19	1.48	2.97			2.97	H/C			A	X		82 E4	8/95	
38-465							5280	5280	14	1.70	3.39			3.39	H/C			A	X		82 F4	8/95	93
38-473							3300	3300	21.5	1.63	3.26			3.26	M/M			B			83 B3	5/95	91
38-474							1830	5280	8	0.34	0.67	10	0.42	1.09	CMC			Q			87 B1		
38-475							2640	2640	7.5	0.45	0.91			0.91	M/M			C			83 B4	6/95	91
38-476							3000	3000	7.5	0.52	1.03			1.03	M/M			C			83 C4	6/95	92
L12-21							600	600	8.5	0.12	0.23			0.23	P/C			C			27 B2	10/97	
L12-25							350	350	6.5	0.05	0.10			0.10	SM P/C			C			27 C2	96	
L12-28							150	150	10.5	0.04	0.07			0.07	SM P/C			C			27 D3	96	
C3-1			X				271	13260	15	0.09	0.19	16	0.10	0.29	CMW			M			3 C4		

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C3-1			X				1290		15	0.44	0.89	26	0.77	1.66	CMW			M			3 C4		
C3-1			X				303		23	0.16	0.32	59	0.41	0.73	CMW			M			3 C4		
C3-2			X				800	10560	18	0.29	0.59	22	0.40	0.99	CMW			M			14 F1		
C3-2			X				115		9	0.02	0.05	13	0.03	0.08	CMW			M			15 A1		
C3-2			X				600		7	0.10	0.19	35	0.48	0.67	CMW			M			15 B1		
C3-2			X				500		16	0.22	0.44	44	0.61	1.05	CMW			M			15 B1		
C3-2			X				643		3	0.04	0.09	14	0.21	0.30	CMW			M			15 B2		
C3-2			X				637		14	0.20	0.41	43	0.63	1.04	CMW			M			15 A1		
C3-2			X				133		16	0.05	0.10	35	0.11	0.20	CMW			M			15 A1		
C3-2			X				906		16	0.33	0.67	44	0.92	1.58	CMW			M			15 A1		
C3-2			X				1288		18	0.53	1.06	30	0.89	1.95	CMW			M			15 B2		
C3-2			X				918		16	0.34	0.67	27	0.57	1.24	CMW			M			15 B2		
C3-2A			X				918	1200	8	0.17	0.34	28	0.59	0.93	CMW			M			15 B2		
C3-2C			X				1273	1000	7	0.20	0.41	30	0.88	1.29	CMW			M			15 B2		
C3-2D			X				783	1500	12	0.22	0.43	25	0.45	0.88	CMW			M			15 A1		
C3-4			X				341	2000	13	0.10	0.20	39	0.31	0.51	CMW			M			14 F1		
C3-4			X				325		11	0.08	0.16	168	1.25	1.42	CMW			M			14 F1		
C3-4			X				142		20	0.07	0.13	11	0.04	0.17	CMW			M			4 D4		
C3-4			X				388		20	0.18	0.36	11	0.10	0.45	CMW			M			3 F4		
C3-7			X				1858	10560	13	0.55	1.11	24	1.02	2.13	CMW			M			4 D4		
C3-13			X				370	1200	8	0.07	0.14	34	0.29	0.42	CMW			M			15 C2		
C3-17			X				296	8280	10	0.07	0.14	30	0.22	0.35	CMW			M			15 B1		
C3-17			X				2410		23	1.27	2.54	96	5.31	7.86	CMW			M			16 D2		
C4-12			X				3560	3560	22	1.80	3.60	48	3.92	7.52	CMW			M			16 D2		
C4-14			X				7845	7920	25	4.50	9.00	87	15.67	24.67	CMW			M			15 E2		
C4-37			X				741	5808	12	0.20	0.41	26	0.44	0.85	CMW			M			16 E3		
C4-51			X				1386	5860	12	0.38	0.76	34	1.08	1.85	CMW			M			15 B2		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
C4-51			X				520		9	0.11	0.21	17	0.20	0.42	CMW			M			15 B2		
C4-51			X				617		13	0.24	0.49	8	0.15	0.64	CMW			M			15 B3		
C4-51			X				903		17	0.35	0.70	20	0.41	1.18	CMW			M			15 B3		
C4-51			X				791		20	0.36	0.73	20	0.36	1.09	CMW			M			15 B3		
C4-53			X				1210	1210	20	0.56	1.11	166	4.61	5.72	CMW			M			15 B3		
C4-54			X				207	3200	20	0.10	0.19	147	0.70	0.89	CMW			M			15 B4		
C4-56			X				75	4500	10	0.02	0.03	8	0.01	0.05	CMW			M			15 B4		
C4-56			X				125		12	0.03	0.07	66	0.18	0.26	CMW			M			15 B4		
C4-56			X				900		10	0.21	0.41	55	1.14	1.55	CMW			M			15 B4		
C4-58			X				1115	13200	49	1.25	2.51	90	2.30	4.81	CMW			M			15 C4		
C4-67			X				1490	3000	15	0.51	1.00	62	2.12	3.15	CMW			M			25 B2		
C4-68			X				800	1500	15	0.28	0.55	62	1.14	1.69	CMW			M			25 B1		
C4-84			X				1448	2500	30	1.00	1.98	21	0.70	2.68	CMW			M			15 C4		
C4-85			X				3930	4350	20	1.80	3.61	24	2.17	5.77	CMW			M			15 C3		
C7-13			X				2000	2000	10	0.46	0.92			0.92	H/C			A	X		3 E3	2/96	2/95
C7-14			X				750	750	16	0.28	0.55			0.55	P/C			B			3 B3	2/96	
C9-15			X				1500	1500	11	0.38	0.76			0.76	H/C			A	X		3 E3	2/96	2/95
C10-18			X				328	1000	9	0.07	0.14	34	0.26	0.39	CMW			M			3 C4		
C10-19			X				1100	1100	12	0.30	0.61	8	0.20	0.81	CMW			M			3 C4		
C10-19			X				413		12	0.11	0.23	16	0.15	0.38	CMW			M			3 C3		
C10-19A			X				305	305	12	0.08	0.17	22	0.15	0.32	CMW			M			3 C4		
C14-10			X				650	650	8	0.12	0.24	25	0.37	0.61	CMW			M			3 C4		
C18-10			X				730	750	10	0.17	0.34	17	0.29	0.62	CMW			M			15 A1		
C18-11			X				1970	2950	5	0.21	0.43	3	0.13	0.56	CMW			M			15 A1		
C18-11			X				1870		5	0.21	0.43	3	0.13	0.56	CMW			M			15 A1		
C22-12			X				89	650	10	0.02	0.04	21	0.04	0.08	CMW			M			14 F2		
C25-13			X				1038	3304	5	0.12	0.24	21	0.50	0.74	CMW			M			15 C2		

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CANAL INVENTORY

CANAL I.D.	FROM	TO	CITY	R/W	EASEMENT	NON-MAINTAINED	WORK LENGTH (FT)	TOTAL LENGTH (FT)	SLOPE WIDTH (FT)*	SLOPE ACRES MAINTAINED (ONE SLOPE)	SLOPE ACRES MAINTAINED (BOTH SLOPES)	T/W WIDTH (FT)	T/W ACRES MAINTAINED	TOTAL CANAL ACRES MAINTAINED	METHOD OF MAINTENANCE	BACK LOG	ANNUAL COST	FREQUENCY OF MAINTENANCE	CONTRACT	COMMENTS (IF MARKED SEE FILE)	ATLAS PAGE	NEXT MAINTENANCE DATE	LAST MAINTENANCE DATE
C26-13			X				534		4	0.06	0.12	18	0.26	0.38	CMW			M			15 C2		
C26-13			X				1187		6	0.16	0.33	16	0.44	0.76	CMW			M			15 C2		
C26-13			X				445		18	0.18	0.37	56	0.57	0.94	CMW			M			15 C2		
C31-15			X				500	1200	8	0.09	0.18	19	0.22	0.40	CMW			M			14 F2		
C31-15			X				220		10	0.05	0.10	28	0.14	0.24	CMW			M			15 A2		
C31-15			X				311		8	0.06	0.11	31	0.22	0.34	CMW			M			15 A2		
C32-15			X				1700	4000	20	0.78	1.56	21	0.82	2.38	CMW			M			15 A2		
C32-15			X				820		20	0.38	0.75	20	0.38	1.13	CMW			M			15 A2		
C32-15			X				1396		6	0.19	0.38	16	0.51	0.90	CMW			M			15 B2		
C33-15			X				1396		6	0.19	0.38	16	0.51	0.90	CMW			M			15 B2		
C33-15A			X				100	100	6	0.01	0.03	28	0.06	0.09	CMW			M			15 B2		
C41-16			X				793	1000	12	0.22	0.44	5	0.09	0.53	CMW			M			15 A4		
C41-17			X				558	558	13	0.17	0.33	17	0.22	0.55	CMW			M			15 A3		
C42-11			X				680	680	7	0.11	0.22	70	1.09	1.31	CMW			M			15 B3		
C42-12			X				700	700	9	0.14	0.28	80	1.29	1.57	CMW			M			15 B4		
C43-12			X				900	900	10	0.21	0.41	96	1.98	2.40	CMW			M			15 B4		
C64-10			X				630	630	7.5	0.11	0.22			0.22	P/C			C			25 A2	2/97	
CR4-1			X				2730	2730	18	1.13	2.26	19	1.19	3.45	CMW			M			4 D4		
CR3-2			X				102	102	4	0.01	0.02			0.02	CMW			M			3 C4		
CR3-3			X				116	116	5	0.01	0.03	26	0.07	0.10	CMW			M			3 C4		
CR3-4			X				132	132	6	0.02	0.04			0.04	CMW			M			3 C4		
CR3-5			X				83	83	5	0.01	0.02	5	0.01	0.03	CMW			M			3 C4		
CR3-6			X				305	305	3	0.02	0.04	3	0.02	0.06	CMW			M			3 C4		
CR3-7			X				174	174	4	0.02	0.03	4	0.02	0.05	CMW			M			3 C4		
CR3-8			X				250	250		0.00		12	0.07	0.07	CMW			M			3 C3		
CR3-13			X				259	259	3	0.02	0.04	7	0.04	0.08	CMW			M			3 C4		
CR5-14			X				626	626	6	0.09	0.17	16	0.26	0.43	CMW			M			15 B2		

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CANAL INVENTORY

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CR15-9			X				389	389	6	0.05	0.11	9	0.08	0.19	CMW			M			15 B2		
CR15-10			X				586	586	3	0.04	0.08	3	0.04	0.12	CMW			M			15 B2		
CR15-11			X				278	278	5	0.03	0.06	18	0.11	0.18	CMW			M			15 B2		
CR15-12			X				800	800	5	0.09	0.18	22	0.40	0.59	CMW			M			15 C3		
CR15-15			X				300	300	6	0.04	0.08	10	0.07	0.15	CMW			M			15 C2		
CR15-16			X				429	429	6	0.06	0.12	5	0.05	0.17	CMW			M			15 C2		
CR15-18			X				2063	2063	6	0.28	0.57	7	0.33	0.90	CMW			M			15 C4		
CR15-19			X				290	290	7	0.05	0.09	21	0.14	0.23	CMW			M			15 A4		
CR15-20			X				477	477	12	0.13	0.26	33	0.36	0.62	CMW			M			15 A1		
CR15-21			X				208	208	8	0.04	0.08			0.08	CMW			M			15 A4		
CR15-22			X				1252	1252	5	0.14	0.29			0.29	CMW			M			15 B2		
CR15-23			X				384	384	7	0.06	0.12			0.12	CMW			M			15 B2		
CR15-24			X				522	522	12	0.17	0.34	19	0.27	0.61	CMW			M			15 B2		
CR15-25			X				770	770	4	0.07	0.14	5	0.09	0.23	CMW			M			15 C3		
CR15-26			X				70	70	5	0.01	0.02	21	0.03	0.05	CMW			M			15 C3		
CR15-27			X				1900	1900	8	0.35	0.70	61	0.28	0.98	CMW			M			15 C4		
CR16-17			X				453	453	5	0.05	0.10	9	0.08	0.19	CMW			M			16 D2		
		GRAND TOTALS =					1,793,192.00	1530439		816.10	1,632.20		303.38	1,933.27									

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SARASOTA COUNTY BRIDGE INVENTORY

This inventory includes bridges with a numbering system, we inventory 92 at this time, numbers starting at 170028 .

BY;
Engineering/ Production/
Scheduling

SARASOTA COUNTY DEPARTMENT OF TRANSPORTATION

Highway

Maintenance Division

			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
170028	Indian Creek Run	38	60		62	89	98	6/30/92	89.90	
	Fruitville Rd									
170030	Cow Pen Slough	21	22	22	33	30	32	05-30-90	60.70	
	Fruitville Rd									
170032	Phillippi Creek	37	38	37	52	53	56	7/27/92	89.60	
	Beneva Road									
170054	Venice Ave ICW Drawbridge	30	19	37	32	42	46	7/17/92	65.60	Lock Replacement
	Venice Avenue									
170055	Myakka River Branch	78	115	138	129	126	140	2/19/91	96.20	PN - 9217
	South River Road									
170056	Gottfried Creek	34	36	36	51	45	49	8/5/92	79.10	
	Dearborn Road									
170057	Albee Road ICW Drawbridge	19	36	36	32	42	46	8/27/92	61.40	FUNC. OBS
	Albee Road									
170058	Manasota ICW Drawbridge	16	32	34	27	36	39	7/27/92	65.50	
	Manasota Beach Road									

SARASOTA COUNTY DEPARTMENT OF TRANSPORTATION
Highway
Maintenance Division

			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
170064	Blackburn Point ICW Swingbridge	13	13	13	16	17	17	7/20/92	4.10	Structure Posted for 4 Tons Cars , Vans , Pickups & Panel Trucks Only
	Blackburn Point Road									STRUCTURALLY DEF
170066	Myakka River	40	44	42	60	52	57	8/27/92	73.80	FUNC. OBS
	Myakka Rd (Cr 780)									
170072	Phillippi Creek	36	36	36	39	37	42	9/23/92	82.30	
	Proctor Road									
170121	Cocoplum Canal	70	73	72	--	97	--	9/12/91	97.20	FDOT transfer
	Toledo Blade Road									
170122	Snover Canal ;	71	74	72				9/12/91	97.20	FDOT transfer
	Toledo Blade Road									
174000	Dona Bay	7	8	8	12	11	11	8/27/92	12.00	Under construction being replaced by 1740__
	Albee Farm Rd									FUNC OBS
174001	Phitlippi Creek Coquina Pass	12	13	13	18	17	19	8/27/92	6.00	STRUCTDEF
	America Drive									

SARASOTA COUNTY DEPAR..MENT OF TRANSPORTATION
Highway
Maintenance Division

			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
174003	Phillippi Creek /Canal	40	42	41	62	56	60	9/8/92	74.10	Under Construction FUNC OBS
	Bahia Vista St									BEGAN 8/1/92
										REP # 174083
174004	Branch Canal AA	14	17	15	22	19	21	9/15/92	48.00	FUNC. OBS
	Bahia Vista St									
174007	Canal Lat. AD	23	23	23	33	29	32	8/27/92	28.00	FDOT design and upgrade 1995 +
	Bee Ridge Rd									FUNC. OBS
174008	Matheny Creek	4	5	5	7	6	7	7/27/92	21.80	FUNC. OBS
	Bispham Rd									
174009	Denham Br.Canal	18	19	18	27	24	27	8/5/92	51.20	
	Bispham Rd									
174010	Dryman Bay	9	11	11	14	13	14	7-19-90	26.10	FUNC. OBS
	Blackburn Pt.Rd									
174011X	Red Bug Slough (Phillippi Creek)	26	31	28	42	35	38	9/8/92	58.50	Deleted from FDOT inspection 9/17/92 Rating date 11/3/89
	Brookside Dr									FUNC. OBS
174014	Whitaker Bayou	11	15	14	19	17	18	8/27/92	36.60	FUNC. OBS
	(Canal Main A)									
	Central Ave									
174016x	Canal Main C	10	9	8	16	12	14	05-30-90	43.20	??????????

SARASOTA COUNTY DEPARTMENT OF TRANSPORTATION
Highway
Maintenance Division

			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
	E Sawgrass Rd									
174019	Dee/TownGutley	37	43	39	57	49	54	9/23/92	77.90	FUNC.OBS
	Harbor Dr									
174020X	Waterford Canal Englewd isles Pkwy	40	48	42	61	52	57	8/31/92	65.60	Deleted from FDOT inspection 8/17/92
										FUNC.OBS
174021	Dona Bay Laurel Road								40.40	REPLACED by 174079
174022	Br. Canal 54B Golf Club Blvd	30	20	21	30	28	30	8/5/92	63.00	
174023X	Bermuda Brook	12	15	13	20	17	18	8/27/92	45.10	Deleted from FDOT inspection
	Lockwd Ridge Rd									FUNC. OBS
174024	Canal Lat. AB	23	45	47	38	49	54	8/27/92	80.00	
	Lokai Rd									
174025	Jaffa Canal	23	24	23	34	31	34	8/27/92	80.20	
	Mineola Dr									
174026X	Blackburn Bay	12	15	13	18	16	18	8/14/92	41.00	Deleted from FDOT inspection
	(Nokomis Beach)									8/17/92
	Boat Ramp Rd									

SARASOTA COUNTY DEPARTMENT OF TRANSPORTATION
Highway
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			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
174027	Blackburn Canal								43.90	CONTRACT UPGRADE completed
	Auburn Rd									BEGAN 12/12/90
174028	Curry Creek	32	34	33	48	44	49	9/8/92	23.00	Upgrade in Progress
	Jackson Rd									FUNC. OBS
174029	TideWater Canal	6	6	6	10	9	9	8/27/92	32.60	FUNC. OBS
	Oak St									
174030	Channel A	18	19	19	27	24	27	8/7/92	39.40	STRUCTDEF
	Ortiz Blvd									
174031	Canal Lat. AG	41	43	42	60	53	58	8/7/92	86.50	
	Palmer Blvd									
174032	Canal Main C	52	55	54	79	71	77	8/30/92	77.70	FUNC. OBS
	Palmer Blvd									
174033	Canal Main C	25	25	25	38	35	37	7/10/92	71.60	
	Porter Road									
174034	Branch Canal BA	19	20	19	28	25	28	8/27/92	66.90	
	Prudence Dr									
174035	Br.Canal BA	11	12	12	17	15	17	9/15/92	38.70	FUNC. OBS
	Prudence Dr									
174037	Canal Lat.CA	9	11	12	15	13	14	7/27/92	46.30	REPAIR PERFORMED by

SARASOTA COUNTY DEPAR...IENT OF TRANSPORTATION
Highway
Maintenance Division

			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
	Raymond Rd									FUNC. OBS
174038X	W. Phillippi Ch.	16	19	18	26	22	24	9/23/92	53.90	Deleted from FDOT Inspection (Func OBS)
	River Ridge Wy									8/17/92
174039	Blossom Brook	30	30	32	31	45	45	9/8/92	58.00	
	Shade Ave									
174040	Alligator Cr.	14	19	18	24	21	23	8/10/92	16.80	Reconst. 10/92 replace total struct.
	Shamrock Dr									STRUCTDEF
174042	Bermuda Brook	10	11	11	16	13	15	9/3/92	51.30	
	Tanglewood Dr									
174043	Channel B	19	20	19	28	25	28	8/7/92	62.30	FUNC. OBS
	Trionfo Ave									
174044	Canal Main B	19	20	20	30	27	29	8/27/92	62.60	
	Tri-Par Dr									
174046	Catfish Creek	9	10	9	13	13	15	7/27/92	38.30	FUNC. OBS
	Varno Way									
174047	Curry Creek	26	28	27	40	36	39	8/27/92	61.80	Reconstructed started 4/15/94

SARASOTA COUNTY DEPAR...ENT OF TRANSPORTATION
Highway
Maintenance Division

			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
	Albee Farm Rd									FUNC. OBS
174049	Phillippi Cr.	23	26	24	35	30	33	9/23/92	59.80	FUNC. OBS
	Webber St									
174050	Brookside Canal	16	17	16	24	21	23	9/8/92	61.60	
	Wilkinson Rd									
174052	Branch Canal BA	47	70	71	78	78	85	8/27/92	94.80	
	27th St. Pkwy.									
174053	Gulf Gate Canal	35	49	61	35	49	49	7/27/92	82.20	
	Beneva Rd									
174054	Hatchett Creek	46	73	84	76	81	89	8/27/92	67.20	
	Venice Ave East									
174055	Orange Creek	38	61	77	60	68	80	6/30/92	93.10	
	Richardson Lane									
174059	Lyons Bay	43	45	44	64	56	62	8/10/92	95.60	
	Albee Rd.									

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			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
174060	Mosquito Run	44	81	99	73	90	98	6/17/92		
	Beneva Rd									
174061X	Waterford Canal	30	36	32	47	40	43	8/27/92	57.10	Deleted from FDOT inspection 8/17/92
XXXX	Englewd Isle Pk									FUNC.OBS
174062X	Windsor Canal	30	36	32	47	40	43	9/3/92	65.90	Deleted from FDOT inspection 8/17/92
	Englewd Isle Pk									FUNC. OBS
174063	Nile Canal	23	44	47	38	49	51	9/8/92	98.90	
	S. Gondola Dr									
174064	Nile Canal	23	44	47	38	49	54	9/15/92	98.90	
	E. Gondola Dr									
174065	Philippi River Bee Ridge Rd	TRANSFERRED TO FL. DOT SEPT,1990							77.30	FL DOT RESP. 8/21/90
									FUNC.OBS	
174066	Branch Canal AA	33	46	45	54	60	66	8/27/92	81.50	
	Cattlemen Rd									
174067	Canal Main A	32	39	43	53	43	47	7/27/92	91.80	
	Cattlemen Rd									

SARASOTA COUNTY DEPARTMENT OF TRANSPORTATION

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			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
174068	Alligator Cr	35	37	36	52	46	50	8/7/92	97.20	
	Jacaranda Blvd									
174069	Phillippi Cr	36	36	35	53	49	52	8/5/92	97.30	
	Tuttle Ave									
174070	Myakka River	34	36	35	51	46	50	8/27/92	48.70	TO BE REPLACED FY 91 +/- By Utilities
	Border Rd									STRUCT.DEF
174071	Lalani Creek	7	14	15	12	15	17	8/27/92	42.70	
	Webber St									FUNC. OBS
174072	Canal Main B	47	49	48	72	65	70	3/26/92	84.30	
	17th St									
174073	Branch Canal BA	74	77	76	99	99	99	1/24/92	93.10	
	17th St									
174074	Phillippi Creek	43	45	44	66	61	65	1/23/90	96.40	
	Bahia Vista St									New construct
										Not accepted
174075	Catfish Creek Central Sarasota Parkway	54	55	54	73	74	62	3/4/92	83	
	Central Sarasota Parkway									
										New construct
174076	Drainage Ditch Honore Ave/ Fruitville	23	45	47	38	49	54	2/25/91	99.3	
	Honore Ave									N. of Sara. SO. BLVD

SARASOTA COUNTY DEPAR..MENT OF TRANSPORTATION
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			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
174077	Truck Ditch N. of Sara Sq McIntosh Rd									
	McIntosh Rd									Constructed 1992
174078	Curry Creek	41	42	41	58	57	56	3/26/92	82.1	
	Auburn Rd									Constructed 1992
										Replaced 174021
174079	Shakett Creek									
	Laruel Rd									
174080	Private									
	Myakka Valley Trail									
174081	Private Kings Gate Club									
174082	Catfish Creek									under const.
	McIntosh Rd									started 8/1/92
174083	MAIN A Phillippi Ck									
	Bahia VistaRd									under const.
										started 8/1/92
174084	MAIN A Phillippi Ck									replace 174000
	McIntosh Rd									
174085	Shakett Ck									Replace 174047 under const 5/1/94
	Albee Farm Road									

SARASOTA COUNTY DEPARTMENT OF TRANSPORTATION
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			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
174086	Curry Creek									Replacement of 174040 under const. 5/1/94
	Albee Farm Road									
174087	Alligator Creek Shamrock Rd.,									
174090	New Landfill Culvert Sta. 202+25									Under Design "Camp, Dresser,"
	Acess Rd									
174091	New Landfill Culvert Sta. 218+86									Under Design "Camp, Dresser,"
	Acess Rd									
Twenty feet (20') Span or greater and are posted for OPERATING RATING.										
POSTED BY INVENTORY RATINGS										
FDA LEGAL LOADING			VEHICLE TYPE							
	ON STRUCTURES.		SU-2	SU-3	SU-4	C-3	C-4	C-5		
	LEGAL LIMITS IN TONS		17	33	35	28	36.6	2/5/00		
	GROSS VEHICLE WEIGHT									

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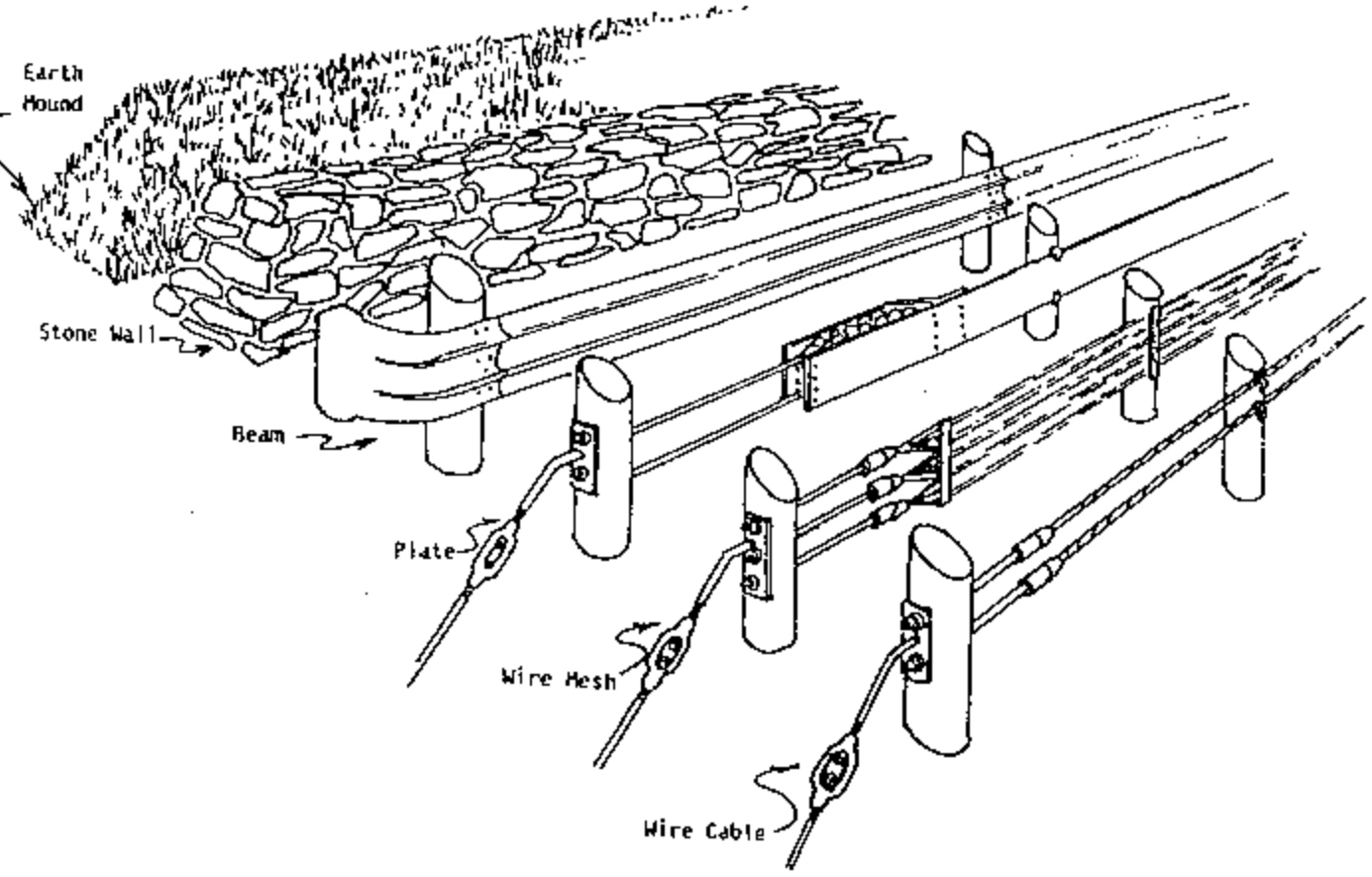
			POSTING (TONS)							
NUMBER	Bridge Name / Road	SU-2	SU-3	SU-4	C-3	C-4	C-5	UPDATE	Sufficiency Rating	Comments
174088	Shamrock Park									Parks and ecreation Park Entrance
174089	Jaranada Blvd									North of I-75/ under construction
174018	Main "C" Canal									Private
	Fox Creek Rd									
174036	Main "C"									Private
	Ranchero Rd									
174015	Cow Pens Slough									Posted
	Rustic Rd									

GUARDRAIL INVENTORY

Please be advised that this inventory is not complete, this is about 50% ? of the Guardrails in Sarasota County. While Locating Guardrails we are identifying the type of Guardrails, Handrails and Chain Link Fences. At this time we are working on Bridges under 20 ft. plus locating free standing Guardrails beside of drainage canals.

Figure 10.4

GUARDRAIL TYPES



Posts for beam type are set 6'-3" or 12'6" C.C. Posts for all other types are set 10'0" C.C.

ROADWAY TASK IDENTIFICATION

Name:_____ Number:_____

From:_____ To:_____

Curb:

Type"A" E W N S (Circle one)

From:_____ To:_____ Feet:_____

Type "B" E W N S (Circle one)

From:_____ To:_____ Feet:_____

Type "C" E W N S (Circle one)

From:_____ To:_____ Feet:_____

Type "D" E W N S (Cirlce one)

From:_____ To:_____ Feet:_____

Total Number of Bullheads:_____

Guardrail:

a - Earth Mound
b - Stone Wall
c - Beam
d - Plate
e - Wire Mesh
f - Wire Cable

Type_____ Feet_____

Type_____ Feet_____

Type_____ Feet_____

Roadside Drainage:

Identification will include:

a - The side of the street E W N S (Circle one)
b - How long _____
c - The depth _____
d - The width _____
e - From:_____ To:_____
f - Total acres from top of bank to top of bank:_____

Use additional sheets as necessary

GUARDRAIL INVENTORY

CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N.E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
8-160		INDIAN CREEK RUN / FRUITVILLE RD.				BEAM			210	210	127	127
6-128	170030	COW PEN SLOUGH / FRUITVILLE RD.				BEAM			128	128	128	128
6-128	170030	COW PEN SLOUGH / FRUITVILLE RD.				EARTH MOUND			151	205	184	218
4-58	170032	PHILLIPPI CREEK / BENEVA RD.				NO						
	170054	VENICE AVE. ICW DRAWBRIDGE		X		NO						
30-431	170055	MYAKKA RIVER BRANCH / SOUTH RIVER RD.				NO						
	170056	GOTTFRIED CREEK / DEARBORN RD.				BEAM			166	83	83	154
	170057	ALBEE RD. ICW DRAWBRIDGE / ALBEE RD.				NO						
	170058	MANASOTA ICW DRAWBRIDGE/MANASOTA BEACH RD				BEAM			129	454	178	371
	170064	BLACKBURN POINT-ICW SWINGBRIDGE				BEAM		X	15	17	16	16
8-256	170066	MYAKKA RIVER / MYAKKA RD. (Cr 780)				BEAM			197	198	197	198
10-58	170072	PHILLIPPI CREEK / PROCTOR RD.				BEAM	X		66	66	66	66
	170122	SNOVER CANAL / TOLEDO BLADE BLVD.			X	BEAM			91	91	91	91
	170121	COCOPLUM CANAL / TOLEDO BLADE BLVD.			X	BEAM			91	91	91	91
	174000	DONA BAY / ALBEE FARM RD.- UNDER CONST.				NO						
	174001	PHILLIPPI CK. / AMERICA DR. - COQUINA PASS				NO						
4-86	174083	REPLACED 174003 - PHILLIPPI CREEK / BAHIA VISTA ST.				NO	X					
4-89	174004	BAHIA VISTA ST.				NO	X					
6-143	174007	BEE RIDGE RD.				NO						
10-198	174008	MATHENY CREEK / BISPHAM RD.				BEAM	X		46	46	33	33
10-190	174009	DENHAM BRANCH / BISPHAM RD.				BEAM	X		18	31	29	25
	174010	DRYMAN BAY / BLACKBURN PT. RD.				BEAM			66	28	41	41

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CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N. E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
10-184	174011	RED BUG SLOUGH / BROOKSIDE DR.				NO						
3-5	174014	WHITAKER BAYOU / 40 TH ST. & CENTRAL AVE.	X			NO						
6-119	174016	E. SAWGRASS RD. WOODEN BRIDGE				NO						
27-327	174019	DEER TOWN GULLEY / HARBOR DR.				NO						
	174020	WATERFORD CANAL / ENGLEWOOD ISLE PKWY				NO						
	174079	REPLACED 174021 - SHAKETT CREEK / LARUEL RD.				BEAM	X		330	66	330	54
6-114	174022	GOLF CLUB BLVD.				NO	X					
4-62	174023	BERMUDA BROOK / LOCKWOOD RIDGE RD.				BEAM	X	X	52	71	52	71
4-106	174024	LOKAI RD.				NO	X					
4-59	174025	JAFFA CANAL / MINEOLA DR.				BEAM			71	71	71	71
	174026	BLACKBURN BAY / NOKOMIS BEACH BOAT RAMP RD.				BEAM					129	
27-330	174028	CURRY CREEK / JACKSON RD.				NO	X					
	174029	TIDEWATER CANAL / OAK ST.				BEAM			21	21	21	21
	174030	CHANNEL (A) ORTIZ BLVD.				NO	X					
6-114	174031	PALMER BLVD.				BEAM			84	84	90	90
6-119	174032	PALMER BLVD.				NO						
6-119	174033	PORTER RD.				NO						
3-16	174034	PRUDENCE DR.				NO						
3-16	174035	PRUDENCE DR.				NO						
6-138	174037	RAYMOND RD. WOODEN				NO						
4-65	174038	W. PHILLIPPI CH / RIVER RIDGE WY				NO						
4-66	174039	BLOSSOM BROOK / SHADE AVE.				NO						

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CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N. E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
	174087	REPLACED 174040 / ALLIGATOR CR. / SHAMROCK DR.				BEAM	X		154	154	66	66
4-62	174042	BERMUDA BROOK / TANGLEWOOD DR.				NO						
	174043	CHANNEL B / TRIONFO AVE.				NO	X					
3-5	174044	TRI-PAR DR.				NO	X					
11-214	174046	CATFISH CREEK / VAMO WY				BEAM			27	27	27	64
	174047	REPLACED BY 174085-SHAKETT CK./ ALBEE FARM RD.				UNDER CONST.						
4-58	174049	PHILLIPPI CREEK / WEBBER ST.				BEAM	X		24	8	24	20
10-184	174050	WILKINSON RD. & SWIFT RD.				BEAM	X				29	9
3-16	174052	27 TH ST. PKWY.				NO						
11-208	174053	BENEVA RD. & CURTISS AVE.				BEAM	X			51		51
27-336	174054	HATCHETT CREEK / VENICE AVE - EAST		X		NO		X				
6-119	174055	RICHARDSON LANE & COBURN RD.				BEAM			46	46	40	40
	174059	LYONS BAY / ALBEE RD.				BEAM			280	154	187	66
10-198	174060	MATHENY CREEK / BENEVA RD.				NO	X					
	174061	WATERFORD CANAL / ENGLEWOOD ISLE PK				NO						
	174062	WINDSOR CANAL / ENGLEWOOD ISLE PK				BEAM & PIPE	X		85	85	68	68
28-377	174063	NILE CANAL / S. GONDOLA DR.				NO						
28-377	174064	NILE CANAL / E. GONDOLA DR.				NO						
	174083	FORKED CREEK - OVERBROOK RD. & FAIRVIEW DR.				NO						
5-58	174065	PHILLIPPI RIVER / BEE RIDGE RD.				NO	X					
4-114	174066	CATTLEMAN RD. & BEE RIDGE RD.				BEAM	X	X	67	67	67	67
4-86	174067	CATTLEMAN RD. & BEE RIDGE RD.				BEAM	X		67	67	67	67

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CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N.E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
28-375	174068	ALLIGATOR CREEK / JACARANDA BLVD.				BEAM	X		104	104	104	104
4-58	174069	PHILLIPPI CREEK / TUTTLE AVE.				BEAM	X	X	54	54	54	54
	174070	MYAKKA RIVER / BORDER RD.				NO						
4-106	174071	LALANI CREEK / WEBBER ST.				GIRDER / BEAM			24	24	27	27
3-14	174072	17 TH ST. & CIRCUS BLVD.				BEAM	X		41	41	41	39
3-16	174073	17 TH ST. & CIRCUS BLVD.				BEAM			41	41	41	59
4-58	174074	PHILLIPPI CREEK / BAHIA VISTA ST.				BEAM	X		41			41
11-214	174075	MCINTOSH RD - NORTH OF SARASOTA SQUARE BLVD.				BEAM	X		66	52	66	52
4-48	174076	HONORE AVE. & FRIUTVILLE RD.				BEAM				40		40'
11-214	174077	CENTRAL SARASOTA PARKWAY & MCINTOSH RD.				BEAM	X	X	91	66	83	83
27-330	174078	REPLACED 174021 - CURRY CREEK / AUBURN RD.				BEAM			109	67	67	67
8-160	174080	PRIVATE - MYAKKA VALLEY TRAIL & OLD RANCH RD.				BEAM	X		64	64	64	64
	174081	PRIVATE KINGS GATE CLUB / SHAKETT CREEK				BEAM	X		44	44	44	44
11-214	174082	CATFISH CREEK / MCINTOSH RD.				BEAM			66		66	
4-86	174084	PHILLIPPI CREEK / MCINTOSH RD.				BEAM	X			192		
11-212	?	BENEVA RD. & EUGENE ST.				NO	X					
	174085	REPLACED 174047 - SHAKETT CK. / ALBEE FARM RD.				UNDER CONST.						
	174086	CURRY CREEK / ALBEE FARM RD - UNDER CONST.				UNDER CONST.						
	174090	NEW LANDFILL / ACCESS RD - UNDER CONST.				UNDER CONST.						
	174091	NEW LANDFILL / ACCESS RD - UNDER CONST.				UNDER CONST.						
	174088	SHAMROCK PARK ENTRANCE				NO	X	X				
27-330	174005	PINEBROOK RD. & PINEBROOK WY.		X			X					

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CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N. E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
27-330	174089	JACARANDA BLVD. & SNYDER DR.				BEAM			116	116	156	178
5-119	174018	PRIVATE / FOX CREEK DR.				BEAM			27	27	27	27
5-119	174036	PRIVATE - RANCHERO DR - ONE LANE				WOODEN			54	54	54	54
19-128	174015	COW PEN SLOUGH / RUSTIC RD.				BEAM			33	33	33	33
3-1	175650	CENTRAL AVE. & 27 TH ST.				NO						
3-1	175660	RIVERSIDE DR. & RIVERSIDE DR. N.				NO						
4-51	175624	ORANGE AVE. & MOUND ST.				NO						
3-2	175630	ORANGE AVE. & 27TH ST.	X			NO	X					
4-66	174057	BRINK AVE. & UPPER TANGELO DR.				NO						
4-66	174055	EUCLID AVE. & SUNNTSIDE ST.				NO						
4-66	174056	TUTTLE AVE. & SUNNYSIDE ST.				NO	X					
4-66	?	UNDER CONST. - EAST AVE. & SUNNYSIDE PL.	X			UNDER CONST.						
11-214	?	PRESTANCIA BLVD. & BOCA POINTE DR.				BEAM	X		89	91	91	91
27-335	176000	GROVE ST. - VENICE PROJECTS		X		BEAM	X	X	27	27	27	27
	?	CASPERSON BEACH PARK - CONCRETE BRIDGE				NO						
	170060	HUMP BACK BRIDGE - SIESTA DR. & FLAMINGO AVE.	X			NO						
3-16	175660	AZINGER WY & CIRCUS DR.	X			NO	X					
3-17	174071	17 TH ST. & BENEVA RD.	X			NO	X					
3-7	?	LEONARD REID & 32 ND ST.	X			NO		X				
	170068	MOUND ST. & OSPREY AVE.	X			NO	X					
	175620	BIRD KEY DR. BY ENTRANCE	X			NO	X					
	175676	BIRD KEY DR. & BOB WHITE DR.	X			NO	X					

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CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N.E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
8-158	170028	FRUITVILLE RD. & 5280' W. OF ANNIE LAURIE LN.				BEAM			128.5	128.5	128.5	128.5
	175550	WILD TURKEY DR. & OWL DR.	X			NO	X					
	175615	PHEASANT DR. & MEADOW LANE	X			NO	X					
3-7	174081	MYRTLE ST & BUTLER AVE.	X			NO			65	65	65	65
3-1	175670	32 ND ST. & COCOANUT AVE.	X			BEAM			38	38	51	51
3-1	175680	MYRTLE ST. & COCOANUT AVE.	X			BEAM			65	65		
3-1	175690	38 TH ST. & COCOANUT AVE. - ONE LANE	X			BEAM	X		78			91
3-1	175700	40 TH ST. & COCOANUT AVE.	X			BEAM	X		43	43	59	59
3-1	175710	46 TH ST. & COCOANUT AVE.	X			BEAM				65	65	
4-51	175950	OSPREY AVE. & BAY ST.	X			BEAM	X		77	77	77	145
4-51	175970	SHADE AVE. & BROWNING ST.	X			BEAM		X	30	30	30	43
	175600	EAST BLVD. OF PRESIDENTS & JACKSON DR.	X			BEAM	X		66	66	66	66
	170021	SARASOTA BAY - RINGLING BRIDGE - DRAWBRIDGE	X			BEAM			218	79	92	218
	170141	BLVD. OF PRESIDENTS & N. WASHINGTON DR.	X			BEAM			66	243	381	104
	170158	GULF OF MEXICO DR. & CITY ISLAND RD.	X			BEAM	X		239	225	481	416
	?	SARASOTA BAY / RINGLING BRIDGE WEST	X			BEAM			334	169	208	347
4-51	175995	WOOD ST.& TUTTLE AVE.	X			BEAM	X		38	38	33	33
	175505	BAYOU LOUISE - SIESTA KEY DR. & HIGEL AVE.	X			BEAM	X		59	59	65	65
	170065	LITTLE SARA. BAY - STICKNEY POINT & U.S. 41 / DRAW				BEAM			370	996	181	782
	174074	GIVENS ST. & HIGEL AVE. - SIESTA KEY				NO						
	174079	PRIMROSE PATH & FEATHER BED AVE. - SIESTA KEY				NO						
	174062	TREASURE BOAT WY & HIGEL AVE. - SIESTA KEY				NO						

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CANAL I.D.	BRIOGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N. E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
	174076	TREASURE BOAT WY & PRIMROSE PATH - SIESTA KEY				NO						
	174064	CALLE FLORIDA & CANAL RD. - SIESTA KEY				NO						
	174067	AZURE WY & CAPE LEYTE DR. - SIESTA KEY				NO						
	174065	CONTENTO DR. & CONTENTO CIR. - SIESTA KEY				NO						
	174073	TREMONT ST. & HIGEL AVE. - SIESTA KEY				BEAM				16	16	
	170059	MIDNIGHT PASS RD. & HARVARD AVE. - SIESTA KEY				BEAM	X	X	383	302	383	302
	170001	SIESTA KEY DR. & SAN REMO TER. - SARA.BAY DRAW	X			BEAM	X		173	85	81	162
	170057	DRYMAN BAY / BLACKBURN POINT RD.				BEAM	X		53	127	53	127
	170910	U. S. 41 BUSINESS & VENICE AVE. - DRAWBRIDGE		X		BEAM	X		192	90	65	67
27-335	176002	BAY INDIES BLVD. & VENICE AVE. - VENICE		X		BEAM			52	52	52	52
	170036	U. S. 41 BUSINESS & CENTER RD. - DRAWBRIDGE		X		BEAM			142	440	265	115
4-47		FRUITVILLE RD. & HONORE AVE. - N. W. CORNER					X					
3-4		NORTH LEON AVE. & 27TH ST. - WEST SOUTH	X				X					
3-4		NORTH NOBLE AVE. & 27TH ST. - WEST SOUTH	X				X					
3-4		NORTH ORANGE AVE. & 27TH ST. - WEST SIDE	X				X					
3-2		MAPLE AVE. & 22ND ST. - NO. & SO. SIDE	X				X					
3-17		BENEVA RD. & 1000' SO. OF 17TH ST. - WEST SIDE					X					
3-46		ORANGE AVE. & 200' NORTH OF 10TH ST. - EAST SIDE	X				X					
C41-16		OSPREY AVE. & BROTHER GEENEN WY. - EAST SO.	X				X					
3-17		17TH ST. & 200' E. OF LOCKWOOD RDG. RD. - SO. SIDE	X				X					
3-46		10TH ST. & 300' EAST OF LEMON AVE. - NORTH SIDE	X				X					
3-2		17TH ST. & LIME AVE. - SOUTH SIDE	X				X					
3-2		21TH ST. & MAPLE AVE. - SO. SIDE	X				X					

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GUARDRAIL INVENTORY

CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N. E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
3-2		22ND ST. & MAPLE AVE. - NO. & SO. SIDE	X				X					
3-2		23RD ST. & MAPLE AVE. - SOUTH SIDE	X				X					
		AUDUBON PL. & FRUITVILLE RD. - SOUTH SIDE	X				X					
		FRUITVILLE RD. & RHODES AVE. - NO. & SO. SIDE	X				X					
4-57		WALDEMERE ST. & ARLINGTON PARK - NO. & SO. SIDE	X				X					
4-56		WALDEMERE ST. & 200' WEST OF SHADE AVE.	X				X					
10-184		MARLETTE ST. & SWIFT RD. - SOUTH SIDE					X					
		HONORE AVE. & 600' NORTH OF COLONIAL OAKS BLVD.					X					
L4-2		PINECREST ST. & 200' SO. OF TUTTLE AVE. - E. SIDE					X					
4-98		MCINTOSH RD. & 300' NORTH OF LINWOOD ST - W. SIDE					X					
4-97		MCINTOSH RD. & 400' SOUTH OF ALTON WY. - W. SIDE					X					
4-96		LINWOOD ST. & 200' WEST OF TEAL AVE. - SO. SIDE					X					
4-106		MCINTOSH RD. & 200' NO. OF MCINTOSH LN. - W. SIDE					X					
		MCINTOSH RD. & 300' SO. OF BEE RIDGE RD. - W. SIDE					X					
10-200		MCINTOSH RD. SO. & 2000' SO. OF RXR - EAST SIDE					X					
10-200		SO. MCINTOSH RD. & PALMER RCH PKWY - E. SIDE					X					
11-217		SO. MCINTOSH RD. - EAST SIDE					X					
3-7		SEWARD DR. & SHADE AVE. - NORTH SIDE					X					
3-19		17TH ST. & 200' W. OF ANDREA PL. - NORTH SIDE					X					
3-7		COLSON AVE. & 27TH ST. - NORTH SIDE						X				
		301 & FRUITVILLE RD. - NORTH & SOUTH SIDE	X				X					
4-12		FRUITVILLE RD. & 1000' W. OF BENEVA RD. - NO. SIDE	X				X					

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CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N. E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
4-88		FRUITVILLE RD. & 300' WEST OF DADE AVE. - NO.SIDE	X				X					
		FRUITVILLE RD. & HONORE AVE. - NORTH SIDE					X					
4-112		DUNCANWOOD DR. & SPAINWOOD DR. - NORTH SIDE					X					
		WEBBER ST. & SWEETLAND AVE. - SO. SIDE					X					
		WEBBER ST. & 400' E. OF GREEN DALE DR. - SO. SIDE					X					
4-96		WEBBER ST. & 150' WEST OF TEAL AVE. - NO. SIDE					X					
4-55		BAHIA VISTA ST. & 150' W. OF SCHOOL AVE. - NO. SIDE	X				X					
10-107		BEE RIDGE RD. & 300' W.OF LONGHORN DR. - SO. SIDE					X					
4-108		BEE RDG. & 2000' E. OF BOND PL. - NO. & SO. SIDE					X					
3-41	170159	FRUITVILLE RD. & BOBBY JONES RD. - NORTH SIDE	X				X					
10-191		BEHIND HEDGES PHARM. & GATE WY. DR. - W. SIDE					X					
19-178		LAUREL RD. & 1000' W. OF SUNSET AVE. - NO. SIDE					X					
		JACARANDA BLVD. & BETWEEN 776 & 41 - NO. SIDE					X					
		WOODMERE DR. & BETWEEN JAC. & 41 - NO. SO. SIDE					X					
		WALK BRIDGE ON 28-385A BEHIND JAC. LIBRARY					X					
		WALK BRIDGES ON JAC.& SO. CYPRESS PT. DR.					X					
		JAC. BLVD. - BETWEEN VENICE AVE / CENTER RD - N/S					X					
		WALK BRDG. ON CENTER RD/SHAMROCK BLVD-S.SIDE				WOODEN	X					
		WALK BRDG. ON SHAMROCK BLVD&TIHAMI RD-S. SIDE				WOODEN	X					
28-392		POMPANO RD. & MISSOURI RD. - NO. & SO. SIDE					X					
28-392		WALK BRDG ON 28-392 ROLLA RD& ALBION RD - N.SIDE				WOODEN	X					
36-460		WALK BRIDGE OVER CANAL / KIWANIS BUCHAN PARK				WOODEN	X					

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CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N.E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
36-463		WALK BRDGS / AT PERRY ST. & WENTWORTH ST.				WOODEN	X					
		DEARBORN ST. & 400' W. OF 776 - SOUTH SIDE					X					
		PINE ST. & DEARBORN ST. - NORTH SIDE					X					
		SO. MCINTOSH RD. BY RXR / WINN DIXIE WAREHOUSE				BEAM			20.5		20.5	
10-200		SO. MCINTOSH RD&1000' SO.OF PALMER RANCH PKWY				BEAM				95.5		95.5
4-89		600' SO. OF LITTLE JOHN TR. ON MCINTOSH RD.				BEAM			239		239	
6-118	?	APEX RD. & 2000' SO. OF PALMER BLVD.				BEAM			15	15	15	15
		NORTH COBURN RD. & FRUITVILLE RD.				BEAM				787.5		787.5
6-132		NORTH COBURN RD. & FRUITVILLE RD.				BEAM			43.5	176.5	43.5	176.5
6-119		SO. COBURN RD. & FRUITVILLE RD.				BEAM				79.5		79.5
4-46		BROWN RD. & FRUITVILLE RD.				BEAM			1482	95.5	1482	95.5
3-41		FRUITVILLE RD. & BOBBY JONES RD.	X			BEAM				51.5		51.5
10-178		NORTH OF ADAGIO WY. ON SHADE AVE.				BEAM			25		25	
4-103		SAWYER RD. & BEE RIDGE RD.				BEAM			226.6		226.6	
4-90		KEELY LN. & BAHIA VISTA ST.				BEAM			36.5	39.5	36.5	39.5
3-5		TWIN DR. & TUTTLE AVE.				BEAM			47	133	47	133
L-108		FOX RUN RD. & BENEVA RD.				BEAM	X		390.5	145	390.5	145
10-185		MONTE VISTA DR. & PROCTOR RD.				BEAM			27	27	27	27
10-186		HOLLINGSWORTH AVE. & SUNNILAND DR.				BEAM				33.5		33.5
10-115		BOULDER BLVD. & CENTER GATE BLVD.				BEAM			44.5	39.5	44.5	39.5
10-192		ENTRANCE TO ST. THOMAS CATHOLIC CHURCH				BEAM			32.5		32.5	
19-290		MISSION VALLEY BLVD. & PINTO CIR.				BEAM			20	20	20	20

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GUARDRAIL INVENTORY

CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N. E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
19-285		KNIGHTS TRAIL & RUSTIC RD.				BEAM			104		104	
27-330	176001	ENTRANCE TO GOLF CLUB & CAPRI ISLES BLVD.		X		BEAM			164	164	164	164
29-368		ENTRANCE TO LAND FILL & JACKSON RD.				BEAM			25	27.5	25	27.5
		JACKSON RD. & KENNEDY DR. & I-75				BEAM			137.5	137.5	137.5	137.5
		HAVANA DR. & BONITA DR. & I-75				BEAM			138.5	144.5	138.5	144.5
L28-60		JACARANDA BLVD. & 300' NORTH OF SO. DORAL LN.				BEAM			27	27	27	27
		JACARANDA BLVD. & 2600' NORTH OF SO. DORAL LN.				BEAM			32.5	32.5	32.5	32.5
		DEAD END OF DENISON DR. & 776				BEAM			29	29		
35-452		776 & 200' SOUTH OF SHANE RD. / ENGLEWOOD				BEAM			77.5	76.5	77.5	76.5
35-458		776 & 500' NO.OF ENGLEWOOD ISLES PKWY-ENGLWD.				BEAM			76.5	76.5	76.5	76.5
		DEAD END OF RIVER RD. BY REST AREA & I-75				BEAM			14	14		
		MANASOTA KEY RD. & BLIND PASS PARK				WOODEN			150.5	856	150.5	856
		STARTS AT 3214 CASEY KEY RD.				WOODEN				650		650
8-157		2600' WEST OF 8-158 FRUITVILLE RD.				BEAM					115.5	115.5
6-126		FRUITVILLE RD. EAST				BEAM			160	160	146.5	146.5
6-119		NORTH COBURN RD. & FRUITVILLE RD. BY WEIR				BEAM			46.5	46.5	62.5	62.5
6-119	170154	FRUITVILLE RD. & COBURN RD.				BEAM			178.5	178.5		
4-46		FRUITVILLE RD. & BROWN RD.				BEAM			1012	1012		
4-119		2000' W. OF CATTLEMAN RD. ON FRUITVILLE RD.				BEAM					39	39
4-37	?	MIDWEST PKWY. & BEARDED OAKS CIR.	X			BEAM	X		15	28	15	28
4-14		1000' SO. OF FRUITVILLE RD. ON BENEVA RD.	X			BEAM			45.5	45.5	45.5	45.5
4-14	170069	FRUITVILLE RD. & BENEVA RD. - NORTH SIDE	X			CONCRETE			117	117		

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GUARDRAIL INVENTORY

CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N.E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
		DESOTA RD. & AIRPORT CONNECTOR - 300' SO. OF RXR				BEAM			24	24	17.5	17.5
3-5		DEAD END OF 47TH ST. & ASHBERRY DR.				BEAM			15		15	
4-51		BROWNING ST. & COURTLAND ST.	X			BEAM		X	46	46	27	27
4-51		E. ENTRANCE SARA. HIGH SCHOOL & SCHOOL AVE.	X			BEAM	X				236	236
10-179		JAMES LN. & RIVERWOOD AVE.				BEAM			216.5	216.5		
		AMERICA DR. & CONSTITUTION BLVD.				BEAM					140	140
10-185A		DEAD END OF CACTUS AVE. & JAMAICA ST.				BEAM					40	40
10-185A		DEAD END OF NELSON AVE. & JAMAICA ST.				BEAM					40	40
10-185A		DEAD END OF IOLA AVE. & JAMAICA ST.				BEAM					40	40
4-62		WEBBER ST. & 1000' - SOUTH OF BENEVA RD.				BEAM					471.5	471.5
4-111		BROOKMEADE DR. & TYNE LN. - HONORE R/W				BEAM			37	37	37	37
4-107		VINSON AVE. & LINWOOD ST.				BEAM			39	39		
12-143		SHADY GLEN LN. & BEE RIDGE RD.				BEAM					49	63
12-86		BEE RIDGE RD. & I-75				BEAM			84	84	84	84
		BEE RIDGE RD. & CATTLEMAN RD. - BY MCDONALDS				BEAM					54.5	54.5
10-115		BEE RIDGE RD. & 1000' E. OF CENTER GATE BLVD.				BEAM					58	58
10-184		PROCTOR RD. & CAMPHOR AVE.				BEAM			106	106	120.5	120.5
10-185		PROCTOR RD. & CORNER OF BENEVA RD.				BEAM					126.5	125.5
		PROCTOR RD. & W. OF GREENLEAF RD.				BEAM			58	58		
12-227		BRIGITTA DR. & HOYER DR.				BEAM			51.5	51.5	51.5	51.5
		QUARTER HORSE RD. & PROCTOR RD.				BEAM			52	52	64.5	64.5
6-146		NO. LEEWYNN DR. & 500' E. OF E. LEEWYNN DR.				BEAM			21	21	21	21

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GUARDRAIL INVENTORY

CANAL I.D.	BRIDGE I.D.	LOCATION	CITY OF SARASOTA	CITY OF VENICE	NORTH PORT	TYPE OF RAILING	HANDRAILS	CHAIN LINK FENCE	N.E. (FT.)	N.W. (FT.)	S.E. (FT.)	S.W. (FT.)
6-146		SO. LEEWYNN DR. & 1000' E. OF E. LEEWYNN DR.				BEAM			27.5	27.5	27.5	27.5
		CATAMARAN DR. & CLARK RD.				BEAM					64	64
		PELICAN PLAZA & 41 & VAMO RD. - IN PLAZA				BEAM			49.5	49.5		
		BAYSHORE RD. & 41				BEAM			22	22	30	30
19-285		RUSTIC RD. & KNIGHTS TRAIL RD.				BEAM			39.5	39.5		
19-283		RUSTIC RD. & 2000' W. OF KNIGHTS TRAIL RD.				BEAM			45.5	45.5	33	33
18-128		COWPEN SLOUGH & UNDER I -75 - W. OF RUSTIC RD.				BEAM			375	375		
		VENICE AVE. & 300' W. OF CAPRI ISLES BLVD.		X		BEAM			27	27		
27-346		CORNER OF VENICE AVE. & JACARANDA BLVD.				BEAM			101.5	101.5	163.5	163.5
28-373		SHAMROCK BLVD. & 300' W. OF LA GORCE DR.				BEAM	X				20	20
28-365		CORNER OF SIESTA DR. & BAFFIN DR.				BEAM			20	20	20	20
						TOTAL =			13340	14259	12532	13284
				GRAND TOTAL OF GUARD RAILS =					53414.1			

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SWEEPER SCHEDULE

ROUTE 1			
Ocean Blvd.	(Every Friday)	4.50 Miles	VEHICLE MAINT.
Beach Road	(Every Friday)	2.20 Miles	
North Beach Road	(Every Friday)	.25 Miles	1 DAY WORK EST.
Avenida Messina	(Every Friday)	.50 Miles	7.45 TOTAL MILES

ROUTE 2		
Swift Road	12.0 Miles	
Tuttle Avenue	8.0 Miles	
Shade Avenue	1.5 Miles	1 DAY WORK EST.
Siesta Drive	1.5 Miles	23 TOTAL MILES

ROUTE 3		
Beneva Road	40.0 Miles	
Gulf Gate Drive	4.0 Miles	
Gateway Avenue	2.0 Miles	
Superior Avenue	2.0 Miles	2 DAY WORK EST.
Mall Drive	.25 Miles	48.25 TOTAL MILES

ROUTE 4		
Sarasota Square Blvd.	4.0 Miles	
Central Sarasota Pkwy.	2.0 Miles	
Palmer Ranch Parkway	2.5 Miles	1 DAY WORK EST.
South Mc Intosh Road	8.4 Miles	16.9 TOTAL MILES

ROUTE 5		
Proctor Road	6.0 Miles	
Cattlemen Road	11.5 Miles	
Webber Road	20.0 Miles	
Bahia Vista Street	8.0 Miles	2-1/2 DAY WORK EST.
North Mc Intosh Road	9.0 Miles	53.5 TOTAL MILES

ROUTE 6		
University Pkwy.	16.0 Miles	
17th Street	20.0 Miles	
North Lockwood Ridge Rd.	16.0 Miles	2 DAY WORK EST.
Honore Ave.	3.0 Miles	61 TOTAL MILES

ROUTE 7		
Bay Street	1.00 Miles	
Vamo Way	.25 Miles	
Harbor Drive	.25 Miles	
Jacaranda Blvd.	14.00 Miles	
Venice Avenue	15.00 Miles	
Colonia Lane	2.00 Miles	
Dearborn Street	2.00 Miles	
Laurel Road	2.50 Miles	2 DAY WORK EST.
Woodmere Dr.	3.20 Miles	40.2 TOTAL MILES

ROUTE 8		
Bee Ridge Rd. (McIntosh Rd. to Cattlemen Rd.)	4.0 Miles	
Fruitville Rd. (City Limits to Honore Ave.)	3.0 Miles	1 DAY WORK EST.
Stickney Point Rd. (Bridge to US 41)	3.0 Miles	10 TOTAL MILES

BOARD RECORDS
FILED IN RECORD
95 NOV 27 PM 1:44
CLERK OF CIRCUIT COURT
SARASOTA COUNTY, FL

RESOLUTION NO. 95-278

RE: ESTABLISHING THE PEAK OUTFLOWS AND CRITICAL CAPACITIES OF STORMWATER FACILITIES IN AREAS OF KNOWN STORMWATER PROBLEMS; PROVIDING FINDINGS; PROVIDING DEFINITIONS; DESIGNATING AREAS OF KNOWN STORMWATER PROBLEMS; SUBJECTING PRELIMINARY SUBDIVISION PLANS AND SITE AND DEVELOPMENT PLANS TO A CRITICAL CAPACITY DETERMINATION; ESTABLISHMENT OF ALLOWABLE PEAK OUTFLOWS AND CRITICAL CAPACITIES IN AREAS OF KNOWN STORMWATER PROBLEMS; APPLICATION OF ALLOWABLE PEAK OUTFLOWS AND CRITICAL CAPACITIES; APPEALS; ADOPTION OF PEAK OUTFLOW AND CRITICAL CAPACITY STUDIES; PROVIDING FOR DEVELOPER OPTION TO IMPROVE STORMWATER FACILITIES; PROVIDING AN EFFECTIVE DATE.

BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA IN PUBLIC MEETING ASSEMBLED:

Section I. Findings. The Sarasota County Board of County Commissioners (the "Board") hereby finds and declares as follows:

A. Stormwater events in Sarasota County in recent months, particularly in June, 1995 and on July 18, 1995, resulted in the flooding of developed land, vacant land, residential and non-residential structures, streets, stormwater facilities and other improvements in areas of the County.

B. Recent flooding in Sarasota County resulted in damage to both public and private real and personal property, causing financial losses to the citizens of Sarasota County. Recent flooding also threatened the safety, security and lives of residents of Sarasota County.

C. Flooding resulting from recent storm events in some areas of the County exceeded the flood levels predicted for the one hundred (100) year 24-hour storm event which are used in designing public and private stormwater improvements.

D. The County has embarked on a program to design and construct improved stormwater facilities in drainage basins in Sarasota County. In some drainage basins improvements are now being constructed while in other drainage basins studies are now underway or are programmed to commence in the future.

E. The Professional Staff of the Stormwater Management Division of the Sarasota County Transportation Department has conducted technical studies to determine what areas of the County are experiencing flooding and the causes of said flooding. These studies have identified areas likely to flood or contribute to flooding downstream as a result of future development, even though such development takes place in accordance with applicable provisions of the Land Development Regulations, adopted levels of service and other county requirements. The technical studies conducted by the Professional Staff have also identified areas with restrictive conveyances or restrictive stormwater facilities which are inadequate to receive the anticipated post-development discharge for the area.

F. Section B.4.a(3) of the Subdivision Technical Manual and Section C.1.c of the Development Improvements Technical Manual of Sarasota County Ordinance No. 81-12, as amended, provide that in areas of known stormwater problems, or areas with restrictive conveyances, allowable peak outflows for designing stormwater management systems for subdivisions and site and development plans shall be as determined by county adopted studies. As used hereinafter, Section B.4.a(3) and Section C.1.c shall refer to the sections of the respective technical manuals cited above.

G. The Board adopted Resolution No. 95-242 on October 3, 1995, directing that allowable peak outflows and critical capacities for stormwater facilities be adopted to apply to preliminary subdivision plans and site and development plans submitted to Sarasota County for approval after October 3, 1995 for development in Areas of Known Stormwater Problems.

H. The Board has determined that adoption of allowable peak outflows for Areas of Known Stormwater Problems or areas with restrictive conveyances, as authorized by Section B.4.a(3) and Section C.1.c, will prevent adverse drainage impacts otherwise associated with development and will promote the public health, safety and welfare of the citizens of Sarasota County.

Section II. Definitions. As used herein, the following words shall have the following meaning:

A. Areas of Known Stormwater Problems shall mean those areas identified in Section III hereof.

B. Critical Capacity means the capacity of stormwater facilities downstream of a proposed development to convey stormwater flows without flooding upstream habitable structures.

C. Developer shall mean any person, individual, partnership, association, syndicate, firm, corporation, trust or legal entity engaged in developing or subdividing land pursuant to the terms of the Land Development Regulations.

D. Flooding shall mean the accumulation of water from precipitation or the overflow of drainageways on land that is normally dry such that the water level on a site rises above the base flood elevation for the site or the minimum floor elevation of a habitable structure.

E. Habitable structure shall mean any structure intended to be used as a dwelling unit for human habitation, excluding garages, porches, patios, lanais, and other appurtenances constrncted below the base flood elevation for the site.

F. Impervious area means hard surfaced areas which either prevent or severely restrict the entry of water into the soil mantle and/or cause water to run off the surface in greater quantities or at an increased rate of flow from that present under natural conditions prior to development. Common impervious ~~surfaces~~ areas include, but are not limited to, rooftops, sidewalks, walkways, patio areas, driveways,

parking lots, storage areas and other surfaces which similarly impact the natural infiltration or runoff patterns which existed prior to development.

G. Land Development Regulations shall mean the regulations for the development of land adopted pursuant to Sarasota County Ordinance No. 81-12, as said ordinance may be amended from time to time.

H. Professional Staff shall mean the professional staff of the Stormwater Management Division of the Sarasota County Transportation Department.

Section III. Designation of Areas of Known Stormwater Problems. Based on analyses performed by the Professional Staff of flooding and drainage problems resulting from recent storm events, the following areas in Sarasota County are hereby identified as Areas of Known Stormwater Problems pursuant to Section B.4.a(3) and Section C.1.c:

A. Phillippi Creek Main C Subbasin, as depicted generally on the map set forth on Exhibit A attached hereto,

B. North Creek Bay Street Subbasin, as depicted generally on the map set forth on Exhibit B attached hereto,

C. Elligraw Bayou Basin, as depicted generally on the map set forth on Exhibit C attached hereto, and

D. Cow Pen Slough Basin, as depicted generally on the map set forth on Exhibit D attached hereto.

Detailed descriptions of the boundaries of the areas identified in Exhibit A, Exhibit B, Exhibit C and Exhibit D are available for inspection in the electronic map file maintained by the Sarasota County Transportation Department.

Section IV. Development Approvals Subject to Critical Capacity. After October 3, 1995, in Areas of Known Stormwater Problems described in Section III hereof, no preliminary subdivision plans or site and development plans submitted to Sarasota County for approval pursuant to the Land Development Regulations shall be approved unless the allowable peak outflow of the development is limited to the critical capacity of downstream stormwater facilities serving the development as set forth in Section V hereof.

Section V. Establishment of Allowable Peak Outflows and Critical Capacity. To insure that future development in Areas of Known Stormwater Problems will not contribute to the flooding of surrounding properties, the Board hereby determines that the post-development peak outflow for the one hundred (100) year, 24-hour storm for any development creating more than two (2) acres of new impervious area shall be limited to the following system critical capacity:

A. Phillippi Creek Main C Subbasin:

1. For developments of ten (10) acres or less, critical capacity shall not exceed 1.0 cubic feet per second.

2. For developments of more than ten (10) acres, critical capacity shall not exceed 0.1 cubic feet per second per acre.

B. North Creek Bay Street Subbasin:

1. For developments of ten (10) acres or less, critical capacity shall not exceed 3.0 cubic feet per second.

2. For developments of more than ten (10) acres, critical capacity shall not exceed 0.3 cubic feet per second per acre.

C. Elligraw Bayou Basin:

1. For developments of ten (10) acres or less, critical capacity shall not exceed 2.0 cubic feet per second.

2. For developments of more than ten (10) acres, critical capacity shall not exceed 0.2 cubic feet per second per acre.

D. Cow Pen Slough Basin:

1. For developments of ten (10) acres or less, critical capacity shall not exceed 1.0 cubic feet per second.

2. For developments of more than ten (10) acres, critical capacity shall not exceed 0.1 cubic feet per second per acre.

In no case shall the post-development peak outflow be greater than the pre-development peak outflow for any development.

Section VI. Applicability of Allowable Peak Outflows and Critical Capacity. The allowable peak outflows and critical capacities adopted herein shall apply to stormwater management plans prepared for preliminary subdivision plans and site and development plans submitted to Sarasota County pursuant to the Land Development Regulations after October 3, 1995. For preliminary subdivision plans and site and development plans submitted to Sarasota County for approval between October 3, 1995 and the date of adoption of this Resolution, time limits set forth in the Land Development Regulations for processing said plans shall not commence until the date of adoption of this Resolution.

The allowable peak outflows and critical capacities for Areas of Known Stormwater Problems adopted herein shall be applied to implement Section B.4.a(3) and Section C.1.c of the Land Development Regulations. These requirements shall be in addition to all other requirements of the Land Development Regulations regarding preparation of stormwater management plans. Where the requirements of the Land Development Regulations are more restrictive than the peak outflow and critical capacity calculations adopted herein, the more restrictive requirement shall apply.

Section VII. Appeals. A developer shall have the right to appeal to the Board of County Commissioners the determination or application of the peak outflows and critical capacities adopted herein. Appeal shall be permitted in the following circumstances:

A. Where it can be established that the drainage outflow from a proposed development, together with the cumulative post-development outflow of presently undeveloped sites draining into the same downstream facilities, will not cause or increase flooding of surrounding properties or exceed the capacity of the downstream stormwater facilities based on 1) the one hundred (100) year, 24-hour storm event and 2) stormwater level of service standards adopted in Section B.4 of the Subdivision Technical Manual and Section C.1 of the Development Improvements Technical Manual of the Land Development Regulations; or

B. Where it can be established that a stormwater management plan is entitled to final approval without regard to the peak outflows or critical capacities adopted herein based upon development rights which have vested through approval of a stormwater management plan by Sarasota County prior to October 3, 1995.

To appeal to the Board pursuant to this section, a developer shall submit to the Director of the Transportation Department a notice of appeal stating the grounds for the appeal. The notice shall include the developer's proposed or approved stormwater management plan prepared by a professional engineer, together with technical data and support materials sufficient to allow evaluation of the plan in accordance with applicable ordinances, resolutions, rules and regulations. Within fifteen (15) days of receipt of the notice of appeal, the Professional Staff shall inform the applicant in writing of the completeness of the materials submitted. The developer shall submit additional materials as requested or reply in writing that no further materials will be submitted. A public hearing to consider the appeal shall be scheduled before the Board within sixty (60) days of receipt by the Department of Transportation of the additional materials requested or notice that no further materials will be submitted. Notice of the public hearing shall be given in the same manner as for a variance before the Board pursuant to the Land Development Regulations.

Section VIII. Adoption of Peak Outflow and Critical Capacity Studies. The Board hereby approves, adopts and incorporates herein by reference the background studies and analyses supporting the determination of peak outflows and critical capacities for Areas of Known Stormwater Problems as referenced in Exhibit E attached hereto. The full text of these studies and analyses is on file in the Stormwater Management Division of the Sarasota County Transportation Department.

Section IX. Developer Option to Improve Stormwater Facilities. In lieu of complying with the peak outflows and critical capacities established herein, the developer shall have the option of expanding the capacity of the downstream stormwater facilities at his own expense to secure approval of stormwater management plans. This option is in lieu of delaying development until such time as improved stormwater facilities are provided by Sarasota County or some other public or private entity.

Section X. Effective Date. This Resolution shall take effect immediately upon adoption and shall be effective throughout the unincorporated area of Sarasota County.

PASSED AND DULY ADOPTED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA, THIS 21st DAY OF NOVEMBER, 1995.

BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA

BY: David E. Mills
CHAIRMAN

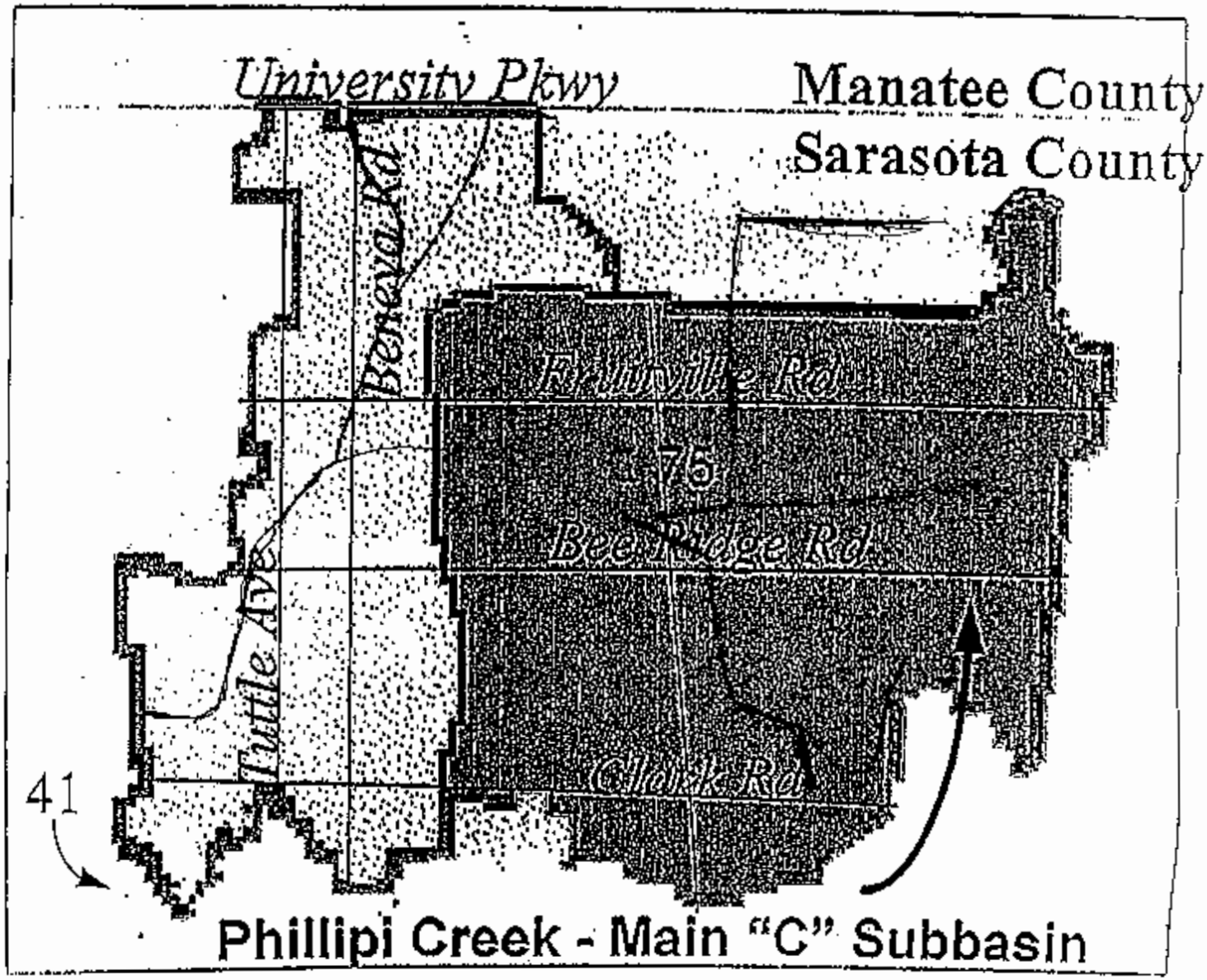
ATTEST:

KAREN E. RUSHING, Clerk of the
Circuit Court and Ex-Officio Clerk
of the Board of County Commissioners
of Sarasota County, Florida

BY: Paula Hintsman
Deputy Clerk

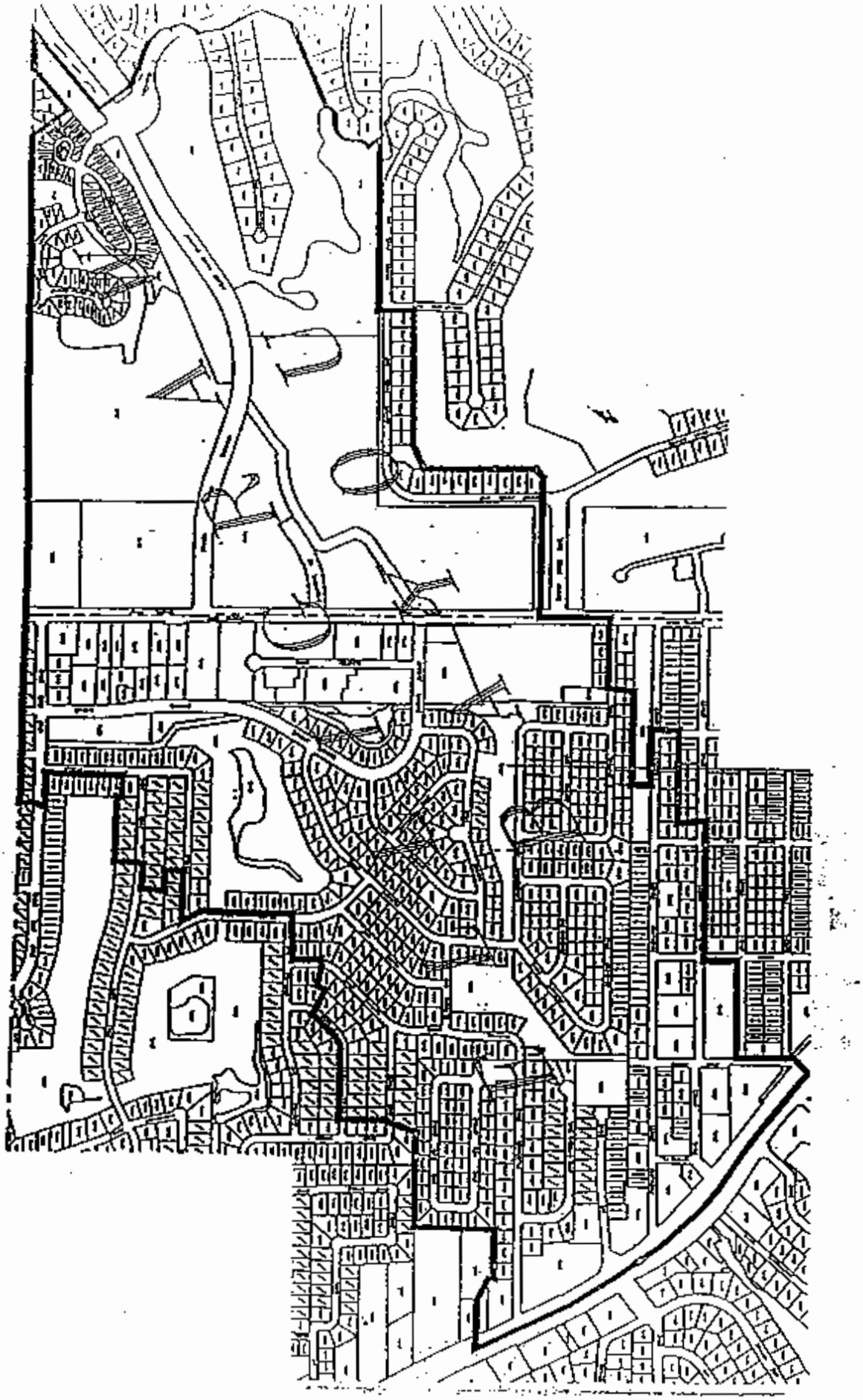
Exhibit "A"

PHILLIPI CREEK - MAIN "C" SUBBASIN



Area Subject to Peak Outflow and Critical Capacity Analysis Pursuant to Resolution No. 95-

Elligraw Bayou



Area Appearing Within Bold Outline Subject to Peak Outflow and Critical Capacity Analysis Pursuant to Resolution No. 95- .

Exhibit E

Critical Capacity
Background Studies and Analyses

Phillippi Creek Basin Master Plan, Dec. 1994, by Post, Buckley, Schuh & Jernigan, Inc.

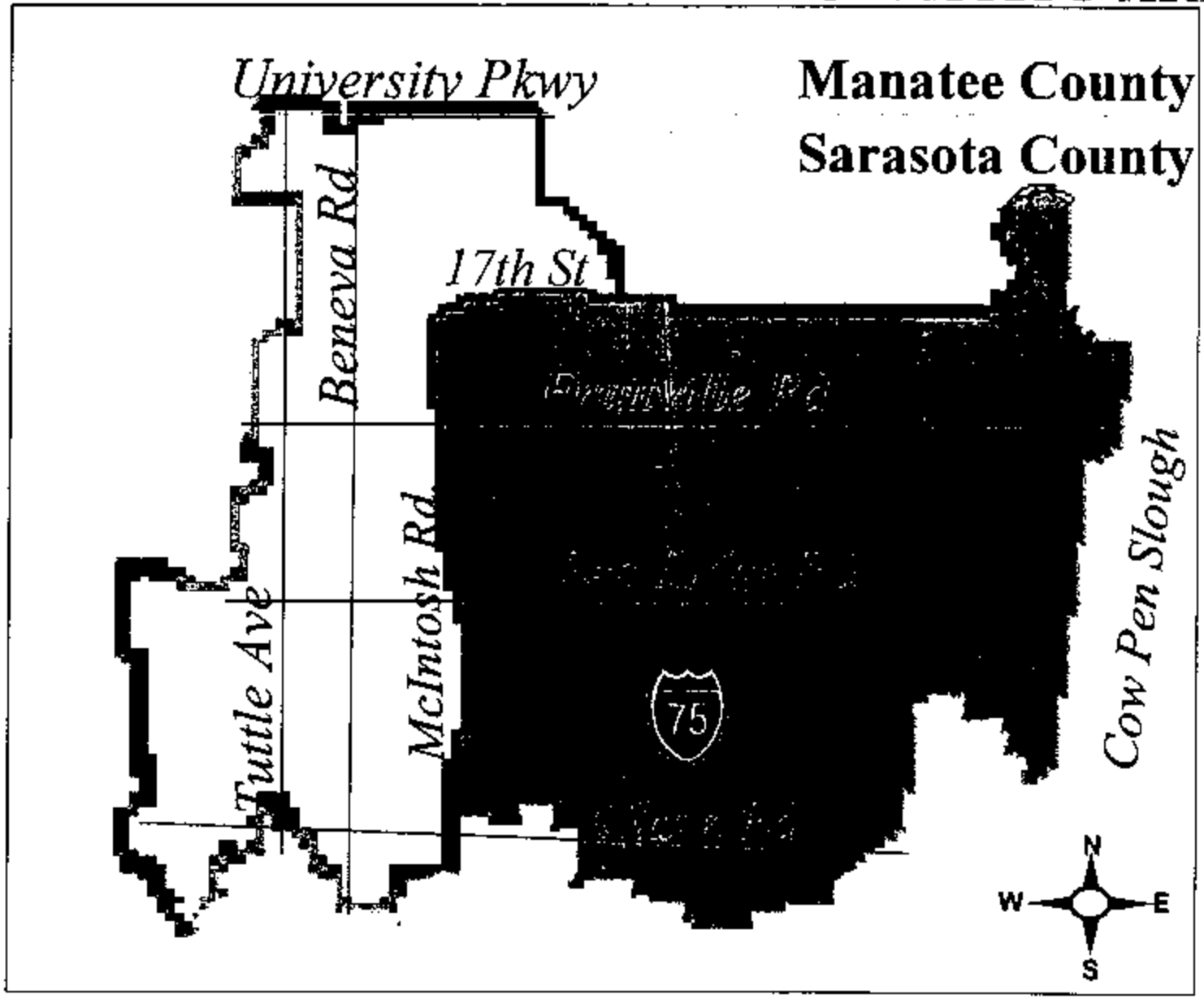
Flood Plain Management Study, Cow Pen Slough Watershed, 1985, by U.S.D.A. Soil Conservation Service (as revised)

Elligraw Bayou Basin Master Plan, Aug. 1994, by Kimley-Horn and Associates, Inc.

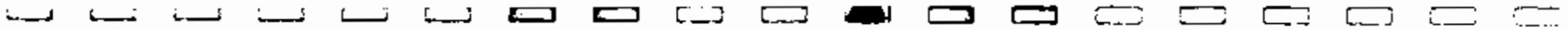
Capacity Analysis of By-Pass Storm Sewer at Bay Street/Old Venice Road, North Creek, Sarasota County, May 1995, by Kimley-Horn and Associates, Inc.

Exhibit "A"

PHILLIPPI CREEK - CRITICAL CAPACITY AREA



Area Subject to Peak Outflow and Critical Capacity Analysis Pursuant to Resolution No. 95-278



SARASOTA COUNTY GOVERNMENT
TRANSPORTATION DEPARTMENT
STORMWATER ENVIRONMENTAL UTILITY
1301 Cattlemen Road
Sarasota, FL. 34232-6299
(941)-378-6030

Stormwater Improvements Report

Date : June 7, 1996

CURRENT DESIGN PROJECTS

Project (name/basin)	map loc.	Project Description	Contract Cost (Est.)	Design Consult./% Complete	R/W acquisition Date Initiated	R/W acquisition O/T	Planned Advertise Date	Constr. completion date	Notes
Beacon Dr.	4	SB, E, CC		Coleman Knott					
Phillippi Creek		PN 85843	(413,000)	100%	NA	NA	NA	NA	
ake Mallard	8	CC, F&SW		Hazen Sawyer					
hillippi Creek		PN 85846	(354,000)	50%			Sep-97	Feb-98	
Celery Fields-phase 2	9	F&SW		Boyle					
hillippi Creek		PN 95867	(9,474,000)	50%	on going		Aug-96	Jan-99	
orest Lakes	11	E, WQ, PI		Landry & Esber					
Phillippi Creek		PN 85839	(154,000)	100%	NA	NA	Aug-96	Mar-97	
Hyde Park	12	WQ, E, RF, PI		PBS&J					
hillippi Creek		PN 85726	(268,000)	90%			Jun-96	Sep-96	R/W,PR
Oakhurst Condo	15	CC		Boyle					
(Eastern Pkwy) Phillippi Crk		PN 95879	(25,000)	30%					
hillippi Shores	16	RF, PI		Coleman Knott					
hillippi Creek		PN 85842	(72,000)	60%	NA	NA	Jul-96	Dec-96	EZ, PR
Redbug Slough	17	CC, RF		Kimley-Horn					
Phillippi Creek		PN 85840	(743,000)	30%					
unnyside Drive	20	CC		Boyle					
pi Creek		PN 95878	(15,000)	30%					
Leon & Noble Ave.	24	RF, CC		Coleman Knott					
Whitaker Bayou		PN 85861	(239,000)	80%	9-7-95	May-96	Aug-96	Dec-96	EZ
Newtown Canal 3-2	25	E, F&SW		WMB&P					
Whitaker Bayou		PN 85834	(671,000)	85%			Jul-96	Nov-96	
urlington Canal Bypass	30	CC, RF		A & M					
udson Bayou		PN 85865	(697,000)	60%			Aug-96	May-97	PR
East Avenue	35	PI		A & M					
Hudson Bayou		PN 85867	(46,000)	90%			Oct-96	Feb-97	
Euclid Ave @ Courtland	36	PI, RF		A & M					
Hudson Bayou		PN 85868	(165,000)	30%					
School Ave Bypass	38	F&SW		Boyle					
Hudson Bayou		PN sch bypass	(278,000)						
School Desiltation	39	CC, F&SW		Boyle					
Hudson Bayou		PN 85866	(678,000)	30%			Aug-96	May-97	
Dolphin Lake	52	CC, F&SW		Mosby					
Alligator Creek		PN 85871	(1,000,000)	80%			Jul-96	Jan-96	PR
Golf Club Lane	53	SB, E, WQ		Coleman Knott					
Alligator Creek		PN 85874	(224,000)	100%	9-8-95	May-96	Aug-96	May-97	EZ
Manasota Gardens	57	F&SW		Van Buskirk					
Coastal		PN 95847	(99,000)	90%	10-95	Apr-96	Jun-96	Sep-96	
Englewood Isles	61	RF,CC		Van Buskirk					
Forked Creek		PN 85877	(43,000)	50%			Aug-96	Dec-96	

ABBREVIATIONS :

CC - ditch/canal improvements
eview by City of Sarasota
E - reduce erosion
EZ - acquisition of easement for maintenance
F&SW - flood attenuation and stormwater treatment
NA - not applicable
O/T - order of taking
O&M - operations and maintenance
P - permit acquired
PI - pipe installation/replacement
PN - CIP project number
PR - permit required
RF - reduce roadway flooding
R/W - right of way acquisition required
SB - stabilize bank slopes
SP - build stormwater pond
WQ - water quality

PROJECTS UNDER CONSTRUCTION

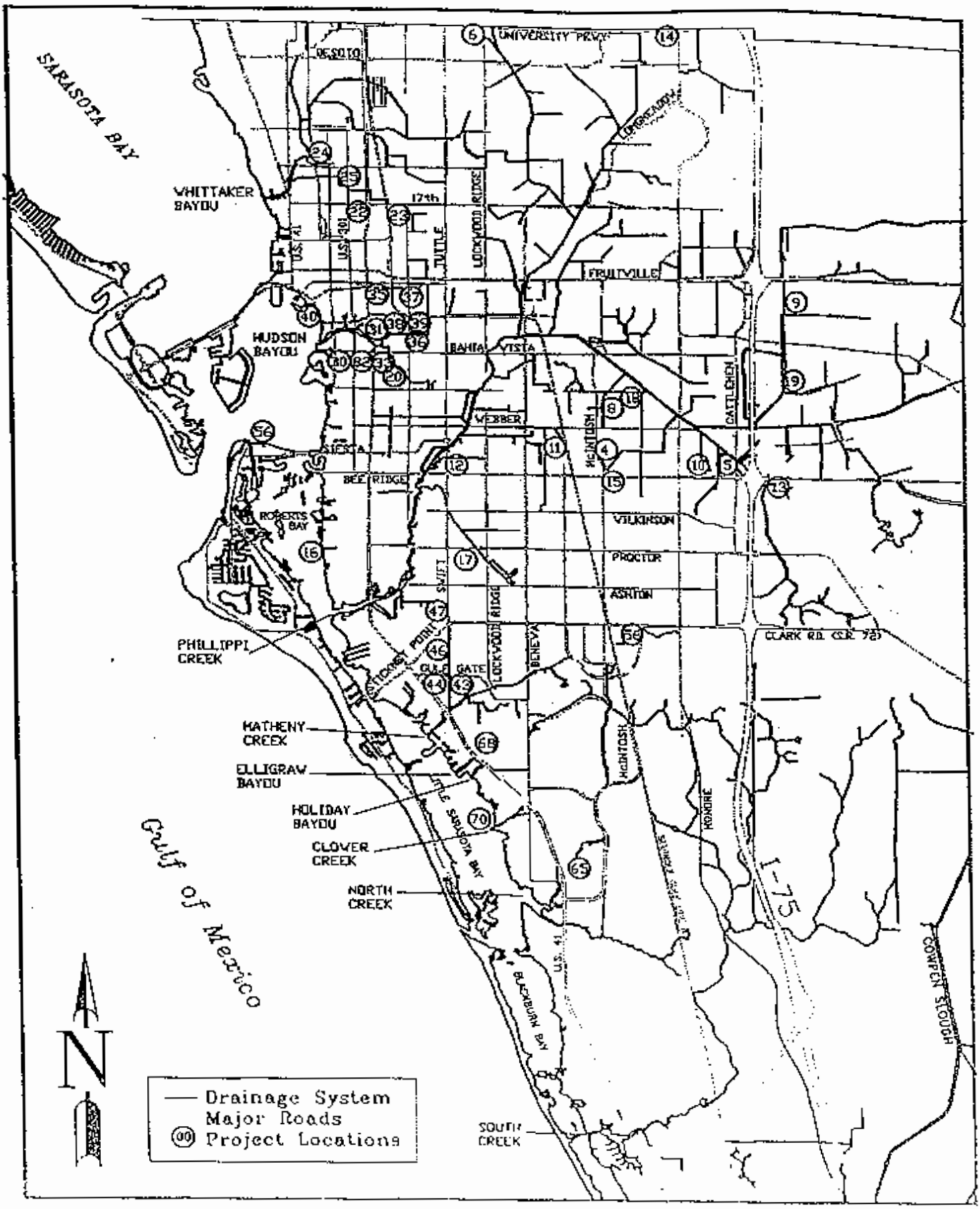
Project (name/basin)	map location	Project Description	Constr. Contract Cost	Consultant/ Contractor	Constr. Completion Date	Constr. % Complete	Contract Time Days Allowed	Contract Time Days Elapsed
Canal 4-98	8	CC, F&SW		Hazen Sawyer				Day 1: 12/4
Phillippi Creek		PN 65843	110,000	Woodruff	Jul-99	100%	240	188
Celery Fields-phase 1(Add)	9	F&SW		Boyle				Day 1: 6/3
Phillippi Creek		PN 95887	1,200,000	Prince Constr.	8/26/98	30%	21	4
Celery Fields Main C Weir	9	replace weir		Boyle				Day 1: 6/3
Phillippi Creek		PN 95887	307,993	Kelly Brothers	10/31/98	0%	150	5
Lake Sarasota	13	F&SW, RF		Bishop				Day 1:
Phillippi Creek		PN 65801	982,458	FL Underground			180	
Regional Main A	18	CC,WQ,EZ		Mosby				Day 1: 12/4
Phillippi Creek		PN 95848	1,500,000	Woodruff	Jul-98	88%	240	188
Roselawn St. Culvert	NA	PI		In House				Day 1:
Phillippi Creek		PN 9321	84,806	FL Remediation			30	
15-19th Streets	22	F&SW, PI		A & E				Day 1 :
Whitaker Bayou		Prj 65445	528,367	Kerr			90	
Canal 11-(99)	44	replace weir		A & E				Day 1:
Mallhenny Creek		PN 95470	145,564	Pittsfield			90	
Pinehurst St/Coventry Dr.	68	CC, F&SW		Kimley-Horn				Day 1: 9/17
Ellington Bayou		Prj 65861	990,988	Wesley	Jul-98	0%	30	
Clover Creek Channel	70	CC, WQ		Tigner				Day 1: 5/6
Clover Creek		PN 85728	283,993	Energy Resources	7/30/98	60%	45	32

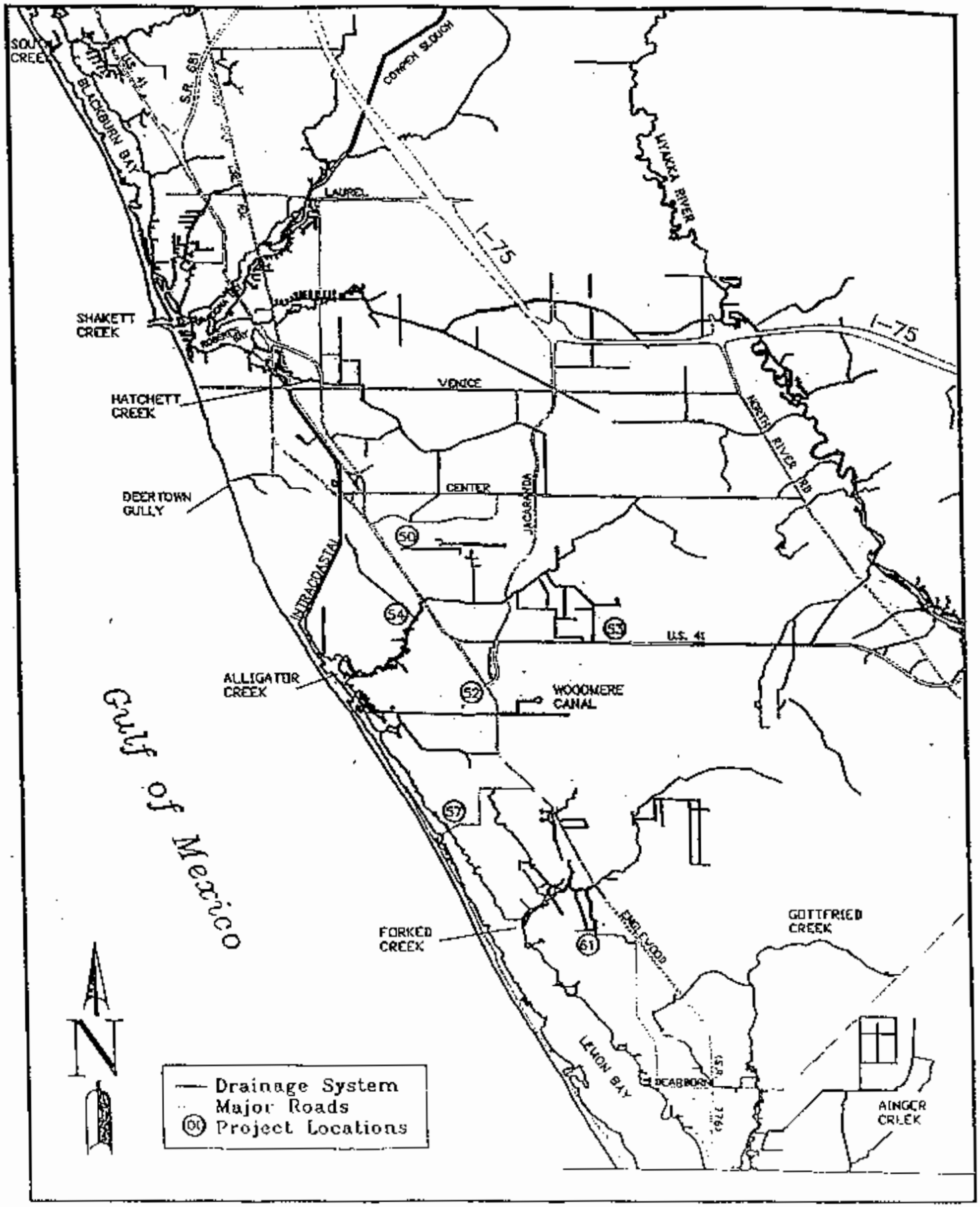
BASIN MASTER PLANS

Project (name/basin)	Initiation Date	Completion Date	Study (est.) cost (000's)	Design Advertise Date	Public Meeting	Final Report to BCC	Design Consultant	Adopted
Hudson Bayou	completed	Feb-95	189	-	-	-	PBS&J	Feb-1995
Mallhenny Creek	completed	Jul-95	185	-	-	-	Kimley-Horn	Jul-1995
Ellington Bayou	completed	1994	64	-	-	-	Kimley-Horn	NA
Clover Creek	completed	1992-93	66	-	-	-	Boiley, Wild	NA
Alligator Creek	completed	1987	NA	-	-	-	CDM	NA
Phillippi Creek	completed	Sep-95	388	-	-	Sep-95	PBS&J	NA
Gottfried Creek	1995	1998	(226)	-	11-28-95	Spring 96	Parsons	
Forked Creek	1995	1998	(184)	-	11-28-95	Spring 96	Parsons	
North Creek	1995	1997	(202)	-		Sep-96	Gee&Jenson	
South Creek	1995	1997	(192)	-		Sep-96	Parsons	
Cow Pen Slough	1995	1997	(254)	-		Jul-97	NEC$	
Whitaker Bayou	1998	1999	(394)	-		FY99	Army Corps	
E.Venice Road & Bridge	Feb-96	1998	(100)	Aug-96		Nov-96	Hold Memtes	
Gillymobs Subdivision	Aug-93	Spring 96	(60)	-		Apr-96	Mosby	
Alligator Creek	1998	1997	(252)	Feb-96			Kimley-Horn	
Curry Creek	Apr-96	1997	(215)	Feb-96			Gee&Jenson	
Halchard Creek	Apr-96	1997	(192)	Feb-96			Gee&Jenson	
Holiday Bayou	1998	1997	(80)	Feb-96			VanBuskirk	
Woodsmere Canal	1998	1997	(179)	Feb-96			Parsons	
Myakka River	1997	1994	(300)					

FUTURE DESIGN PROJECTS

Project (name/basin)	map location	Project Description	Total (est) Cost (000's)	Time Table Design	Land	Construct	Design Advertise Date	Design Consultant
Branch 8A Regional	6	F&SW						
Phillippi Creek		PN 65858	(5,155)	FY97	FY97,99	FY99		
Colonial Gables	10	RF						
Phillippi Creek		PN ogabled	(100)	FY97	NA	FY98		
Main B Regional	14	F&SW						
Phillippi Creek		PN 65355	(8,589)	FY96	FY96,97,99	FY98	selected	Kimley-Horn
South Lawayn Drive	19	RF						
Phillippi Creek		PN so lee	(85)	FY97	NA	FY99		
17th @ Lime & Euclid		CC						
Whitaker Bayou		PN 17thEuclime	(157)	FY97	NA	FY98		
Arlington Canal @ Euclid	31	F&SW						
Hudson Bayou		PN arleuclid	(35)	FY98	NA	FY97	selected	Mander & Assoc
Arlington Crf @ Hawthorne	32	CC, F&SW						
Hudson Bayou		PN arlhawth	(100)	FY98	NA	FY99	selected	Mander & Assoc
Arlington Canal Improves	33	CC, F&SW						
Hudson Bayou		PN arl improv	(138)	FY98	FY97,99	FY04	selected	Mander & Assoc
Gratiotester Branch	43	F&SW						
Mallhenny Creek		PN gratwy	(560)	FY97	FY98-99	FY99-00		
Coral Lakes	46	F&SW						
Mallhenny Creek		PN coral lk	(250)	FY96,97	FY97	FY98	Jul-96	
Clark Road		SP, RF						
Mallhenny Creek		PN clark	(540)	FY97	FY98,01	FY99		
Gulf Gate Branch		RF, CC						
Mallhenny Creek		PN ggbranch	(581)	FY97	FY98	FY99		
Williamsburg Branch		CC, WQ						
Mallhenny Creek		PN williamsburg	(620)	FY97	FY98	FY99		
South Creek Regional		F&SW						
South Creek		PN so regional	(4,362)	FY96	FY97	FY98		
Bay Street		CC, RF						
North Creek		PN bay st	(125)	FY97	NA	FY98		
Osprey Isles		RF, CC						
North Creek		PN osprey	(60)	FY97	NA	FY98		
Gatewood Ditch	50	F&SW,PI,CC						
Alligator Creek		PN 65872	(1,439)	FY97	FY98,00	FY99		


SARASOTA BAY
Gulf of Mexico
WHITTAKER BAYOU
HUDSON BAYOU
ROBERTS BAY
PHILLIPPI CREEK
MATHENY CREEK
ELLIGRAW BAYOU
HOLIDAY BAYOU
CLOVER CREEK
NORTH CREEK
SOUTH CREEK
DESOTO
UNIVERSITY PKWY
LONGMEADOW
17th
U.S. 41
U.S. 301
TUTTLE
LOCKWOOD RIDGE
FRUITVILLE
BAHIA VISTA
WEBBER
SIESTA
BEE RIDGE
McINTOSH
CATTLEMEN
WILKINSON
PROCTOR
ASHTON
SWIFT
STICKNEY POINT
GULF GATE
BENEVA
CLARK RD. (S.R. 72)
MONROE
LITTLE SARASOTA BAY
BLACKBURN BAY
I-75
COWPEN SLOUGH
N
Drainage System
Major Roads
Project Locations


SOU
CREE
BLACKBURN BAY
U.S. 41
S.R. 681
COMPON SLOUGH
MYAKKA RIVER
LAUREL
I-75
SHAKETT
CREEK
VENICE
I-75
HATCHETT
CREEK
NORTH RIVER
DEERTOWN
GULLY
CENTER
JACARANDA
INTRACOASTAL
50
54
53
U.S. 41
ALLIGATOR
CREEK
52
WOODMERE
CANAL
Gulf of Mexico
57
FORKED
CREEK
61
ENGLEWOOD
GOTTFRIED
CREEK
LEMON BAY
DEARBORN
S.R.
776
AINGER
CREEK
N
Drainage System
Major Roads
Project Locations

Should the lowest responsive and responsible bidder fail to meet the obligations of this bid specification, the next lowest responsive and responsible bidder may be awarded the procurement if, in the sole opinion of the Procurement Manager, it is in the best interest of the County to do so.

2.5 **ASSIGNMENT:** Contractor shall not transfer or make any assignment of the resulting contractual agreements between parties, in whole or in part, without the prior written authorization of the Purchasing Manager.

2.6 **INDEMNIFICATION:** The Contractor shall pay on behalf of or indemnify and hold harmless County, its officers, employees, agents, and volunteers from and against any and all claims, actions, damages, fees, fines, penalties, defense costs, suits or liabilities, which may arise out of any act, neglect, omission or default of the Contractor arising out of or in any way connected with the CONTRACTOR'S (or CONTRACTOR'S officers, employees, agents, volunteers and subcontractors, if any) performance or failure to perform under the terms of this Contract. This section of the contract will extend beyond the term of the contract.

2.7 **QUALIFICATIONS OF BIDDER:** Bids will be considered only from firms normally engaged in providing the types of commodities/services specified herein; and have sufficient financial support, equipment, and organization to ensure that they can satisfactorily execute the services if awarded a contract under the terms and conditions herein stated.

Prior to beginning services specified in this bid, Bidders will be required to submit proof of possession of all current licenses or certifications as required by the County, State or Federal codes and regulations, including EPA certification for disposal if applicable. Bidders agree to comply with all County, State and Federal codes and regulations applicable to the manufacturing, procurement, handling, storing and disposal of hazardous materials.

2.8 **EQUAL EMPLOYMENT OPPORTUNITY:** No Contractor shall discriminate against any employee or applicant for employment because of race, religion, color, sex or National origin, or physical or mental handicap if qualified. Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during their employment without regard to their race, religion, color, sex or National origin, or physical or mental handicap. Such actions shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitruent advertising, layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post, in conspicuous places available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

SARASOTA COUNTY GOVERNMENT

ADMINISTRATIVE DIRECTIVE

MAY 0 8 1996

NUMBER: 9.02A

ISSUED: January 18, 1995

EFFECTIVE: January 18, 1995

SUPERSEDES: 9.02

SUBJECT:

Interdepartmental Integrated Pest Management (IPM) Program .

AUTHORITY:

Sarasota County Board of County Commissioners Resolution # 91-092, which provided for adoption of integrated pest management practices by County Government pest control programs and established an Environmental Pest Management Advisory Board.

PURPOSE:

This administrative directive sets forth the policy and procedures for County personnel involved with operations related to the management of pests and undesirable vegetation.

POLICY:

Integrated Pest Management (IPM) in Sarasota County is an approach to managing vectors/pests and undesirable vegetation that incorporates the following key ingredients:

> Identification of the pest or undesirable problem, regular monitoring, determination of injury or problem levels, record keeping, selection of the least toxic strategies and techniques, and evaluation of actions taken to control or correct the problem.

County departments managing pests or vegetation will develop and implement comprehensive written integrated pest and vegetation management programs in accordance with the requirements of this policy.

Integrated pest and vegetation management programs shall include the following elements:

1) Goals and objectives of the Department's Program.

2) Description of the scope of responsibility and boundaries of the system/property to be managed.

3) Pesticide usage/storage procedures

4) Training and education requirements for personnel involved in the departmental Pest Management Program.

6) Recordkeeping for pesticide use/reporting

5) Identification of the pest or conditions causing a problem to occur. This can change seasonally.

7) Regular inspections of the areas or sites for potential pest/vegetation problems

8) Determination of when pest levels/vegetation problems are likely to require action (based on a monitoring plan). Maintain records to measure pest occurrence and determine when numbers or situations pose a problem.

9) Identification of ways to change these conditions to discourage recurrences of the problem.

9) Selection of the most environmentally sound and economically viable treatment strategies to suppress the pest problem.

10) Evaluation after treatment to determine if action taken has been effective worthwhile, and cost effective.

RESPONSIBILITY:

All County Government Departments are responsible for accomplishing the provisions of this Administrative Directive. The County Administrator will designate a Pest Management Coordinator who will:

1) Assist the departments in implementing this Directive.

2) Provide staff support to the Environmental Pest Management Advisory Board.

3) Provide support for educational programs on IPM activities.

4) Update IPM directives and procedures as required.

5) Maintain a master file of all labels and Material Safety Data Sheets (MSDS) for those pesticides being used by County departments.

PROCEDURES:

All County departments managing pests or vegetation will:

1) Identify an IPM coordinator(s) and alternate(s) to provide overall departmental program management. Assist the Designated County Pest Management Coordinator and the Environmental Pest Management Advisory Board in developing recommended policy.

2) Develop and implement comprehensive written integrated pest and vegetation management programs containing, as a minimum, the elements identified in policy section above.

3) Provide continuing personnel training in integrated pest and vegetation management concepts and methods. Assistance will be provided by Cooperative Extension and other qualified personnel in the County.

4) Modify job descriptions to assure that training and educational requirements for the applicator personnel comply with State regulations pertaining to the control of vegetation and pests and the use of pesticides.

5) Review plans and specifications to enhance the use of IPM procedures and decisions for the planning for modification/repair/replacement/construction of new buildings, landscapes, roads, drainage structures/systems with the objective of minimizing pest problems. Departments are encouraged to seek assistance from the IPM Working Group in this process.

6) Shall purchase and use non-biorational pesticides only where feasible alternatives are not available. Non-biorational pesticides are conventional broad spectrum chemical pesticides whereas biorational pesticides tend to have less negative impact on the environment and beneficial predators. Examples of biorational products include: Bacillus thuringiensis (Bt, Btl), Insecticidal oils and soaps, insect growth regulators (IGRs), insect-attacking nematodes, borate-based compounds, and insecticidal baits.

7) Suggest research needs to the Environmental Pest Management Advisory Board, through the County's designated Coordinator for consideration by the University of Florida.

8) In coordination with the County's Designated Coordinator conduct an annual evaluation of the Department's IPM program and determine where improvements should/could be made.

9) Will develop operational guidelines and standards for general maintenance activities, and IPM prescriptions for specific pests.

10) Will develop pesticide procedures for at least the following:

a. Procedures for public notification of pesticide applications (according to each Departments operations and State laws).

b. Pesticide application procedures.

c. Pesticide spill response procedures.

d. Pesticide storage procedures.

e. Cleaning and calibration of equipment procedures.

f. Storage and disposal of containers

GUIDELINES:

When using pesticides, Departments will give consideration to the selection of the least toxic material, beneficial organisms, identification of the pest, efficacy of the material, timing of application, method of application, characteristics of the treatment site, and qualifications of applicator personnel. Departments will consider the following:

1) Disruption of natural enemies - Become familiar with beneficial organisms. Use available charts and literature to evaluate impact of control strategies and their toxicity to specific natural enemies.

2) Identification - Proper identification of the pest or problem is critical to understanding its management and selection of the appropriate pesticide strategy.

3) Pesticide Toxicity - select effective pesticides that are the least toxic available in order to minimize threats to the applicator as well as to other non-target organisms. Use only when other control methods would not be effective or practical in maintaining the established level of service.

4) Efficacy - Pesticide efficacy can vary from one pest to another, one location to another, and even from one year to the next in the same location. It is

essential when pesticides have to be used to select the correct materials based upon their least toxic impact and efficacy. Good record keeping will be used to support selections.

5) Timing of Application - The effective use of pesticides is enhanced by regularly monitoring pest and beneficial populations to determine the optimum application time. Attack pests during the most susceptible point in their life cycle or growth period. The same holds true for undesirable vegetation. Young, actively growing weeds are usually the easiest to control, e.g., translocating herbicides designed to control weeds by moving from foliage to roots will be most effective at this time.

6) Rate and Method of Application - Regardless of the pest, a method of application should be chosen based on distribution of the pest relative to its environment so that adequate coverage is achieved. Proper application will maximize effectiveness and minimize need for additional sprays. The Goal - is to reduce pesticide use without compromising control.

7) Characteristics of Application Sites - The physical texture, mineral, and chemistry of soils and other geologic materials affect the mobility of water and soluble pesticides. In addition, the topegraphy of the application site, its proximity to surface water, climate and wind conditions are important considerations.

8) Applicator requirements - Pesticides must be applied by certified personnel. To evaluate the effectiveness of pest management activities it is essential to consider the following:

   a. Monitor the Program - Keep written records of site pest management objectives, when and where pest problems are seen, decisions made, actions taken, and effectiveness of treatment action. Data provided by the monitoring system should reflect the actual pest/vegetation problem.

   b. Working Injury Level - Select an injury level that provides sufficient advance warning to permit taking treatment action before intolerable levels of pests or vegetation presence are reached (arrived at through monitoring).

   c. Treatment Activities - Formal monitoring data, or other channels of communication about the pest problem should show that the pest numbers of situations have gone down or been corrected as a result of control activities. Return to the site to evaluate the success of the total treatment.

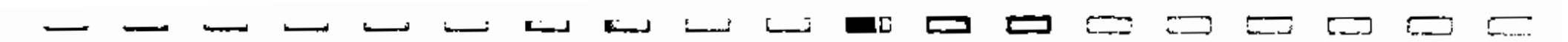
d. Integration of the Services Rendered - Ensure that all parties involved in the pest problem understand how their actions are contributing to the overall program.

e. Education Program - Educate County employees on the connection between their own or other causal activities and pest/vegetation problem/solution and the public as appropriate.

This Administrative Directive supercedes Sarasota County Administrative Directive No. 9.02 (Outdoor Integrated Pest Management (I.P.M.) Program)

Approved:

John Wesley White
County Administrator



SARASOTA COUNTY GOVERNMENT

HAZARDOUS MATERIALS PLAN

EMERGENCY MANAGEMENT

STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS

2740 CENTERVIEW DRIVE • TALLAHASSEE, FLORIDA 32399

LAWTON CHILES
Governor

WILLIAM E. SADOWSKI
Secretary

July 10, 1991

Mr. Gregg Feagans, Director
Sarasota County Department of
Emergency Management
101 South Washington Boulevard
Room 304
Sarasota, Florida 34237

Dear Mr. Feagans: Gregg

The Division of Emergency Management has completed its review of the Sarasota County Hazardous Materials Emergency Plan update. This evaluation has revealed that the plan meets the Department of Community Affairs' Hazardous Materials Emergency Plan Compliance Criteria. We recommend that the revised plan be adopted by your county commission. Please provide the Division with notification of the date of this adoption.

Approval of the plan also completes your county's requirements under your plan update contract with the Department. Final payment under this contract is now being processed. Thank you for your cooperation in this important planning endeavor. If you have any questions, please call the Hazardous Materials Planning Section at (904) 488-1472.

Sincerely,

Gordon

Gordon L. Guthrie
Director

GLG:ere

cc: Denise Johnston
John Gibbons

PASSED AND DULY ADOPTED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA, this 5th day of November, 1991.

BOARD OF COUNTY COMMISSIONERS
SARASOTA COUNTY, FLORIDA

BY: _____

ATTEST:

KAREN E. RUSHING, Clerk of the
Circuit County and Ex-Officio Clerk
of the Board of County Commissioners
of Sarasota County, Florida

BY: _____
Deputy Clerk

RES/HMEP

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RRT/NRT-1 CROSS REFERENCE

RRT Criterion	NRT-1 Criterion	Sarasota County Hazardous Materials Emergency Plan
1.1	A(1)	Figure 4-1
2.1	A(2)	Resolution
2.2	A(2)	
2.3	A(2)	
3.1	A(3)	Section 1.6
3.2	A(3)	Section 1.6
4.1	A(4)	Table of Contents
5.1	A(5)	Definitions/ Acronyms
6.1	A(6)	Section 1.4
6.2	A(5)	Figures 1-1 through 1-17
6.3	A(5)	Figures 1-1 through 1-17
6.4	A(5)	
6.5	A(5)	Section 8.2
6.6	A(6)	
6.6.1	A(6)	Figures 1-1 through 1-17
6.6.2	A(6)	Figures 1-1 through 1-17
6.6.3	A(6)	Figures 1-1 through 1-17
6.7	A(6)	Section 1.2
6.8	A(6)	Section 1.2
6.9	A(6)	
6.10	A(6)	Section 1.2
7.1		Sections 2.2 and 2.5
7.2	A(7)(b)	Section 2.2 and Figures 1-1through 1-17
7.3	A(7)(b)	
7.4	A(7)(c)	
7.5	A(7)(c)	
7.6	A(7)(b)	Section 2.2
7.7	A(7)(b)	Sections 3.2 and 3.3
7.8	A(7)(c)	Sections 3.2 and 3.3
7.9	A(2)	Section 1.6
7.10	A(7)(c)	
7.11	A(7)(c)	
7.12	A(7)(c)	
8.1	A(8)(a)	Section 1.0
8.2	A(8)(b)	Section 1.1
9.1	A(a)	Section 1.1
10.1		Section 4.3

ACRONYMS

BCC
Board of County Commissioners

CAP
Civil Air Patrol

CAS
Chemical Abstract Service

CB
Citizens Band

CERCLA
Comprehensive Environmental Response, Compensation and Liability Act

CHEMTREC
Chemical Transportation Emergency Center

CHRIS
Chemical Hazard Response Information System

CPE
Chlorinated Polyethylene

CPG
Citizens Protection Guide

DEM
Florida Division of Emergency Management

DER
Florida Department of Environmental Regulation

DHHS
U.S. Department of Health and Human Services

DNR
Florida Department of Natural Resources

DOT
(U.S. or Florida) Department of Transportation

EBS
Emergency Broadcast System

EHS
Extremely Hazardous Substance

EOC
Emergency Operations Center

EPA
U.S. Environmental Protection Agency

EPI
Emergency Public Information

FEMA
Federal Emergency Management Agency

GAR
Governor's Authorized Representative

HEAR
Hospital/Emergency Ambulance Radio

HMTF
Hazardous Materials Task Force

IDLH
Immediately Dangerous to Life and Health

LEPC
Local Emergency Planning Committee

LOC
Level of Concern

MSDS
Material Safety Data Sheet

NAWAS
National Warning System

NIOSH
National Institute for Occupational Safety and Health

NOAA
National Oceanic and Atmospheric Administration

NRC
National Response Center

NRT-1
Hazardous Materials Emergency Planning Guide, National Response Team

OHM-TADS
Oil and Hazardous Materials Technical Assistance Data Systems

PEL
Permissible Exposure Limit

PIO
Public Information Officer

RACES
Radio Amateur Civil Emergency Services

REL
Recommended Exposure Limit

RRT
Regional Response Team

SARA
Superfund Amendments and Reauthorization Act

SCBA
Self-Contained Breathing Apparatus

SEOC
State Emergency Operations Center

SERC
State Emergency Response Commission

USCG
United States Coast Guard

VOC
Volatile Organic Compound

DEFINITIONS

Acute

Severe but of short duration. Acute health effects are those that occur immediately after exposure to hazardous chemicals.

Ambient

Surrounding. Ambient temperatures are temperatures of the surrounding area (e.g., air or water).

Disposal

The removal of waste material to a site or facility that is specifically designed and permitted to receive such wastes.

Drill

A supervised instruction period aimed at developing testing and monitoring technical skills necessary to perform emergency response operations.

Exercise

A simulated accident or release set up to test emergency response methods and for use as a training tool.

Extremely Hazardous Substances (EHS's)

A list of chemicals identified by EPA on the basis of toxicity, and listed under Title III of SARA.

Facility

Defined for Section 302 of Title III of SARA as all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person who controls, is controlled by, or under common control with, such person). For purposes of emergency release notification, the term includes motor vehicles, rolling stock, and aircraft.

Facility Emergency Coordinator

Facility representative for each facility with an extremely hazardous substance (EHS) in a quantity exceeding its threshold planning quantity (TPQ), who participates in the emergency planning process.

Full Emergency Condition

An incident involving a severe hazard or large area which poses an extreme threat to life and/or property and will probably require a large scale evacuation, or an incident requiring the expertise or resources of County, State, Federal or private agencies.

Hazardous Material

Any substance or material in a quantity or form which may be harmful to humans, animals, crops, water systems, or other elements of the environment if accidentally released. Hazardous materials include: explosives, gases (compressed, liquefied, or dissolved), flammable and combustible liquids, flammable solids or substances, oxidizing substances, poisonous and infectious substances, radioactive materials, and corrosives.

Immediately Dangerous to Life and Health (IDLH)

The maximum level to which a healthy worker can be exposed for 30 minutes and escape without suffering irreversible health effects or escape-impairing symptoms.

Incident Commander

The pre-designated local, State, or Federal official responsible for the coordination of a hazardous materials response action, as outlined in the pertinent emergency response plan.

Level of Concern (LOC)

The concentration of an extremely hazardous substance (EHS) in the air above which there may be serious irreversible health effects or death as a result of a single exposure for a relatively short period of time.

Limited Emergency Condition

An incident involving a greater hazard or larger area which poses a potential threat to life and/or property and which may require a limited evacuation of the surrounding area.

Local Emergency Planning Committee (LEPC)

A committee appointed by the State Emergency Response Commission (SERC), as required by Title III of SARA, to formulate a comprehensive emergency plan for its district.

Material Safety Data Sheet (MSDS)

A compilation of information required under the OSHA Hazard Communication Standard on the identity of hazardous chemicals, health and physical hazards, exposure limits, and precautions. Section 311 of Title III of SARA requires facilities to submit MSDS's under certain conditions.

Potential Emergency Condition

An incident or threat of a release which can be controlled by the first response agencies and does not require evacuation of other than the involved structure or the immediate outdoor area. The incident is confined to a small area and does not pose an immediate threat to life or property.

Remedial Actions

Actions consistent with a permanent remedy which are necessary to prevent or minimize the release of hazardous materials so that they do not spread or cause substantial danger to public health and safety, or to the environment.

Reportable Quantity (RQ)

The quantity of a hazardous substance that triggers reporting under CERCLA; if a substance is released in a quantity that exceeds its RQ, the release must be reported to the National Response Center (NRC), as well as to the State Emergency

1.0 PLAN OVERVIEW AND PURPOSE

1.1 Responsibility for the Planning Effort

With the enactment of the Emergency Planning and Community Right-To-Know Act of 1986, Congress imposed upon state and local governments additional planning and preparedness requirements for emergencies involving the release of hazardous materials. In compliance with these requirements, Sarasota County officials have prepared a plan for use in responding to and recovering from a release of hazardous or toxic materials from those facilities that are subject to the requirements of the Act.

The Sarasota County Hazardous Materials Emergency Plan is developed based upon guidance criteria prepared by the National Response Team (Hazardous Materials Emergency Planning Guide/NRT-1) and by the State Emergency Response Commission for Hazardous Materials (Chapter 9G-7, Florida Administrative Code). This plan will provide local emergency response personnel with operational guidance in order to effectively manage resources in response to emergencies involving hazardous materials. This plan is based upon certain assumptions and the existence of specific resources and capabilities which may be subject to frequent change. Because of this, some deviation in the implementation of operational concepts identified in this plan may be necessary to protect the health and safety of residents and transients near each facility. This plan addresses the range of potential emergency situations and the appropriate measures to be implemented to minimize exposure through inhalation, ingestion, or direct exposure.

Those portions of the plan addressing local emergency response capabilities were developed by the Sarasota County Department of Emergency Management, with input from designated emergency contacts of those agencies with hazardous materials emergency responsibilities. Site-specific portions of the plan were developed by fire department hazmat response with input from affected facility owners and operators. The Director of the County Department of Emergency Management has overall responsibility for the development of this plan and assuring the Board of County Commissioners and the Local Emergency Planning Committee that prompt and effective protective measures can and will be taken in the event of an emergency involving the release of hazardous materials.

The Plan will be reviewed and updated annually. Plan revisions will reflect changes in implementing procedures, improved emergency preparedness capabilities, deficiencies identified in drills and exercises, etc. *The latest revisions date will appear at the top of each page and the revision will be reflected by italic type.* The Director of the County Department of Emergency Management will certify the plan to be current annually. This plan will be adopted by the appropriate municipal and County officials in accordance with procedures governing local plan adoption.

Copies of the plan and any subsequent revisions will be distributed to organizations and individuals responsible for implementation of the plan. Each copy will be numbered and the County Department of Emergency Management will maintain a control log of plan recipients. Each recipient will be responsible for maintaining a record of plan revisions in accordance with instructions provided by the County Division of Emergency Management at the time each revision is issued, and may provide copies to appropriate personnel. Each local emergency response organization is encouraged to use information contained in this plan to develop its respective response plans and implementing procedures.

1.2 Emergency Planning Bases

Sarasota County is located in the west central part of the Florida peninsula on the Gulf of Mexico and comprises a total area of 620 square miles of which 32 square miles are composed of water bodies. The County extends a distance of 30 miles from north to south along the Gulf of Mexico, and at its widest point some 27 miles from east to west. It is bounded on the north by Manatee County, on the east by Manatee and DeSoto Counties, and on the south by Charlotte County. It has three heavily populated barrier islands: Longboat Key, Lido Key, and Siesta Key; and two lesser populated barrier islands: Casey Key and Manasota Key.

Sensitive environmental areas in the County as identified in Apoxsee, The Revised and Updated Sarasota County Comprehensive Plan, include beaches, dunes, coastal hammocks, mangrove swamps, tidal marshes, mesic hammocks, grassy dry prairies, high dry scrubs, and freshwater wetlands. The Apoxsee sets out guidelines for evaluating land development proposals in these native habitats.

Potable water sources for Sarasota County are provided through contractual agreements with Manatee County for use of the Manatee County watershed. Sarasota County is currently in the

will require specialized assistance during an emergency situation.

The significant critical time variables impacting on emergencies would be the traffic rush hours between 7:30 and 9:00 a.m. and 4:30 and 6:00 p.m.

The major population centers in the County are found in the towns and surrounding areas of Sarasota County. They are according to the 1990 census:

City of Sarasota 50,961
City of Venice 16,022
City of North Port 11,973
Town of Longboat Key
Total permanent residents 8,000
Total Sarasota Cnty res. 3,393
Total during "season" 18,000

Together these centers comprise 32% of the total population. The remainder of the County population resides in the urban areas along the coast.

The seasonal population annually increases the total population by 50,000 to 60,000.

There were approximately 165,575 dwelling units in Sarasota County in 1990. The following shows the growth in dwelling units for 1988, 1989 and 1990. These figures are based on reported data and assessment roll information.

	1988	1989	1990
Single Family Units	74,374	76,587	79,714
Duplex Units	4,552	4,524	4,542
Condominium Units	38,754	39,461	39,884
Co-Ops Units	403	374	375
Mobile Home Units	23,041	23,165	24,100
Motel/Hotel Units	3,521	3,437	3,410
Retirement Home Units	2,467	2,856	2,996
Nursing Home Units	2,149	2,253	2,329
Rental Apartment Units	8,438	8,689	9,225
Totals	157,669	161,347	165,575

Source: 1991 Statistical Report, Sarasota County Property Appraiser.

As with the population, approximately 98% of all facilities listed above are located within the three-mile strip of land next to the coast. (These data were derived from the 1984 Hurricane Loss Study, Southwest Florida Regional Planning Council Housing Units by Type, the Sarasota County Planning Dept. and the Sarasota County Property Appraiser's 1991 Statistical Report.)

Sarasota County has four (4) hospitals and twenty three (23) nursing homes and/or medical care facilities.

Within Sarasota County there are a number of private and public facilities which produce, store or use hazardous materials. In addition, anytime there are transportation routes, inclusive of roads, rail lines, waterways, etc., there exists the potential threat of a transportation mishap involving a hazardous substance.

In general, a mixture of hazardous materials was found in Sarasota County. However, with limited hazardous material stockpiling, usage or transportation occurring in the County, and because of the absence of any major accidents or incidents involving such substances, there is a low probability a reportable hazardous materials accident will occur in Sarasota County. But based upon the current non-reportable history of "minor" hazardous incidents there is a high probability a minor hazardous materials accident will occur in Sarasota County.

The areas of maximum threat for hazardous materials transported over highways in Sarasota County are the City of Sarasota and City of Venice.

Residents of Sarasota County are vulnerable to the harmful effects of the accidental release of hazardous materials. A large volume of hazardous materials is transported throughout the County by railroads, highways, air traffic, water and pipelines on a routine daily basis. Within Sarasota County there are a number of private and public facilities which produce, store or use hazardous materials.

Emergencies involving hazardous materials can be postulated as ranging from a minor emergency with no offsite effects to a major emergency with no offsite effects to a major emergency that may result in an offsite release of hazardous and/or toxic materials. The overall objective of chemical emergency response planning and preparedness is to minimize exposure for a spectrum of emergencies that could produce offsite levels of contamination in excess of levels of concern (LOCs) established by the Environmental Protection Agency. Minimizing this exposure will reduce the consequences of an emergency to persons in the area nearby facilities that manufacture, store or process hazardous materials.

No specific emergency sequence can be isolated as the model for which to plan because each emergency could have different consequences, both in nature and degree. As an alternative to defining a specific emergency, the plan identifies various parameters for planning which are based upon knowledge of the possible consequences, timing and release characteristics of a spectrum of

1.4 Assumptions

Extremely hazardous substances present in quantities above their threshold planning quantities will be identified for the Local Emergency Planning Committee by the reporting facilities. Estimates of vulnerable zones are based upon the following credible "worst case" assumptions:

- Quantity released: maximum quantity that could be released from largest vessel or interconnected vessels.
- Rate of release to air: total quantity of gas, solid as a powder, or solid in solution is assumed to be released in 10 minutes; for liquids and molten solids, the rate is based on the rate of evaporation (rate of volitization).
- Temperature: not applicable to gases or solids as powders or in solution; for liquids, dependent on whether they are used at ambient temperature or near their boiling points; for molten solids, at their melting point.
- Meteorological conditions: wind speed of 1.5 meters per second (3.4 miles per hour).
- Topographic conditions: flat, level, unobstructed terrain; use of the dispersion model for rural areas.
- Level of concern: one-tenth of the National Institute for Occupational Safety and Health's "Immediately Dangerous to Life and Health" level.

The chemical facility owners and operators will notify state and local governments of an emergency in sufficient time to implement warning and protective actions.

1.5 Supporting Plans

The following federal, state, local and facility emergency plans are available to support the implementation of the Sarasota County Hazardous Materials Emergency Plan:

- Florida Coastal Pollutant Spill Plan
- Florida Mutual Aid Plan
- Sarasota County Peacetime Emergency Plan
- State Comprehensive Emergency Management Plan
- National Oil and Hazardous Substances Pollution Contingency Plan

1.6 Authorities and References

Legislation and Regulations

1. Emergency Planning and Community Right-to-Know Act of 1986, Title III, Superfund Amendments and Reauthorization Act of 1986.
2. State Emergency Management Act, Chapter 252, Florida Statutes.
3. Resource Conservation and Recovery Act.
4. Comprehensive Environmental Response, Compensation, and Liability Act.
5. Resolution - Sarasota County Board of Commissioners
6. Executive Order 80-29, "Disaster Preparedness" Mutual Aid Agreements.

Sarasota County has entered into mutual aid agreements with surrounding counties and with municipalities within Sarasota County. These agreements include: conditions, rules and standards governing any mutual aid; provisions for immunity from liability, waiver of claims and indemnification from third party claims; notification of persons authorized to request or invoke mutual aid; compensation consideration; and procedures for the direction and control of personnel and units rendering aid.

Mutual aid agreements exist between Sarasota County and the following counties and municipalities:

- City of Sarasota
- Charlotte County
- City of Venice
- Collier County
- City of North Port
- DeSoto County
- Town of Longboat Key
- Hendry County
- Lee County
- Manatee County

An official copy of each mutual aid agreement is on file with the Clerk of each County and municipality.

General and Technical References

1. Guide for Development of State and Local Emergency Operations Plans (CPG 1-8), Federal Emergency Management Agency.
2. Hazardous Materials Emergency Planning Guide (NRT-1), National Response Team.
3. Community Teamwork, U.S. Department of Transportation.
4. Community Awareness and Emergency Response Program Handbook, Chemical Manufacturers Association.
5. Site Emergency Response Planning, Chemical Manufacturers Association.
6. Community Emergency Response Exercise Program, Chemical Manufacturers Association.
7. CHRIS: Manual I,A Condensed Guide to Chemical Hazards, Washington, D.C.: U.S.

Business By Chemical Reports
Businesses With EPA 302 Chemicals
BID Range: [1] To [99999]
(In Business Name Order)

[BID] Business Name And Address	Haz Rate	#Chem	Owner/Main Contact	Phones
[00004] AT AND T COMMUNICATIONS 1315 STRINGFIELD AV., SARASOTA, FL 34237	302 WCP	1	AT AND T DOUG DOUGHTON	(813) 951-1460 (813) 951-1460
[00010] ATLANTIC UTILITIES 4400 BAHIA VISTA ST., SARASOTA, FL 34232	300 O	1	J. PETER MARTIN LESTER RUPER	(305) 652-1100 (813) 371-1059
[00058] CAMELOT LAKE UTILITIES 53[illegible] QUEENSBURY BL., SARASOTA, FL 34241	302 OWCP	2	ROM ROULEAU, GERALD ELLENBURG JIM BLUE	(813) 922-0852 (813) 746-0313
[35009] CAPRI ISLES GOLF COURSE/NEMATODE CONTROLLERS 84[illegible] CAPRI ISLES BL., VENICE, FL 34292	000 P	1	MICHAEL A. COOK ROB MCCOY	(813) 685-2043 (813) 484-6621
[61427] CENTRAL COUNTY UTILITIES, INC. 79[illegible] MCINTOSH RD., SARASOTA, FL 34238	300 O	1	CENTRAL COUNTY UTILITIES, INC. KEN STEPHEN	(813) 922-9659 (813) 922-9659
[63217] CIRCLEWOOD UTILITIES 708 CIRCLEWOOD DR., VENICE, FL 34293	300 O	1	CIRCLEWOOD HOMEOWNERS ASSOC HENRY J. HAFFNER	(813) 493-1119 (813) 493-1119
[050016] CITY OF SARASOTA CIRCUS BLVD BOOSTER PUMP STATION 3700 CIRCUS BL., SARASOTA, FL 34232	300 O	1	CITY OF SARASOTA DOUGLAS TAYLOR	(813) 955-2325 (813) 955-2325
[[illegible]0001] CITY OF SARASOTA OLD WATER TREATMENT PLANT SITE 1085 N. ORANGE AV., SARAOSTA, FL 34236	300 O	1	CITY OF SARASOTA DOUGLAS TAYLOR	(813) 955-2325 (813) 955-2325
[00014] CITY OF SARASOTA SEA WATER PUMP STATION 1118 10TH ST., SARAOSTA, FL 34236	300 O	1	CITY OF SARASOTA DOUG TAYLOR	(813) 955-2325 (813) 955-2325
[00004] CITY OF SARASOTA TEMPLE ST. BOOSTER PUMP STATIO 2600 TEMPLE ST., SARASOTA, FL 34239	300 O	1	CITY OF SARASOTA DOUGLAS TAYLOR	(813) 955-2325 (813) 365-2200
[00007] CITY OF SARASOTA VERNA WELL FIELD 00[illegible] VERNA RD., MYAKKA CITY, FL 34251	300 O	1	CITY OF SARASOTA DOUGLAS TAYLOR	(813) 955-2325 (813) 966-2325
[01017] CITY OF SARASOTA WASTEWATER TREATMENT PLANT 18[illegible] 12TH ST., SARAOSTA, FL 34236	302 OWCP	3	CITY OF SARASOTA DOUGLAS H. TAYLOR	(813) 955-2325 (813) 955-2325
[01012] CITY OF SARASOTA WATER TREATMENT PLANT 16[illegible] 12TH ST., SARAOSTA, FL 34236	302 OWCP	2	CITY OF SARASOTA DOUGLAS TAYLOR	(813) 955-2325 (813) 955-2325
[35001] CITY OF VENICE WATER TREATMENT PLANT 20[illegible] N. WARFIELD AV., VENICE, FL 34293	302 OWCP	2	CITY OF VENICE JEFF PHILLIPS	(813) 484-9327 (813) 485-3311
[35002] CITY OF VENICE WSTEWATER TREATMENT PLT(MCCULLOUGH) 1800 S. HARBOR DR., VENICE, FL 34293	300 O	1	CITY OF VENICE, FLORIDA ED MC CAMPBELL	(813) 484-5837 (813) 484-5837
[35010] COOK BATES COMPANY INC [illegible] OGDEN RD., SARASOTA, FL 34292	422 WCP	2	LONDON INTERNATIONAL JOHN F. WERMANN	(813) 493-3566 (813) 493-3566
[00012] DOLOMITE UTILITIES 1616 WENDEL KENT RD., SARASOTA, FL 34231	300 O	1	DOLOMITE UTILITIES WARD WRIGHT	(813) 351-1094 (813) 377-9456

Business By Chemical Reports
Businesses With EPA 302 Chemicals
BID Range: [1] To [99999]
(In Business Name Order)

02/16/93

[B[illegible]] Business Name And Address	Haz Rate	#Chem	Owner/Main Contact	Phones
[0[illegible]08] GENERAL TELEPHONE COMPANY-SARASOTA DAC 1660 RINGLING BL., SARASOTA, FL 34236	302 WCP	1	GTE HAROLD MCDANIEL	(813) 224-4740 (813) 952-5522
[6[illegible]12] GULF GATE AWT PLANT 73[illegible] BOUNTY DR., SARASOTA, FL 34231	300 O P	2	FLORIDA CITIES WATER COMPANY C.N. COURT	(813) 924-1128 (813) 924-1128
[6[illegible]18] GULF VIEW UTILITIES, INC. WATER TREATMENT PLANT 00[illegible] MONROE RD., VENICE, FL 34293	300 O	1	GULF VIEW UTILITIES, INC. MIKE TREMBLAY	(813) 497-5285 (813) 497-5285
[61614] HERON BAY CLUB 76[illegible] SARABAY RD., OSPREY, FL 34229	300 O	1	HERON BAY CONDOMINUM ASSOC E. C. SANDERS	(813) 746-0149 (813) 746-0149
[06164] KENSINGTON PARK UTILITIES 24[illegible] DR MARTIN LUTHER KI WY., SARASOTA, FL 34234	300 O	1	KENSINGTON PARK UTILITIES, IN. M. R. FISHKIND	(813) 922-3516 (813) 922-3516
[06162] KENSINGTON PARK UTILITIES-MONICA PKWY PLANT 900 27TH ST., SARASOTA, FL 34231	300 O	1	KENSINGTON PARK UTILITIES, INC M.R. FISHKIND	(813) 922-3516 (813) 922-3516
[60002] KEY CLUB LANDSCAPING (A SHANNON GROUP HOTEL) 542 GULF OF MEXICO DR., LONGBOAT KEY, FL 34228	400 P	1	JAMES A. KEARNEY, JR. JAMES A. KEARNEY, JR.	(813) 383-5667 (813) 383-5667
[[illegible]00] KINGS GATE CLUB, INC. 290 AVENUE OF KINGS AV., Ste B, NOKOMIS, FL 34275	300 O	1	DON FISHER-PRESIDENT JERRY ORAVEC	(813) 484-6119 (813) 484-6119
[0[illegible]02] LEAP BATTERY 1500 CENTRAL AV., SARASOTA, FL 34234	302 WCP	1	JOHN LEAP JOHN LEAP	(813) 355-5948 (813) 355-5948
[0[illegible]68] MANASOTA PLATING 18[illegible] 61ST ST., SARASOTA, FL 34243	302 WCP	1	BARBARA NUNN ALFRED MCNISH	(813) 355-1522 (813) 355-1522
[0[illegible]53] MANATEE CHEMICAL COMPANY 30[illegible] BELL RD., SARASOTA, FL 34240	300 O	1	BRUCE C. DOWNING BRUCE DOWNING	(813) 924-2077 (813) 924-2077
[61319] MANATEE COMMUNITY COLLEGE 30[illegible] S. TAMIAMI TR., VENICE, FL 34293	300 O	1	MANATEE COMMUNITY COLLEGE CHURCK PERRY	(813) 755-1511 (813) 493-3504
[50008] MYAKKA PINES GOLF CLUB, INC./NEMATODE CONTROLLERS [illegible]5[illegible] S. RIVER RD., ENGLEWOOD, FL 34223	000 P	1	MICHAEL COOK PAT MCCLAIN	(813) 685-2043 (813) 474-6351
[61829] MYAKKA RIVER STATE PARK 13707 STATE ROAD 72 RD., SARASOTA, FL 34231	300 O	1	FLA. DEPT. OF NATURAL RESROUCS JEFF DIMAGGIO	(813) 361-6503 (813) 361-6513
[40001] NORTH PORT WASTEWATER TREATMENT PLANT 1355 PAN AMERICAN BL., NORTH PORT, FL 34287	300 O	1	GENERAL DEVELOPMENT UTILITIES PAUL BENECKE	(813) 426-9500 (813) 625-5941
[6[illegible]13] PALM BAY CLUB [illegible] MIDNIGHT PASS RD., SARASOTA, FL 34242	300 O	1	PALM BAY CLUB HOMEOWERS JERRY CULHANE	(813) 349-1911 (813) 349-1911
[0[illegible]34] PRESTANCIA GOLF CLUB/NEMATODE CONTROLLERS 4409 TPC DR., SARASOTA, FL 34238	000 P	1	MICHAEL COOK JACK MORRISON	(813) 685-2043 (813) 921-2800

Business By Chemical Reports
Businesses With EPA 302 Chemicals
BID Range: [1] To [99999]
(In Business Name Order)

02/16/93

BID] Business Name And Address	Haz Rate	#Chem	Owner/Main Contact	Phones
[123] VENICE GARDENS HOMEOWNERS ASSOC. PLANT #2 4[illegible] SHAMROCK BL., VENICE, FL 34293	300 O	1	VENICE GARDENS HOMEOWNERS ASSN JAMES CORLEY	(813) 493-5743 (813) 493-0845
[124] VENICE GARDENS UTILITIES WASTEWATER PLANT #1 7[illegible] SRIARWOOD RD., VENICE, FL 34293	300 O	1	SOUTHERN STATES UTILITIES JERRY MANNING	(813) 493-8506 (813) 493-9614
[228] VENICE GARDENS UTILITIES WASTEWATER PLANT #2 0[illegible]000 VENICE EAST BL., VENICE, FL 34293	300 O	1	SOUTHERN STATES UTILITIES JOE SCIBILIA	(813) 488-2284 (813) 493-9201
[06051] VENICE GARDENS UTILITIES WATER PLANT #1 0[illegible]0000 SHAMROCK BL., VENICE, FL 34293	300 O	1	SOUTHERN STATES UTILITIES WAYNE VOWELL	(813) 493-8506 (813) 493-6118
[35008] WATERFORD GOLF CLUB/NEMATODE CONTROLLERS 1[illegible] GLENEAGLE DR., VENICE, FL 34292	000 P	1	MICHAEL A. COOK ROB MCCOY	(813) 685-2043 (813) 484-6621
[06156] WINDWARD ISLE HOMEOWNERS, INC. 1 CATAMARAN DR., SARASOTA, FL 34233	300 O	1	WINDWARD ISLE HOMEOWNERS INC FRANK PERKINS	(813) 922-3090 (813) 922-3090
[111] WINN DIXIE 6100 MCINTOSH RD., SARASOTA, FL 34238	420 P	1	WINN DIXIE ROGER PRICE	(813) 923-4921 (813) 923-4921

75 BUSINESS(ES) LISTED

2.0 EMERGENCY RESPONSE ORGANIZATIONS AND RESPONSIBILITIES

2.1 General

This section identifies the state, County, federal and private organizations that would participate in response to an emergency involving hazardous materials, and describes the responsibilities of each group. Those individual officials who are responsible for coordinating the activities of the agencies listed below are responsible for assuring continuity of resources to support emergency operations over a protracted period of time.

2.2 Local Government Organizations and Responsibilities

2.2.1 Sarasota County Board of County Commissioners

The Sarasota County Board of County Commissioners has the responsibility for overall hazardous materials emergency response planning for Sarasota County. The Board shall establish a Hazardous Materials Response Policy to be administered by the County Administrator or his designee. The Policy as documented in this plan shall provide direction and control at the local level, and shall include consideration of in-place sheltering or evacuation as an option for the protection of the public, and describe the emergency operations for responding to the effects of an emergency involving hazardous materials.

The Board is responsible for assuring overall continuity of resources to assure 24-hour operations for a protracted period. If conditions warrant, the Board will declare a local state of emergency.

2.2.2 County Administrator

The County Administrator shall coordinate all activities between the Board of County Commissioners and elected officials and city/town managers/mayors by the most expedient means available including radio and telephone.

The County Administrator may conduct news conferences and issue emergency management news bulletins or other emergency management public information statements in any manner authorized by the Board of Sarasota County Commissioners.

2.2.3 Director, Department of Emergency Management

The Director is responsible for the coordination, development and maintenance of procedures to implement the Sarasota County Hazardous Materials Emergency Plan consistent with existing conditions and procedures. The Director will also be responsible for maintaining this plan through annual revisions. The Director or his designee will be responsible for providing communications and other logistical support to the public safety agencies involved in emergency operations in response to a hazardous materials release.

The Director is responsible for early warning and notification of the population within the area affected by the release of hazardous materials. He is also responsible for the notification of the County EOC staff, activating the EOC, and notifying all local governmental and non-governmental agencies supporting emergency operations as appropriate to the severity of the incident.

The Director is responsible for developing and implementing a public education program designed to advise the public of the risks associated with hazardous materials and appropriate actions to take in the event of an emergency involving the release of hazardous materials. The Director is authorized to issue any public information statements during a disaster period necessary to implement any contingency plan previously approved by the Board of Sarasota County Commissioners.

The Director is designated as the Community Emergency Coordinator (CEC) for Sarasota County. The Director will coordinate overall emergency operations and support needs with the State Division of Emergency Management, state and federal support agencies, and the appropriate facility owner/operator.

2.2.4 Sheriff's Department and Municipal Law Enforcement Agencies

Responsibilities shared by the Sheriff's Office and municipal law enforcement agencies include:

a. Determine the occurrence of a hazardous materials release.
b. Notify the fire department which has jurisdiction of the occurrence of a hazardous materials release and request that appropriate response be initiated.
c. Detail a law enforcement command officer in the incident command post for the life of the incident.
d. Isolate and establish command over the area where evacuation, public safety, traffic control and protection of property are of concern.
e. Execute the evacuation order and assist the population at risk.
f. Provide physical assistance to population at risk including transportation from the evacuation zone to safe shelter.

nursing homes, and schools, as well as the general public.

2.2.12 Emergency Medical Services

The Emergency Medical Services will provide emergency medical transportation to persons in need of such services, to assist in the evacuation and transfer of patients from nursing homes and hospitals in the affected areas, and to assist in the evacuation of persons with special needs who are unable to evacuate themselves.

2.2.13 Hospitals

Hospitals will accommodate, if evacuation is necessary, transfer patients from affected hospitals, critical nursing home patients requiring hospitalization, and accident victims injured during the evacuation operations.

2.2.14 Other County and Municipal Agencies

Other County and municipal agencies may be required to provide equipment, personnel and services to support emergency operations.

2.3 State Government Organizations and Responsibilities

2.3.1 Governor

Under the provisions of Chapter 252, Florida Statutes, the Governor is ultimately responsible for protecting the population of the State from the dangers created by emergencies which are beyond the capabilities of local governments or which are multi-jurisdictional in nature. He will provide that protection through the assignment of appropriate state resources and agencies.

Any or all of the above responsibilities are implemented as authorized through the Rules and Regulations of the State of Florida.

1. Providing direction and control should the emergency be beyond the capabilities of the local governments affected.
2. Issuing necessary Executive Orders, proclamations, and regulations.
3. Ensuring that timely emergency response operations can be initiated.

   The Governor will also request federal assistance as necessary upon determining that the State has insufficient technical and/or logistical resources to adequately cope with the offsite consequences of an emergency involving hazardous materials.

2.3.2 Attorney General

The Attorney General will provide consultation to the Governor on legal matters pertaining to emergencies involving the release of hazardous materials.

2.3.3 Department of Community Affairs

The Department is responsible for coordinating the State's response to emergencies involving hazardous materials. The Department will also request and coordinate assistance as necessary from federal emergency response agencies. The Department will:

a. Notify appropriate state, local and federal agencies of an emergency involving hazardous materials.
b. Coordinate federal, state and local emergency response activities.
c. Ascertain the requirements of state and local political subdivisions for supplies and equipment, and locate and provide needed supplies and equipment.
d. Provide for activation of the State Emergency Operations Center, and provide personnel and equipment to operate emergency response facilities.

2.3.4 Department of Environmental Regulation

a. Act as the technical advisory agent in identifying, containing and removing hazardous materials threatening, or affecting, water or air quality, as authorized by Florida Statutes.
b. Locate sites and establish acceptable procedures for the disposal of hazardous materials.
c. Act as the primary operational agency in the containment and cleanup of inland hazardous materials spills.
d. Act as the sole authority on the use of chemical dispersants in combating a hazardous materials incident.
e. Provide a coordinator, to serve as chairman of the Hazardous Materials Task Force, when an incident requires a multi-agency response, and the agency is designated as the primary operational agency.

2.3.5 Department of Natural Resources

a. When pollutants, as defined in Section 376.031(7), Florida Statutes, are determined to be discharged into navigable waters within the geographic responsibility of the United States Coast Guard, the state response shall be as provided in the Florida Coastal Pollutant Spill Plan, as approved by the Governor and Cabinet, pursuant to Sections 376.05 and 376.07, Florida Statutes.
b. Provide traffic supervision and control for water transportation routes adversely affected by a hazardous materials incident.

2.3.13 Department of Insurance

a. Enforce rules and regulations covering the design, construction, location and operation of equipment for liquified petroleum gas storage, handling and intrastate transporting by tank truck, tank trailer or pipeline.
b. Enforce regulations covering the manufacture of hazardous materials.
c. Enforce rules and regulations for the intrastate transportation of hazardous materials.
d. Provide personnel to determine the cause of an incident; conformance with Department of Insurance regulations.

2.3.14 Hazardous Materials Task Force

The State Hazardous Materials Task Force has been formed to provide a mechanism for the coordinated response by state agencies to hazardous materials emergencies that are beyond the capability of local governments. The task force also provides technical assistance and information for incidents which require state or federal involvement. The chairman of the task force shall serve as the focal point for coordinating state response and support to local governments. Membership on the task force includes the state agencies whose responsibilities are outlined in this section.

2.4 Federal Government Organizations and Responsibilities

2.4.1 U.S. Coast Guard

a. Provide for the cleanup and decontamination of any hazardous substance on the state's coastline and on navigable waterways within the state.
b. Operates the National Response Center (NRC) on a 24-hour per day basis.

2.4.2 U.S. Environmental Protection Agency

Provide for the cleanup and decontamination of any hazardous substance that has the potential to affect public health and safety and the environment.

2.4.3 U.S. Department of Transportation

Regulates the transportation of hazardous materials.

2.4.4 Regional Response Team (RRT)

The RRT provides a coordinated federal response capability at the scene of a hazardous materials incident that poses a threat to the public health and welfare, the navigable waters of the United States, adjoining shorelines, or into or upon waters of the contiguous zones, and all inland waters.

2.5 Facility Owners/Operators

a. Designate a representative/coordinator to participate in the emergency planning process and as a facility emergency coordinator and assist local emergency management directors and Local Emergency Planning Committees (LEPC's) in the preparation and maintenance of emergency response plans for hazardous materials present at their facility(ies).
b. Prepare, test and maintain an Emergency Response Plan for the hazardous materials at their facilities.
c. Notify the State Emergency Response Commission if subject to the requirements of SARA/Title III.
d. Submit Material Safety Data Sheets and emergency inventory forms to the State Emergency Response Commission, Local Emergency Planning Committees and local fire departments.
e. Submit toxic chemical release forms to the State Emergency Response Commission and the Environmental Protection Agency for each toxic chemical defined in Section 313 of SARA/Title III that was manufactured, processed or otherwise used in quantities exceeding the established threshold planning quantity during the preceding calendar year.
f. Provide immediate notification to the local fire departments, State Emergency Response Commission and Local Emergency Planning Committee of the emergency release of a listed hazardous substance in excess of the reportable quantity for that substance.
g. Provide written follow-up emergency notice to the State Commission and Local Emergency Planning Committees after the release.

2.6 Volunteer Organizations

2.6.1 American Red Cross

The American Red Cross will provide reception and care for evacuees. This service will include registration of evacuees, provision of shelter managers, and special assistance to evacuees. Additional shelter space may have to be established by the American Red Cross should the relocation period last longer than anticipated. In this event, mobilization and relocation of evacuees will be coordinated by the American Red Cross through the County Emergency Operations Center.

2.6.2 Emergency Broadcast System (EBS) Stations

Provide early warning to the public and area broadcasting stations via EBS tone alert systems.

3.0 DIRECTION AND CONTROL

3.1 General

This section describes the coordination and management of emergency response operations between local, state and federal agencies.

3.2 Local Government Role

Local governments have the primary role in preventing unnecessary hazards to the general public from an emergency involving the release of hazardous materials. When the accidental release of hazardous materials occurs, the effects of which are strictly confined to the premises of a private industry in Sarasota County, governmental response agency assistance will be on a cooperative basis only. Care must be exercised that a local government is not unnecessarily subjected to liability for damages because actions were forced upon a facility operator in an incorrect manner. When there is any possible off-site threat to the general public or the environment, however, a public safety agency must assert its authority and take decisive charge of the scene.

Initial response to hazardous materials accidents will be the responsibility of the law enforcement, fire and emergency medical services agencies within the jurisdiction in which the accident occurred. The Community Emergency Coordinator (Director of Emergency Management) will coordinate overall emergency response activities and operations. Direction and control will be exercised through the County EOC.

3.2.1 On-Scene Command

The first responding officer (law enforcement, fire, rescue) is designated as the on-scene commander. Incident Command at the scene shall be established and transferred as outlined in the National Inter-agency Incident Management System (N.I.I.M.S.) procedures to the appropriate fire agency having jurisdiction. As long as there is a threat to life and/or property from the release/incident, the fire department having jurisdiction shall be the agency in charge of the incident scene.

In this capacity the incident commander would be responsible for:

- Coordination of local resource deployment and local emergency response activities;
- Keeping County officials and the Emergency Operations Center apprised regarding on-scene activities;
- Implementing actions necessary to protect public health and safety; and,
- Coordination of clean-up and recovery operations.

3.2.2 On-Scene Command Transfer of Authority

When the threat to life and/or property from the release/incident has been mitigated, incident command passes from the appropriate fire department to representatives of the Sarasota County Department of Solid Waste and then to the Sarasota County Department of Natural Resources, and finally to the Florida Department of Environmental Regulation. Transfer of authority will not occur until the agency receiving the transfer is in agreement that the incident has been stabilized by Emergency Response Units and they are prepared to accept command.

3.2.3 Emergency Operations Center

The County Emergency Operations Center (EOC) may be activated by the County emergency management director upon receipt of notification of a release of hazardous materials. Appropriate response and support personnel would be called to the EOC to coordinate the actions of their respective agencies and organizations. Upon activation, direction and control of County emergency operations would be exercised by the Director of Emergency Management as authorized through the Chairman of the BCC from the EOC. Once fully activated, the EOC will continue to function on a continuous basis until the emergency is over and its effects can be more effectively controlled through normal governmental channels.

3.3 State Government Role

The role of state government in response to a hazardous materials emergency is to support local government operations unless the scope of the emergency warrants increased state action. The state government support is coordinated by the State Division of Emergency Management from the State Emergency Operations Center.

Upon receipt of notification from the County that a release of hazardous materials has occurred, staff from the Department of Environmental Regulation (inland releases or spills) or the Department of Natural Resources (coastal releases or spills, and accidents involving petroleum derivatives, pesticides, chlorine and ammonia) may be dispatched to the scene to provide guidance to local emergency operations personnel to mitigate

FIGURE 3-1
EXAMPLE EXECUTIVE ORDER
STATE OF FLORIDA
OFFICE OF THE GOVERNOR
EXECUTIVE ORDER NUMBER _____

WHEREAS, on _____, 19__, a hazardous materials emergency condition was declared at the _____ chemical plant, operated by the _____ Company in Sarasota County, causing a potentially hazardous chemical release into the atmosphere, and

WHEREAS, certain additional specialized equipment, personnel and resources are required, and

WHEREAS, the _____ Company has exerted every effort to correct the emergency condition, and

WHEREAS, local governments in the affected counties and municipalities have exerted every effort to assist the affected citizens, and

WHEREAS, the Sarasota County Commission has declared a local state of emergency and has requested assistance from the state,

NOW, THEREFORE, I, (governor's name), as Governor of the State of Florida, by virtue of the authority vested in me by Article IV, Section 1(A), Florida Constitution (1968), Section 252.31 et seq., Florida Statutes , Section 250.06, Florida Statutes , and all applicable law, do hereby declare the existence of a disaster emergency and promulgate the following Executive Order effective immediately:

1. That a state of emergency exists within Sarasota County due to the potentially hazardous effects of a chemical release from the _____ Company.

2. That the Florida Comprehensive Emergency Management Plan is hereby activated and the Department of Community Affairs shall be responsible for emergency management and is hereby empowered to take all action under the plan necessary to protect the health, welfare, and safety of the people and property in the vicinity of the chemical release.

3. That the Chairperson of the Board of County Commissioners of Sarasota County or the Chairperson's designee shall act as coordinator of the local emergency management effort within Sarasota County.

4. That the County Department of Emergency Management is hereby authorized to order the evacuation of those portions of Sarasota County whose people and property are in imminent or existing danger as a result of the emergency at the _____ Company and the chemical release. Should such action become necessary, the evacuation orders shall have the force and effect of state law.

5. That the Florida Division of Emergency Management is hereby authorized to direct the use of any State and County facility, including public schools, to ensure the proper reception, sheltering, and care of evacuees.

6. That State agencies and the Florida National Guard, as coordinated by the Florida Division of Emergency Management, shall provide mission support by furnishing resources and support personnel to alleviate threat to life and property resulting from the state of emergency at the _____Company.

7. That all affected toll facilities are hereby ordered to suspend the collection of toll charges until such time as the Governor or his Authorized Representative designates this as no longer necessary.

8. That _____ is hereby appointed the Governor's Authorized Representative for Sarasota County and the area(s) within the vulnerable zone surrounding the _____ Company.

9. In the event of _____ absence, _____ shall act as the Governor's Authorized Representative.

10. This Executive Order shall remain in effect for a period of thirty days unless otherwise rescinded.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Florida to be affixed at Tallahassee, the Capitol, this _____of_____, 19__.
(Day) (Month)

_____
GOVERNOR

ATTEST:

_____
SECRETARY OF STATE

4.0 NOTIFICATION AND ACTIVATION

4.1 General

This section outlines responsibilities and procedures for the notification of appropriate emergency response organizations; alerting key local, state and federal emergency response personnel; and for providing warning and instructions to the general public.

4.2 Warning Points

The Sarasota County 9-1-1 Communications Center of the Sarasota County Sheriff's Department is the designated County Warning Point in the event of a hazardous materials emergency. The County Warning Point is staffed on a 24-hour per day basis for receipt of notification by the facility owner/operator that a hazardous materials release has occurred, and for alerting key local and state emergency response personnel. The telephone number for the County Warning Point is 9-1-1. For information from 8:00 a.m. to 5:00 p.m. Monday through Friday, calls should be made to the Sarasota County Department of Emergency Management, (813) 366-6000.

The Florida Division of Emergency Management (DEM) is the designated State Warning Point in the event of a hazardous materials incident. As such, the DEM is responsible for receiving notification of an emergency from the County Warning Point and alerting key state and federal emergency response personnel. The DEM is also responsible for assisting Local Emergency Planning Committees (LEPCs) in providing warnings and instructions to the general public.

A Duty Officer is on duty at the State Warning Point in Tallahassee on a 24-hour per day basis. The 24-hour telephone number for the State Warning Point is (904)488-1320. Upon receipt of notification from the County Warning Point that a release involving hazardous materials has occurred, the State Warning Point will make the appropriate notification to the National Response Center.

The National Response Center (NRC) is the national warning and communications center for emergencies involving the release of hazardous materials. Located at U.S. Coast Guard headquarters in Washington, D.C., the NRC receives and relays notices of discharges and releases to the appropriate on-scene commander, and provides facilities for the National Response Team to use in coordinating a national response action when required. A 24-hour telephone number for the NRC is (800) 424-8802.

4.3 Notification and Activation

SARA Title III requires facility owners and operators to notify immediately local, state (and in some cases federal) authorities following the release or spill of a listed extremely hazardous substance or CERCLA chemical in an amount that exceeds the reportable quantity for that particular substance. Specific information to be included in the facility's initial and follow-up messages is identified in Figure 4-1. In the event that the State Warning Point receives notification of a release from a source other than the County Warning Point, the State Warning Point will immediately notify the County Warning Point.

Following a reportable release the facility owner or operator must:

1. Contact the Community Emergency Coordinator for the LEPC for each area likely to be affected by the release or spill and the State Emergency Response Commission by calling the State Warning Point; and

2. Contact the NRC if a substance is reportable under the comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

Facility owners or operators are encouraged to report all incidents involving hazardous materials to the County Warning Point by dialing 9-1-1. Upon receipt of notification of an emergency involving the release of hazardous materials, the County Warning Point will make every effort to verify information contained in the initial report. Local response organizations will be notified of the emergency by the County Warning Point, at the direction of the County 9-1-1 Communications Supervisor. The names and telephone numbers of both the primary and alternate contact for each emergency response organization identified in Figure 4-2 will be maintained by the Sarasota County Department of Emergency Management and on the 911 C.A.D. system. These names and telephone numbers will be verified and updated continuously to assure accurate and timely notification. The notification message will specify that the organization stand by or start to mobilize emergency response personnel.

Emergency response personnel will be called to duty using established County notification procedures. Support agencies will be alerted by the agency they are supporting. Should mobilization be required, emergency response personnel will report to their agency response center for specialized equipment and further instructions.

The sequences for notification and activation of emergency response personnel for each level of

will instruct the dispatch center to notify the appropriate Hazardous Materials Team. If the incident occurs in a jurisdiction that does not have a Hazardous Materials Team, mutual aid compacts will be activated. The Officer in Charge of the hazardous materials incident is responsible for assuring that the following personnel are notified, specifying what assistance or call-back is needed:

I. Sheriff's Dispatch (9-1-1), who will notify:
   Sarasota Sheriff's Patrol
   State Warning Point (after normal working hours)
   County Department of Emergency Management Director, who will notify:
   County Administrator
   Deputy County Administrator
   Board of County Commissioners
   Public Information Officer

II. Local Liaisons:
   Emergency Medical Services Director
   Law Enforcement Dispatch
   Local HRS
   Natural Resources
   Red Cross Director of Disaster Services
   School Board
   Solid Waste
   Transit
   Transportation

c. Activation

The County Emergency Management Director and staff will activate the EOC and assist in the notification process. Evacuation information telephone numbers will also be activated. Designated emergency personnel will report to the EOC and other emergency response personnel may be directed to take appropriate emergency actions.

4.4 Notification to the Public

Upon the determination that a Limited Emergency Condition or a Full Emergency Condition is in progress, the County emergency management director will activate procedures to provide the incident commander's notification and clear instructions, including periodic status updates, to the general public within the area affected by the release.

The Sarasota County Department of Emergency Management will activate the Emergency Broadcast System (EBS) to notify the public of a general emergency caused by a hazardous material release. Residents and transients will be advised to tune to the following radio and television stations for detailed information and instructions.

Television Radio
WWSB-Channel 40 WKXY 930 (AM)*+
Sarasota Cable-Channel 7 WAMR 1320 (AM)
WWZZ 1280 (AM)
WQSA 1220 (AM)
WENG 1530 (AM)*+
WRAV 92.1 (FM)
WSRZ 106.3 (FM)
WKZM 105.5 (FM)
WAVE 102.5 (FM)*

*Stations with emergency power

+Stations selected as prime broadcast stations in the event other stations fail.

As a backup, police and fire rescue vehicles and aircraft equipped with public address systems will move throughout the area advising residents of the protective actions they should take based on the severity of the emergency in accordance with the response agencies' established procedures.

At night or because of air-conditioned buildings, a vehicle with sirens should be used to awaken or get the attention of residents and precede a second vehicle which gives instructions by loudspeaker. If a toxic cloud is already in the air, information contained in Media Release B, Figure 6-2, should be given by loudspeaker at this time.

Boaters in the waters near affected facilities will be notified of the emergency by loud speakers from boats and aircraft operated by the Florida Marine Patrol, Florida Game and Fresh Water Fish Commission, Sarasota County Sheriff's Department, and U.S. Coast Guard.

The public notification system may be activated for a Potential Emergency and will be activated for a Limited Emergency or Full Emergency. Activation of the public notification system should be accomplished within 15 minutes after the decision is made to activate. Notification of the public should occur between 15 to 45 minutes after activation.

Figure 4-1

THIS FORM PROVIDES GUIDANCE FOR INITIAL NOTIFICATION

SARA - TITLE III
SECTION 304 REPORTING FORM

Reporting Number 904/488-1320

1. General Information SARA LOG #_____

   A. Time/Date_____/_____

   B. Reported by (Name/Company) _____

   C. Contact Person (If different from 1-B above) _____

   D. Location_____

   E. Telephone Number_____

2. Release Information

   A. Substance(s) Involved_____

   B. Release Medium: Air_____
      Water_____ (surface/ground)
      Land_____

   C. Event Terminated: Yes/No

      Release Began_____; Ended_____ Duration_____

   D. Quantity Released_____

   E. 302 (a) Release: Yes/No; CERCLA Release: Yes/No

3. Is this a Reportable Incident/Emergency under Section 304?

4. Incident Description _____

5. Action Taken to Respond or Contain _____

FIGURE 4-2

EMERGENCY CONTACT LIST

POTENTIAL EMERGENCY CONDITIONS

County Fire/Rescue
Director, County Department of Emergency Management
HRS-Sarasota Public Health Unit
Municipal fire departments
State Warning Point

LIMITED EMERGENCY CONDITIONS

Chief, Sarasota County Fire/Rescue
County Administrator
County School Board Liaison
Deputy County Administrators
Director, County Department of Emergency Management
Director of Disaster, Sarasota County Chapter of the American Red Cross
HRS-Sarasota County Public Health Unit Liaison
Medical Director, Sarasota County Emergency Medical Services
Municipal Fire Departments
Municipal Police Departments
Natural Resources Department Liaison
Public Information Officer
Sarasota County Sheriff
Solid Waste Department Liaison
State Warning Point
Transit Authority Liaison
Transportation Department Liaison

FULL EMERGENCY CONDITIONS

Chief, Sarasota County Fire/Rescue
County Administrator
County School Board Liaison
Deputy County Administrators
Director, County Department of Emergency Management
Director of Disaster, Sarasota County Chapter of the American Red Cross
HRS-Sarasota County Public Health Unit Liaison
Medical Director, Sarasota County Emergency Medical Services
Municipal Fire Departments
Municipal Police Departments
Natural Resources Department Liaison
Public Information Officer
Sarasota County Sheriff
Solid Waste Department Liaison
State Warning Point
Transit Authority Liaison
Transportation Department Liaison

Emergency telephone numbers will be verified and updated continuously and maintained in the emergency communications center of the County Department of Emergency Management.

5.0 EMERGENCY COMMUNICATIONS

5.1 General

Located within the Sarasota County 9-1-1 Emergency Operations Center is a fully operational communications center, which is manned 24 hours per day by a professional staff of emergency communicators and capable of coordinating communications among response organizations during an emergency. This section describes the various communications systems which can be used during emergencies involving hazardous materials.

5.2 Coordination of Emergency Communications

The EOC will provide all off-site communications support to the incident commander for the public safety agency having responsibility for coordinating emergency response to hazardous materials incidents within that particular jurisdiction within Sarasota County.

Upon activation of the Sarasota County EOC, all emergency communications systems will be placed into service and tested. The Emergency Management Communications Officer will establish liaison with County communications, American Red Cross communications personnel, Emergency Medical Services, Civil Air Patrol, amateur radio operators, and any other organization with the capability to provide supplemental communications.

The Emergency Management Communication Officer will arrange for staffing of the communications center (including volunteer communicators) to operate emergency communications systems. Emergency communications personnel will be directed to report to the County EOC for assignment. County departments supporting field response operations will be responsible for the operation of the County Communications Center. Amateur radio operators have been assigned to each shelter. Upon receipt of an evacuation order, amateur radio operators will report to their assigned shelters with their equipment and begin to open communications nets with the EOC. Amateur radio operators assigned to shelters will report to the American Red Cross Communications Chairman; those assigned to the EOC will operate the RACES and amateur repeater positions. Law enforcement and fire department radio positions will be staffed at the EOC by personnel from those departments on an as needed basis.

Direct communications between the Sarasota County EOC and the following organizations will be established and maintained:

5.2.1 The State Division of Emergency Management regarding the local situation and requests for state and federal support and resources;

5.2.2 The chemical facility where the release of hazardous materials is occurring;

5.2.3 Local emergency response agencies by agency radio systems and commercial telephone;

5.2.4 Medical facilities and ambulance services through the County's emergency management radio network; and

5.2.5 Federal agencies, through the State Division of Emergency Management.

5.2.6 Telephone service within the EOC operations room will be established and a log of incoming and outgoing messages will be maintained.

5.3 Communications Systems

Any or all of the following systems may be used to communicate during a hazardous materials emergency:

5.3.1 Sheriff's Radio and Inter-City Police Radio

(154.770 MHz - 154.875 MHz) (154.950 MHz)
This system is used for evacuation related messages and to facilitate alert and warning of the general public.

5.3.2 Intra-County Fire Radio and Forestry Service Radio

(46.06 MHz) (155.310 MHz)
This system is used for search and rescue operations and evacuation related messages.

5.3.3 State & Local Government Radio

(155.370 MHz) - 154.920 MHz)
This system is used to transmit emergency operations messages, situation reports and general information.

5.3.4 County Local Government Radio

(155.175 MHz)
This system is used to coordinate with other local agencies and organizations, media and public warning, shelter information and general information.

5.3.5 Hospital/Emergency Ambulance Radio

6.0 PUBLIC INFORMATION AND EDUCATION

6.1 General

This section provides guidance for keeping the public informed about potential hazards present at chemical facilities, emergency responses required to cope with a hazardous material emergency, and protective measures that can be taken to minimize or alleviate adverse public health effects. This section also provides procedures for the timely and accurate collection, coordination, and dissemination of such information to the public.

6.2 Public Information Officers

Public Information Officers (PIO's) are those persons authorized by their organizations to release news and background information to the media, monitor events and summarize information for distribution to responders and the media, coordinate and verify information from and with all entities, assure support with regard to timely notification to the public, and assist public information spokespersons maintain records of news releases and public information as well as a log of events. Specific duties to be performed by PIOs include the following:

1.Collect, edit, and release information and instructions to the media;

2.Establish contact with wire services;

3.Assist news media personnel in the performance of their functions, including accreditation and identification;

4.Coordinate the release of information with facility representative and County information officer;

5.Brief the news media as conditions warrant; and

6.Keep concerned staffs informed through "in-house" news summary bulletins.

6.2.1 Local Public Information Officer

The Sarasota County Public Information Officer will be the hazardous materials PIO. The PIO will be responsible to the Director of the Sarasota County Department of Emergency Management, and in turn, to the Board of County Commissioners for communicating emergency messages through the electronic and print news media or other designated channels.

The PIO will be responsible for the organization, training, and operations of matters concerning public information. He/she will also be responsible for establishing proper working relations with other agencies, individuals, and related groups in order to build an awareness, understanding, and acceptance of hazardous materials emergency response activities. Primary duties include:

a. Maintaining personnel rosters and listings of public information sources (such as emergency management officials), news media or other media relating to public communications;

b. Instructing news media representatives concerning the role of the PIO during emergency conditions and providing technical and supportive information regarding Emergency Operations Center functions;

c. Establishing and maintaining liaison with all news media representatives, and providing for the recruitment, assignment, training, and operations of personnel within the Public Information Team.

d. Arranging and conducting meetings with the media in advance of emergency conditions on an annual or routing basis in order to review media needs, responsibilities, and informational needs;

e. Establishing a rapid, uniform media notification system and maintaining contact with other emergency agencies or utilities;

f. Supervising the collection, preparation, and dissemination of appropriate routine and emergency messages to all mass media or designated communications channels;

g. Establishing communications with emergency command posts during spot disasters in order to prepare public information releases;

h. Coordinating with other public information specialists and serving as a contact point, including American Red Cross and Sarasota Memorial Hospital;

6.2.2 Public Information Team

During a hazardous materials emergency incident the PIO will be assisted by an assembled Public Information Team (PIT). The Team will be composed of:

a. Sarasota County School Board PIO;

b. Law Enforcement PIO's; and,

c. Fire Agencies PIO's.

When an emergency is in process and the Emergency Operations Center is activated, the Public Information Team will operate in accordance with established procedures set forth in the Sarasota County Peacetime Emergency Plan.

6.2.3 State Public Information Officer

The Governor's Director of Communications is the Public Information Officer for the Governor's Office, and will operate from the DEM Press Room or the local Emergency Operations Center. Releases of information to the news media from any state agency will be coordinated through the State PIO

residents and property, and will be distributed through local newspapers, radio and television stations, special mail-outs, and other means. As a result of the influx of non-English speaking residents and transients into Sarasota County, EPI materials will be distributed in both English and Spanish.

In addition to educating the public, the County Department of Emergency Management will undertake efforts to educate the media by conducting, at least annually, media briefings advising the media of emergency plans and procedures, of the flow of information, role of the media during an emergency, and the names of emergency contact persons. This will be accomplished through the use of slide/tape presentations, press packets, and other educational materials developed by the County Department of Emergency Management.

Figure 6-1

MEDIA RELEASE A: Alert - No Protective Action
The Sarasota County Department of Emergency Management received a report that

_____

_____

_____

has occurred. It has been determined that no protective actions are required to ensure and maintain public health and safety. The Department of Emergency Management will continuously monitor and assess the situation to confirm earlier reports. As monitoring results become available, protective actions may be recommended as needed.
NOTE TO CORRESPONDENTS:
This message has been issued by authority of the Sarasota County Board of County Commissioners. Additional information may be obtained from

_____

_____

Date/Time of issue: _____

Issued by: _____

Figure 6-3

MEDIA RELEASE C: Evacuation Preparation
The Board of Sarasota County Commissioners has declared an emergency situation in the area bounded by

_____

_____

Should the decision be made to evacuate your area, you should plan to be away from your home for _____ hours. You should now begin thinking about where you would stay and the necessities you may wish to take with you.

You should review any evacuation instructions on hand which may have previously been supplied by local officials. This station will broadcast instructions if evacuation is ordered.

The following items are recommended as evacuation supplies:

1. Two (2) blankets per person, or a sleeping bag.

2. Change of clothing.

3. Important papers (checkbook, etc.)

4. Medicine, particularly special medication.

5. Toilet articles.

We repeat that evacuation has not yet been recommended. These are only preparatory instructions.
NOTE TO CORRESPONDENTS:

This message has been issued by authority of the Board of Sarasota County Commissioners. Additional information may be obtained from.

_____

_____

Date/Time of Issue: _____

Issued by: _____

Figure 6-5

MEDIA RELEASE E: Evacuation Follow-Up

During the period of evacuation, law enforcement officers will patrol the evacuated areas to protect homes and businesses. No unauthorized persons will be allowed in the evacuated areas.

County officials will monitor the affected areas continuously. When conditions are determined safe, you will be notified to return home. Transportation will again be provided for those in need.

NOTE TO CORRESPONDENTS:

This message has been issued by authority of the Board of Sarasota County Commissioners. Additional information may be obtained from

_____

_____

Date/Time of Issue: _____

Issued by: _____

Figure 6-7

MEDIA RELEASE G: School Evacuation

The Superintendent of Schools, Sarasota County School Board has issued an order directing the immediate evacuation of _____ School. School authorities have begun the evacuation of children to

_____

Parents of children attending _____ School are advised to pick up their children at

_____

If you need additional information, you may contact

_____

NOTE TO CORRESPONDENTS:

This message has been issued by authority of the Superintendent of Schools, Sarasota County School Board. Additional information may be obtained from

_____

Date/Time of Issue: _____

Issued by: _____

7.0 EMERGENCY FACILITIES AND EQUIPMENT

7.1 General

This section describes the emergency response facilities, identifies supplies and equipment designated for emergency response, and identifies the key personnel and organizations that are anticipated to respond to emergencies.

7.2 Emergency Response Facilities and Personnel

7.2.1 Emergency Operations Centers

1. County Emergency Operations Center (EOC)

The County EOC is located at 101 South Washington and is incorporated in the offices of the County Department of Emergency Management. The EOC is the center for overall coordination of local response to any major emergency. The EOC has auxiliary power and logistical provisions to support emergency operations.

It is not anticipated that the EOC will be activated during a **potential** emergency condition. Key County officials will report to the EOC in response to a **limited** emergency condition. The County EOC will be fully staffed and activated during a **full** emergency condition. EOC staffing will include representatives from the following:

Board of County Commissioners;
Office of the County Administrator;
Deputy County Administrators;
County Department of Emergency Management;
Sheriff's Department;
Municipal Police Departments;
HRS-County Public Health Unit;
County Fire/Rescue Department;
Municipal Fire/Rescue Department;
County Department of Transportation;
County School Board;
Medical Director, Sarasota County E.M.S.;
Transit Authority;
Facility Owner/Operator;
Natural Resources Department;
Department of Solid Waste; and
American Red Cross.

2. State Emergency Operations Center

The Division of Emergency Management is responsible for providing and staffing the State Emergency Operations Center (SEOC). The SEOC is the center for coordination of state response for any major emergency. It is located within the Division of Emergency Management (DEM) offices at 2740 Centerview Drive, Tallahassee, Florida. During a limited emergency condition, key personnel will report to the State EOC. Upon declaration of a full emergency condition, the State EOC will be fully activated to coordinate all state operations and establish communications with involved County EOC's.

3. On Scene Command Post

In the event of an emergency, the first responding unit at the site will establish an On-Scene Command Post. The Incident Commander at the On-Scene Command Post will be the senior responding officer and he shall coordinate and control on-scene emergency operations.

Incident command at the scene shall be established and transferred as outlined in N.I.I.M.S. (National Interagency Incident Management System) procedures by the fire agency having jurisdiction. As long as there is a threat to life and/or property from the release/incident, the fire agency having jurisdiction shall be the agency in charge of the incident scene.

7.3 Equipment and Resources

7.3.1 Equipment

The Fire/Rescue Departments will respond to emergencies involving the release of hazardous materials with their appropriately equipped HAZMAT teams. Specified inventory is maintained by the HAZMAT teams and indicated in Figure 7.1.

7.3.2 Laboratory Analytical Support

The Sarasota County Natural Resources Department has a limited capability for laboratory and analytical support of emergency operations in the event of a major chemical release.

The Sarasota County Sheriff's Department's Crime Lab and water treatment plants throughout the County may also be called upon to provide laboratory and analytical support as needed.

In the event that the need for laboratory and analytical support exceeds the capability of County resources, private contractors will be called upon for laboratory and analytical support (see Section 7.3.4). A private contract for services will be maintained by the Sarasota County Department of Solid Waste. The private contractor will provide Sarasota County with complete emergency response services in the event of a hazardous incident for but not limited to:

1. Identification of the suspected hazardous materials/wastes;

2. Technical assistance regarding protection of the general public, protection of the emergency

Figure 7.1
EQUIPMENT LIST
SARASOTA COUNTY FIRE DEPARTMENT
APPARATUS INVENTORY OF HM-100

COMPARTMENT	DESCRIPTION	QUANTITY
1	Wheel Chocks	2
1	Mop	1
1	Broom	2
1	Visqueen 4 mil.	1
1	Soap "Ivory"	4
1	30 gal. Was Tub	3
1	Chlorine "A" Kit	1
1	Chlorine " Kit"	1
1	5 gal. Paint Bucket	4
1	Survey Stakes	16
1	Tripod Sign Stands	4
1	Turbine Wash Brush	2
1	Turbine Wash Handle Ext.	2
1	20 Gal. Garbage Can	2
1	Bilge Pump	1
1	Scrub Brush with Short Handle	2
1	Toilet Brush	2
1	30 Gal. Garbage Bags	40
1	Zone Signs - 'HOT-WARM-COLD-DECON"	1 EA.
1	Air Bags	3
1	Decon Kit	1
1	Trauma Kit	1
1	Air Boom Kit	1
1	4' 4x4 Cribbing	2
1	Round Tip Sparkproof Shovel	1
1	Square Tip Sparkproof Shovel	3
2	Angus Foam Nozzle F450	2
2	Angus Foss Eductor F450	2
2	AFFF/ATC 3-6% National Universal Foam	9
2	10' 1 1/2 Ponies	2
3	18"x18" Sorbent Pads	75
3	25# Bag of Safe Step Absorbent	1
3	Scoop (for absorbant)	1
4	10' Sorbent Booms	8
4	40# Bag of Oil Dry Absorbent	1
4	5 gal. Bucket Lids	5
4	Roll of Chicken Wire	1
5	Splash Suit/Flash Suit Kit	2 ea.
5	Tyvek Coveralls (grey box)	2
5	Airlines for Tether 10' ea. (grey box)	2
5	Gloves/Boot Covers (grey box)	
5	Total Coverage Saranex/Tyvek Suits	
5	Camping Stool	4
5	Dress Out Kit Level "B" (complete)	4
5	Boots PVC w/Steel Toe (grey box)	
5	Boots Neoprene w/Steel Toe	

COMPARTMENT	DESCRIPTION	QUANTITY
7	Safety Face Shield	1
8	Salvage Covers	6
8	Cribbing (10 green, 8 red, 9 yellow)	
9	Scott 4.5 Air Pak	4
9	Scott 4.5 Air Pack Bottle	8
9	Lifeguard II	4
9	2.2 Air Pak Bottle	2
10	Periodic Table of Elements	1
10	Merck Index	1
10	Chemical Resistance Tables	1
10	Chris Manuals (4 Volumes)	4
10	Pocket Guide To Chemical Hazards	1
10	Condensed Chemical Dictionary	1
10	Amtrak Emergency EVAC Guide	1
10	D.O.T. Hazardous Materials Guide	1
10	Potentially Hazardous Materials	1
10	D.O.T. Emergency Response Guide	1
10	Threshold Limit Value Book	1
10	NFPA Hazardous Materials Handbook	1
10	GATX Tank Car Manual	1
10	Chemical Transportation Safety Index	1
10	Handbook of Reactive Chemical Hazards	1
10	Hazardous Chemicals in the Workplace	1
10	Decon Shower with Manifold	1
10	ICS Kit with Board	1
10	Large Sparkproof Shovel	1
10	Sparkproof Shovel	1
10	Portable Cellular Telephone	1
10	County Emergency Management Network Radio	1
10	Salvage Drum 95 gal. Polypropylene	1
10	Bunker Gear Sets	2
10	Total Encap. Suit TLE w/Passthrough	2
10	Total Encap Suit Chem. Fab Chal. 5200	4
10	HNU Photo Ionizer PID 10.2eV	1
10	*Motorola Syntor High VHF Programmable Ratio*	*1*
11	Haz-Cat Indentification Kit	1
11	D-Cell Batteries	8
11	Explosion Proof Handlights	3
11	Ammonia Inhalents	1 case
11	35cc Sample Vials	3
11	Scott Filter Cartridge	4
11	Wind Speed Indicator w/Compass	1
11	CDV-777-1 Radiological Kit	1
11	MX-241 Combustible Gas Detector	2
11	MX-241 Calibration Kit	1
11	MX-241 Charger	2
11	SF-200 Sampling Pump	1
11	National Draeger Detector	2
11	pH Test Tape	1
11	HCL Detector Tubes	1 box
11	Ammonia Detector Tubes	1 box

COMPARTMENT	DESCRIPTION	QUANTITY
COMMAND AREA	Occupational Guidelines	1
COMMAND AREA	Protective Clothing	1
COMMAND AREA	Emergency Action Guide	1
COMMAND AREA	Emergency Care for Haz Mat	1
1	Wheel Chocks	2
1	Fire Extinguisher	1
TRAY 2	Rescue Baby-Pack	1
TRAY 2	3/8" Safety Rope	1
TRAY 3	5/8" Rescue Rope	1
TRAY 3	3/8" Safety Rope	2
TRAY 4	5/8" Rescue Safety Rope	4
TRAY 4	3/8" Utility Rope	4
TRAY 4	Rope Protectors	6-10
TRAY 5	Jump Box	1
TRAY 4	Airway Kit	1
TRAY 5	Rescue Wench Tool	1
TRAY 6	Blue Rope Protectors	6
TRAY 6	Utility Belts	6
TRAY 6	Rescue Harness	2
TRAY 6	Line Transfer Kit	1
TRAY 6	Stokes Harness W.D Rings	1
TRAY 6	Swiss Seats	6
TRAY 7	Rope Rollers	4
TRAY 7	5/8" Single Pulley's	9
TRAY 7	5/8" Double Pulley's	4
TRAY 7	3 Way Pull Rings	5
TRAY 7	Ascenders	2
TRAY 7	Shunts	2
TRAY 7	Assorted D-Rings	27
TRAY 7	Figure 8"s	13
TRAY 7	Rescue Racks	9
8	Stokes Basket	1
8	Back Board	1
TRAY 9	Bunker Gear	2 Sets
TRAY 9	Ajax Tool	1
TRAY 9	Rabbet Tool	1
TRAYS 10 & 11	Assorted Cribbing	
TRAY 12	Hurst Tool Rams	2
TRAY 12	Come-A-Long W/Chains	1
TRAY 12	Arc-Air Cutter	1
TRAY 13	Pick Head Axe	1
TRAY 13	Holmatro Hoses & Reg.	2 Sets
TRAY 13	Bolt Cutters	1

COMPARTMENT	*DESCRIPTION*	*QUANTITY*
Tray 26	*Absorbent Pads*	
TRAY 27	*Oclansorb*	
TRAY 27	*Speedi-Dry*	
TRAY 27	*Plastic Sheeting*	
TRAY 27	*Lid Openers*	*2*
TRAY 28	*Spare Bottles*	*5*
TRAY 28	*1 Hr - Spare Bottles*	*2*
TRAY 28	*Spare MSA Masks*	*4*
TRAY 29	*Complete Air Packs*	*2*
TRAY 29	*Complete 1 Hr Air Pack*	*1*
30	*"A" Cholorine Kit*	*1*
30	*"B" Chlorine Kit*	*1*
30	*E-Leak Kit*	*1*
30	*Burn Off Kit*	*1*
30	*Plastic Dip Cup*	*1*
TRAY 31	*Water Broom*	*1*
TRAY 32	*Pigs*	
TRAY 32	*Recovery Pail Lids*	
TRAY 32	*Spill Bags*	
TRAY 32	*Oclansorb*	
TRAY 32	*Speedy-Dry*	
TRAY 33	*Non-Spark Shovels*	*4*
TRAY 33	*Hand Pumps*	*2*
TRAY 33	*Tote Trays*	*2*
TRAY 33	*LPG Burn-Off Kit*	*1*
TRAY 34	*Fire-Line Tape*	
TRAY 34	*Haz Mat Tape*	
TRAY 34	*Wooden Plugs*	*Assorted*
TRAY 34	*Gas Clamps*	*Assorted*
TRAY 35	*Tool Box*	*1*
TRAY 35	*Hearing Protectors*	
TRAY 35	*Misc. Leak Equipment*	
TRAY 35	*Leak Equip. W/Tray*	

CITY OF VENICE FIRE RESCUE
APPARATUS INVENTORY OF HAZMAT 24

DESCRIPTION	QUANTITY
Chlorine "A" Kit	
Chlorine "B" Kit	
Monitoring Equipment:	
1) Aim 2000	
2) GasTech 1614 SMPN/Combustible/O2	
3) MSA Explosimeter	
4) PH Monitoring Equipment	
5) Radiation Detection Kits	2

HAZMAT EQUIPMENT INVENTORY IN STORAGE AT ACADEMY

AFFF-3/6% concentrate	245 gal. in 5 gal. pails
Flouroprotein-3% concentrate	45 gal. in 5 gal. pails
Flouroprotein-3% concentrate	25 gal. in 5 gal. drum
Training foam concentrate	55 gal. in 5 gal. pails
Recovery Drums	
Steel-spray lined-85 gal.	4
Steel-spray lined-30 gal.	2
Polyethelene-85 gal.	2
Poly trash can-square-30 gal.	1
Soda Ash - 50 lb. bags	3
Granular Sorbent - 50 lb. bags	2
Plugging/Patching Materials	
Chain-encased in hose	19 ft.-1
Chain-encased in hose	31 ft.-1
Come-A-Long	1
Pig Putty	8 sticks
Plug N Dike	1 bag (5 lbs)
De-Con Equipment	
Brush-rotary-hose connect	1
De-Con Chemicals	
Blob adsorbent	1-5 lb. pail
Trisodium phosphate	1-5 gal. pail
Alkaline powder	6-1 lb. pkgs.
Chlorine powder	6-1 lb. pkgs.
De-Con pools-inflatable	2
Traffice cones-small	4
Disposal bags	4 boxes
Paper towels-individual	1 box
Plastic sheeting - 10 x 100	1 box
Plastic runner	1 unk length
Disposable Suits	
Tyvek-hooded-xl-yellow	6
Tyvek-white-lg.	6
Tyvek-white-xl	6
PVC-hooded face-xl	4
Safery vest-blue	1
Sleeve cones for Level A	1 pr.
Leather work gloves	2 pr.
Miscellaneous	
Duct tape	3 rolls
Surveyor tape-green	4 rolls
Surveyor tape-pink	4 rolls
Fog Fixer	1 box packets
Ice packs	6
Spare parts-MSA 2A	XXXXXXXXXX
Absorbent boom-40 ft.	1 in drum
Acid/gas suits-training use only	2 on shelf

8.0 ACCIDENT ASSESSMENT

8.1 General

This section describes responsibilities and procedures for assessing the offsite impacts of an emergency involving the release of hazardous materials and its effects on the health and well-being of the residents and visitors to Sarasota County.

8.2 Initial Assessment

The initial accident assessment will be performed by the facility owner/operator as soon as possible after the accident. The results of the assessment will be reported immediately to local and state emergency response organizations in accordance with Section 4.0 of this plan. Until the arrival of official emergency response personnel, the facility owner/operator will assess actual and potential offsite consequences and provide the results of this assessment to the arriving on-scene commander and Sarasota County 9-1-1 Supervisor.

Upon arrival by official emergency personnel, the responsibility for assessing the impacts or potential impacts of a release will be assumed by the lead local agency. This is the designated incident commander operating from an on-scene command post.

The lead agency's assessment should include, but is not limited to the following:

-Identification of the nature, amount and location of released materials;

-Evaluation of the threat to human health by reliant agencies that have the technical capabilities to perform such assessment. These agencies, can be but are not limited to, the U.S. Environmental Protection Agency, the State of Florida Department of Environmental Regulation, the State of Florida Department of Natural Resources, the State of Florida Department of Health and Rehabilitative Services Sarasota County Public Health Unit, the Sarasota County Departments of: Solid Waste, Natural Resources, Stormwater Management, Risk Management, and any local municipal agencies that can exhibit technical expertise and have jurisdiction in the affected areas;

-Identification of potentially responsible party(ies);

-Determine the probable direction and time of travel for released materials;

-Identification of possible exposure pathways for humans and the environment;

-Identification of potential impacts on human health and safety, the environment, natural resources and property; and

-Identification of priorities for protected public health, safety and the environment.

8.3 Assessment and Monitoring

8.3.1 Resources and Capabilities

Assessment and monitoring within the vulnerable zone surrounding the facility from which hazardous materials were released will be provided by the following agencies: the Sarasota County Departments of: Solid Waste, Natural Resources, Stormwater Management, Risk Management; HRS-Sarasota County Public Health Unit; and any local municipal agencies that can exhibit technical expertise and have jurisdiction in the affected areas. Additional assistance and support in assessing the environmental and public health consequences of a release of hazardous materials from the State's Departments of Environmental Regulation and Health and Rehabilitative Services, District VIII Headquarters, Ft. Myers, Florida, respectively. If necessary, the U.S. Environmental Protection Agency will also be called upon for assistance.

The Sarasota County Department of Solid Waste will maintain a contract with a private hazardous waste management company to assist in the emergency response to a hazardous incident and provide:

1. Identification of the suspected hazardous materials/wastes in question;
2. Technical assistance to Sarasota County authorities regarding protection of the general public, protection of the emergency responders, and emergency containment of the hazardous materials/wastes in question;
3. Timely and total cleanup of the hazardous incident;
4. Insure that the hazardous material/wastes in question are properly neutralized, removed, transported, and disposed of in a timely manner consistent with all applicable federal, state, and local statutes and ordinances and to guarantee that all work is performed in accordance with these same statutes and ordinances; and,
5. Expert witness service as deemed necessary by Sarasota County authorities.

Laboratory support and equipment available for use by field monitoring personnel are identified in Section 7.3.2 of this plan.

8.3.2 Activation of Field Teams

County Department of Solid Waste to assist in technical assistance in response, identification, containment, and removal of hazardous materials.

Authorization for the utilization of this capability shall be through the County Administrator or his designee.

9.0 EXPOSURE CONTROL FOR EMERGENCY WORKERS

9.1 General

This section establishes the means and responsibilities for controlling exposure of emergency workers to hazardous materials. Local emergency response organizations will limit exposure to emergency workers by:

1. Limiting the amount of time spent in hazardous areas;
2. Limiting entry into hazardous areas to the maximum extent possible; and
3. Using protective clothing and equipment.

Because they are frequently the first on the scene, firefighters and law enforcement personnel should use proper safety precautions when approaching a hazardous materials incident. First response personnel should have copies of the U.S. Department of Transportation's Hazardous Materials Emergency Response Guidebook and should know how to find and interpret shipping manifests.

9.2 Exposure Monitoring

After notification that a release has occurred, it is crucial to monitor and assess its impact, both on-site and off. A detailed log of all sampling results should be maintained and health officials should be kept informed of the situation. Decisions about response personnel safety, citizen protection, and use of food and water in the area will depend upon an accurate assessment of spill or plume movement and concentration.

Both initial and periodic monitoring are required at hazardous materials incidents. Initial monitoring must be conducted to identify any immediate dangers to life or health (IDLH) concentrations or other dangerous situations, such as the presence of flammable atmospheres, oxygen-deficient environments, and toxic contaminants. Once chemicals have been identified, standard information sources such as NIOSH Pocket Guide to Chemical Hazards and CHEMTREC (Chemical Transportation Emergency Center) should be consulted to identify potential hazards, recommended exposure limits (RELs), permissible exposure limits (PELs), emergency action, personal protective equipment, and first aid procedures. MSDS's should be consulted for information including: manufacturer's name, chemical synonyms, trade name, chemical family, hazardous ingredients, physical data, fire and explosion hazard data, health hazards, reactivity data, spill or leak procedures, special precautions, and special protection information.

Local governments should institute a medical surveillance program for all emergency workers who are or may be exposed to hazardous substances or health hazards above the established recommended exposure limits (RELs) for 30 or more days in a 12-month period, or who wear respirators 30 days or more a year. Medical examinations must be available for all emergency workers who may have been exposed to concentrations of hazardous substances above the recommended exposure limits. An accurate record of medical surveillance must be retained.

9.2.1 EPA Levels of Protection

Based on the results of the preliminary evaluation, personal protective equipment must be selected and used. The selection process is aided by consulting the Department of Transportation's Hazardous Materials Emergency Response Guidebook and CHEMTREC. No single combination of protective equipment and clothing is capable of protecting against all hazards. Generally, the greater the level of personal protective equipment used, the greater the risk to the worker from such hazards as heat stress, physical and psychological stress, impaired vision, mobility and communication. Therefore, equipment should be selected that provides an adequate level of protection, but not over-protection.

The U.S. Environmental Protection Agency (EPA) has identified four levels of protection for emergency workers. Level A (Chemical Protective Clothing and Equipment) will protect the wearer against the specific hazard for which it was designed. The special clothing may afford protection only for certain chemicals and may be penetrated by chemicals for which it was not designed. Do not assume any protective clothing is fire resistant unless it is specifically stated by the manufacturer. Full-encapsulated protective clothing (cocoons) can be used for no-fire spills and leaks requiring evacuation of people, but offer little or no thermal protection.

Level A Recommended Personal Protective Equipment includes:

1. Pressure-demand, full face piece self-contained breathing apparatus (SCBA);
2. Fully-encapsulating, chemical-resistant suit;
3. Inner chemical-resistant gloves;
4. Chemical-resistant safety boots/shoes;
5. Two-way radio communications; and
6. Optional: cooling unit, coveralls, long cotton underwear, hard hat, disposable gloves and boot covers.

Areas used for decontamination will be monitored for residual contamination. Any site found to be contaminated will be sealed off under the control of the County Public Health Department and County law enforcement agencies. These sites will be decontaminated with the assistance of Department of Environmental Regulation personnel and other appropriate federal and state agencies.

Personnel who are injured in the affected area of a hazardous materials emergency will be treated as possible contamination victims until a positive determination can be made. Emergency medical personnel will take precautions to prevent the spread of contamination on an injured person, to medical support personnel, and to medical equipment until the injured person can be transported to a medical facility with injury decontamination capabilities.

10.0 PROTECTIVE ACTIONS

10.1 General

The purpose of this section is to establish the range of protective actions that are available to state and local governments for the protection of the public. Protective actions which may be initiated to provide for the safety of the public may include any or all of the following:

Notification of affected residents and transients to seek immediate in-place shelter;

Evacuation of transients and residents within designated sectors exposed to a plume of hazardous materials to shelter areas outside the affected area;

Control of entrance into affected areas;

Implementation of procedures to prevent the consumption and distribution of contaminated food and water supplies; and

Implementation of procedures to decontaminate persons exposed to hazardous materials.

10.2 Vulnerable Zones

A vulnerable zone is an estimated geographical area that may be subject to concentrations of an airborne extremely hazardous substance (EHS) at levels that could cause irreversible acute health effects or death to persons within the area following an accidental release. Vulnerable zones are based on estimates of the quantity of an EHS released to air, the rate of release to air, airborne dispersion and the airborne concentration that could cause irreversible health effects or death.

10.3 Levels of Concern

A level of concern (LOC) is the concentration of an EHS in the air above which there may be serious irreversible health effects or death as a result of a single exposure for a relatively short period of time. There is no precise measure of an LOC for the chemicals listed as EHS's.

For the purpose of this plan, an LOC has been estimated by using one-tenth (0.10) of the "Immediately Dangerous to Life and Health" (IDLH) level published by the National Institute for Occupational Safety and Health (NIOSH), or one-tenth of an approximation of the IDLH from animal toxicity data.

10.4 Evacuation

Authority to issue an immediate evacuation order for any vulnerable zone is delegated to the incident commander (on-scene) within a given jurisdiction if the health and safety of persons within the critical evacuation area is in imminent danger. Evacuation of all or any part (i.e., downwind) of a vulnerable zone will be by geographic boundaries. Persons residing in a vulnerable zone which is ordered to be evacuated will be instructed to evacuate according to the evacuation plan outlined in Section 10.4.1.

All evacuation routes will lead citizens toward registration centers. Once at the centers, citizens will be screened for conditions requiring immediate medical attention, transported to medical facilities if necessary, and assigned to a shelter.

Strict traffic control measures will be utilized to permit ingress and egress of ambulances, fire/rescue, and other emergency vehicles and equipment. County and municipal law enforcement personnel will control traffic along evacuation routes. Law enforcement personnel will block state roads as needed to prevent unauthorized use. Periodic patrols of the evacuation routes by law enforcement personnel will be used to maintain order, assist disabled evacuees to protect private property and report route impediments to the County EOC.

Hurricane high winds and tides would prevent evacuation along north and southbound coastal roads; however, for this event the wind speed would be in excess of 74 miles per hour and a plume requiring evacuation would be improbable. Traffic control points and barricades will be used to expedite the flow of traffic. Drawbridges will remain in operation in accordance with Coast Guard and Department of Transportation regulations. The routes will be monitored by law enforcement personnel and Florida Highway Patrol. Should breakdowns occur on bridges, wreckers will be dispatched to the scene.

10.4.1 Evacuation Routes

Evacuation routes from each facility vulnerable zone are shown in Appendix A.

10.4.2 Evacuation of the General Public

The primary means of evacuating residents and transients from the vulnerable zones will be private automobiles. Households with more than one vehicle will be encouraged to take only one car to minimize traffic congestion. Announcements will be made via the broadcast media requesting that car-pooling arrangements be made to accommodate those without transportation of their own. Residents without transportation will be picked up by buses and transported to the nearest decontamination/ reception center.

11.0 MEDICAL AND PUBLIC HEALTH SUPPORT

11.1 General

This section describes the arrangements that have been made for medical services for individuals who become victims of hazardous materials incidents. This section includes provisions for emergency medical services and transportation of victims of chemical releases, sudden illness and medically incapacitated persons among the population affected by evacuation and relocation during a hazardous materials incident.

Personnel from the HRS-County Public Health Unit and the State Department of Health and Rehabilitative Services (DHRS), District VIII Headquarters, Ft. Myers, Florida will coordinate the delivery of medical support services to victims of hazardous materials incidents. The DHRS Disaster Preparedness Coordinator will be notified by the State Division of Emergency Management (DEM) and will in turn activate the appropriate DHRS district personnel.

11.2 Medical Support

A hazardous materials release can present actual or potential health hazards to individuals within the affected area. It is imperative that capabilities exist for treating exposed individuals. An on-going capability for emergency medical services and transportation of victims of accidents and sudden illness, and special needs population during evacuation must also exist.

During disaster-related medical and rescue operations, the Medical Director, Sarasota County E.M.S, or his designee will direct and coordinate all participating medical/rescue units using the Hospital/Ambulance Emergency Radio Network, the Ultra-High Frequency (UHF) Cardiac Telemetry Radio Network, and commercial telephone lines, while operating from the incident location, EMS Dispatch Center, or hospital.

The Emergency Medical Services Dispatch Center will establish and maintain two-way radio communications between the medical/rescue units and the hospitals, coordinate and dispatch vehicles and personnel to the areas requiring on-site medical assistance, coordinate all ambulance and fire/rescue vehicles during emergency medical operations, and coordinate patient transport to available medical receiving facilities.

Ambulance and other emergency medical vehicle resources are under the control of the Medical Director, Sarasota County E.M.S, or his designee. Resources in excess of the needs of response to the hazardous materials incident will be released to their respective agencies.

All medical/rescue agencies will operate from their normal bases of operation as long as possible during the period of emergency. They may disperse their vehicles and personnel as they see fit, provided the Medical Director, Sarasota County E.M.S, or his designee, is kept informed of each vehicle's location and status. In the event of an imminent hazard to EMS personnel, they will seek safe shelter for themselves and their equipment. Following the shelter period, all personnel will return to their bases of operation and report their status to the Medical Director, Sarasota County E.M.S, or his designee, for assignment.

Emergency mental health care will be provided through the Medical Director, Sarasota County E.M.S., or his designee, the HRS-County Public Health Unit, and the local Crisis Intervention service.

Ambulance and medical/rescue units performing on-site duties in a jurisdiction other than their own will, unless otherwise directed by proper authority, operate under the tactical control of the ranking Fire/Medic officer in whose jurisdiction the operation is located. If there is no Fire/Medic officer, the on-site senior Emergency Medical Technician or Paramedic will be responsible for patient care until such time as the Fire/Medic officer becomes available.

Hospitals in Sarasota County will keep the EMS Medical Director informed of the number of bed spaces and the levels of service available in each hospital.

Coordination of the delivery of all state medical and health support services to the victims of hazardous materials incidents is the responsibility of the DHRS. The DHRS Director for each of the DHRS districts is responsible for assuring that adequate medical and health support services exist for treating and transporting victims of hazardous materials incidents to medical support facilities.

11.2.1 Hospitals and Ambulance Service

Hospitals and other emergency medical facilities capable of providing medical support for exposed individuals are identified in Figures 11-1 and 11-2.

12.0 RECOVERY AND REENTRY

12.1 General

This section provides general guidelines for recovery and re-entry operations to be followed when a hazardous materials emergency has been brought under control and no further significant releases are anticipated. Decisions to relax protective measures which have been implemented in a hazardous materials emergency will be based on an evaluation of chemical concentrations which exist at the time of consideration and on the projected long-term exposure which may result in dose commitments to residents and transients in the affected area.

12.2 Recovery

Recovery operations may be coordinated and directed from either the County EOC or the on-scene command post.

12.2.1 Environmental Analysis

Prior to allowing public access to potentially contaminated areas, the Sarasota County Departments of: Solid Waste, Natural Resources, Stormwater Management, Risk Management, HRS-Sarasota County Public Health Unit, and, the State Department of Environmental Regulation will evaluate the environmental conditions in the affected areas by conducting direct measurements and collecting environmental samples for laboratory analysis. Environmental sampling will proceed from the perimeter of affected areas to the interior. Interpretation of these data to determine safety of recovery and reentry will be done by the Director of HRS-Sarasota County Health Unit.

In-state laboratory analysis of collected samples will be performed by independent contractors made available by the state departments of Environmental Regulation or Natural Resources.

12.2.2 Containment and Cleanup

At any location where the lead agency determines that there is a threat to public health, welfare or the environment, the lead agency may take any appropriate action to prevent, mitigate or minimize the threat to the public health, safety, or to the environment. In determining the appropriate extent of action to be taken at a given location, the lead agency should first review the preliminary assessment and current site conditions.

The following factors should be considered in determining the appropriateness of removal actions:

a. Actual or potential exposure to hazardous substances by nearby populations, animals or food chain;
b. Actual or potential contamination of drinking water supplies or sensitive ecosystems;
c. Hazardous substances, pollutants or contaminants in bulk storage containers that may pose a threat of release;
d. High levels of hazardous substances or contaminants in soils, largely at or near the surface, that may spread;
e. Weather conditions that may facilitate the spread or release of hazardous substances;
f. Threat of fire or explosion;
g. The availability of other appropriate state or federal response mechanisms; and
h. Other situations or factors which may pose threats to public health, welfare or the environment.

If the lead agency determines that a removal action is necessary, actions shall be taken as soon as possible to prevent, minimize or mitigate the threat to public health, welfare or the environment. The following removal actions are, as a general rule, appropriate in the following situations:

Action	Situation
Fences, warning signs, other security, or site control precautions	Where humans or animals have access to the release
Drainage controls	Where precipitation or runoff from other sources may enter the release area
Stabilization of berms, dikes or impoundments	Where needed to maintain the integrity of the structures
Capping of contaminated soils or sludge	Where needed to reduce the spread of hazardous substances into soil, groundwater, or air
Using chemicals or other materials to retard spread of release or to mitigate its effects	Where use of such chemicals will reduce the spread of release
Action	Situation
Removal of contaminated	Where removal will

further pollution	
Treatment of contaminated water to reduce or eliminate its hazard potential	Contaminated surface water
Actions to remove, treat or contain soil or waste to reduce or eliminate its hazard potential	Contaminated soil/waste

12.2.3 Documentation and Follow-Up

During all phases of response, documentation should be collected and maintained to support all actions taken under this Plan, and to form the basis for cost recovery. In general, documentation should be sufficient to provide the source and circumstances of the condition, the identity of responsible parties, accurate accounting of local or private party costs incurred, and impacts and potential impacts to the public health, welfare and the environment. Evidentiary and cost documentation procedures and requirements to be followed will be those specified in the USCG Marine Safety Manual (Commandant Instruction M16000.3) and 33 CFR Part 153.

A final report of the incident should be prepared by the lead response agency which includes, at a minimum, the following information:

Time and date of incident;
Name and address of affected facility;
Name of facility owner/operator;
Hazardous material(s) involved;
Nature, cause and source of release;
Summary of actions taken by emergency response agencies and organizations;
Summary of actions taken to protect public health/safety, the environment and other property;
Summary of injuries and property damage;
Documentation of costs; and
Need for additional actions.

The information and reports obtained by the lead agency for response actions shall, as appropriate, be transmitted to the Chairman of the Local Emergency Planning Committee and the Chairman of the State Emergency Response Commission for Hazardous Materials.

12.3 Re-entry

The decision to relax protective actions will be made by the Sarasota County Administrator, in consultation with the HRS-County Public Health Unit, Director of Emergency Management, other responsible County department/division heads, and the on-scene commander. Re-entry operations will be coordinated from the on-scene command post. Re-entry will be considered when chemical concentrations in air, water, and ground are below established levels of concern in the affected areas (downwind portions of the vulnerable zone).

Upon the determination by the HRS-County Public Health Unit Director that the environmental conditions in the affected areas are safe for public access, protective actions will be relaxed and reentry will be authorized.

The County Emergency Management Director will coordinate local re-entry activities with the on-scene commander through the County EOC with the media and will keep the State EOC informed. Safe areas will be opened when clearly definable boundaries are available (i.e., highways, streets, and canals). Limited re-entry by the general public will not be allowed.

13.0 EXERCISES AND DRILLS

13.1 General

Exercises and drills must be conducted periodically to evaluate the adequacy of the Hazardous Materials Emergency Plan and the skills of the emergency response personnel. Results of exercises and drills provide a basis for changes in the response plans, in implementing procedures, and for future scheduling of training for emergency response personnel.

13.2 Exercises

An exercise is an event that tests the integrated response capability and major elements within emergency preparedness plans. The emergency preparedness exercise will simulate an emergency which results in hazardous materials releases and response by local authorities. Exercises will be conducted annually and will be evaluated by qualified observers.

For an emergency plan to remain useful, it must be kept up-to-date through a thorough review of actual responses, simulated exercises, and collection of new data. As key assumptions and operational concepts in the plan change, the plan must be amended to reflect the new situations.

13.2.1 Full Scale Exercise

A Full Scale Exercise is designed to fully demonstrate the emergency preparedness and response capabilities of appropriate County agencies and organizations. Mobilization of local emergency personnel and resources will be demonstrated.

13.2.2 Functional Exercise

A Functional Exercise is designed to demonstrate one or more functions or capabilities specified in the emergency plan. Mobilization of local emergency personnel and resources will be limited.

13.2.3 Tabletop Exercise

A Tabletop Exercise is a simulation in which response activities are discussed. There is no mobilization of emergency personnel and resources.

13.2.4 Scheduling and Scenario Development

Exercises will be scheduled jointly by the facility owner/operators and the County Hazardous Materials Exercise Design Team. Exercise objectives and the scenarios for the exercises will be developed and prepared jointly by the facility owner/operator and the County Hazardous Materials Exercise Design Team.

The Exercise Design Team will be comprised of representatives from existing training officers in the following departments: Fire, law enforcement, safety officers, Risk Management, and Emergency Management. All departments identified in this Plan will participate in drills when appropriate.

Scenarios will be varied from year-to-year such that all major elements of the plan and preparedness organizations are tested within a five-year period. The scenarios will include but not be limited to the following:

1. Objectives of the exercise and appropriate evaluation criteria;
2. Dates, time period, places, and participating organizations;
3. The simulated events;
4. A time schedule of real and simulated initiating events;
5. A narrative summary describing the conduct of the exercise; and
6. A description of arrangements for advance materials to be provided to observers.

13.2.5 Critique and Reports

Controllers and observers will fully participate in all exercises. These controllers and observers will be selected from non-participating County agencies and organizations, neighboring counties, state and federal agencies. A critique will be conducted after each exercise to evaluate the capability of participating emergency agencies and organizations to implement emergency plans and procedures. Participating agencies will be requested to submit critique written comments as input for an after-action report on the exercise.

13.3 Drills

A drill is a supervised instruction period aimed at developing, testing and monitoring technical skills necessary to perform emergency response operations. A drill may be a component of an exercise. Each drill will be evaluated by the coordinator for that particular drill.

In addition to the required exercise, drills will be conducted at the frequencies listed below.

13.3.1 Communications Drills

Communications between the facility owners/operators, state and local governments will be tested as described in Section 5. Communications with federal emergency response organizations will

14.0 TRAINING

14.1 General

This section outlines requirements for a training program that will assure that hazardous materials emergency response training is provided for emergency response personnel responsible for decision making, planning, and response.

14.2 Annual and Refresher Training

Each local governmental entity within Sarasota County is responsible for assuring that local emergency response personnel receive adequate hazardous materials training annually. The County Department of Emergency Management will maintain records of personnel completing training courses. These records will be updated periodically to reflect refresher training. The type of training required by each emergency response agency/organization is identified in Figure 14-1.

In 40CFR 311, the Environmental Protection Agency (EPA) adopted training rules promulgated by the Occupational Safety Health Administration in 29CFR 1910.120 which require specific training for all public employees who respond to hazardous material incidents, effective March 6, 1990. Different levels of training are required for first responders hired after the effective date of this rule, depending on the duties and functions performed by each. However, all employees must complete the training or demonstrate competency at their respective level of response. These levels include:

First responder awareness level
First responder operations level
Hazardous materials technician
Hazardous materials specialist
On-scene incident commander

14.3 Schedule and Availability of Training

A Hazardous Materials Emergency Response training program has been developed by the State Division of Emergency Management, in cooperation with the State Fire College, Federal Emergency Management Agency and the U.S. Environmental Protection Agency. This program is designed to improve the capabilities of local governments to effectively respond to emergencies involving hazardous materials.

Courses will be scheduled contingent upon the availability of funding. The State Division of Emergency Management will prepare and disseminate a training schedule to each County emergency management agency, local law enforcement agencies, and local fire departments. The Sarasota County Department of Emergency Management will recruit participants for these courses from local emergency response agencies and organizations.

FIGURE 14-1 TRAINING FOR EMERGENCY PERSONNEL

Training Need	Emer. Mgmt.	Public Officials	Law Enf.	Fire & Rescue	Emer. Medical	Public Health	School Board	Public Works	Hospitals	Facility Operators
1. Recognition/ indentification of hazardous materials	x		x	x		x		x		x
2. Classification, labeling, packaging of hazardous materials	x		x	x		x		x		x
3. Handling hazardous materials	x	x	x	x		x		x		x
4. Hazardous materials Chemistry	x		x	x	x					
5. Evaluation of threat of hazardous materials	x	x	x	x	x	x	x	x	x	x
6. Response strategies and tactics	x	x	x	x	x	x	x	x	x	x
7. Use of response guides	x	x	x	x		x				x
8. Safety operations	x	x	x	x	x	x	x	x	x	x
9. Use of protective clothing and equipment	x		x	x		x		x		x
10. Spill control, containment and mitigation	x	x	x	x				x		x
11. Decision-making	x	x	x	x		x				x
12. Treatment of contaminated injuries	x	x		x	x	x			x	x

APPENDIX A -- HAZARDS ANALYSES
SITE SPECIFIC HAZARDS ANALYSES ARE FILED IN
THE DEPARTMENT OF EMERGENCY MANAGEMENT

APPENDIX B -- CHEMICAL ATTRIBUTES

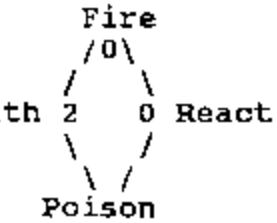
Chemical Analyzer MSDS Report

02/27/91

SULFUR DIOXIDE
7446095

Product Identification

Name : SULFUR DIOXIDE
CAS# : 7446095
DOT# : 1079
Guide : 16
Color : COLORLESS/CLEAR
Odor : PUNGENT/ACRID/SHARP
Form : GAS/VAPOR
Hazard1: NON-FLAMMABLE COMPRESSED GAS
Hazard2: POISON COMPRESSED GAS (POISON A)
Hazard3: UNKNOWN/UNDEFINED



Melting Point: -75.5 F
Boiling Point: -10.0 F
Flash Point : 0 F

Vapor pressure : 0.00 mm Hg @ 0.00 F
Vapor density : 2.264 #/cf
Specific Gravity: 0.000 #/gal

XRef: B2486/H49-85/S3146

Reportable Qty: 0
TPQ: 0
TLV: 0.0000

Lists: EPA
Date : 05/17/89

Synonyms

SIARKI DWUTLENEK (POLISH)
SUFUROUS ACID ANHYDRIDE
SULFUROUS ANHYDRIDE
SULFUROUS OXIDE
SULFUR OXIDE
BISULFITE, GAS/VAPOR
FERMENICIDE LIQUID
FERMENICIDE POWDER
SCHWEFELDIOXYD (GERMAN)
SULPHUR DIOXIDE, LIQUIFIED (DOT)

Antagonistic Materials

ACROLEIN
ALUMINUM
CESIUM ACETYLENE CARBIDE
CESIUM MONOXIDE
CHLORATES
CHLORINE TRIFLUORIDE
CHROMIUM
FERROUS OXIDE

Treatment and/or First Aid

Remove to fresh air. Call physician and identify material. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact with material or water solution, immediately flush skin or eyes with running water for at least 15 minutes. Remove contaminated clothing and shoes. Keep patient at rest and treat for shock.

Recommendations and Protective Clothing

Wear self-contained breathing apparatus and full protective clothing, including chemical resistant gloves.

Leaks and Spill Response

Stop leak if without risk. Use water fog to reduce or control vapors; dike runoff water. Keep area isolated until gas has dispersed. If spill or leak is massive, evacuate all areas where vapor cloud travels or threatens. Avoid contact with liquefied gas. If runoff escapes, notify downstreams health, water and sanitation officials.

Procedures for Evacuation

FIRE: 1,500 Feet (600 Paces) Minimum in all directions.

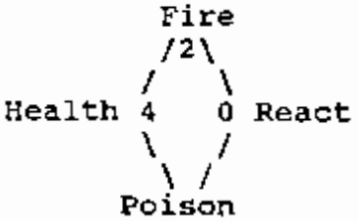
NO FIRE: 400 Feet (160 Paces) Minimum in all directions. Also, throughout plus half this distance on all sides of any area endangered by smoke and/or vapor cloud.

*** END OF MSDS REPORT ***

Chemical Analyzer MSDS Report
AMMONIA, ANHYDROUS, GAS
7664417

Product Identification

Name : AMMONIA, ANHYDROUS, GAS
CAS# : 7664417
DOT# : 1005
Guide : 15
Color : COLORLESS/CLEAR
Odor : PUNGENT/ACRID/SHARP
Form : GAS/VAPOR
Hazard1: NON-FLAMMABLE COMPRESSED GAS
Hazard2: UNKNOWN/UNDEFINED
Hazard3: UNKNOWN/UNDEFINED



Melting Point: -77.7 F
Boiling Point: -33.3 F
Flash Point : 0 F

Vapor pressure : 10.00 mm Hg @ 25.00 F
Vapor density : 0.600 #/cf
Specific Gravity: 0.000 #/gal

XRef: B257/S231

Reportable Qty: 0
TPQ: 0
TLV: 0.0000

Lists: EPA
Date : 05/06/89

Synonyms

AMMONIA, GAS
AMMONIACA (ITALIAN), GAS
AMMONIAC (FRENCH), GAS
AMMONIA GAS, GAS
AMMONIAK (GERMAN), GAS
AMONIAK (POLISH), GAS
SPIRIT OF HARTSHORN, GAS

Antagonistic Materials

ACETALDEHYDE
ACROLEIN
BORON
BORON TRIIODIDE
BROMINE
BROMINE PENTAFLUORIDE
CHLORIC ACID
CHLORINE
CHLORINE MONOXIDE
CHLORINE TRIFLUORIDE
CHLORITES

Fire Fighting Techniques

Move exposed containers from fire area, if without risk. Cool containers with water. Do not approach ends of horizontal tanks. Use standard firefighting agents unless instructed to the contrary.

Explosion and Fire Hazards

Capable of forming explosive mixtures with air in high percentage concentrations. Heated container may rupture violently and produce flying missiles.

Some materials in this group can burn only in high concentrations or high ignition temperatures or both.

Health Hazard Information

Vapors very irritating if breathed; may cause suffocation. Contact with material may cause damage to skin and mucous membrane. May be liquefied, in which case hazards are increased.

Treatment and/or First Aid

Remove to fresh air. Call physician and identify product. If not breathing, give artificial respiration and oxygen. In case of contact with material or water solution, immediately flush skin and eyes with running water for 15 minutes. Remove contaminated clothing and shoes. Keep patient at rest.

Recommendations and Protective Clothing

Wear self-contained breathing apparatus and full protective clothing.

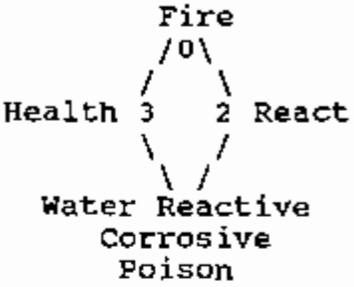
Leaks and Spill Response

Stop leak if conditions permit. Use water spray to reduce vapors. Keep area isolated until vapors have dispersed. If spill or leak is massive, evacuate downwind all areas where vapor cloud travels or threatens. Avoid contact with any liquefied gas. Dike runoff for later disposal.

Chemical Analyzer MSDS Report
SULFURIC ACID
7664939

Product Identification

Name : SULFURIC ACID
CAS# : 7664939
DOT# : 1830
Guide : 39
Color : COLORLESS/CLEAR
Odor : ODORLESS
Form : LIQUID
Hazard1: CORROSIVE
Hazard2: WATER REACTIVE
Hazard3: UNKNOWN/UNDEFINED



Melting Point: 10.4 F
Boiling Point: 290.0 F
Flash Point : 0 F

Vapor pressure : 1.00 mm Hg @ 145.00 F
Vapor density : 0.000 #/cf
Specific Gravity: 0.000 #/gal

XRef: B2487/S3147/H49-85

Reportable Qty: 0
TPQ: 0
TLV: 0.0000

Lists: EPA
Date : 05/17/89

Synonyms

ACIDE DE SULFURIQUE (FRENCH)
ACIDO SOLFORICO (ITALIAN)
DIPPING ACID
NORDHAUSEN ACID
OIL OF VITRRIOL
SCHWEFELSAEURELOESUNGEN (GERMAN)
SULPHURIC ACID
VITRIOL BROWN OIL
ZWAVELZUUROPLOSSINGEN (DUTCH)
BOV
HYDROGEN SULFATE (DOT)
MATTING ACID (DOT)
SPENT SULFURIC ACID (DOT)
VITRIOL, OIL OF (DOT)
SULFUR ACID

Antagonistic Materials

ACETIC ANHYDRIDE
ACETONE CYANHYDRIN
CETONE AND NITRIC ACID

PICRATES
POTASSIUM TERT-BUTOXIDE
POTASSIUM CHLORATE
POTASSIUM PERMANGANATE
POTASSIUM PERMANGANATE AND POTASSIUM CHLORIDE
POTASSIUM PERMANGANATE AND WATER
PROPIOLACTONE (BETA-)
PROPYLENE OXIDE
PYRIDINE
RUBIDIUM ACETYLENE CARBIDE
SILVER PERMANGANATE
SODIUM
SODIUM CARBONATE
SODIUM CHLORATE
SODIUM HYDROXIDE
STEEL
STYRENE MONOMER
TOLUENE AND NITRIC ACID
VINYL ACETATE
WATER
ZINC CHLORATE

General Chemical Information

No unnecessary personnel. Keep upwind and upgrade. Identify product and isolate hazard area. Wear self-contained breathing apparatus and full protective clothing, including chemical resistant gloves. Notify owners and seek technical advice if necessary. No smoking, chewing, eating or drinking should be permitted in the immediate area or where such items can be contaminated by the poisonous material or its byproducts. Special clothing should be available. Refer to data pages.

Fire Fighting Techniques

On small fires, use dry chemical or carbon dioxide. On large fires, use water fog or foam. Move exposed containers from fire area if without risk. If products of combustion or vapor clouds endanger inhabited area, evacuate all regions threatened. Protect exposed containers from the side with water stream, but DO NOT get water in containers.

Procedures for Evacuation
1,000 Feet (400 paces) Minimum in all directions. Also, throughout plus half this distance on all sides of any area endangered by smoke and/or vapor cloud.

*** END OF MSDS REPORT ***

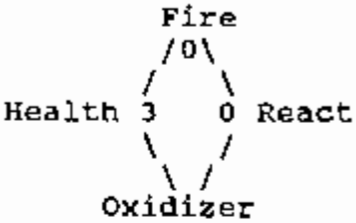
Chemical Analyzer MSDS Report

CHLORINE, GAS
7782505

02/27/91

Product Identification

Name : CHLORINE, GAS
CAS# : 7782505
DOT# : 1017
Guide : 20
Color : GREEN TO YELLOW/AMBER
Odor : PUNGENT/ACRID/SHARP
Form : GAS/VAPOR
Hazard1: NON-FLAMMABLE COMPRESSED GAS
Hazard2: POISON COMPRESSED GAS (POISON A)
Hazard3: UNKNOWN/UNDEFINED



Melting Point: -101.0 F
Boiling Point: -34.5 F
Flash Point : 0 F

Vapor pressure : 48.00 mm Hg @ 20.00 F
Vapor density : 2.490 #/cf
Specific Gravity: 0.000 #/gal

XRef: B67/R259/S768/H49-28

Reportable Qty: 0
TPQ: 0
TLV: 0.0000

Lists: EPA
Date : 05/22/89

Synonyms

BERTHOLITE, GAS
CHLOOR (DUTCH), GAS
CHLORE (FRENCH), GAS
CHLOR (GERMAN), GAS
CLORO (ITALIAN), GAS
MOLECULAR CHLORINE
CHLORINE MOL.

Antagonistic Materials

ACETALDEHYDE
ACETYLENE
ALCOHOLS
ALKYLISOTHIOUREA SALTS
ALKYLPHOPHINES
ALUMINUM
AMMONIA
ANTIMONY
ARSENIC
ARSENIC DISULFIDE
ARSINE

AGNESIUM
MAGNESIUM PHOSPHIDE
ANGANESE
ANGANESE DITRITAPHOSPHIDE
MERCURIC OXIDE
MERCURIC SULFIDE
ERCURY
ERCURY TETRATRIPHOSPHIDE
METHANE
IOBIUM (COLUMBIUM)
ITROGEN TRIIODIDE
OXOMONOSILANE
OXYGEN DIFLUORIDE
XYGEN DIFLUROIDE AND COPPER
HOSPHINE
PHOSPHORUS
HOSPHORUS AND HEPTANE
HOSPHORUS ISOCYANATE
PHOSPHORUS OXIDE
PHSOPHORUS TRIOXIDE
OLYCHLORINATED BIPHENYL
OLYDIMETHYLSILOXANE
POLYPROPYLENE
OTASSIUM
OTASSIUM ACETYLENE CARBIDE
POTASSIUM HYDRIDE
RUBBER
UBIDIUM
RUBIDIUM ACETYLENE CARBIDE
SILICON
ILICON HYDRIDE
ILVER OXIDE
SODIUM
ODIUM ACETYLENE CARBIDE
ODIUM CARBIDE
SODIUM HYDRIDE
STANNOUS FLUORIDE
TIBINE
TRONTIUM PHOSPHIDE
SULFAMIC ACID
TELLURIUM
ETRAMETHYL DIARSINE
THORIUM
IN
UNGSTEN DIOXIDE
TURPENTINE URANIUM
URANIUM DICARBIDE
ANADIUM
INC
IRCONIUM DICARBIDE

Leaks and Spill Response

Avoid contact with spilled or leaking material. Avoid excessive use of water. Dike ahead of spill for later disposal. If runoff cannot be contained, notify downstream health, water and sanitation districts. If qualified, obtain pH reading; do not attempt to neutralize unless trained. Decontaminate equipment and personnel following exposure.

Procedures for Evacuation

FIRE: 1,500 Feet (600 Paces) Minimum in all directions.

NO FIRE: 1,000 Feet (400 Paces) Minimum in all directions. Also, throughout plus half this distance on all sides of any area endangered by vapor cloud.

*** END OF MSDS REPORT ***

APPENDIX C -- LIST OF EXTREMELY HAZARDOUS SUBSTANCES

APPENDIX C

THE LIST OF EXTREMELY HAZARDOUS SUBSTANCES

EPA identified chemicals that meet the criteria for extremely hazardous substances (EHSs) discussed in Section B.2. In addition, other chemicals were identified as EHSs as described in Section B.4. The chemicals are listed by their common names and also by their Chemical Abstract Service (CAS) numbers. While a chemical may be known by several different names, the CAS number provides a unique and unambiguous identification. The list of EHSs is presented in the following forms:

- Exhibit C-1: List of common names, in alphabetical order, with CAS number, ambient physical state, molecular weight, boiling point, vapor pressure, level of concern (LOC), and liquid factors.
- Exhibit C-2: Same list as that in Exhibit C-1, in CAS number order.

Note that the value for the LOC given in these Exhibits is one tenth the Immediately Dangerous to Life and Health (IDLH) level or an estimation of that level for chemicals which do not have a specific IDLH assigned to them. Refer to Appendix D for a more detailed discussion of the LOC and other values that planners may wish to use.

Exhibit C-1
List of Extremely Hazardous Substances and Data for Hazards Analysis
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
*109-19-3	Butyl Isovalerate	Liquid	158	175.5	0.45	8.2	0.00003	0.03	
*111-34-2	Butyl Vinyl Ether	Liquid	100	94	50	0.62	0.002	0.03	
1306-19-0	Cadmium Oxide	Solid	128	1559 S	0.00001	0.004			0.000004
2223-93-0	Cadmium Stearate	Solid	681		0.00001	0.0013			
7778-44-1	Calcium Arsenate	Solid	398		0.00001	0.01			
8001-35-2	Camphechlor	Solid	414	0	0.4	0.02			0.003
56-25-7	Cantharidin	Solid	196	110 S	0.02	0.0043			0.02
51-83-2	Carbachol Chloride	Solid	183		0.00001	0.015			
26419-73-8	Carbamic Acid, Methyl-, O-(((2,4-Dimethyl-1,3-Dithiolan-2-Yl) Methylene)Amino)-	Solid	234	400	0.0000006	0.001			0.000004
1563-66-2	Carbofuran	Solid	221	360	0.00001	0.00043			0.00005
75-15-0	Carbon Disulfide	Liquid	76	46.5	360.0	0.16	0.01	0.03	
786-19-6	Carbophenothion	Liquid	343	350	0.0000003	0.0068	0.00000000003	0.04	
*2244-16-8	Carvone	Liquid	150	230	0.04	0.0037	0.000002	0.03	
57-74-9	Chlordane	Liquid	410	400	0.00001	0.05	0.000000001	0.04	
470-90-6	Chlorfenvinfos	Liquid	360	390	0.000004	0.01	0.0000000004	0.04	
7782-50-5	Chlorine	Gas	71	-34.6		0.0073			
24934-91-6	Chlormephos	Liquid	235	295	0.0056	0.007	0.0000005	0.03	
999-81-5	Chlormequat Chloride	Solid	158		0.00001	0.007			
*107-20-0	Chloroacetaldehyde	Liquid	78.5	85	100	0.069	0.004	0.03	
79-11-8	Chloroacetic Acid	Solid	95	189	0.5	0.0018			0.0002
107-07-3	Chloroethanol	Liquid	81	128	5.0	0.0033	0.0002	0.02	
627-11-2	Chloroethyl Chloroformate	Liquid	143	155.7	9.0	0.02	0.0005	0.03	
67-66-3	Chloroform	Liquid	119	61.7	160.0	0.49	0.009	0.04	
542-88-1	Chloromethyl Ether	Liquid	115	106	30.0	0.00025	0.002	0.03	
107-30-2	Chloromethyl Methyl Ether	Liquid	81	59	224	0.0018	0.009	0.03	
3691-35-8	Chlorophacinone	Solid	373		0.00001	0.001			
1982-47-4	Chloroxuron	Solid	291		0.0000001	0.01			
21923-23-9	Chlorthiophos	Liquid	361	400	0.0004	0.0078	0.00000004	0.04	
10025-73-7	Chromic Chloride	Solid	158	1300 S	0.00001	0.00005			0.003
*7440-48-4	Cobalt	Solid	59	2870	0.00001	0.002			0.0000000001
10210-68-1	Cobalt Carbonyl	Solid	342	52 D	0.1	0.00027			0.07
62207-76-5	Cobalt,((2,2'-(1,2-Ethanediylbis (Nitrilomethylidine))Bis(6-Fluoro Phenolato))(2-)-N,N',O,O')-	Solid	361		0.00001	0.003			
64-86-8	Colchicine	Solid	399	407	0.00001	0.0009			0.00001
*117-52-2	Coumafuryl	Solid	298		0.00001	4			
56-72-4	Coumaphos	Solid	363		0.0000001	0.003			
5836-29-3	Coumatetralyl	Solid	292		0.00001	0.0165			
95-48-7	Cresol, o-	Solid	108	191	0.5	0.11			0.00003
535-89-7	Crimidine	Solid	172	300	0.00001	0.0012			0.00001
4170-30-3	Crotonaldehyde	Liquid	70	104	36	0.04	0.001	0.02	
123-73-9	Crotonaldehyde, (E)-	Liquid	70	104	36	0.04	0.001	0.02	
506-68-3	Cyanogen Bromide	Solid	106	61.4	92	0.044			0.02
506-78-5	Cyanogen Iodide	Solid	153	45 S	1	0.18			0.02
2636-26-2	Cyanophos	Liquid	243	350	0.0008	0.025	0.00000007	0.03	
675-14-9	Cyanuric Fluoride	Liquid	135	73	120	0.00017	0.007	0.04	
66-81-9	Cycloheximide	Solid	281	245	0.006	0.002			0.0008
108-91-8	Cyclohexylamine	Liquid	99	134.5	10	0.16	0.0005	0.03	
*287-92-3	Cyclopentene	Liquid	70	49	317	11	0.01	0.03	
*633-03-4	C. I. Basic Green 1	Solid	483		0.00001	0.25			

Exhibit C-1
List of Extremely Hazardous Substances and Data for Hazards Analysis
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
151-56-4	Ethyleneimine	Liquid	43	55	207	0.004	0.006	0.02	
*2235-25-8	Ethylmercuric Phosphate	Solid	327		0.00001	0.001			
542-90-5	Ethylthiocyanate	Liquid	87	146	4	0.1	0.0002	0.02	
22224-92-6	Fenamiphos	Solid	303	450	0.0000001	0.0009			0.0000000000001
122-14-5	Fenitrothion	Liquid	277	370	0.000006	0.0038	0.0000000006	0.03	
115-90-2	Fensulfothion	Liquid	308	440	0.00000001	0.002	0.000000000001	0.03	
4301-50-2	Fluenetil	Solid	258		0.0000025	0.006			0.0000007
7782-41-4	Fluorine	Gas	38	-188		0.039			
640-19-7	Fluoroacetamide	Solid	77	250	0.001	0.0058			0.0002
144-49-0	Fluoroacetic Acid	Solid	78	165	2	0.00047			0.0001
359-06-8	Fluoroacetyl Chloride	Liquid	96	73	80	0.01	0.004	0.03	
51-21-8	Fluorouracil	Solid	130	361	0.00001	0.019			0.004
944-22-9	Fonofos	Liquid	246	380	0.00021	0.0013	0.00000002	0.03	
50-00-0	Formaldehyde	Gas	30	-19		0.012			
107-16-4	Formaldehyde Cyanohydrin	Liquid	57	183	1.8	0.006	0.00006	0.02	
23422-53-9	Formetanate Hydrochloride	Solid	258	440	0.0000001	0.018			0.00003
2540-82-1	Formothion	Liquid	257	250	0.0000085	0.00027	0.0000000008	0.04	
17702-57-7	Formparanate	Solid	235	385	0.0000025	0.0072			0.0000003
21548-32-3	Fosthietan	Liquid	241	250	0.0000065	0.0047	0.00000000006	0.04	
3878-19-1	Fuberidazole	Solid	184		0.00001	0.0033			
110-00-9	Furan	Liquid	68	32	700	0.0012	0.03	0.03	
13450-90-3	Gallium Trichloride	Solid	176	201.3	0.2	0.032			0.0004
77-47-4	Hexachlorocyclopentadiene	Liquid	273	239	0.08	0.0002	0.000007	0.04	
*1335-87-1	Hexachloronaphthalene	Solid	335	270	0.003	0.0002			
4835-11-4	Hexamethylenediamine, N,N'-Dibutyl-	Liquid	228	205	0.0004	0.0022	0.00000003	0.04	
302-01-2	Hydrazine	Liquid	32	113.5	14.4	0.01	0.0003	0.01	
74-90-8	Hydrocyanic Acid	Gas	27	25.7		0.0055			
7647-01-0	Hydrogen Chloride (Gas Only)	Gas	36	-85		0.015			
7664-39-3	Hydrogen Fluoride	Gas	20	19.4		0.0016			
7722-84-1	Hydrogen Peroxide (Conc > 52%)	Liquid	34	152	5	0.01	0.0001	0.01	
7783-07-5	Hydrogen Selenide	Gas	81	-41		0.00066			
7783-06-4	Hydrogen Sulfide	Gas	34	-60		0.042			
123-31-9	Hydroquinone	Solid	110	285	0.001	0.02			0.0008
*53-86-1	Indomethacin	Solid	358		0.00001	0.0024			
*10025-97-5	Iridium Tetrachloride	Solid	334		0.00001	0.0047			
13463-40-6	Iron, Pentacarbonyl-	Liquid	196	103	40	0.0008 a	0.003	0.04	
297-78-9	Isobenzan	Solid	412		0.00001	0.001			
78-82-0	Isobutyronitrile	Liquid	69	103.8	50	0.025	0.002	0.02	
102-36-3	Isocyanic Acid,3,4-Dichlorophenyl Ester	Solid	188	240	0.02	0.014			0.000009
465-73-6	Isodrin	Solid	365	344	0.00001	0.007			0.004
55-91-4	Isofluorphate	Liquid	184	185	0.58	0.0036	0.00004	0.03	
4098-71-9	Isophorone Diisocyanate	Solid	222	360	0.00001	0.00123			0.000000006
108-23-6	Isopropyl Chloroformate	Liquid	123	104.6	50	0.1	0.003	0.03	
625-55-8	Isopropyl Formate	Liquid	88	68.2	100	0.0014	0.004	0.03	
119-38-0	Isopropylmethylpyrazolyl Dimethylcarbamate	Liquid	211	295	0.001	0.0056	0.00000008	0.03	
78-97-7	Lactonitrile	Liquid	71	182	1.7	0.018	0.00006	0.02	
21609-90-5	Leptophos	Solid	412	380	0.000002	0.03			0.000000009
541-25-3	Lewisite	Liquid	207	190	0.395	0.0047	0.00003	0.04	
58-89-9	Lindane	Solid	291	323.4 D	0.0000094	0.1			0.00004
7580-67-8	Lithium Hydride	Solid	8		0.00001	0.005			
109-77-3	Malononitrile	Solid	66	218	0.08	0.019			0.000005

Exhibit C-1
List of Extremely Hazardous Substances and Data for Hazards Analysis
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
*65-86-1	Orotic Acid	Solid	156		0.00001	2			
*20816-12-0	Osmium Tetroxide	Solid	254	130	11	0.0001			0.002
630-60-4	Ouabain	Solid	585		0.00001	0.0083			
23135-22-0	Oxamyl	Solid	219	310	0.00023	0.0017			0.00002
78-71-7	Oxetane, 3,3-Bis(Chloromethyl)-	Liquid	155	200	0.5	0.002	0.00003	0.03	
2497-07-6	Oxydisulfoton	Liquid	274	330	0.00006	0.0035	0.000000006	0.03	
10028-15-6	Ozone	Gas	48	-111		0.002			
1910-42-5	Paraquat	Solid	257		0.0000001	0.00015			
2074-50-2	Paraquat Methosulfate	Solid	408		0.0000001	0.00015			
56-38-2	Parathion	Liquid	291	375	0.000038	0.002	0.000000004	0.03	
298-00-0	Parathion-Methyl	Solid	263	D	0.0000097	0.00034			
12002-03-8	Paris Green	Solid	1014		0.00001	0.022			
19624-22-7	Pentaborane	Liquid	63	60	170	0.0008	0.006	0.02	
*76-01-7	Pentachloroethane	Liquid	202	161	3.4	3.5	0.0003	0.04	
*87-86-5	Pentachlorophenol	Solid	266	309	0.0002	0.015			0.001
2570-26-5	Pentadecylamine	Solid	227	307.6	0.0003	0.002			0.00000001
79-21-0	Peracetic Acid	Liquid	76	105	60	0.0045	0.002	0.02	
594-42-3	Perchloromethylmercaptan	Liquid	186	147	10	0.0076	0.0007	0.04	
108-95-2	Phenol	Solid	94	181.75	0.35	0.039			0.00008
97-18-7	Phenol, 2,2'-Thiobis(4,6-Dichloro)-	Solid	356		0.0000001	0.007			
4418-66-0	Phenol,2,2'-Thiobis(4-Chloro-6-Methyl)-	Solid	315	443	0.0000001	0.0013			0.00001
64-00-6	Phenol, 3-(1-Methylethyl)-, Methylcarbamate	Solid	193	143	0.4	0.016			0.004
58-36-6	Phenoxarsine, 10,10'-Oxydi-	Solid	502		0.00001	0.014			
696-28-6	Phenyl Dichloroarsine	Liquid	223	254.4	0.033	0.004	0.000003	0.03	
59-88-1	Phenylhydrazine Hydrochloride	Solid	145	240 D	0.00001	0.25			0.03
62-38-4	Phenylmercury Acetate	Solid	337		0.000009	0.022			
2097-19-0	Phenylsilatrane	Solid	251	350	0.00001	0.001			0.0008
103-85-5	Phenylthiourea	Solid	152	320	0.000002	0.003			0.0002
298-02-2	Phorate	Liquid	260	290	0.00084	0.0001	0.00000008	0.04	
4104-14-7	Phosacetim	Solid	375	400	0.00001	0.0037			0.00000009
947-02-4	Phosfolan	Solid	255	410	0.00001	0.009			0.000000000002
75-44-5	Phosgene	Gas	99	8.2		0.0008			
732-11-6	Phosmet	Solid	317	D	0.0008	0.00054			0.000008
13171-21-6	Phosphamidon	Liquid	300	350	0.000025	0.0003	0.000000002	0.04	
7803-51-2	Phosphine	Gas	34	-88		0.028			
2703-13-1	Phosphonothioic Acid, Methyl-, O-Ethyl O-(4-(Methylthio)Phenyl) Ester	Liquid	262	298	0.0001	0.01	0.000000009	0.04	
50782-69-9	Phosphonothioic Acid, Methyl-, S-(2-(Bis(1-Methylethyl)Amino)Ethyl) O-Ethyl Ester	Liquid	267	298	0.0007	0.0009	0.00000006	0.04	
2665-30-7	Phosphonothioic Acid, Methyl-,O-(4-Nitrophenyl) O-Phenyl Ester	Liquid	309	400	0.00001	0.008	0.000000001	0.03	
3254-63-5	Phosphoric Acid, Dimethyl 4-(Methylthio) Phenyl Ester	Liquid	248	300	0.001	0.007	0.00000009	0.03	
2587-90-8	Phosphorothioic Acid, O,O-Dimethyl-S-(2-Methylthio) Ethyl Ester	Liquid	216	230		0.02		0.04	
7723-14-0	Phosphorus	Solid	31	280	0.05	0.003			0.00000005
10025-87-3	Phosphorus Oxychloride	Liquid	153	106	40	0.003	0.003	0.04	
10026-13-8	Phosphorus Pentachloride	Solid	208	160	1	0.02			0.006
1314-56-3	Phosphorus Pentoxide	Solid	142		0.00001	0.0006			
7719-12-2	Phosphorus Trichloride	Liquid	137	76	135	0.028	0.008	0.04	

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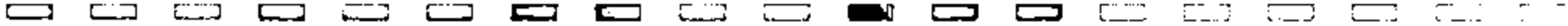
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
7446-09-5	Sulfur Dioxide	Gas	64	-10		0.026			
7783-60-0	Sulfur Tetrafluoride	Gas	108	-40		0.0092			
7446-11-9	Sulfur Trioxide	Solid	80	45	433	0.003			0.01
7664-93-9	Sulfuric Acid	Liquid	98	290	0.000001	0.008	0.000000000005	0.02	
77-81-6	Tabun	Liquid	162	240	0.07	0.00015	0.000005	0.03	
13494-80-9	Tellurium	Solid	128	989.9	0.00001	0.02			0.00000002
7783-80-4	Tellurium Hexafluoride	Gas	242	-39 S		0.001			
107-49-3	TEPP	Liquid	290	310	0.00047	0.001	0.00000005	0.04	
13071-79-9	Terbufos	Liquid	288	315	0.0003	0.001	0.00000003	0.04	
78-00-2	Tetraethyllead	Liquid	323	110	0.2	0.004	0.00002	0.06	
597-64-8	Tetraethyltin	Liquid	235	181	2	0.007	0.0002	0.04	
75-74-1	Tetramethyllead	Liquid	267	110	22	0.004	0.002	0.05	
509-14-8	Tetranitromethane	Liquid	196	126	13	0.008 a	0.001	0.04	
*1314-32-5	Thallic Oxide	Solid	457	875	0.00001	0.002			0.003
10031-59-1	Thallium Sulfate	Solid	1527	D	0.00001	0.002			
6533-73-9	Thallous Carbonate	Solid	469		0.00001	0.002			
7791-12-0	Thallous Chloride	Solid	240	720	0.0000001	0.002			0.00007
2757-18-8	Thallous Malonate	Solid	511	300	0.00001	0.002			
7446-18-6	Thallous Sulfate	Solid	505		0.0000001	0.002			
2231-57-4	Thiocarbazide	Solid	106		0.00001	0.1			
*21564-17-0	Thiocyanic Acid, 2-(Benzothiazolylthio) Methyl Ester	Liquid	238	350	0.00001	1.6	0.0000000008	0.03	
39196-18-4	Thiofanox	Solid	218	315	0.00017	0.0085			0.00000009
*640-15-3	Thiometon	Liquid	246	340	0.0003	0.06	0.00000003	0.03	
297-97-2	Thionazin	Liquid	248	360	0.003	0.0035	0.0000003	0.03	
108-98-5	Thiophenol	Liquid	110	168.3	1	0.0014	0.00005	0.03	
79-19-6	Thiosemicarbazide	Solid	91	320	0.00001	0.0092			0.0004
5344-82-1	Thiourea, (2-Chlorophenyl)-	Solid	187	323	0.000002	0.0046			0.0001
614-78-8	Thiourea, (2-Methylphenyl)-	Solid	166		0.000002	0.05			
7550-45-0	Titanium Tetrachloride	Liquid	190	136.4	10	0.001	0.0007	0.04	
584-84-9	Toluene 2,4-Diisocyanate	Liquid	174	251	1	0.007	0.00007	0.03	
91-08-7	Toluene 2,6-Diisocyanate	Liquid	174	245	0.5	0.0009	0.00003	0.03	
110-57-6	Trans-1,4-Dichlorobutene	Liquid	125	155.5	6	0.0044	0.0003	0.03	
1031-47-6	Triamiphos	Solid	294	400	0.0000001	0.01			0.000000003
24017-47-8	Triazofos	Liquid	313	350	0.00001	0.0028	0.000000001	0.04	
76-02-8	Trichloroacetyl Chloride	Liquid	182	118	0.0000001	0.0045	0.000000000007	0.04	
115-21-9	Trichloroethylsilane	Liquid	164	97.9	0.6	0.003	0.00004	0.04	
327-98-0	Trichloronate	Liquid	334	360	20	0.01	0.002	0.04	
98-13-5	Trichlorophenylsilane	Liquid	212	201.5	0.01	0.0033	0.0000008	0.04	
*52-68-6	Trichlorophon	Solid	257	280	0.000008	0.013			
1558-25-4	Trichloro(Chloromethyl)Silane	Liquid	184	118	30	0.0003	0.002	0.04	
27137-85-5	Trichloro(Dichlorophenyl)Silane	Liquid	280	260	70	0.008	0.007	0.04	
998-30-1	Triethoxysilane	Liquid	164	132	23	0.005	0.002	0.04	
75-77-4	Trimethylchlorosilane	Liquid	109	57	71	0.05	0.004	0.03	
824-11-3	Trimethylolpropane Phosphite	Solid	162	200	0.2	0.0025			0.0001
1066-45-1	Trimethyltin Chloride	Solid	199	154	3	0.02			0.0004
639-58-7	Triphenyltin Chloride	Solid	385	400	0.000001	0.02			0.0000001
555-77-1	Tris(2-Chloroethyl)Amine	Liquid	205	256	0.011	0.0008	0.0000008	0.03	
2001-95-8	Valinomycin	Solid	1112		0.00001	0.0025			
1314-62-1	Vanadium Pentoxide	Solid	182	1750	0.0000001	0.007			0.0000000000002
108-05-4	Vinyl Acetate Monomer	Liquid	86	72	124	0.054	0.005	0.03	
*3048-64-4	Vinylnorbornene	Liquid	120	141	5	4.37	0.0003	0.03	

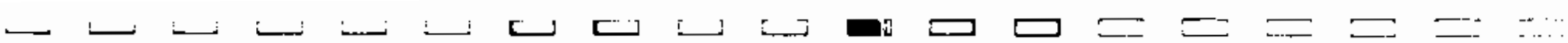


INCIDENT RESPONSE 1995

Pollution Control Division

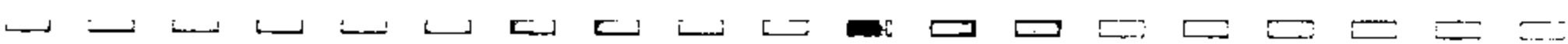
Water Quality Section

TYPE	TOTAL
Water Quality (General)	155
Petroleum	127
Wastewater Treatment Facilities	106
Fish Kills	27
Hazardous Materials	57
Septic System Discharges	24
Buried and Surface Waste	11
Pesticides	16
Sewage	43
Total Incidents	566



FIRE DEPARTMENT
HAZARDOUS WAS.. MANAGEMENT

DATE	LOCATION	AMNESTY DAY	HAZWASTE STATION	NO. PART.	GAL USED OIL	UNITS LEAD-ACID BATTERIES	GAL LATEX PAINT	GAL GASOLINE WASTE	GAL ANIT-FREEZE	LBS DISPOSAL CONTRACTOR	COST CONTRACTOR	COST JAN'S	COST TIM'S	REVENUE BATTERY
JAN 95	ALL			118	2627	208	260	45	180			$ 139.00		$ 156.00
FEB 95	ALL			76	2415	98	243	30	268			$ 163.00		$ 72.00
MAR 95	ALL			45	1127		99	28	148			$ 103.00		
MAR 05/95	JRTS	*		563	410	63	781	91	84	23125	$ 42,849.00	$ 152.00		$ 47.00
MAR 12/95	BRLF	*		713	898	186	1575	67	86	36925	$ 66,474.00	$ 128.00		$ 125.00
APR 95	ALL			113	2845	198	253	140	277			$ 302.00		$ 149.00
APR 14/95	CENTER									1200	$ 1,005.00			
APR 28/95	N PORT	*		561	439	40	1025	55	74	18225	$ 33,261.00	$ 103.00		$ 30.00
APR 95	BRLF		*							1600	$ 1,720.00			
MAY 95	ALL			136	1764		370	54	145			$ 134.00		
MAY 18/95	MYAKKA		*							1600	$ 1,035.00			
JUN 95	ALL			103	1884	154	244	30	260			$ 157.00		$ 114.50
JUL 95	ALL			63	2486	95	125	149	267			$ 320.00		$ 71.25
SEP 17/94-AUG 20/95	BRLF		*							9350	$ 19,871.00			
SEP 17/94-AUG 20/95	JRTS		*							10300	$ 20,319.00			
AUG 95	ALL			125	1754	111	286	45	285			$ 178.00		$ 83.00
AUG 30/95	JRTS		*							400	$ 525.00			
SEP 95	ALL			102	1840	110	293	0	0					$ 83.00
SEP 29/95	SCF #32									25	$ 110.00			
OCT 95	ALL			75	1645	111	151	70	85				$ 47.00	$ 83.00
OCT 14/95	ENG	*		131	110	12	260	0	0	3150	$ 10,502.00		$ -	$ 9.00
OCT 22/95	JRTS	*		588	450	84	880	94	40	24600	$ 43,340.00		$ 22.00	$ 53.00
OCT 28/95	BRLF	*		953	1150	202	3800	100	100	45025	$ 77,251.00		$ 55.00	$ 152.00
NOV 95	ALL			83	2055	0	129	0	0					$ -
DEC 95	ALL			78	1105	155	195	55						$ 116.00
AUG 21/95-DEC 30/95	BRLF/JRTS		*							8075	$ 11,554.00			
1995 Totals				4526	27004	1805	10959	1053	2309	181600	$ 329,816.00	$ 1,879.00	$ 124.00	$ 1,352.75
Totals in Lbs.					205770	68590	43836	5980	19257					



Sarasota County Fire Department
Hazardous Waste Management
6750 Bee Ridge Road, Sarasota FL 34241
(941) 316-1301

DATE: _____

NPDES STORMWATER INSPECTION

Facility Name:

Facility Address:

1. **Water Supply:**
☐ Private Well
☐ Public Utility
☐ Private Utility
Utility Name: _____
Follow-Up? Yes ____ No ____

2. **Sewage System:**
☐ Septic System
☐ Public Utility
☐ Private Utility
Utility Name: _____
Follow-Up? Yes ____ No ____

3. Are there floor drains other than toilet drains in your facilities? Yes _____ No _____

If so, where do these drains empty? _____

4. Are there storm drains on the property? Yes _____ No _____

☐ Closed Type (Pipes, Inlets)
☐ Open Type (Swales, Ditches)

5. Are there lakes, streams or retention ponds on the property? Yes _____ No _____

6. Are there tanks situated on the property? Yes _____ No _____

☐ Underground Tanks Size_____ Contents_____ If ≥110 gallons, notify Tanks Sec. Yes____No____
☐ Above Ground Tanks Size_____ Contents_____ If ≥550 gallons, notify Tanks Sec. Yes____No____

7. Is there evidence of stressed vegetation and/or discolored or disturbed soils on the property?
Yes _____ No _____

☐ Stressed Vegetation
☐ Discolored Soils/Impervious Surfaces
☐ Disturbed Soils

8. Further investigation is warranted? Yes _____ No _____

If yes, reason for: _____

INSPECTOR	DATE FORWARDED TO POLLUTION CONTROL

CONSTRUCTION SITE MANAGEMENT PROVISIONS

1. The contractor shall provide adequate storage facilities or shelters for construction materials and chemicals. All storage facilities shall be planned as far away from natural drainage features as possible.

2. The contractor shall designate specific routes to handle construction traffic and equipment in order to minimize disturbed areas. A dust control program including use of calcium chloride may be warranted as determined by the field engineer.

3. Removed soil should be stockpiled, protected, and redistributed over disturbed areas. Excavated materials should be placed in designated areas planned sufficient distances away from drainage features and facilities so as to reduce potential for erosion and sediment pollution.

4. The contractor shall minimize the size of exposed or disturbed areas and limit their duration of exposure. In order to limit exposed areas the contractor should schedule operations so that land exposure is not subject to periods of high erosive rainfalls.

5. All litter and debris shall be self contained on the site and planned as far away from natural drainage features as possible.

6. To prevent biological pollutants, the contractor shall provide proper sanitary facilities and conditions on the site.

All of the above specifications are subject to the approval of the field engineer or any of his representatives.

EROISION AND SEDIMENT CONTROL

1. Contractor to use hay bales, sand/gravel bags, etc. for eroision and sediment control on site.
2. All areas which are stripped of vegetation are to be sodded at critical points and grassed elsewhere as quickly as possible.
3. Contractor shall make effort to direct all stormwater through sediment control areas until the completion of the stormwater pollution abatement system.
4. No off-site discharges allowed during construction.

GENERAL NOTES:

1. THE ENVIRONMENTAL AND SURFACE WATER MANAGEMENT SYSTEM SHALL BE MAINTAINED IN ACCORDANCE WITH THE APPROVED MONITORING AND MAINTENANCE MANUAL (CONTAINED AS EXHIBIT D IN SARASOTA COUNTY RESOLUTION NO. 89-305) AND SHALL BE SUBJECT TO THE REQUIREMENTS OF THE PALMER RANCH MASTER ASSOCIATION - "DECLARATION OF PROTECTIVE COVENANTS", ON FILE IN THE PUBLIC RECORDS OF SARASOTA COUNTY (O.R. 1804, PGS. 2467-2510)

2. ALL AREAS DESIGNATED AS "PRESERVE" TO BE CLEARLY DEMARCATED PRIOR TO INITIATION OF CONSTRUCTION

APPLICABLE PERMITS:

1. SWFWMD MSW NOS. 491293.03, 491293.05, 406905.00, 406906.00, 491293.15, 491293.16 and 406905.01
2. COE IPE89-20142, NW 330.5(a)(28)(MOD)

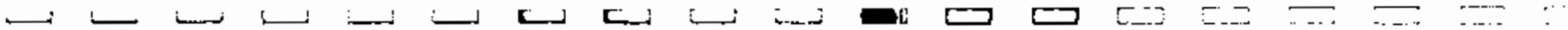
GENERAL CONSTRUCTION NOTES:

1. THERE SHALL BE NO CHANGE OR DEVIATION FROM THESE PLANS UNLESS PRIOR APPROVAL BY THE ENGINEER
2. ALL CLEARING AND GRUBBING DEBRIS TO BE BURNED OR REMOVED FROM SITE AND IS PART OF CLEARING AND GRUBBING ITEM.
3. IT IS THE INTENT OF THE OWNER THAT CERTAIN TREES BE DESIGNATED TO BE SAVED AND PROTECTED BY THE CONTRACTOR. IT IS ASSUMED THOSE TREES ARE HEALTHY AND ARE EXPECTED TO BE PART OF THE LANDSCAPE DEVELOPMENT. THEREFORE, IF ANY TREE(S) DAMAGED BY CONSTRUCTION OPERATION OR BY OTHER MEANS (EXCLUDING LIGHTNING, WINDSTORM AND OTHER ACTS OF GOD) PERISHES WITHIN THE CONSTRUCTION PERIOD, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND DISPOSE OF THOSE TREES. NO ADDITIONAL COMPENSATION WILL BE MADE BY THE OWNER FOR THE LABOR, MATERIAL OR MACHINERY REQUIRED TO REMOVE SAID TREE(S).
4. WHERE EXCAVATIONS ARE IN CLOSE PROXIMITY OF TREES, THE CONTRACTOR SHALL USE EXTREME CARE IN NOT DAMAGING THE ROOT SYSTEM. NO EQUIPMENT, SUPPLIES OR VEHICLES SHALL BE STORED OR PARKED WITHIN THE DRIP LINE OF TREES TO REMAIN AND BE PRESERVED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM ALL OF HIS EMPLOYEES AND SUBCONTRACTORS OF THIS REQUIREMENT AND TO ENFORCE SAME.
5. LAY SOD AROUND ALL INLETS, MITERED ENDWALLS, HEADWALLS, SWALES, LAKE SLOPES, AND THREE FEET (3') WIDE STRIP ADJACENT TO ALL CURBING, AND AS DIRECTED BY THE ENGINEER. ALL PROPOSED GROUND ELEVATIONS ARE FINISHED SOD ELEVATIONS. FINISH EARTHWORK GRADING WILL BE 0.2 FEET BELOW ELEVATIONS SHOWN TO ALLOW FOR SOD THICKNESS. SODDING INCLUDES MAINTAINING SLOPES AND SOD UNTIL COMPLETION AND ACCEPTANCE OF TOTAL PROJECT OR GROWTH IS ESTABLISHED WHICHEVER COMES LAST. ALL EROSION SILTATION AND MAINTAINING GRADES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THEN.
6. NOTIFY SUNSHINE (1-800-282-6861), STORER, CENTRAL COUNTY UTILITIES, FP&L, SARASOTA COUNTY UTILITIES DEPARTMENT, AND GENERAL TELEPHONE COMPANY PRIOR TO CONSTRUCTION AND CONNECTION TO EXISTING UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING UTILITIES FROM DAMAGE.
7. ALL UTILITY LINES, STORM DRAIN LINES AND ACCESSORIES SUCH AS, BUT NOT LIMITED TO; MANHOLES, CLEANOUTS, SEWER AND WATER SERVICES, VALVES, FIRE HYDRANTS AND INLETS WILL BE CONSTRUCTED TO ALIGNMENT AND LOCATIONS SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
8. CLEARING, GRUBBING, STRIPPING, AND COMPACTION WILL BE INSPECTED BY THE ENGINEER PRIOR TO FILLING.
9. PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, PRESERVE AREAS WITHIN AND ADJOINING THE AREA OF CONSTRUCTION ACTIVITY SHALL BE PROTECTED BY ERECTION OF TREE PROTECTION BARRICADES AND/OR SILT BARRIERS. TREE PROTECTION BARRICADES SHALL MEET THE STANDARDS OF THE SARASOTA COUNTY TREE PROTECTION ORDINANCE. SILT BARRIERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "BEST MANAGEMENT PRACTICE GUIDELINES FOR PALMER RANCH" AND THE BMP DETAILS SHOWN ON SHEET 20 OF THESE PLANS. THE ENGINEER WILL DETERMINE THE EXTENT AND TYPE OF PROTECTIVE MEASURES TO BE CONSTRUCTED FOR PROTECTION OF PRESERVE AREAS SUBJECT TO THE APPROVAL OF THE SARASOTA COUNTY NATURAL SCIENCES DIVISION. THE NATURAL SCIENCES DIVISION SHALL BE NOTIFIED WHEN PRESERVE AREA BARRICADES AND BARRIERS ARE IN PLACE.
10. ORGANIC MATERIAL LOCATED IN WETLANDS SHOWN TO BE REMOVED SHALL BE SALVAGED AS DETERMINED BY THE ENGINEER. PRIOR TO DISTURBANCE OF THESE AREAS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT SALVAGEABLE AREAS CAN BE FIELD IDENTIFIED AND DELINEATED.
11. TOPOGRAPHIC INFORMATION PROVIDED BY PALMER PARK OF COMMERCE, LTD.

* DESIGN SPEED = 45 M.P.H.
POSTED SPEED = 40 M.P.H.

DRAWING INDEX

Sheet No.	Description
1.	TITLE SHEET
2	AERIAL LOCATION MAP



FILE COPY

SARASOTA COUNTY GOVERNMENT

Inter Office Memorandum

TO: **Dennis Daughters, P.E., City Engineer, City of Sarasota**
Juan J. Florensa, Director of Public Works, City of North Port
Larry A. Heath, Director of Public Works, City of Venice
Laurie Hayes, P.E., Maintenance Engineer, FDOT, District I
Charles Rose, Engineering Department, City of Venice
Leonard A. Smally, P.E., Director of Public Works, Town of Longboat Key

FROM: **Pat Collins, P.E., Stormwater Engineer, Stormwater Environmental Utility**

SUBJECT: **NPDES MEETING NOTICE**

DATE: **June 21, 1995**

As required by the National Pollutant Discharge Elimination System (NPDES) stormwater permit issued to Sarasota County and Co-permittees, the Co-permittees are required by Part V.B.1 to establish local monitoring stations in conjunction with the State of Florida's Surface Water Ambient Monitoring Program (SWAMP). A meeting has been set to initiate this requirement. The meeting is scheduled for July 12, 1995, 10:00 a.m., in the Health Department conference room, located at 1301 Cattlemen Road, Sarasota, Florida (downstairs from my office). Eric Livingston and Doug Farrell (SWAMP) of the Florida Department of Environmental Protection and Jeannie McNeill, P.E., of the Environmental Protection Agency, will be in attendance.

We ask that each Co-permittee ensure that they have a representative in attendance. Please R.S.V.P. with the name(s) of your representative(s) to Debbie Shultz at the Stormwater Environmental Utility, (941)378-6030, by 5:00 p.m. July 7, 1995. We want to ensure sufficient room is provided for the meeting. However, we encourage you to limit those in attendance so that representatives will have time to contribute and remain focused on the meeting objective.

c: Doug Farrell, PhD., SWAMP Administrator, FDEP
Eric Livingston, Environmental Administrator, FDEP
J.P. Marchand, P.E., Manager, Stormwater Environmental Utility
Jeannie McNeill, P.E., EPA, Region IV
Susan Schoettle, Assistant County Attorney, Office of the County Attorney
Tom Walker, P.E., Camp, Dresser & McKee, Inc.

FILE COPY

SARASOTA COUNTY GOVNERNMENT
INTEROFFICE MEMORANDUM

TO: Gregg Feagans, Director, Emergency Management
Harry Glaze, P.E., Deputy Director, Transportation Department
Robin Hart, Assistant Director, Natural Resources Department
Stephen Cork, Director, General Services Department
Larry B. Turner, Director, Utilities Department
Tim Lawrence, Manager, Solid Waste Operations
Michael Holsinger, Director, Cooperative Extension Services
Dennis Laabs, Hazardous Waste Manager, Fire Department
Don Moultney, Supervisor, Development, Parks and Recreation

FROM: Pat Collins, P.E., Stormwater Engineer, Stormwater Environmental Utility

DATE: June 22, 1995

SUBJ: N.P.D.E.S. Permit; Interim Status of Year One Elements

We are approaching the half-way point in the first year of Sarasota County's N.P.D.E.S. permit. The Stormwater Environmental Utility (SEU) needs to ensure that program elements which your department is responsible for implementing in Year One have started and are being documented adequately. The SEU is available to advise your department on how to get started or to use the documentation forms transmitted with J.P. Marchand's May 15, 1995, memorandum.

We have highlighted on the attached Activity Sheets, elements and activities which your department is responsible for implementing in Year One. Some activities are existing ongoing programs (example: continue Amnesty Days). Other activities are new or expanded programs (example: maintain a list of all industrial storm sewer sources discharging to the County storm sewer system). We are interested in knowing the status of each existing, new or expanded program to be implemented by your department during Year One. Please provide us with this information by indicating the activity status on the highlighted Activity Sheets and returning the sheets to Kirk Bagley at the SEU Cattlemen Road Complex. We request that you return this information to us by July 15, 1995.

Thank you for your cooperation in this important matter. As always, if you have questions, comments or concerns,contact Kirk Bagley or myself at 378-6030.

Attachments

c: John C. Goodknight, P.E., Director, Transportation Department
Gary S. Comp, Director, Natural Resources Department
David R. Bullock, Solid Waste Department
John Albritton, Fire Chief, Fire Department
Walter J. Rothenbach, Jr., Director, Parks and Recreation
J. P. Marchand, P.E., Manager, Stormwater Environmental Utility

SARASOTA COUNTY GOVERNMENT

FILE COPY

Inter Office Memorandum

TO: Dennis Daughters, P.E., City Engineer, City of Sarasota
Juan J. Florensa, Director of Public Works, City of North Port
Sam Fusco, P.E., Stormwater Manager, City of North Port
Larry A. Heath, Director of Public Works, City of Venice
Laurie Hayes, P.E., Maintenance Engineer, FDOT, District I
Charles Rose, P.E., City Engineer, City of Venice
Leonard A. Smally, P.E., Director of Public Works, Town of Longboat Key

FROM: Pat Collins, P.E., Stormwater Engineer, Stormwater Environmental Utility

SUBJECT: NPDES Monitoring Program Workshop

DATE: August 1, 1995

An all day workshop to develop the NPDES monitoring program is scheduled for Monday, August 14, 1995, from 10 a.m. to 5 p.m., in the Sarasota County Health Department conference room, located at the Cattlemen Road Complex, 1301 Cattlemen Road, Sarasota, Florida. Please come prepared with any information or studies your municipality or agency may have on surface, storm or ground water quality within your jurisdiction. We intend to have a final draft of the monitoring program by the end of the workshop session. Therefore, any relative historical information that you may have should be brought to the workshop.

Jeannie McNeill, EPA, Region IV, and Eric Livingston, FDEP, will be there to help develop and approve the monitoring plan. Representatives from Pinellas and Hillsborough Counties and St. Pete have been invited to come and observe the meeting.

If you have any questions, please contact Kirk Bagley or myself at the Stormwater Environmental Utility, (941)378-6030.

C: Gary Comp, Director, Natural Resources Department
Eric Livingston, Environmental Administrator, FDEP
J.P. Marchand, P.E., Manager, Stormwater Environmental Utility
Gary Reckner, District Conservationist,
Jeannie McNeill, P.E., EPA, Region IV
Susan Schoettle, Assistant County Attorney, Office of the County Attorney
John Trommer, Hydrologist-in-Charge, US Geological Survey
Tom Walker, P.E., Camp, Dresser & McKee, Inc.

SARASOTA COUNTY GOVERNMENT FILE COPY

INTEROFFICE MEMORANDUM

TO: Gregg Feagans, Director, Emergency Management
Harry W. Glaze, P.E., Deputy Director, Transportation Department
Robin Hart, Assistant Director, Natural Resources Department
Stephen Cork, Director, General Services Department
Larry B. Turner, Director, Utilities Department
Tim Lawrence, Manager, Solid Waste Operations
Michael Holsinger, Director, Cooperative Extension Services
Dennis Laabs, Hazardous Waste Manager, Fire Department
Don Moultney, Supervisor, Development, Parks and Recreation

FROM: Kirk Bagley, Area Superintendent, Stormwater Environmental Utility

DATE: August 16, 1995

SUBJ: N.P.D.E.S. Permit; Computer Disk for Documentation

The computer disk of N.P.D.E.S. documentation forms is now available to involved departments. We would like to schedule meetings with department representatives and/or the personnel who will be doing the actual data entry of the activities performed. We would like to schedule the meetings between now and the end of September.

Please contact Pat Collins or myself at 378-6030 to set up a meeting based on your individual schedules.

file

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

SEP 06 1995

RECEIVED
SEP 12 1995
STORMWATER ENVIRONMENTAL UTILITY

TO: Patrick S. Collins, Stormwater Engineer
Stormwater Environmental Utility
Sarasota County

Dennis Daughters, P.E., City Engineer
City of Sarasota

Juan J. Florensa, Director of Public Works
City of North Port

Larry A. Heath, Director of Public Works
City of Venice

Laurie Hayes, P.E., Maintenance Engineer
FDOT, District I

Leonard A. Smally, P.E., Director of Public Works
Town of Longboat Key

FROM: Gina McNeill, P.E., Environmental Engineer GMc
Storm Water and Municipal Permits Unit
EPA, Region 4

SUBJECT: NPDES Monitoring Program

I would like to thank Sarasota County and municipalities for your active participation in the August 14, 1995, NPDES Monitoring Program Workshop held with the State at the Sarasota County Health Department.

As discussed, a final monitoring plan will be submitted to EPA, Region 4 by November 13, 1995 (90 days from the date of this workshop). If you have any questions regarding your monitoring plan, please do not hesitate to call me at (404) 347-3012 extension 2964.

cc: Eric Livingston, FDEP

SARASOTA COUNTY GOVERNMENT

INTEROFFICE MEMORANDUM

TO: Pat Collins, P.E., Stormwater Engineer, S.E.U.

FROM: Kirk Bagley, Chief Engineering Inspector, S.E.U.

DATE: November 8, 1995

SUBJ: Meeting w/Pollution Control and Fire Dept.
Re: N.P.D.E.S. High Risk Inspection and Monitoring

I met with Karen Rheams and John Ryan of Pollntion Control and Dennis Laabs of the Fire Department to discuss the inspection and monitoring activities required in year two of the N.P.D.E.S. permit. The discussion centered around development of a form to be used by the Fire Department inspectors that includes inspection for potential pollution of the MS4. It was decided that the current inspection form would be modified to address the permit requirements. Dennis will provide us with a draft copy when it is available.

We also discussed the flow of information in the event an illicit discharge is suspected. The Fire Department inspector will forward the inspection report from a suspect facility to Pollution Control. Pollution Control will investigate as usual under their pollution control ordinance. In the event a discharge did occur, Pollution Control will document the investigation, findings and enforcement actions for inclusion in our Annual Report to E.P.A.

Although implementation of this activity is not required until year three of the permit, it was decided to start the inspections as soon as possible in order to become familiar with the procedure. Pollution Control's new position (an Enviriornmental Specialist III) is expected to be filled in April so Dennis' inspectors will perforin that function until then. If things go well, we may be able to implement this activity earlier than anticipated.

SARASOTA COUNTY GOVERNMENT

Inter Office Memorandum

TO: **Dennis Daughters, P.E., City Engineer, City of Sarasota**
Samuel A. Fusco, P.E., Stormwater Manager, City of North Port
Larry A. Heath, Director of Public Works, City of Venice
Laurie Hayes, P.E., Maintenance Engineer, FDOT, District I
Charles Rose, Engineering Department, City of Venice
Leonard A. Smally, P.E., Director of Public Works, Town of Longboat Key

FROM: **Pat Collins, P.E., Stormwater Engineer, Stormwater Environmental Utility**

SUBJECT: **NPDES MEETING NOTICE**

DATE: **November 17, 1995**

As required by the National Pollutant Discharge Elimination System (NPDES) stormwater permit issued to Sarasota County and Co-permittees, each permittee is required by Part V.C to contribute to the preparation of an annual system-wide report. The report shall be coordinated by committee. The SEU has scheduled the first committee meeting for Monday, December 4, 1995, 1:30 p.m., in the SEU conference room, 1301 Cattlemen Road, Sarasota, Florida.

We ask that each permittee ensure that they have a representative in attendance. Please review the Annual Report requirements found on page 49 of the permit prior to attending the meeting. If you have any questions, please contact Kirk Bagley or Pat Collins at 378-6030.

c: Kirk Bagley, Chief Engineering Inspector, Stormwater Environmental Utility
Robin Hart, Ph.D, Assistant Director, Natural Resources Department
J.P. Marchand, P.E., Deputy Transportation Director (Development)
Susan Schoettle, Assistant County Attorney, Office of the County Attorney

950820

SARASOTA COUNTY GOVERNMENT

INTEROFFICE MEMORANDUM

TO: Robert S. LaSala, Deputy County Administrator, Growth Management

THROUGH: John C. Goodknight, P.E., Director, Transportation Department

FROM: J. P. Marchand, P.E., Deputy Transportation Director (Development)

SUBJECT: NPDES Permit

DATE: December 20, 1995

As required in our federal stormwater permit, we developed a required monitoring program which the EPA, FDEP and the permittees all support. The attached letter to EPA, for your signature, confirms the results of our meetings with the EPA, FDEP and permittees to formulate the program. The program establishes local monitoring stations that meet the requirements of our NPDES permit.

If acceptable, please sign and return the letter to me for forwarding. If you have any questions, please contact me.

carried away by storm sewers, or other approved means. Where flow velocities in excess of two (2') feet per second are anticipated, curb and gutter shall be provided.

c. **LOT LINE SWALES.** Lot line swales shall be required and preserved via covenants and restrictions for each lot, unless other drainage means are affected, according to an approved development drainage study.

d. **OPEN CHANNELS AND OUTFALL DITCHES.** With the exception of roadside swales and major drainage ways, open drainageways within one hundred (100') feet of school sites shall not be permitted unless specifically approved by the Board. In these areas, drainage plans shall provide that stormwater be collected in properly designed systems of underground pipes, inlets and other appurtenances and be conveyed to an ultimate positive outfall beyond the outer edge of the subdivision or at the nearest natural outfall. Where permitted, open drainageways shall retain natural characteristics and be so designed and protected that they do not present a hazard to life and safety. Protection against scour and erosion shall be provided based on standard engineering practice as required by the County Engineer.

e. **DISPOSITION OF STORMWATER.**

DRAINAGE LEVEL OF SERVICE:
Stormwater Quality: no discharge from any stormwater discharge facility shall cause or contribute to a violation of water quality standards in waters of the state as provided for in State Statutes. Further, the County will develop and set criteria based upon state and local regulations which will set a community level of water quality standard for stormwater discharge facilities; and Stormwater Quantity: a complete stormwater management system shall provide for adequate control of stormwater runoff. In order to avoid burdening downstream drainageways and for general conservation purposes, the following specific guidelines are as follows:

1) Drainage designs shall provide for the attenuation/retention of stormwater from the site. Water released from the site shall be in such a manner as to assure that the rate of runoff after post development is less than that before development.

2) A 100-year event flood analysis shall be provided demonstrating no inundation of habitable structures and no offsite discharge except through approved outfalls.

3) Drainage systems shall include special engineering design features to minimize pollution from oil, suspended solids and other objectionable materials. Wet detention treatment systems shall be designed to treat one (1") inch of runoff; other treatment systems shall be designed to treat the runoff resulting from the first one (1") inch of rainfall. Stormwater systems discharging directly into saltwater tidal systems, bays, or the gulf shall be designed to treat 1.5 times the volume required for the selected treatment system. Runoff from the area being developed or redeveloped shall be treated.

4) Stormwater systems shall be designed to reduce floating and suspended solids to a minimum.

5) Drainage structures (inlets, manholes, control structures, etc.) shall be designed to minimize ponding within the structure.

6) No cutting, clearing, grading or filling shall be accomplished on any site under development unless appropriate devices, as shown in the Best Management Practices Plan, have been installed to minimize pollution from objectionable materials, to control erosion, and to remove sediment from surface water runoff. Appropriate techniques shall also be utilized to stabilize and revegetate disturbed areas as soon as possible.

7) A plan for operating and maintaining the stormwater management system shall be provided. The plan shall include a schedule of tasks to be performed including periodic dredging and silt removal by the designated maintenance entity and shall be sufficient to ensure proper performance of the system.

8) A Certificate of Ownership and Delegation of Stormwater Facilities Maintenance Agreement (see APPENDIX C23), will be required for all developments which are not a part of a previously approved stormwater management system.

9) A construction plan stormwater review checklist (see Appendix C25) and a construction plan stormwater design summary form (see Appendix C26) will be required for all developments which are not a part of a previously approved stormwater management system.

f. **ATTENUATION AND RETENTION FACILITIES.** Underground facilities are not acceptable unless adequate justification and demonstration of reliable performance can be provided based on standard engineering practice to the County Engineer. Underground facilities shall provide for easy inspection, access and maintenance. Voids in gravel or similar material cannot be included in the calculation of treatment or attenuation storage.

g. **REGIONAL ATTENUATION FACILITIES.** The use of regional stormwater attenuation facilities in lieu of on-site facilities is encouraged. Documentation shall be provided demonstrating that proposed regional facilities adequately serve the intended service area without adverse impacts up or downstream. The County may require a development to utilize a public, regional stormwater facility in lieu of requiring individual, on-site attenuation for the development. The following conditions must exist before the County can require developers to use a public facility:

1) an accepted County study drainage basin study has identified the regional stormwater facility service area and the development is located within the service area

2) the construction of the regional stormwater facility required to accommodate the development is complete or underway.

Developments required to use regional stormwater facilities in lieu of individual, on-site attenuation shall provide a one-time capital contribution to the County for use of the facility at the time of development. The amount of the one-time capital contribution shall be based on that percentage of the regional stormwater management facility capacity which is to be consumed by the development.

h. **INLET SPACING.** Inlets shall be spaced in such a manner as to accept one hundred (100%) percent of the design runoff. The actual required spacing will depend on the characteristics of each particular site.

APPENDIX C23 - CERTIFICATE OF OWNERSHIP AND DELEGATION OF STORMWATER FACILITIES MAINTENANCE AGREEMENT
(For Corporate Ownership)

KNOW ALL MEN BY THESE PRESENTS, that the Corporation named below certifies that it is Owner of:

_____
(Complete Name of Development, Business, Subdivision or Other)

_____
(Address of Legal Description)

and: certify it is the Maintenance Entity referred to on the Approved Preliminary Plan, Site and Development Plan, and/or Construction Plans.

and: does hereby grant to Sarasota County and any of its agencies, legal access to rectify and future maintenance related complaints or problems associated with the stormwater management system at the expense, including any legal fees, of the maintenance entity, should such entity not rectify the maintenance related problems.

IN WITNESS WHEREOF, has caused these presents to be signed and attested to by the officers named below and its corporate seal to be affixed hereto on _____(Date).

Signed and sealed in the presence of: _____
(Corporate Name)

_____ _____
Name & Title of Corporate Officer (Corporate Address)

_____ _____
Officer's Signature (Name & Title)

_____
(Signature)

STATE OF _____, COUNTY OF _____

THIS IS TO CERTIFY, that on _____(Date) before me, an officer duly authorized to take acknowledgments in the State and County aforesaid, personally appeared _____ and _____, respectively, _____, President and _____ of the above named corporation incorporated under the laws of the State of _____, to be known to be the individual and officer described in and who executed the forgoing dedication and severally acknowledged the execution thereof to be their free act and deed as such officer and thereunto duly authorized; that the official seal of said corporation is duly affixed thereto; and that the said dedication is the act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the above date.

_____
Notary Public
My commission expires: _____

APPENDIX C25
CONSTRUCTION PLAN
STORMWATER REVIEW CHECKLIST

PROJECT NAME: _____

ITEM NO.	ITEM	CHECK ITEM IF PROVIDED
1	Construction Plan Stormwater Design Summary Form Completed	
2	Detailed Design Calculations For Stormwater Management Ponds	
3	Detailed Design Calculations For Site Stormwater Piping And Conveyance System	
4	Detailed Development Plans	
5	Final Easement (Onsite and Offsite)	
6	Ditch Cross Sections	
7	Lot Grading Plan And Cross Sections	
8	Finished Floor Elevations	
9	Illustrate Flood Encroachment And Compensation Areas	

ALL ITEMS NOTED ABOVE MUST BE SUBMITTED FOR THE COUNTY TO ACCEPT THE SUBMITTAL

APPENDIX C26
CONSTRUCTION PLAN
STORMWATER DESIGN SUMMARY
FORM

Engineer's Seal and Dated Signature

PROJECT NAME: _____

LDR Section B4.4.e - **DESIGN SUMMARY**	
Total Site Area (Acres)	
Total Site Impervious (Acres)	
Seasonal High Water Elevation	Pond 1____ Pond 2____ Pond 3 ____
Control Structure Control Elevation	Pond 1____ Pond 2____ Pond 3 ____
100-Year Design High Water Elevation	Pond 1____ Pond 2____ Pond 3____
100-Year Storage Volume (Ac.-Ft.)	Pond 1____ Pond 2____ Pond 3 ____
100-Year Pond Area (Acres)	Pond 1____ Pond 2____ Pond 3____
Method of Attenuation Calculetion: Rational or Hydrograph routing	Rational: ____ Hydrograph Routing: ____
Existing critical discharge requirements	
Pre-development 100-year peak discharge	
Post-development 100-year peak discharge	
100-year peak Stage at Control Structure	
Lowest Habitable Structure Elevation	
Treatment Volume Requirement	
Treatment Volume Provided	
Treatment Volume Type	wet: ____ dry: ____
Treatment Volume Drawdown Time (hrs.)	1/2 volume wet: ____ dry: ____
1.5 x Treatment Volume for discharge into in saltwater tidal systems?	Yes: ____ Not Applicable ____
SWFWMD Permit Number and Expiration date	Number : ____ Expiration Date: ____
NPDES (NOI) Application Form	Yes: ____ Not Applicable: ____

APPENDIX C26
CONSTRUCTION PLAN
STORMWATER DESIGN SUMMARY
FORM

Engineer's Seal and Dated Signature

PROJECT NAME: _____

Level of Service (LOS) -**PROPOSED FLOODING VS. ALLOWABLE FLOODING**
Appendix C14 -

ROADWAYS	10-YEAR Proposed	10-YEAR Allowable	25-YEAR Proposed	25-YEAR Allowable	100-YEAR Proposed	100-YEAR Allowable
Evacuation		0 inches		0 inches		0 inches
Arterial		0 inches		0 inches		6 inches
Collector		0 inches		6 inches		9 inches
Neighborhood		6 inches		9 inches		12 inches
Parking Area		9 inches		9 inches		12 inches

LDR Section B3.1.b.(2) - **FLOODPLAIN COMPENSATION**

Elevation from	Elevation to	100-year Floodplain Encroachment (cubic feet)	100-year Floodplain Compensation (cubic feet)
Total			

LDR Section C5.3.d(7) - **PLAN FOR OPERATING AND MAINTAINING THE STORMWATER MANAGEMENT SYSTEM**

TASK	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE
1. Mowing and invasive plant species removal		
2. Stabilization of eroded bank areas		
3. Litter and debris removal		
4. Back flush underdrains (where applicable)		
5. Sediment removal and disposal		
6. Control Structure inspection & maintenance		

SARASOTA COUNTY GOVERNMENT
SARASOTA, FLORIDA

P.O. Box 8
Sarasota, Florida 34230-0008
Telephone (813) 951-5200
FAX (813) 951-5987

January 20, 1995

Ms. Felicia Robinson, Unit Chief
Coastal Planning Unit
Mr. Roosevelt Childress, Unit Chief
Water Management Division
Permits Section
Environmental Protection Agency, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: Request for Permit Modification;
NPDES Permit No. FLS000004

Dear Ms. Robinson and Mr. Childress:

To confirm the January 12, 1995 conversation between staff from Sarasota County, the Sarasota Bay National Estuary Program, and the U.S. Environmental Protection Agency (EPA), you have agreed to modify the National Pollutant Discharge Elimination System (NPDES) Permit (FLS000004) for Sarasota County. As discussed, all the parties agreed in principal with the language proposed by the Tampa Bay area governments cited in the January 11, 1995 memorandum to you from Mr. Richard Eckenrod, the Director of the Tampa Bay National Estuary Program (copy attached). The agreed to modification would delete Condition 1 under Part VII.A. Modification to the Permit and replace it with the following or similarly interpreted condition below:

1. "The permittee may decide, upon concurrence from EPA, to reopen the permit to incorporate relevant elements of the Comprehensive Conservation and Management Plan (CCMP) developed through the Sarasota Bay National Estuary Program including, but not limited to, stormwater pollutant loading reduction goals. If the permittee chooses not to reopen the permit during its current term, then the permittee and the EPA will jointly decide which elements of the CCMP could be incorporated in the permit upon renewal.

> At any time, the permit will not be modified to include the relevant CCMP elements unless the EPA, the Southwest Florida Water Management District, the Florida Department of Environmental Protection, and other agencies having jurisdiction have previously agreed to incorporate consistent conditions in any permits or related rules and regulations that might affect the permittee."

Please consider this letter as a formal request to modify Permit #FLS000004, Part VII.A., Condition 1, to incorporate this language.

Sarasota County further understands that the EPA, Region IV, plans to incorporate additional modifications to the permit to correct minor errors found subsequent to issuance of the original permit. EPA will provide the changes to the county and all other permit co-applicants. Any modification will be made in accordance with 40 CFR 122.62, 122.63 and 124.5 which requires a public notice and comment period.

Thank you for your assistance in resolving this important issue. Should you have any further questions or comments regarding this matter, please contact Pat Collins or J. P. Marchand at the Stormwater Environmental Utility, (813) 378-6030).

Sincerely,

Robert S. LaSala
Deputy County Administrator
Growth Management Services

c: Mark Alderson, Director, Sarasota Bay National Estuary Program
Gary Comp, Director, Natural Resources Department
John C. Goodknight, P.E., Director, Transportation Department
Susan P. Schoettle, Assistant County Attorney, Office of the County Attorney
Sarasota County NPDES Permittees

MODE = TRANSMISSION START=JUL-20 09:18 END=JUL-20 09:19

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

APR 28 1995

RECEIVED
MAY 05 1995
STORMWATER ENVIRONMENTAL UTILITY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REF: 4WM-WPEB

Mr. Robert S. LaSala
Deputy County Administrator
Sarasota County Transportation Department
1301 Cattlemen Road
Sarasota, FL 34232

RE: Minor Permit Modification
Sarasota County & Co-applicants - Municipal Separate Storm Sewer System - NPDES Number FLS000004

Dear Mr. LaSala:

In accordance with Title 40, Code of Federal Regulations (C.F.R.) Section 122.63, the U.S. Environmental Protection Agency, Region IV, is making minor modifications to the referenced National Pollutant Discharge Elimination System (NPDES) permit in order to clarify existing conditions stipulated in the permit.

The following changes have been incorporated:

- Part II, page 3, paragraph 2, the correct language should read as follows: "...and reduce the discharge of pollutants to the maximum extent practicable (MEP), and shall not cause or contribute to violations of State Water Policy."

- Part II, page 3, paragraph 4, the correct language should read as follows: "...and shall not cause or contribute to violations of State Water Policy pursuant to the Florida Administrative Code (FAC) §62.420(1)-(4)."

- Pages 4, 7, 8, 15, 20, 27, 48, the correct language should read as follows: "...and reduce the discharge of pollutants to the MEP, and shall not cause or contribute to violations of State Water Policy."

- Part II, page 17.B., the language should actually read "None".

- Part VIII.S., page 69, should read as follows: "State Storm Water Policy, is the implementing regulation of Section 403.0891 of the Florida Statutes under Chapter 62-40, Florida Administrative Code, namely §62.420(1)-(4), for design criteria to meet minimum state water performance treatment standards to address compliance with State water quality standards.

A copy of the permit containing the aforementioned corrected pages is enclosed within.

If you have any questions concerning these modifications, please contact Mike Mitchell at the above address or at 404/347-3012, ext. 2951.

Sincerely yours,

for James H Scarbrough

Robert F. McGhee, Acting Director
Water Management Division

Enclosures

cc: Florida Department of Environmental Protection

U.S. Fish & Wildlife Service, Vero Beach Field Office

SARASOTA COUNTY GOVERNMENT
SARASOTA, FLORIDA

Transportation Department
Stormwater Environmental Utility

1301 Cattlemen Road, Bldg. A
Sarasota, Florida 34232
Telephone (813) 378-6030
FAX (813) 378-6130

FILE COPY

July 5, 1995

Ms. Jeannie McNeill, P.E.,
Environmental Engineer,
Water Management Division
Permits Section
Environmental Protection Agency, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: Status of Permit Modification;
NPDES Permit No. FLS000004

Dear Ms. McNeill:

This letter is sent to confirm today's conversation regarding Sarasota County's January 20, 1995 request for modification to the National Pollutant Discharge Elimination System (NPDES) Permit (FLS000004) for Sarasota County. As discussed, your office is initiating the permit modification as requested and the permittees can expect to receive the modified permit soon. The agreed to modification would delete Condition 1 under Part VII.A. Modification to the Permit and replace it with the following or similarly interpreted condition below:

1. "The permittee may decide, upon concurrence from EPA, to reopen the permit to incorporate relevant elements of the Comprehensive Conservation and Management Plan (CCMP) developed through the Sarasota Bay National Estuary Program including, but not limited to, stormwater pollutant loading reduction goals. If the permittee chooses not to reopen the permit during its current term, then the permittee and the EPA will jointly decide which elements of the CCMP could be incorporated in the permit upon renewal.

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At any time, the permit will not be modified to include the relevant CCMP elements unless the EPA, the Southwest Florida Water Management District, the Florida Department of Environmental Protection, and other agencies having jurisdiction have previously agreed to incorporate consistent conditions in any permits or related rules and regulations that might affect the permittee."

Sarasota County further understands that the EPA, Region IV, will provide the changes to the county and all other permittees. Any modification will be made in accordance with 40 CFR 122.62, 122.63 and 124.5 which requires a public notice and comment period.

The County appreciates your assistance in resolving this important issue. Should you have any further questions or comments regarding this matter, please contact me at the Stormwater Environmental Utility, (941) 378-6030.

Sincerely,

Patrick S. Collins, P.E.
Stormwater Engineer,
Stormwater Environmental Utility

c: Mark Alderson, Director, Sarasota Bay National Estuary Program
Gary Comp, Director, Natural Resources Department
J.P. Marchand, P.E., Manager, Stormwater Environmental Utility
Susan P. Schoettle, Assistant County Attorney, Office of the County Attorney
Sarasota County NPDES Permittees

AUG 03 1995
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REF: 4WM-WPEB

Mr. Robert S. LaSala
Deputy County Administrator
Sarasota County Transportation Department
1301 Cattlemen Road
Sarasota, Florida 34232

SUBJ: Intent to Modify
Sarasota County - Municiple Separate Storm Sewer System
NPDES Number FLS000004

Dear Mr. LaSala:

The Environmental Protection Agency (EPA), Region 4, intends to modify the National Pollutant Discharge Elimination System (NPDES) permit in accordance with the Federal Clean Water Act to the referenced facility in the near future.

The enclosed draft permit modification shows the proposed conditions to be incorporated as part of the final NPDES permit.

Part V, Page 45 and 53: A modification was made as to the manner in which the seasonal pollutant load and event mean concentration estimates for a representative storm shall be provided to EPA; the pollutant load and event mean concentration estimates are to be reported to EPA for each major watershed rather than for each major outfall.

Part VI, Page 65: The reopener language was modified to read as follows:

The permit may be reopened or modified, at the request of the permittee, to incorporate relevant elements of the Comprehensive Conservation and Management Plan (CCMP) developed through the Sarasota National Estuary Program including, but not limited to, living resource targets and associated pollutant loading targets.

Comments relative to this modification are not required; however, if you wish to submit comments, please do so before September 4, 1995. When a permit is modified, only the conditions subject to modification are reopened for comments.

Comments made during this time period may be incorporated into the draft permit prior to public notice. After this date, EPA will proceed with the permitting process, including requesting state certification and publicly noticing the draft permit modification. At the time of public notice, a copy of the notice will be sent to you. At that time you will have an additional opportunity to comment on or object to any aspects of the draft permit modification.

If you have any questions concerning the enclosed conditions or the procedures associated with the permit program, please contact me at the above address or by calling (404) 347-3012, extension 2964.

Sincerely,

Gina McNeill, P.E.
Environmental Engineer
Permits Section
Water Permits and Enforcement Branch
Water Management Division

Enclosures (2)
1. Draft NPDES Permit Modification
2. Fact Sheet

cc: FDEP (with enclosures)

bcc: FL NPDES Enforcement Clerk (with enclosures)

PERMIT NO. FLS000003
Major MS4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, 33 U.S.C. 1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act",
Sarasota County - Municipal Separate Storm Sewer System Permittees:

Sarasota County
Sarasota County Transportation Department
Sarasota, Florida 34232

Town of Longboat Key
Department of Public Works
Longboat Key, Florida 34228

City of North Port
Roads and Drainage Department
North Port, Florida 34287

City of Sarasota
Department of Public Works
Sarasota, Florida 34230-1058

City of Venice
Department of Public Works
Venice, Florida 34285

Florida Department of Transportation
District One
Bartow, Florida 33830-1249

are authorized to discharge, in accordance with the approved Storm Water Management Program(s), effluent limitations, monitoring requirements, and other provisions as set forth in Parts I, II, III, IV, V, VI, VII, and VIII herein, from all portions of the

Municipal Separate Storm Sewer System
Owned or Operated by any Permittee listed above,
to waters of the United States and all tributaries thereto.

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This permit became effective on January 1, 1995.

This modification allows the permit to be reopened or modified at the request of the permittee to incorporate relevant elements of the Comprehensive Conservation and Management Plan (CCMP) developed through the Sarasota National Estuary Program including, but not limited to, living resource targets and associated pollutant loading targets. Also, the permit is being modified to change the manner in which the seasonal pollutant load and event mean concentration estimates for a representative storm shall be provided to EPA; the pollutant load and event mean concentration estimates are to be reported to EPA for each major watershed rather than for each major outfall. Only Pages 45, 53, and 65 are included.

This permit and the authorization to discharge under the National Pollutant Discharge Elimination System shall expire at midnight, on December 31, 1999.

_____
Date Issued

_____
Date Modified

_____
Robert F. McGhee, Director
Water Management Division

PART V. MONITORING AND REPORTING REQUIREMENTS

A. Seasonal Loadings and Event Mean Concentrations.

1. As per 40 CFR 122.26(d)(2)(iii)(C), the permittees shall provide estimates of the seasonal pollutant load and of the event mean concentration of a representative storm for the parameters listed in Table V.A.1. for each "major watershed" within the MS4. These constituents were detected in the sampling data reported in the Part 2 application. The seasonal pollutant load and event mean concentration for each major watershed may be estimated from the representative monitoring locations, from regional NURP or State data, or from pooling results from other nearby Florida MS4 monitoring activities and shall take into consideration land uses and drainage areas within the watershed. The estimates of seasonal loadings and event mean concentrations shall be included in the ANNUAL REPORT for Year Four of the permit.

   For the purposes of this permit, a "major watershed" is defined as follows:

   - An area bounded peripherally by a water parting (i.e., ridge) and drainging to a particular water courseor body of water. A major watershed shall encompass a named major water coarse or may consist of a coastal area draining direcly into a bay. A major watershed may contain one or more "major outfalls".

   The location of all known major outfalls shall be inventoried in the ANNUAL REPORT for Year One of the permit, with updates describing any additionally identified major outfalls in each sequent ANNUAL REPORT. For the purposes of this permit, a "major outfall" is defined as follows:

   - a pipe (or closed conveyance) system with a cross-sectional area equal to or greater than 7.07 square feet (e.g., if a single circular pipe system, an inside diameter of 36 inches or greater);
   - a single conveyance other than a pipe, such as an open channel ditch, which is associated with a drainage area of more than 50 acres;
   - a pipe (or closed conveyance) system, draining *"industrial land use,"* with a cross-sectional area equal to or greater than 0.79 square feet (e.g., if a single circular pipe system, an inside diameter of 12 inches or greater); or
   - a single conveyance other than a pipe, such as an open channel ditch, which is associated with an *"industrial land use"* drainage area of more than 2 acres;

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5. The ANNUAL REPORT shall contain a Monitoring Section which discusses the progress and results of the monitoring programs required under Part V of the permit.

   a. The Monitoring Section of the ANNUAL REPORT shall include a summary of the monitoring program developed and implemented under Part V.B.1. of the permit. The details to be discussed include:

      (1) Brief summary statement of the objective of each monitoring project included under the program,

      (2) Summary chart of the data from the monitoring completed,

      (3) Discussion of any results or conclusions derived from the monitoring completed,

      (4) Status of monitoring with respect to the compliance schedule in Part V.B.1. of the permit, and

      (5) Discussion of monitoring program revisions that are summarized elsewhere in the ANNUAL REPORT.

   b. The Monitoring Section of the ANNUAL REPORT shall include the following information as required in Part V.A. of the permit:

      (1) The ANNUAL REPORT for Year One of the permit shall contain an inventory of all known major outfalls with updates describing additionally identified major outfall in each subsequent ANNUAL REPORT.

      (2) The ANNUAL REPORT for Year Three of the permit shall include the investigation of the sources of the organic pollutants detected in the Part 2 application sampling data as required in Part V.A.2. of the permit.

      (3) The ANNUAL REPORT for Year Four of the permit shall include estimates of seasonal pollutant loadings and event mean concentrations (EMC) for each major watershed required by Part V.A.1.

6. Provide a summary of SWMP and Monitoring Modifications made during the permit year.

PART VII. PERMIT MODIFICATION

A. Modification of the Permit: The permittee may request EPA to reopen the permit to incorporate relevant elements of the Comprehensive Conservation and Management Plan (CCMP) developed through the Sarasota National Estuary Program including, but not limited to, living resource targets and associated pollutant loading targets. If a permit modification is not requested during the term of this permit, elements of the CCMP will be considered for incorporation in the permit renewal. At any time, during the permit term, the permit will not be modified to include the relevant CCMP elements unless EPA and the Florida Department of Environmental Protection have previously agreed to incorporate consistent conditions in any permits or related rules and regulations that might affect the permittee. In addition, the permit may be reopened and modified during the life of the permit to:

1. Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;

2. Address changes in State or Federal statutory or regulatory requirements;

3. Include the addition of a new permittee who is the owner or operator of a portion of the Municipal Separate Storm Sewer System; or

4. Include other modifications deemed necessary by the Director to comply with the goals and requirements of the Clean Water Act.

All modification to the permit will be made in accordance with 40 CFR 122.62, 122.63, and 124.5.

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B. Termination of Coverage for a Single Permittee

Permit coverage may be terminated, in accordance with the provisions of 40 CFR 122.64 and 124.5, for a single permittee without terminating coverage for other permittees.

C. Modification of Storm Water Management Program(s)

Only those portions of the Storm Water Management Programs specifically required as permit conditions shall be subject to the modification requirements of 40 CFR 124.5. Replacement of an ineffective or infeasible BMP implementing a required component of the Storm Water Management Program with an alternate BMP expected to achieve the goals of the ineffective or infeasible BMP shall be considered minor modifications to the Storm Water Management Program and not modifications to the permit. (See also Part II.G.)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

INDUSTRIAL FACILITY FACT SHEET MODIFICATION TO NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER TO U.S. WATERS

Permit No. FLS000004 Permit Writer: Gina McNeill
Public Notice Date: October 12, 1995

1. Name and Address of Permittees:

Sarasota County
Sarasota County Transportation Department
1301 Cattlemen Road
Sarasota, Florida 34232

Town of Longboat Key
Department of Public Works
501 Bay Isles Road
Longboat Key, Florida 34228

City of North Port
Roads and Drainage Department
5650 North Port Boulevard
North Port, Florida 34287

City of Sarasota
Department of Public Works
1565 First Street
Sarasota, Florida 34230-1058

City of Venice
Department of Public Works
401 West Venice Avenue
Venice, Florida 34285

Florida Department of Transportation
District One
Post Office Box 1249
Bartow, Florida 33830-1249

2. Type of Facility:

Municipal Seperate Storm Sewer System

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3. Permittee's Receiving Water:

The discharges from the MS4 are discharged into the following United States water bodies and tributaries thereto within Sarasota County, Florida:

Hudson Bayou	Little Salt Creek	Cow Pen Slough	Whitaker Bayou
Matheny Creek	Deer Prairie Slough	Alligator Creek	North Creek
Sarasota Bay	Ainger Creek	Phillippi Creek	Little Sarasota Bay
Catfish Creek	Shakett Creek	Lemon Bay	Clower Creek
South Creek	Sona Bay	Curry Creek	Woodmere Creek
Roberts Bay	Forked Creek	Braden River	Intracoastal Waterway
Godfrey Creek	Myakka River	Hatchett Creek	Big Slough

4. Current Permit Effective/Expiration Date:

January 1, 1995/December 31, 1999

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5. Proposed Modifications

a. The EPA is making a modification in the existing National Pollutant Discharge Elimination System (NPDES) permit upon request by the permittee to change permit language under ***Part VII.A. Modification of the Permit.*** The previous language allowed the permit to be reopened and modified to *"incorporate into the permit the finalized pollutant load reduction goals agreed to by the permittees and the National Estuary Program (NEP) in the National Estuary Program Comprehensive Conservation and Management Plan (CCMP) for the geographical area covered by this NPDES permit."* The Sarasota National Estuary Program CCMP has been finalized; however, the finalized pollutant load reduction goals contained in this document are only general overall target goals rather than specific pollutant loading reduction goals for each municipality. At a later date, these general target goals may be further developed into specific pollutant loading reduction goals for each municipality. Because of this reason, the permittee together with the EPA developed the following permit language to be placed in the permit in lieu of the earlier:

> ***"The permittee may request EPA to reopen the permit to incorporate relevant elements of the Comprehensive Conservation and Management Plan (CCMP) developed through the Sarasota National***

Estuary Program including, but not limited to, living resource targets and associated pollutant loading targets. If a permit modification is not requested during the term of this permit, elements of the CCMP will be considered for incorporation in the permit renewal. At any time during the permit term, the permit will not be modified to include the relevant CCMP elements unless the EPA and the Florida Department of Environmental Protection have previously agreed to incorporate consistent conditions in any permits or related rules and regulations that might affect the permittee."

b. The EPA is making a modification in the existing NPDES permit to change the manner in which the seasonal pollutant load and event mean concentration estimates for a representative storm shall be provided to EPA during the permit term. The base for which the seasonal pollutant load and event mean concentration estimates are to be reported to EPA shall be changed to "for each major watershed" rather than "for each major outfall." Pollutant reduction goals are developed specifically on a watershed basis, rather than on an outfall basis. This reporting change will allow estimates to be easily evaluated with pollutant reduction goals as they are established.

6. Proposed Schedule for Modified Permit Issuance:

Draft Permit to Permittees:	August 4, 1995
Draft to State for Certification:	September 8, 1995
Proposed Public Notice Date:	October 12, 1995
(30 Day Comment Period)	
Proposed Issuance Date:	November 13, 1995
Modified Permit Issuance:	January 1, 1996

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7. Procedures for the Formulation of Final Determinations

a. Comment Period

The Environmental Protection Agency proposes to issue an NPDES permit to this applicant subject to the aforementioned effluent limitations and special conditions. These determinations are tentative and open to comment from the public.

Interested persons are invited to submit written comments regarding permit issuance on the proposed permit limitations and conditions to the following address:

Office of Public Affairs
Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365
ATTN: Ms. Lena Scott, Public Notice Coordinator

All comments received within thirty (30) days following the date of public notice will be considered in the formulation of final determinations with regard to proposed permit issuance.

b. Public Hearing

The EPA Regional Administrator will hold a public hearing if there is a significant degree of public interest in a proposed permit or group of permits, or if he determines that useful information and data may be obtained thereby. Public Notice of such a hearing will be circulated at least thirty days prior to the hearing.

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c. Issuance of the Permit

After consideration of all written comments and of the requirements and policies in the Clean Water Act (the Act) and appropriate regulations, and, if a public hearing is held, after consideration of all comments, statements and data presented at the hearing, the EPA Regional Administrator will make determinations regarding the permit issuance. If the determinations are substantially unchanged from the tentative determinations outlined above, the Regional Administrator will so notify all persons submitting written comments, and, if a public hearing was held, all persons participating in the hearing. If the determinations are substantially changed, the EPA Regional Administrator will issue a public notice indicating the revised determinations. Unless a request for an evidentiary hearing is granted, the proposed permit contained in the RegionalAdministrator's determinations shall become issued and effective and will be the final action of the U.S. Environmental Protection Agency.

d. Evidentiary Hearing

If the determinations are substantially unchanged, any interested person may submit a request for an evidentiary hearing on the permit and its conditions within thirty (30) days of the receipt of the notice described in section c. If

the determinations are substantially changed, any interested person may submit a request for an evidentiary hearing within thirty days of the date of the public notice or of the date of becoming aware of the determinations, which ever comes first. Such requests will be considered timely if mailed by certified mail within the thirty day period to the Regional Hearing Clerk, Environmental Protection Agency, 345 Courtland Street, N.E., Atlanta, Georgia 30365. All requests must contain:

(1) The name, mailing address and telephone number of the person making such request;

(2) A clear and concise factual statement of the nature and scope of the interest of the requester;

(3) The names and addresses of all persons whom the requester represents;

(4) A statement by the requester that, upon motion of any party, or sua sponte by the Presiding Officer and without cost or expense to any other party, the requester shall make available to appear and testify, the following:

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(i) The requester;
(ii) All persons represented by the requester; and
(iii) All officers, directors, employees, consultants and agents of the requester and the persons represented by the requester;

(5) Specific references to the contested permit terms and conditions, as well as suggested revised or alternative permit terms and conditions (not excluding permit denial) which, in the judgement of the requester, would be required to implement the purposes and policies of the Act;

(6) In the case of challenges to the application of control or treatment technologies identified in the statement of basis or fact sheet, identification of the basis for the objection, and the alternative technologies or combination of technologies which the requester believes are necessary to meet the requirements of the Act;

(7) Specific identification of each of the discharger's obligations which should be stayed if the request is granted. If the request

contests more than one permit term/condition, then each obligation which is proposed to be stayed must be referenced to the particular term/condition warranting the stay;

(8) Each legal or factual question alleged to be at issue and its relevance to the permit decision;

(9) An estimate of the hearing time necessary for adjudication; and

(10) Information supporting the request or relied upon which is not already a part of the administrative record required by 40 CFR §124.18 (48 Federal Register 14272, April 1, 1983).

The granting of a request will stay only the contested portions of the permit. Uncontested provisions of the permit shall be considered issued and effective and the permittee must comply with such provisions. Except, if the permit is for a new source or new discharge, the applicant will be without a permit for the proposed new source or new discharge, pending final Agency action. The final Agency decision on the permit provisions contested at an evidentiary hearing will be made in accordance with Title 40, Code of FederalRegulations, Part 124, Subpart B, found at 48 Federal Register 14278, et seq. Prior to granting an evidentiary hearing request, the entire final permit is not effective, in accordance with 40 CFR Section 124.15(b)(2).

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e. Panel Hearing

In the case of an "initial license," including the first grant of an NPDES permit, or the first decision on a requested variance, if the Regional Administrator elects to apply the provisions of Subpart F and so states in the public notice of the draft permit, any person may request the Regional Administrator to hold a panel hearing on the permit. Such a request must be made within the comment period of the notice described above. Requests will be considered timely if mailed by certified mail within the comment period. All requests must contain:

(1) A brief statement of the interest of the person requesting the hearing;

(2) A statement of any objections to the draft permit;

(3) A statement of the issues which such person proposes to raise for consideration of such hearing;

(4) The name, mailing address and telephone number of the person making the request;

(5) A clear and concise factual statement of the nature and scope of the interest of the requester;

(6) The names and addresses of all persons whom the requester represents;

(7) A statement by the requester that, upon motion of any party, or sua sponte by the Presiding Officer and without cost or expense to any other party, the requester shall make available to appear and testify, the following:

(i) The requester;
(ii) All persons represented by the requester; and
(iii) All officers, directors, employees, consultants and agents of the requester and the persons represented by the requester; and

(8) Specific references to the contested permit terms and conditions, as well as suggested revised or alternative permit terms and conditions (not excluding permit denial) which, in the judgement of the requestor, would be required to implement the purposes and policies of the Act.

If the permit for which a panel hearing is requested is for a new source or new discharge, the applicant will be without permit for the proposed new source or new discharge, pending final Agency action. Panel hearings will be conducted in accordance with Title 40, Code of Federal Regulations, Part 124, Subpart F, found at 48 Federal Register 14285, et seq.

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UNITED STATES ENVIRONMENTAL PRO
REGION IV
345 COURTLAND STREET,
ATLANTA, GEORGIA 303

SEP 07 1995

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REF: 4WM-WPEB

Mr. Robert S. LaSala
Deputy County Administrator
Sarasota County Transportation Dep
1301 Cattlemen Road
Sarasota, Florida 34232

SUBJ: Intent to Modify
Sarasota County - Municipal Separate Storm Sewe
NPDES Number FLS000004

Dear Mr. LaSala:

The Environmental Protection Agency (EPA), Region 4, intends to modify the National Pollutant Discharge Elimination System (NPDES) permit in accordance with the Federal Clean Water Act to the referenced facility in the near future.

The enclosed draft permit modification shows the proposed conditions to be incorporated as part of the final NPDES permit.

Pages 3, 4, 7, 8, 15, 16, 20, 25, 27, and 48:	Language was modified from "... shall not cause or contribute to violations of State Water Policy." to "... shall be consistent with State Water Policy." This language is being modified for clarification.
Part V, Page 45 and 53:	A modification was made as to the manner in which the seasonal pollutant load and event mean concentration estimates for a representative storm shall be provided to EPA; the pollutant load and event mean concentration estimates are to be reported to EPA for each major watershed rather than for each major outfall.

Part VI, Page 65: The reopener language was modified to read as follows:

The permit may be reopened or modified, at the request of the permittee, to incorporate relevant elements of the Comprehensive Conservation and Management Plan (CCMP) developed through the Sarasota National Estuary Program including, but not limited to, living resource targets and associated pollutant loading targets.

Comments relative to this modification are not required; however, if you wish to submit comments, please do so before October 10, 1995. When a permit is modified, only the conditions subject to modification are reopened for comments. Comments made during this time period may be incorporated into the draft permit prior to public notice. EPA will proceed with the permitting process, of requesting state certification of the draft permit modification. At the time of public notice, a copy of the notice will be sent to you. At that time you will have an additional opportunity to comment on or object to any aspects of the draft permit modification.

If you have any questions concerning the enclosed conditions or the procedures associated with the permit program, please contact me at the above address or by calling (404) 347-3012, extension 2964.

Sincerely,

Gina McNeill

Gina McNeill, P.E.
Environmental Engineer
Permits Section
Water Permits and Enforcement Branch
Water Management Division

Enclosures (2)
1. Draft NPDES Permit Modification
2. Fact Sheet

cc: FDEP (with enclosures)

Department of
Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

RECEIVED
NOV 0 / 1995
STORMWATER ENVIRONMENTAL UTILITY

November 1, 1995

Mr. Roger O. Pfaff, Acting Chief
Water Permits and Enforcement Branch
US EPA Region 4
345 Courtland Street NE
Atlanta, Georgia 30365

Subject: State Certification
Modification of Sarasota County
MS4 Permit FLS000004

Dear Mr. Pfaff:

We have reviewed the modifications to the Sarasota County MS4 permit. We certify that they are consistent with Florida's stormwater watershed management and water quality management programs, laws, and regulations.

We want to thank your staff, particularly Ms. Gina McNeill, for coordinating and communicating with us in the preparation of this permit modification.

Sincerely,

Eric H. Livingston
Environmental Administrator
Stormwater and Nonpoint Source
Management Section

EHL/alc
cc: Daryll Joyner
Pat Collins

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

RECEIVED
FEB 13 1996
SARASOTA COUNTY
TRANS. / ADMIN.

FEB 09 1996

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

FEB 20 1996
ENVIRONMENTAL UTILITY

REF: 4WM-WPEB

Mr. Robert S. LaSala
Deputy County Administrator
Sarasota County Transportation Department
1301 Cattlemen Road
Sarasota, Florida 34232

SUBJ: Final Modification of NPDES Permit No. FLS000004
Sarasota County Municipal Separate Storm Sewer System

Dear Mr. LaSala:

Enclosed is the final modification of the National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced facility. This action constitutes the Environmental Protection Agency's final permit decision in accordance with Title 40, Code of Federal Regulations (CFR) Section 124.15(a). The permit modification will become effective as specified, provided that no timely request for an evidentiary hearing is received by the Agency. Only conditions of the permit which have changed as a result of this modification may be contested.

Any interested person may contest this decision by submitting a timely request for an evidentiary hearing (hearing) pursuant to the procedures at 40 CFR § 124.74. If a request for a hearing is received by the Agency, following review, a determination will be made and the requester advised of the Agency's decision on the request. Until that time, please be advised that any request will render the permit modification ineffective pursuant to 40 CFR § 124.15(b). For a new source, a new discharger, or a recommencing discharger, a hearing request renders the facility without an NPDES permit and the facility may not discharge (unless relief is granted by the Presiding Officer under 40 CFR § 124.60(a)).

If the evidentiary hearing request is granted, in whole or part, to an existing source, the effect of the contested provision(s), and any other conditions not severable from those conditions, will be stayed and not subject to judicial review pending final Agency action. In this case, all provisions of the prior permit, as well as all uncontested provisions of the modified permit, shall continue fully enforceable and effective pending final Agency action on the permit appeal. See 40 CFR § 124.60.

To request an evidentiary hearing under 40 CFR § 124.74, you must submit an original and two copies of the request to the Regional Hearing Clerk at the letterhead address within thirty (30) days from service of this notice. A copy of the procedures and requirements for evidentiary hearing requests and appeals to the Administrator is enclosed.

For purposes of judicial review under the Clean Water Act, 33 U.S.C. § 1251 et seq., final Agency action on a permit does not occur unless and until a party has exhausted its administrative remedies as required by 40 CFR Part 124.

Further information on procedures pertaining to the filing of an evidentiary hearing request or other legal matters may be obtained by contacting Ms. Gwen Fitz-Henley, Assistant Regional Counsel, at (404) 347-2309, extension 2906. For information regarding technical aspects of the permit, unrelated to any anticipated evidentiary hearing requests, please contact the permit writer.

Sincerely,

R. F. McGhee

Robert F. McGhee
Director
Water Management Division

Enclosures (3)
1. Evidentiary Hearing Procedures
2. Final NPDES Permit Modification
3. Amendment to Fact Sheet

cc: Florida DEP (with all enclosures, except Evid. Hearing Procedures)

U.S. Fish & Wildlife Service, Vero Beach Field Office (with all enclosures, except Evid. Hearing Procedures)

SARASOTA COUNTY GOVERNMENT
SARASOTA, FLORIDA

P.O. Box 8
Sarasota, Florida 34230-0008
Telephone (813) 951-5200
FAX (813) 951-5987

December 26, 1995

Mr. Roosevelt Childress, Unit Chief
Storm Water and Municipal Permits Unit
Environmental Protection Agency, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: Monitoring Program Modifications;
NPDES Permit No. FLS000004

Dear Mr. Childress:

This letter confirms a series of meetings between members of your staff, the Florida Department of Environmental Protection (FDEP), and Sarasota County and co-applicants relative to Part V. B. 1.c. of the National Pollutant Discharge Elimination System (NPDES) Permit (FLS000004) for Sarasota County. As required by this section of this permit, the permittees, the FDEP Bureau of Surface Water Management, and EPA must select monitoring stations and agree to a sampling program schedule in conjunction with the State of Florida's Surface Water Ambient Monitoring Program. The permit requires that the monitoring program be implemented by the permittees within 24 months of the effective date of the permit or no later than December 31, 1996. The permit further requires that the details of the program be submitted in the Annual Report for year two of the permit (due June 1997) and the permittees provide a status report in the Annual Report for year one (due June 1996).

On August 14, 1995, the permittees, FDEP and EPA selected and agreed to the following monitoring program schedule:

1. The long-term program includes monitoring in the Big Slough, Hudson Bayou, and Phillippi Creek basins. The monitoring originally proposed for North Creek in the July 23, 1993 permit application has been eliminated. At the time of application, North Creek was primarily dominated by open land use. This is no longer the case. Monitoring the North Creek basin will not provide a good basis for predevelopment water quality.

2. Monitoring in the Big Slough and Phillippi Creek basins shall be in conjunction with the State of Florida's Surface Water Ambient Monitoring Program using either biological analysis, or sediment analysis, or both methods, whichever combination is deemed appropriate, in each basin. Assessments shall be made according to the standard operating procedures (SOP's) for biological or sediment analysis prepared for the Florida Department of Environmental Protection.

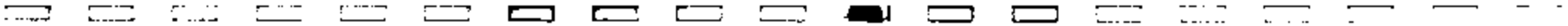
3. Monitoring in the Hudson Bayou basin shall be performed using traditional water chemistry analysis and sediment scans as originally proposed in the July 23, 1993 permit application.

4. Monitoring in the Phillippi Creek basin shall be performed at the water quality station established by the FDEP at Main A and Bahia Vista Street. A second station, to be determined, shall be located upstream of the Celery Field Regional Treatment and Storage Facility. The purpose of the second monitoring station is to estimate the ambient water quality condition of Phillippi Creek in the unurbanized portion of the watershed.

Our NPDES permit requires that the permittees implement and fund a monitoring program. As specified in the permit, however, the permittees are not required to fund a monitoring program that exceeds the projected costs in the July 23, 1993, permit application approved by the Sarasota County Board of County Commissioners and the permittees' respective governing boards. The program costs included in the July 23, 1993, permit application are limited to $245,000 for the duration of the permit.

Thank you for your staff's participation in our July and August 1995 workshops. Should you have any further questions or comments regarding this monitoring program, please contact Pat Collins, P.E., or J.P. Marchand, P.E., at the Stormwater Environmental Utility, (941) 378-6030.

Sincerely,

Robert S. LaSala
Deputy County Administrator

c: Gary Comp, Director, Natural Resources Department
John C. Goodknight, P.E., Director, Transportation Department
Eric H. Livingston, Environmental Administrator, Surface Water Management, FDEP
Sarasota County NPDES Permittees