MEMORANDUM

TO: Ben Pratt, Dick Rogers, Jim Show, Tony Waterhouse

FROM: Kevin Dickson KD

DATE: February 1, 1994

SUBJECT: Revisions to Appendix 2 of the Basis of Review

Attached is a draft of the subject document. Please provide me with your comments or suggestions as soon as possible. I am aware of the lack of "Figures" illustrating the west coast drainage basins. I should be able to locate something we can use while you are reviewing this draft.

Much of the information contained within this Appendix was obtained from the surface water management basin atlases which were prepared by the Department of Research and Evaluation. Other source documents include C.O.E. Detailed Design Memorandums, the District's Structures Operations Manual and numerous technical reports prepared by the District, as well as others. Any information which you or your staff forwarded to Dick Rogers, last July, has also been included.

Thanks for your help.

Ralph, 2-1-94
Comments??
Suggestions
Thanks
Kevin

APPENDIX 2

ALLOWABLE DISCHARGE VALUES FOR PROJECTS WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT
January 31, 1994

The purpose of this Appendix is to present allowable instantaneous peak discharge values for various drainage basins within the District. This version of Appendix 2 is more comprehensive, with regard to the number of drainage basins discussed, than previous versions. The locations of the drainage basins are included within this Appendix. The allowable discharge rates are expressed as cubic feet per second per square mile (CSM). The values given for a specific conveyance represent the maximum allowed. Since most projects will not discharge directly into a conveyance discussed here, their discharge will most likely be limited by the capacity of the intermediate connections to the primary system. Some projects may be able to justify a higher allowable discharge value if they drain to an area where significant storage of runoff will occur prior to overflow into a shared conveyance system. If a proposed project is located within an area where an allowable discharge value is not identified, an analysis should be performed in order to be certain that the instantaneous peak discharge from the project after development does not exceed the same value prior to development. In areas where a projects discharge is influenced by tidal fluctuations, consideration should be given to the impact that this will have on the design and operation of the water management system. In some cases, a project will be located in an area that discharges downstream of the easternmost coastal structure within a District canal. In these instances, the pre versus post analysis should consider the tailwater stage below the structure under the combined influence of tidal fluctuation and discharge of fresh water from upstream.

AIRPORT ROAD CANAL (Collier County)

The allowable discharge rate is 25.6 CSM if the project is located North of Vanderbilt Beach Road and 38.4 CSM if the project is located South of Vanderbilt Beach Road. This rate has been established by Collier County. The design storm is a 25 year event.

DISTRICT SIX (Collier County)

The allowable discharge rate is 38.4 CSM. This rate has been established by Collier County. The design storm is a 25 year event.

GOLDEN GATE CANAL (Collier County)

The allowable discharge rate is 64 CSM. This rate has been established by Collier County. The design storm is a 25 year event.

COCOHATCHEE RIVER (Collier County)

The allowable discharge rate is 25.6 CSM. This rate has been established by Collier County per Ordinance 90-10. The design storm is a 25 year event.

LELY CANAL (Collier County)

The allowable discharge rate is 38.4 CSM. This rate has been established by Collier County. The design storm is a 25 year event.

FAKAHATCHEE STRAND (Collier County)

The allowable discharge rate is 32 CSM. This rate was established by a pre versus post development analysis. The design storm is a 25 year event.

AREAS OF COLLIER COUNTY NOT IDENTIFIED ABOVE

The allowable discharge rate is 38.4 CSM. The design storm is a 25 year event.

TEN MILE CANAL (Lee County)

The allowable discharge rate for the majority of the basin is 64 CSM. This rate is based on the Needles report. Approximately 2,033 acres of this basin drains through the Harper Bothers Farm (SWM Permit #36-00736-S). The allowable discharge, for this area, has been determined, by previous permit action, to be 43 CSM. The design storm is a 25 year event.

SIX MILE CYPRESS (Lee County)

The allowable discharge rate is 37.1 CSM. This rate is based on the Needles report. The design storm is a 25 year event.

NORTH COLONIAL WATERWAY (Lee County)

The allowable discharge rate is 37.1 CSM. This rate is based upon canal design criteria. The design storm is a 25 year event.

LAKES PARK (Lee County)

The allowable discharge rate is 102.4 CSM. This rate has been established by Lee County. The design storm is a 25 year event.

CALOOSAHATCHEE RIVER (Glades, Hendry and Lee Counties)

The allowable discharge rate is 30.1 CSM. This rate is based upon Corps of Engineers design criteria. The design storm is a 25 year event.

L-1, L-2, L-3 AND L-2W (Hendry County)

The allowable discharge rate is 11.5 CSM. This rate is based upon District canal design criteria. The design storm is a 25 year event.

TOWNSEND CANAL (Hendry County)

The allowable discharge rate is 30.1 CSM. This rate is based upon Corps of Engineers design criteria. The design storm is a 25 year event.

TIDAL AREAS (All Counties)

The allowable discharge rate is based on the proposed projects peak runoff rate after development not exceeding the rate which existed prior to development. This analysis should consider the effect, if any, that tidal fluctuations have on the projects ability to discharge through its control structure as well as through conveyances further downstream . The tide data used

in the analysis should utilize the Mean Higher High Water (MHHW) datum. This datum should be derived for the tide station which is closest to the proposed project site. The design storm is a 25 year event.

DEVILS GARDEN WATER CONTROL DISTRICT (Hendry County)

The allowable discharge rate is 20.2 CSM. The design storm is a 25 year event.

CHARLOTTE COUNTY

The historic allowable discharge rate for eastern Charlotte County is 26.9 CSM. The design storm is a 25 year event.

GATOR SLOUGH BASIN (Lee County)

The allowable discharge rate is 64 CSM downstream of a breakpoint located 2,590 feet southwest of U.S. 41. Upstream of this breakpoint, the allowable rate is 29 CSM. This rate is from the Lee County Surface Water Management Plan (June 1991). The design storm is a 25 year event.

YELLOW FEVER CREEK (Lee County)

The allowable discharge rate is 96 CSM. This rate is from the Lee County Surface Water Management Plan (June 1991). The design storm is a 25 year event.

YELLOW FEVER CREEK-EAST BRANCH (Lee County)

The allowable discharge rate should be determined by a pre versus post development analysis. The calculated rate should not exceed 64 CSM, however, since the Lee County Surface Water Management Plan (June 1991) indicates that the system is overburdened. The design storm is a 25 year event.

POWELL CREEK (Lee County)

The allowable discharge rate for previously undeveloped areas is 20 CSM. The rate for areas which are being redeveloped is 108 CSM. These rates have been taken from the Lee County Surface Water Management Plan (June 1991). The design storm is a 25 year event.

BILLY CREEK (Lee County)

The allowable discharge rate is 64 CSM. This rate is from the Lee County Surface Water Management Plan (June 1991). The design storm is a 25 year event.

WHISKEY CREEK (Lee County)

The allowable discharge rate is 108 CSM for areas north of College Parkway. For areas south of the Parkway, the rate is 40 CSM. These rates are from the Lee County Surface Water Managment Plan (June 1991). The design storm is a 25 year event.

DEEP LAGOON BASIN (Lee County)

The allowable discharge rate is 50 CSM until the McGregor Boulevard culverts are enlarged. Once the culverts are enlarged, the rate may be increased to 96 CSM. The design storm is a 25 year event.

COW SLOUGH (Lee County)

The allowable discharge rate should be determined based on a pre versus post development analysis according to the Lee County Surface Water Management Plan (June 1991). The design storm is a 25 year event.

HENDRY CREEK (Lee County)

The allowable discharge rate is 102 CSM upstream of the Lakes Park weir. Other areas within the basin should be allowed 131 CSM. These values are from the Lee County SurfaceWater Management Plan (June 1991). The design storm is a 25 year event.

IMPERIAL RIVER (Lee County)

The allowable discharge rate is 59 CSM for areas west of Bonita Grande Drive. Areas east of Bonita Grande Drive are allowed 25 CSM. These values are from the Lee County Surface Water Management Plan (June 1991). The design storm is a 25 year event.

HANCOCK CREEK (Lee County)

The allowable discharge rate is 64 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

MARSH POINT (Lee County)

The allowable discharge rate is 108 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

COHN BRANCH (Lee County)

The allowable discharge rate is 64 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

DAUGHTREY CREEK (Lee County)

The allowable discharge rate is 27 CSM for areas located upstream of Nalle Grade Road. Downstream of Nalle Grade road, the allowable rate is 48 CSM. These values are from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

DAUGHTREY CREEK-EAST BRANCH (Lee County)

The allowable discharge rate is 81 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

CHAPEL BRANCH (Lee County)

The allowable discharge rate is 81 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

BAYSHORE CREEK (Lee County)

The allowable discharge rate is 81 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

POPASH CREEK (Lee County)

The allowable discharge rate is 81 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

STROUD CREEK (Lee County)

The allowable discharge rate is 81 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

TROUT CREEK (Lee County)

The allowable discharge rate is 39 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

OTTER CREEK (Lee County)

The allowable discharge rate is 39 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

TELEGRAPH CREEK (Lee County)

The allowable discharge rate is 39 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

BEDMAN CREEK (Lee County)

The allowable discharge rate is 58 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

HICKEY CREEK (Lee County)

The allowable discharge rate is 65 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

ORANGE RIVER (Lee County)

The allowable discharge rate is 55 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

MULLOCK CREEK (Lee County)

The allowable discharge rate is 69 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

ESTERO RIVER (Lee County)

The allowable discharge rate is 42 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

HALFWAY CREEK (Lee County)

The allowable discharge rate is 60 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

SPRING CREEK (Lee County)

The allowable discharge rate is 81 CSM. This value is from the Lee County Surface Water Management Plan (December 1992). The design storm is a 25 year event.

C-1 (BLACK CREEK CANAL) BASIN (Dade County)

The allowable discharge rate is 45.8 CSM. This value is based upon the design capacity of the system during a 10 year storm event.

C-2 (SNAPPER CREEK) BASIN (Dade County)

The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 25 year event.

C-3 (CORAL GABLES CANAL) BASIN (Dade County)

This conveyance system was designed to provide flood protection from the 25 year storm event. Downstream of structure G-97, the allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. Upstream of G-97, the allowable discharge rate is 54 CSM.

C-4 (TAMIAMI CANAL) BASIN (Dade County)

The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 25 year event.

C-5 (COMFORT CANAL) BASIN (Dade County)

The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 25 year event.

C-6 (MIAMI CANAL) BASIN (Dade County)

The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 25 year event.

C-7 (LITTLE RIVER CANAL) BASIN (Dade County)

The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 25 year event.

C-8 (BISCAYNE CANAL) BASIN (Dade County)

The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 25 year event.

C-9 (SNAKE CREEK CANAL) BASIN (Dade and Broward Counties)

The allowable discharge rate for the eastern subbasin is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The allowable discharge for the western subbasin is 20 CSM. The boundary between the subbasins is Flamingo Road in Broward County and N.W. 67th Ave. in Dade County. The design storm is a 25 year event.

C-100 BASIN (Dade County)

This basin is also known as the Cutler Drainage Basin. This system of conveyances (i.e. C-100, C-100A, C-100B, and C-100C) was designed to provide flood protection from the 10 year storm. The allowable discharge rate is 56.6 CSM.

C-102 BASIN (Dade County)

This system of conveyances (i.e. C-102 and C-102N) was designed to provide flood protection from the 10 year storm. The allowable discharge rate is 52.4 CSM.

C-103 BASIN (Dade County)

This basin contains a system of three conveyances (i.e. C-103, C-103N,and C-103S). In addition, the North Canal and the Florida City Canal also drain through this basin via the west borrow canal of L-31E. The allowable discharge rate is 43.5 CSM. The design storm is a 25 year event.

HOMESTEAD AIR FORCE BASE BASIN (Dade County)

The Homestead AFB is drained by the Military Canal. The allowable discharge rate is 191.5 CSM. The design storm is a 25 year event.

THE NORTH CANAL BASIN (Dade County)

The allowable discharge rate is 43.5 CSM. The design storm is a 25 year event.

THE FLORIDA CITY CANAL BASIN (Dade County)

The allowable discharge rate is 43.5 CSM. The design storm is a 25 year event.

THE NORTH AND SOUTH MODEL LAND CANAL BASINS (Dade County)

The allowable discharge rate is 16.0 CSM. The design storm is a 25 year event.

C-10 (HOLLYWOOD CANAL) BASIN (Broward County)

The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 25 year event.

C-11 (SOUTH NEW RIVER CANAL) BASIN (Broward County)

The allowable discharge rate is 20 CSM, west of Structure 13A and 40 CSM, east of 13A. These rates are based on pump capacities of 20 CSM at pump stations S-9 and S-13. In addition, the spillway at S-13 has the potential for removing up to an additional 20 CSM depending on the headwater and tailwater stages. The design storm is a 25 year event.

C-12 (PLANTATION CANAL) BASIN (Broward County)

This conveyance was designed to provide flood protection from the 25 year storm event. The allowable discharge rate for projects located upstream of structure S-33 is 76.7 CSM. This value was calculated by dividing the 920 cfs removal rate by the approximate drainage area (12 square miles). The allowable discharge rate for projects located downstream of S-33 is based on the peak discharge rate after development not exceeding the rate that existed prior to development.

C-13 (MIDDLE RIVER CANAL) BASIN (Broward County)

This conveyance was designed to provide flood protection from the 25 year storm event. The allowable discharge rate for projects located downstream of structure S-36 (i.e. the eastern basin) is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The allowable discharge rate for projects located upstream of S-36 (i.e. the western basin) is 52 CSM. This value was calculated by dividing the design discharge rate at S-36 (1560 cfs) by the approximate drainage area (30 square miles).

NORTH FORK MIDDLE RIVER BASIN (Broward County)

This basin receives flows from a 5 square mile area located north of the eastern C-13 basin. The allowable discharge rate for this basinis based on the peak discharge rate after development not exceeding the rate thatexisted prior to development. The design storm is a 25 year event.

C-14 (CYPRESS CREEK CANAL) BASIN (Broward County)

This conveyance is divided into an eastern and western section with regard to design flood protection. The boundary between the two basins is Farm Road. The eastern and western basins were designed to handle flows from 30 and 10 year storm events respectively. A 25 year design storm should be used in the eastern basin instead of a 30 year event. The allowable discharge rate, within C-14, downstream of S-37A, is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The allowable discharge rate for other areas within the C-14 basin is 69.2 CSM.

OLD POMPANO CANAL BASIN (Broward County)

This conveyance was designed to provide flood protection from the 25 year storm event. The allowable discharge rate, downstream of G-57, is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The allowable discharge rate for the portion of the basin between G-65 and G-57 is 72 CSM.

NORTH NEW RIVER CANAL BASIN (Broward County)

The area of the eastern basin is 7 square miles. The western basin drains 23 square miles. The boundary between the two basins is approximately State Road 817. This basin provides flood protection from the 25 year storm event. The allowable discharge rate for the area between S-34 and the Sewell Lock is 70.8 CSM. Downstream of the Sewell Lock the allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development.

HILLSBORO CANAL BASIN (Broward and Palm Beach Counties)

There is no specified design storm for the Hillsboro Canal since it was built prior to the Central and Southern Florida Flood Control Project. A 25 year design event should be utilized though. The allowable discharge rate for areas between S-39 and the Deerfield Lock is 35 CSM. Downstream of the Deerfield Lock, the allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development.

C-15 BASIN (Palm Beach County)

This canal provides flood protection from a 30 year storm event. A 25 year design storm should be utilized though. The allowable discharge for projects within this basin, upstream of S-40, is 64 CSM. If land development were to occur downstream of S-40, the peak discharge rate after development could not exceed the rate that existed prior to development.

C-16 (BOYNTON CANAL) BASIN (Palm Beach County)

This canal provides flood protection from a 30 year storm event. A 25 year design storm should be utilized though. The allowable discharge for projects within this basin, upstream of S-41, is 62.6 CSM. Downstream of S-41, the allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development.

C-17 (EARMAN RIVER CANAL) BASIN (Palm Beach County)

This canal provides flood protection from a 30 year storm event. A 25 year design storm should be utilized though. The allowable discharge for projects within this basin, upstream of S-44, is 62.7 CSM. Downstream of S-44, the allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development.

C-18 BASIN (Palm Beach County)

Allowable discharges within this basin are based upon the recommendations contained within the SFWMD's Technical Publication 88-11, "Flood Management Study of the C-18 Basin, August 1988". Figure ___ illustrates the subbasins within the study area and their corresponding discharge coefficients. Allowable discharge rates should be applied to the 25 year design storm.

C-19 BASIN (Glades County)

The allowable discharge for this conveyance is 57.8 CSM. The design storm is a 25 year event.

C-51 (WEST PALM BEACH CANAL) BASIN (Palm Beach County)

Allowable discharge rates are designated for each subbasin served by the C-51 canal. They are to be applied to a 10 year design storm. The discharge coefficients for each subbasin are illustrated in Figure___.

C-59 (TAYLOR CREEK-NUBBIN SLOUGH) BASIN
(Martin, Okeechobee and St. Lucie Counties)

This canal provides protection from a 10 year storm event. The allowable discharge is 39.6 CSM.

S-153 BASIN (Martin County)

This canal was designed for protection from a 10 year storm event. The allowable discharge is 105.5 CSM.

S-135 BASIN (Martin and Okeechobee Counties)

The allowable discharge rate for this basin is 20.2 CSM. It should be used with a 25 year design storm.

C-44 (ST. LUCIE CANAL) BASIN (Martin County)

The allowable discharge rate is limited by the conveyance capacity of numerous drainage spillways constructed along the St. Lucie Canal. The location, drainage area, and discharge capacity of the spillways are described and illustrated in Table ____ and Figure ____. The design storm is a 25 year event.

TIDAL ST. LUCIE BASIN (Martin County)

The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 25 year event.

NORTH FORK OF THE ST. LUCIE RIVER BASIN (Martin and St. Lucie Counties)

This basin includes project canal C-23A. The allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 10 year event.

C-25 (BELCHER CANAL) BASIN (St.Lucie, Okeechobee, and Indian River Counties)

This conveyance system is designed to prevent flooding from a 10 year storm event. The allowable discharge rate for projects located upstream of S-50 is 23.1 CSM. Downstream of S-50, the allowable discharge rate is based on the peak discharge rate after development not exceeding the rate that existed prior to development.

C-24 (DIVERSION CANAL-RIM DITCH CANAL) BASIN
(St.Lucie and Okeechobee Counties)

This conveyance system is designed to prevent flooding from a 10 year storm event. The allowable discharge rate for projects located upstream of S-49 is 28.1 CSM.

C-23 (COUNTY LINE CANAL) BASIN (St.Lucie, Okeechobee, and Martin Counties)

This conveyance system is designed to prevent flooding from a 10 year storm event. The allowable discharge rate for projects located upstream of S-97 is 30.0 CSM.

C-38 (KISSIMMEE RIVER) BASIN (Osceola, Polk, Okeechobee, and Highland Counties)

The allowable discharge rate for projects located in this basin is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 10 year event.

S-131 BASIN (Glades County)

The allowable discharge rate is 20.5 CSM. The design storm is a 25 year event.

S-133 BASIN (Okeechobee County)

The allowable discharge rate is 15.6 CSM. The design storm is a 25 year event.

S-154 BASIN (Okeechobee County)

The allowable discharge rate is 20.2 CSM. The design storm is a 10 year event.

S-154C BASIN (Okeechobee County)

The allowable discharge rate for projects located in this basin is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a ten year event.

C-40 (INDIAN PRAIRIE CANAL) BASIN (Glades and Highlands Counties)

The design storm is a 10 year event. The allowable discharge rate is 45.3 CSM.

C-41 (HARNEY POND CANAL) BASIN (Glades and Highlands Counties)

The design storm is a 10 year event. The allowable discharge rate is 40.8 CSM.

C-41A (STUB OR BRIGHTON CANAL) BASIN (Glades and Highlands Counties)

The design storm is a 10 year event. The allowable discharge rate is 62.1 CSM.

LAKE ISTOKPOGA BASIN (Highlands and Polk Counties)

Figure ____ illustrates the location of numerous subbasins. Table ____ provides allowable discharge rates for each subbasin for various storm events. Use the 10 year storm event. The values were produced as part of the "Lake Istokpoga Feasibility Study" (July 1993, Howard Searcy Consulting Engineers).

S-127 BASIN (Glades County)

The allowable discharge rate is 20.2 CSM. The design storm is a 25 year event.

S-129 BASIN (Glades County)

The allowable discharge rate is 20.2 CSM. The design storm is a 25 year event.

L-59E BASIN (Glades County)

The allowable discharge rate for projects located in this basin is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a 10 year event.

L-59W BASIN (Glades County)

The design storm is a 10 year event. The allowable discharge rate is 45.3 CSM.

L-60E BASIN (Glades County)

The design storm is a 10 year event. The allowable discharge rate is 45.3 CSM.

L-60W BASIN (Glades County)

The design storm is a 10 year event. The allowable discharge rate is 40.8 CSM.

L-61E BASIN (Glades County)

The design storm is a 10 year event. The allowable discharge rate is 40.8 CSM.

L-61W BASIN (Glades County)

The allowable discharge rate for projects located in this basin is based on the peak discharge rate after development not exceeding the rate that existed prior to development. The design storm is a ten year event.

ALLIGATOR LAKE BASIN (Osceola County)

The design storm is a 10 year event. The allowable discharge rate is 13.0 CSM.

LAKE GENTRY BASIN (Osceola County)

The design storm is a 10 year event. The allowable discharge rate is 13.8 CSM.

S-63A BASIN (Osceola County)

The design storm is a 10 year event. The allowable discharge rate is 56.7 CSM.

CANOE CREEK BASIN (Osceola County)

The design storm is a 10 year event. The allowable discharge rate is 8.9 CSM.

LAKE MYRTLE BASIN (Osceola and Orange Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Orange County. The allowable discharge rate is 3.6 CSM.

LAKE HART BASIN (Orange and Osceola Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Orange County. The allowable discharge rate is 10.6 CSM.

BOGGY CREEK BASIN (Orange and Osceola Counties)

The design storm is a 25 year event in Orange County and a 10 year event in Osceola County. The allowable discharge rate is 50 CSM.

EAST LAKE TOHOPEKALIGA BASIN (Orange and Osceola Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Orange County. The allowable discharge rate is 16.1 CSM.

SHINGLE CREEK BASIN (Orange and Osceola Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Orange County. The allowable discharge rate for areas located north of Sand Lake Road is 0.5 cfs/acre. The allowable discharge rate for those areas located south of Sand Lake road, within Orange County, is 0.3 cfs/acre. For those areas south of Sand lake Road, within Osceola County, the allowable discharge rate is 0.1 cfs/acre, except for the following areas which should be allowed 0.3 cfs/acre.

T25S/R28E/Sections 1, 2, the East half of 3, all of 11 except for that part of the West half of the Southwest quarter which is not presently developed.

T25S/R29E/Sections 5, East portion of 6 and East portion of Northeast quarter of 7 which lie East of Shingle Creek, that part of 8 which lies North of the East-West ditch which

approximately bisects this section, the Northwest quarter of 9.

LAKE TOHOPEKALIGA BASIN (Osceola and Orange County)

The design storm is a 10 year event in Osceola County and a 25 year event in Orange County. The allowable discharge rate is 17.5 CSM.

REEDY CREEK BASIN (Polk, Orange, and Osceola Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Orange and Polk Counties. The allowable discharge rate within Orange County is 67 CSM. The allowable discharge rate for subbasins within Polk and Osceola Counties can be determined from Figure ___ (Drainage Analysis Unit 8/Kissimmee River Above Lake Hatchineha). This illustration was taken from the Surface Water Management Plan which was prepared for Polk County by Envisors, Inc. It covers numerous drainage basins within Polk and Osceola Counties and has been modified by the District in order to reflect allowable discharge rates in units of cfs per square mile (CSM).

HORSE CREEK BASIN (Osceola and Polk Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Polk County. The allowable discharge rates for the various subbasins can be determined from Figure ____ (Drainage Analysis Unit 8/Kissimmee River Above Lake Hatchineha).

LAKE CYPRESS BASIN (Osceola and Polk Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Polk County. The allowable discharge rates for the various subbasins can be determined from Figure ____ (Drainage Analysis Unit 8/Kissimmee River Above Lake Hatchineha). The allowable discharge rate for portions of the basin not covered by Figure ____ is 8.9 CSM.

LAKE PIERCE BASIN (Polk County)

The design storm is a 25 year event. The allowable discharge rates for the various subbasins can be determined from Figure ____ (Drainage Analysis Unit 8/Kissimmee River Above Lake Hatchineha).

LAKE HATCHINEHA BASIN (Polk and Osceola Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Polk County. The allowable discharge rates for the various subbasins can be determined from Figure ____ (Drainage Analysis Unit 8/Kissimmee River Above Lake Hatchineha).

LAKE MARIAN BASIN (Osceola County)

The design storm is a 10 year event. The allowable discharge rate is 8.9 CSM.

LAKE WEOHYAKAPKA BASIN (Polk County)

The design storm is a 25 year event. The allowable discharge rate for projects located in this basin is based on the peak discharge rate after development not exceeding the rate that existed prior to development.

LAKE KISSIMMEE BASIN (Osceola and Polk Counties)

The design storm is a 10 year event in Osceola County and a 25 year event in Polk County. The allowable discharge rate is 8.9 CSM.

L-8 BASIN (Palm Beach and Martin Counties)

The design storm is a 25 year event. The allowable discharge rate is 20.2 CSM.

S-5A BASIN (Palm Beach County)

The design storm is a 25 year event. The allowable discharge rate is 20.2 CSM.

S-2 BASIN (Palm Beach County)

The design storm is a 25 year event. The allowable discharge rate is 20.2 CSM.

S-6 BASIN (Palm Beach County)

The design storm is a 25 year event. The allowable discharge rate is 20.2 CSM.

S-7 BASIN (Palm Beach County)

The design storm is a 25 year event. The allowable discharge rate is 20.2 CSM.

S-3 BASIN (Palm Beach and Hendry Counties)

The design storm is a 25 year event. The allowable discharge rate is 20.2 CSM.

S-8 BASIN (Palm Beach and Hendry Counties)

The design storm is a 25 year event. The allowable discharge rate is 20.2 CSM.

S-236 BASIN (Palm Beach County)

The design storm is a 25 year event. The allowable discharge rate is 20.2 CSM.

S-4 BASIN (Glades and Hendry County)

The design storm is a 25 year event. The allowable discharge rate from agricultural lands is 20.2 CSM. The allowable discharge rate for the City of Clewiston is 107.5 CSM.

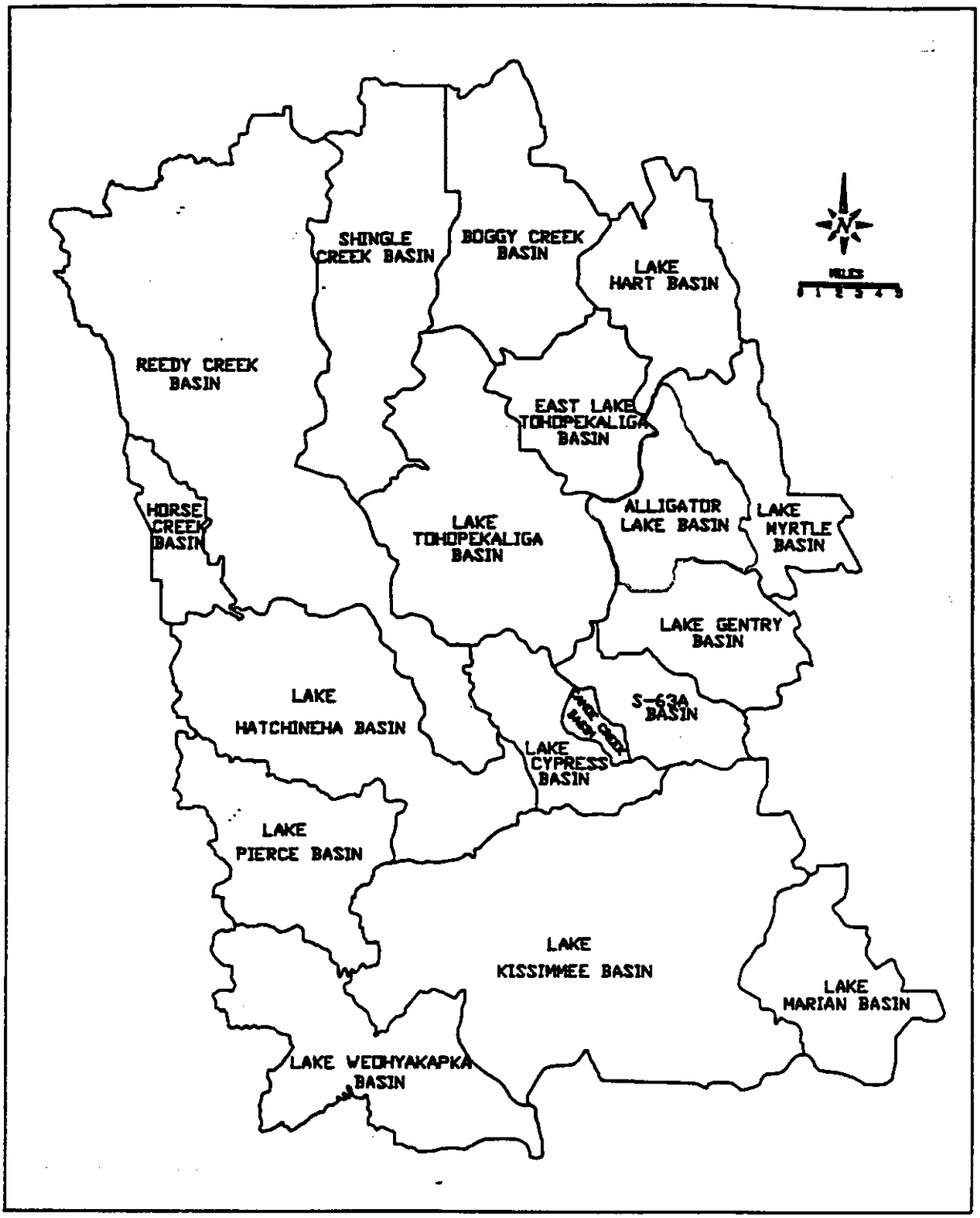


FIGURE RELATIVE LOCATIONS OF UPPER KISSIMMEE RIVER DRAINAGE BASINS

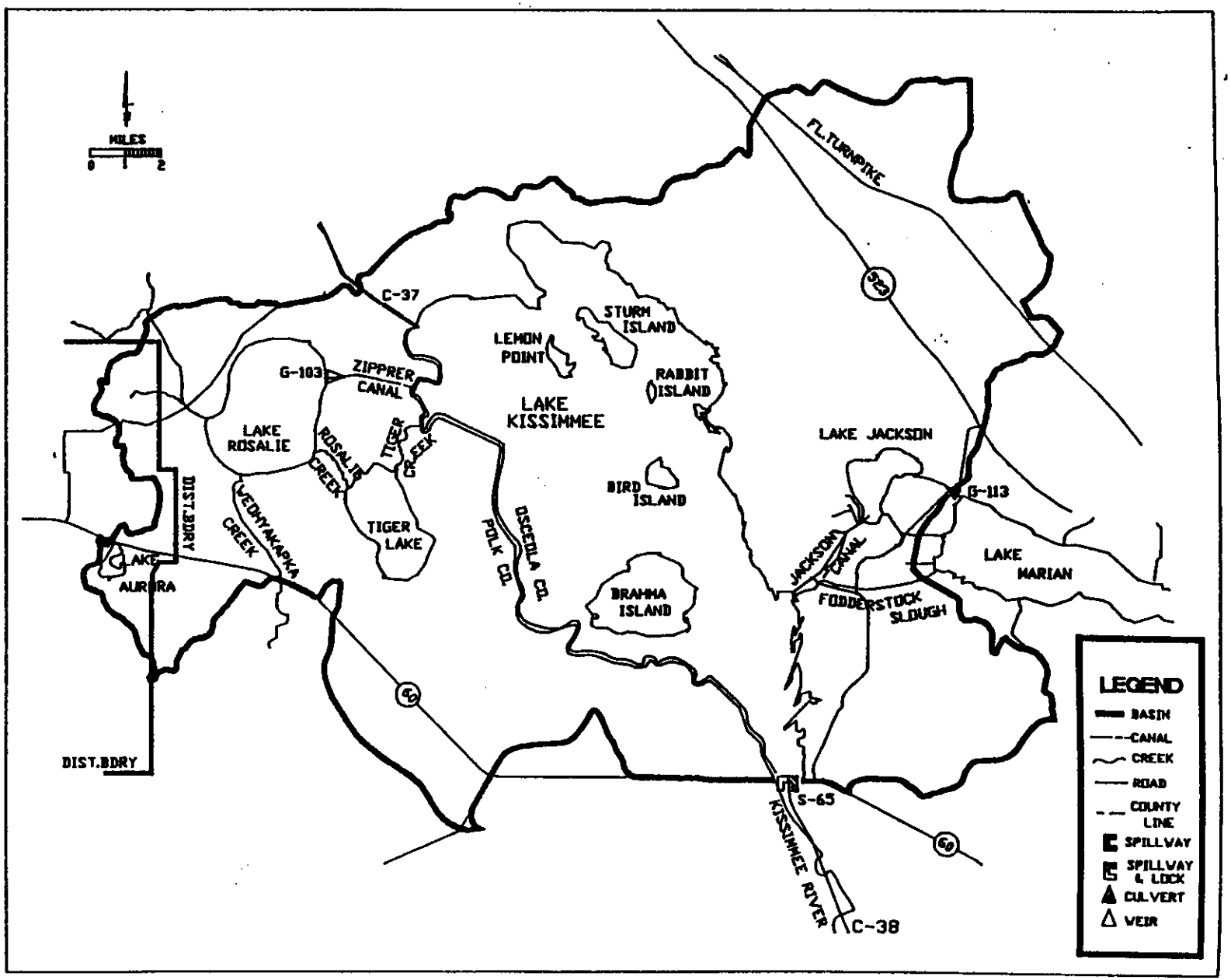


FIGURE Lake Kissimmee Basin (172,300 acres).

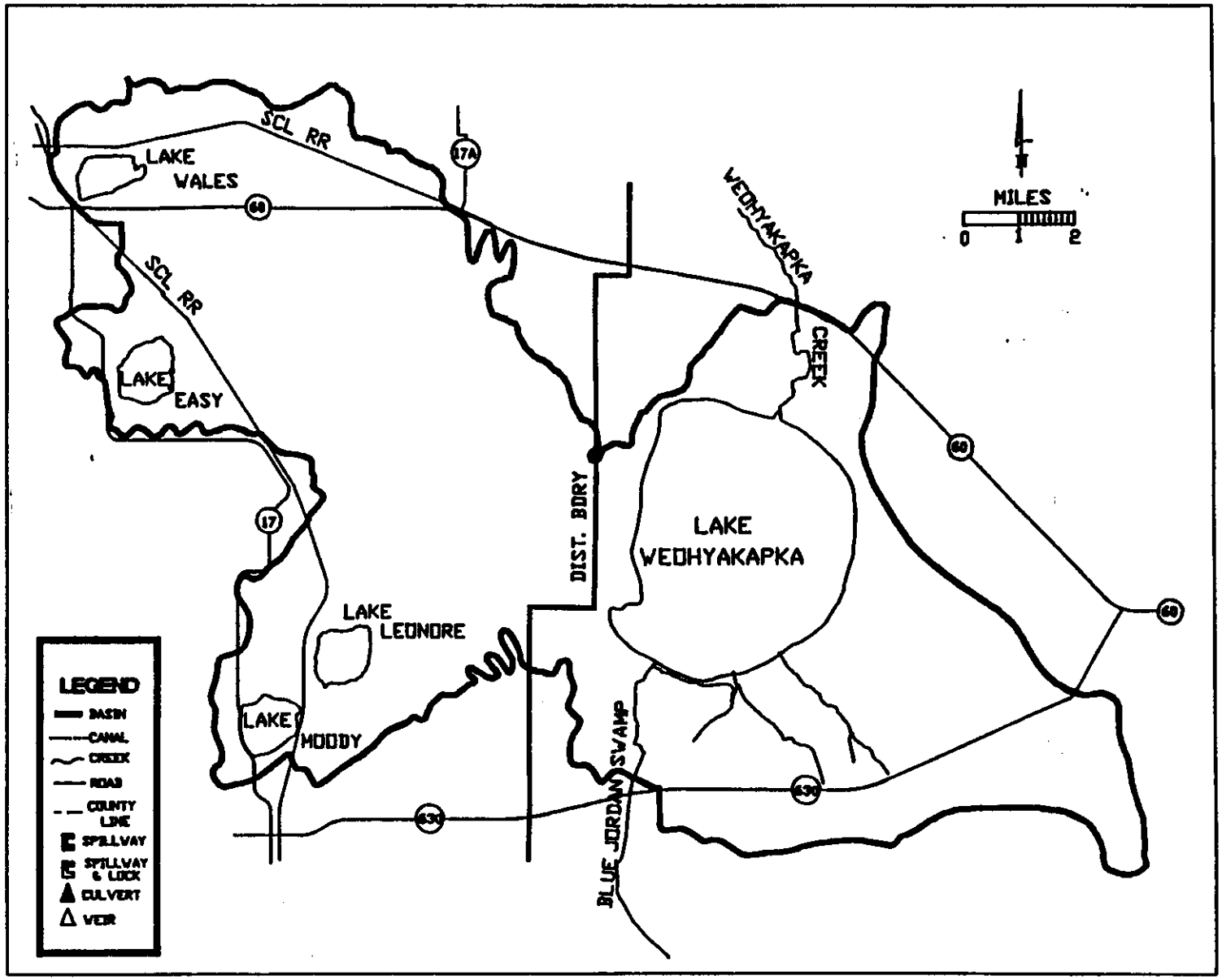


FIGURE Lake Weohyakapka Basin (62,600 acres).

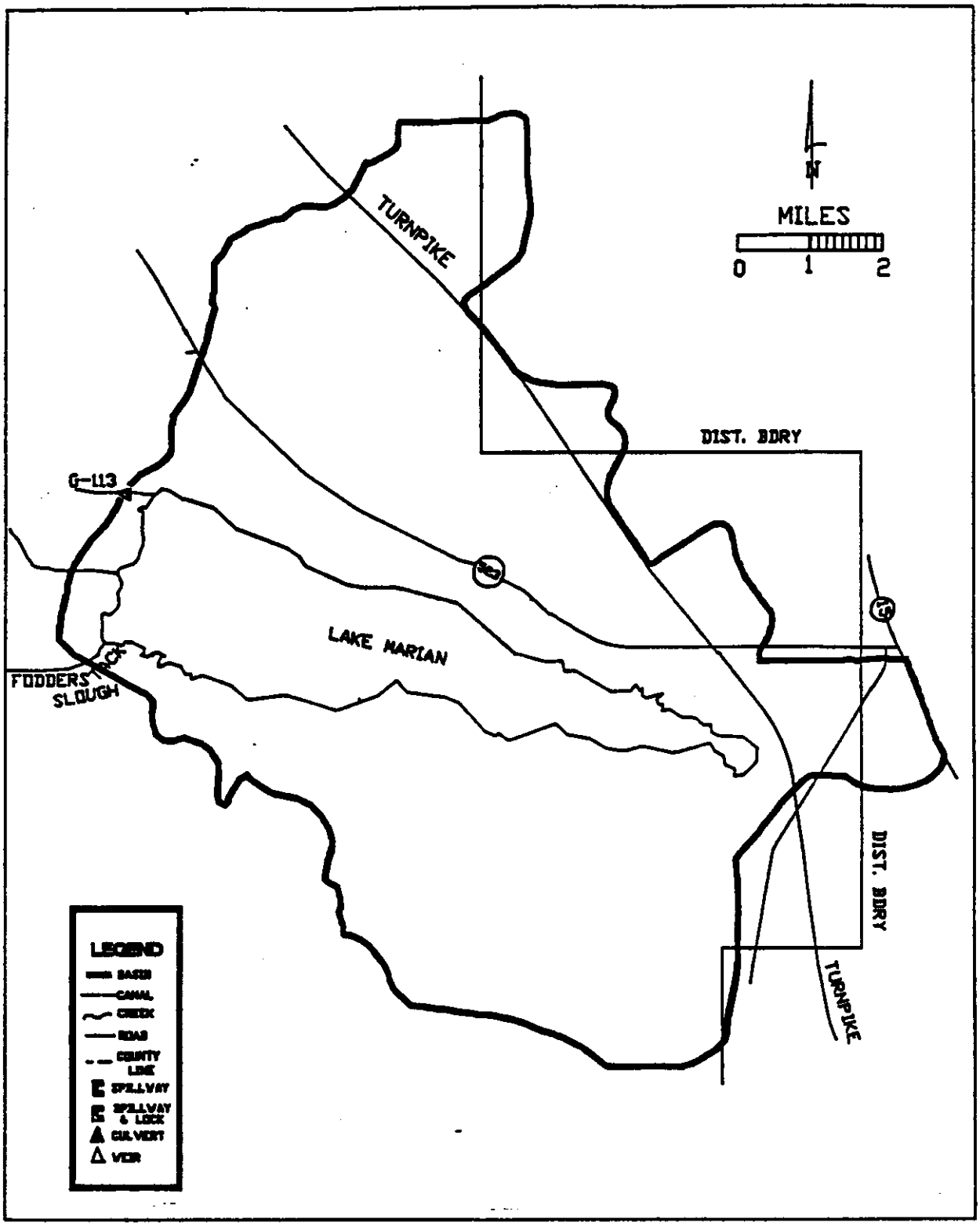
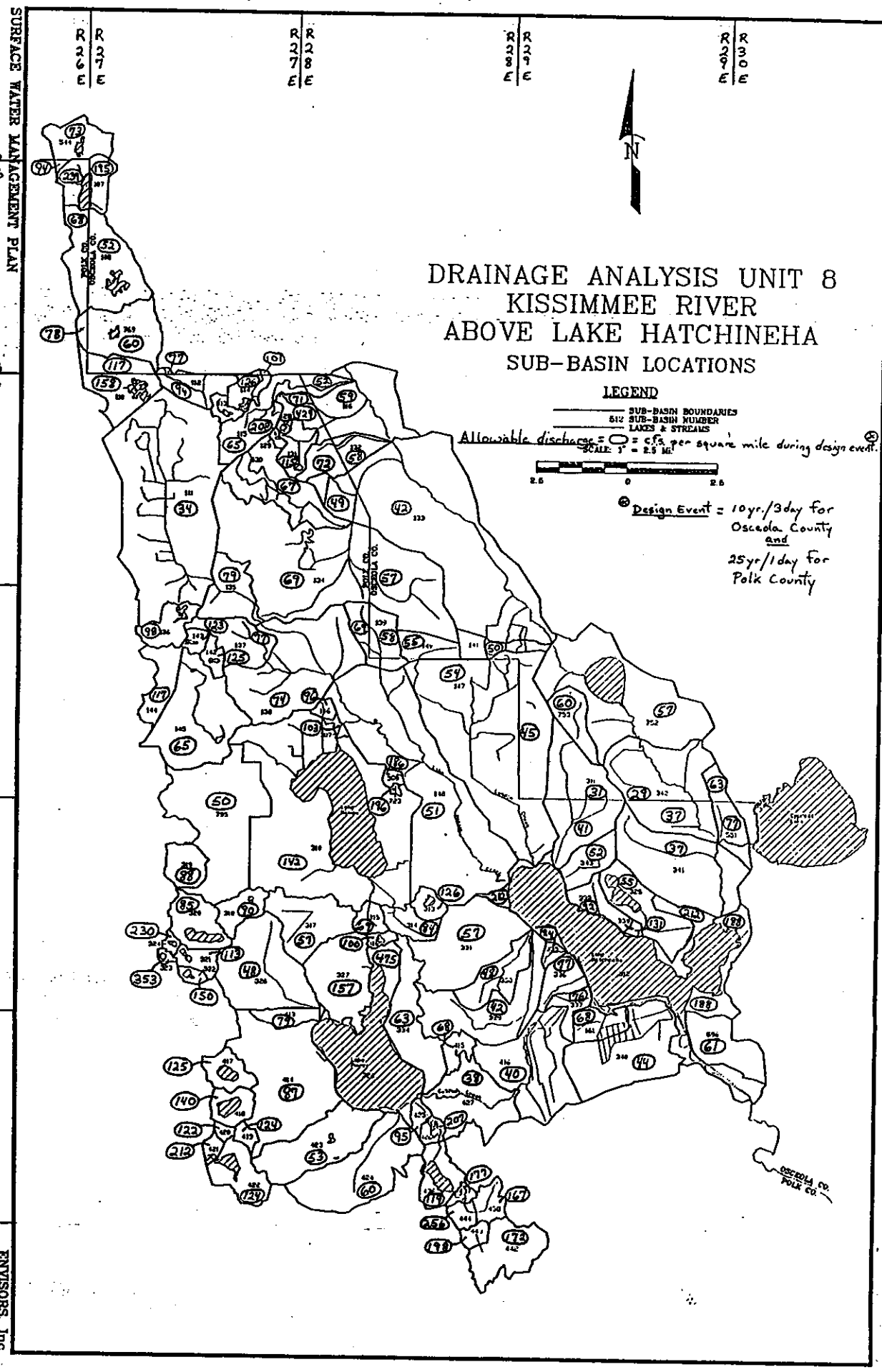


FIGURE Lake Marian Basin (37,040 acres).


SURFACE WATER MANAGEMENT PLAN
R 26 E
R 27 E
R 28 E
R 29 E
R 30 E
T24S
T25S
T25S
T26S
T26S
T27S
T27S
T28S
T28S
T29S
T29S
T30S
N
DRAINAGE ANALYSIS UNIT 8
KISSIMMEE RIVER
ABOVE LAKE HATCHINEHA
SUB-BASIN LOCATIONS
LEGEND
SUB-BASIN BOUNDARIES
512 SUB-BASIN NUMBER
LAKES & STREAMS
Allowable discharge = ○ = c.f.s. per square mile during design event. ②
SCALE: 1" = 2.5 MI.
2.5 0 2.5
② Design Event = 10yr./3day for Osceola County and 25yr/1day for Polk County
OSCEOLA CO.
POLK CO.
ENVISORS, Inc.

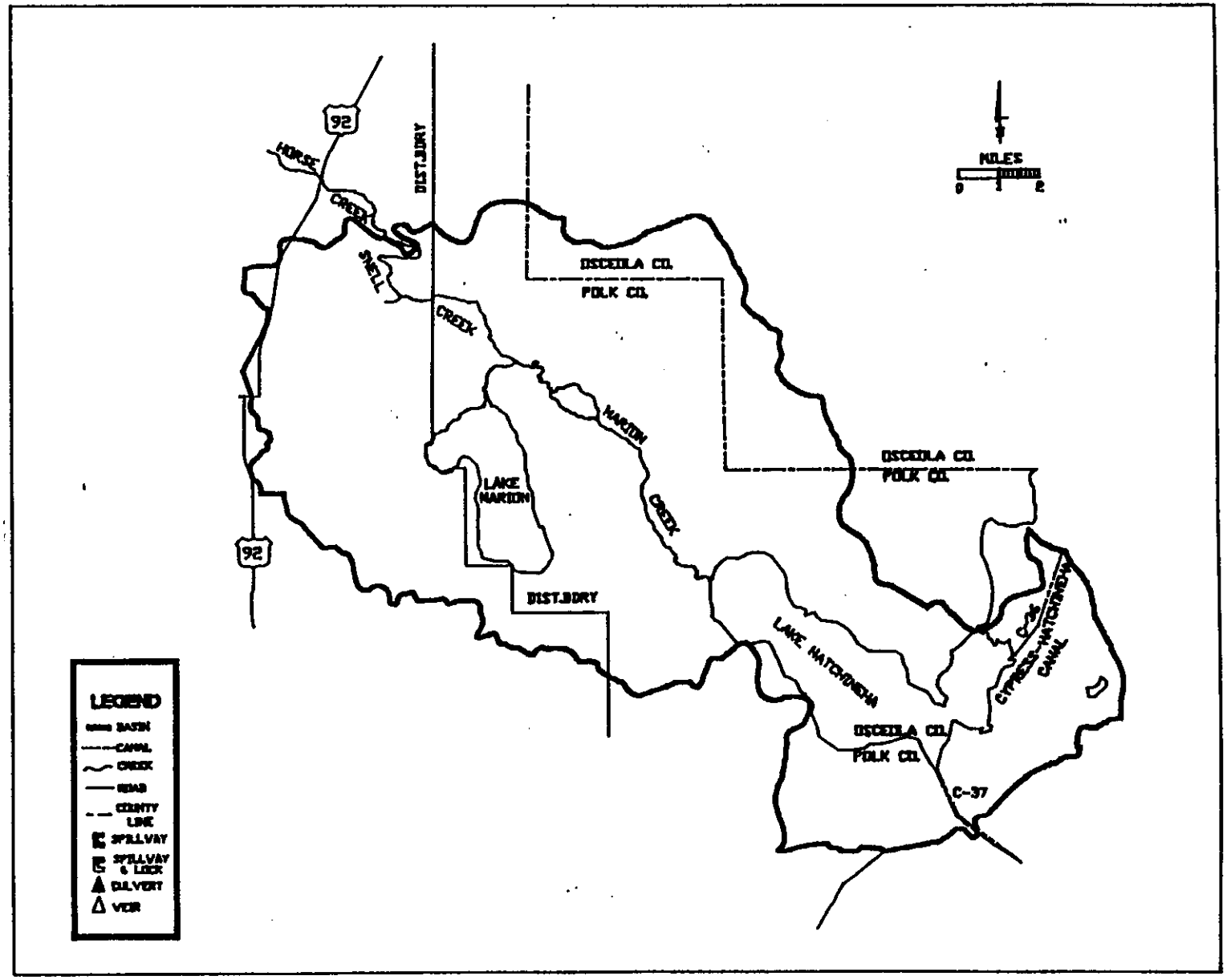


FIGURE . Lake Hatchineha Basin (82,250 acres).

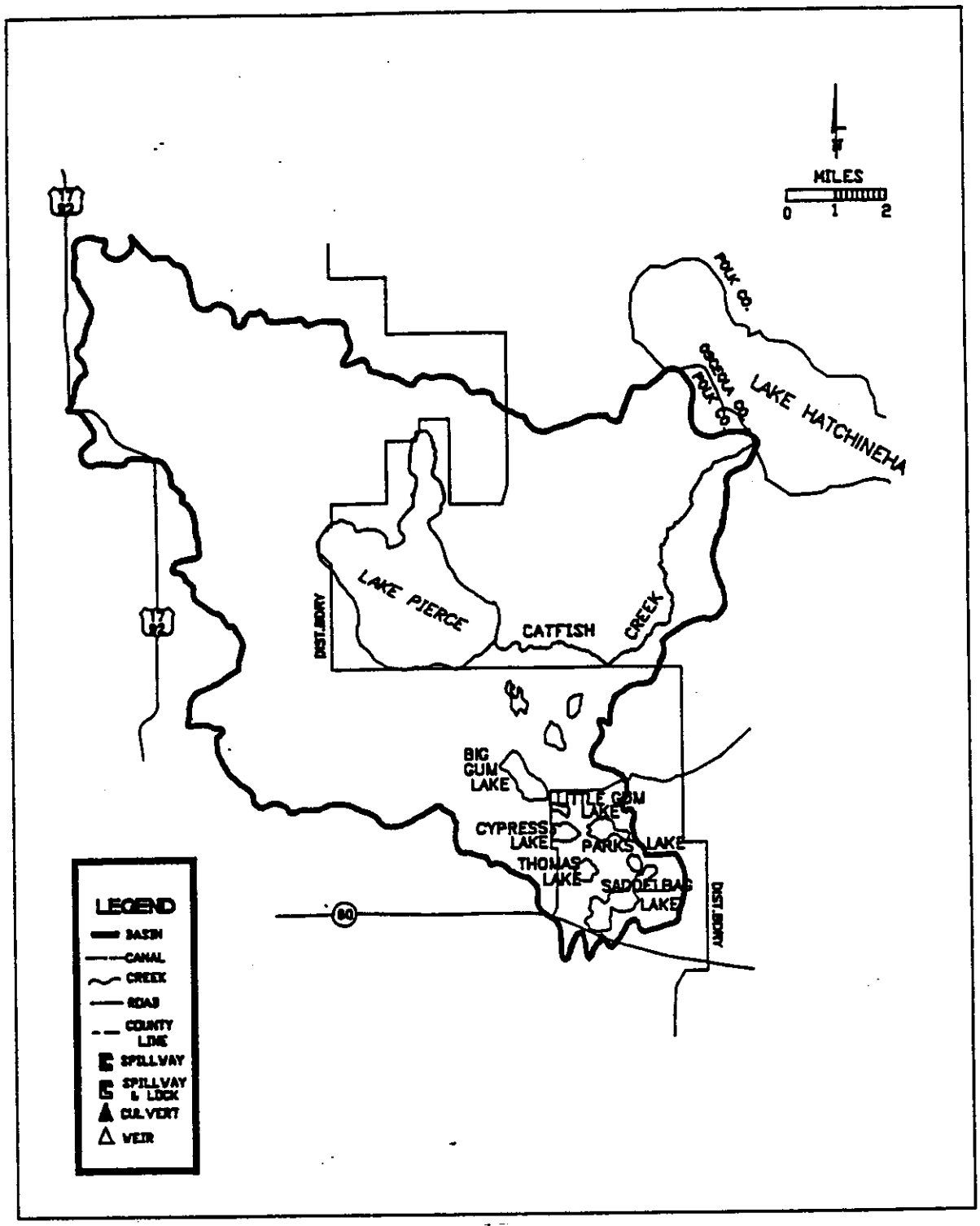


FIGURE Lake Pierce Basin (48,610 acres).

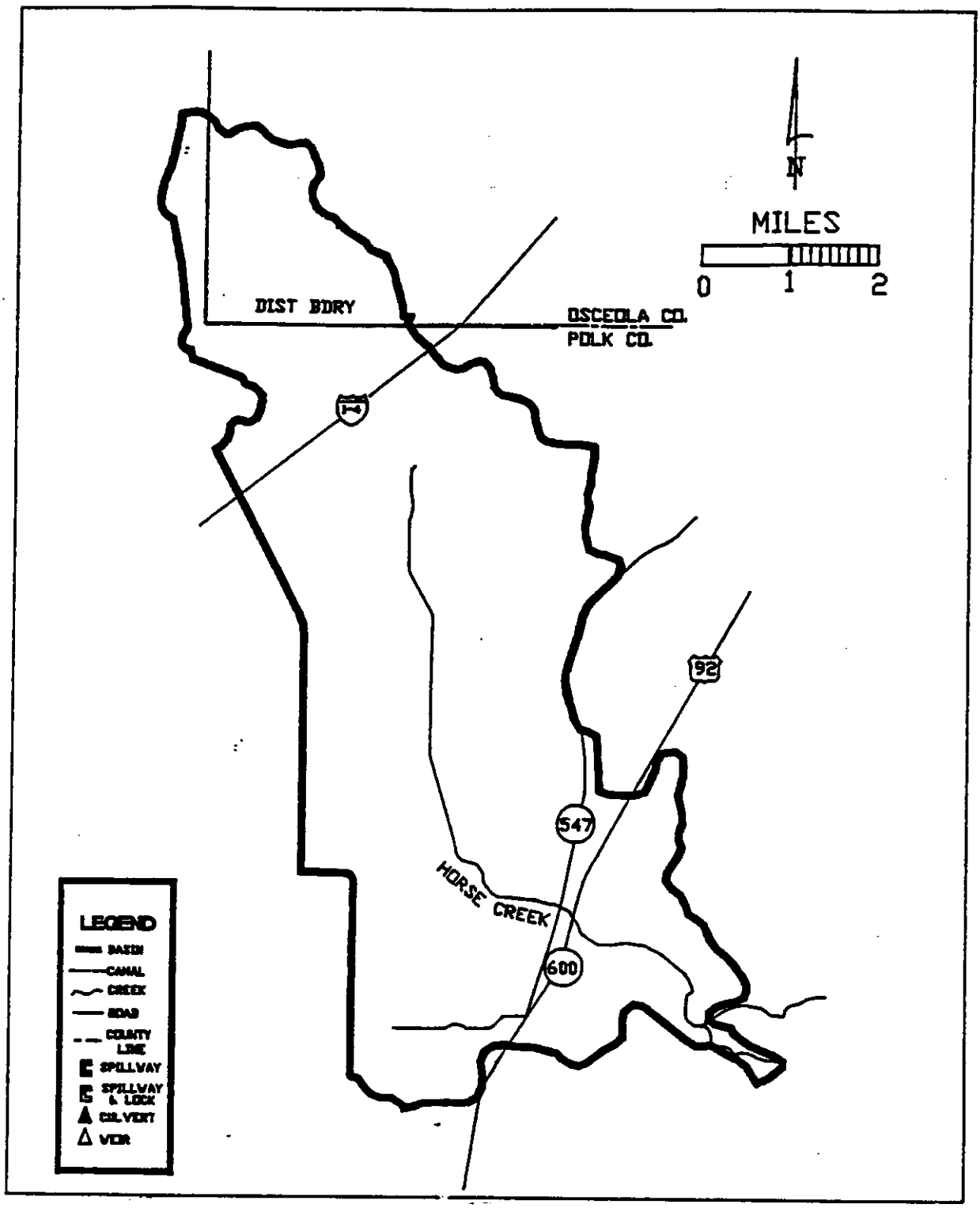


FIGURE Horse Creek Basin (16,960 acres).

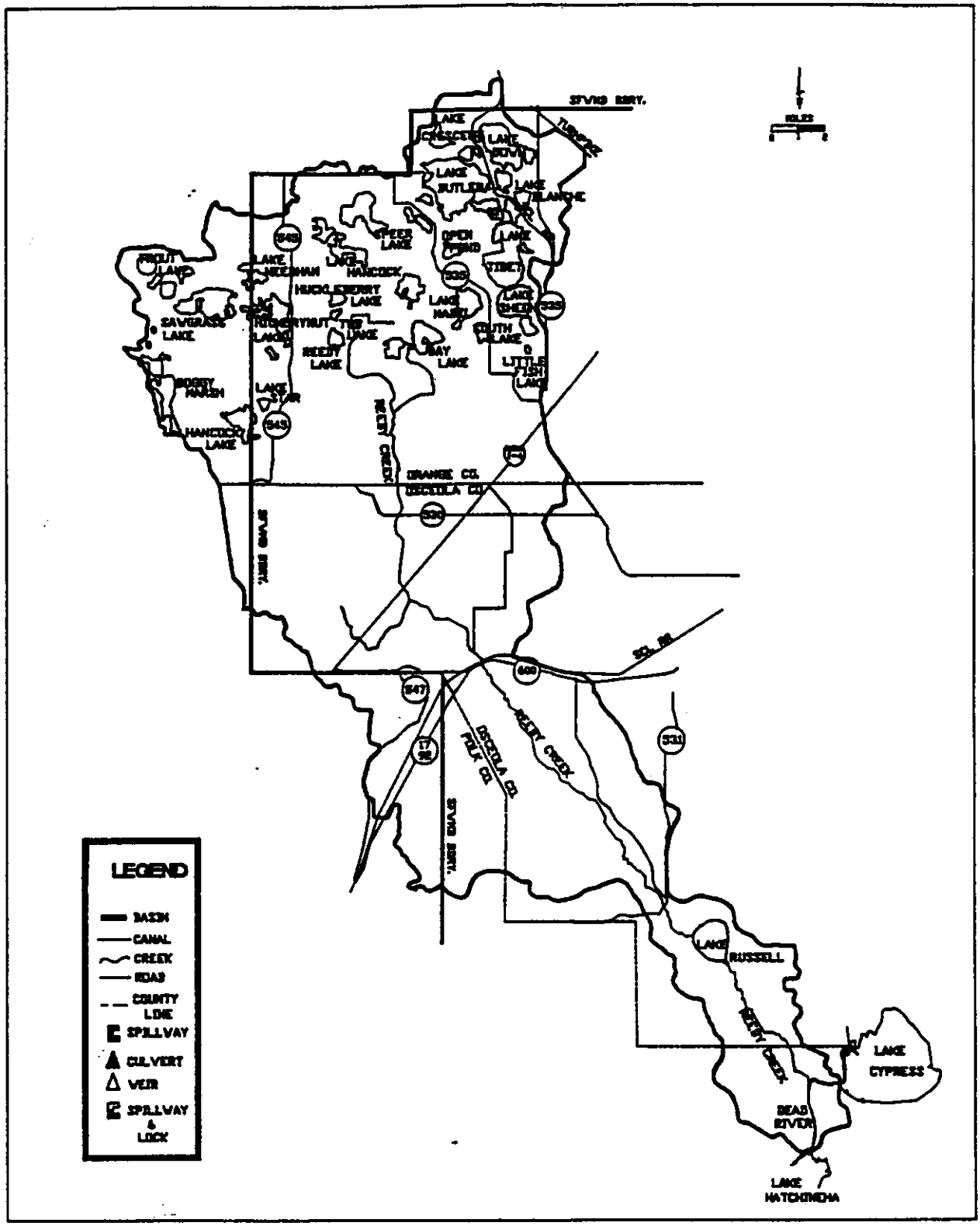


FIGURE Reedy Creek Basin (172,200 acres).

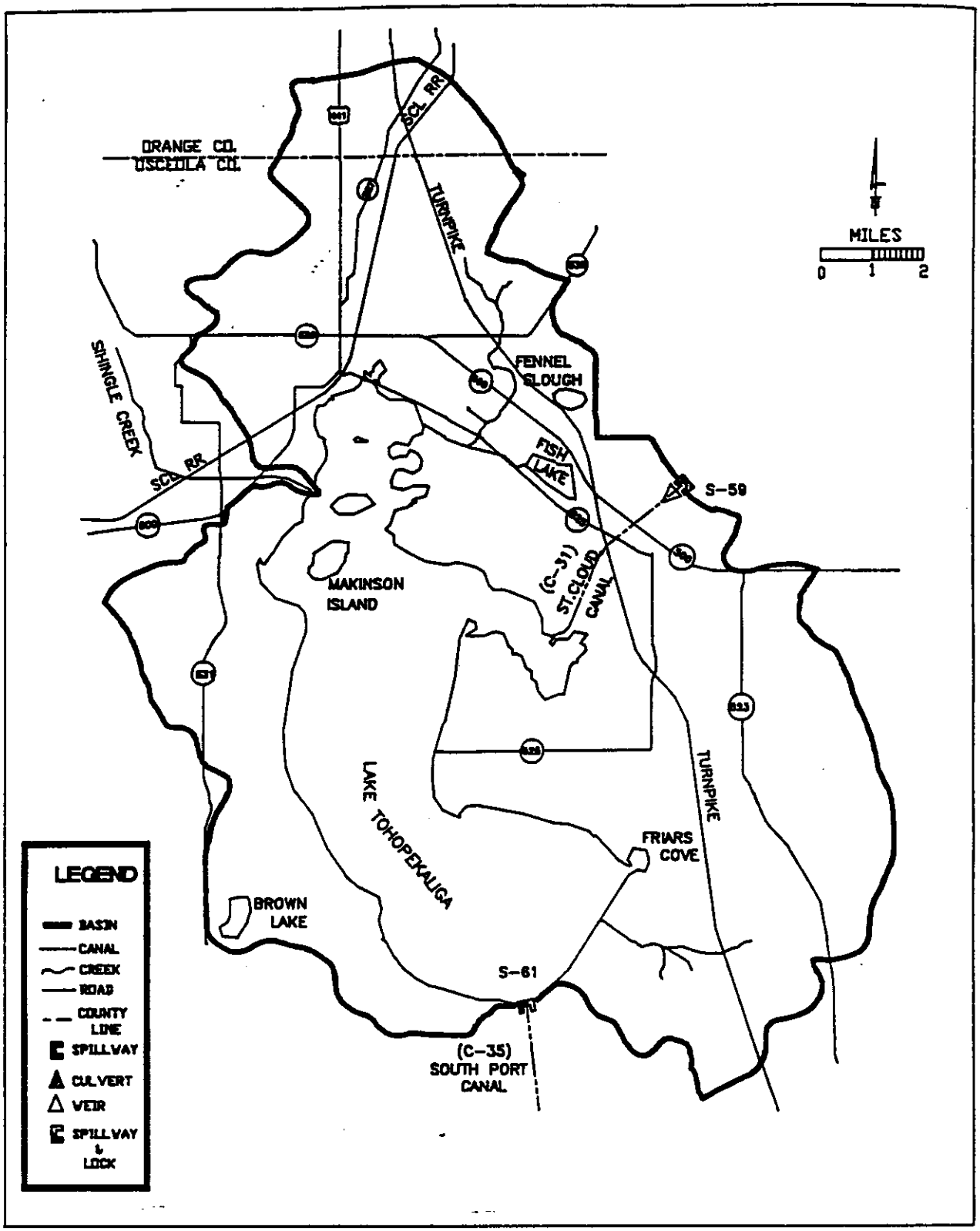


FIGURE Lake Tohopekaliga Basin (84,130 acres).

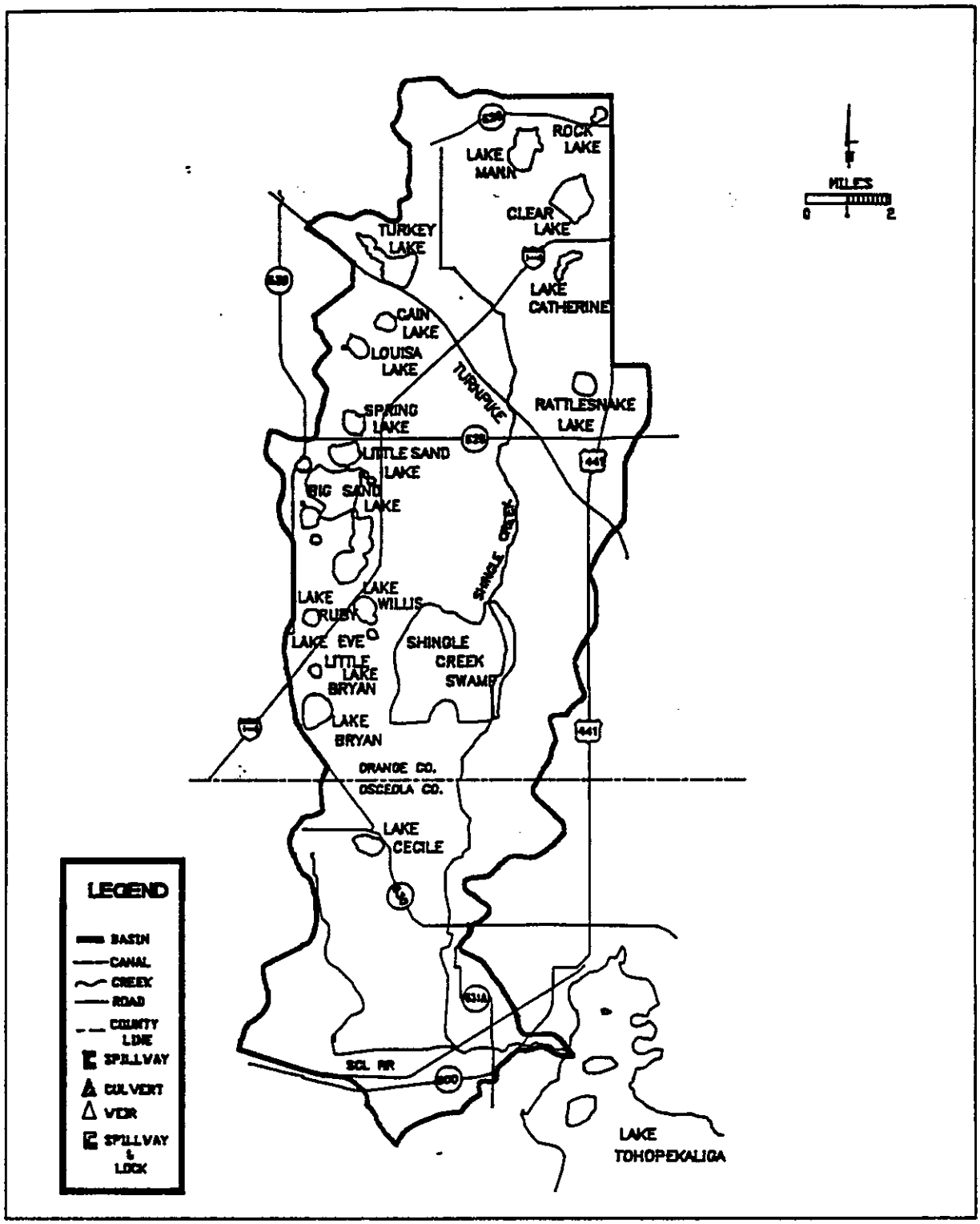


FIGURE Shingle Creek Basin (71,310 acres).

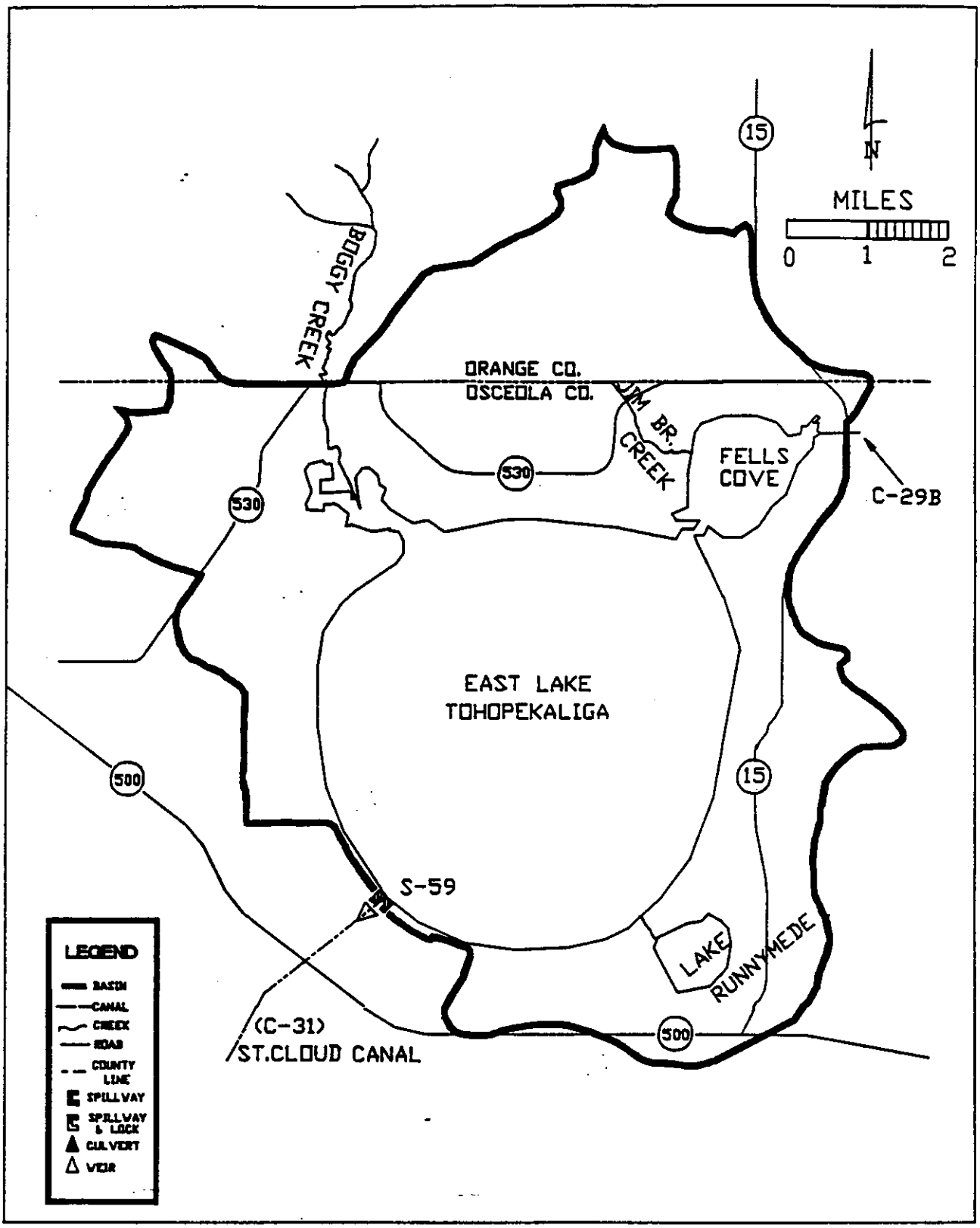


FIGURE . East Lake Tohopekaliga Basin (32,540 acres).

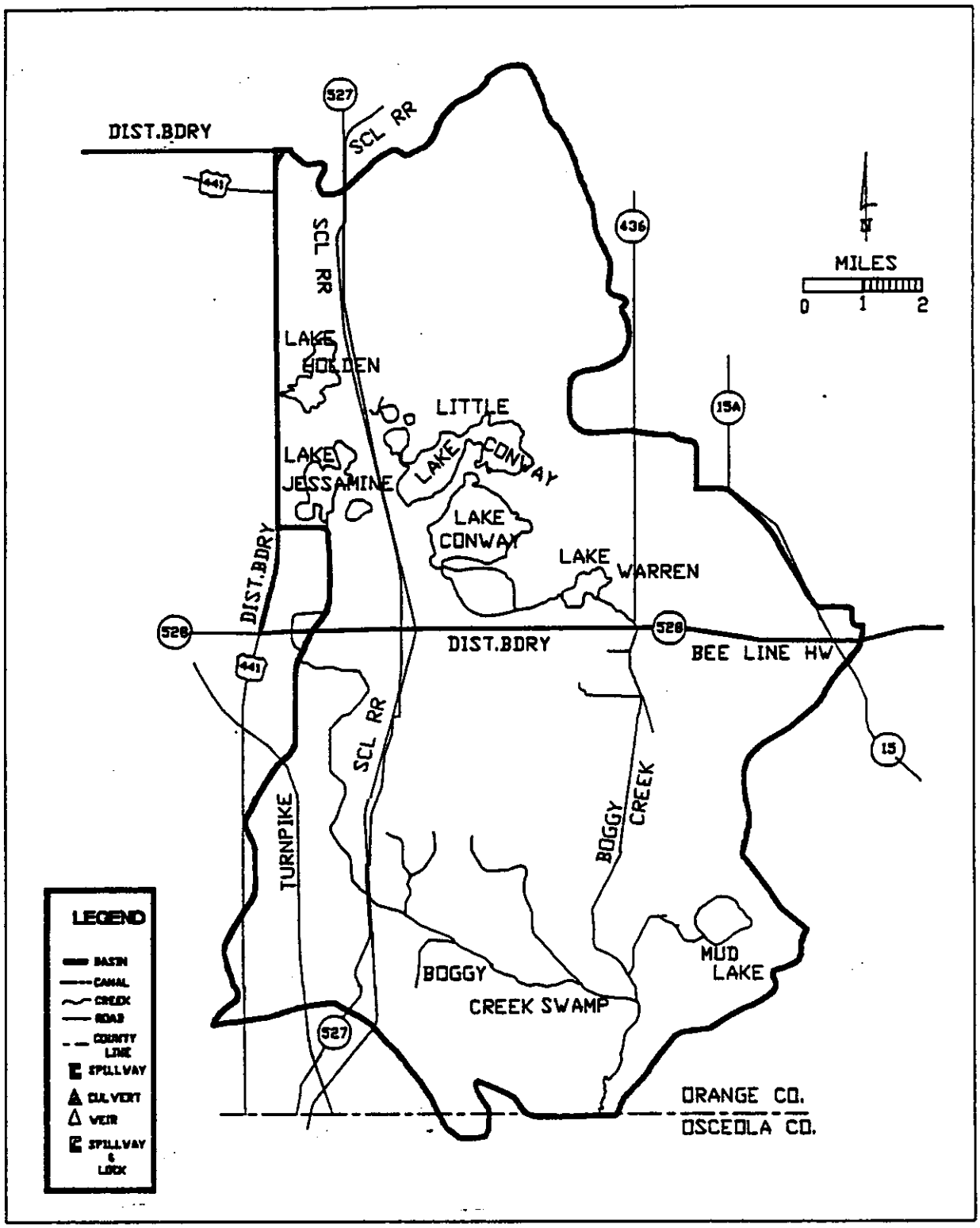


FIGURE Boggy Creek Basin (55,600 acres).

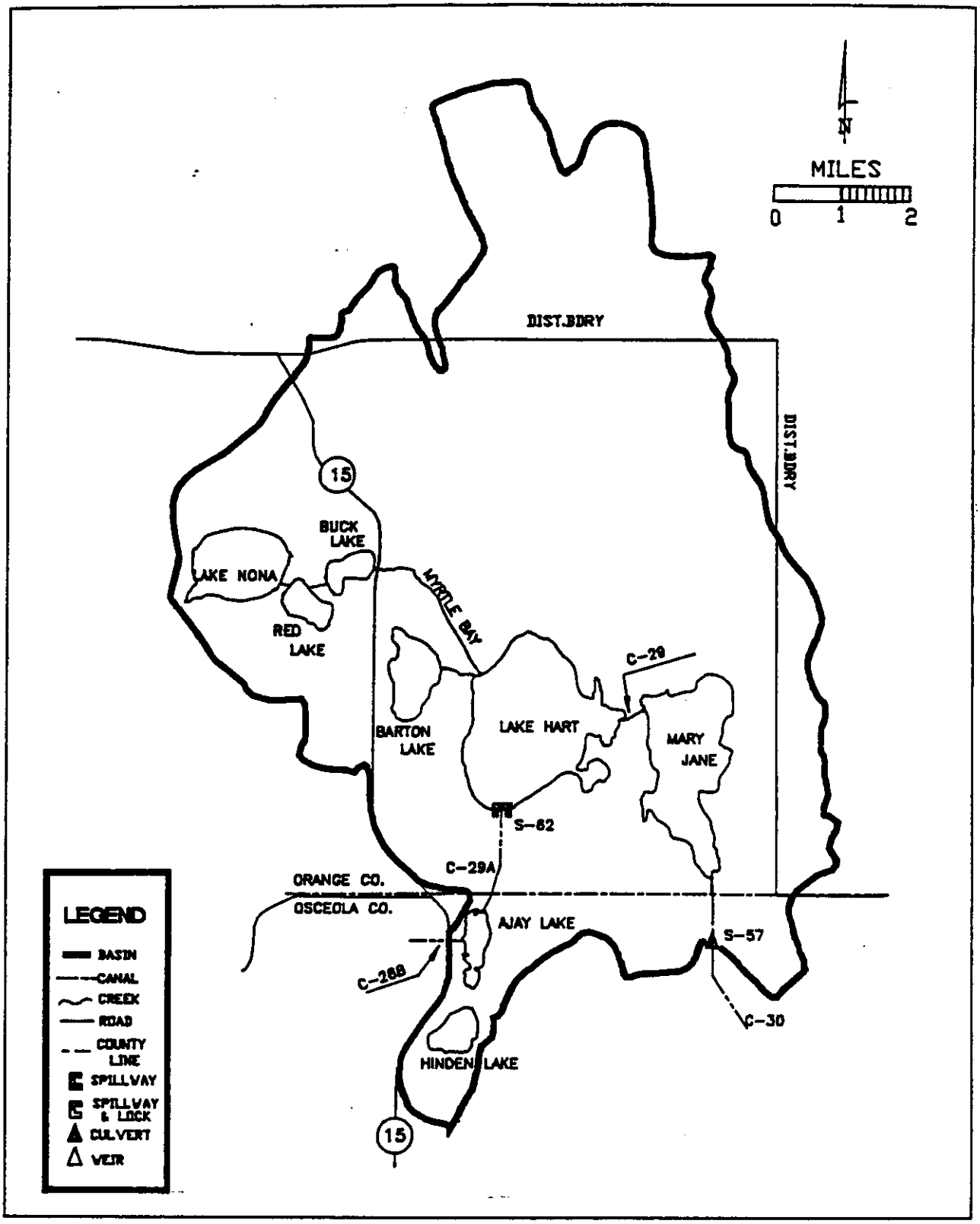


FIGURE Lake Hart Basin (38,530 acres).

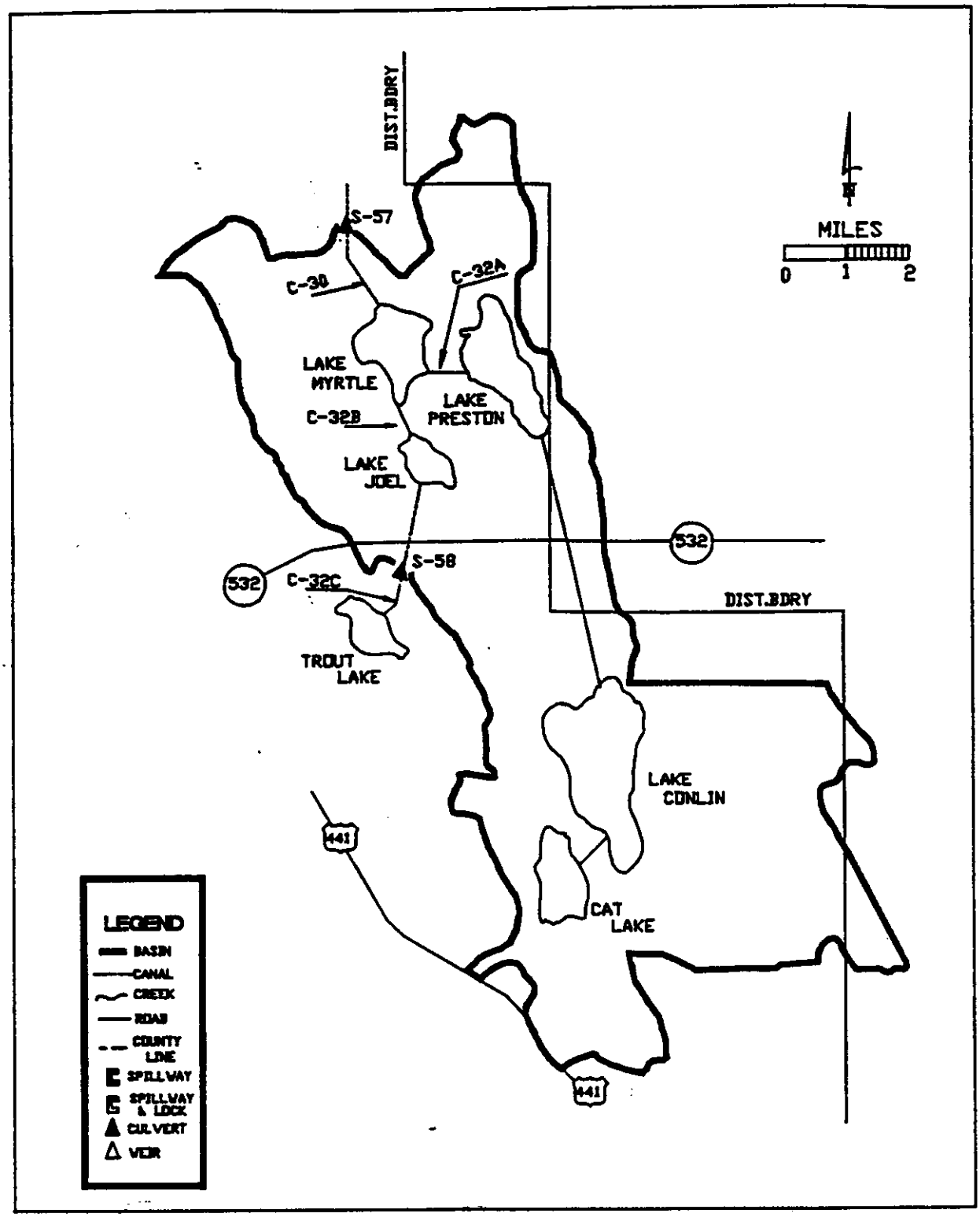


FIGURE Lake Myrtle Basin (30,435 acres).

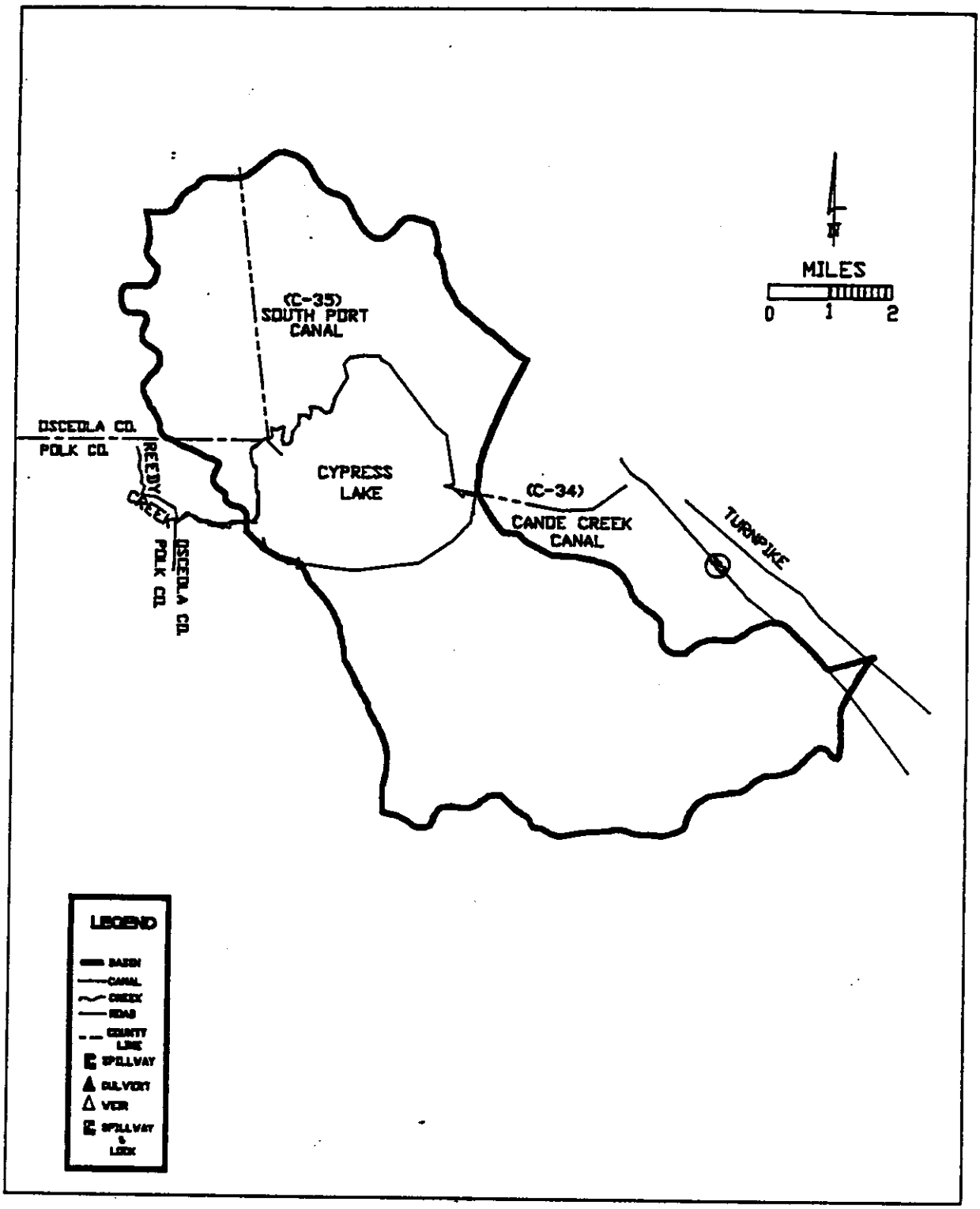


FIGURE Lake Cypress Basin (27,170 acres).

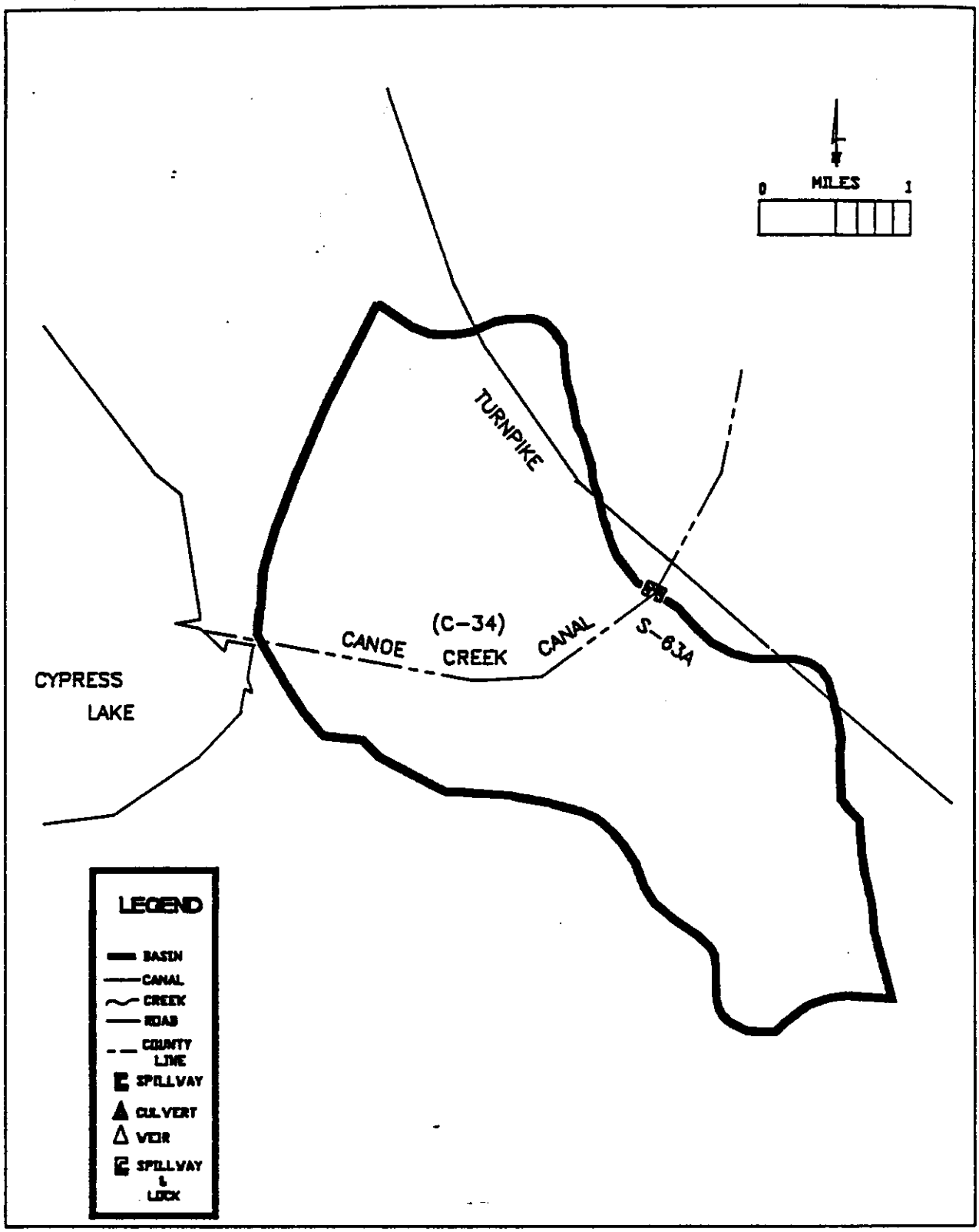


FIGURE Canoe Creek Basin (4,440 acres).

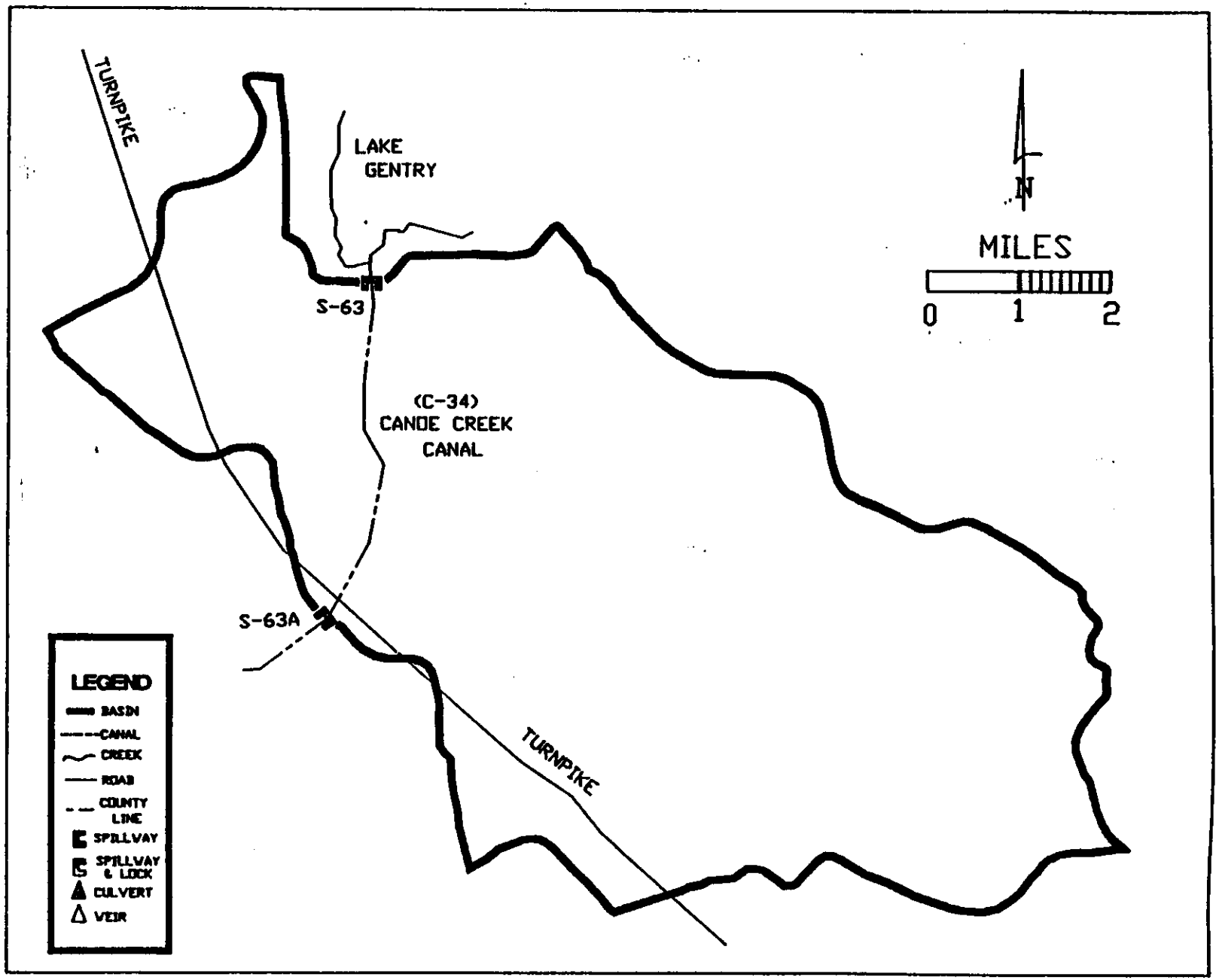


FIGURE S-63A Basin (22,570 acres).

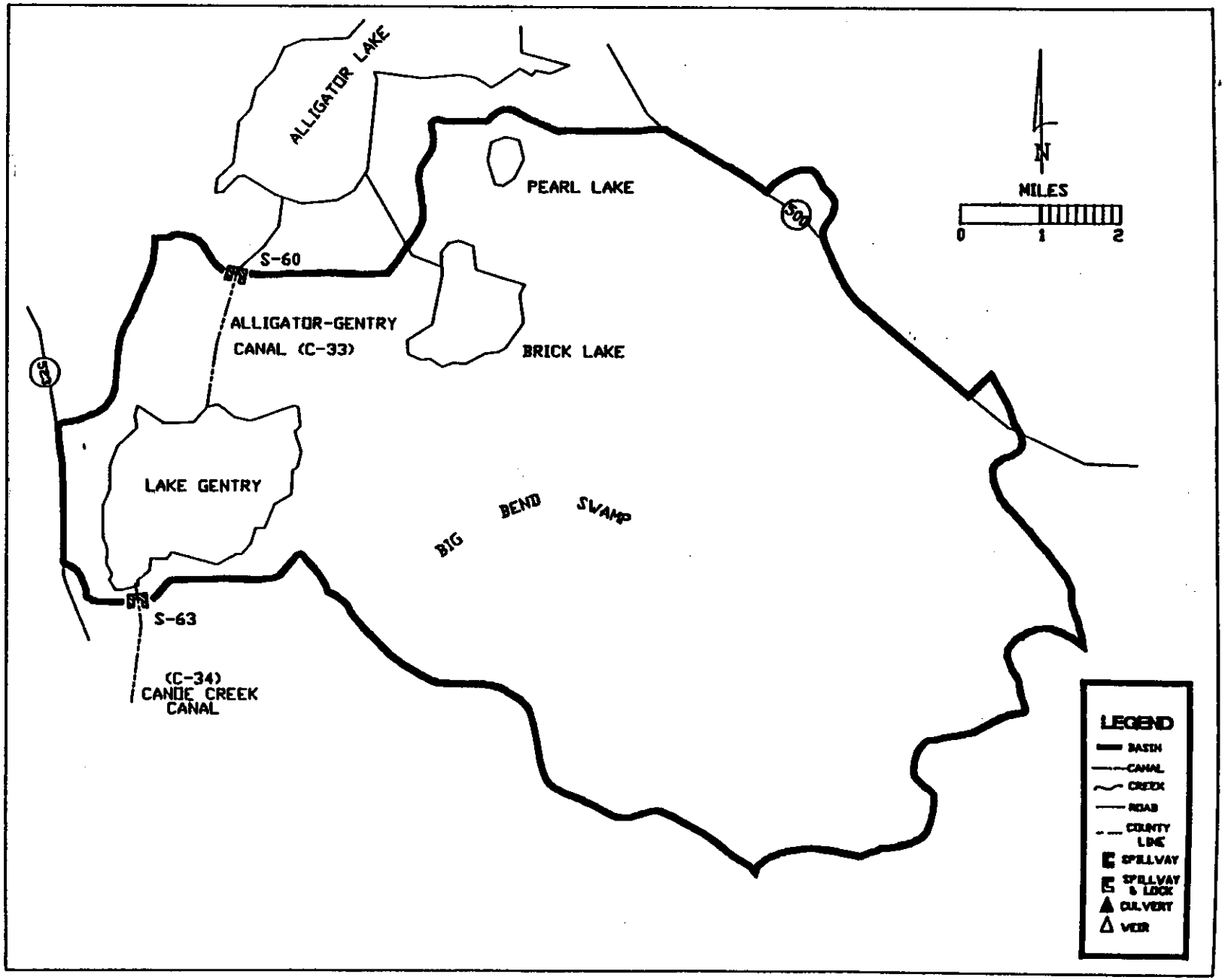


FIGURE Lake Gentry Basin (33,115 acres).

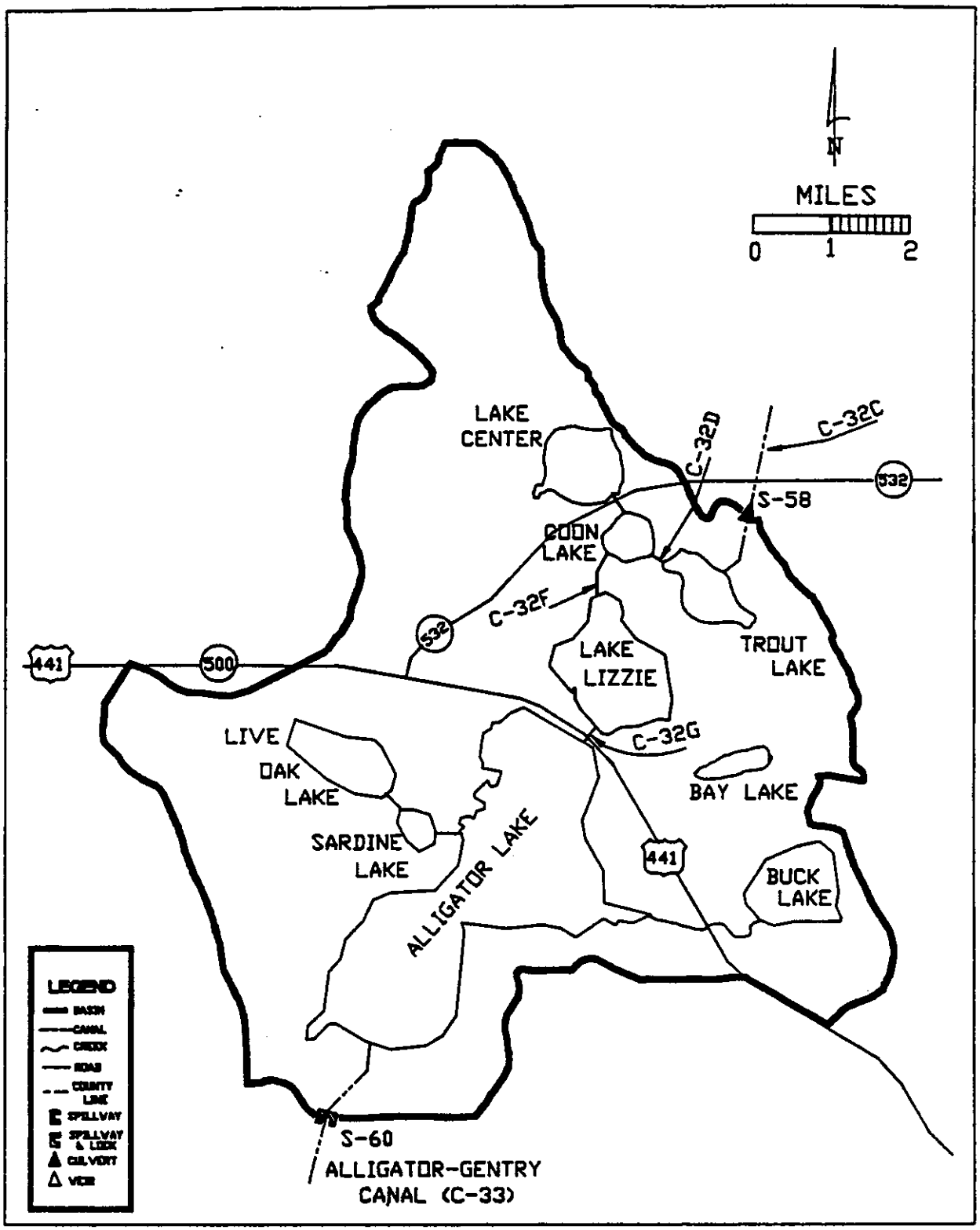


FIGURE Alligator Lake Basin (29,985 acres).

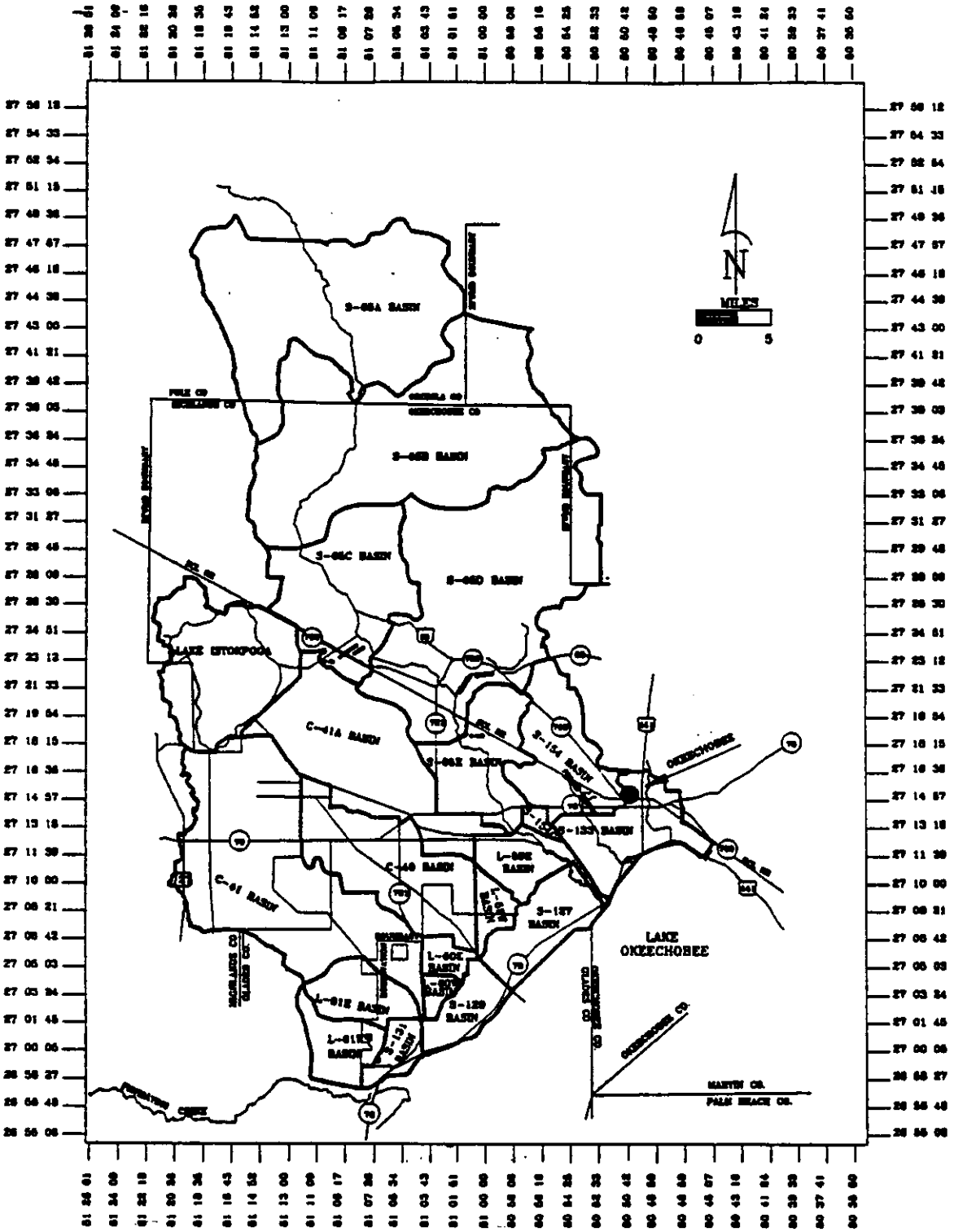


FIGURE Lower Kissimmee River and Lake Istokpoga Basins

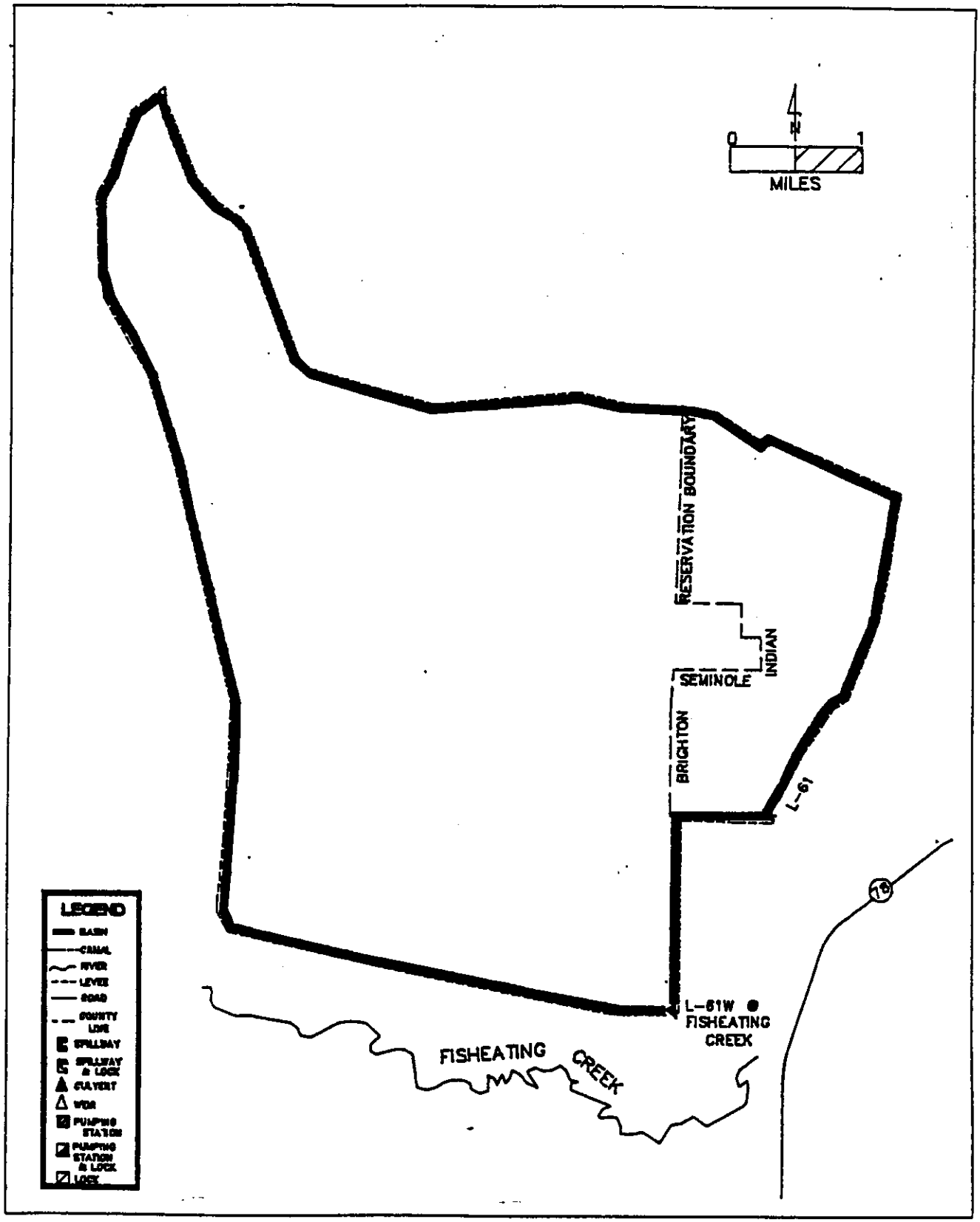


FIGURE L-61W Basin Map

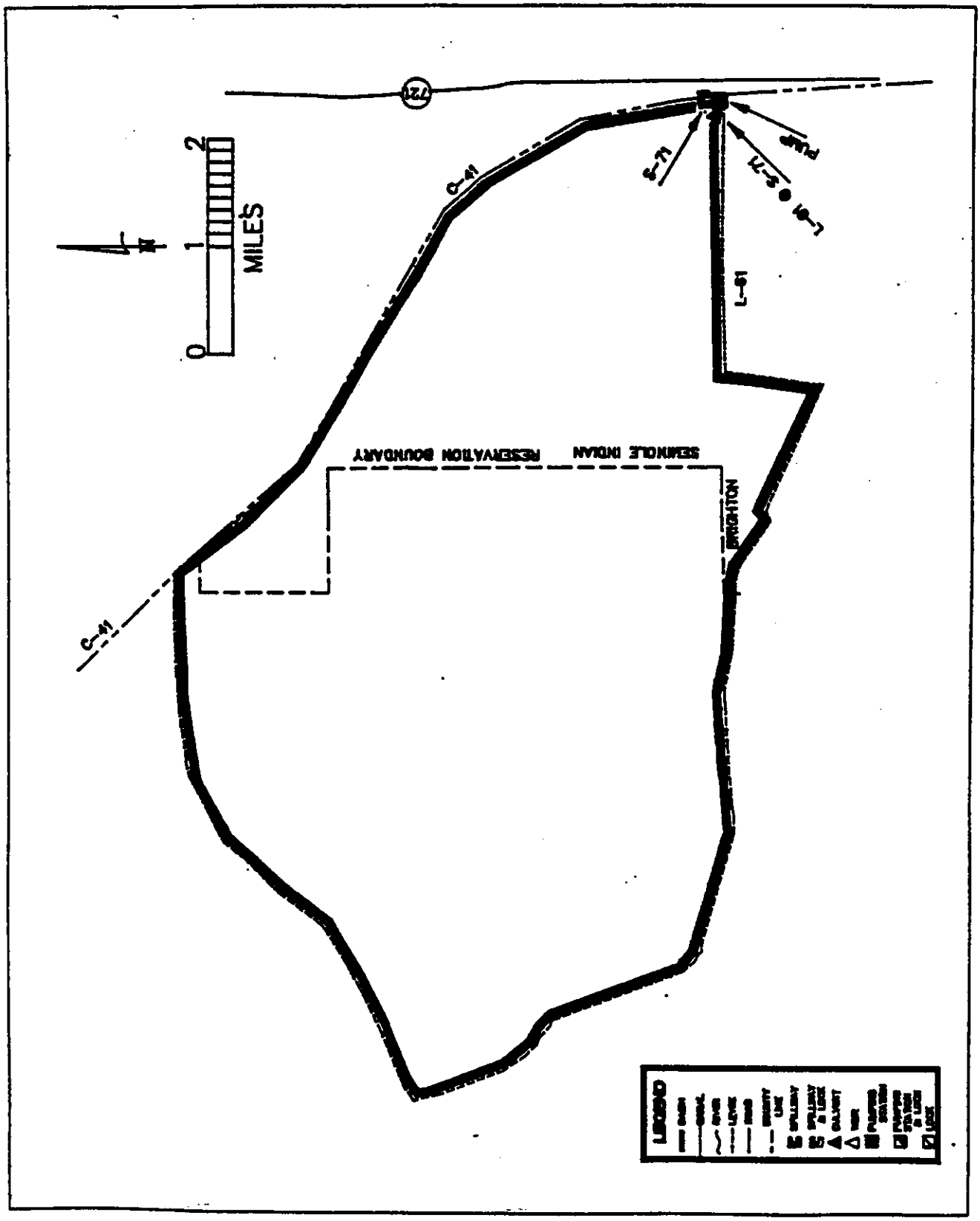


FIGURE L-61E Basin Map

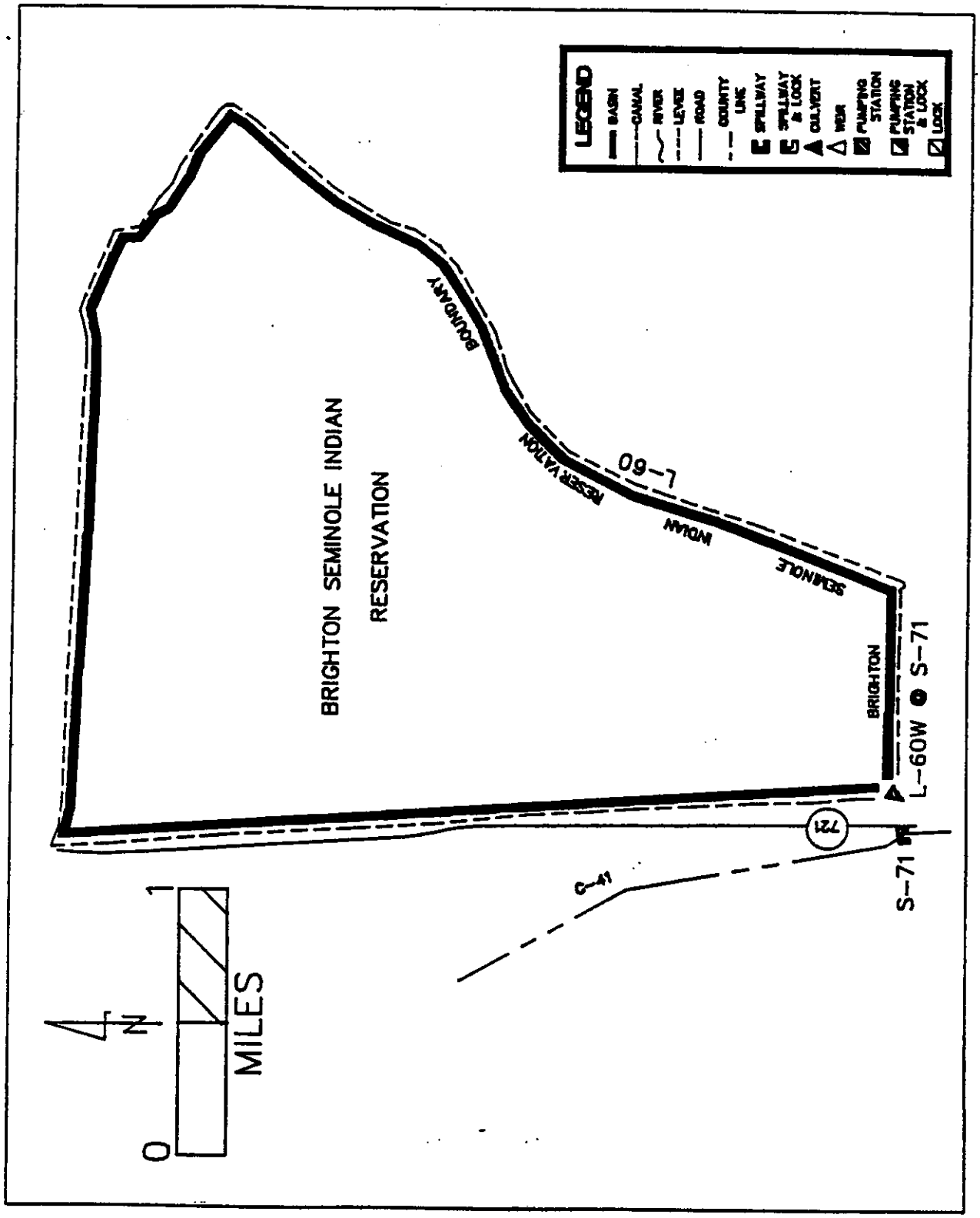


FIGURE L-60W Basin Map

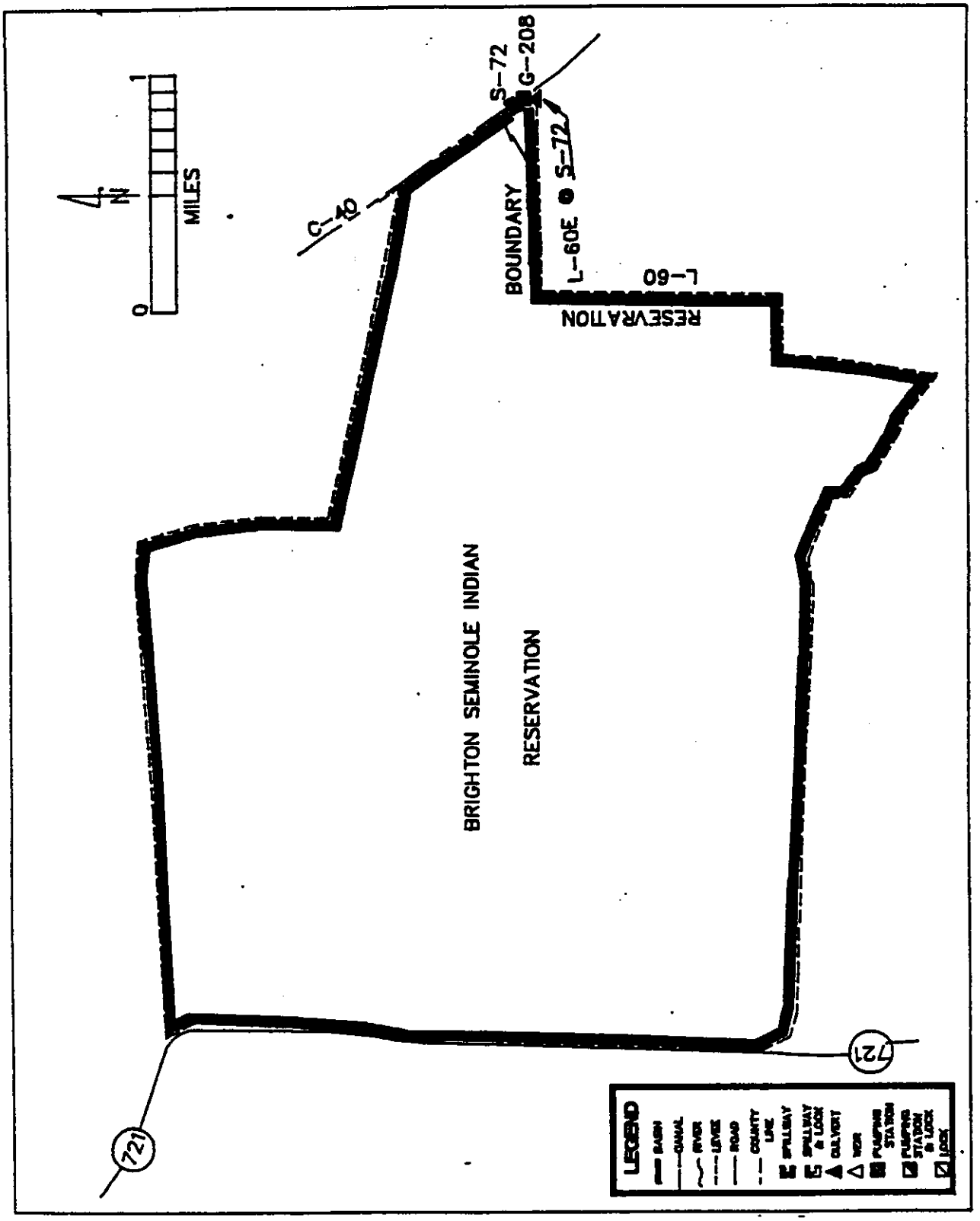


FIGURE L-60E Basin Map

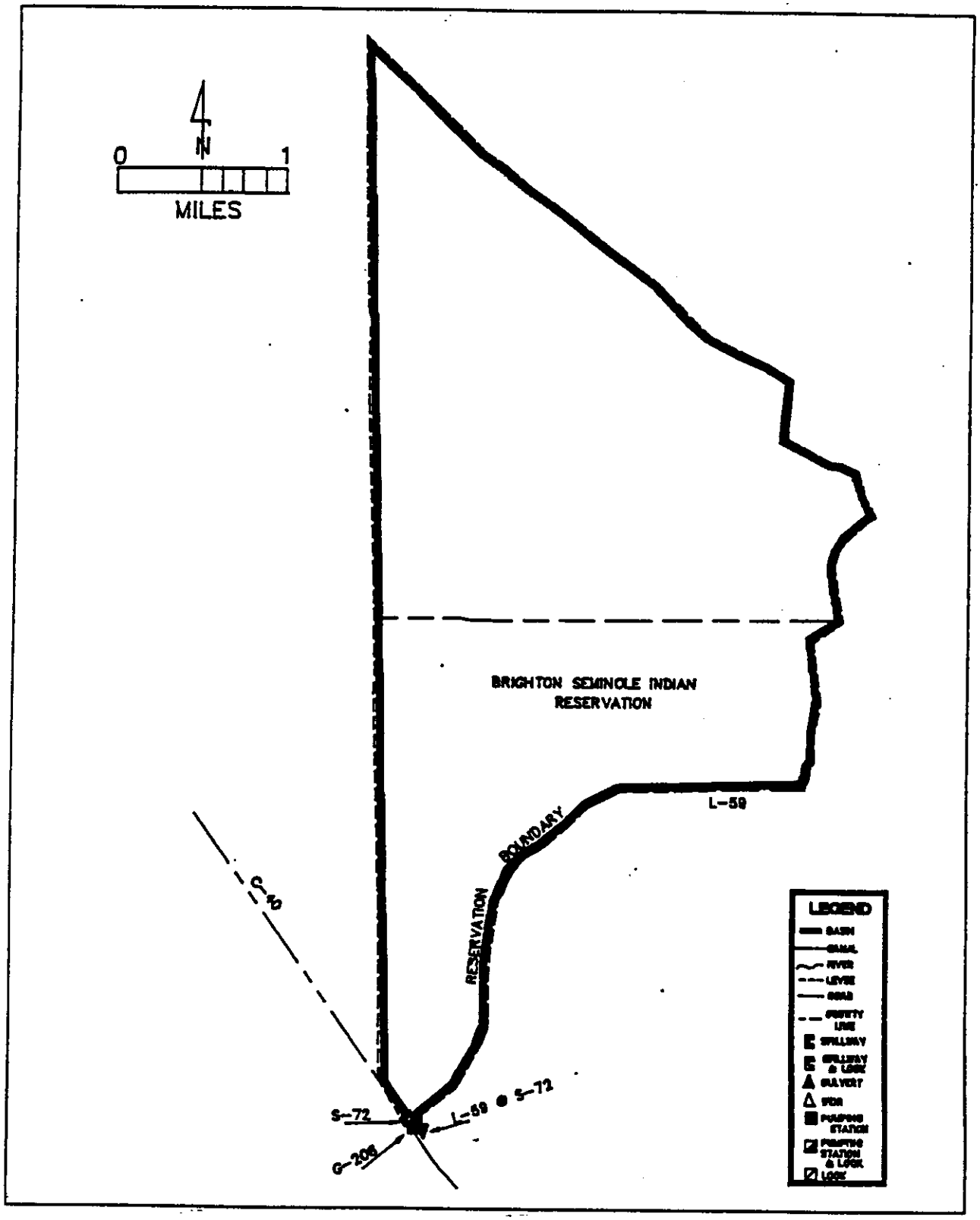


FIGURE L-59W Basin Map

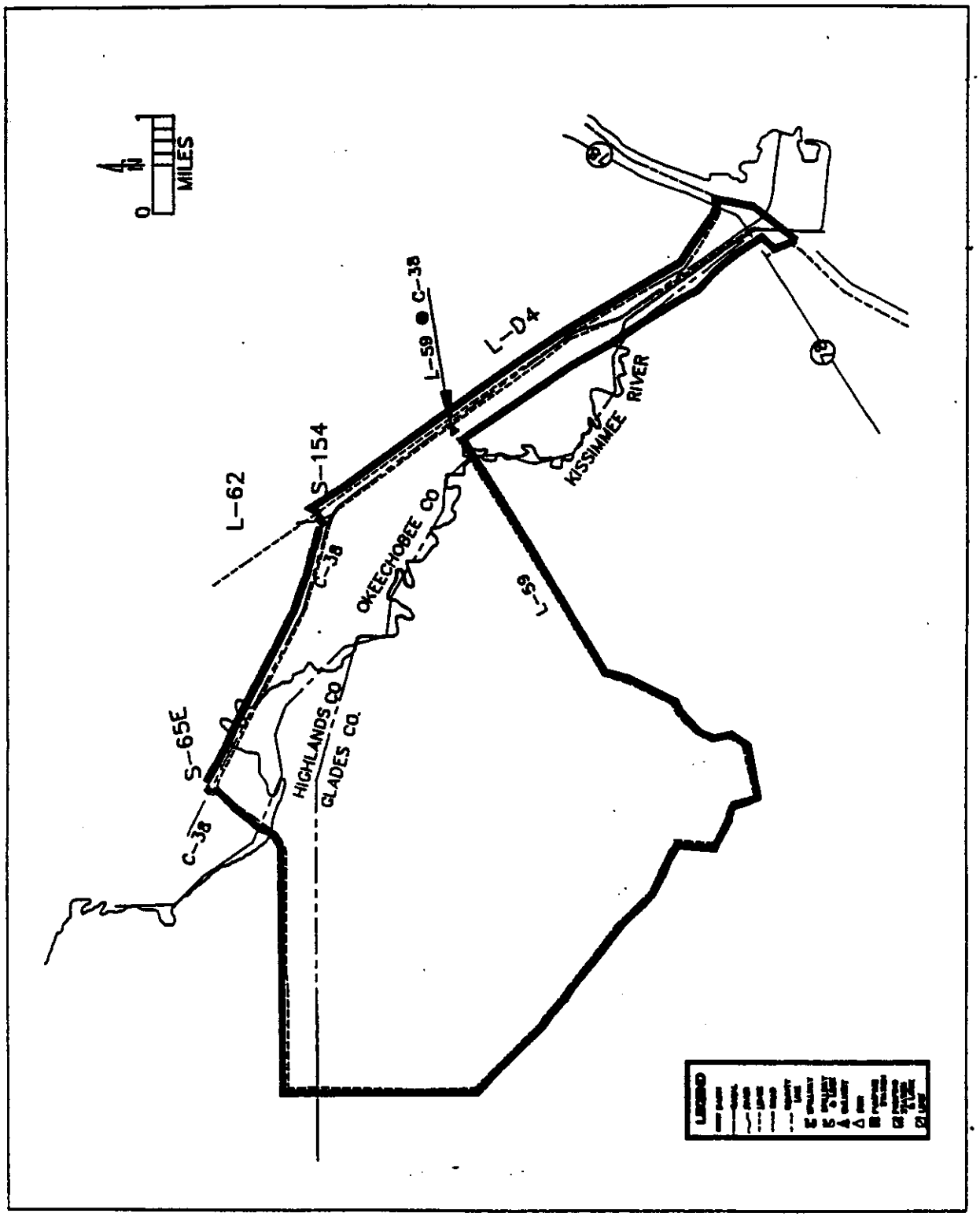


FIGURE . L-59E Basin Map

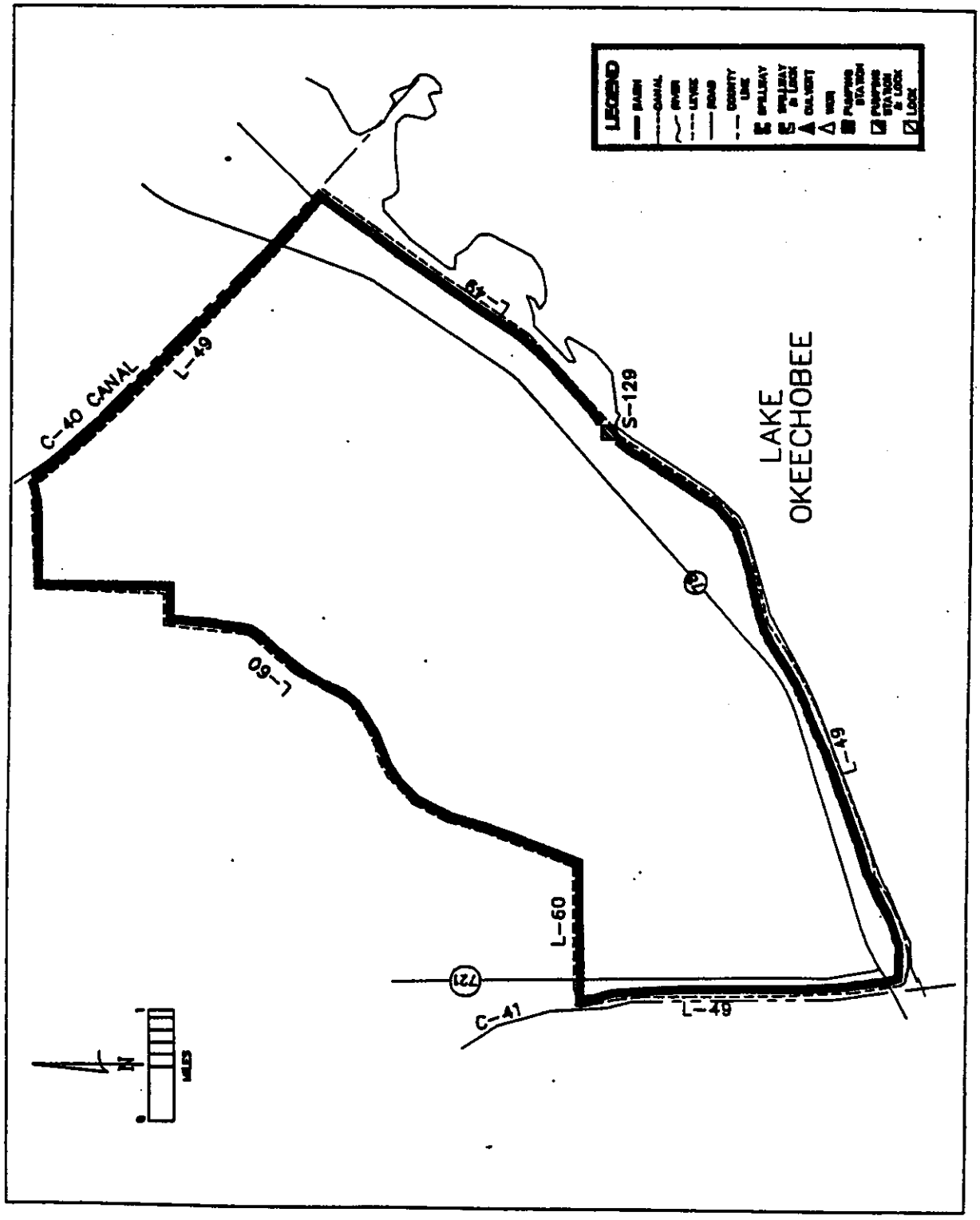


FIGURE S-129 Basin Map

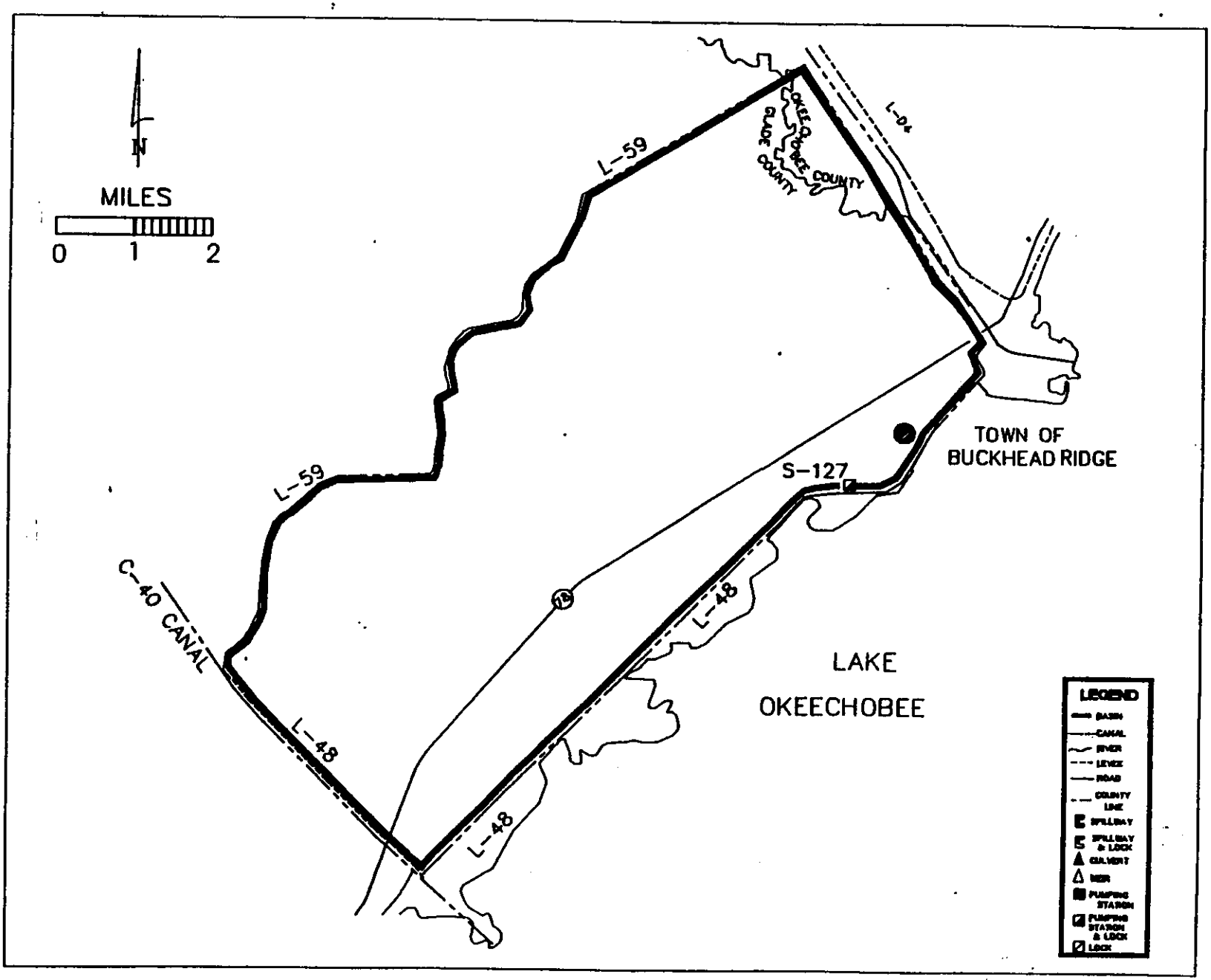


FIGURE S-127 Basin Map

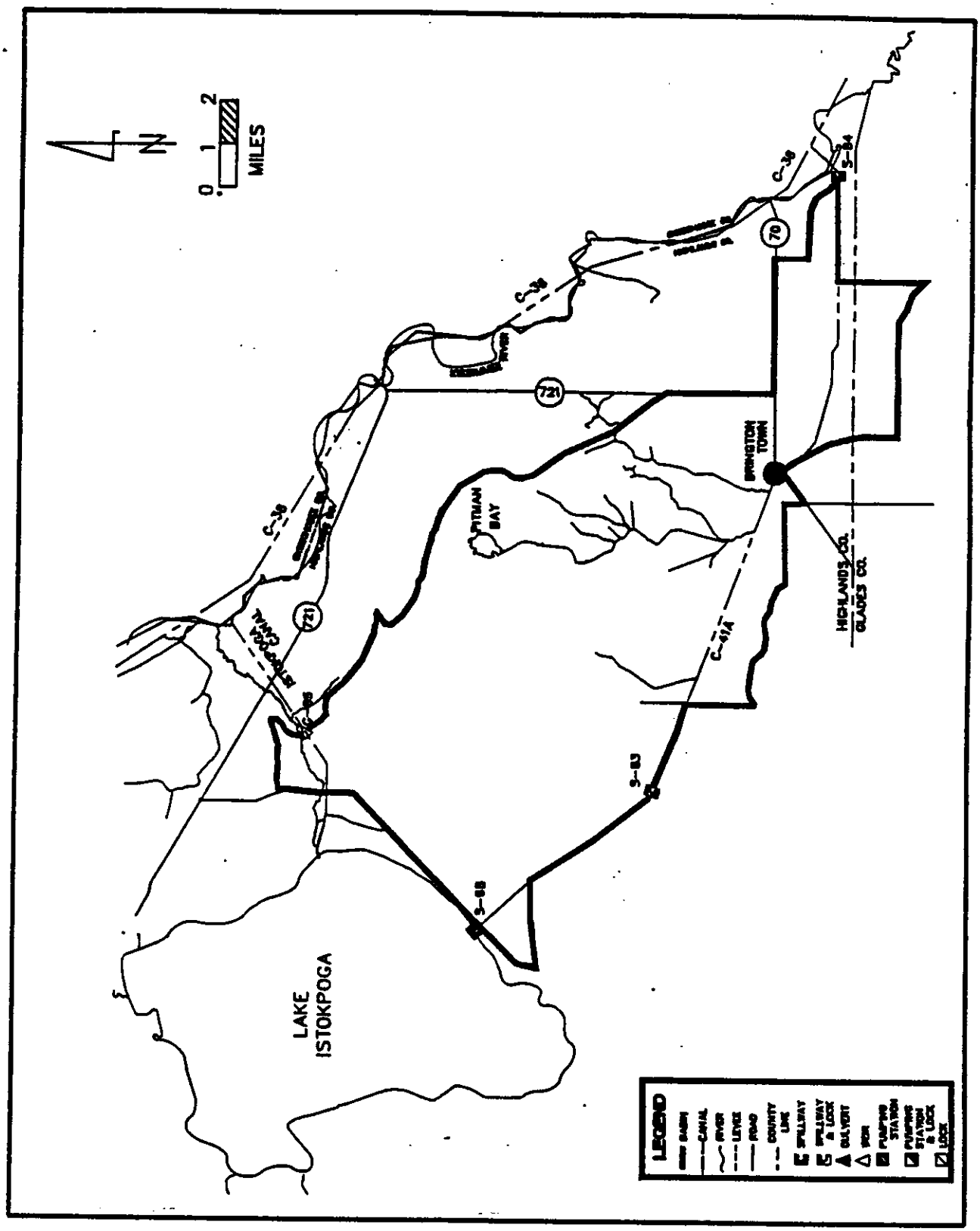


FIGURE C-41A Basin Map

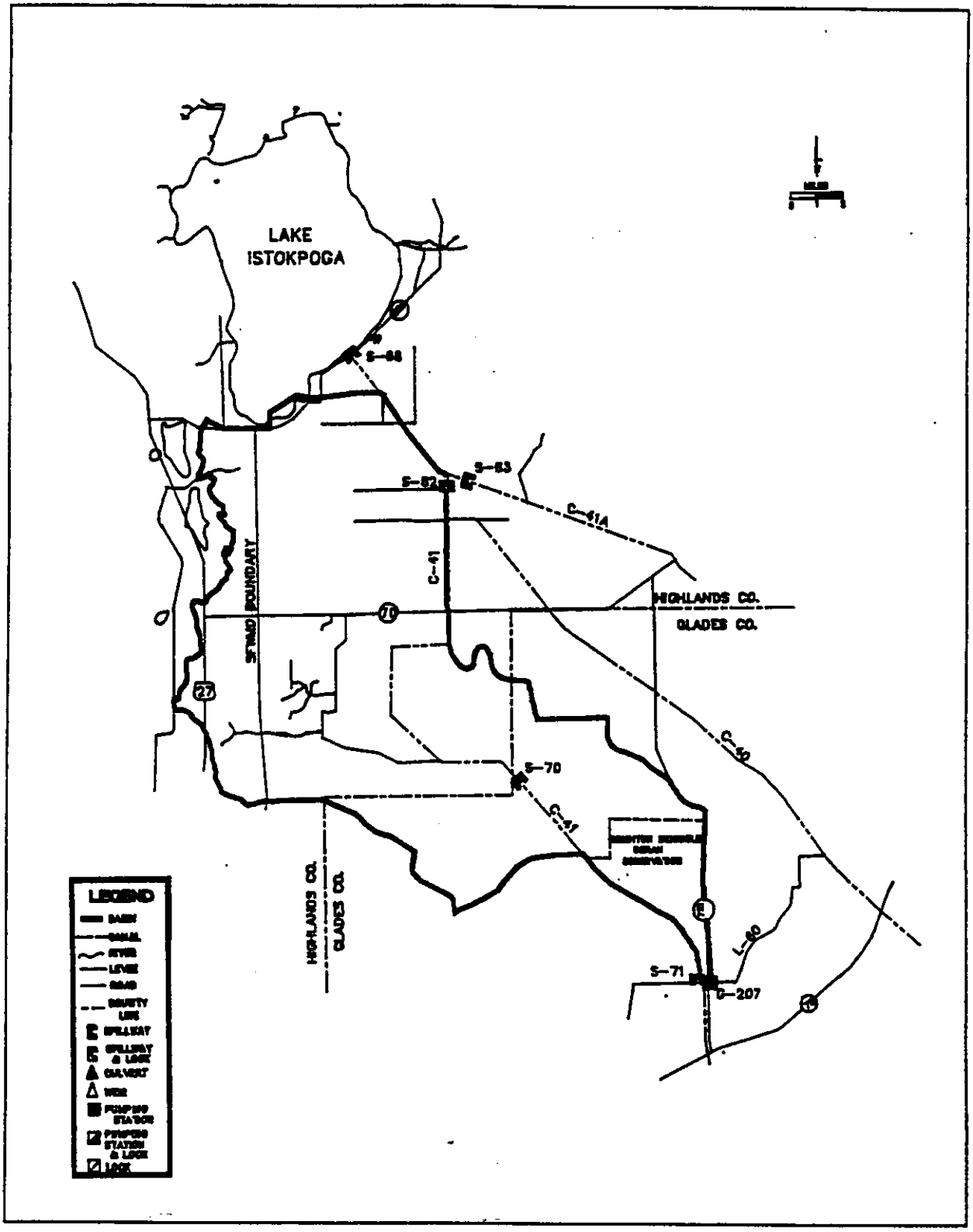


FIGURE . C-41 Basin Map

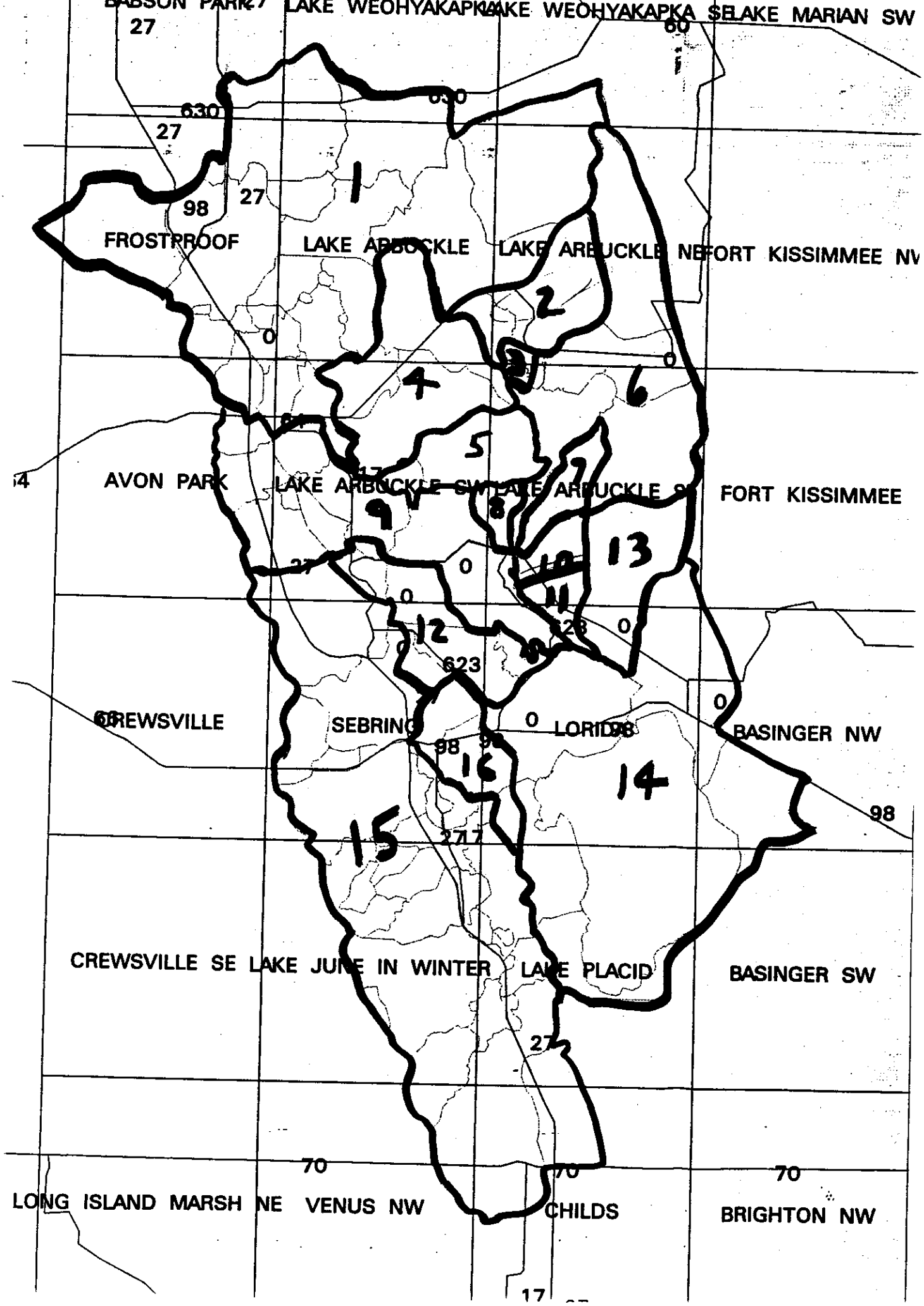


FIGURE ___ LOCATION OF LAKE ISTOKPOGA DRAINAGE SUBBASINS

TABLE ____ DISCHARGE VALUES FOR LAKE ISTOKPOGA DRAINAGE SUBBASINS

Basin	Inflow Point	Area (sq. mi.)	Cubic Feet per Second per Square Mile (csm) SPF	100-Year	50-Year	10-Year	5-Year
1	Arbuckle 0.00	179.34	17.95	14.89	12.38	7.14	6.13
2	Arbuckle 1.25	14.41	251.91	201.25	180.43	124.91	111.03
3	Arbuckle 4.17	1.33	254.14	201.50	184.21	142.11	125.56
4	Arbuckle 5.83	28.56	161.06	129.55	112.04	68.28	57.42
5	Arbuckle 8.03	12.04	192.69	149.50	99.67	18.27	10.80
6	Arbuckle 9.50	45.35	73.87	48.73	34.62	14.33	12.35
7	Arbuckle 12.0	5.88	173.47	137.76	120.75	81.63	68.03
8	Arbuckle 13.0	2.96	253.38	202.70	179.05	128.38	108.11
9	Arbuckle 14.0	39.58	111.42	86.15	56.85	10.11	6.06
10	Arbuckle 15.5	3.96	247.47	196.97	166.67	85.86	73.23
11	Arbuckle 17.3	4.39	250.57	200.46	177.68	109.34	91.12
12	Arbuckle 19.5	20.73	7.81	5.84	3.14	0.53	0.39
13	Arbuckle 20.5	15.84	198.86	152.15	125.63	64.39	53.03
14	Local Inflows	64.9	231.12	184.90	160.25	93.99	73.96
15	Josephine 0.0	132.67	43.72	32.03	23.37	7.16	4.90
16	Josephine 2.0	11.15	178.48	133.63	80.72	9.87	7.17
	Average	36.44	165.50	129.88	107.34	60.39	50.58
	Maximum	179.34	254.14	202.70	184.21	142.11	125.56
	Minimum	1.33	7.81	5.84	3.14	0.53	0.39

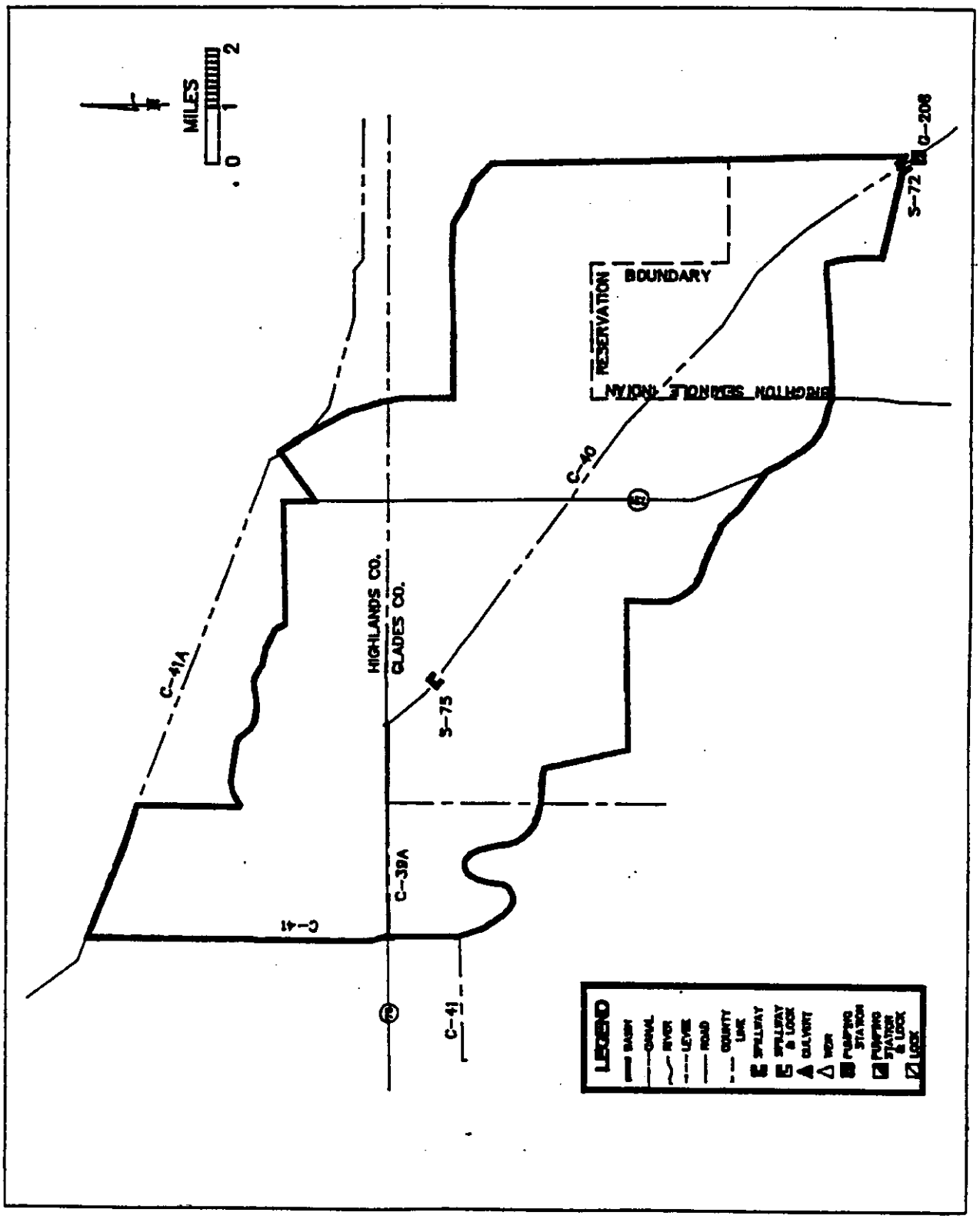


FIGURE C-40 Basin Map

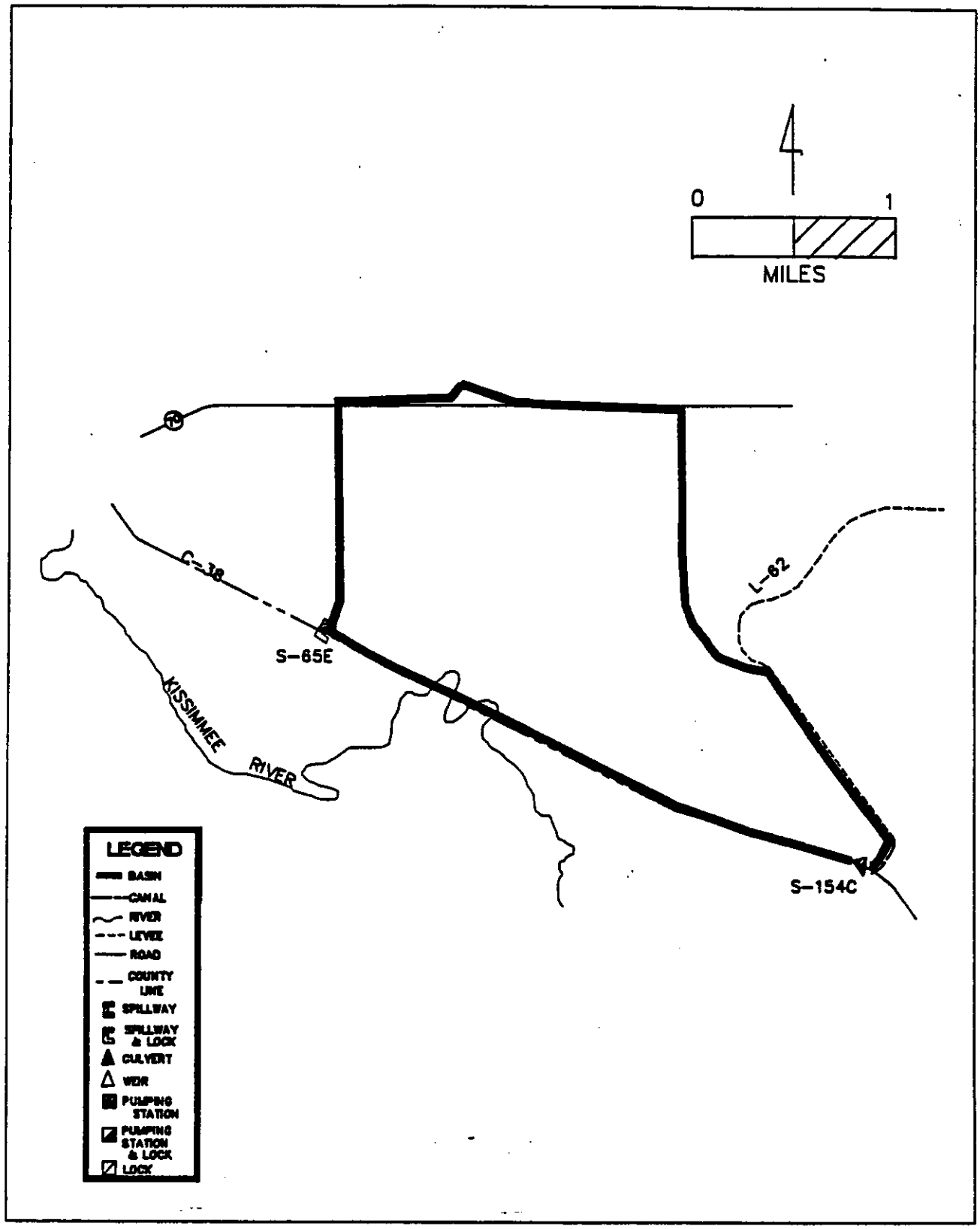


FIGURE S-154C Basin Map

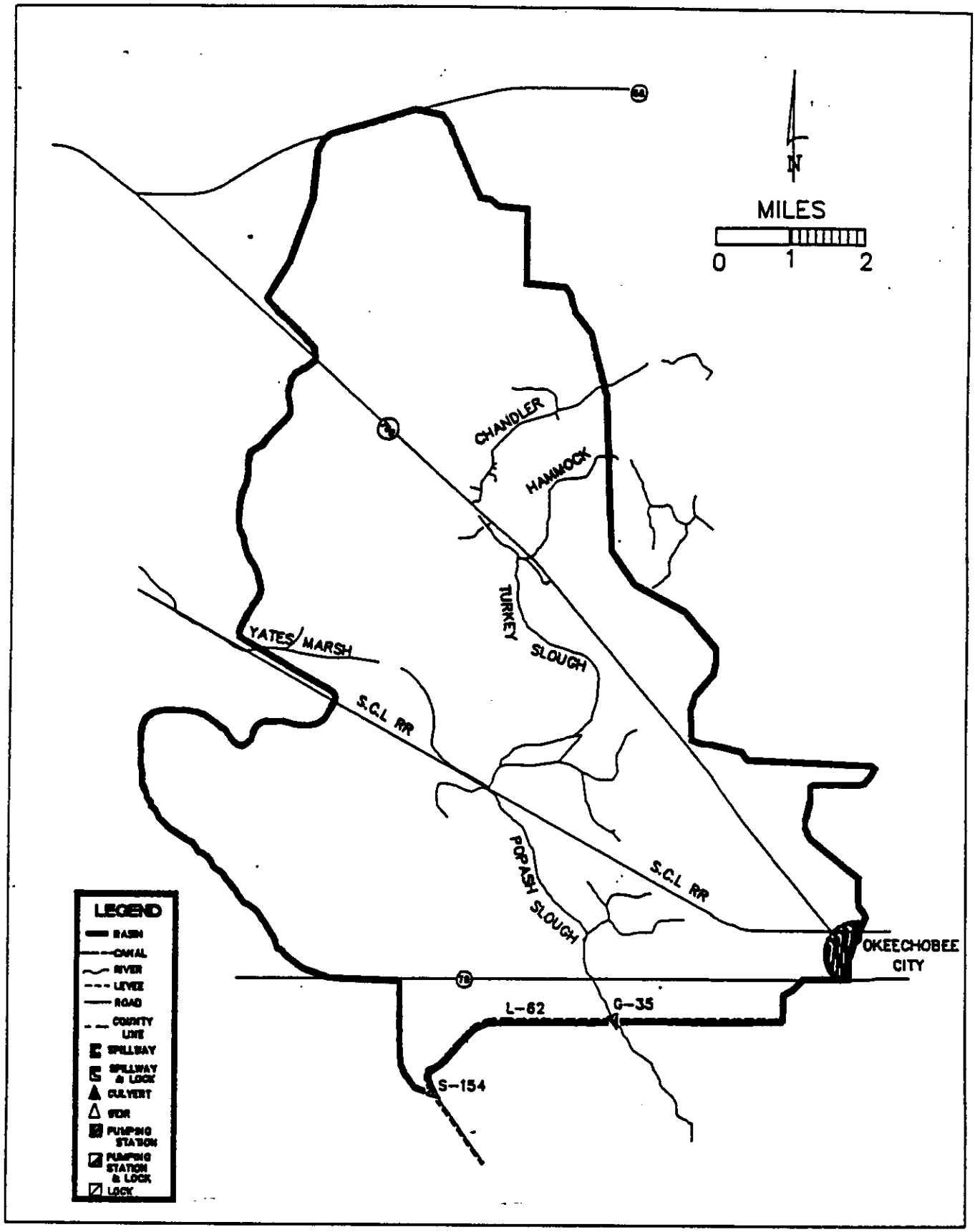


FIGURE S-154 Basin Map

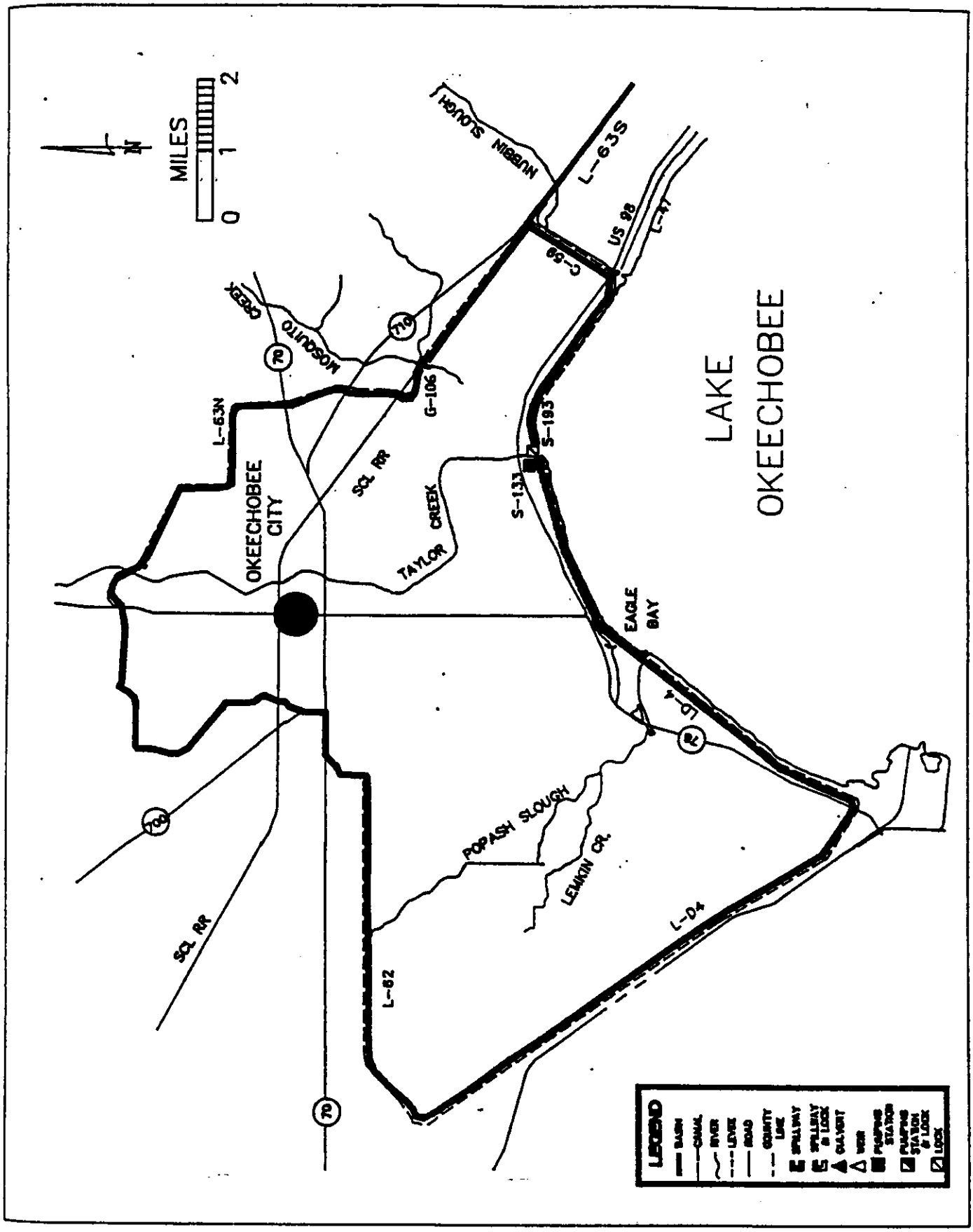


FIGURE S-133 Basin Map

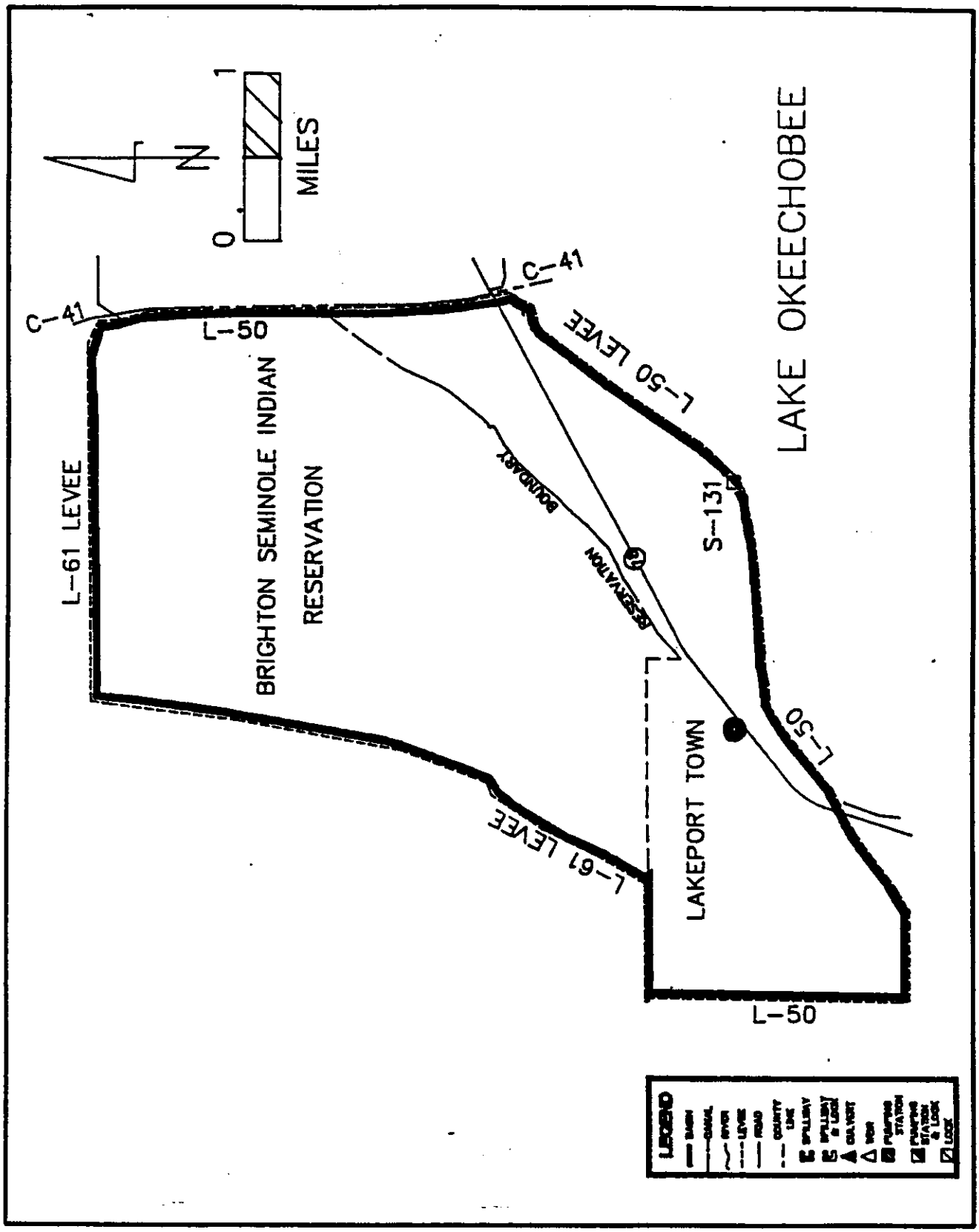


FIGURE S-131 Basin Map

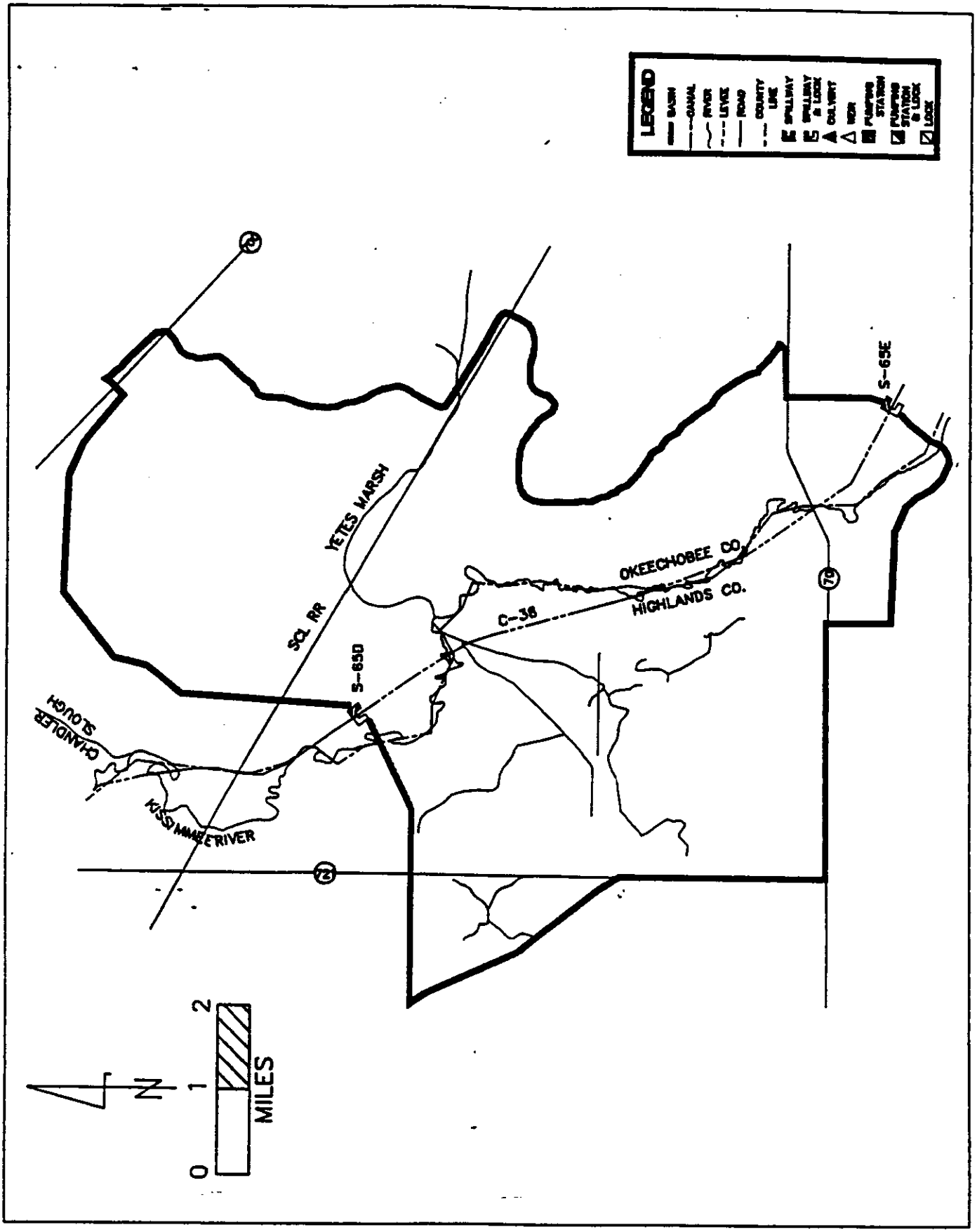


FIGURE S-65E Basin Map

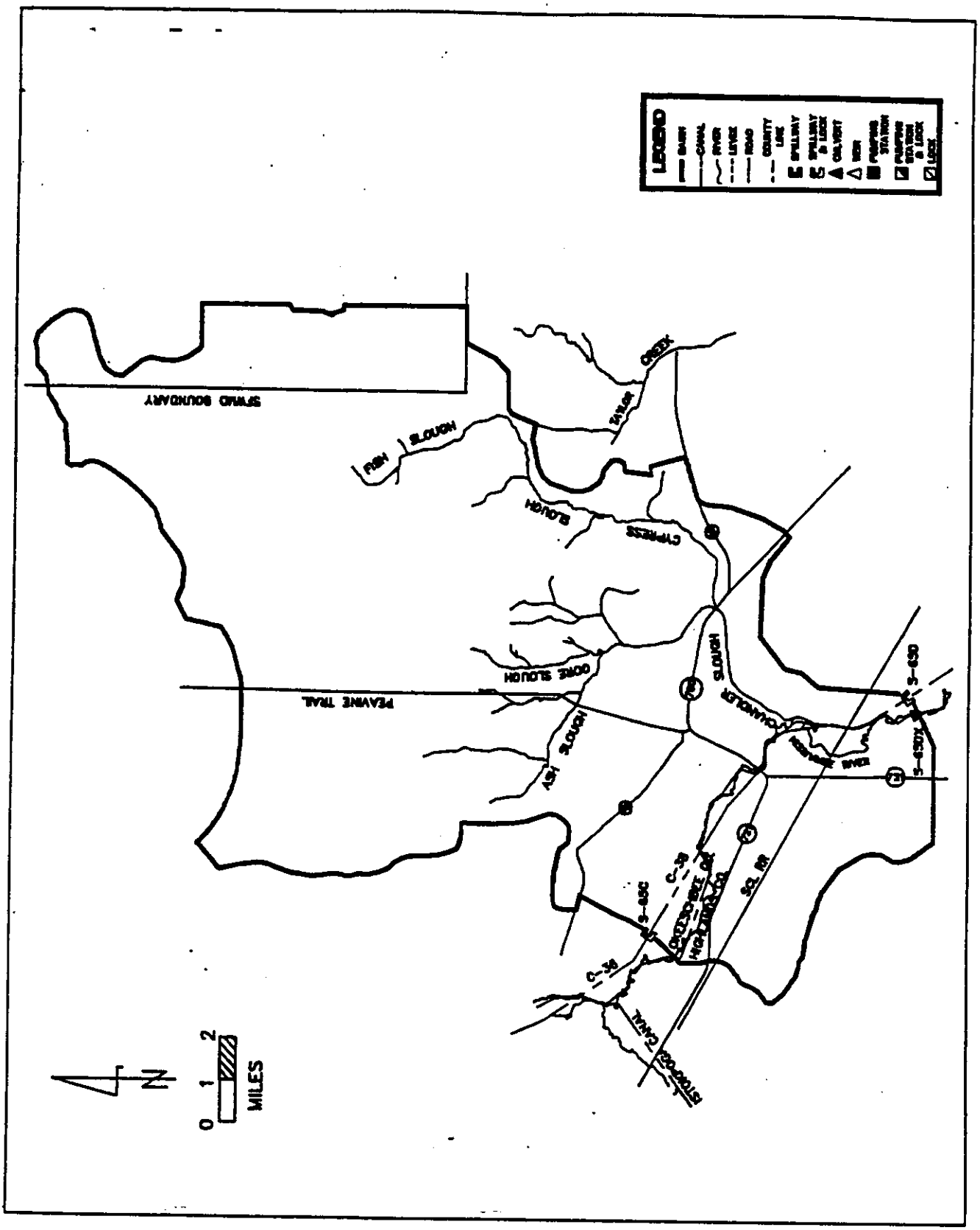


FIGURE S-65D Basin Map

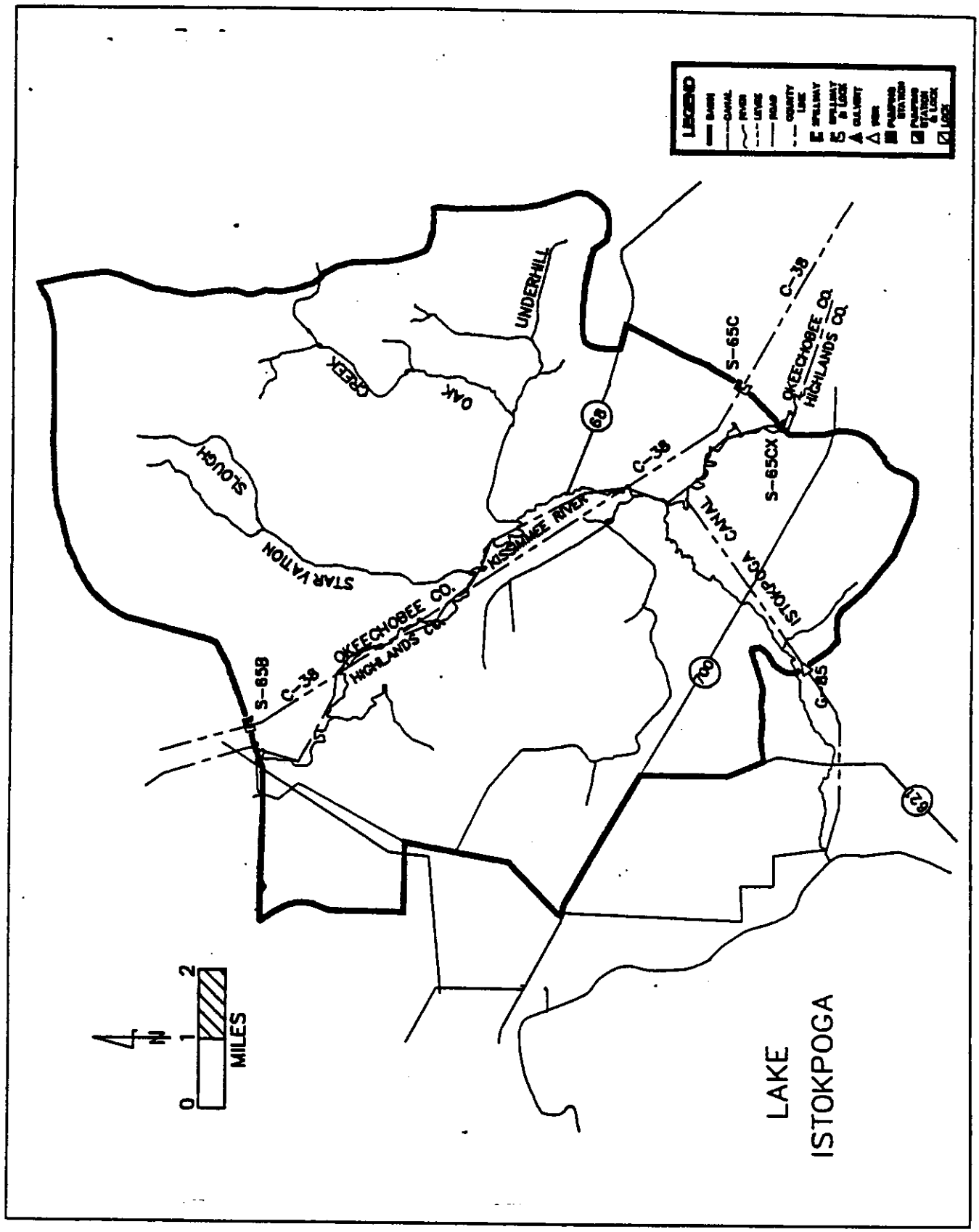


FIGURE S-65C Basin Map

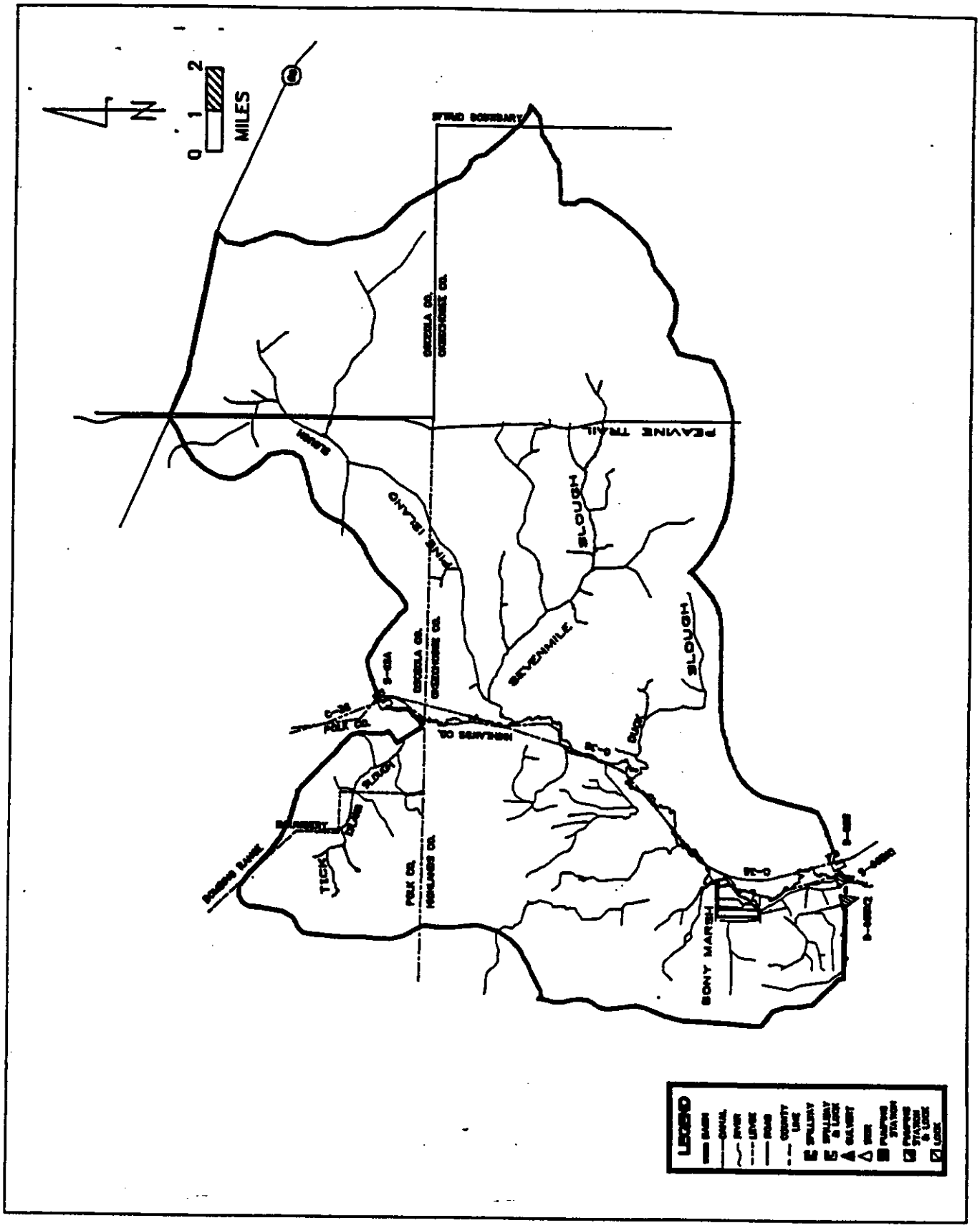


FIGURE S-65B Basin Map

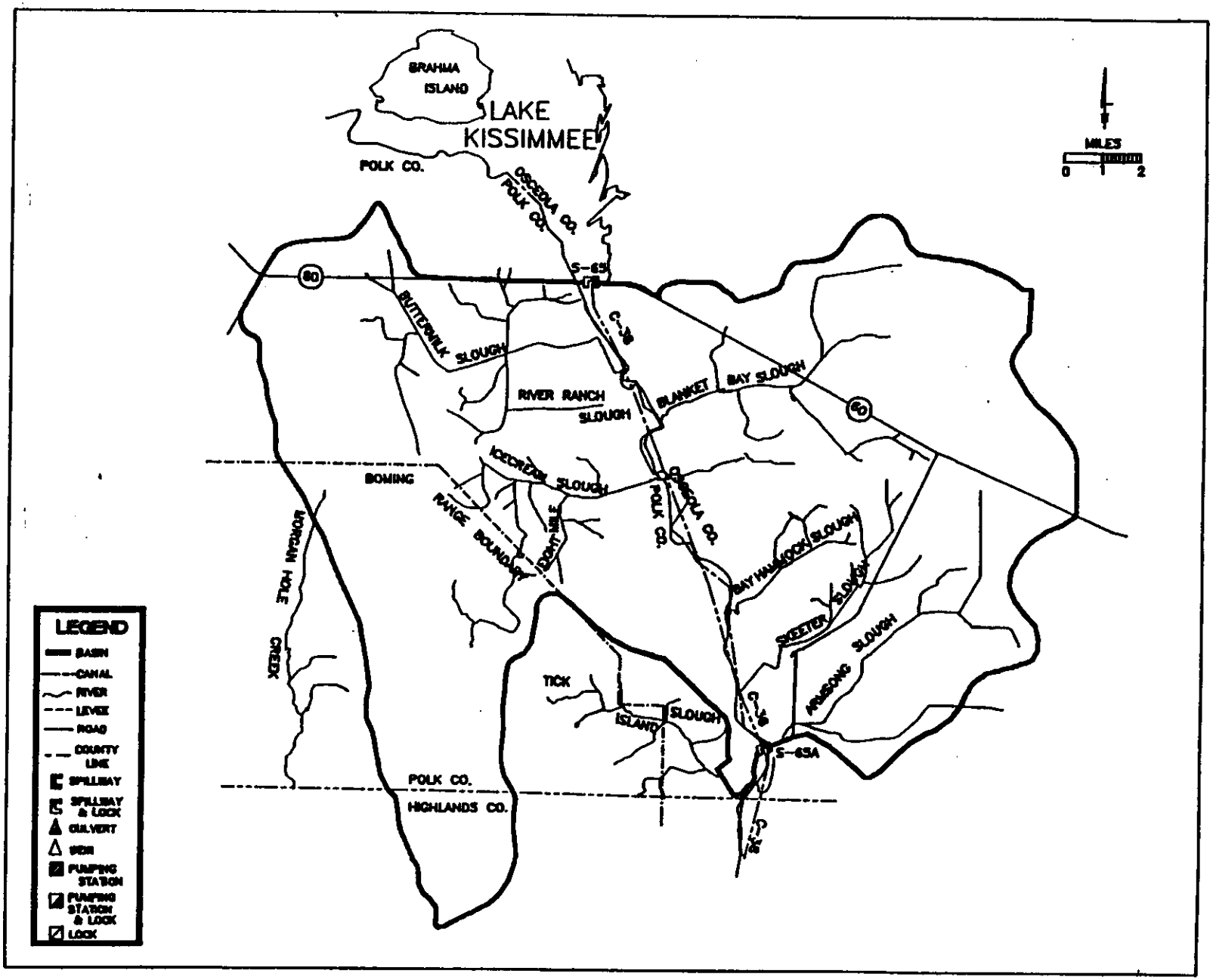


FIGURE S-65A Basin Map

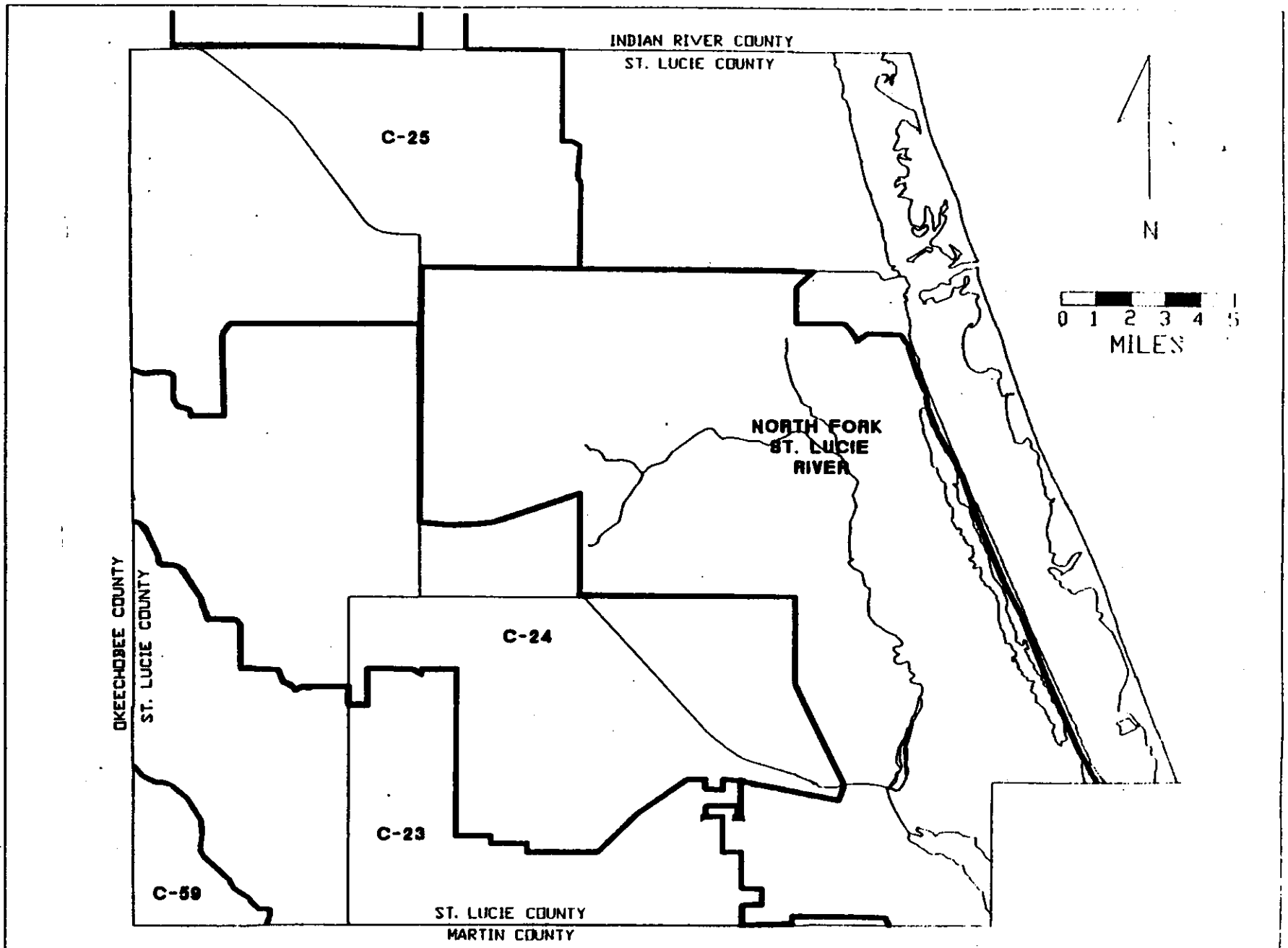


FIGURE ST. LUCIE COUNTY DRAINAGE BASINS

C-25 BASIN

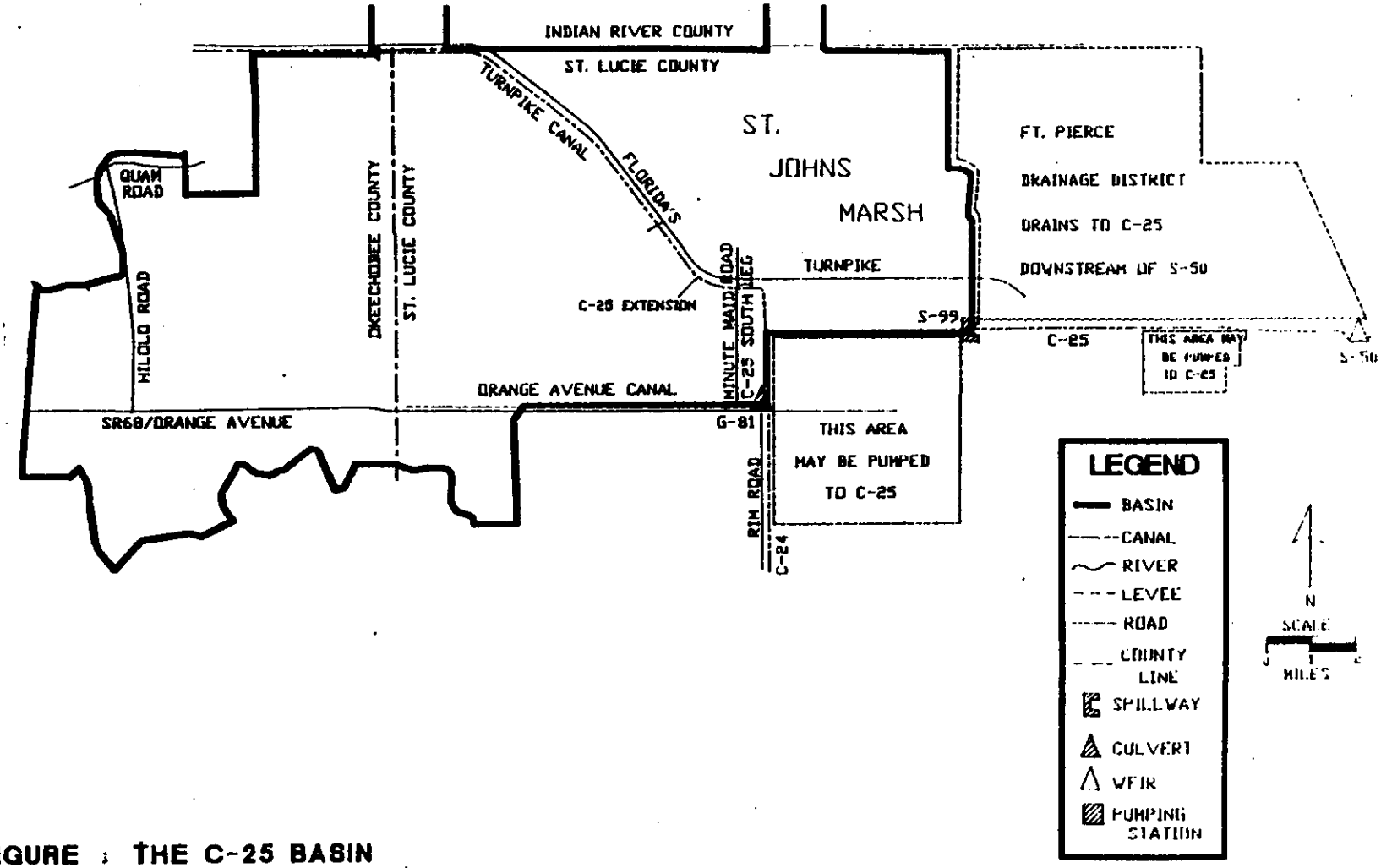


FIGURE : THE C-25 BASIN

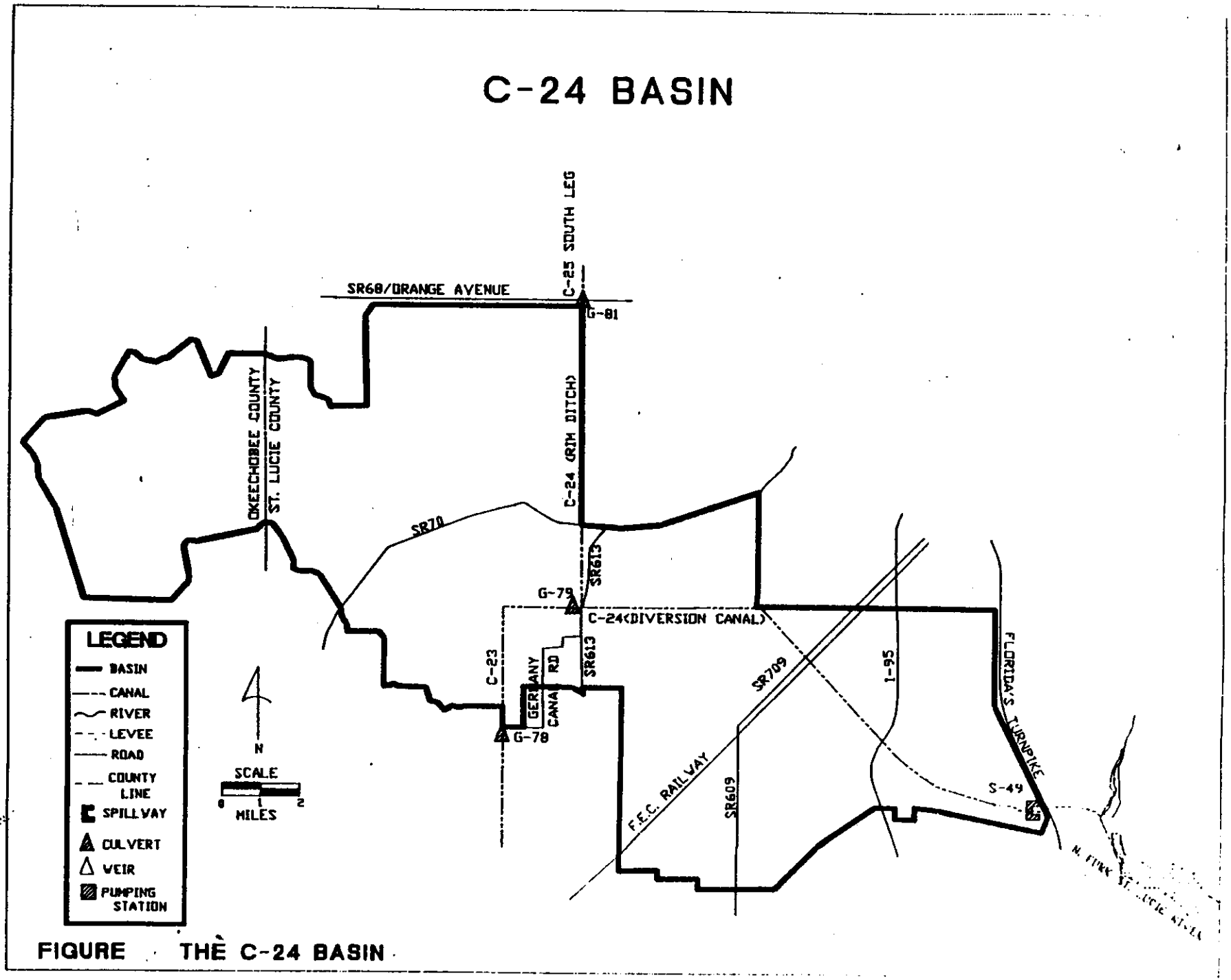


FIGURE THE C-24 BASIN

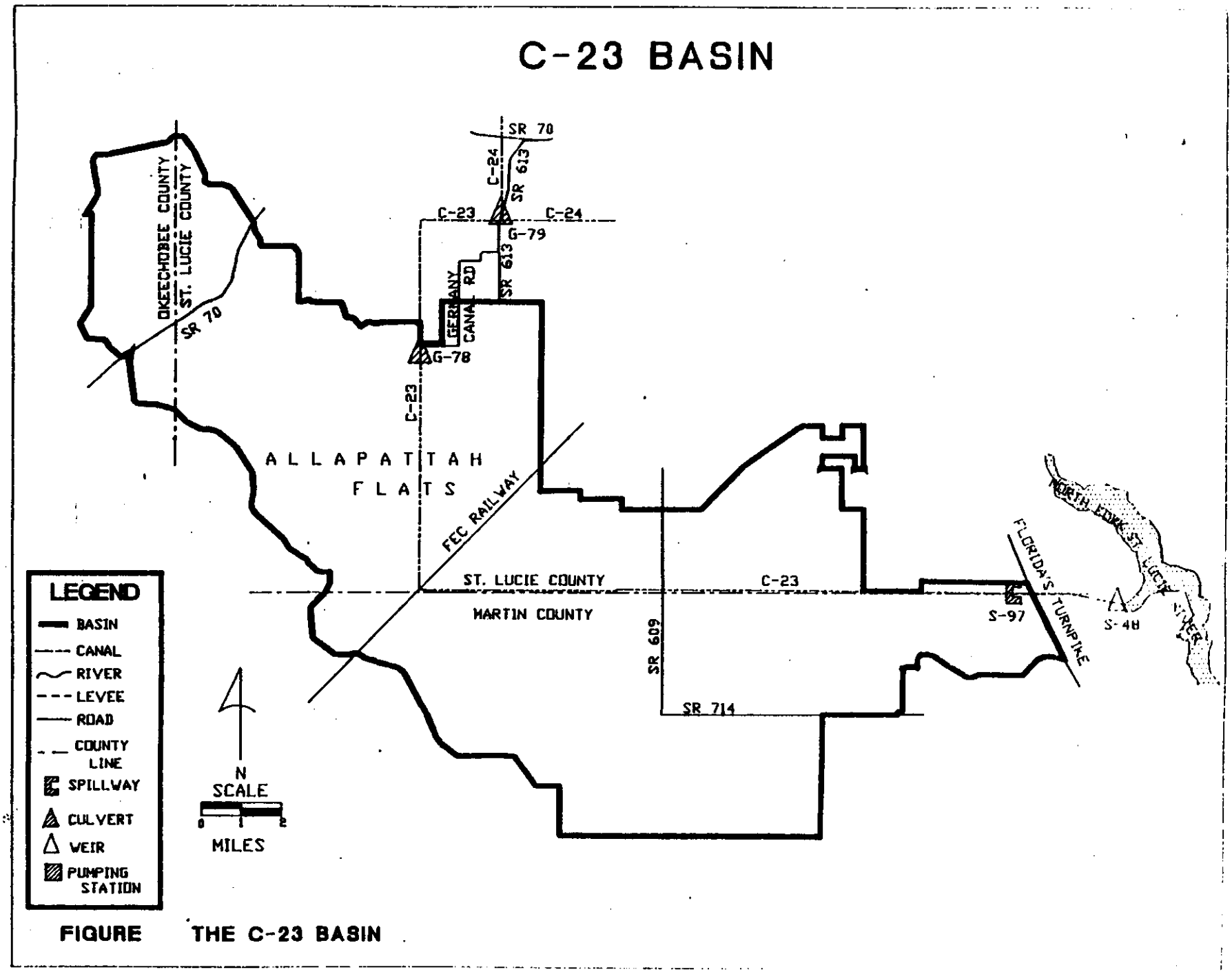


FIGURE THE C-23 BASIN

NORTH FORK OF THE ST. LUCIE RIVER BASIN

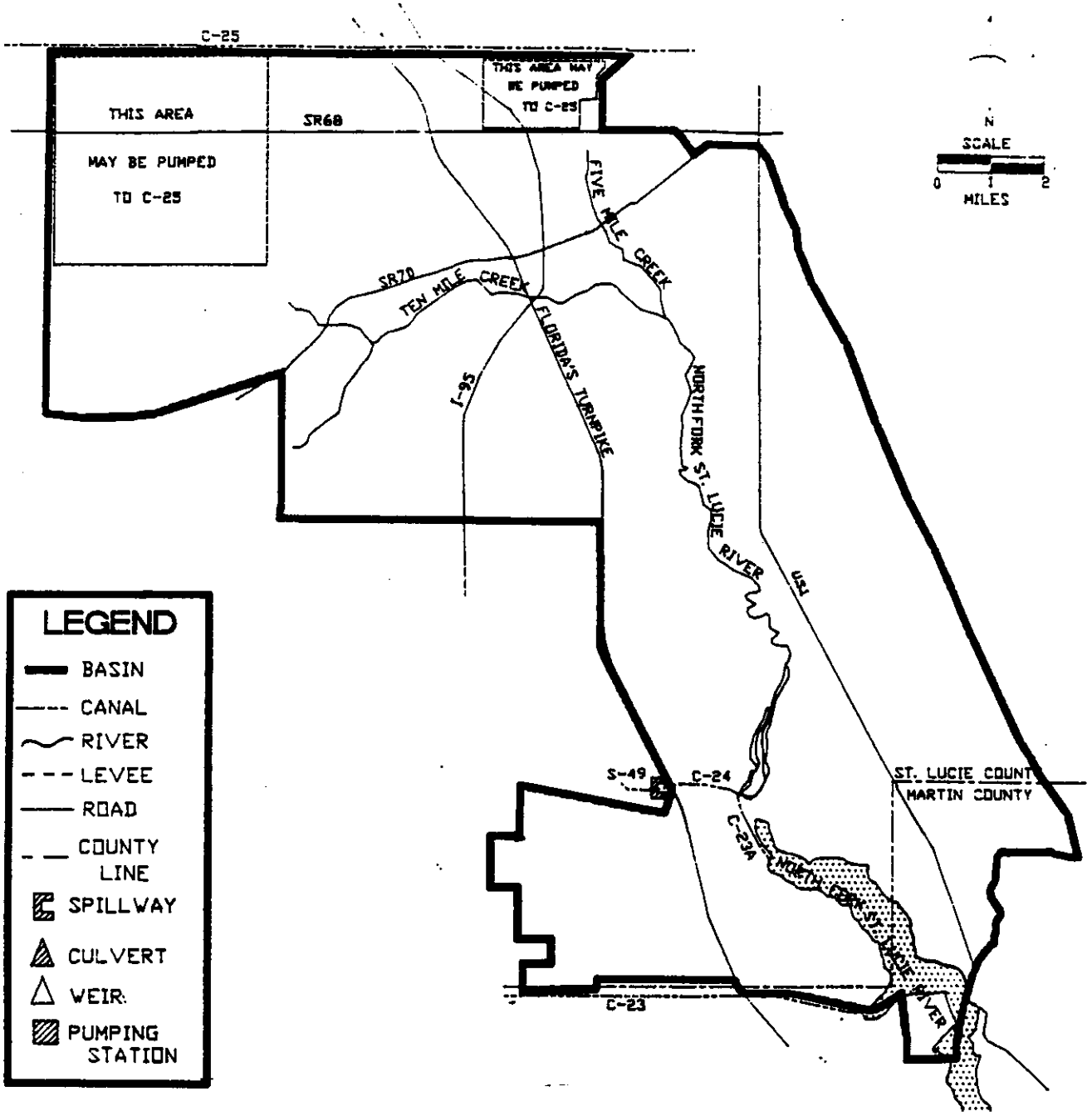


FIGURE THE NORTH FORK OF THE ST. LUCIE RIVER BASIN

C-59 BASIN

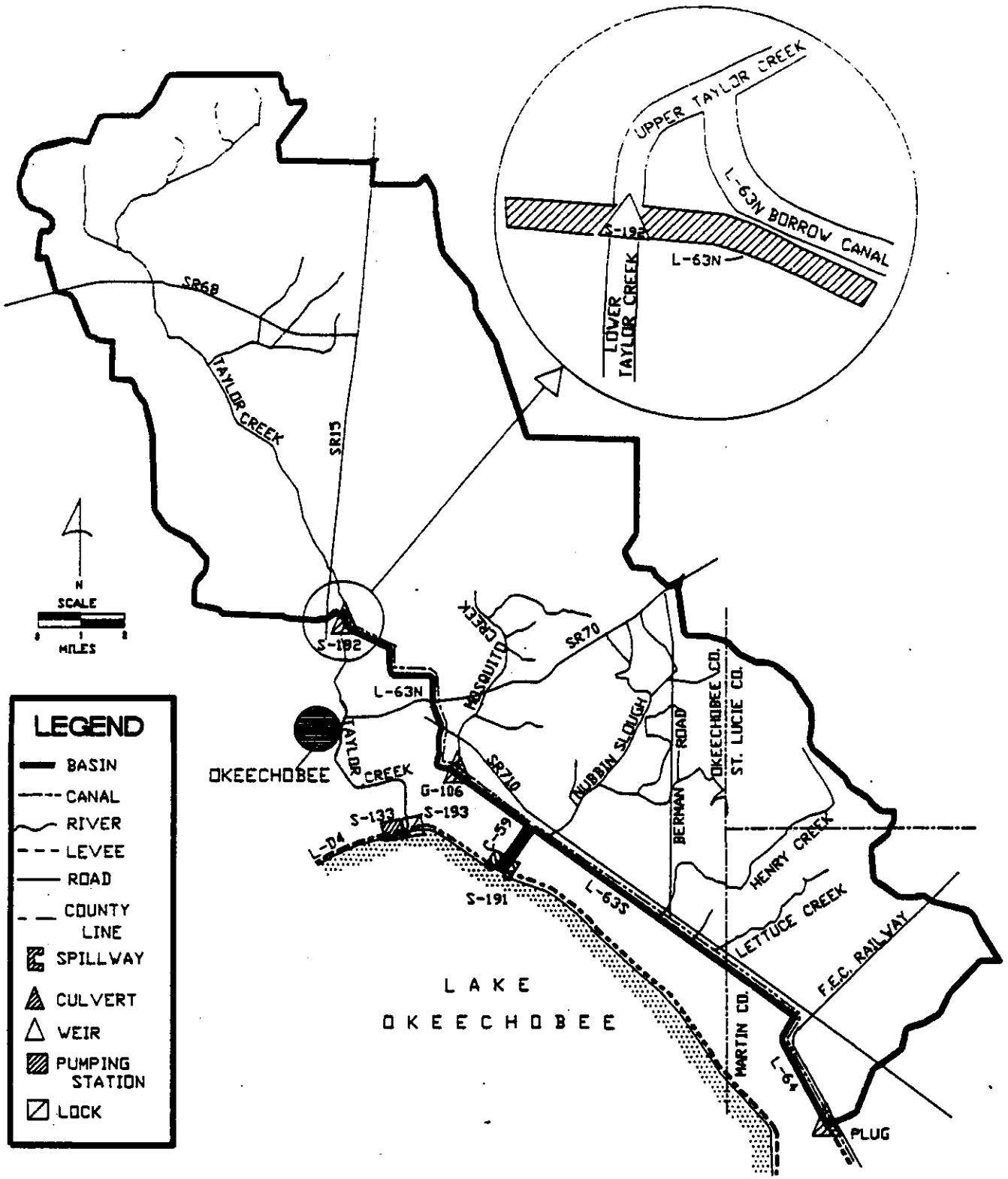


FIGURE THE C-59 BASIN

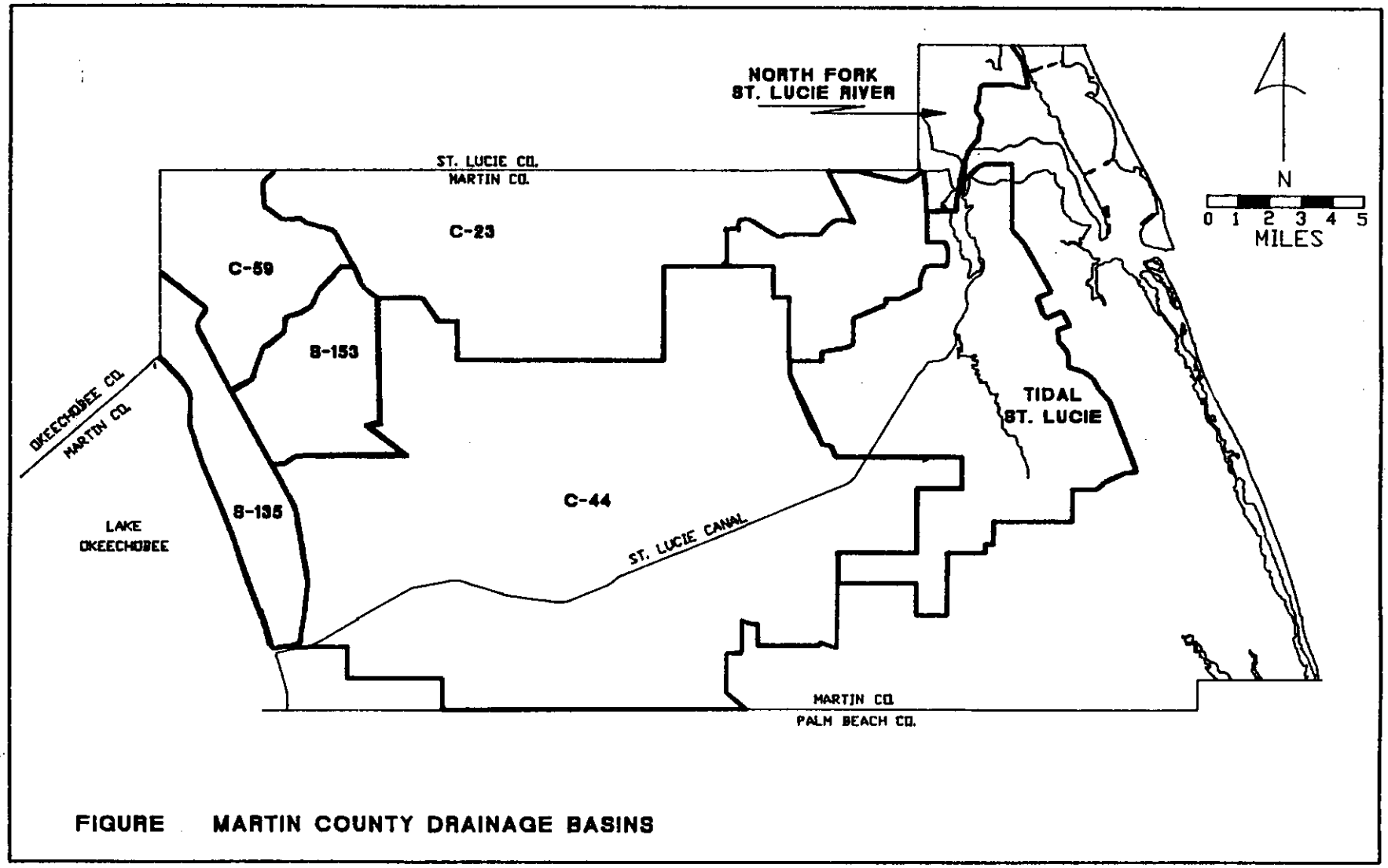


FIGURE MARTIN COUNTY DRAINAGE BASINS

NORTH FORK OF THE ST. LUCIE RIVER BASIN

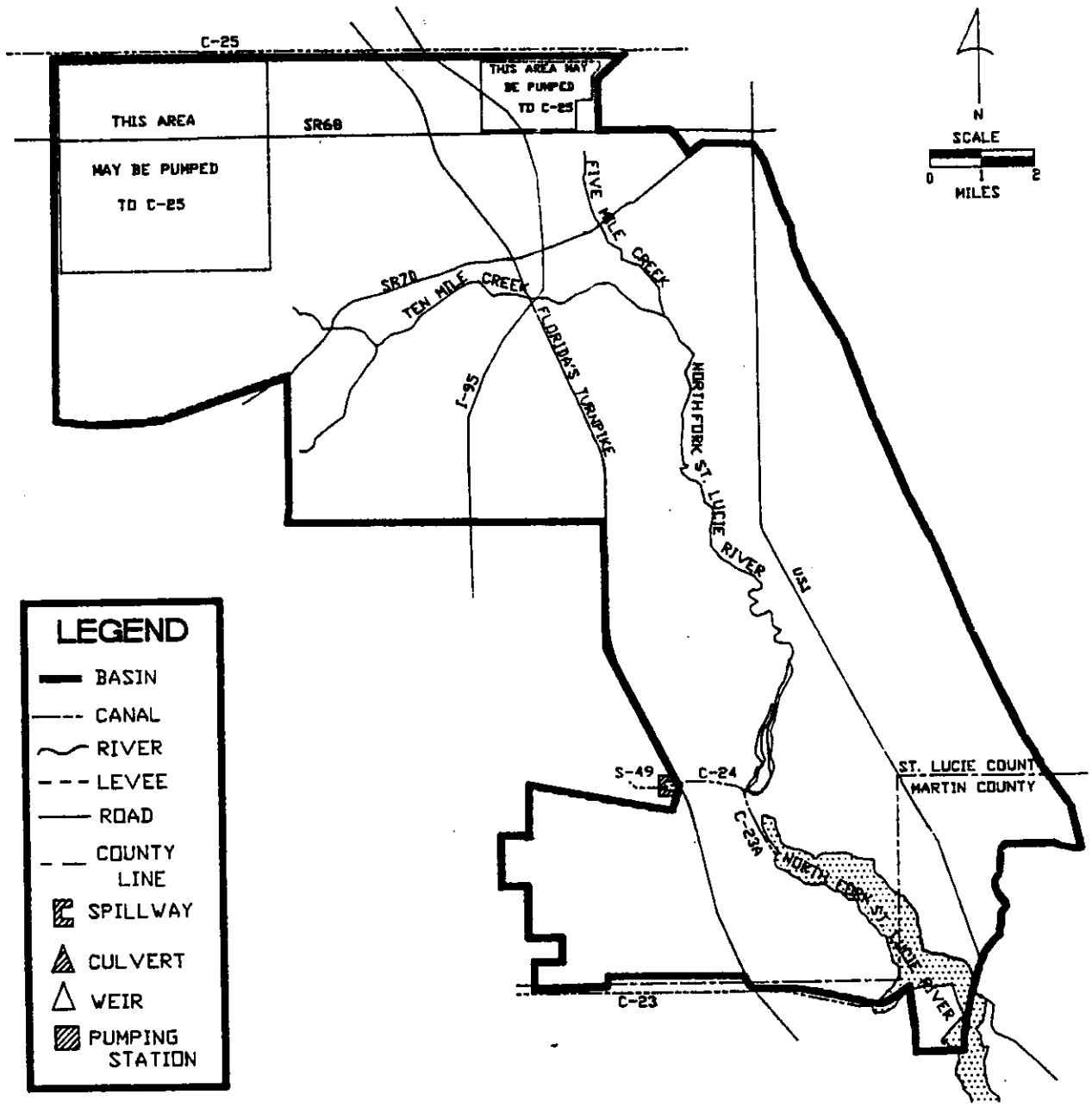


FIGURE THE NORTH FORK OF THE ST. LUCIE RIVER BASIN

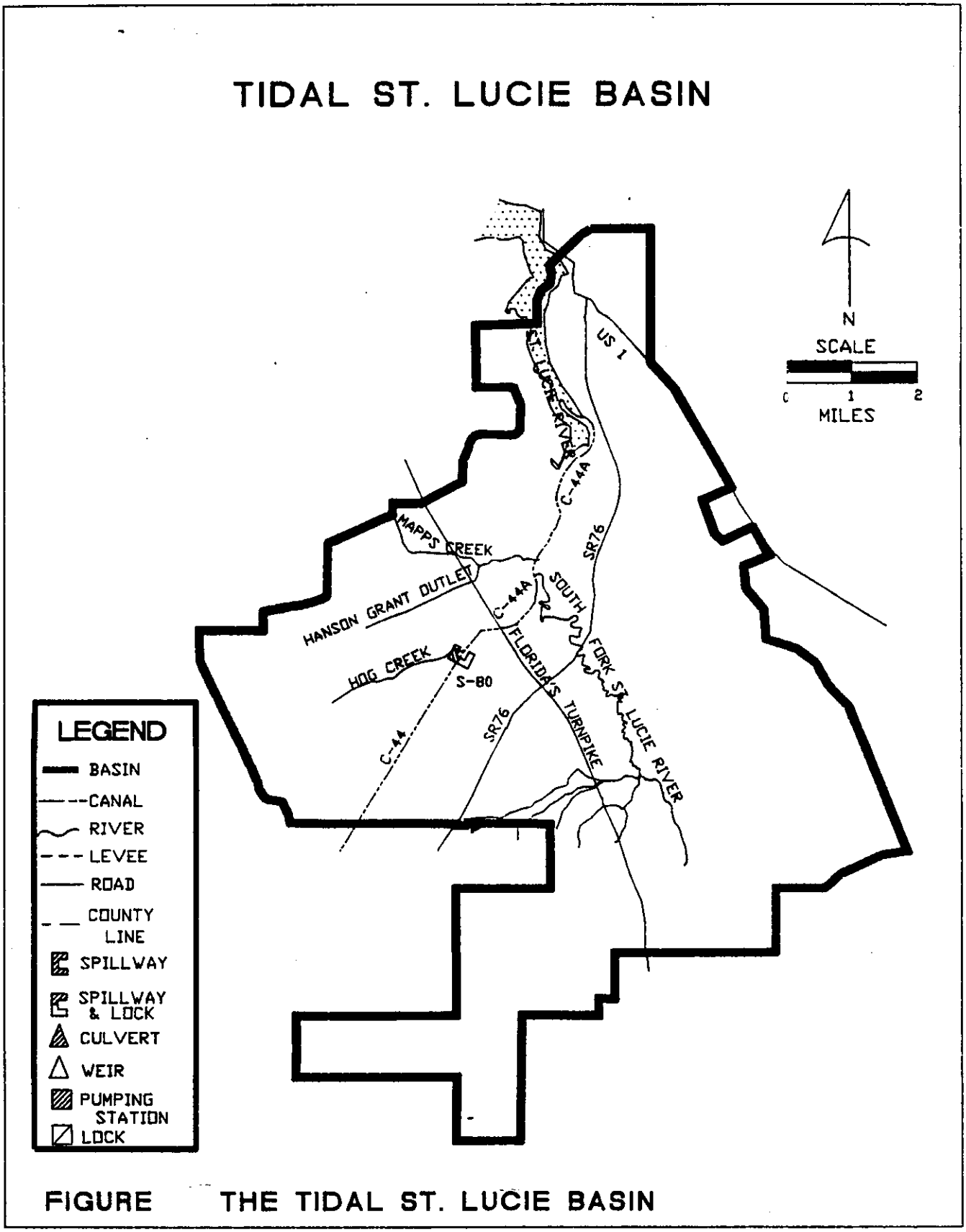


FIGURE THE TIDAL ST. LUCIE BASIN

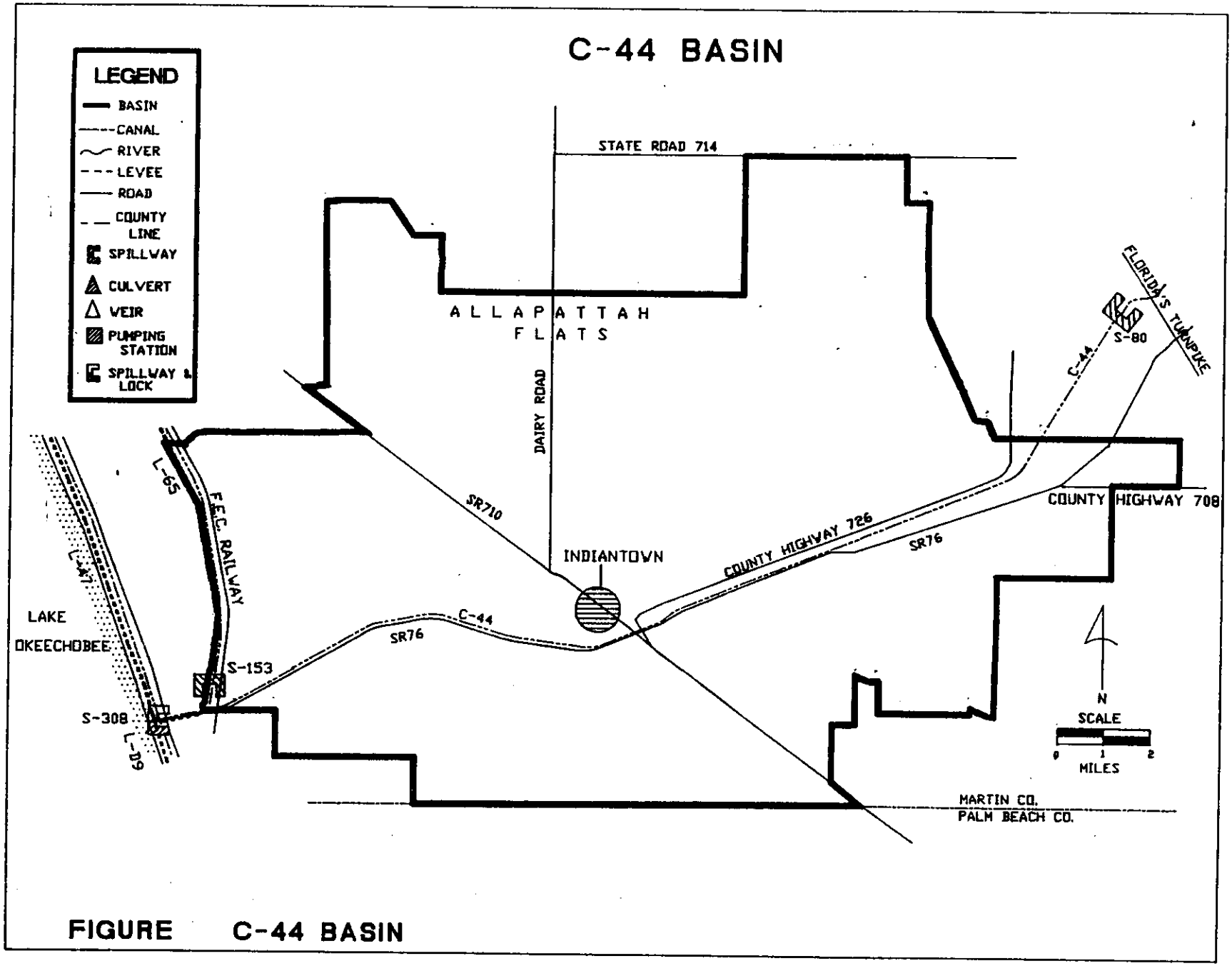


FIGURE C-44 BASIN

CORPS OF ENGINEERS SPILLWAYS ON THE ST. LUCIE CANAL (C-44)

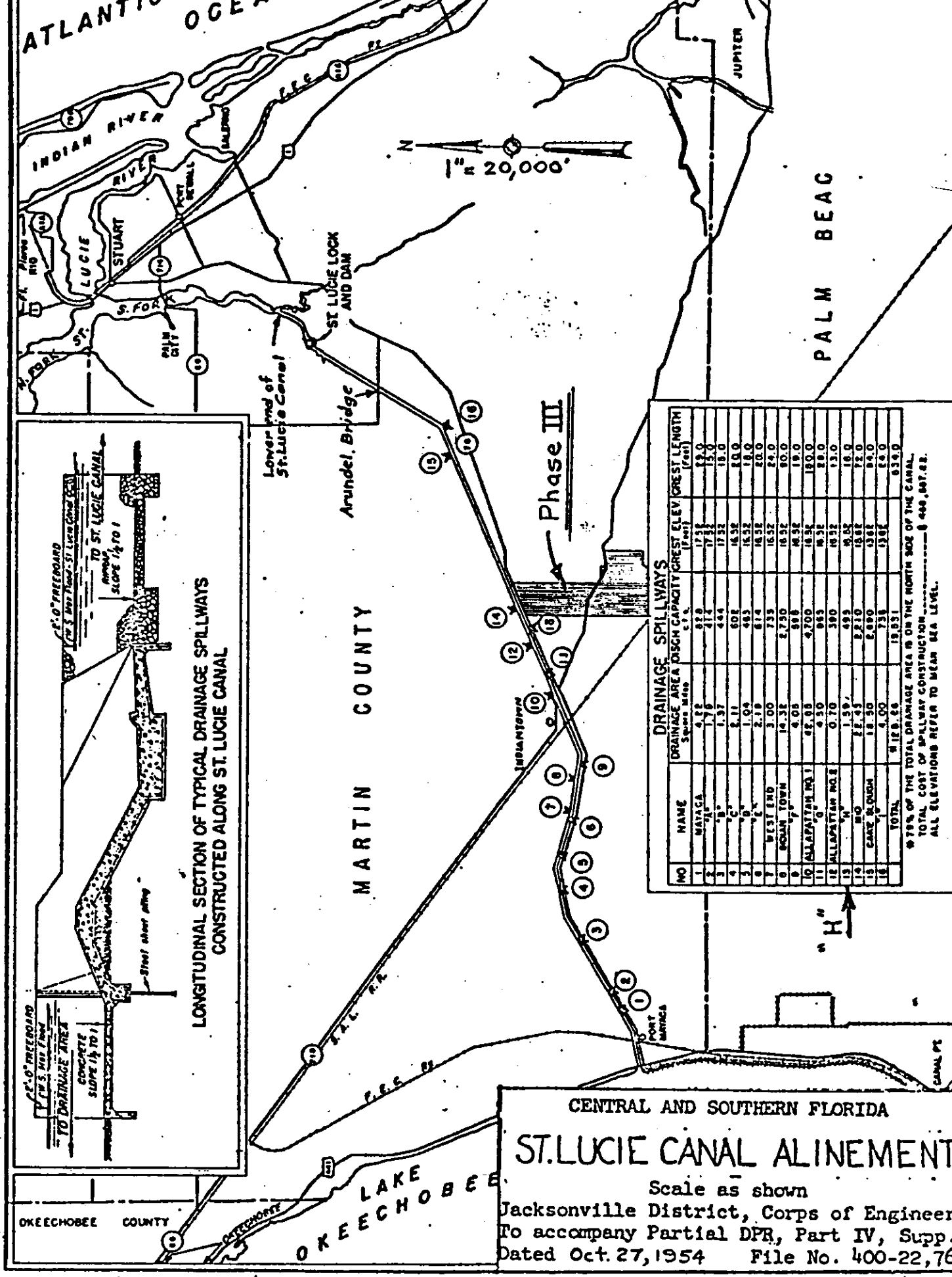
NAME AND NUMBER	SECTION	TOWNSHIP	RANGE	
1. Myaca 196.2 CSM	13	40S	37E	2600' E of 14/13 S line along river bank 4.22 sq. miles. Drainage area 828 cfs discharge capacity south side.
2. "A" 231.28 CSM	13	40S	37E	400' W of 37/38 R line along R bank 1.79 sq. miles. Drainage area 414 cfs discharge capacity south side.
3. "B" 324 CSM	8	40S	38E	2500' E of 37/38 R line along R bank 1.37 sq. miles. Drainage area 444 cfs discharge capacity south side.
4. "C" 285 CSM	4	40S	38E	500' W of 4/3 S line along R bank 2.11 sq. miles. Drainage area 602 cfs discharge capacity south side.
5. "D" 445 CSM	10	40S	38E	400' W of 10/11 S line along R bank 1.04 sq. miles. Drainage area 463 cfs drainage capacity south side.
6. "E" 280 CSM	11	40S	38E	100' W of 11/12 S line along bank 2.19 sq. miles. Drainage area 614 cfs discharge capacity south side.
7. West End 245 CSM	12	40S	38E	600' E of 11/12 S line along R bank 3.0 sq. miles. Drainage area 735 cfs discharge capacity north side.
8. Indiantown 192 CSM	7	40S	39E	On the 38/39 range line 14.32 sq. miles. Drainage area 27,500 cfs. Discharge capacity north side.
9. "F" 146.9 CSM	7	40S	39E	2600' E of 38/39 range line 4.05 sq. miles. Drainage area 595 cfs discharge capacity south side.
10. Allaphata #1 109.68 CSM	4	40S	39E	2800' W of 4/3 sectionline 42.85 sq. miles. Drainage area 4700 cfs discharge capacity north side.
11. "G" 192.2 CSM	4	40S	39E	100' W of 4/3 sectionline 4.50 sq. miles. Drainage area 865 cfs discharge capacity south side.

CORPS OF ENGINEERS SPILLWAYS ON THE ST. LUCIE CANAL (C-44)

con't.

	NAME AND NUMBER	SECTION	TOWNSHIP	RANGE	
12.	Allaphata #2 528 cfs from original drainage area boundaries need to be redefined.	3	40S	39E	1200' W of 2/3 sectionline 0.7 sq. miles drainage area 390 cfs discharge capacity north side.
13.	"H" 253.8 CSM	2	40S	39E	1200' E of 2/3 sectionline 1.59 sq. miles drainage area 495 cfs discharge capacity south side.
14.	"MID" Q=98.5 CSM	35	39S	39E	200' W of 35/36 sectionline 22.43 sq. miles drainage area 2210 cfs discharge capacity north side.
15.	Cane Slough 149.03 CSM	27	39S	40E	1200' E of 27/28 sectionline 18.0 sq. miles drainage area 2690 cfs discharge capacity north side.
16.	"I" 184 CSM	22	39S	40E	25' W of 22/23 sectionline 4.00 sq. miles drainage area 736 cfs discharge capacity "I" south side.
17.	East End 231 CSM	1	39S	40E	100' W of 40/41 range line 7.85 sq. miles drainage area 1820 cfs discharge capacity north side.

CSM = Cubic Feet per Second per Square MILE



NO	NAME	DRAINAGE AREA Square miles	DSCH CAPACITY c.f.s.	CREST ELEV. (Feet)	CREST LENGTH (Feet)
1	MATANZA	4.88	810	17.5	12.0
2	"A"	1.76	414	17.32	15.0
3	"B"	1.37	444	17.32	16.0
4	"C"	5.11	608	16.32	20.0
5	"D"	1.04	463	16.32	18.0
6	"E"	2.19	814	16.32	20.0
7	WEST END	3.00	735	16.32	24.0
8	ROUND TOWN	14.32	2,730	16.32	80.0
9	"F"	4.05	998	16.32	19.0
10	ALLAPATTAH NO.1	62.00	4,200	16.32	180.0
11	"G"	4.30	965	16.32	28.0
12	ALLAPATTAH NO.2	0.70	390	16.32	13.0
13	"H"	1.59	495	16.32	16.0
14	NO	22.45	2,210	15.82	72.0
15	CAKE ROUGH	18.30	2,690	13.82	84.0
16	"I"	4.00	736	13.82	24.0
	TOTAL	162.26	19,831	13.82	634.0

* 75% OF THE TOTAL DRAINAGE AREA IS ON THE NORTH SIDE OF THE CANAL.
TOTAL COST OF SPILLWAY CONSTRUCTION ..... $ 440,847.82.
ALL ELEVATIONS REFER TO MEAN SEA LEVEL.

CENTRAL AND SOUTHERN FLORIDA

ST. LUCIE CANAL ALINEMENT

Scale as shown
Jacksonville District, Corps of Engineer
To accompany Partial DPR, Part IV, Supp.
Dated Oct. 27, 1954 File No. 400-22,76

LOCATION OF COE SPILLWAYS ON THE ST. LUCIE CANAL

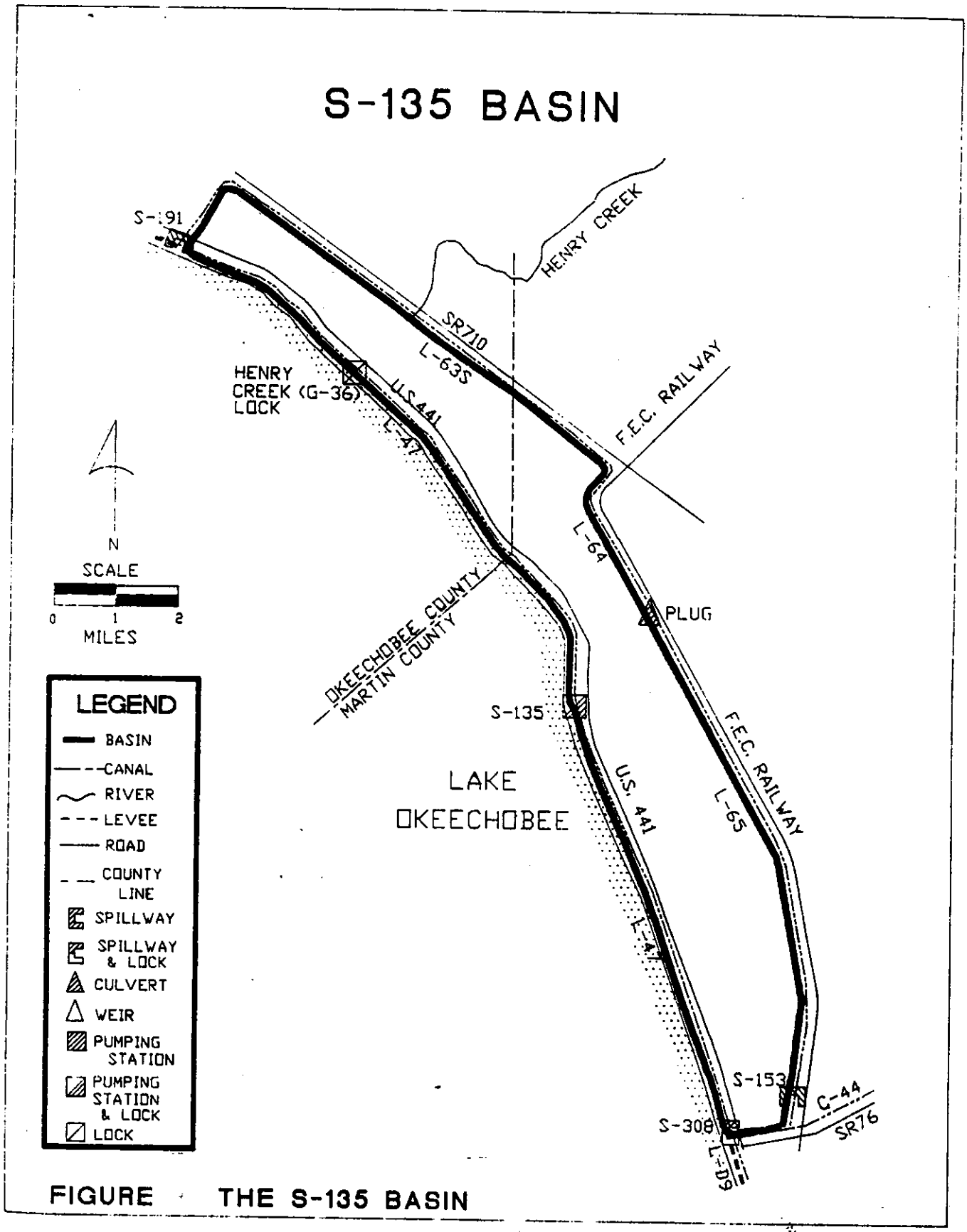


FIGURE THE S-135 BASIN

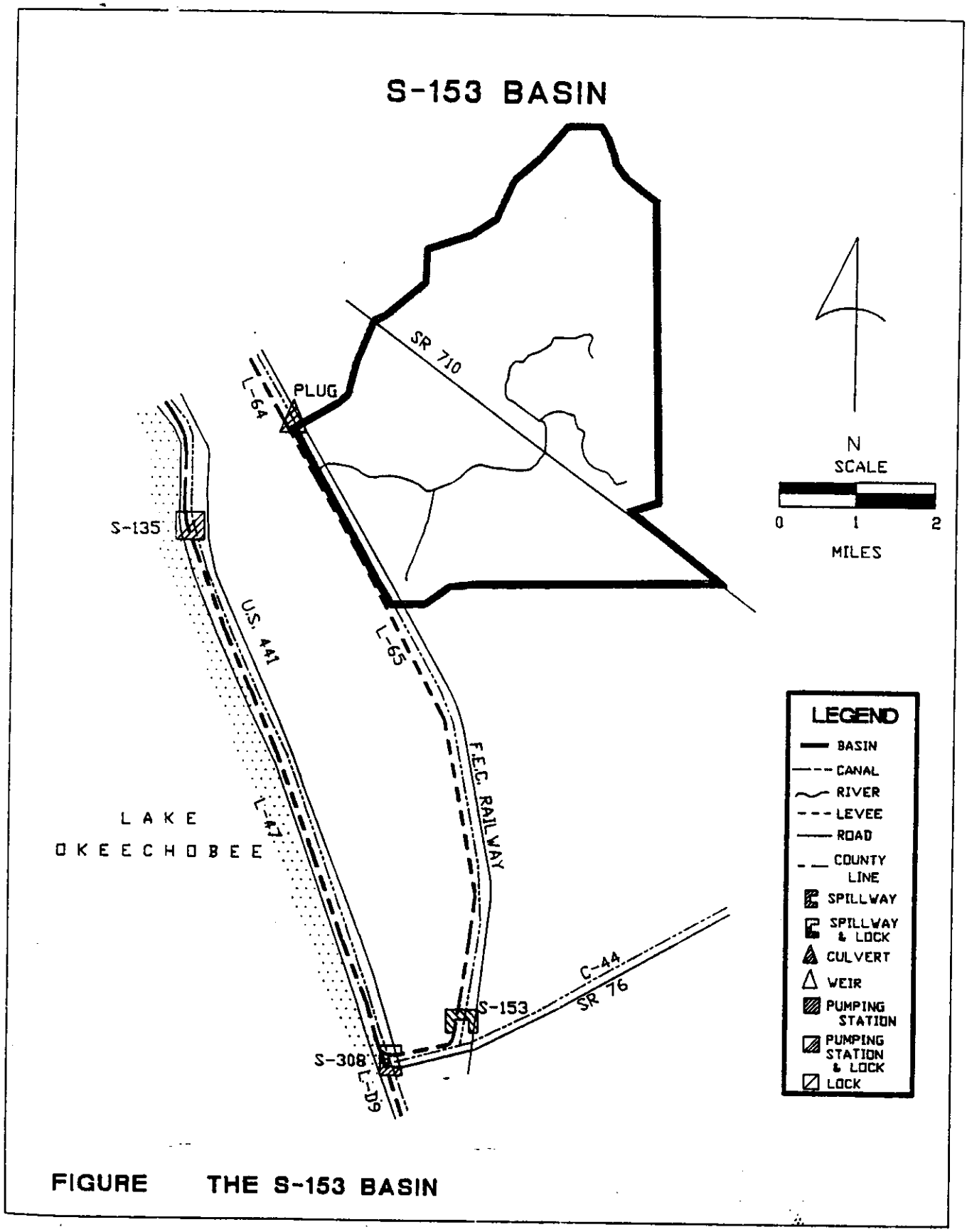


FIGURE THE S-153 BASIN

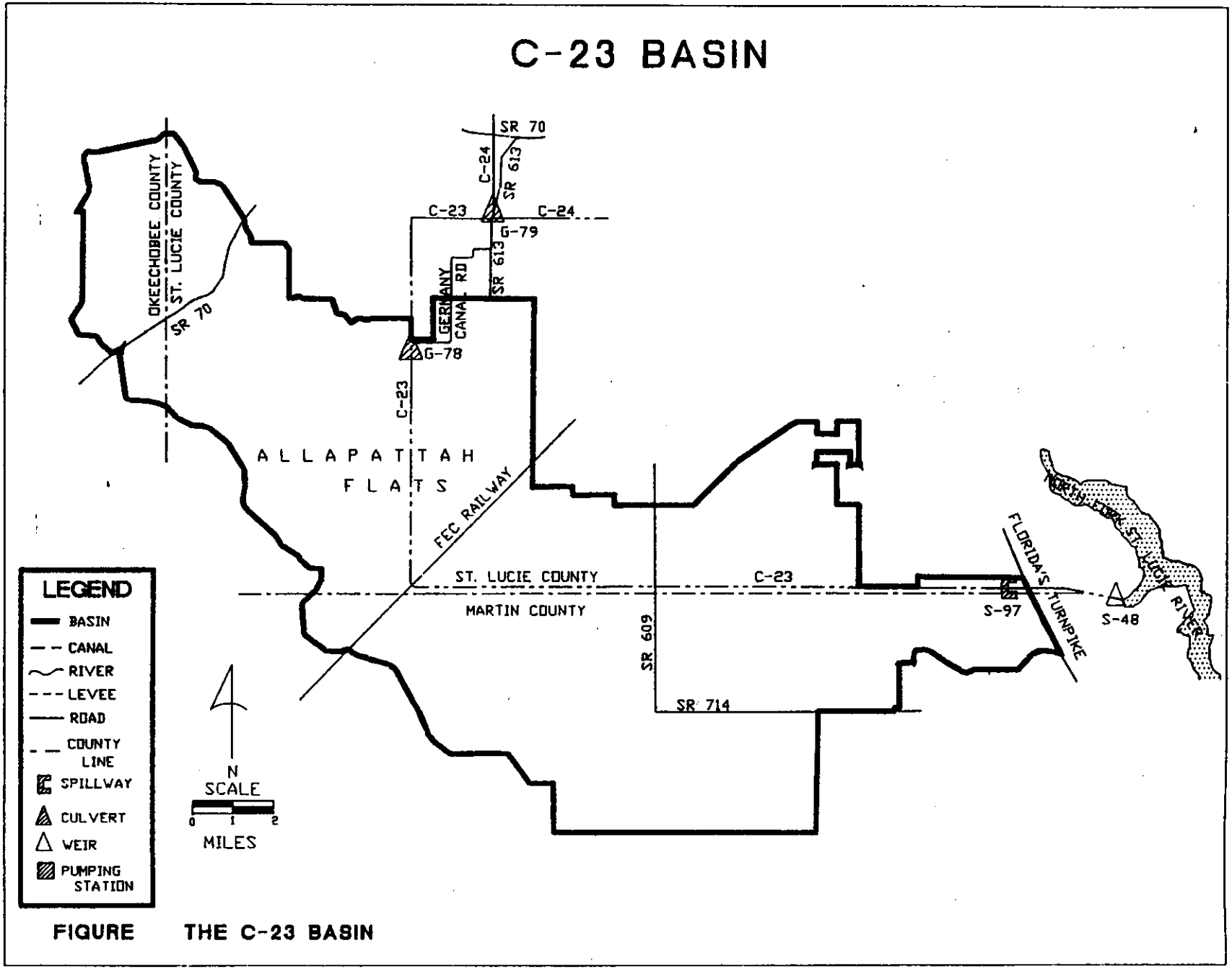


FIGURE THE C-23 BASIN

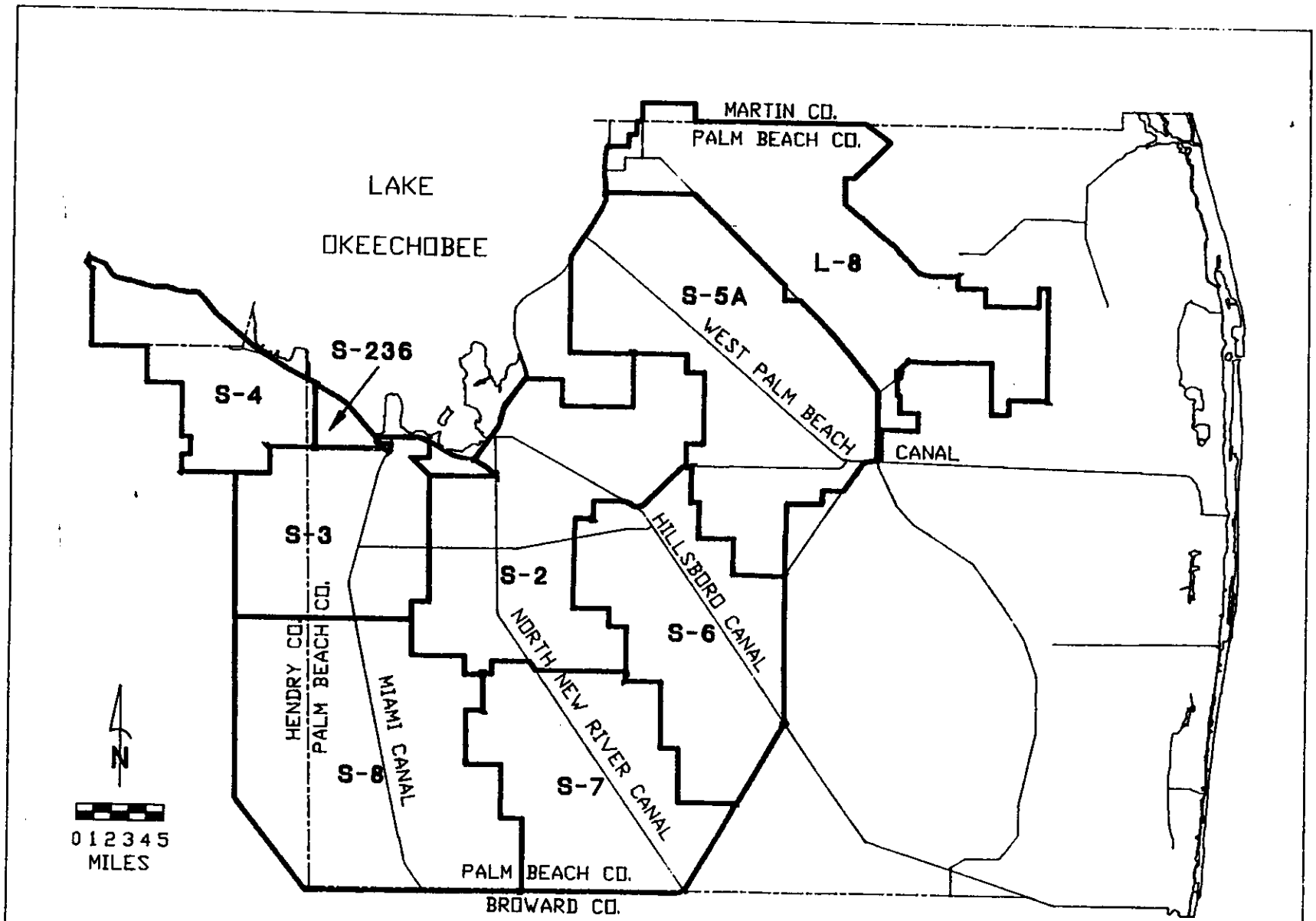


FIGURE THE EVERGLADES AGRICULTURAL AREA DRAINAGE BASINS

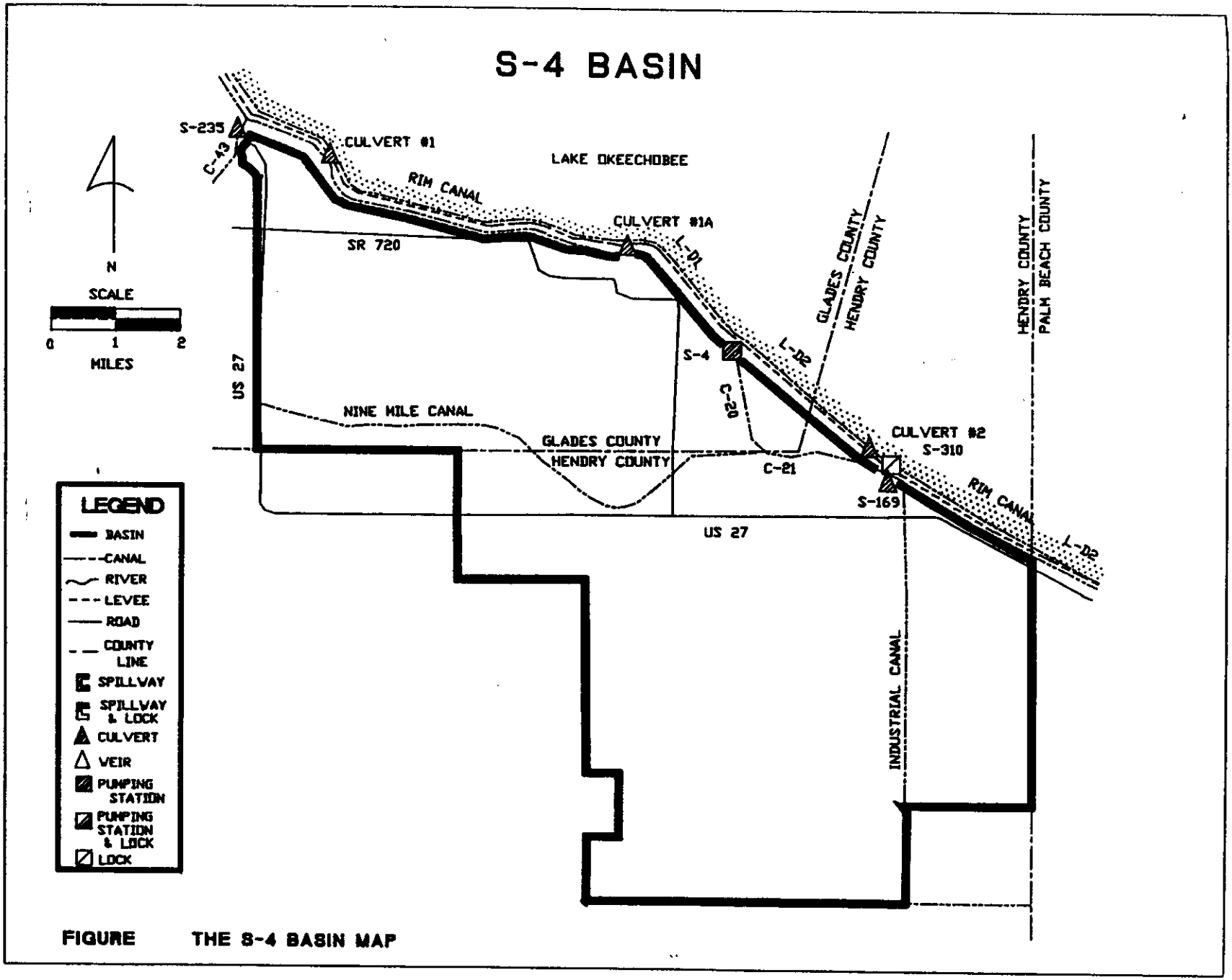


FIGURE THE S-4 BASIN MAP

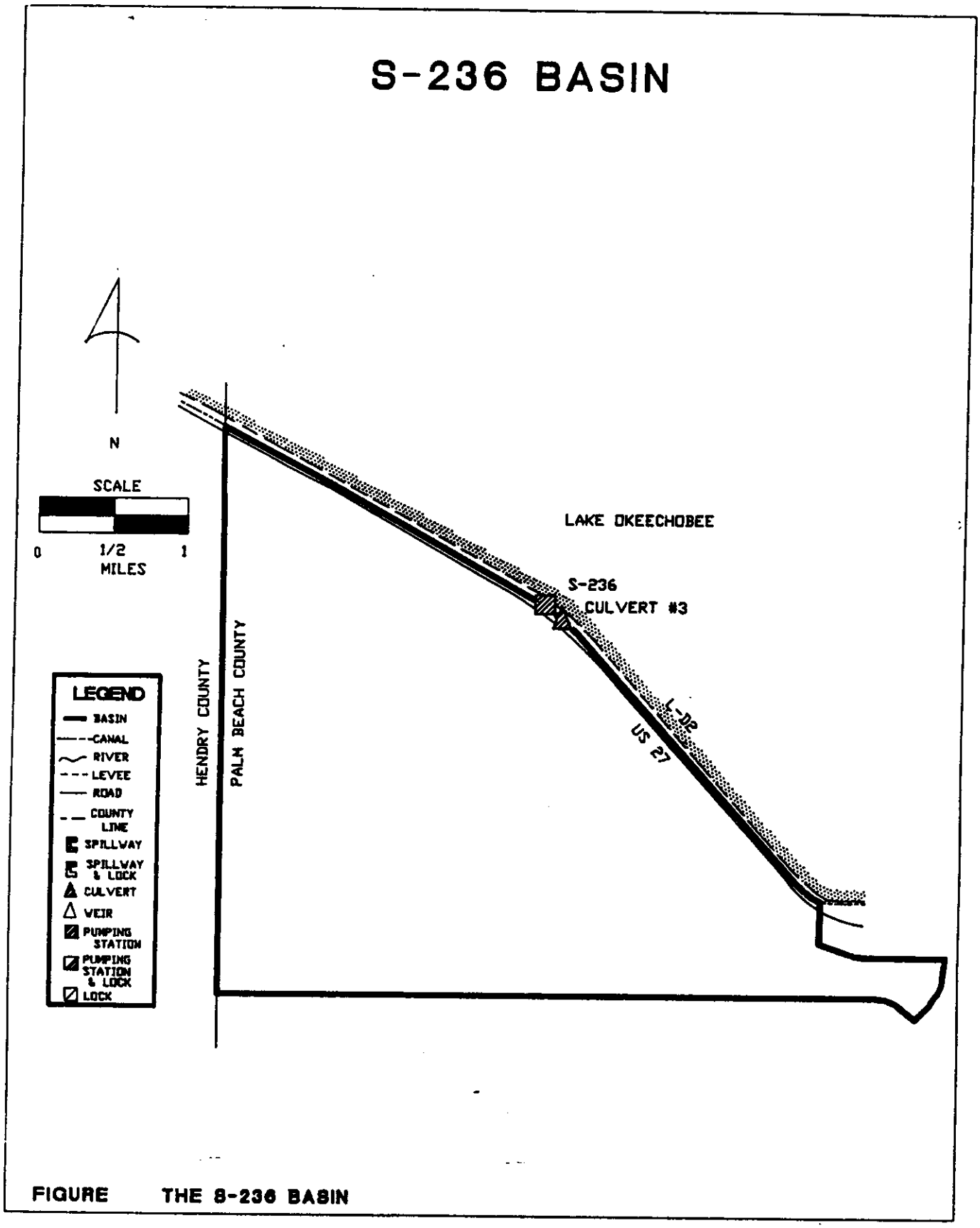


FIGURE THE S-236 BASIN

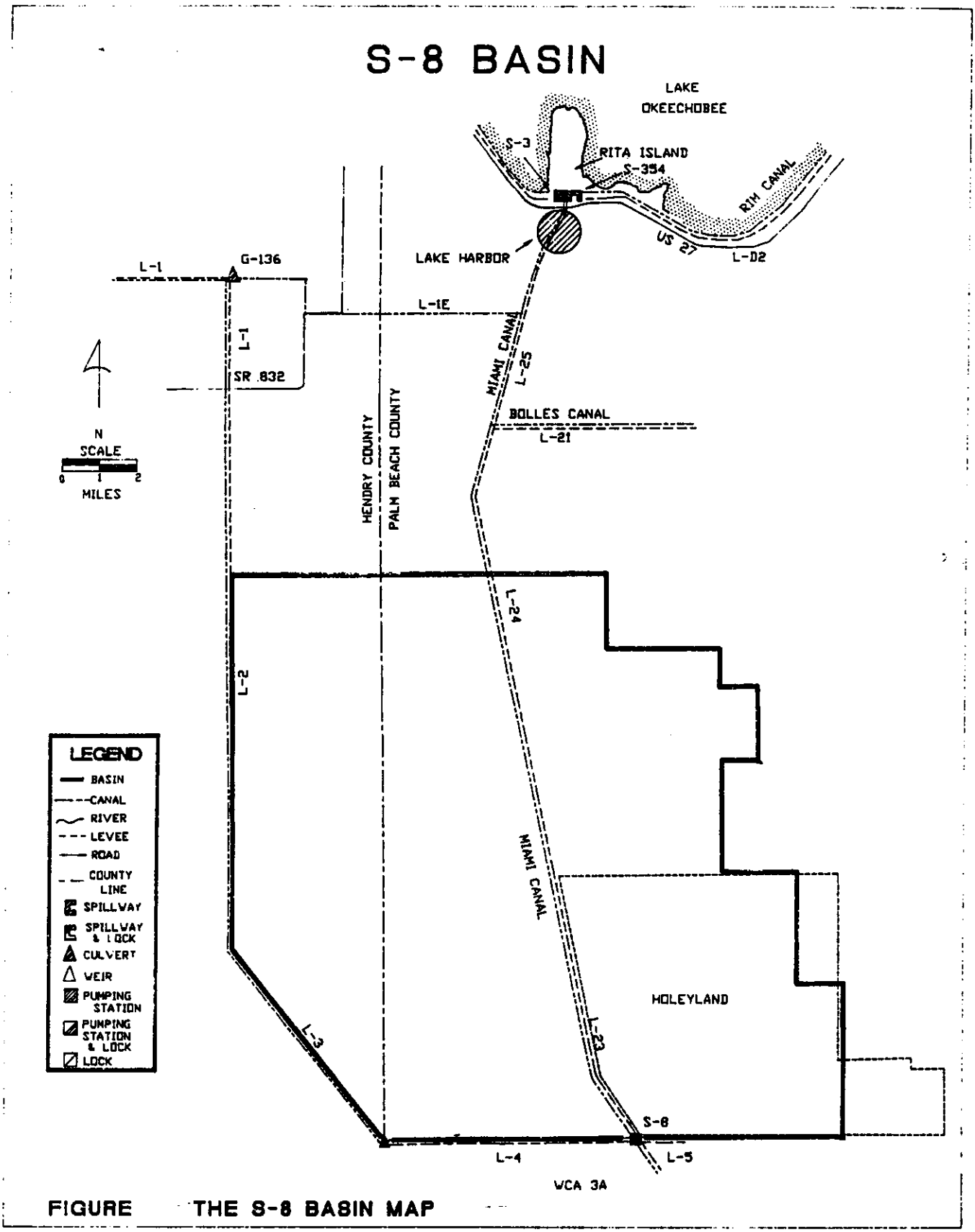


FIGURE THE S-8 BASIN MAP

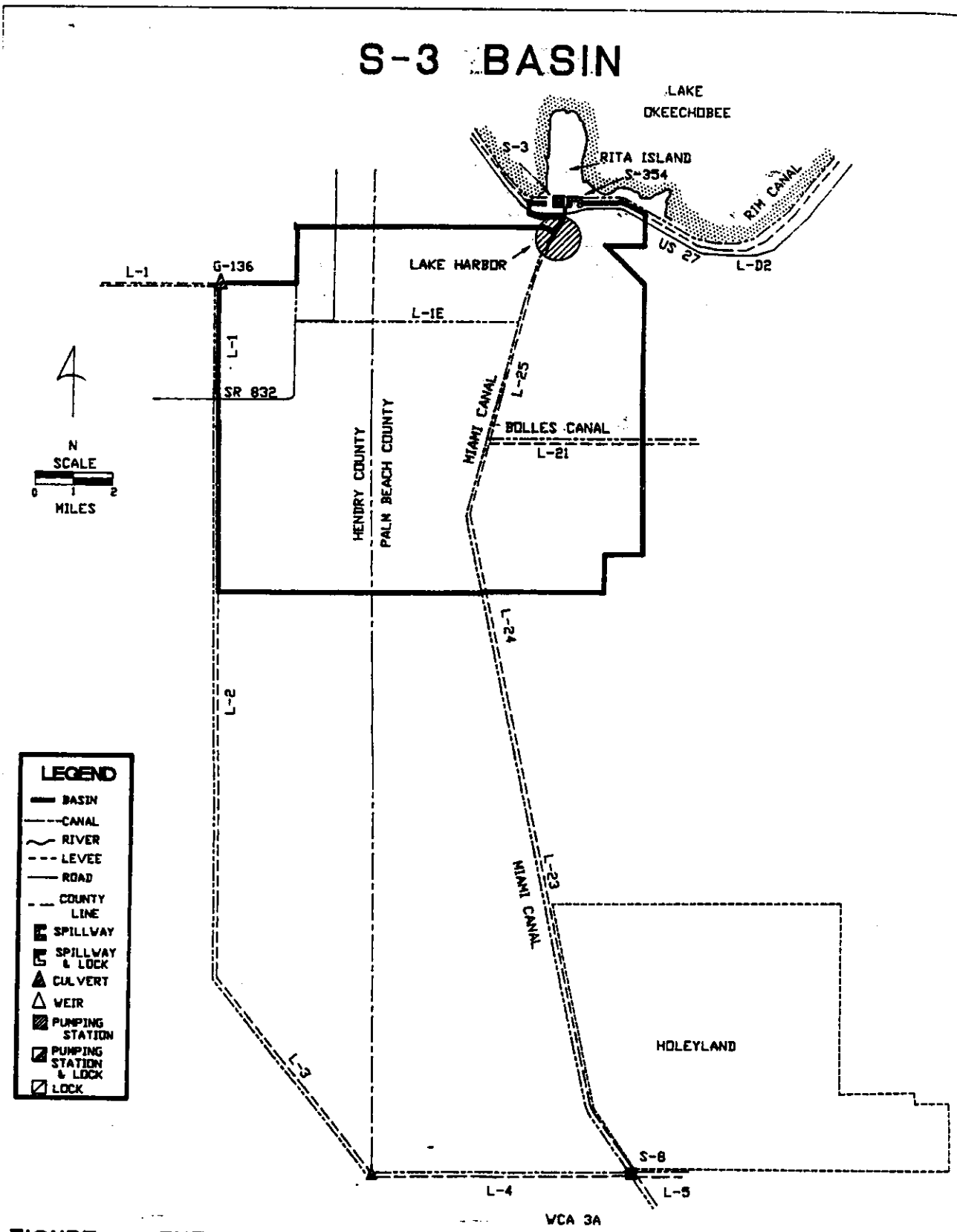


FIGURE 11. THE S-3 BASIN MAP

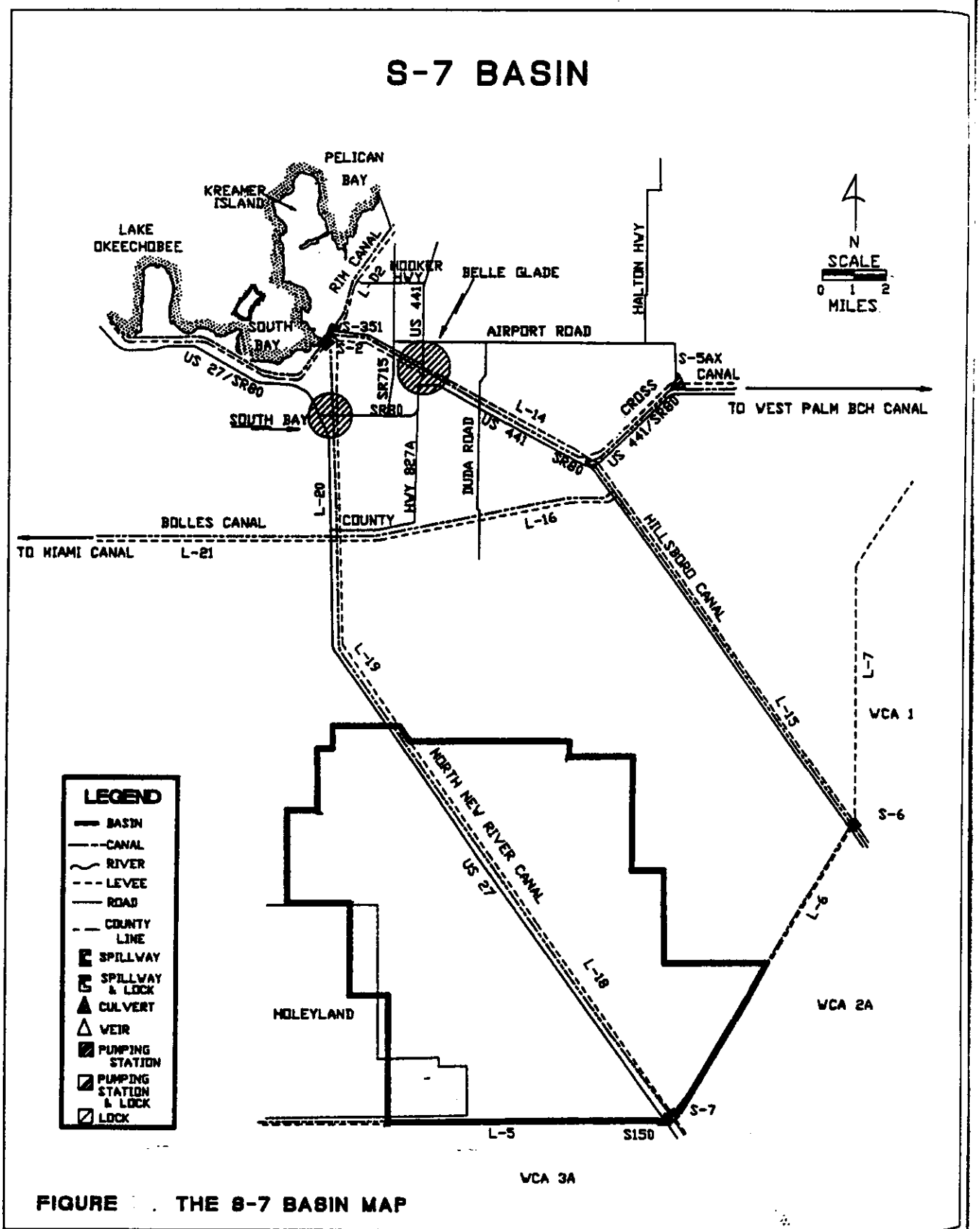


FIGURE . THE S-7 BASIN MAP

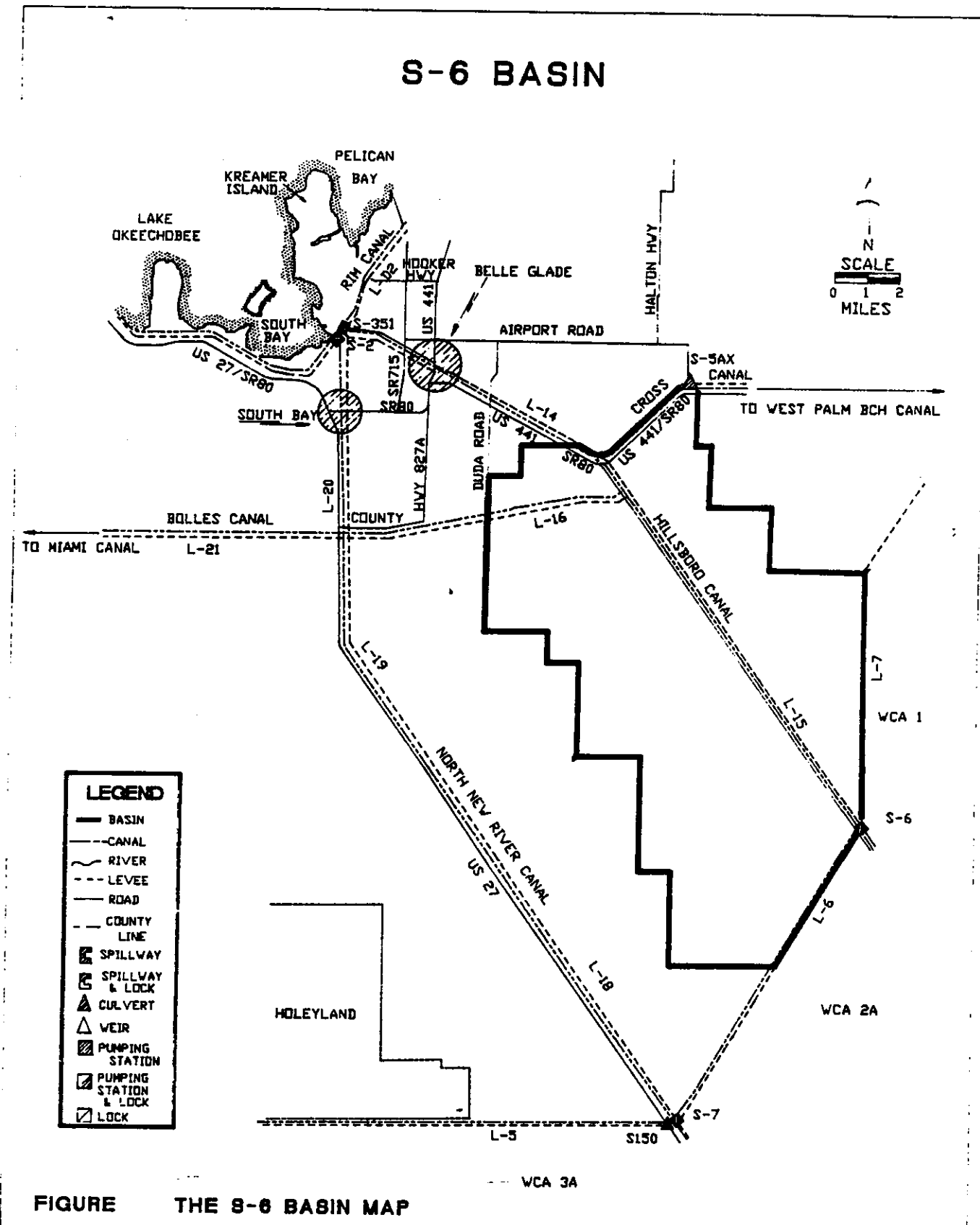


FIGURE THE S-6 BASIN MAP

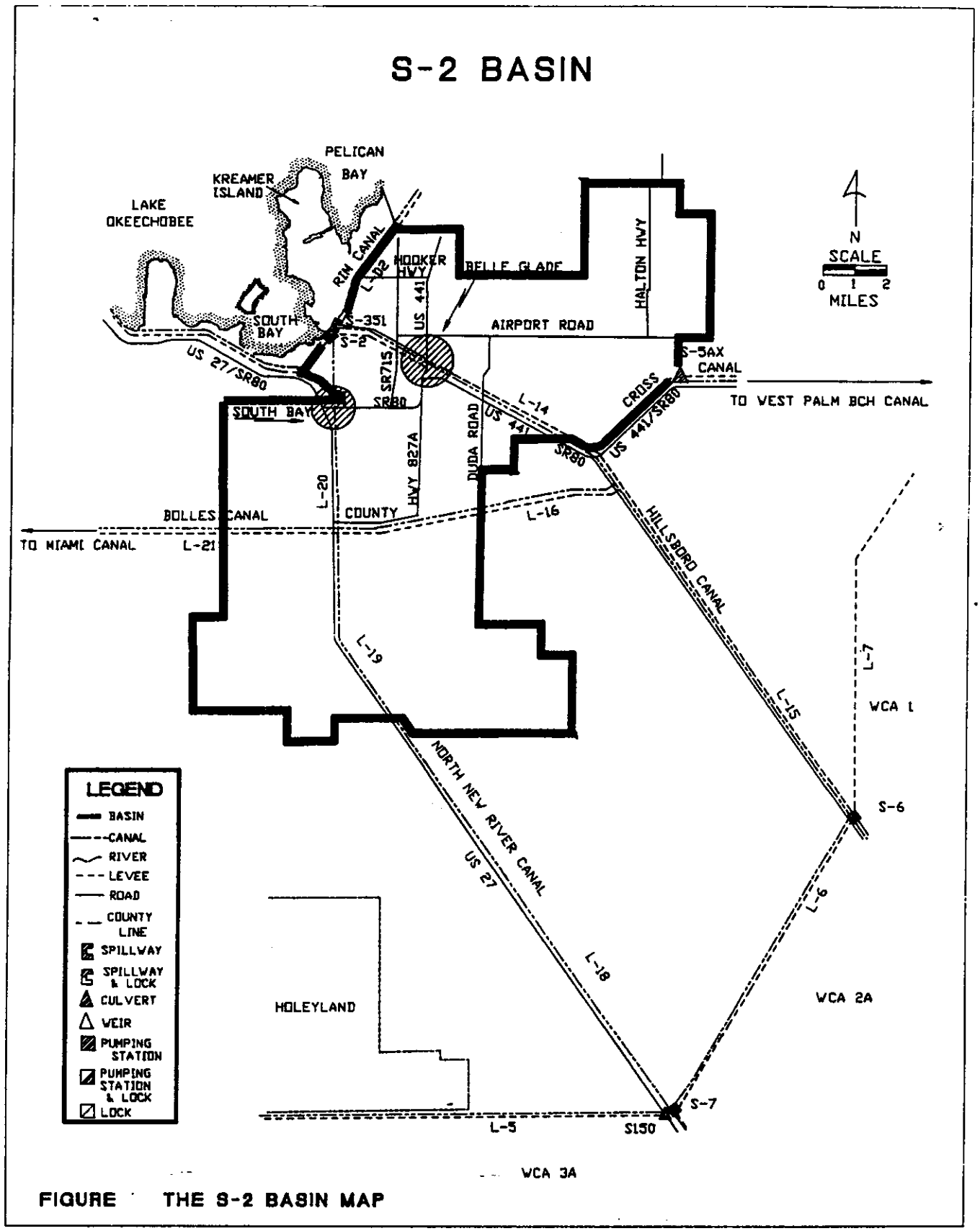


FIGURE THE S-2 BASIN MAP

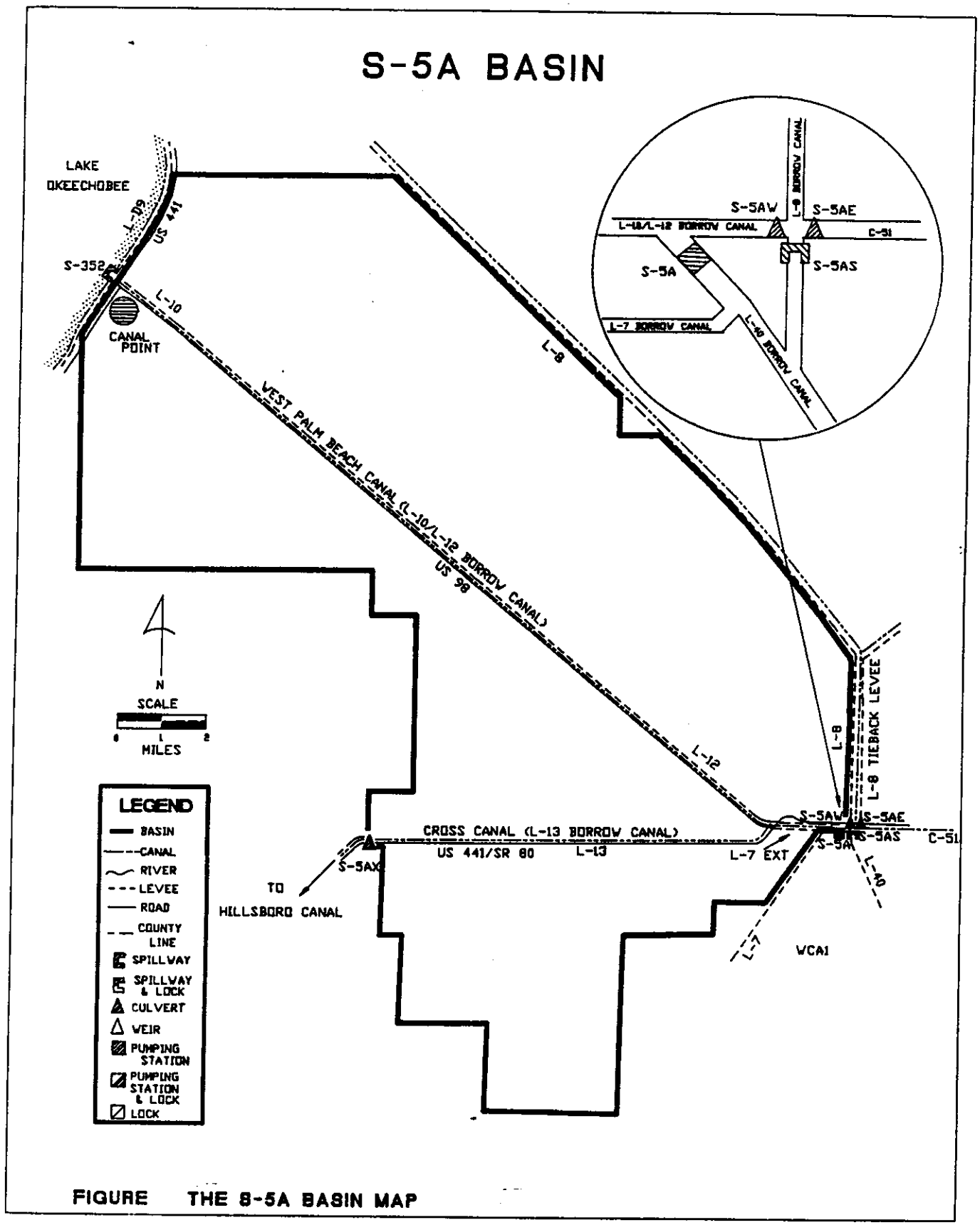


FIGURE THE S-5A BASIN MAP

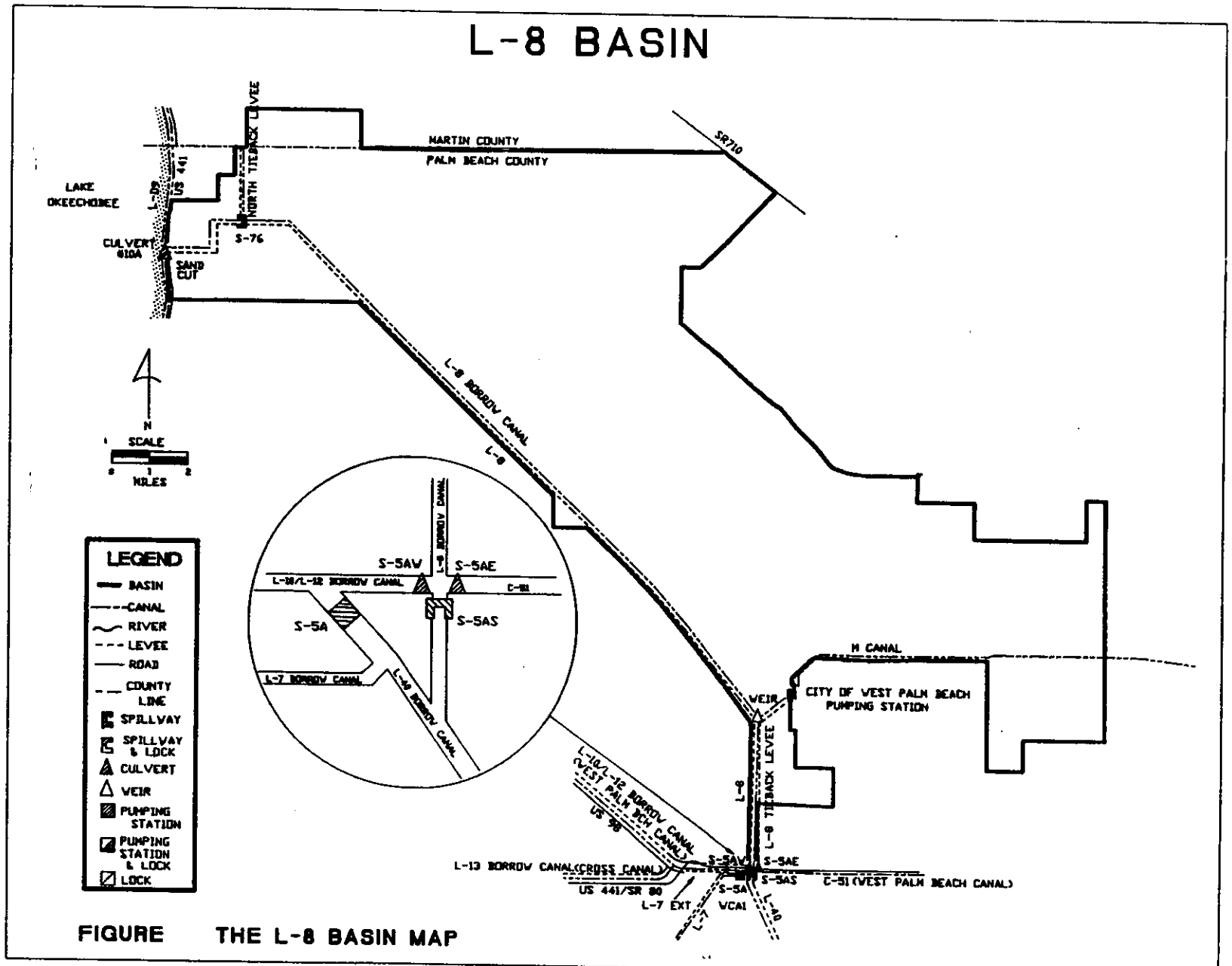


FIGURE THE L-8 BASIN MAP

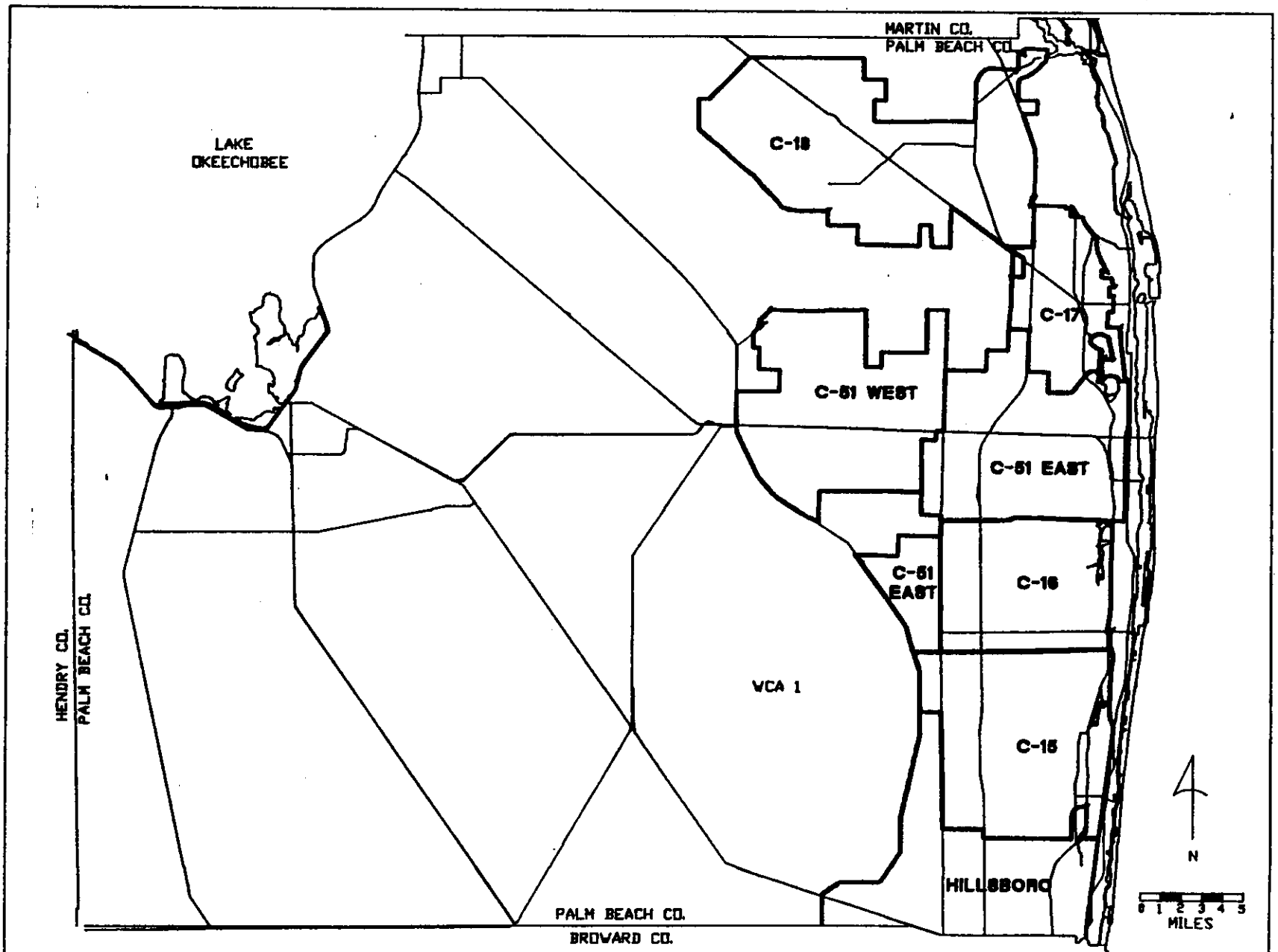


FIGURE PALM BEACH COUNTY DRAINAGE BASINS

HILLSBORO CANAL BASIN

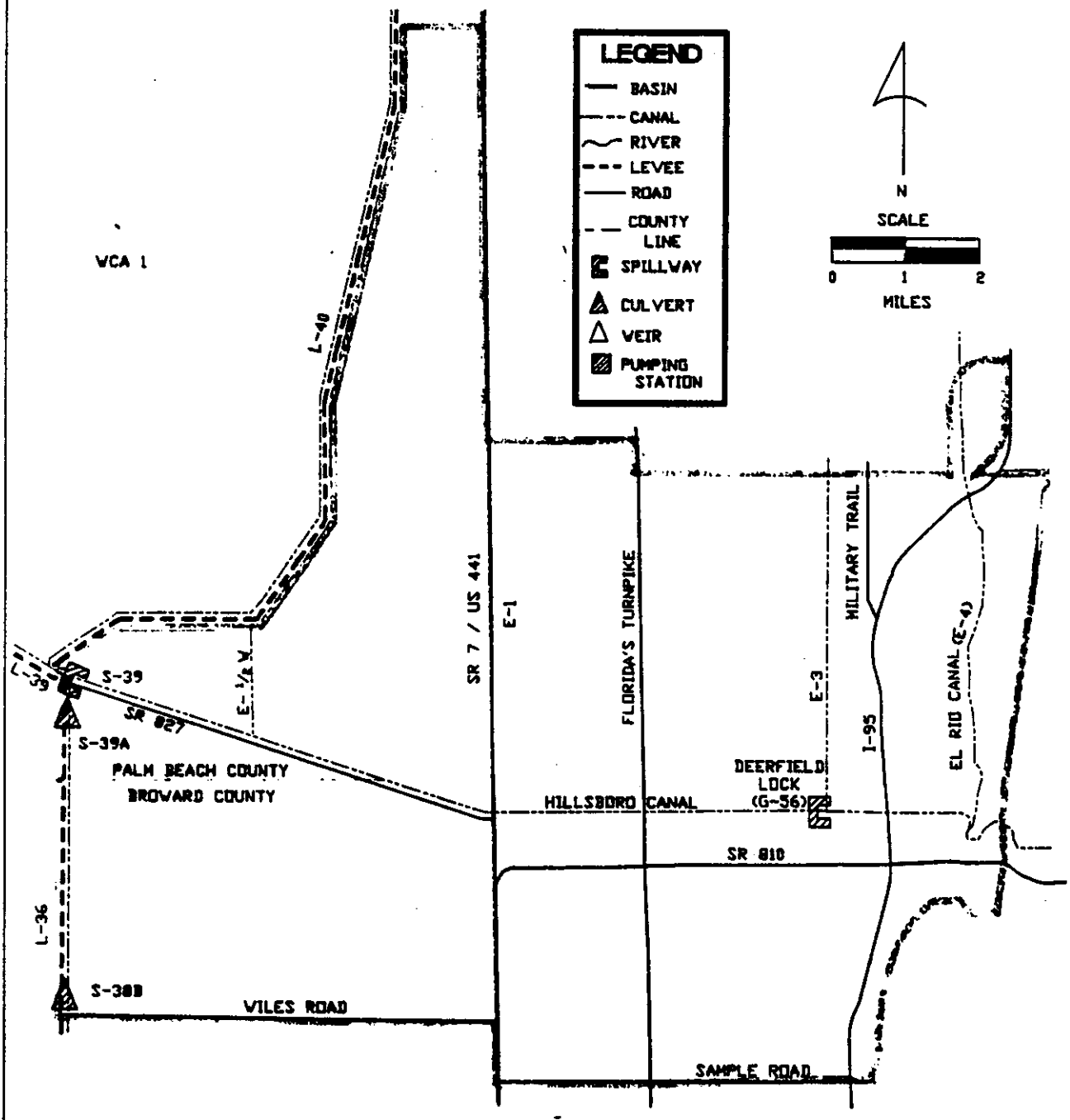


FIGURE THE HILLSBORO CANAL BASIN

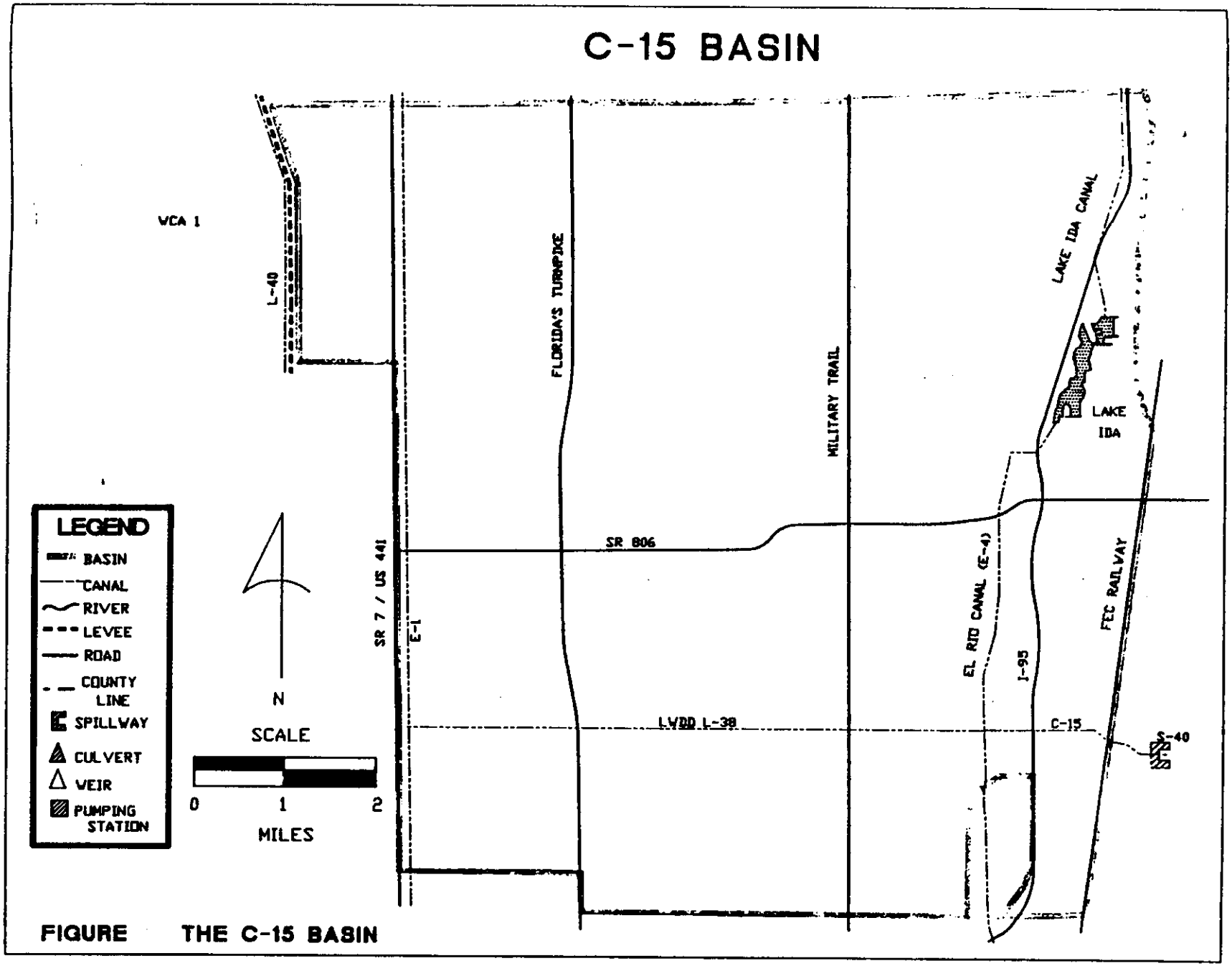


FIGURE THE C-15 BASIN

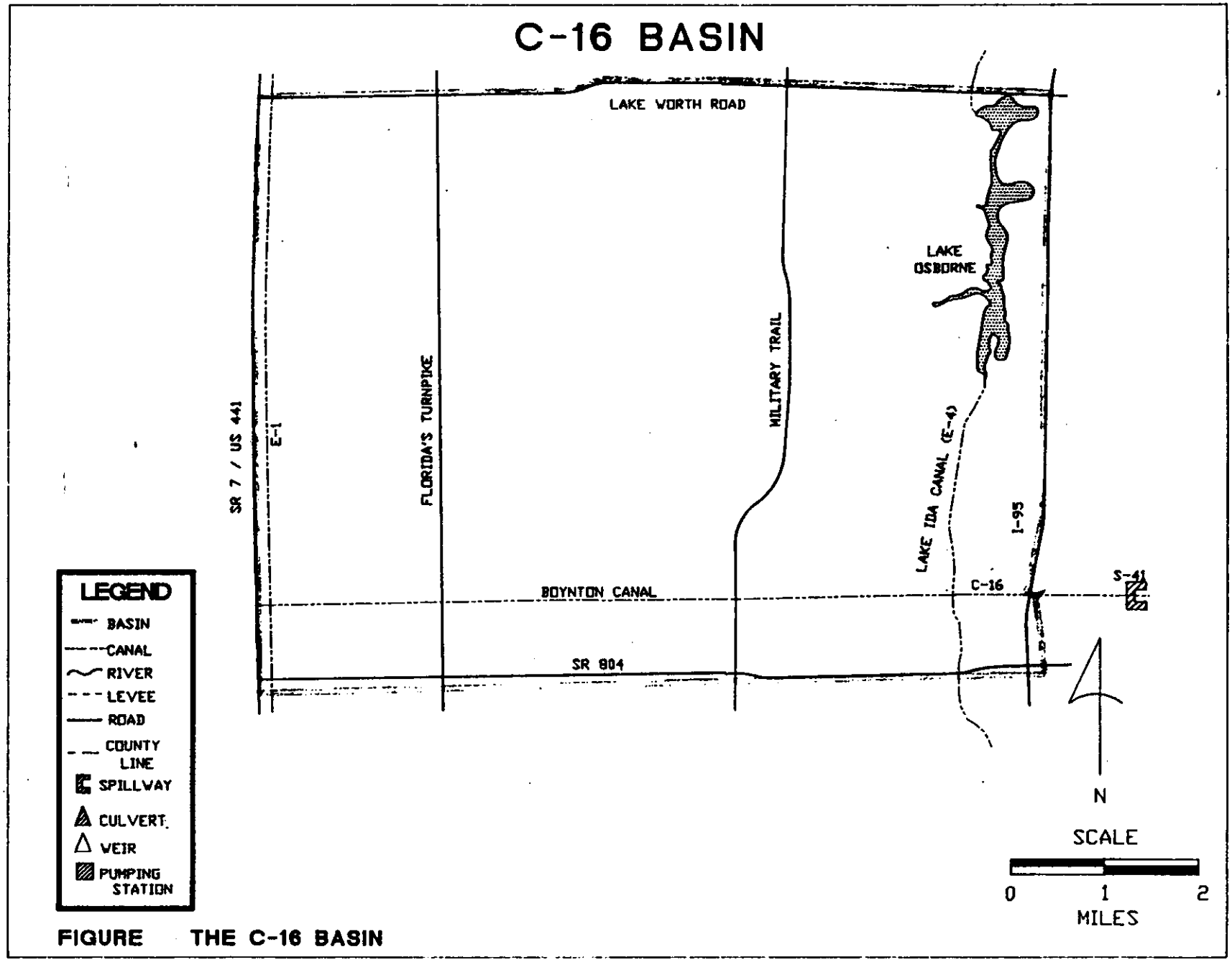
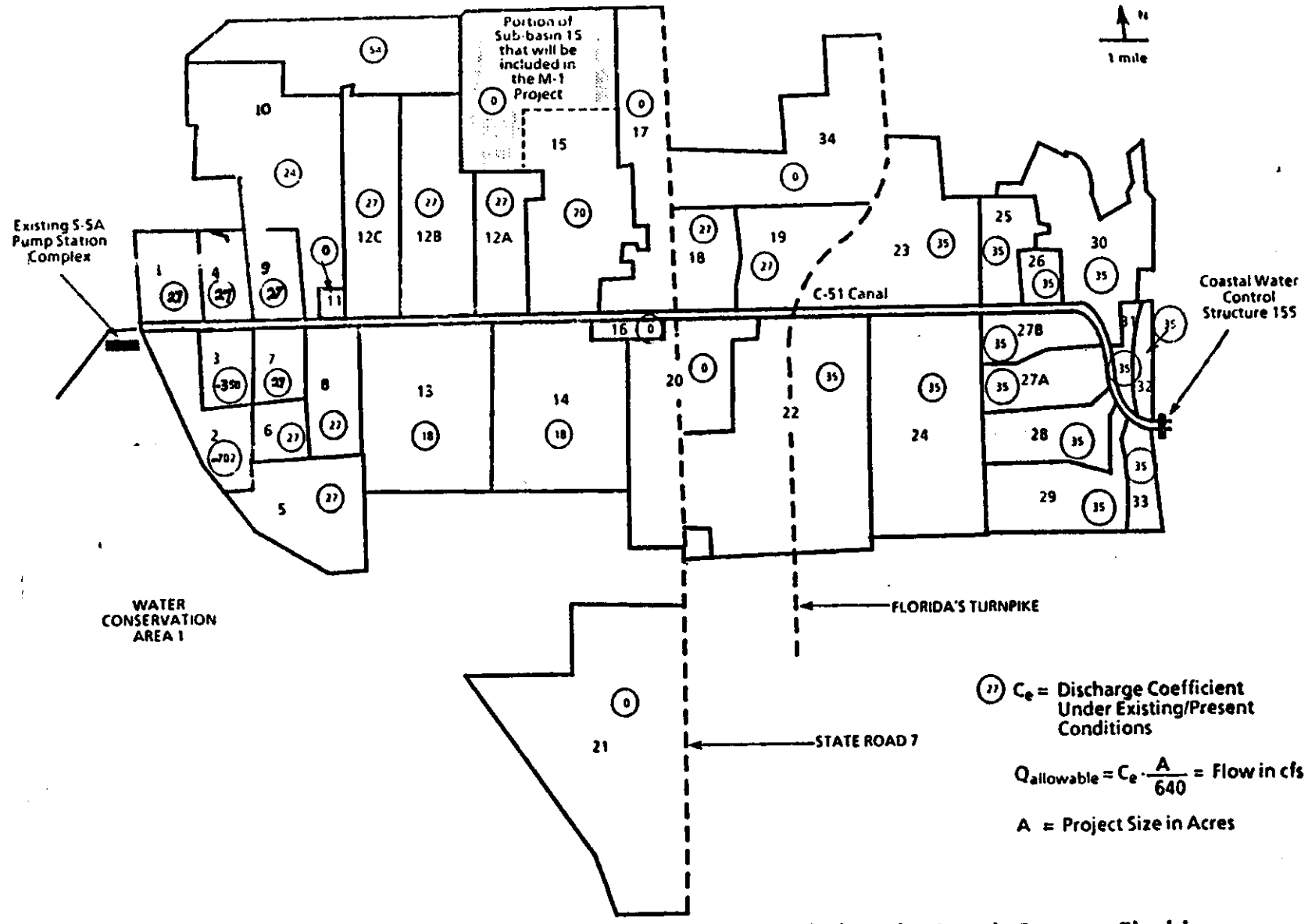


FIGURE THE C-16 BASIN



Discharge Coefficients for the Sub-basins of the C-51 Basin in Palm Beach County, Florida.
Figure

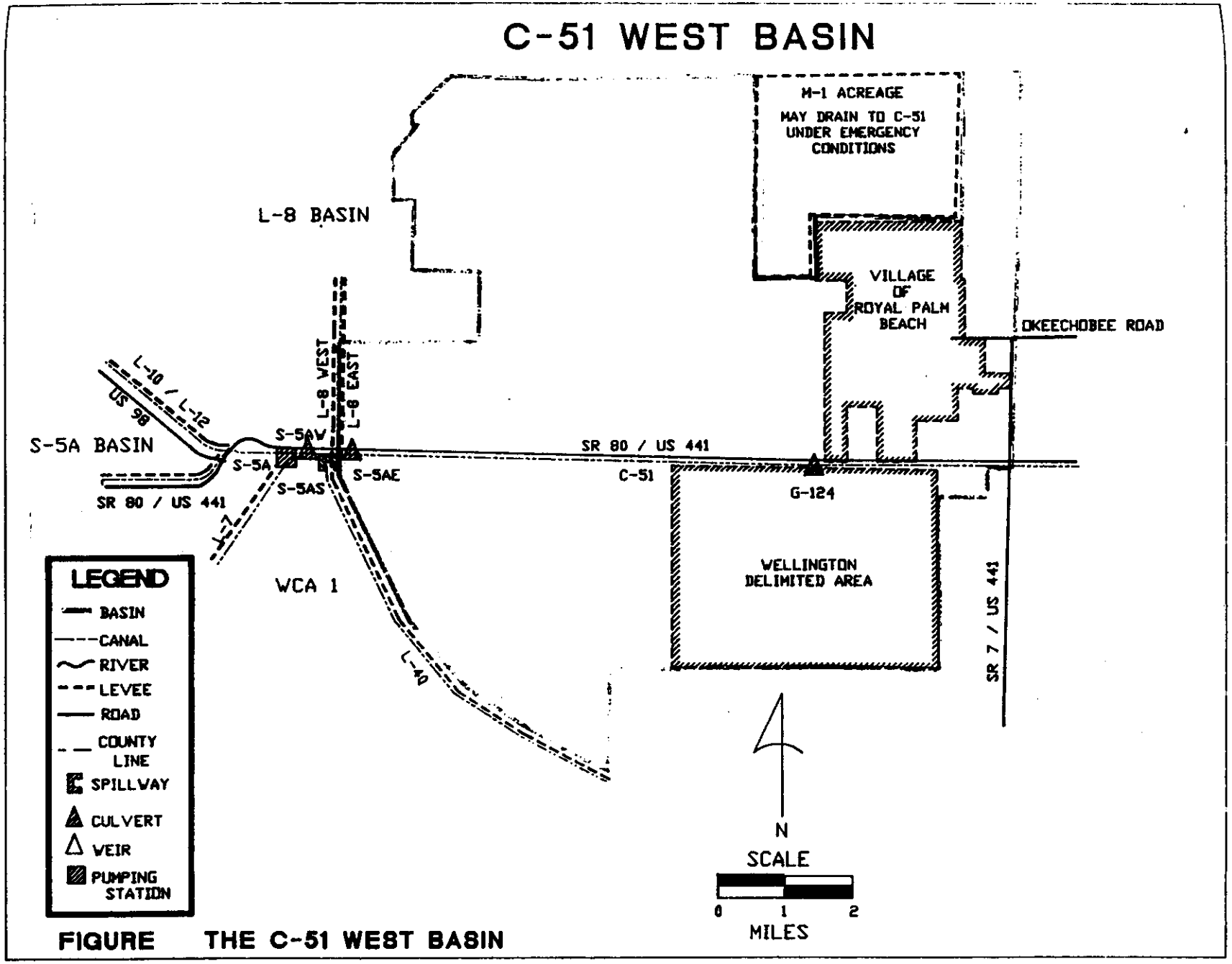


FIGURE THE C-51 WEST BASIN

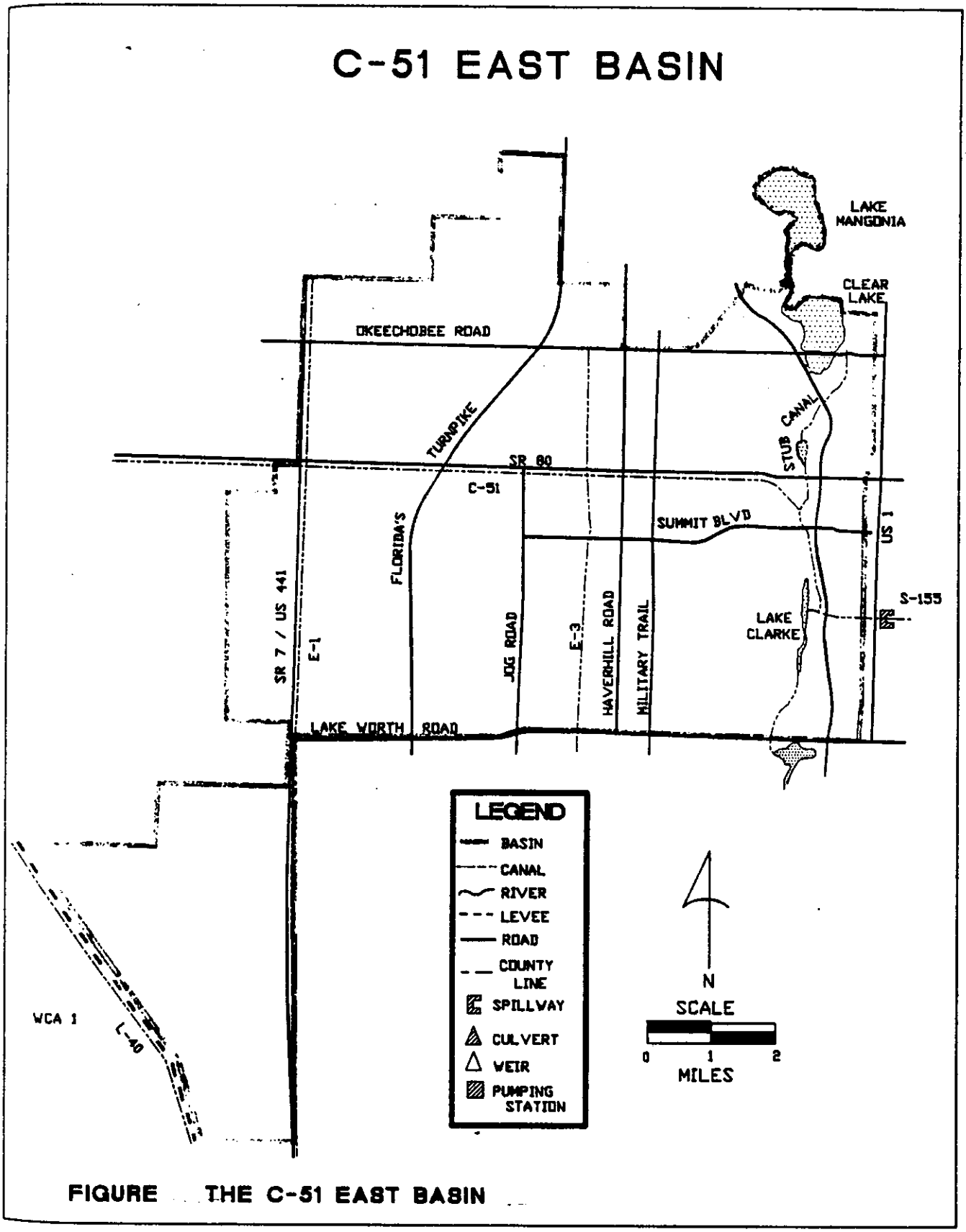


FIGURE THE C-51 EAST BASIN

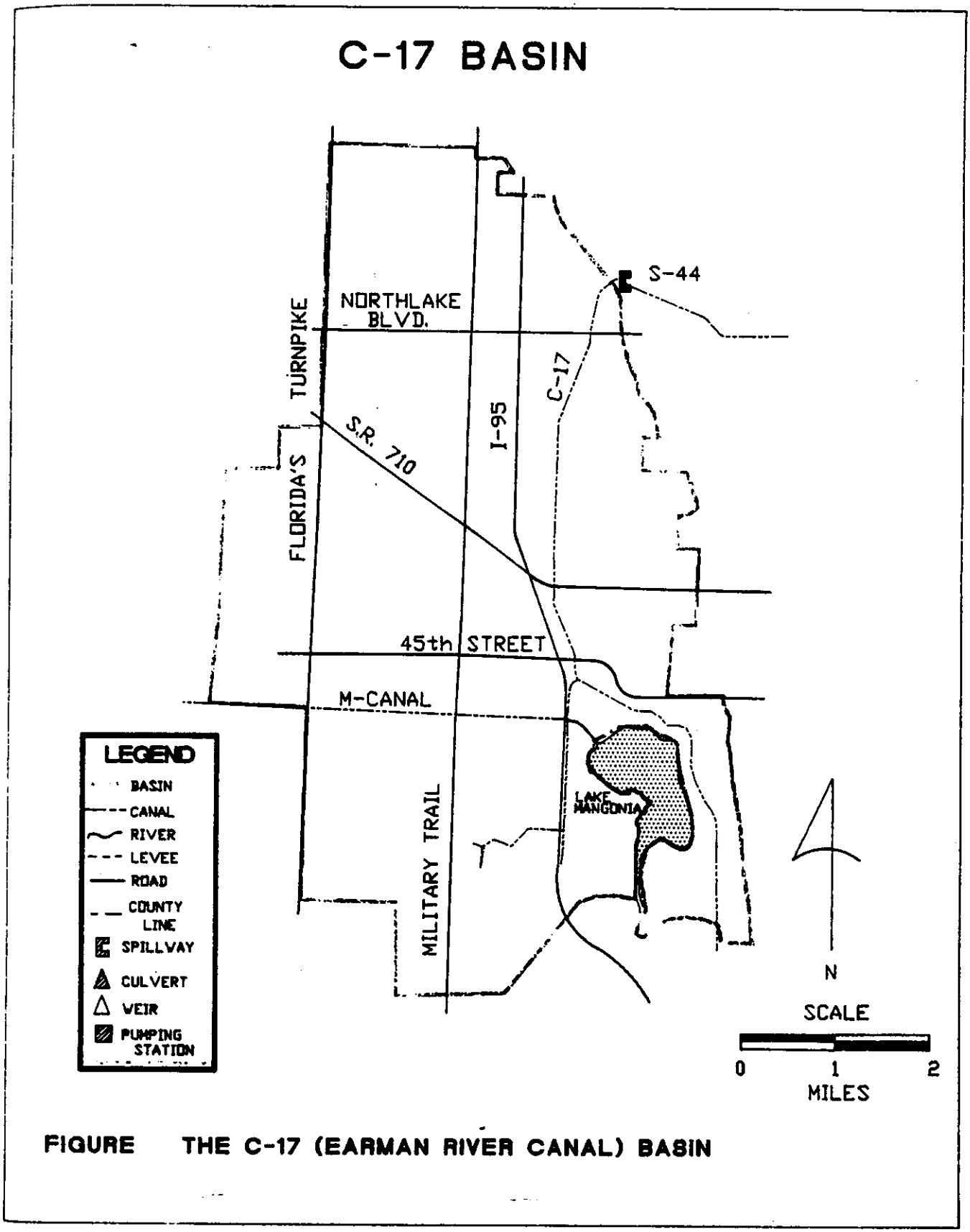


FIGURE THE C-17 (EARMAN RIVER CANAL) BASIN

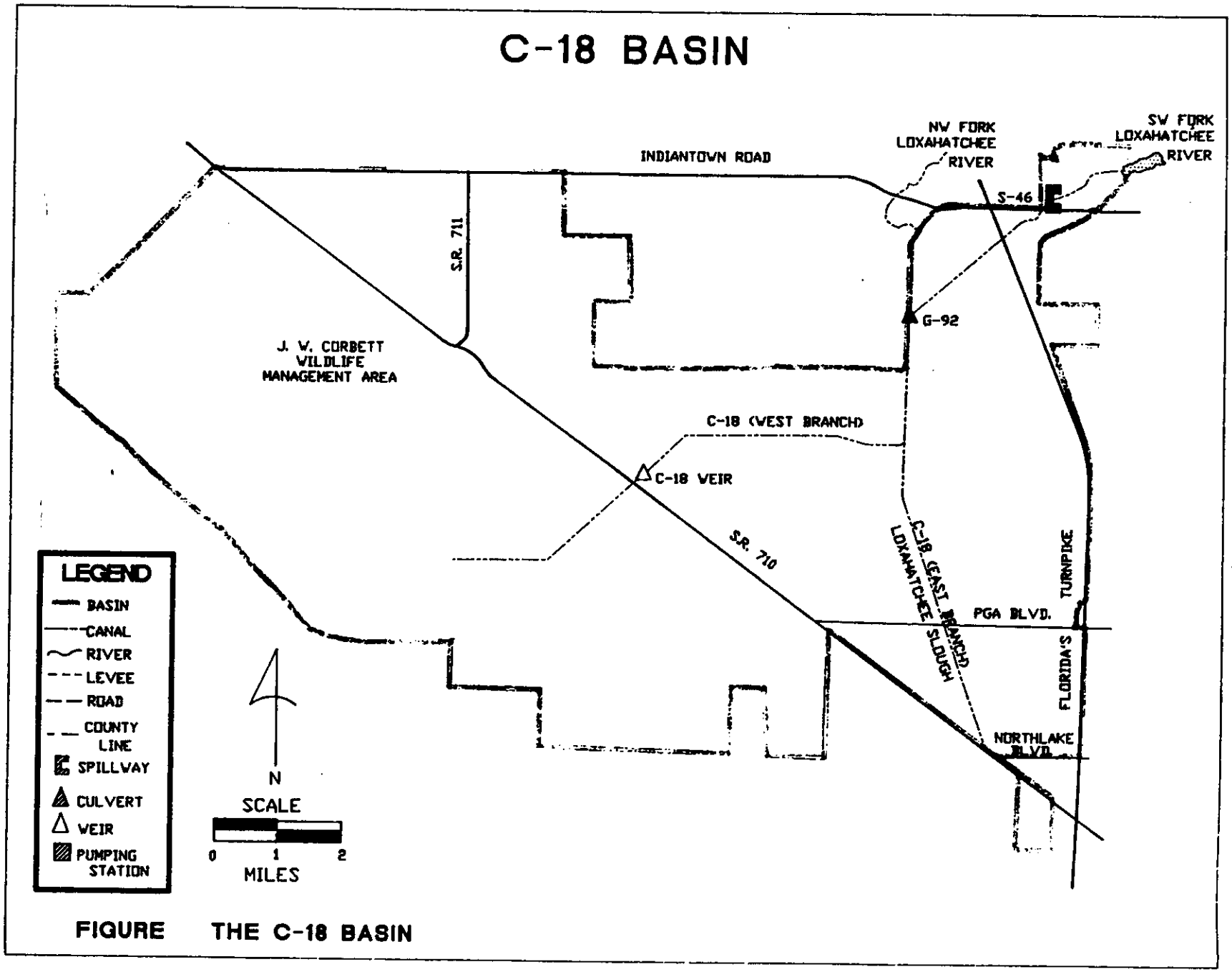


FIGURE THE C-18 BASIN

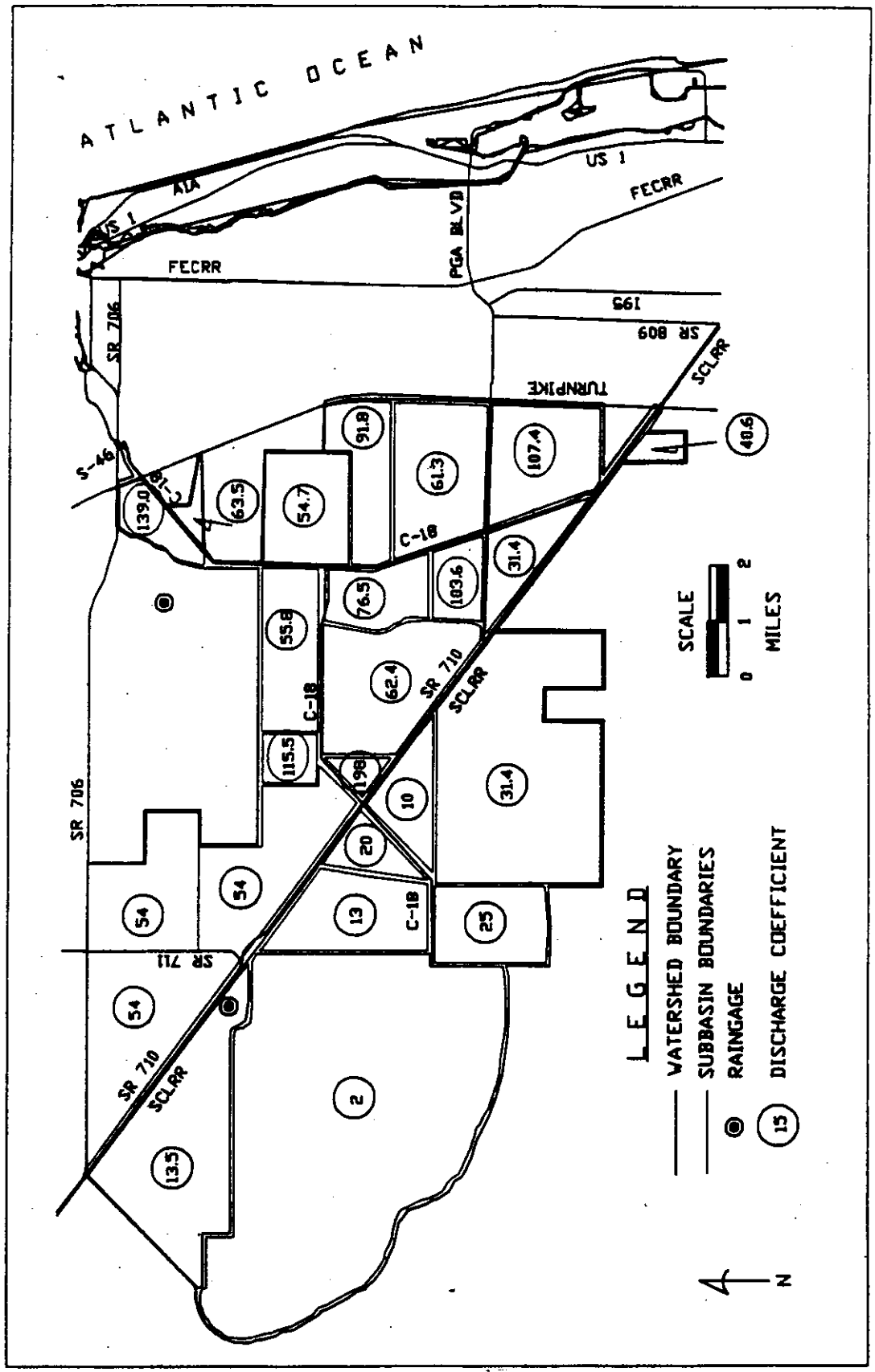


FIGURE Discharge Coefficient,Ce, for New Development. Permitted Discharge Qp = Ce * A/640 Where A is Drainage Area in Acres

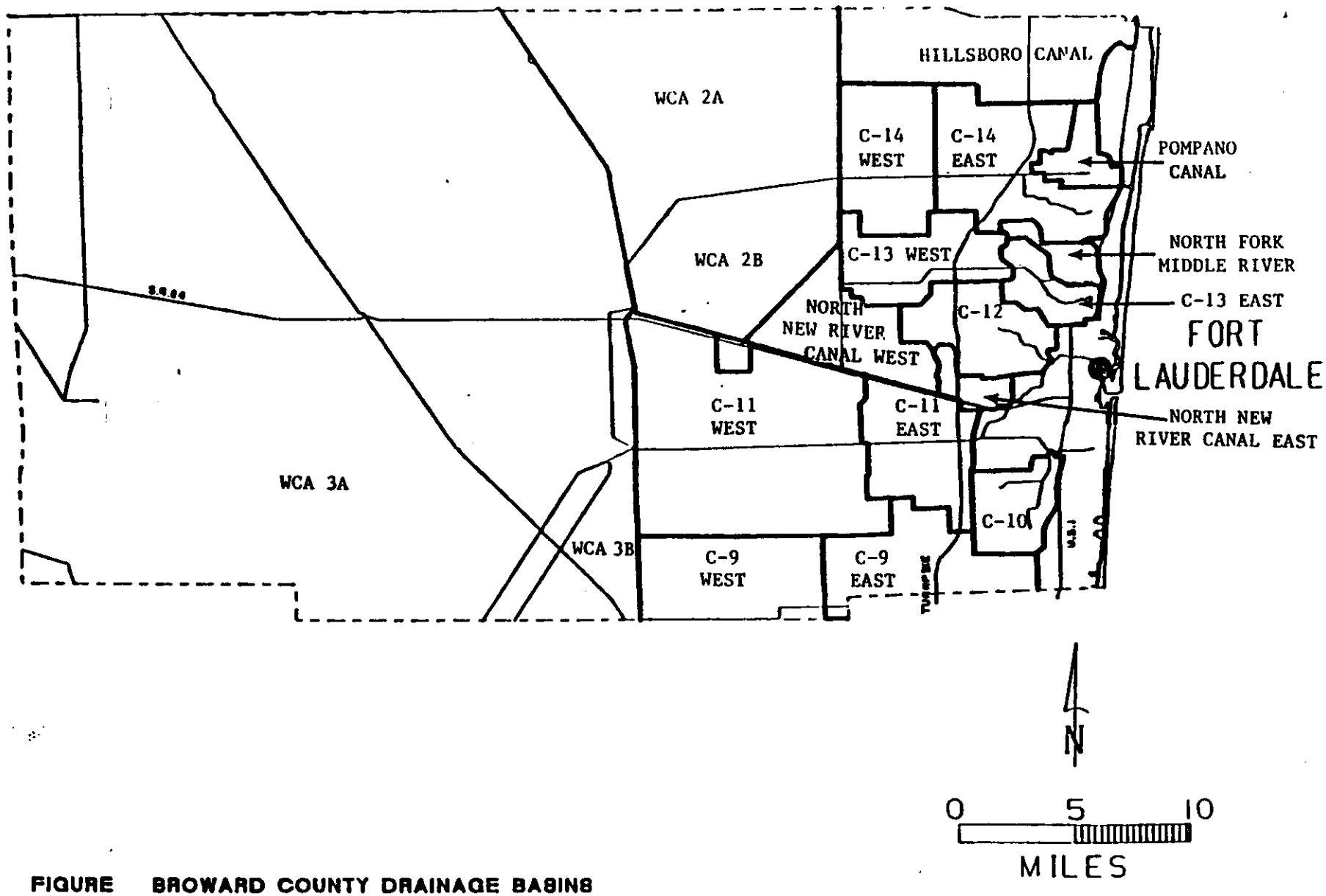


FIGURE BROWARD COUNTY DRAINAGE BASINS

C-9 WEST

29.000 ACRES

18.000 ACRES BROWARD

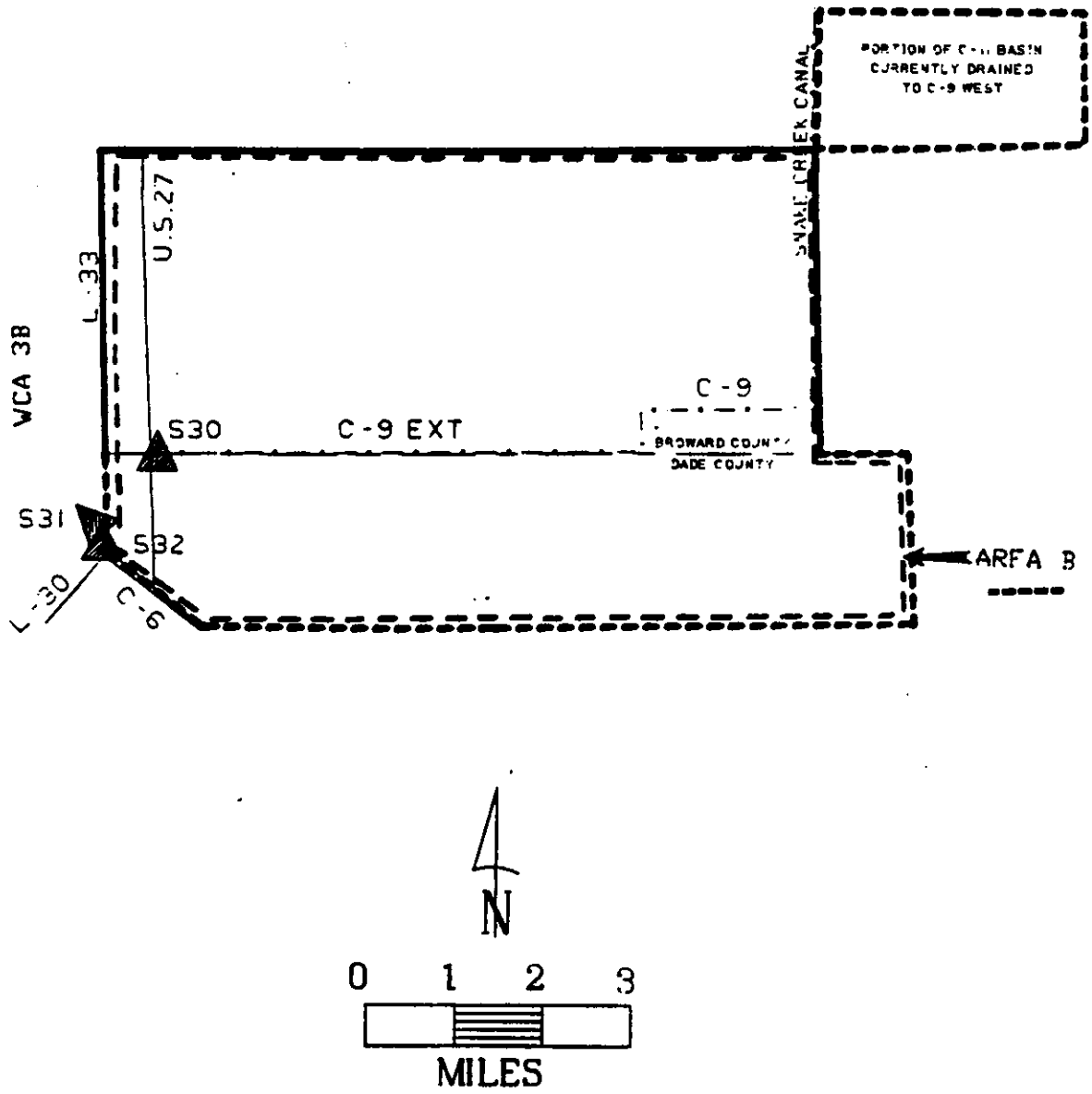
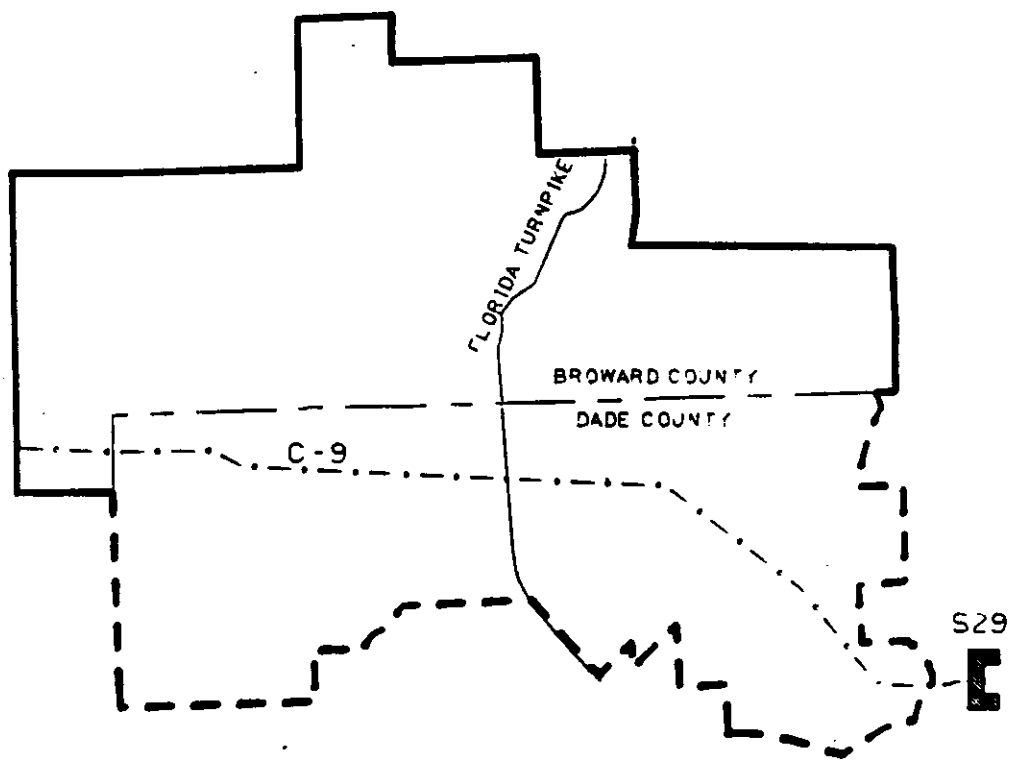


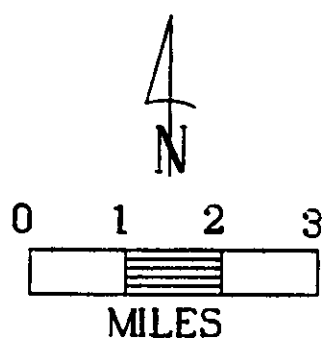
FIGURE C-9 WEST BASIN MAP

C-9 EAST BASIN

34.000 ACRES

16.000 ACRES BROWARD





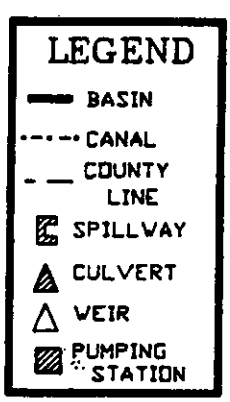


FIGURE C-9 EAST BASIN MAP

C-10 BASIN
(HOLLYWOOD CANAL)
9.500 ACRES

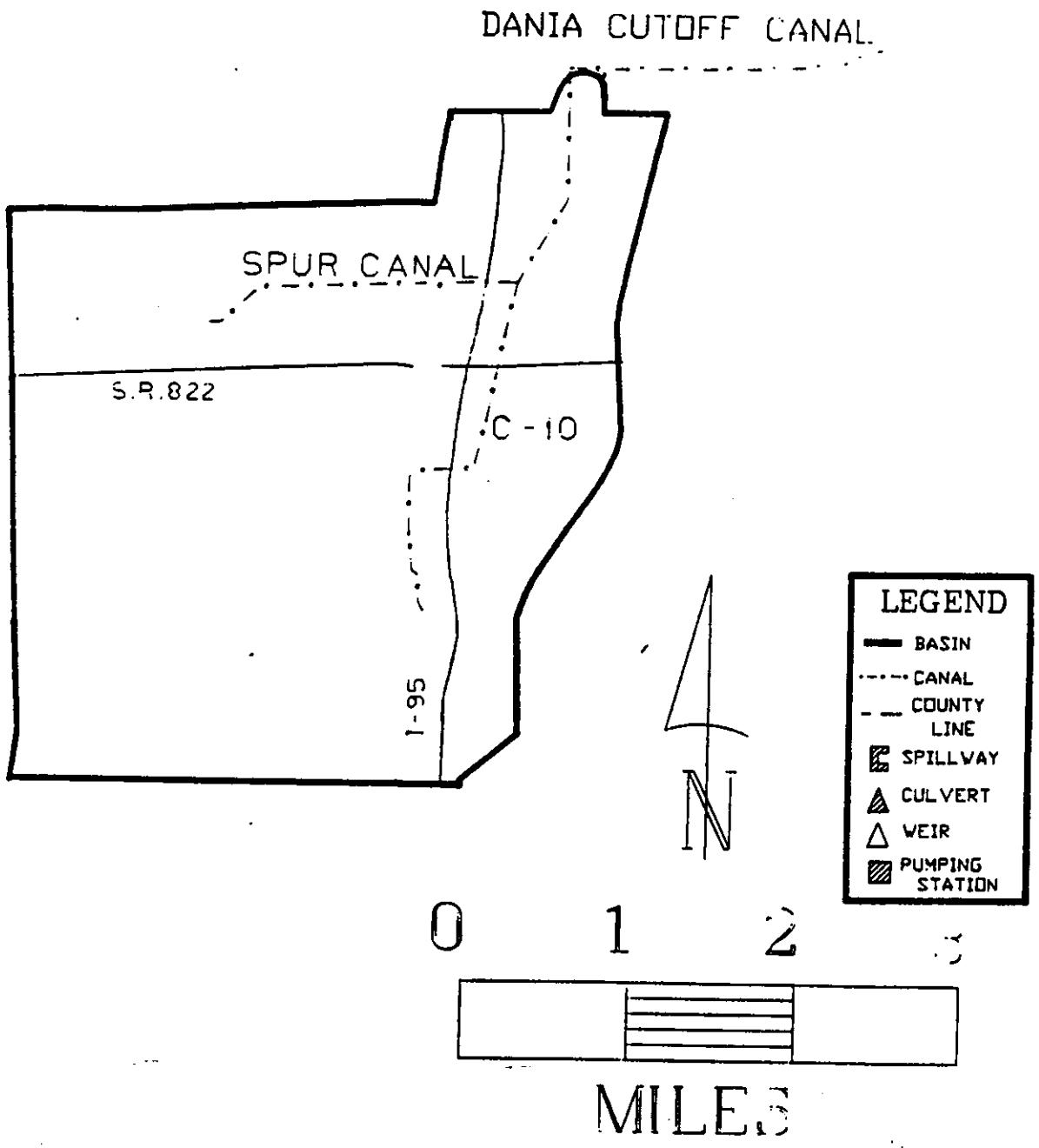


FIGURE **C-10 BASIN MAP**

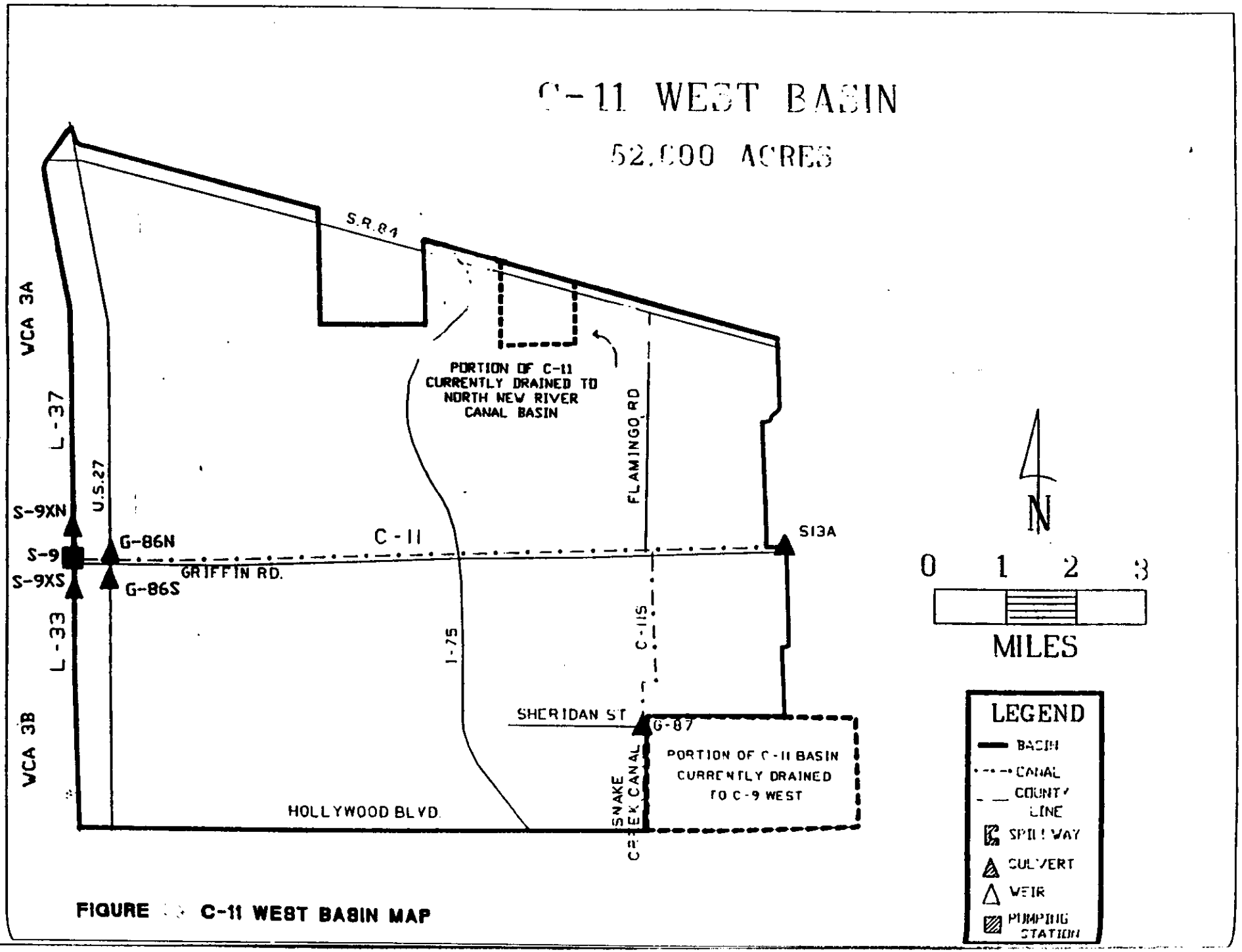


FIGURE C-11 WEST BASIN MAP

C-11 EAST
15,000 ACRES

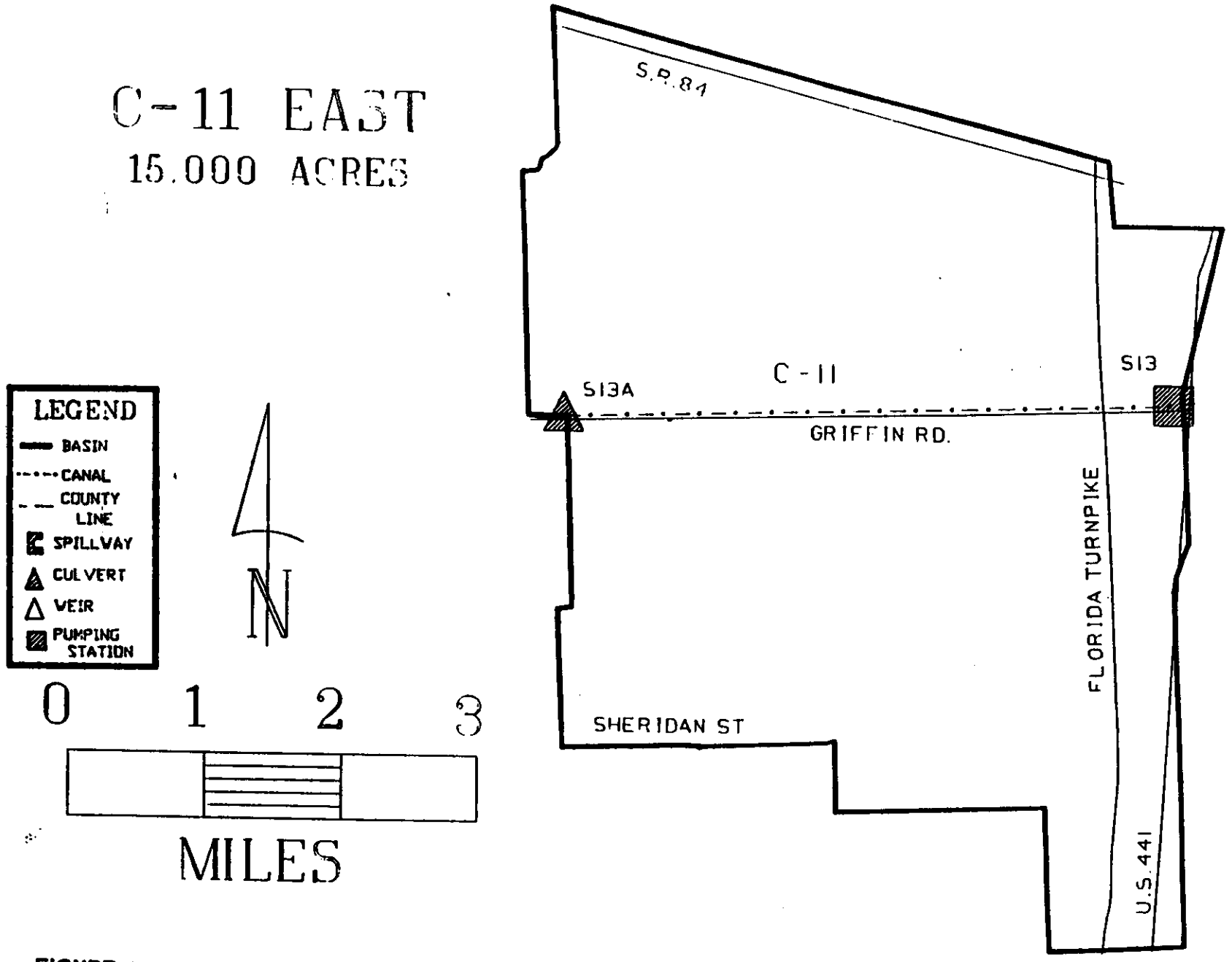


FIGURE C-11 EAST BASIN MAP

NORTH NEW RIVER CANAL WEST BASIN

14,200 ACRES

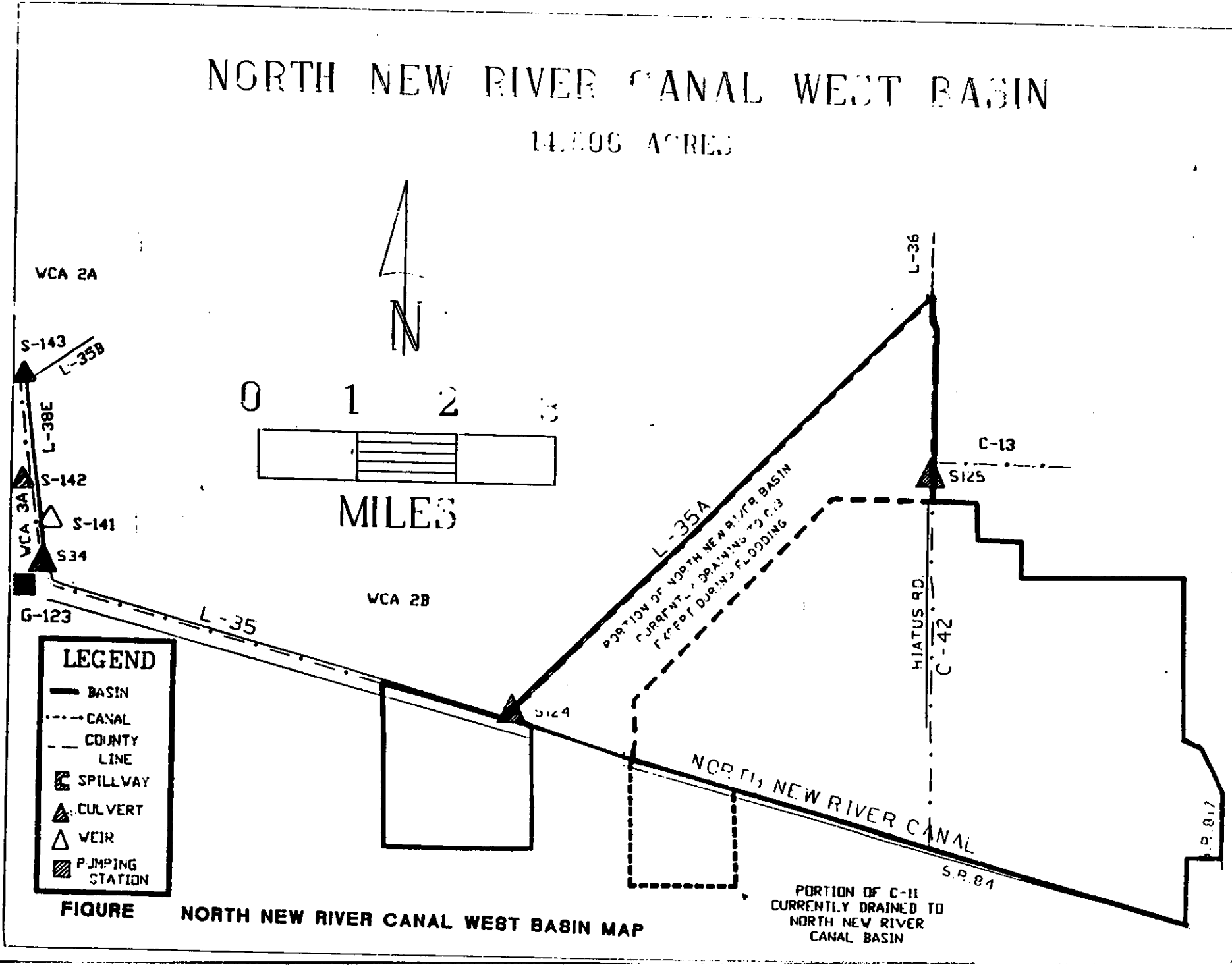


FIGURE NORTH NEW RIVER CANAL WEST BASIN MAP

NORTH NEW RIVER CANAL EAST BASIN

4,800 ACRES

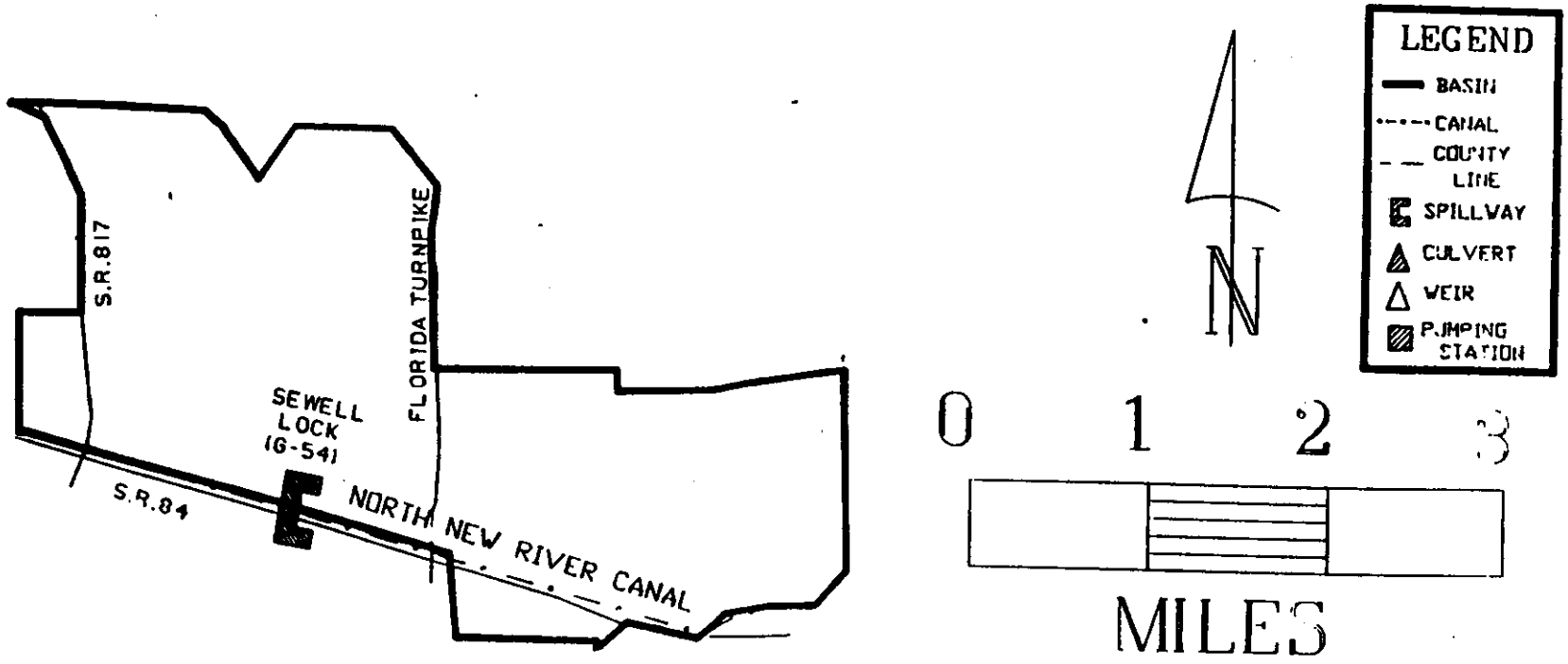


FIGURE NORTH NEW RIVER CANAL EAST BASIN MAP

C-12 BASIN
(PLANTATION CANAL)
12,100 ACRES

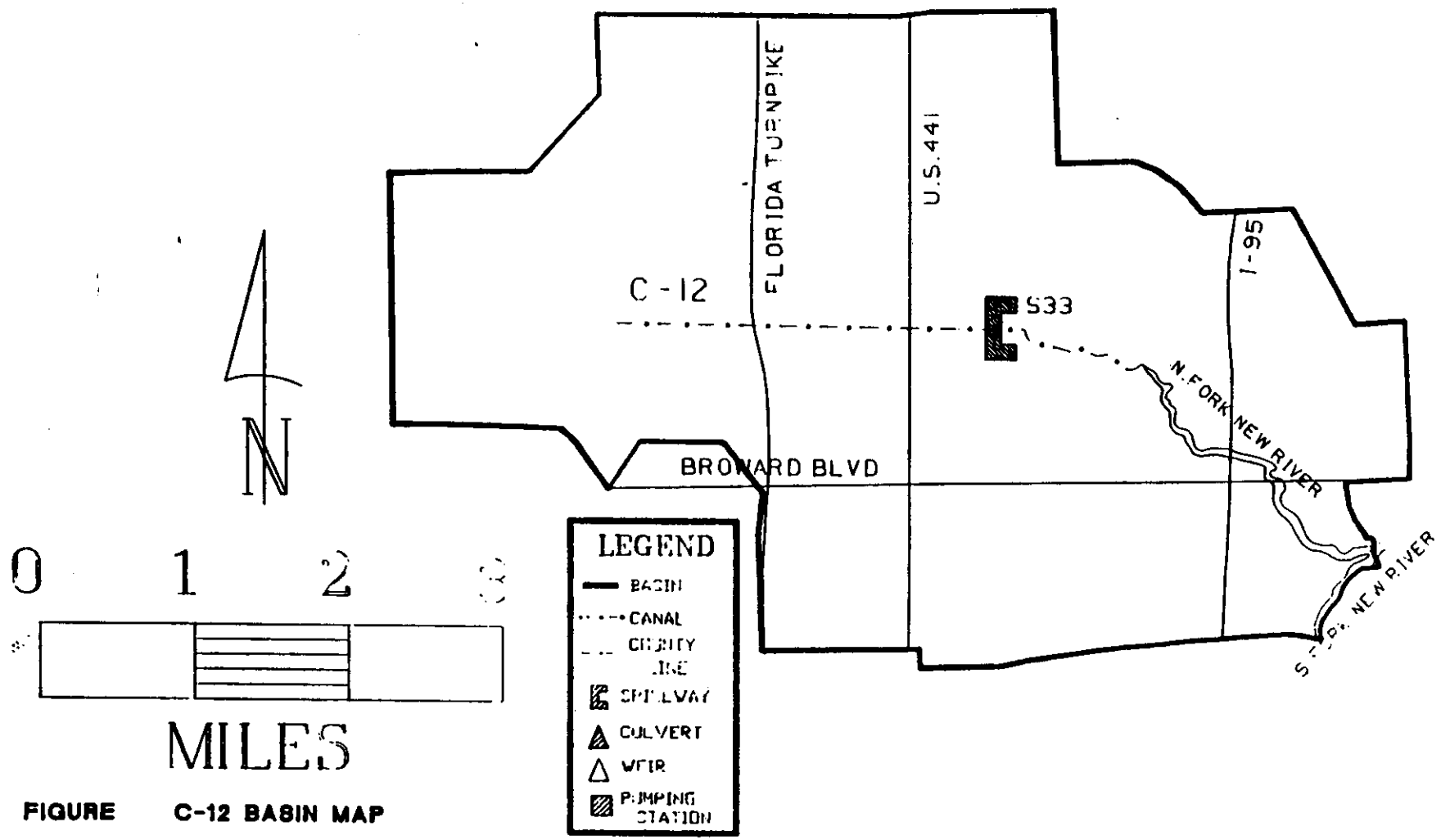


FIGURE C-12 BASIN MAP

NORTH FORK MIDDLE RIVER

3,400 ACRES

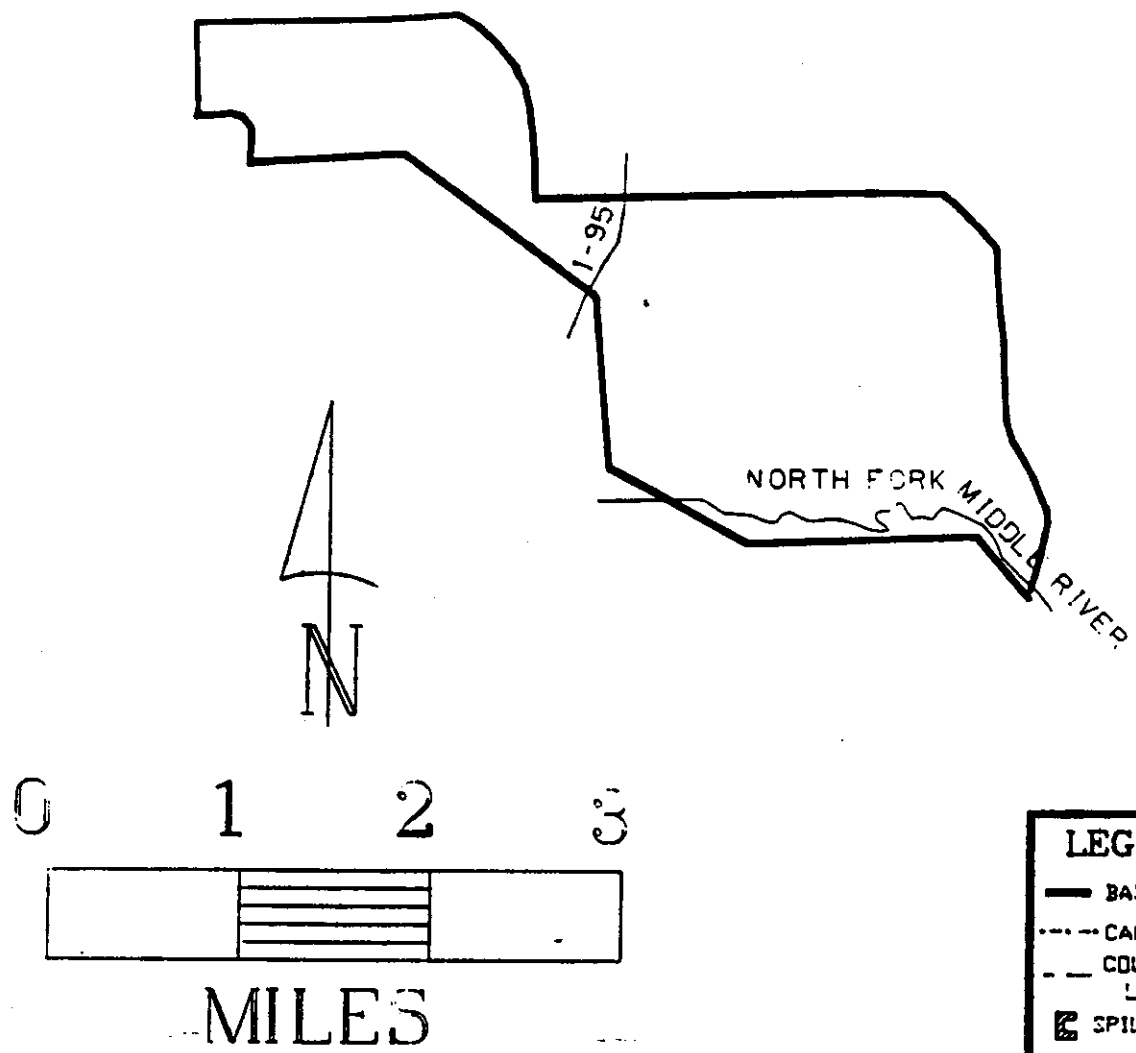


FIGURE **NORTH FORK MIDDLE RIVER BASIN MAP**

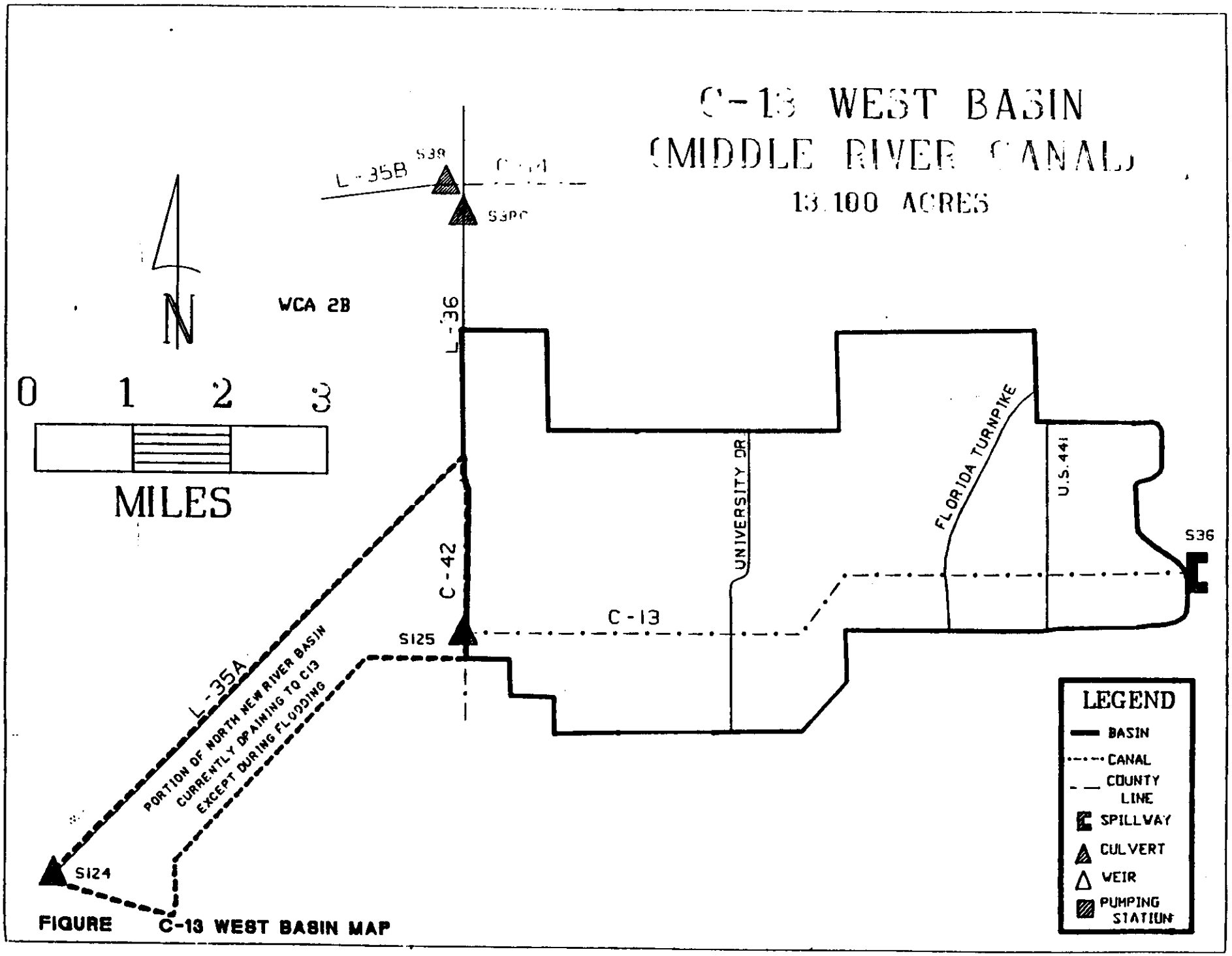
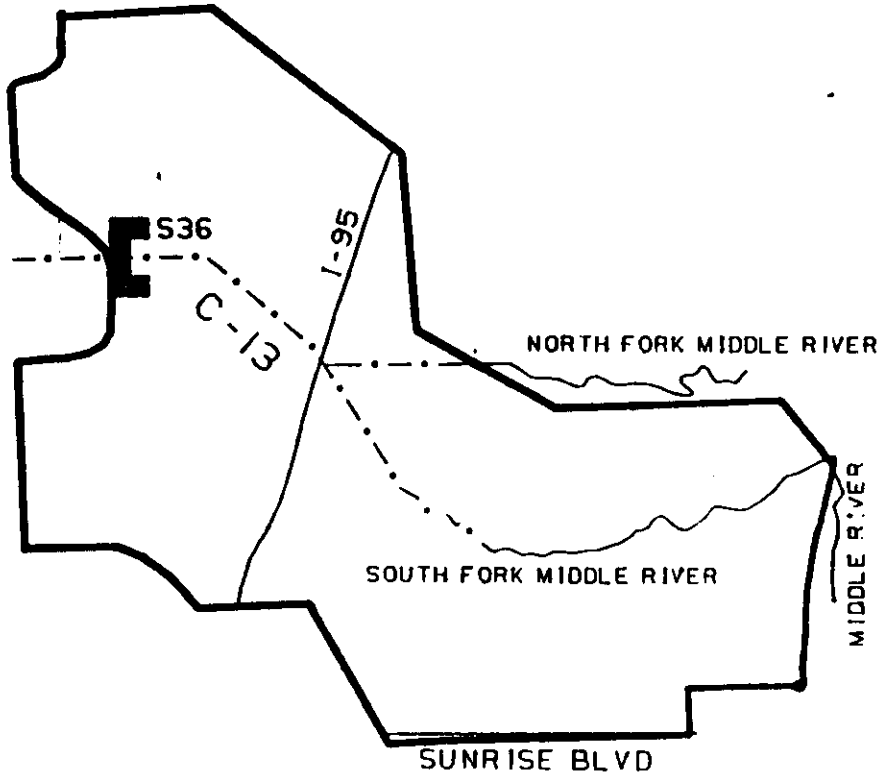


FIGURE C-13 WEST BASIN MAP

C-13 EAST BASIN
(MIDDLE RIVER CANAL)
5,000 ACRES



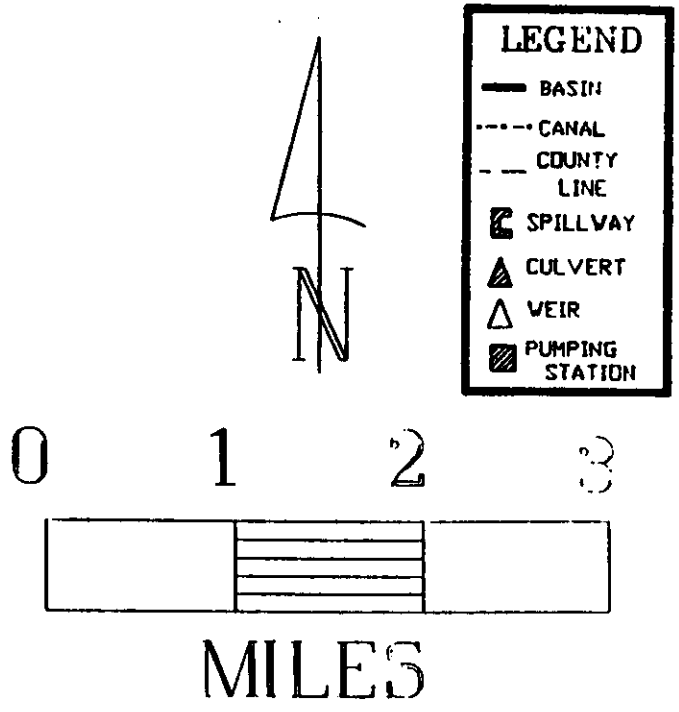
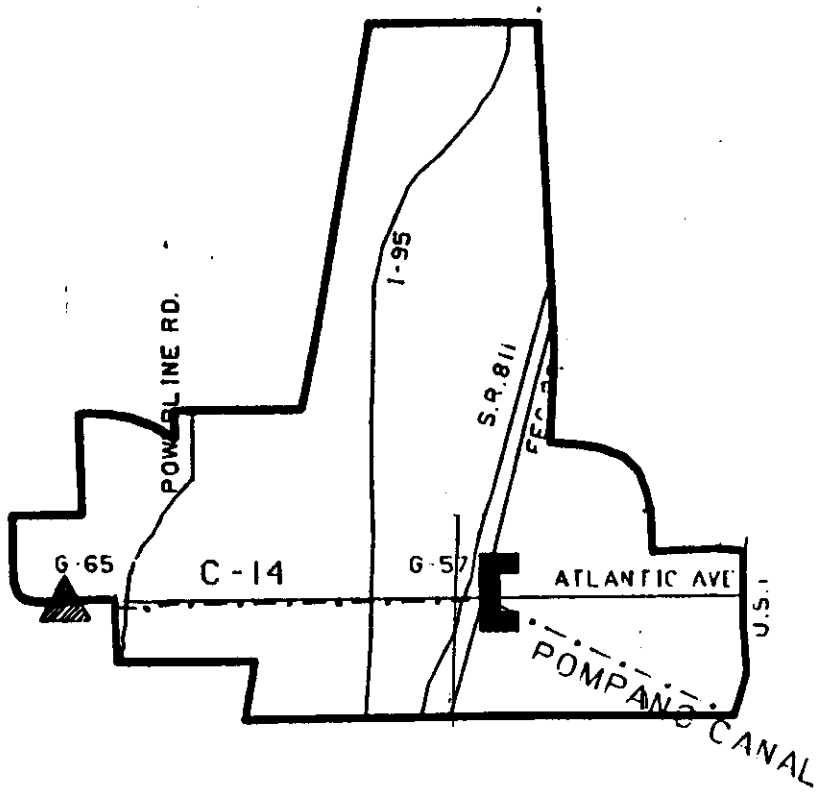


FIGURE C-13 EAST BASIN MAP

POMPANO CANAL

4,000 ACRES



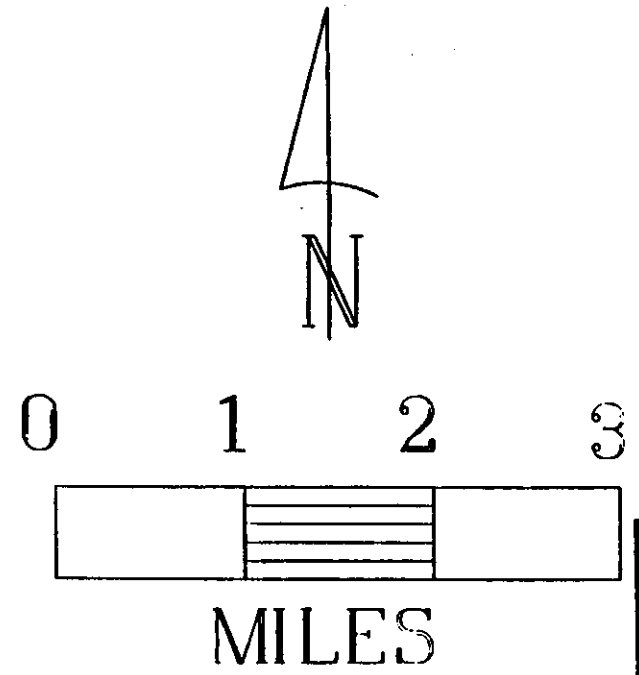


FIGURE POMPANO CANAL BASIN MAP

C-14 WEST BASIN
(CYPRESS CREEK)

15,800 ACRES

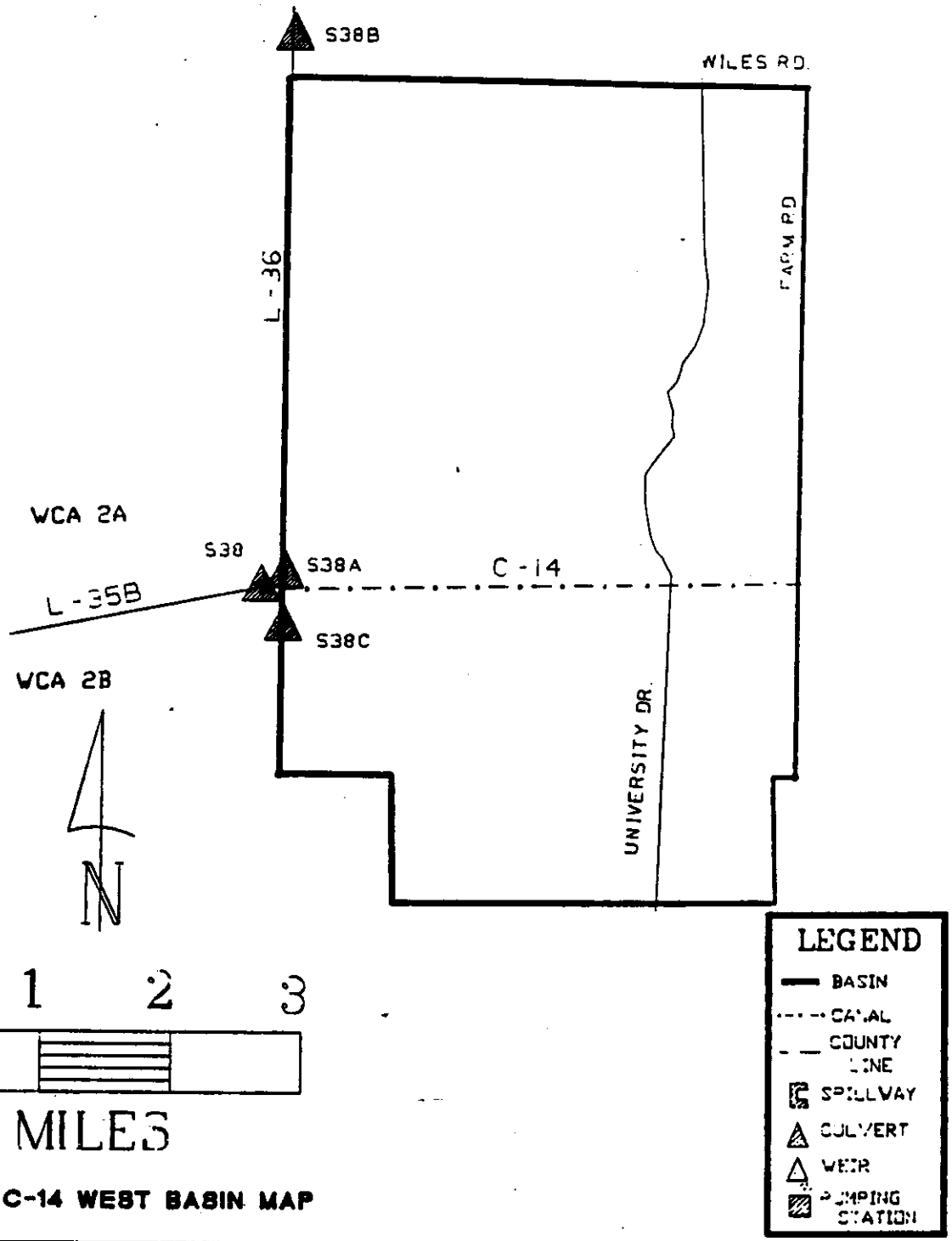


FIGURE C-14 WEST BASIN MAP

C-14 EAST BASIN
(CYPRESS CREEK CANAL)
21,600 ACRES

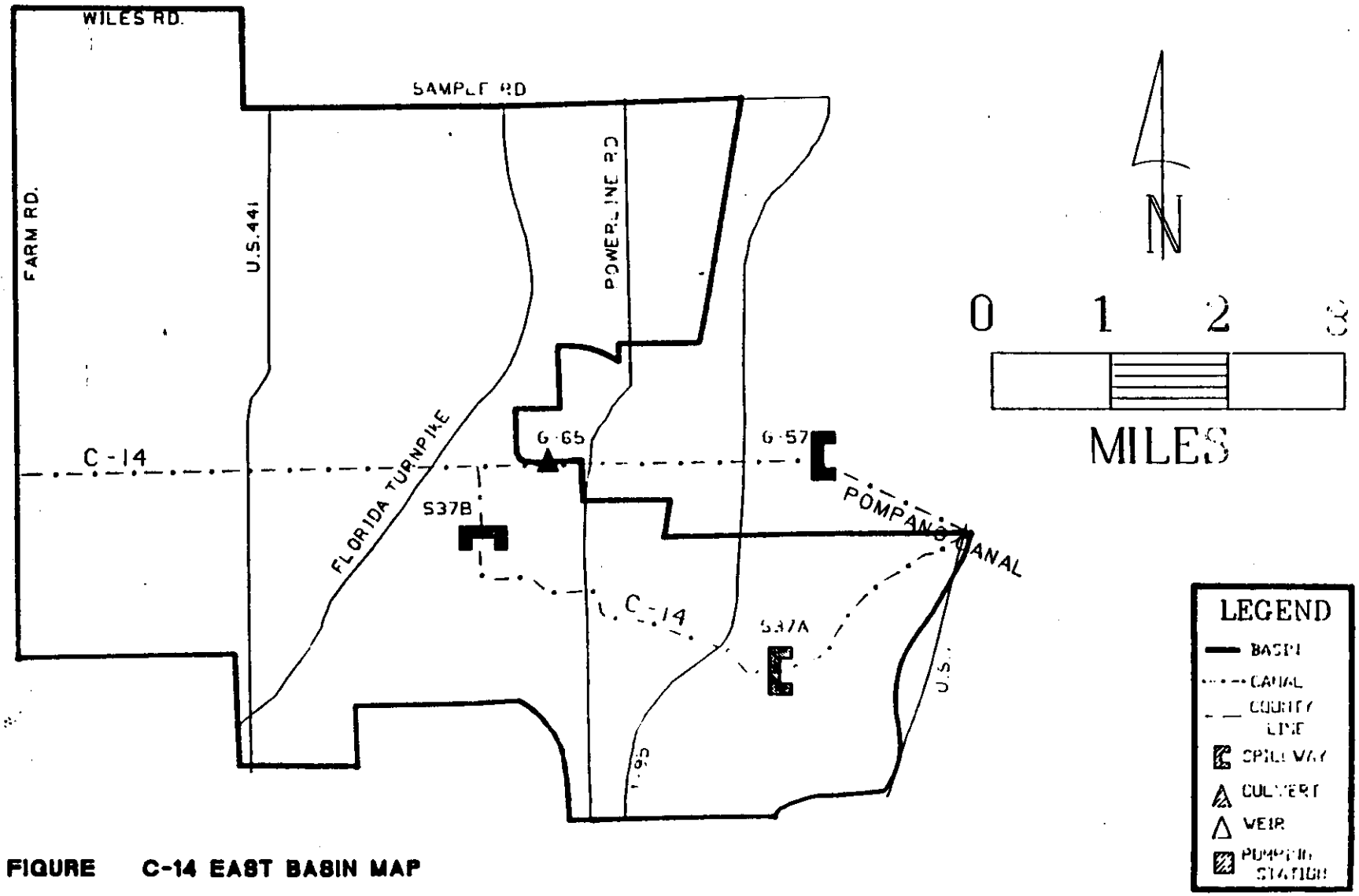


FIGURE C-14 EAST BASIN MAP

HILLSBORO CANAL BASIN

65.600 ACRES

25.700 ACRES BROWARD

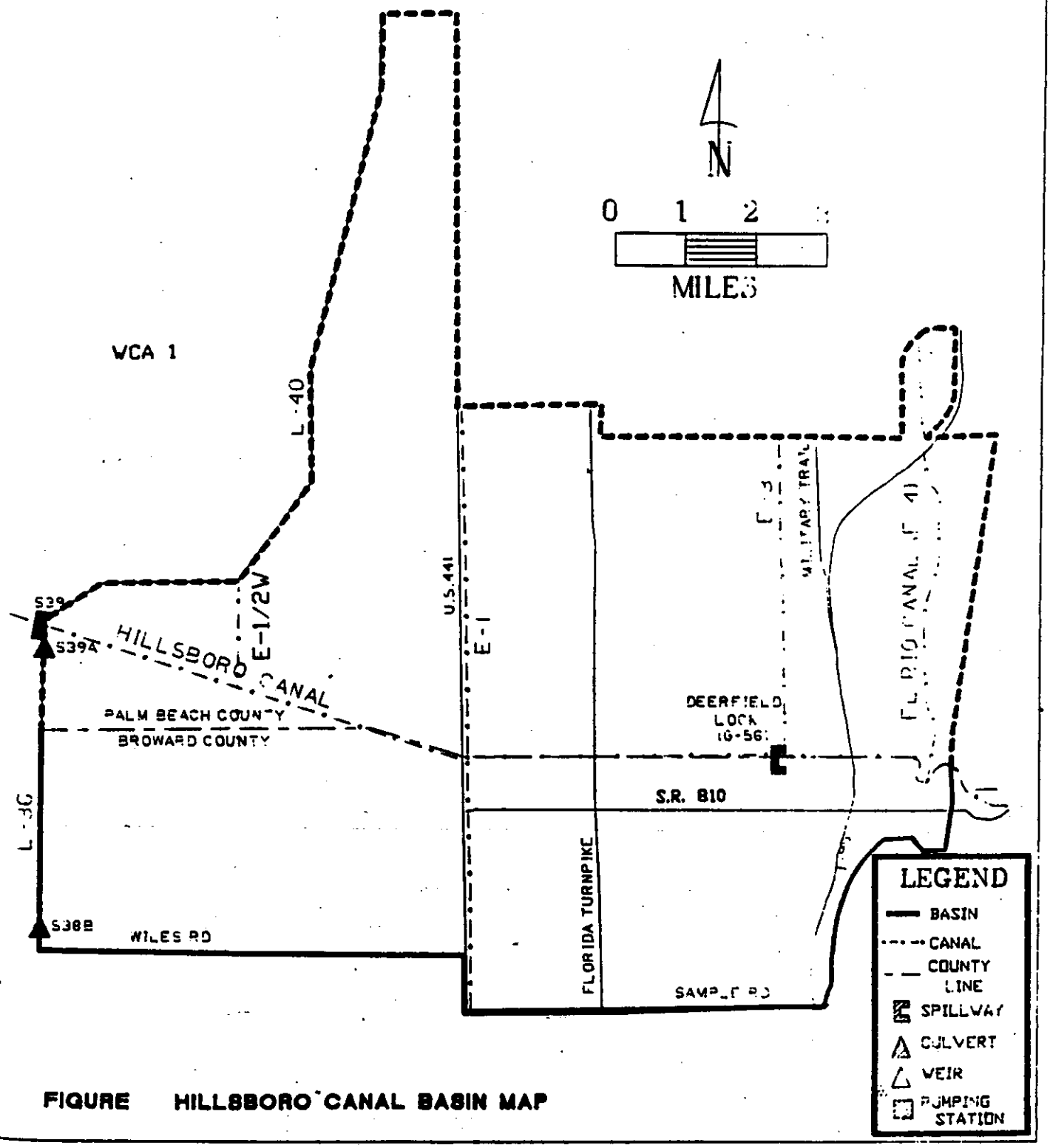


FIGURE HILLSBORO CANAL BASIN MAP

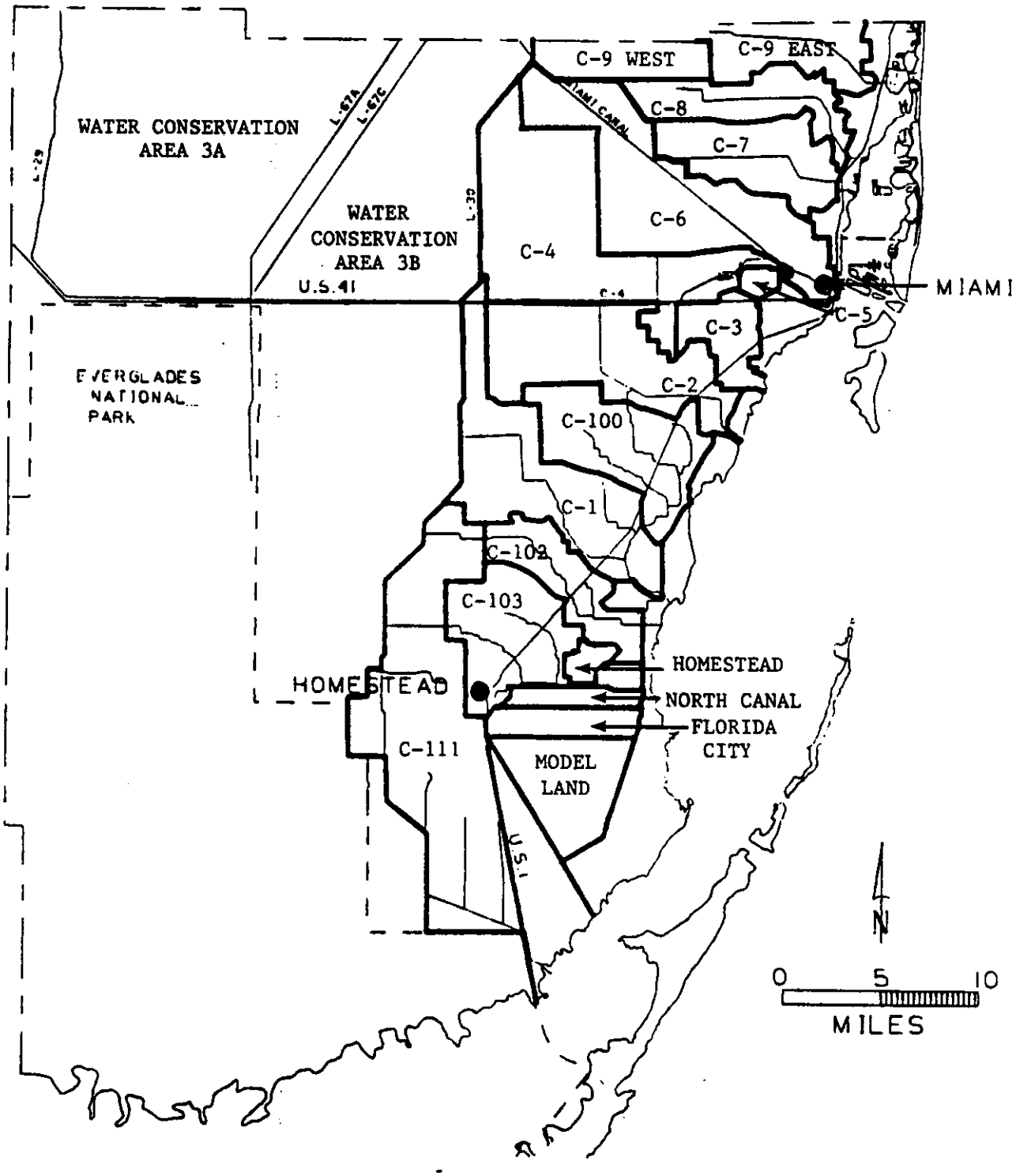


FIGURE DADE COUNTY DRAINAGE BASINS

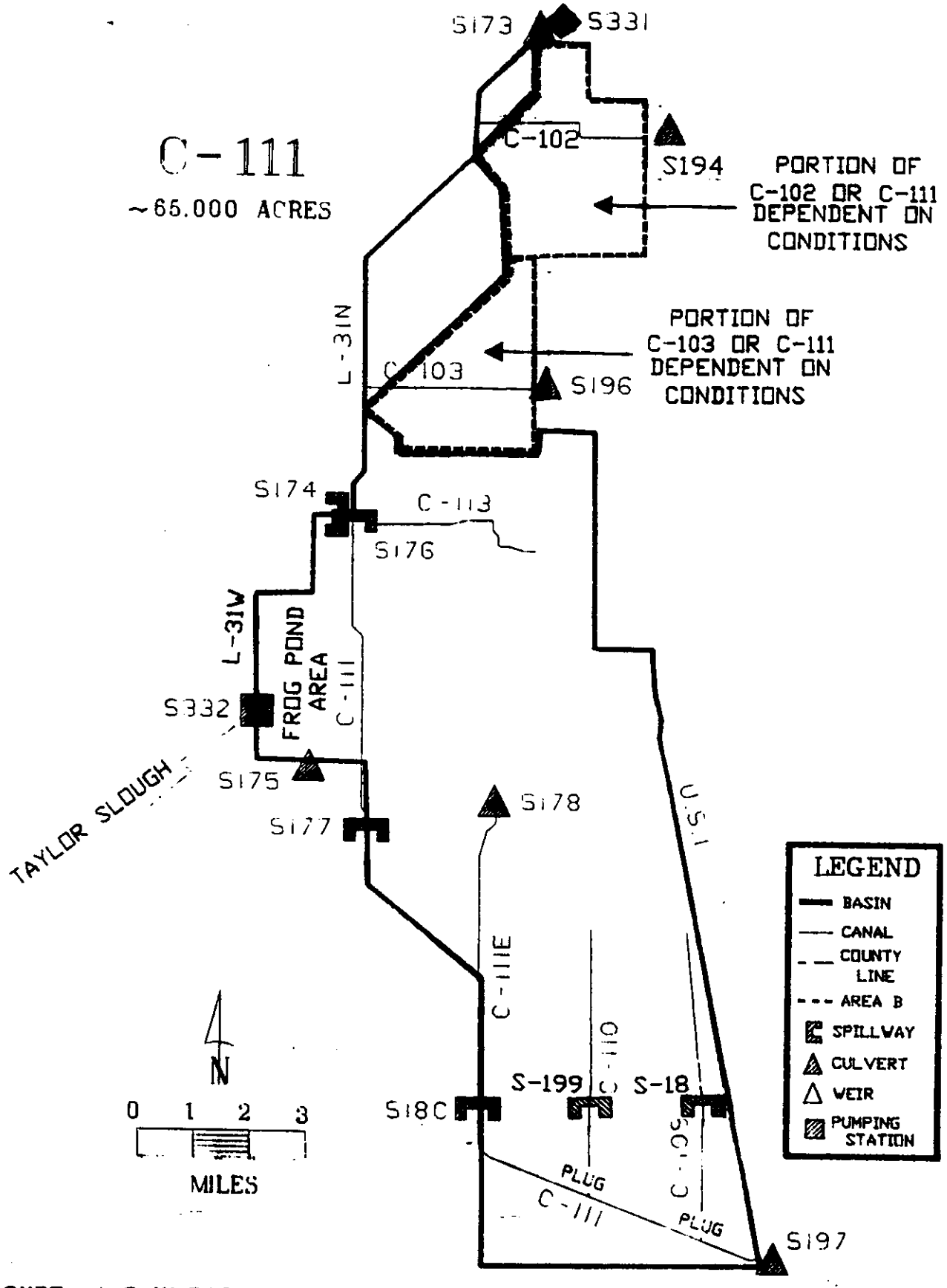
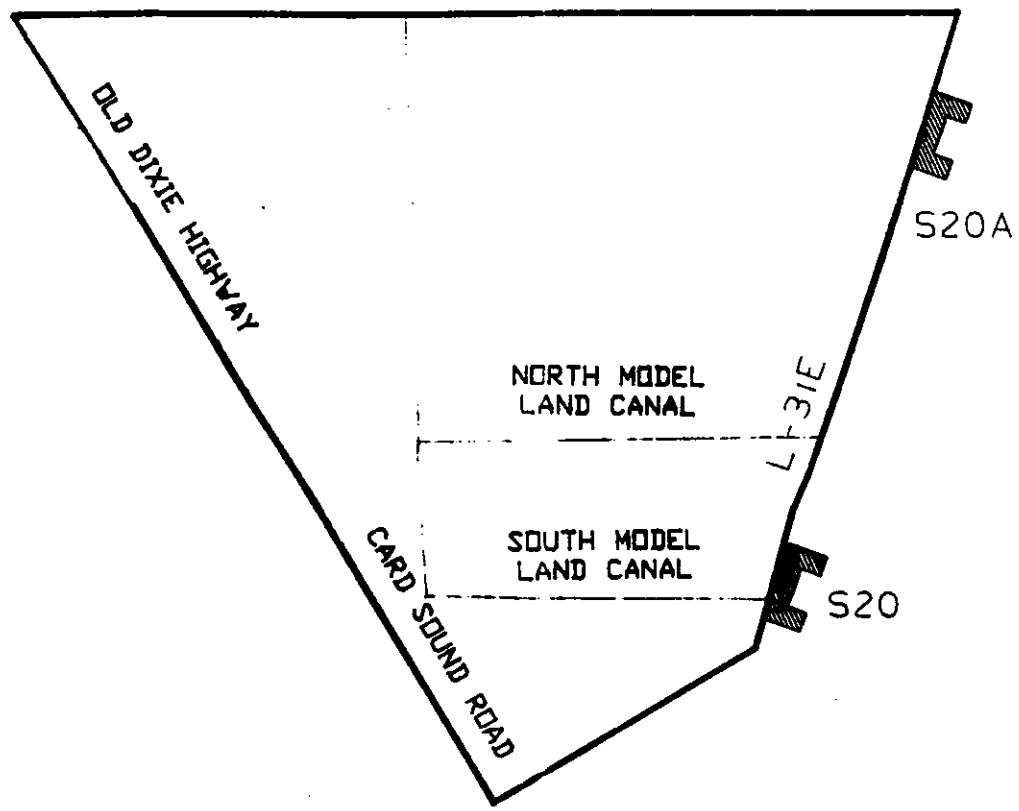
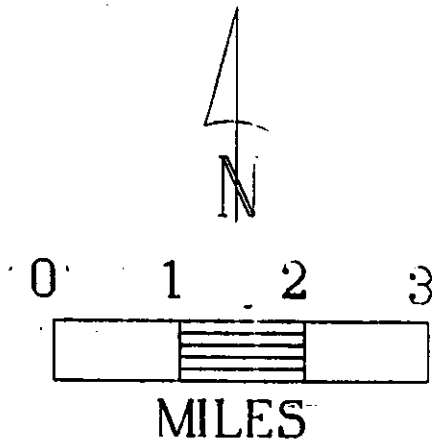


FIGURE C-111 BASIN MAP

MODEL LAND

~ 18,000 ACRES





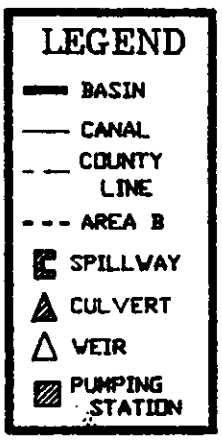
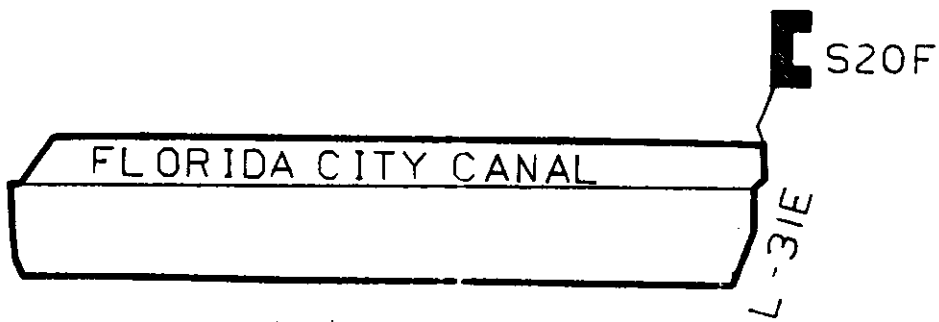
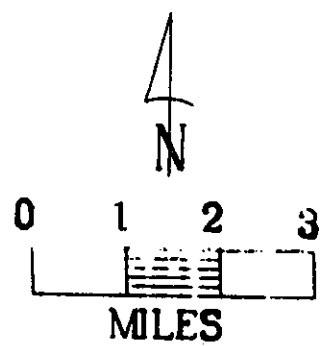


FIGURE MODEL LAND CANAL BASIN MAP

FLORIDA CITY

~ 8,000 ACRES





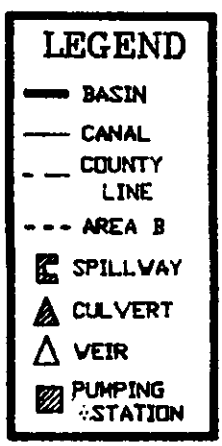
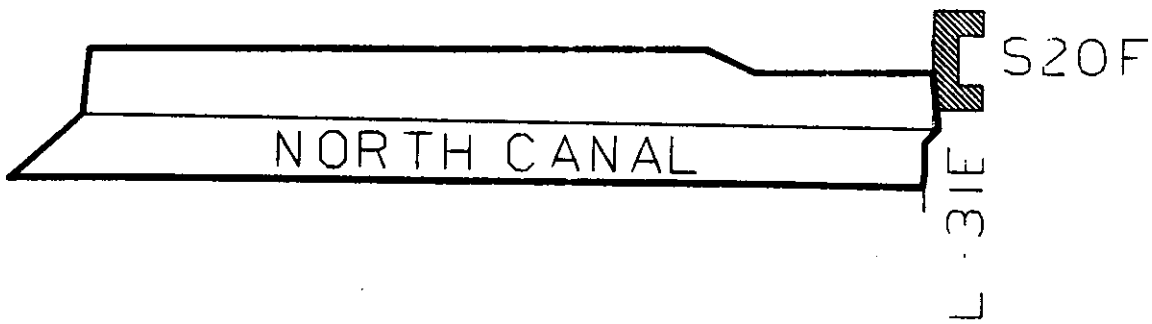
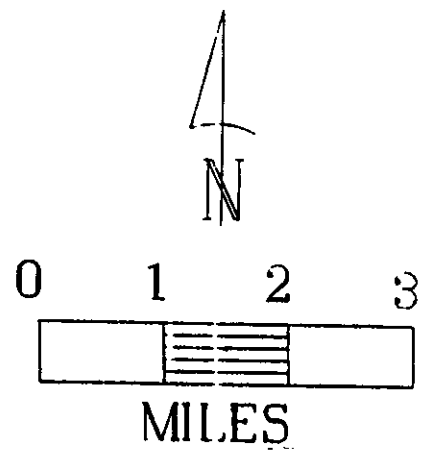


FIGURE FLORIDA CITY CANAL BASIN MAP

NORTH CANAL

~5,000 ACRES





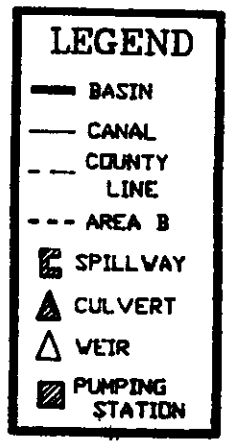


FIGURE NORTH CANAL BASIN MAP

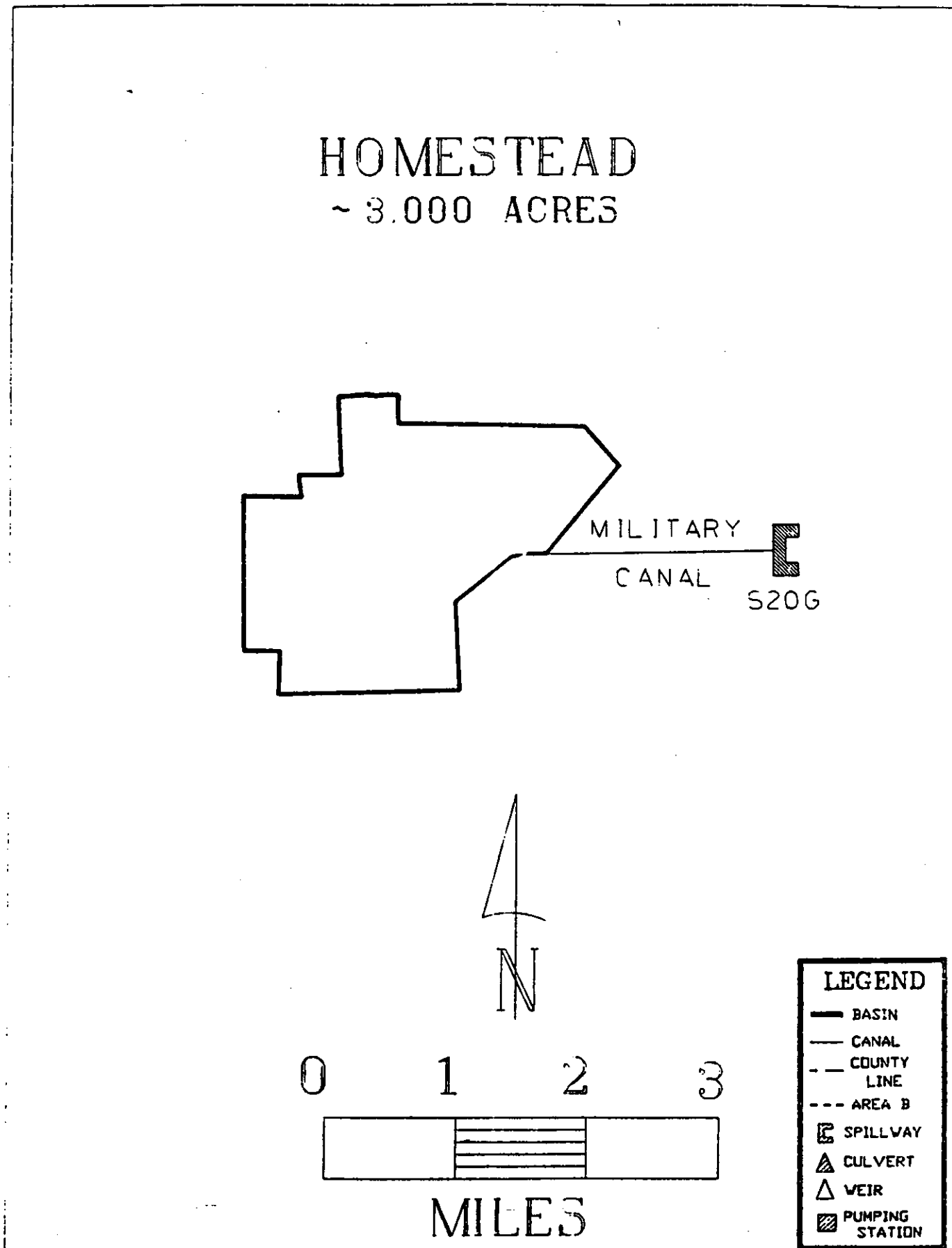
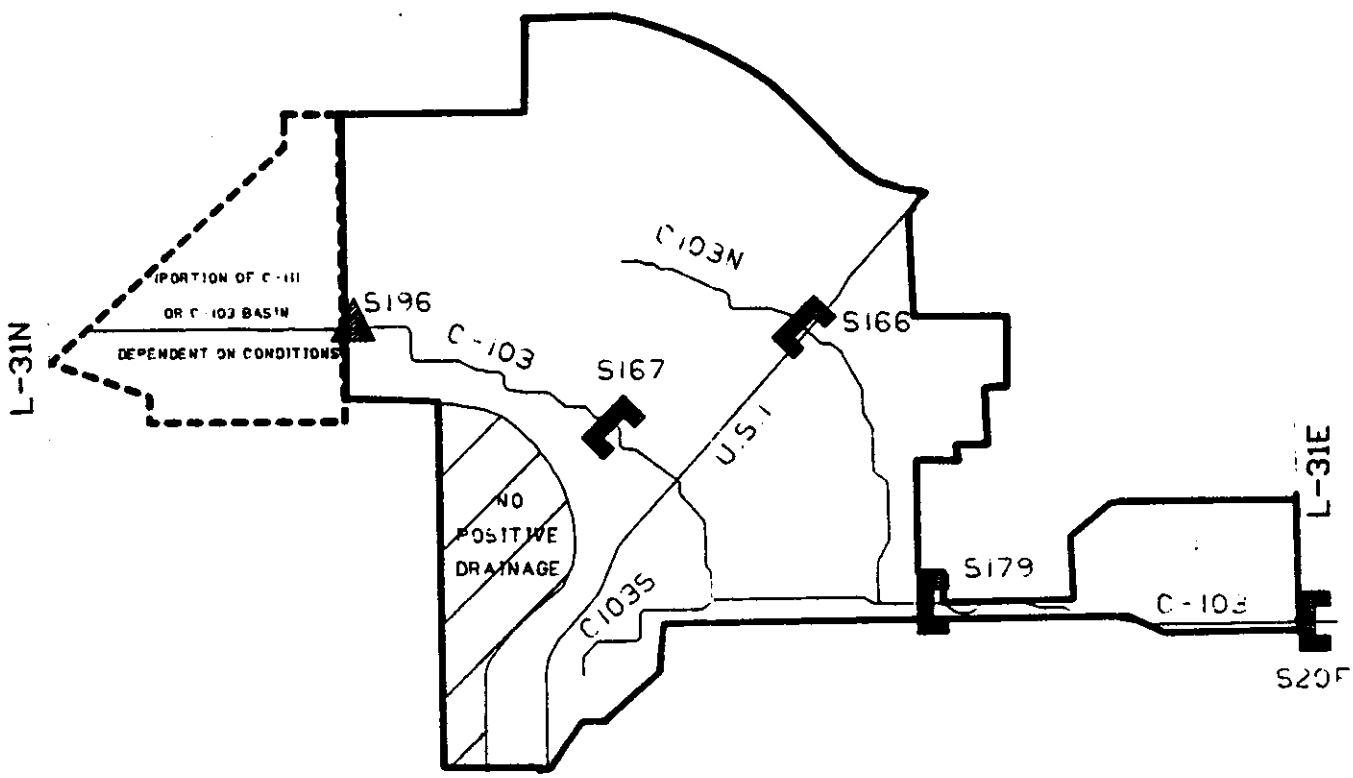
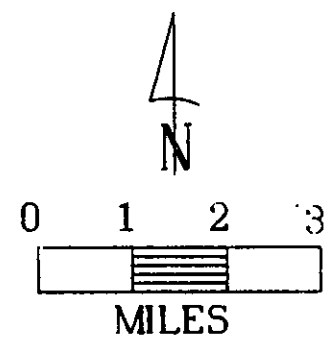


FIGURE 29 HOMESTEAD BASIN MAP

C-103

~26.000 ACRES





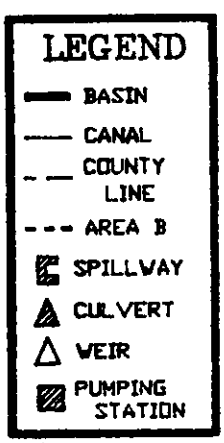


FIGURE **C-103 BASIN MAP**

C-102

~16,000 ACRES

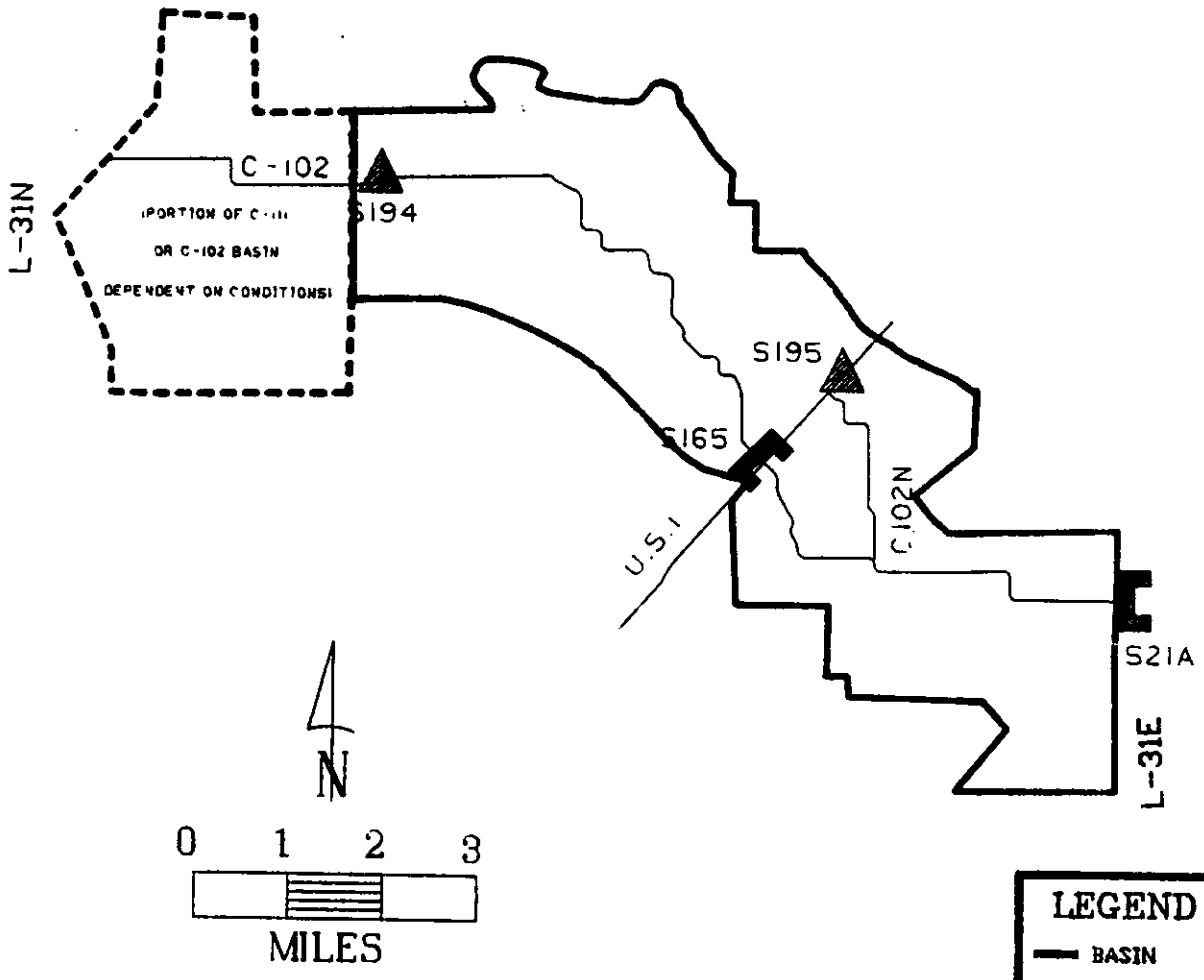


FIGURE **C-102 BASIN MAP**

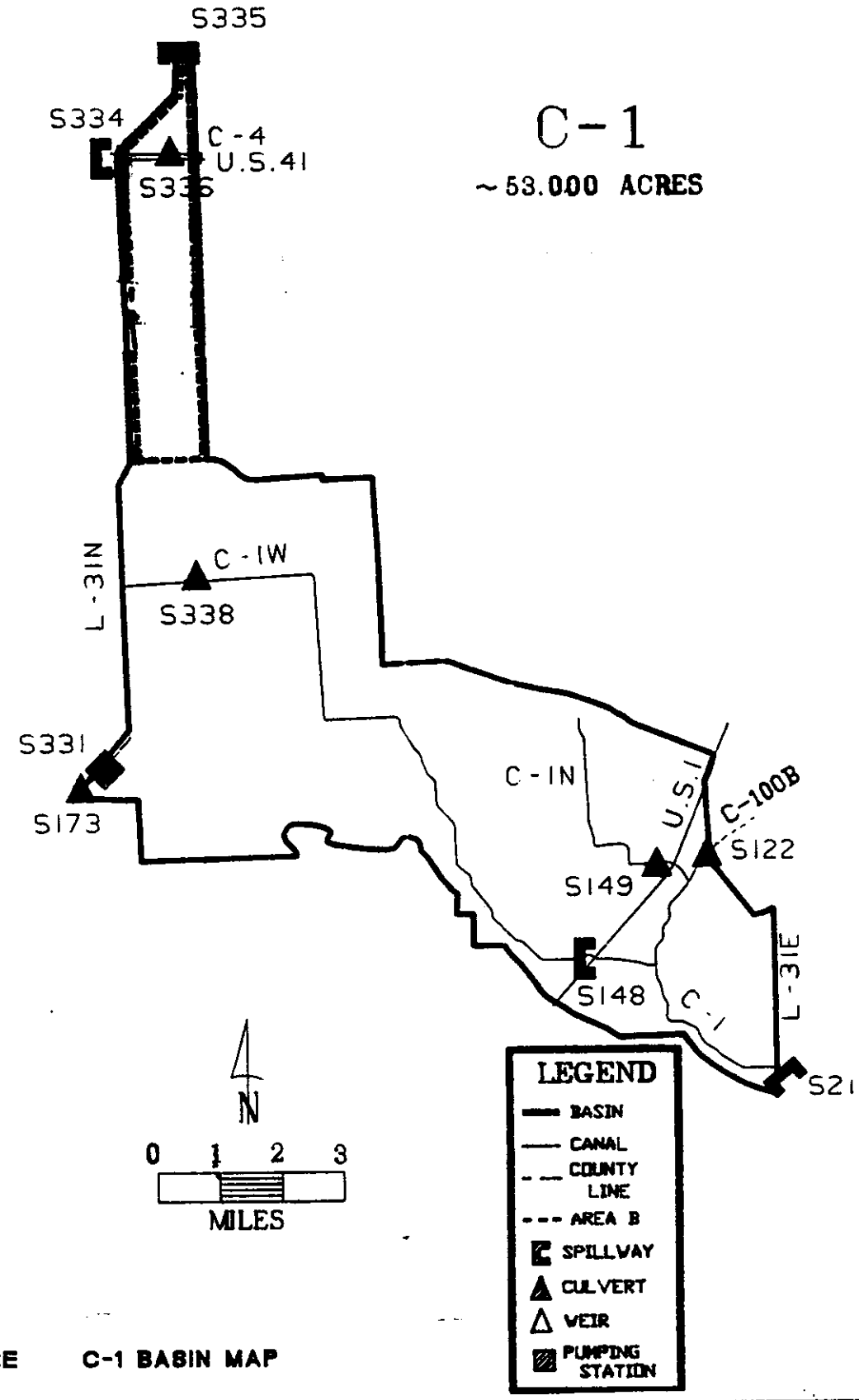


FIGURE C-1 BASIN MAP

C-100

~ 26,000 ACRES

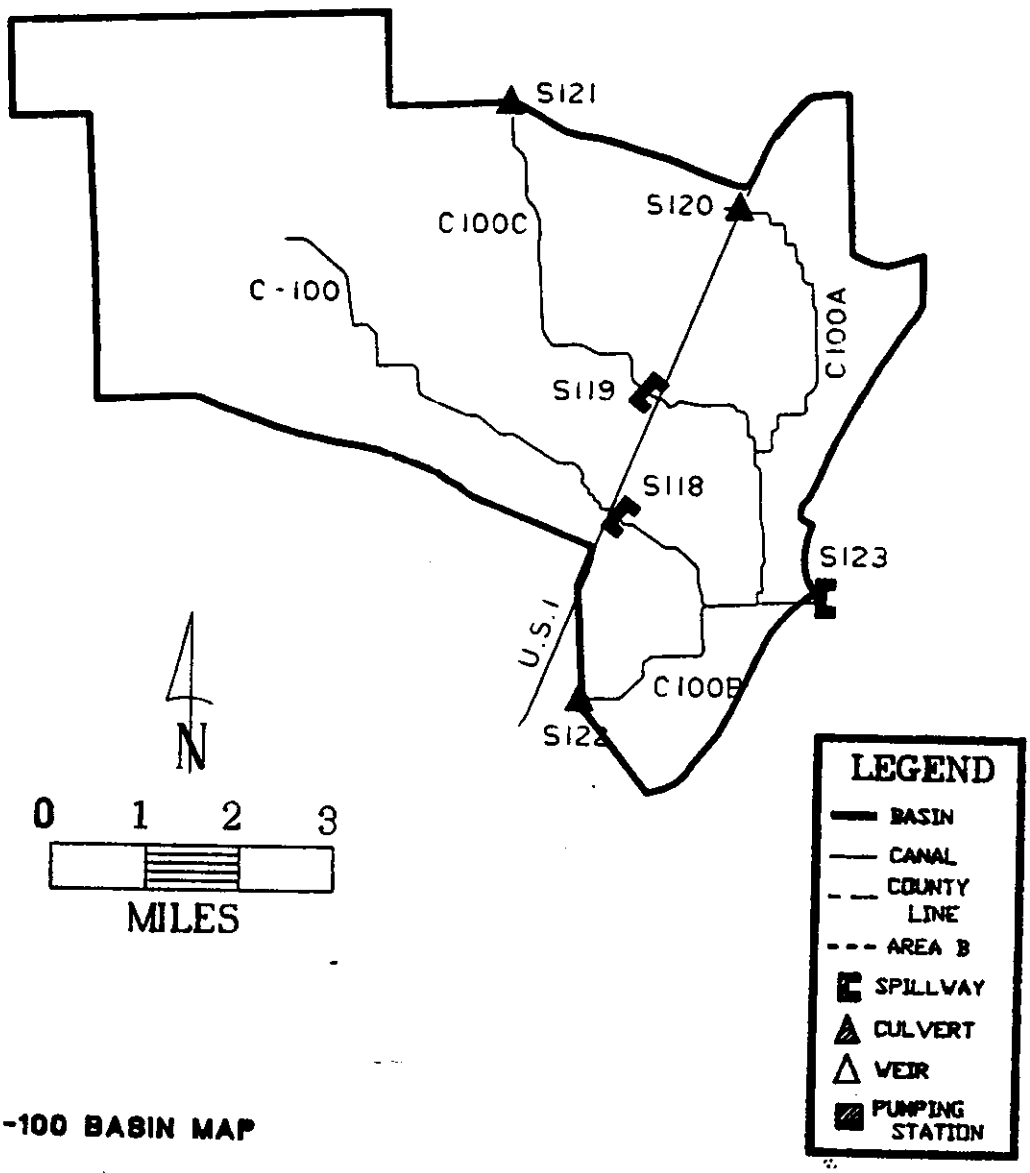
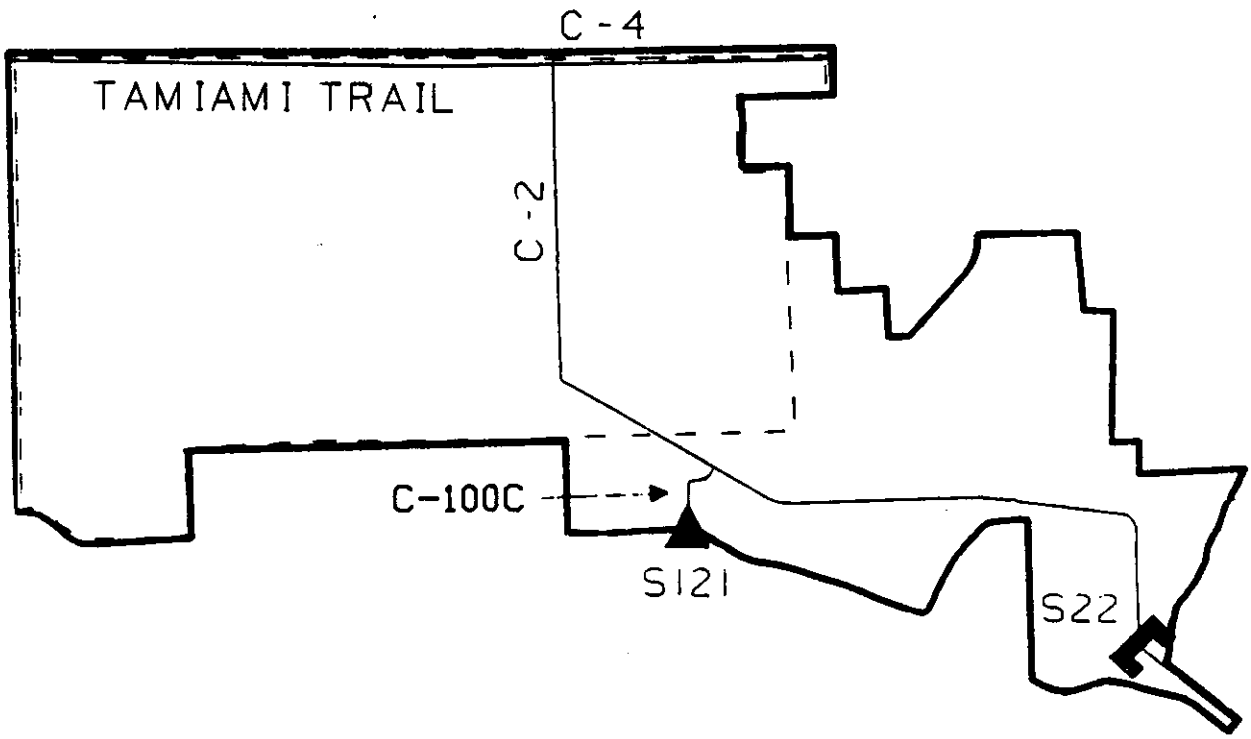
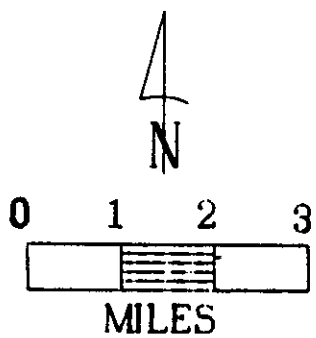


FIGURE C-100 BASIN MAP

C-2

~ 34.000 ACRES





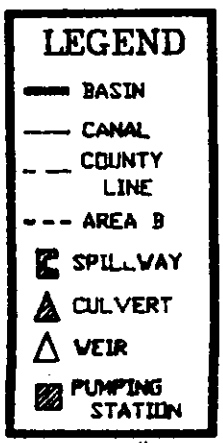


FIGURE C-2 BASIN MAP

C-3

~10,000 ACRES

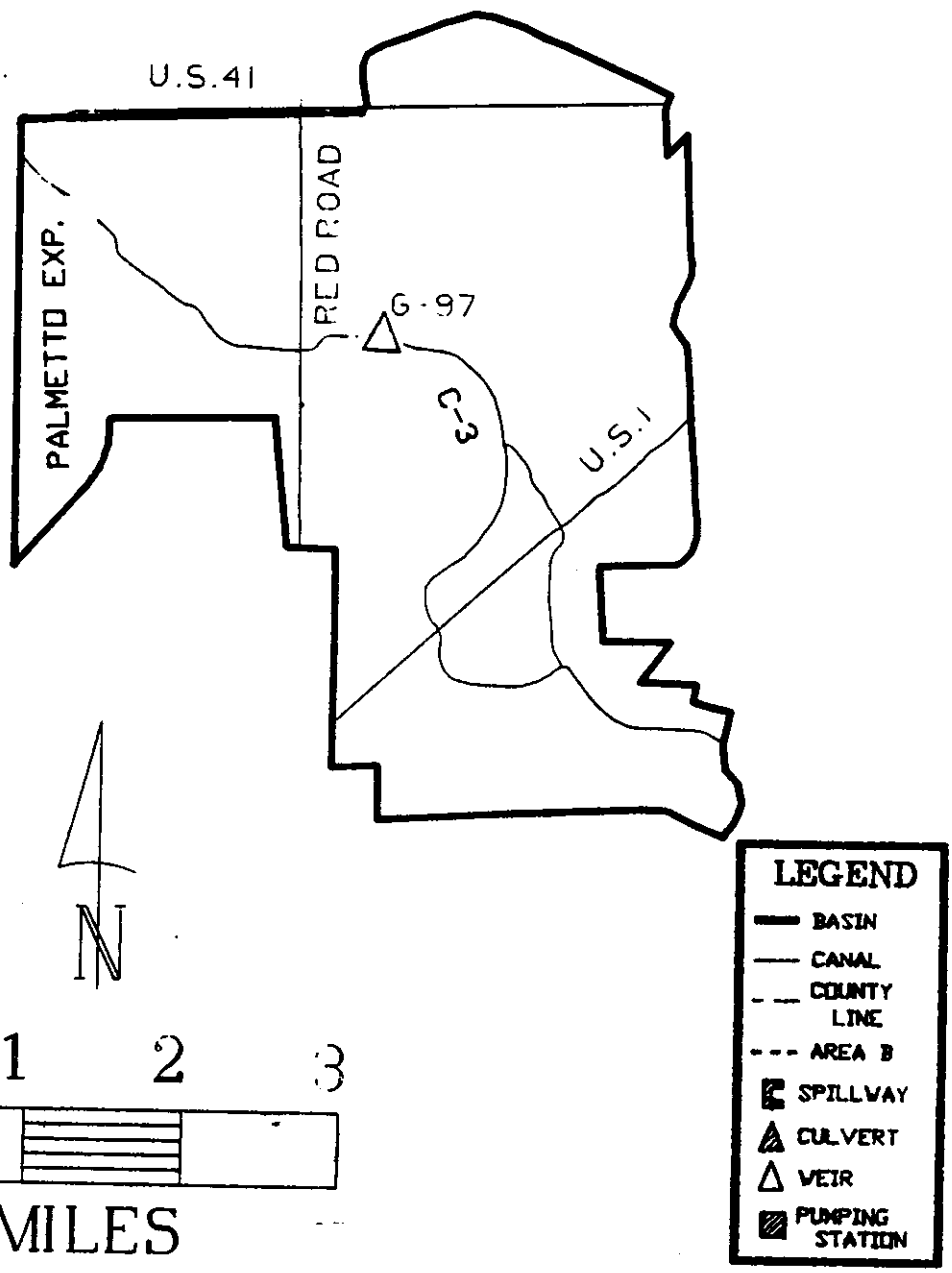
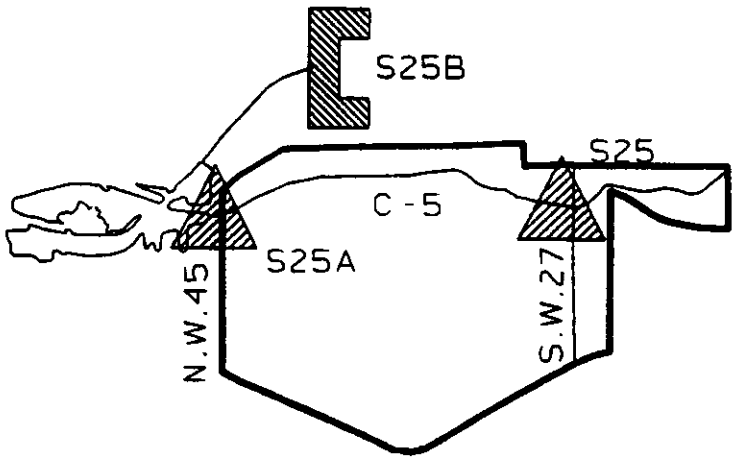
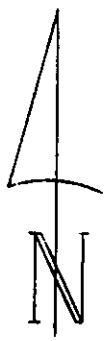


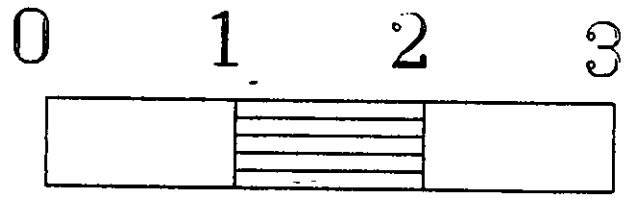
FIGURE C-3 BASIN MAP

C-5

~1,400 ACRES







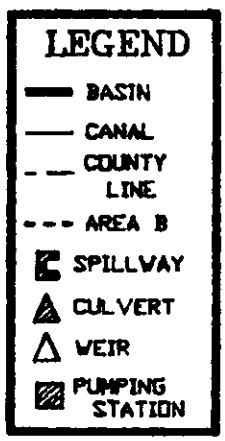


FIGURE 1 C-5 BASIN MAP

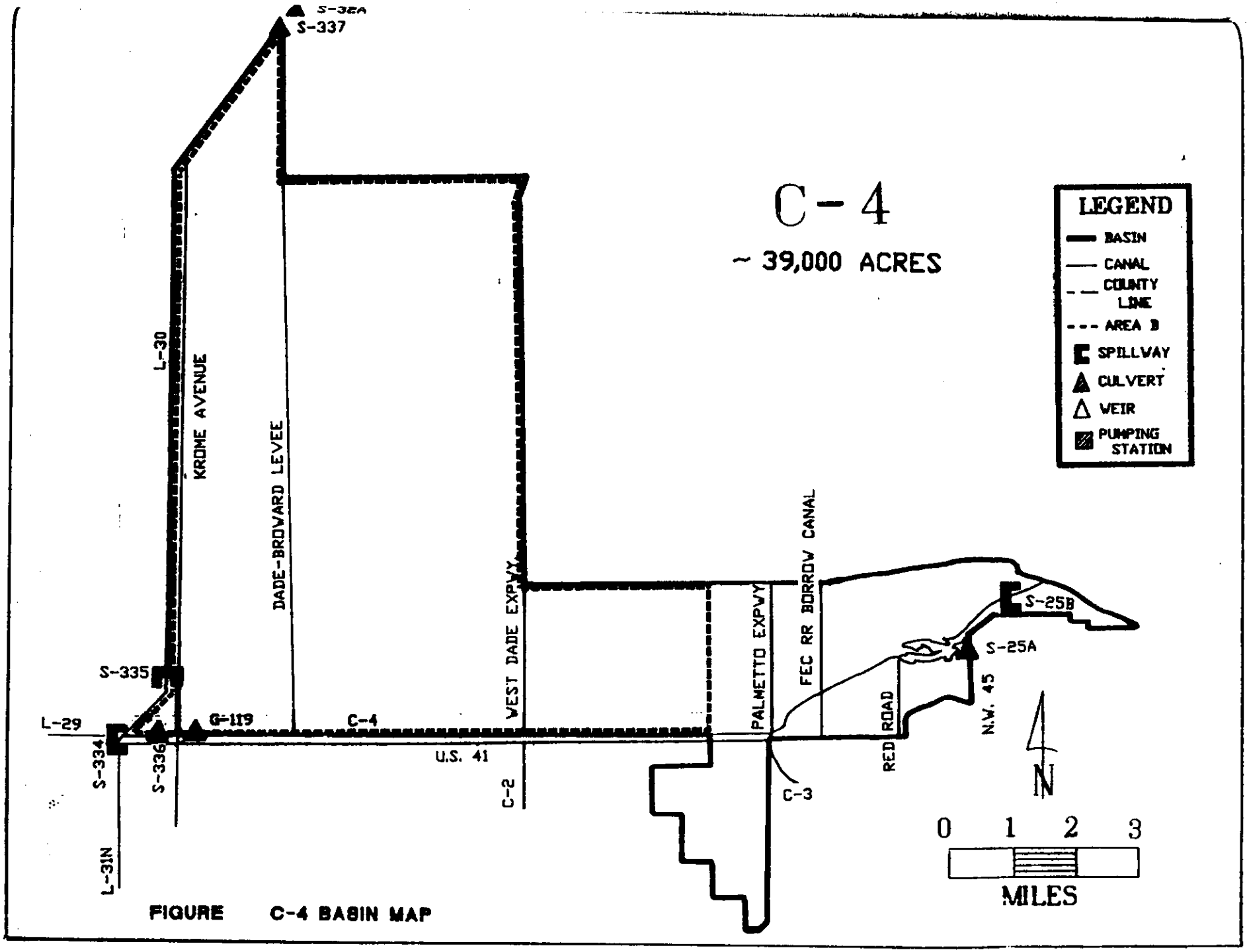


FIGURE C-4 BASIN MAP

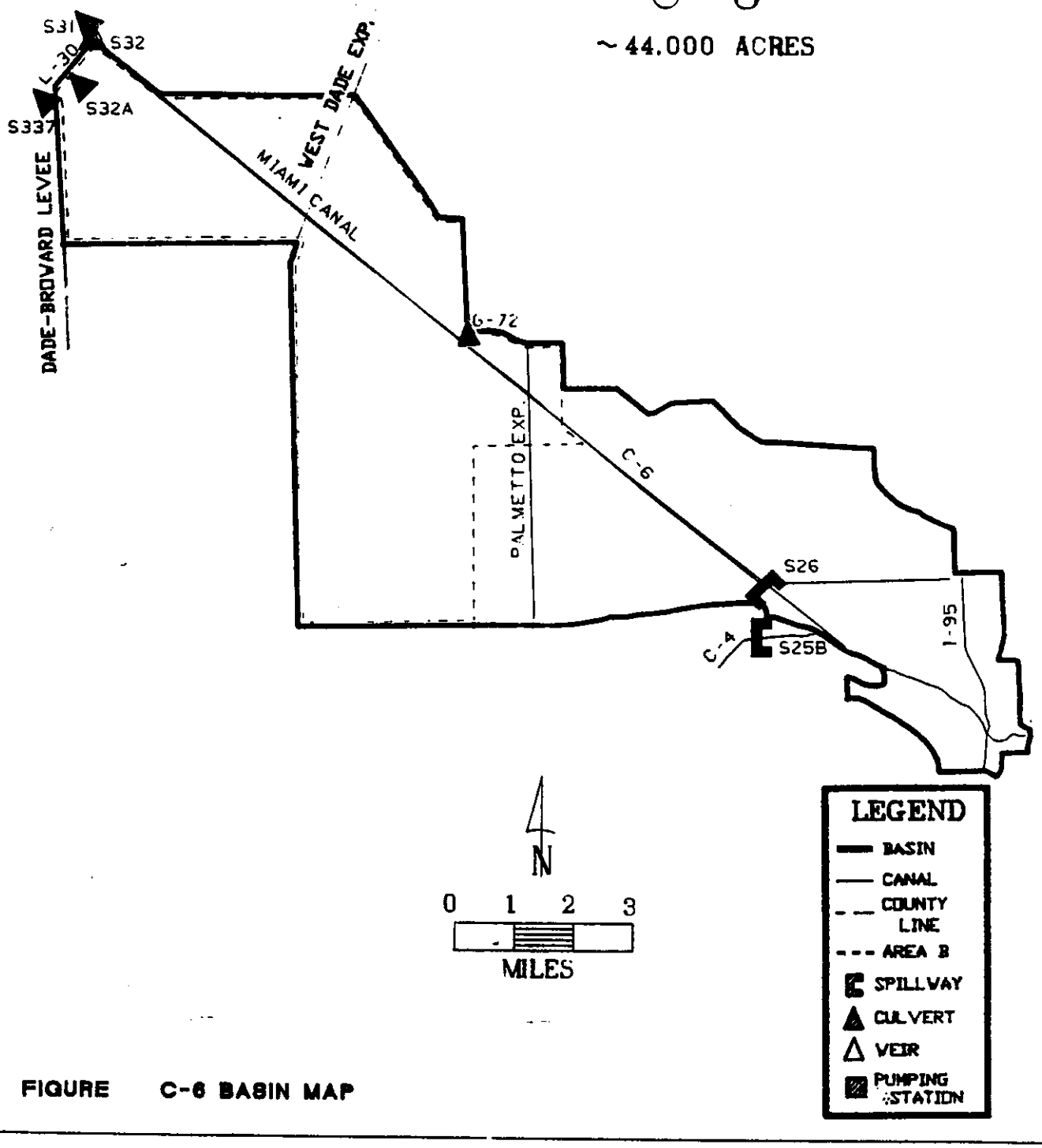


FIGURE C-6 BASIN MAP

C-7

~20,000 ACRES

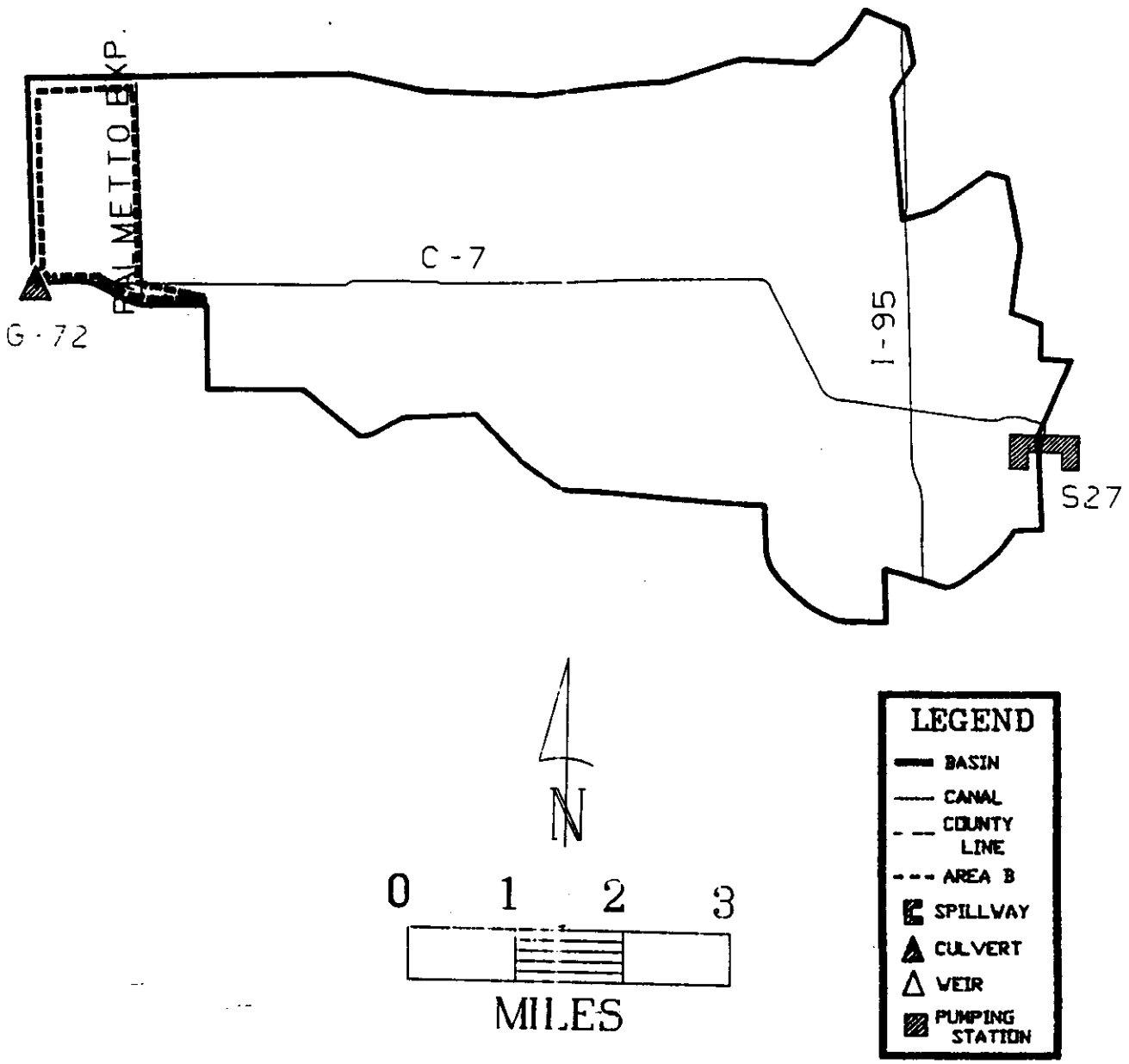


FIGURE C-7 BASIN MAP

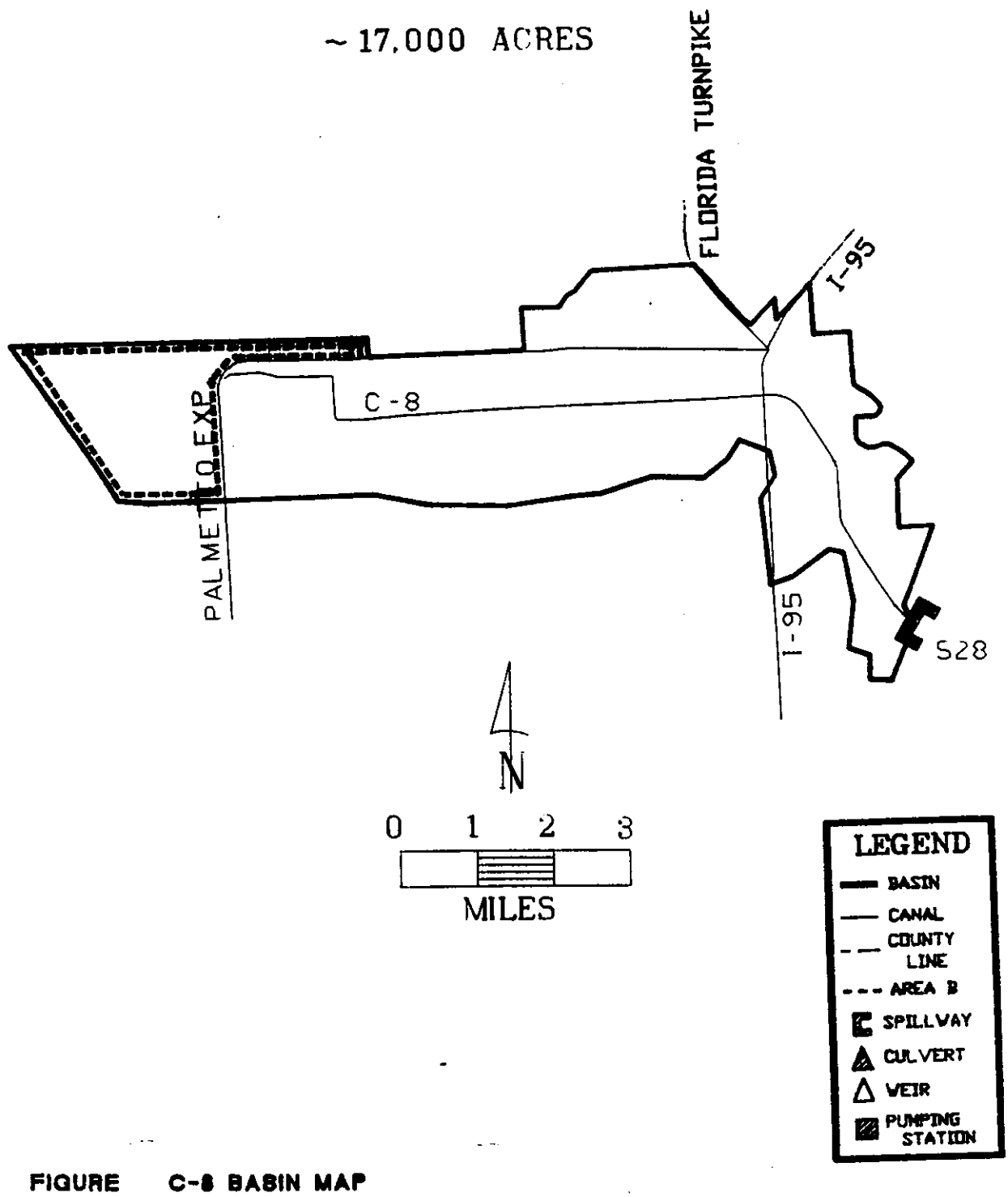


FIGURE C-8 BASIN MAP

C-9 WEST

~29.000 ACRES

~11.000 ACRES DADE

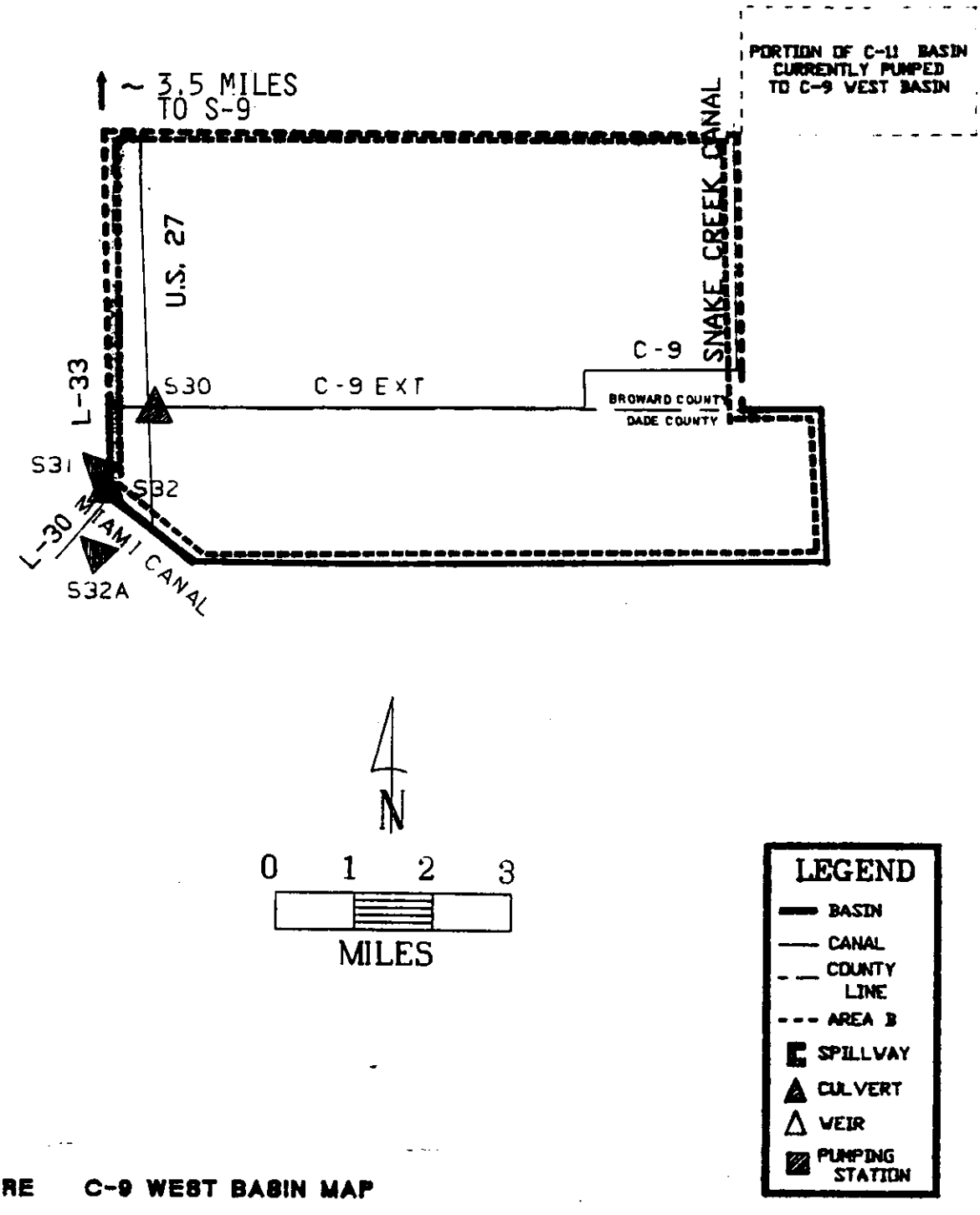
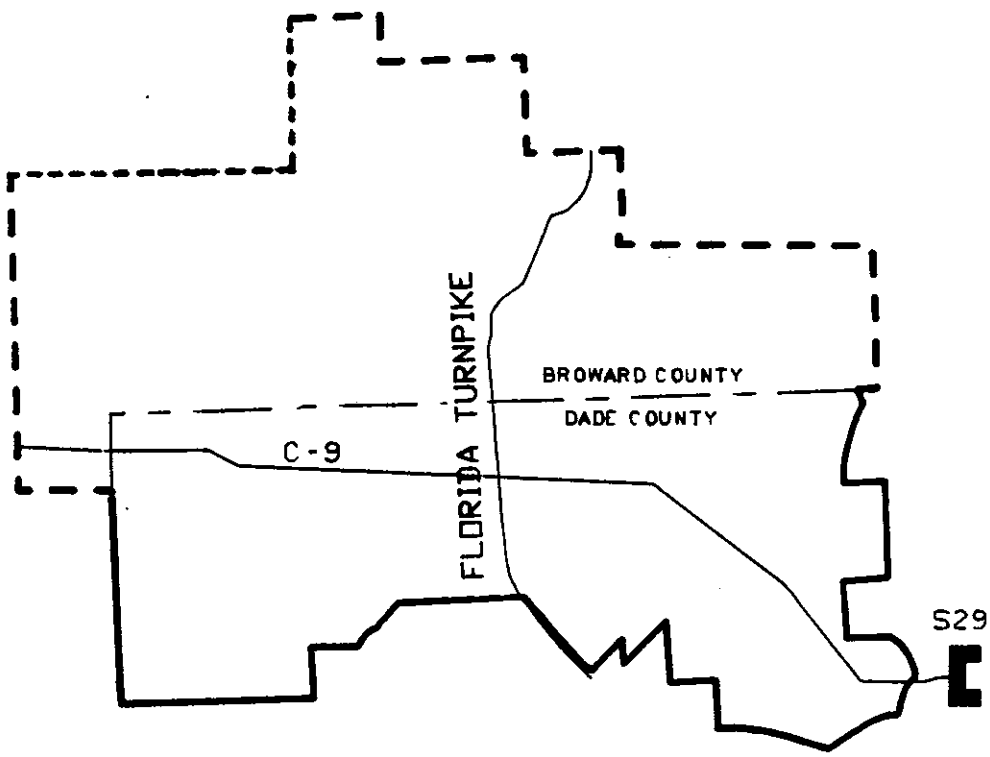


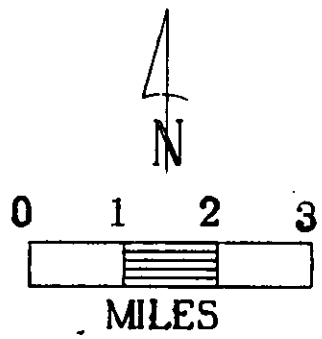
FIGURE C-9 WEST BASIN MAP

C-9 EAST

~34.000 ACRES

~14.000 ACRES DADE





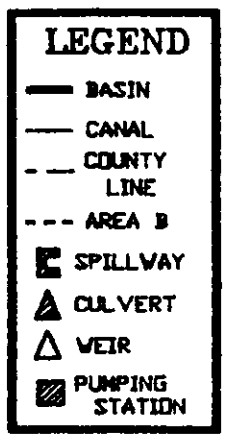
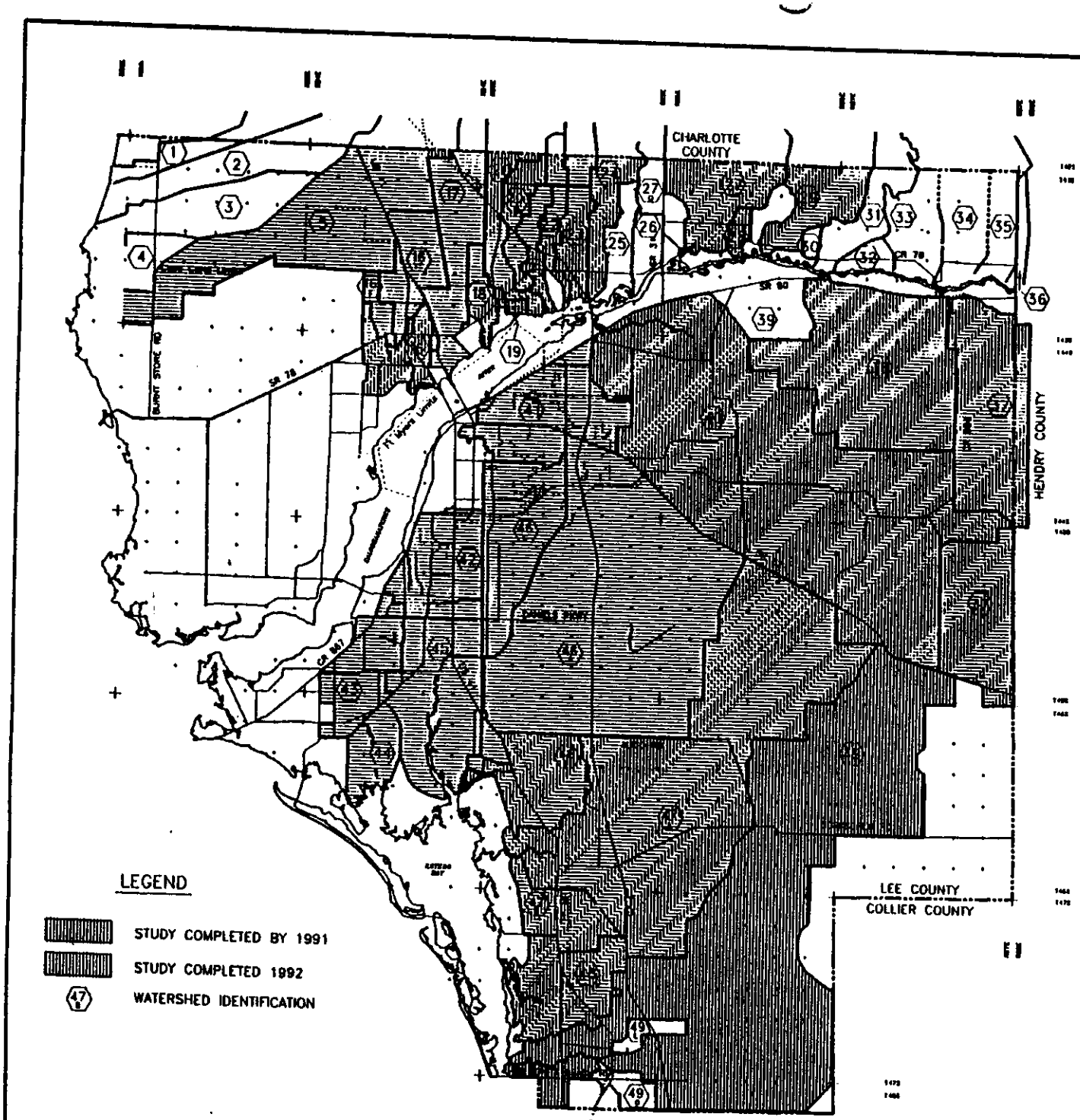


FIGURE C-9 EAST BASIN MAP



1	YUCCA PEN CREEK
2	DURDEN CREEK
3	GREENWELL BRANCH
4	LONGVIEW RUN
5	GATOR SLOUGH
16	HANCOCK CREEK
16-Y	YELLOW FEVER CREEK
16-E	YELLOW FEVER – EAST BRANCH
17	POWELL CREEK
18	MARSH POINT
19	COHN BRANCH
20	DAUGHTREY CREEK
20-A	DAUGHTREY – EAST BRANCH
21	CHAPEL BRANCH
22	BAYSHORE CREEK
23	POPASH CREEK
24	STROUD CREEK
25	PALM CREEK
26	KICKAPOO CREEK
27-O	OWL CREEK
27	TROUT CREEK
28	OTTER CREEK
29	TELEGRAPH CREEK
30	FRANKLIN RUN
31	FICHTER BRANCH
32	PARK BRANCH
33	CYPRESS CREEK
34	SPANISH CREEK
35	MILLER'S GULLY
36	COUNTY LINE
37	BEDMAN CREEK
38	HICKEY CREEK
39	OLGA
40	ORANGE RIVER
41	BILLY CREEK
42	WHISKEY CREEK
43	DEEP LAGOON
44	COW CREEK
45	HENDRY CREEK
46-A	SIX MILE CYPRESS
46-B	MULLOCK CREEK
46-C	TENMILE CANAL
47-A	ESTERO RIVER
47-B	HALFWAY CREEK
48	SPRING CREEK
49	IMPERIAL RIVER
49-L	LEITNER CREEK
49-O	OAK CREEK

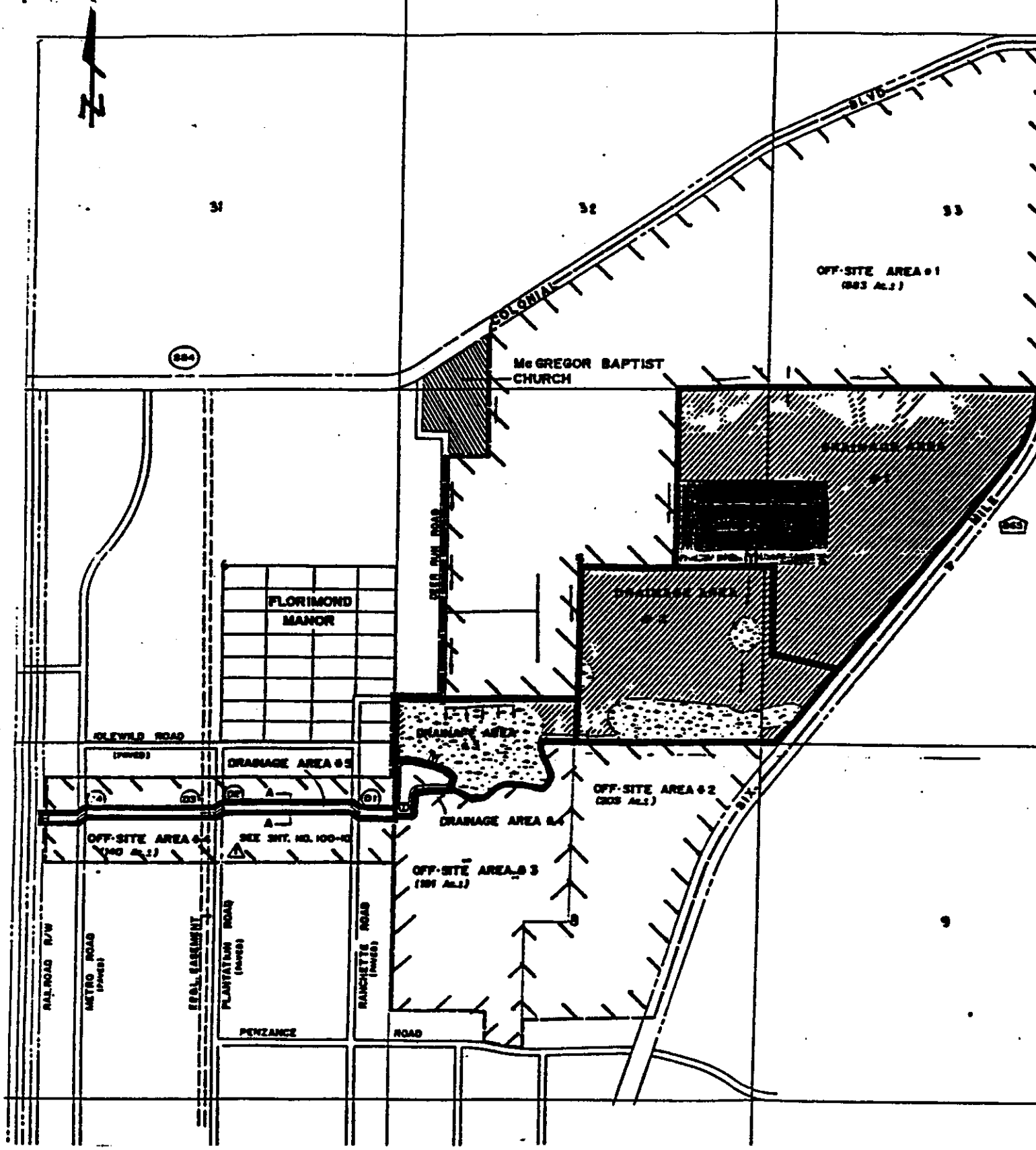
INDICATES WATERSHEDS COMPLETED PRIOR TO 1992

INDICATES WATERSHEDS COMPLETED 1992

SCALE 1" = 5 M

N

COMPLETED WATERSHEDS IN



PROJECT: HARPER BROTHERS FARM * 2,033.4 ACRE BASIN

LOCATION: LEE COUNTY, S32,33/T44S/R25E & S4,5,7,8,9/T45S/R25E