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TECHNICAL PUBLICATION 90-04

October, 1990

DRE-290

A Three-Dimensional Finite Difference Ground Water Flow Model Of Hendry County

DRE 290

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Technical Publication #90-04

**A THREE-DIMENSIONAL FINITE DIFFERENCE
GROUND WATER FLOW MODEL
OF HENDRY COUNTY**

by

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October 1990

This publication was produced at an annual cost of \$1050.00 or \$2.10 per copy to inform the public. 500 1090 Produced on recycled paper.

**Hydrogeology Division
Department of Research and Evaluation
South Florida Water Management District
West Palm Beach, Florida**

EXECUTIVE SUMMARY

Hendry County, Florida is underlain by two fresh water aquifer systems: the Surficial Aquifer System and the Intermediate Aquifer System. The Surficial Aquifer System is comprised of the water table and lower Tamiami aquifers. The sandstone aquifer is the major producing zone within the Intermediate Aquifer System. Information from a ground water assessment completed by the South Florida Water Management District in 1988 was used to develop a regional three-dimensional ground water flow model.

The Hendry County ground water flow model was developed using the U. S. Geological Survey modular three-dimensional finite-difference ground water flow model, commonly known as MODFLOW. This model was used because it allows a detailed evaluation of ground water flow, it is available in the public domain, it is compatible with most computer systems, and it contains many features which make it easy to use and modify. MODFLOW simulates ground water levels and flow using data describing the aquifers, such as hydraulic conductivity, transmissivity, leakance, and storage. Stress on the aquifers can also be simulated, such as recharge, evapotranspiration, well withdrawals, and interactions with surface water bodies.

The Hendry County ground water flow model contains three layers representing the water table, lower Tamiami, and sandstone aquifers. Confining zones between aquifers are not represented by separate layers within the model. Rather, confining zones are represented by vertical flow terms within the top two layers of the model. The horizontal model grid is composed of 48 rows and 54 columns, with a uniform spacing of one mile.

The model was calibrated by adjusting aquifer parameters to match computed water levels with observed water levels for the period January 1986 through December 1988. Ground water withdrawal information for the calibration period was obtained from individual water use permits for agricultural irrigation issued by the District. The permits supplied information on crop types, acreages, irrigation practices, and wells. This information was used to estimate actual monthly water use during the calibration period. Public supply water use, as reported to the District, was used in the model. Together, agricultural irrigation and public supply account for over 99 percent of the ground water use in Hendry County.

To ensure the best possible accuracy for evaluative or predictive purposes, it is important to test the model's sensitivity to the estimated parameters. The top layer, representing the water table aquifer, is most sensitive to evapotranspiration and recharge rates. The lower layers, representing the lower Tamiami and sandstone aquifer, are somewhat sensitive to the vertical hydraulic conductivity of the confining zones.

Upon completion of the sensitivity analyses, a predictive scenario was evaluated. This run represented all of the water use permitted or proposed as of November 1989, simulating moderately dry conditions (2 in 10 year drought). Results show that water levels within the water table aquifer decline one foot or more over approximately 50% of the modeled area. This regional head decline is a result of the decrease in recharge associated with the simulated drought. Several localized areas show larger head declines due to increased withdrawals. The lower Tamiami aquifer responds to drought in a similar manner. However, head declines due to withdrawals are larger because much more water is pumped from the lower Tamiami

aquifer than the water table aquifer. A regional cone of depression centering on large scale agricultural production is seen in southeastern Hendry County, along with several other similar, but smaller scale impacts scattered through the modeled area. The sandstone aquifer shows the greatest impact with approximately 75% the simulated aquifer area showing water level declines of one foot or more during drought conditions. Areas showing greater impacts due to withdrawals are west of LaBelle and the area where Hendry, Lee, and Collier Counties meet. Because water level declines in the lower aquifers can result in an increase in the amount of leakage from overlying aquifers, the water level declines in the lower Tamiami and sandstone aquifers are causing significant water levels declines in the water table aquifer.

Recommendations

Strict management of the lower Tamiami aquifer in southeastern Hendry County and the sandstone aquifer throughout the study area is needed because of the projected declines in water levels. Minimum water levels should be established for the lower Tamiami aquifer in southeast Hendry County and the sandstone aquifer throughout the study area. All permitted withdrawals should be regulated to ensure the minimum levels are maintained. Increased monitoring of water levels and withdrawals is recommended for areas where minimum levels are set. Future requests for large scale withdrawals should be closely examined to ensure that the minimum levels can be maintained. The establishment of minimum water levels should be a part of the development of the water supply plan for this area.

Accurate projections of future agricultural water use in Hendry County are essential to the planning process. These projections must include acreages, crop types, and locations likely to be developed, in order to simulate reasonable projections of future water conditions.

The model developed in this study should be used in the evaluation of water use permit applications. Where a finer scale or site specific model is required, the regional model could be used to provide the boundary conditions. Areas where this is necessary include southeast Hendry County and Ft. Denaud (west of LaBelle). The model should continue to be refined and updated whenever additional information becomes available.

Hydrogeologic studies should be undertaken in those areas where existing information is incomplete. These areas include Ft. Denaud in northwest Hendry County and the water table aquifer throughout the study area. This will increase the overall accuracy and confidence level of the model.

Interfaces should be developed with the Lee County model, and the Collier County model currently under development. This will result in a truly regional model that will encompass the entire flow regime for the Surficial Aquifer System and the Intermediate Aquifer System in the lower west coast water supply planning area. The interface with the Lee County model is of particular importance, since the models indicate that much of the flow into the sandstone aquifer in Lee County consists of lateral flow originating in Hendry County. The large withdrawals for agricultural irrigation occurring near the county border may be affecting regional flow patterns in the area.

Interactions between ground and surface water should be investigated. The dense network of small canals found in Hendry County should be examined and their effect on ground water flows quantified and used in the model. This would improve the calibration of the water table aquifer and the overall accuracy of the model.

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ACKNOWLEDGEMENTS

This study was carried out under the direction of Sharon Trost, formerly the Director of the Hydrogeology Division, and currently the Director of the Water Supply Planning Division. Scott Burns, Director of the Hydrogeology Division also provided direction and input on the hydrogeology of the lower west coast.

The author wishes to acknowledge the peer review committee, whose comments greatly improved the quality of this report:

Leslie Wedderburn, Ph.D., Research and Evaluation Department, SFWMD
Bonnie Kranzer, Ph.D., Executive Office, SFWMD
William Scott Burns, Hydrogeology Division, SFWMD
Richard Bower, Water Supply Planning Division, SFWMD
Steve Lamb, Water Use Division, SFWMD
Phil Fairbank, Hydrogeology Division, SFWMD
Gail Milleson, Murray-Milleson Inc., West Palm Beach
Tom Missimer, Missimer and Associates, Cape Coral
Dale Hardin, Agricultural Management Services, Punta Gorda
Peter Anderson, GeoTrans Inc., Herndon, Virginia

The author also wishes to acknowledge all others who reviewed this document: Karin Adams, Mary-Jo Shine, Jorge Restrepo, Walter Ward, Jose Alvarez, Lloyd Horvath, and Maurice Gebhardt.

Richard Bower provided insight and assistance in understanding the subtleties of MODFLOW. He also developed many programs used to generate and manipulate the large data sets necessary in a model of this size. Finally, he provided insight into the hydrogeology of the Lee County - Hendry County border area.

Karin Adams provided a great deal of assistance in running and making the necessary modifications to the many pre- and post- processing programs.

Emily Hopkins assembled the rainfall, water level, and evaporation data used in the calibration process.

Finally, the author wishes to acknowledge Cindy Whelan and Chris Benkley for their work on the graphics; and Karen Hargray and Hedy Marshall, who did the word processing and assisted in the editing of this report.

ABSTRACT

Hendry County, Florida, is underlain by two fresh water aquifer systems: the Surficial Aquifer System and the Intermediate Aquifer System. The Surficial Aquifer System is comprised of the water table and lower Tamiami aquifers. The sandstone aquifer is the major producing zone within the Intermediate Aquifer System. A three-dimensional ground water flow model of these aquifers was developed using the U. S. Geological Survey modular finite-difference ground water flow model (MODFLOW). The model consists of three layers representing the water table, lower Tamiami, and sandstone aquifers. Horizontal discretization was accomplished using a grid comprised of 48 rows and 54 columns, with a grid spacing of one mile. Initial aquifer parameters were obtained from a ground water resource assessment study of Hendry County (Smith and Adams, 1988). A transient calibration was performed for a three year period (1986 through 1988) by comparing simulated water levels with observed water levels in an extensive monitoring network. Sensitivity analyses showed that the lower Tamiami and sandstone aquifers are sensitive to changes in vertical hydraulic conductivity, and the water table aquifer is sensitive to changes in recharge and the maximum evapotranspiration rate.

A predictive scenario was evaluated, representing all permitted and proposed water use as of November 1989, simulating a moderately dry period (2-in 10 year drought). Results of the simulation show that the water table aquifer experiences water level declines of one foot or more over 50% of the modeled area. The lower Tamiami aquifer is also showing significant effects of ground water withdrawals, as evidenced by the regional cone of depression that occurs in southeast Hendry County. The sandstone aquifer shows the greatest potential impact from permitted and proposed water withdrawals. The predictive scenario indicates that a decline in water levels of one foot or more will occur over approximately 75% of the areal extent of the sandstone aquifer in the study area, with localized head declines due to withdrawals exceeding 10 feet. Strict water management is recommended in the lower Tamiami aquifer in southeast Hendry County and in the sandstone aquifer throughout Hendry County. This should include the establishment of minimum water levels in the affected areas. Permitted withdrawals should be regulated in order to maintain these levels, which should be developed during the water supply planning process.

INTRODUCTION

PURPOSE AND SCOPE

This study was undertaken as part of the South Florida Water Management District's program to develop comprehensive water supply plans. These plans will be based on quantitative assessments of the available water resources combined with estimates of future water use demands. Evaluation of existing water supply problem areas, identification of potential problem areas, and development of management guidelines will be integral parts of a water supply plan.

The purpose of this study was to develop a county wide three-dimensional ground water flow model of the major fresh water aquifer systems in Hendry County. Specific applications of this model will enable the development and evaluation of various ground water elements to be included in the water supply plan for the Hendry County area and the subsequent evaluation of the impacts of proposed ground water uses. The model will also be used to evaluate short term drought management scenarios during declared water shortages.

This report represents the third phase of a three phase ground water resource assessment for Hendry County. The first phase of the Hendry County ground water assessment was completed in 1986 and involved the evaluation of the ground water monitor network, identification of areas of data deficiency, and investigation of land and water use patterns. The results of this study are summarized in a technical memorandum (Smith, Sharp, and Shih, 1988). The second phase of the project included extensive field work to define the extent and occurrence of major aquifer systems, regional ground water flow patterns, water quality trends, and a preliminary assessment of the future development potential of the ground water resources of Hendry County. The results of this work are described in SFWMD Technical Publication 88-12 (Smith and Adams, 1988). Development of the ground water flow model is the final phase of the resource assessment; however the model will be continually refined and updated as it is used in the regulatory and planning processes, and as more data becomes available.

LOCATION OF STUDY AREA

Hendry County is located in the central portion of south Florida, south of Lake Okeechobee (Figure 1). The study area includes all of Hendry County and a six mile buffer area into the adjacent counties of Charlotte, Lee, Collier, Broward, Palm Beach, and Glades. It lies generally within Townships 42 through 49 South, and Ranges 27 through 35 East, and encompasses approximately 2100 square miles, 1189 of which are in Hendry County (Figure 2).

PREVIOUS INVESTIGATIONS

Early investigations into the geology of south Florida were made by Matson and Clapp (1909), Matson and Sanford (1913), and Cooke and Mossom (1929). These studies were summarized by Parker and Cooke (1944), and Parker, Ferguson, Love and others (1955). More recent work on the geology of south Florida was done by Missimer (1984).

The stratigraphy of the area was discussed by Puri and Vernon (1964), and Peck (1979). The stratigraphy and paleoecology along the Caloosahatchee River was investigated by DuBar (1958). The Tamiami Formation in Hendry County was

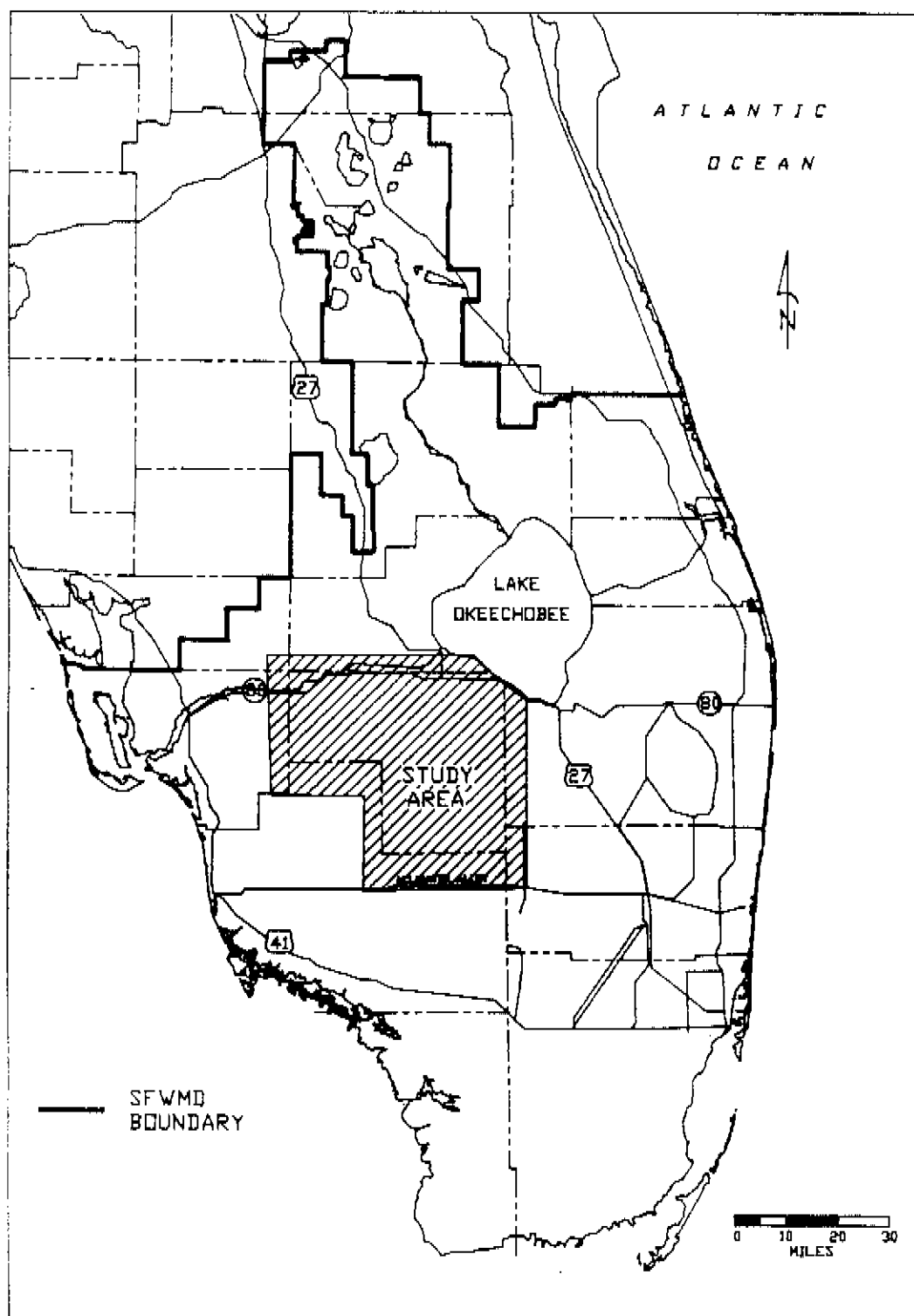


Figure 1. LOCATION OF STUDY AREA

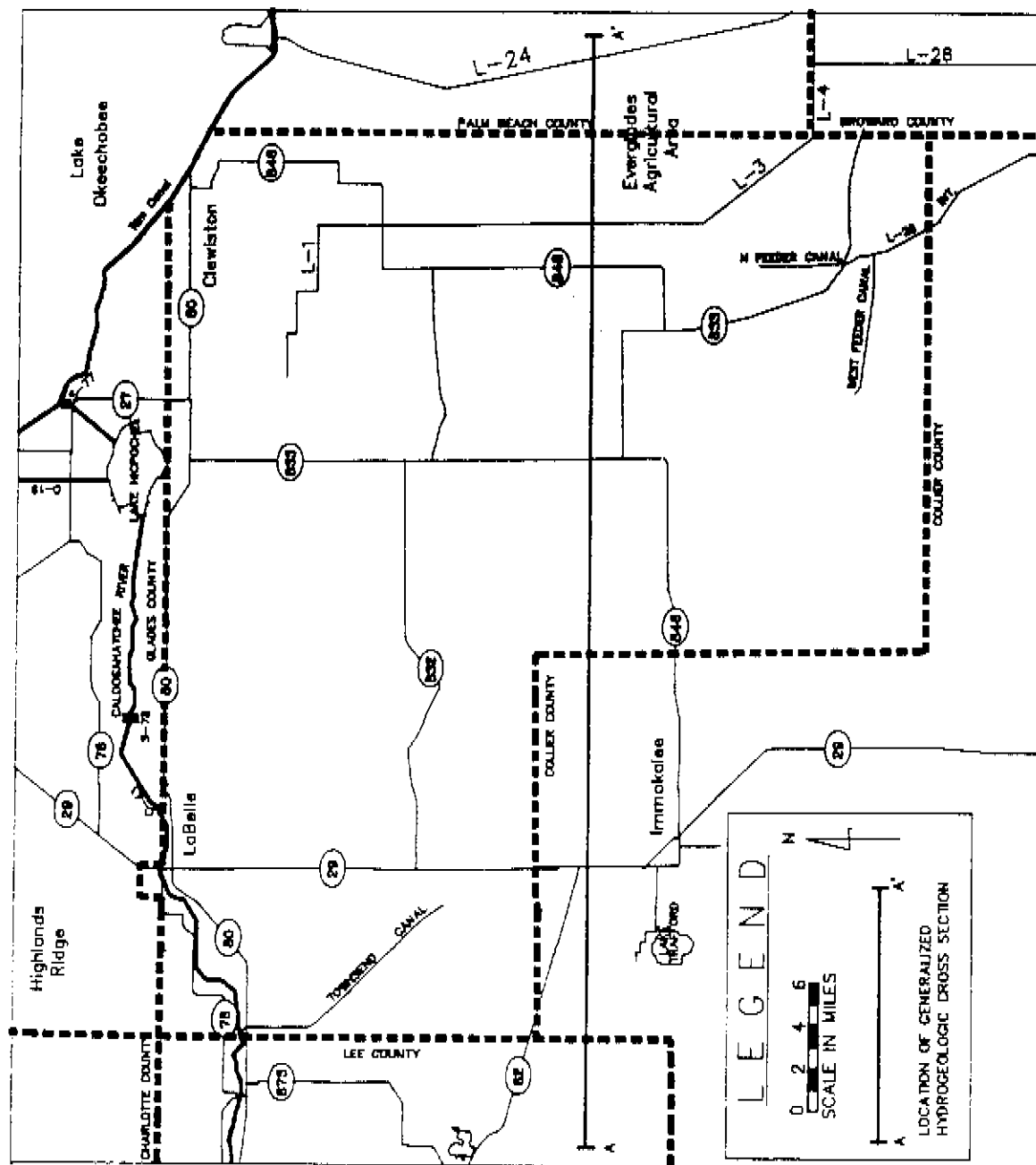


Figure 2. STUDY AREA

investigated by Slater (1978). The lithostratigraphy of the Hawthorn Group was discussed by Scott (1988).

The hydrogeology of the area was investigated by Klein, Schroeder, and Lichtler (1964) and Fish, Causaras, and O'Donnell (1983). The most recent work in Hendry County was done by Smith and Adams (1988). In addition, many site specific reports by various consultants are available. The reader is directed to the bibliography in Smith and Adams (1988) for a more complete list.

Hydrogeologic studies in areas adjacent to Hendry County were done in Lee County by Wedderburn et al. (1982), and James M. Montgomery, Inc. (1988); and in Collier County by Knapp, Burns, and Sharp (1986). Three-dimensional ground water flow models have been developed for Lee County (Bower, Adams, and Restrepo, 1989) and Palm Beach County (Shine, Padgett, and Barfknecht, 1990).

HYDROGEOLOGY

A brief summary of the hydrogeology which supports the model development follows. Readers wishing a more detailed discussion of the hydrogeology of the Hendry County area are referred to Smith and Adams (1988). Hydrostratigraphic nomenclature used in this report is consistent with the 1988 publication, which follow the guidelines set forth by the Southeastern Geological Society Committee on Florida Hydrostratigraphy (SGSCFH, 1986).

Hendry County is underlain by three aquifer systems: the Surficial Aquifer System, the Intermediate Aquifer System, and the Floridan Aquifer System. The model developed for this study is limited to the Surficial Aquifer System and the upper portion of the Intermediate Aquifer System (Figure 3). The Floridan Aquifer System is not used for water supply in Hendry County because of its poor water quality; therefore, it is not discussed in this report.

Surficial Aquifer System

The Surficial Aquifer System consists of the water table aquifer and hydraulically connected units above the top of the first occurrence of laterally extensive and vertically persistent beds of much lower permeability (SGSCFH, 1986). In Hendry County, the Surficial Aquifer System is comprised of the water table aquifer and the lower Tamiami aquifer. Where they both occur, they are separated by leaky semi-confining beds which are collectively referred to as the Tamiami confining zone.

Water Table Aquifer. The water table aquifer occurs throughout Hendry County. It is generally 20 to 40 feet thick, although in localized areas around LaBelle and Immokalee it occurs in thicknesses in excess of 80 feet. It is extremely variable in composition and hydraulic properties. Information on the hydraulic properties of the water table aquifer in Hendry County is extremely limited. Reported values of hydraulic conductivity range from approximately 100 feet per day (ft/day) to 3500 ft/day. Because of the large degree of lateral heterogeneity, susceptibility to drought induced stress, availability of other water sources, and potential impacts to wetlands, the water table aquifer is not heavily used in Hendry County. However, some localized use occurs in areas where there is no other viable water source available.

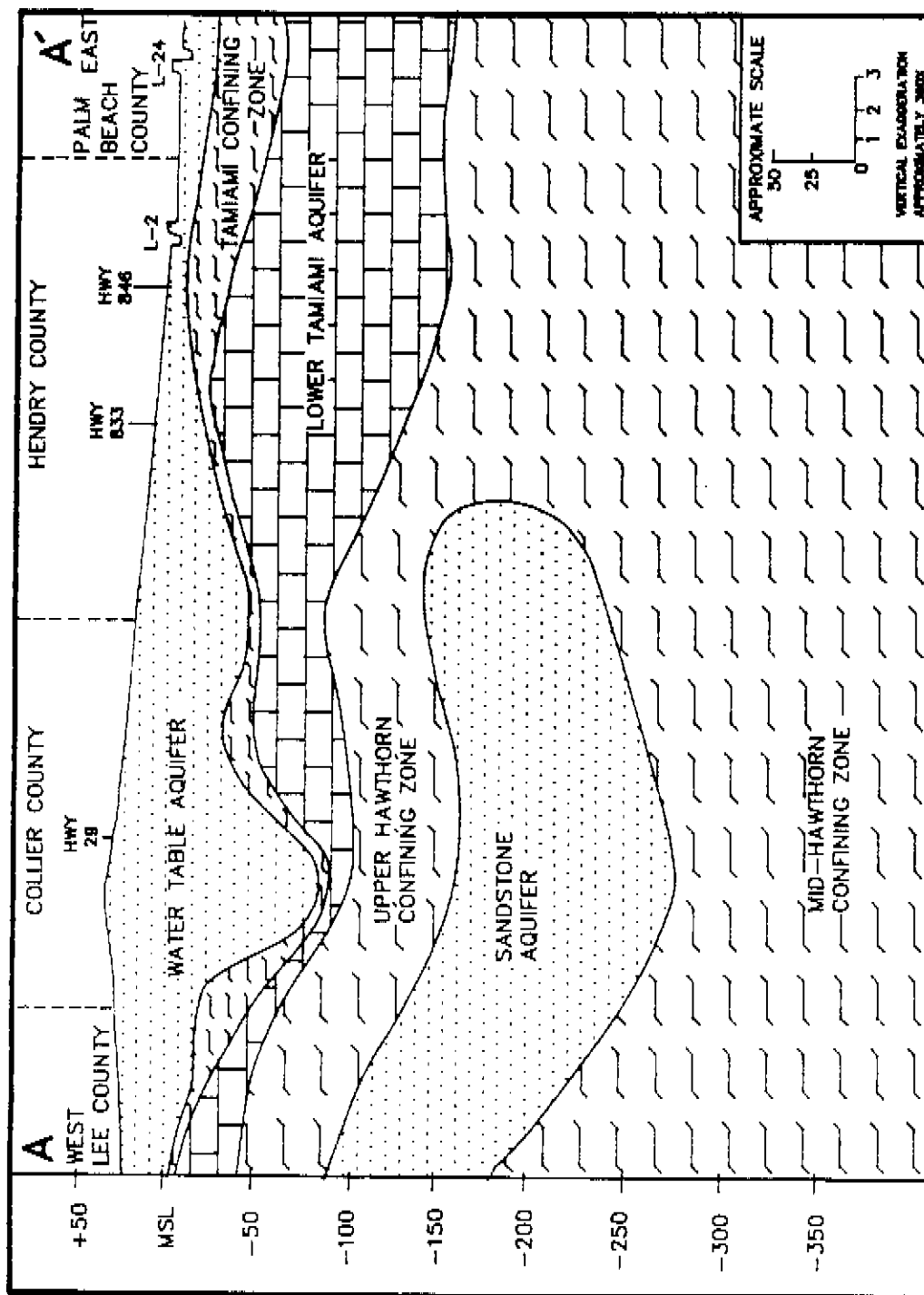


Figure 3. GENERALIZED HYDROGEOLOGIC CROSS SECTION OF HENDRY COUNTY

Tamiami Confining Zone. The Tamiami confining zone is a leaky semi-confining zone that separates the water table aquifer from the underlying lower Tamiami aquifer. It is present throughout most of Hendry County and occurs in thicknesses up to 60 feet. However, in some areas of the western portion of the study area, it is very thin and is characterized by high values of vertical hydraulic conductivity. In these areas, it does not form an effective confining layer, and the Surficial Aquifer System behaves as a single unconfined aquifer. These areas generally correspond to the localized thick occurrences of the water table aquifer previously discussed.

Lower Tamiami Aquifer. The lower Tamiami aquifer is the major source of ground water for most of Hendry County. It behaves as a semi-confined aquifer except in those areas where the Tamiami confining zone exhibits high values of vertical hydraulic conductivity, as previously discussed.

Reported transmissivities in the lower Tamiami aquifer range from approximately 2800 ft²/day to 138,000 ft²/day. Generally, the aquifer is the most productive in southeast and east-central Hendry County, with productivity decreasing to the north, west, and south. In the areas where the lower Tamiami aquifer is unconfined, it also exhibits lower thickness and hydraulic conductivity values. The aquifer is not a major water source in these areas (Figure 4).

Intermediate Aquifer System

The Intermediate Aquifer System in southwest Florida consists of the upper Hawthorn confining zone, the sandstone aquifer, the mid-Hawthorn confining zone, the mid-Hawthorn aquifer, and the lower Hawthorn confining zone. Together, these units act to confine the underlying Floridan Aquifer System.

Upper Hawthorn Confining Zone. The upper Hawthorn confining zone is a term used by Wedderburn et al. (1982) to describe a zone of low permeability in the uppermost part of the Hawthorn Group in Lee County. Smith and Adams (1988) extended this term into Hendry County to describe the zone of low permeability that forms the bottom of the Surficial Aquifer System and retards the vertical flow of water into the underlying aquifers of the Intermediate Aquifer System. The upper Hawthorn confining zone in the study area ranges in thickness from 10 feet near Immokalee to 260 feet southeast of LaBelle.

Sandstone Aquifer. The sandstone aquifer occurs only in the western portion of the study area (Figure 5). It generally occurs as two distinct lithologic zones - an upper clastic zone and a lower carbonate zone (Smith and Adams, 1988). In many locations, the two lithologic zones exhibit good hydraulic connection and act as a single semi-confined aquifer. The sandstone aquifer varies in thickness in the study area between 160 feet in southeastern Lee County to zero throughout eastern Hendry County. It is the major source of ground water in western Hendry County due to the low yields of the water table and lower Tamiami aquifers in the area. Reported values of transmissivity in the sandstone aquifer range from approximately 160 ft²/day to 40,000 ft²/day.

Smith and Adams (1988) reported the occurrence of an unnamed white limestone aquifer that occurs in Glades County northwest of LaBelle. Based on the limited information that exists, it is believed that this unit may be an extension of the sandstone aquifer; it is treated as such in this report.

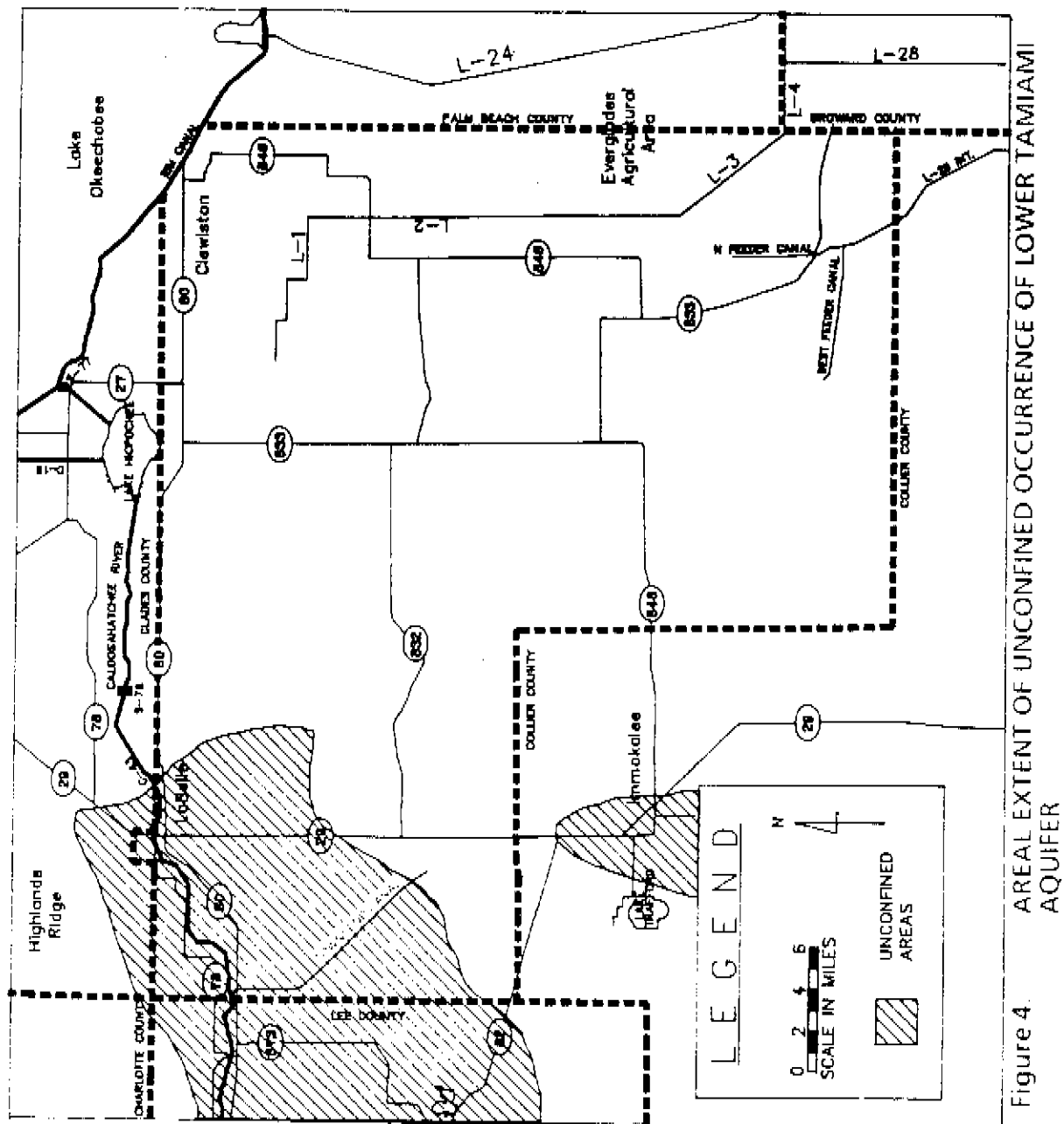


Figure 4. AREAL EXTENT OF UNCONFINED OCCURRENCE OF LOWER TAMIAMI AQUIFER

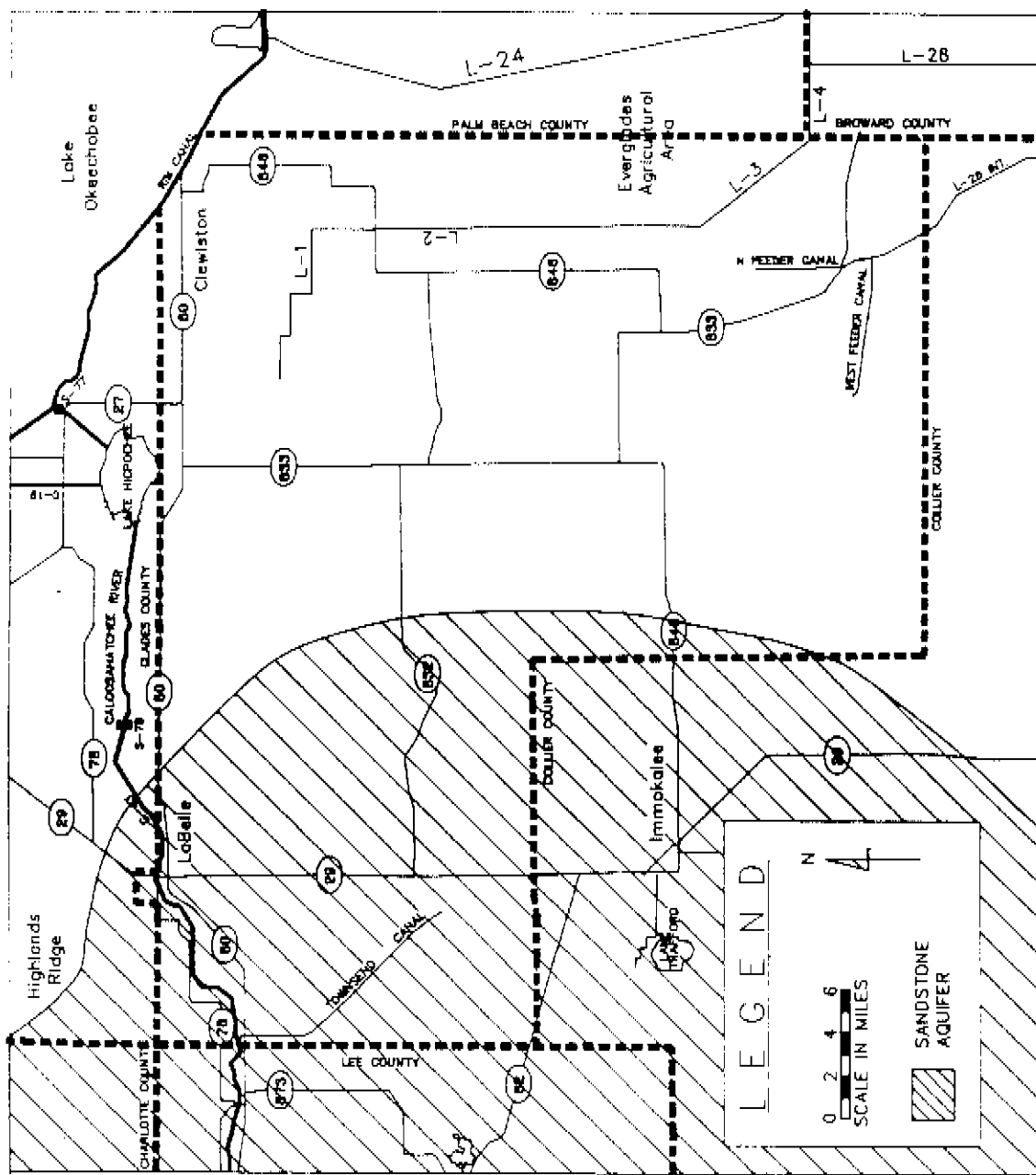


Figure 5. AREAL EXTENT OF THE SANDSTONE AQUIFER

Mid-Hawthorn Confining Zone. The mid-Hawthorn confining zone underlies the sandstone aquifer. In those areas where the sandstone aquifer does not occur, the mid-Hawthorn and upper Hawthorn confining zones occur merge into one unit. The mid-Hawthorn confining zone is a relatively thick heterogeneous mixture of clayey dolosilts exhibiting very low values of hydraulic conductivity (Knapp et al., 1986).

Mid-Hawthorn Aquifer. The mid-Hawthorn aquifer is not significantly developed in Hendry County. In those areas where it does occur, poor water quality and very low yields limit its use as a water source. Existing data indicate that no significant vertical flow occurs between the mid-Hawthorn aquifer and shallower units. As a result, the mid-Hawthorn aquifer is not included in the ground water flow model.

MODEL DESCRIPTION

INTRODUCTION

The model used in this study is the U. S. Geological Survey modular three dimensional finite-difference ground water flow model (McDonald and Harbaugh, 1988), commonly known as MODFLOW. This model was selected for the following reasons:

1. It is available in the public domain,
2. It is compatible with most computers with only minor modification,
3. The modular structure of the code and its excellent documentation allow easy modification of the code and the addition of new modules for specialty applications,
4. MODFLOW allows great flexibility of data file structure and management; this facilitates the employment of and interaction with other software for data manipulation,
5. The cell-by-cell flow feature of the code can be used to:
 - A. Evaluate in detail, flow and head changes associated with various withdrawal scenarios, and
 - B. Generate boundary conditions for higher-resolution models within the regional flow model.

The MODFLOW code contains modules which simulate recharge, evapotranspiration, rivers, drains, wells, and other sources and sinks of water external to the model. Three iterative solution schemes are available for simulating flow problems: slice successive over relaxation (SSOR), strongly implicit procedure (SIP), and the preconditioned conjugate gradient (PCG) method (Kuiper, 1987). SSOR is the better solution method for some strongly layered conditions. However, it is not as direct as SIP, therefore it requires more time to arrive at a solution. PCG is frequently faster than SIP or SSOR for complex flow systems. Both SSOR and SIP were evaluated in the Hendry County model. SIP proved to be more efficient than SSOR in arriving at a solution, while SSOR was more stable than SIP during runs simulating drought conditions. Solutions generated by either method show no significant differences in head distribution. Table 1 summarizes the modules and their application to the Hendry County model.

Three types of boundary conditions are available: specified head, specified flux, and head dependent flux. Specified head boundaries, also referred to as constant head, maintain the same user-specified head level throughout the simulation. Specified flux boundaries can be simulated through the use of external source terms in the model. No-flow boundaries are a type of specified flux boundary. Head dependent flux boundaries, as the name implies, generate a flux dependent on the head in the cell and a user specified head assigned to the external source. All types of boundary conditions can be set anywhere within a model grid. A no-flow boundary is implicit along the outer edges and bottom of a model grid.

TABLE 1
MODFLOW MODULES AND APPLICATION TO THE
HENDRY COUNTY MODEL

MODFLOW MODULE	FUNCTION	USE IN MODEL
Basic	Model Administration	Used
Block Centered Flow	Computation of Aquifer Parameter Input Sets	Used
Well	Simulates a source/sink to the model that is not affected by aquifer head	Used to simulate pumpage
Drain	Simulates discharge from model dependant on aquifer head	Not Used
River	Simulates effects of river leakage. May recharge or drain model depending on head differences	Used to simulate surface water interactions
ET	Simulates discharge through evapotranspiration	Used
General Head Boundary	Simulates a source/sink at rates depending on head differences bwt. source/sink and aquifer	Not Used
Recharge	Simulates recharge to model from infiltration of rainfall	Used
SIP	Solves finite difference equations using the Strongly Implicit Procedure	Used
SSOR	Solves finite difference equations using the Slice Successive Over Relaxation Method	Used
PCG	Solves finite difference equations using the Preconceived Conjugate Gradient Method	Not Used
Output Cntrl.	Specifies output format	Used
Observation Nodes	Generates a file of computed heads for selected nodes	Used to generate convergence maps and hydrographs

DISCRETIZATION

The study area was discretized into a horizontal grid comprised of cells measuring one square mile each, assembled into a grid of 48 rows and 54 columns (Figure 6). The origin of the model grid was set to correspond as closely as possible with the government survey grid, with each model cell representing approximately one section of land. However, variations in the survey grid made this difficult.

MODFLOW offers two options for vertical discretization. In a fully three-dimensional model, the confining zones are represented in the model as individual layers. Values of transmissivity, storage, and vertical hydraulic conductivity for the confining zone are required for this approach. A fully three-dimensional model would more accurately simulate flow conditions where horizontal flow in the confining zone is an important part of the flow regime. In a quasi-three-dimensional model, the confining zones are not represented as individual layers, but as vertical conductance terms (V_{cont}) specified for the model layers representing aquifers. Within the study area, the values of hydraulic conductivity exhibited by the aquifers are several orders of magnitude greater than those in the confining zones. Therefore, it can be assumed that on the regional scale of the model, flow in the aquifers is primarily horizontal, and flow across the confining zones is primarily vertical, and the quasi-three-dimensional approach is a good approximation of the ground water flow regime in Hendry County.

The Hendry County model contains three layers (Figure 7). Layer 1 represents the water table aquifer, layer 2 represents the lower Tamiami aquifer, and layer 3 represents the sandstone aquifer. While the sandstone aquifer occurs as two distinct lithologic zones, existing data indicates that it acts as a single, semi-confined aquifer. Therefore, it was represented as one layer in the model. The Tamiami confining zone is represented as vertical conductance terms in layer one, and the upper Hawthorn confining zone is represented as vertical conductance terms in layer two. The top of the mid-Hawthorn confining zone was simulated by the no-flow boundary implicit at the bottom of the model grid. This was based on lithologic and hydrogeologic data that indicate that no significant vertical flow takes place between the mid-Hawthorn confining zone and shallower units.

BOUNDARY CONDITIONS

MODFLOW allows the user to set several types of boundary conditions; no-flow, specified head and specified flux boundaries are commonly used types. No-flow boundaries are used where the ground water flow regime is such that flow across a boundary is not expected to occur. Specified head was chosen for the model boundaries in Hendry County where flow is expected to occur because:

1. The specified head condition allows the model to compute fluxes for a variety of ground water flow configurations, whereas the specified flux condition requires the user to estimate fluxes for a single ground water flow condition, and
2. The specified head condition is established only once for a model run in a file designated solely for that purpose, while the specified flux condition requires the user to set the fluxes for each stress period in a file used for other purposes. The specified head option greatly simplifies file management in a model of this size.

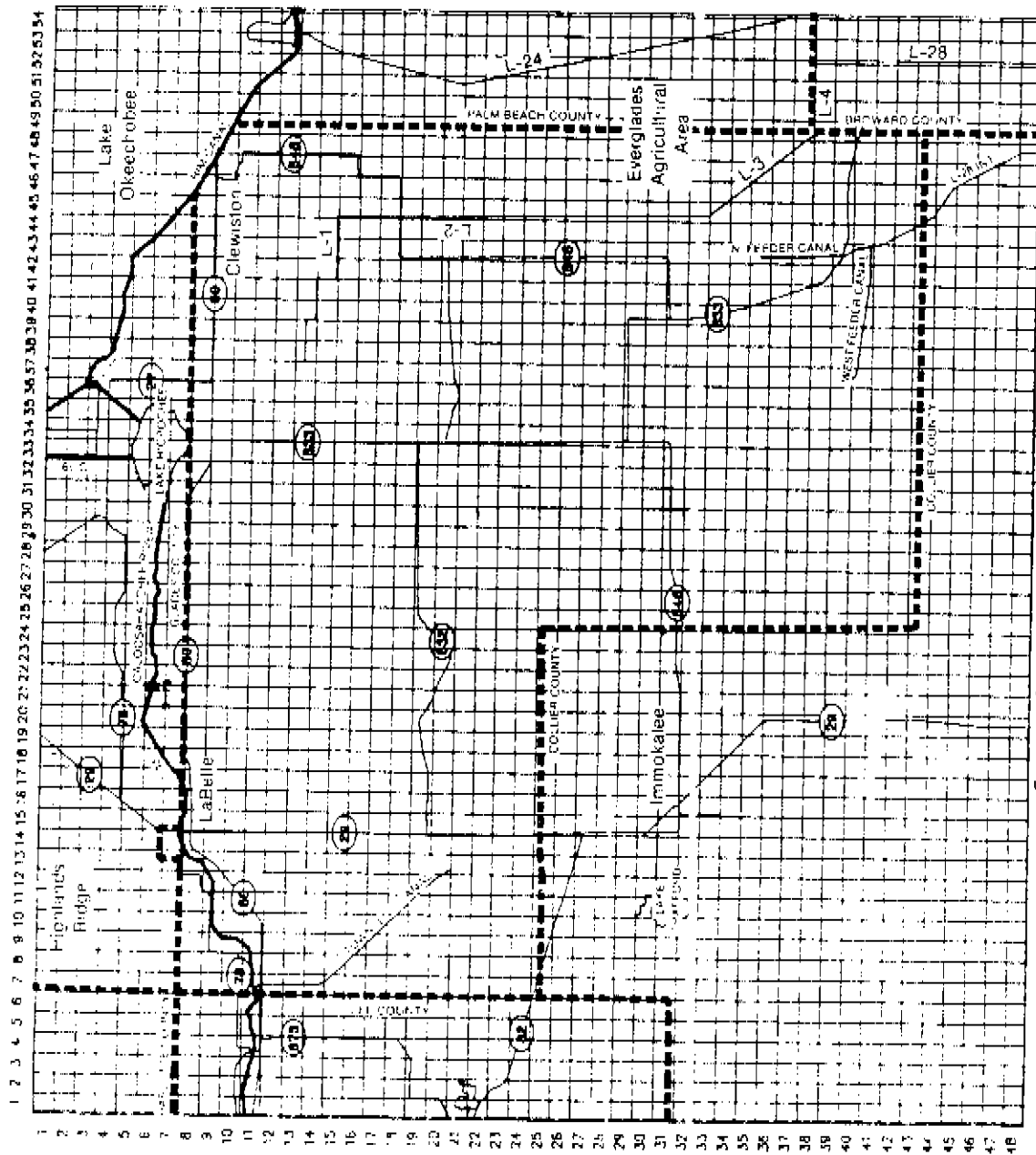


Figure 6. MODEL GRID

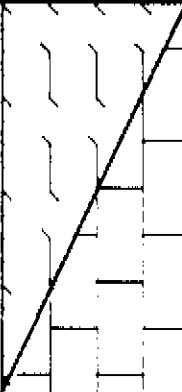
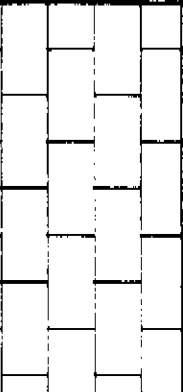
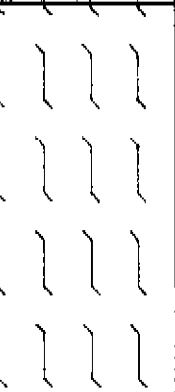
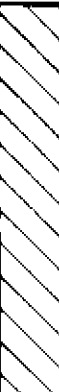
AQUIFER SYSTEM		HYDROGEOLOGIC UNIT	MODEL LAYER
Surficial Aquifer System		Water Table Aquifer	Layer 1
		Tamiami Confining Zone	Represented by Vertical Conductance Terms between layers 1 & 2
		Lower Tamiami Aquifer	Layer 2
Intermediate Aquifer System		Upper Hawthorn Confining Zone	Represented by Vertical Conductance Terms between layers 2 & 3
		Sandstone Aquifer	Layer 3
		Mid-Hawthorn Confining Zone	Not Represented in Model

Figure 7 HYDROGEOLOGIC UNITS AND CORRESPONDING MODEL LAYERS

A potential problem in the use of specified head boundaries is that the model may overestimate the flow into the model if steep ground water gradients (such as those around a pumping well) approach the boundary. Most of the large withdrawals are located such that the associated drawdowns do not reach the model boundaries, therefore any overestimation of flow into the model is assumed to be insignificant. This assumption was tested during sensitivity analysis of the model.

In layers 1 and 2, representing the water table aquifer and the lower Tamiami aquifer, the boundaries consisted of specified head cells set six miles outside the county border except along Lake Okeechobee, where specified head cells were set along the rim canal (Figure 8). Six miles was chosen assuming that this distance was great enough to minimize any boundary effects in Hendry County. This assumption was tested during sensitivity analysis of the model. In layer 3, representing the sandstone aquifer, boundary conditions are set similar to layers 1 and 2, except for a no-flow boundary set at the easternmost extent of the sandstone aquifer (Figure 9). A no-flow boundary was chosen here because lithologic and hydrogeologic data indicate that the aquifer pinches out, and potentiometric surface maps (Smith and Adams, 1988) show that the principle flow in the sandstone aquifer occurs parallel to its eastern boundary. Therefore it is assumed that no significant flow occurs across the boundary.

HYDRAULIC CHARACTERISTICS

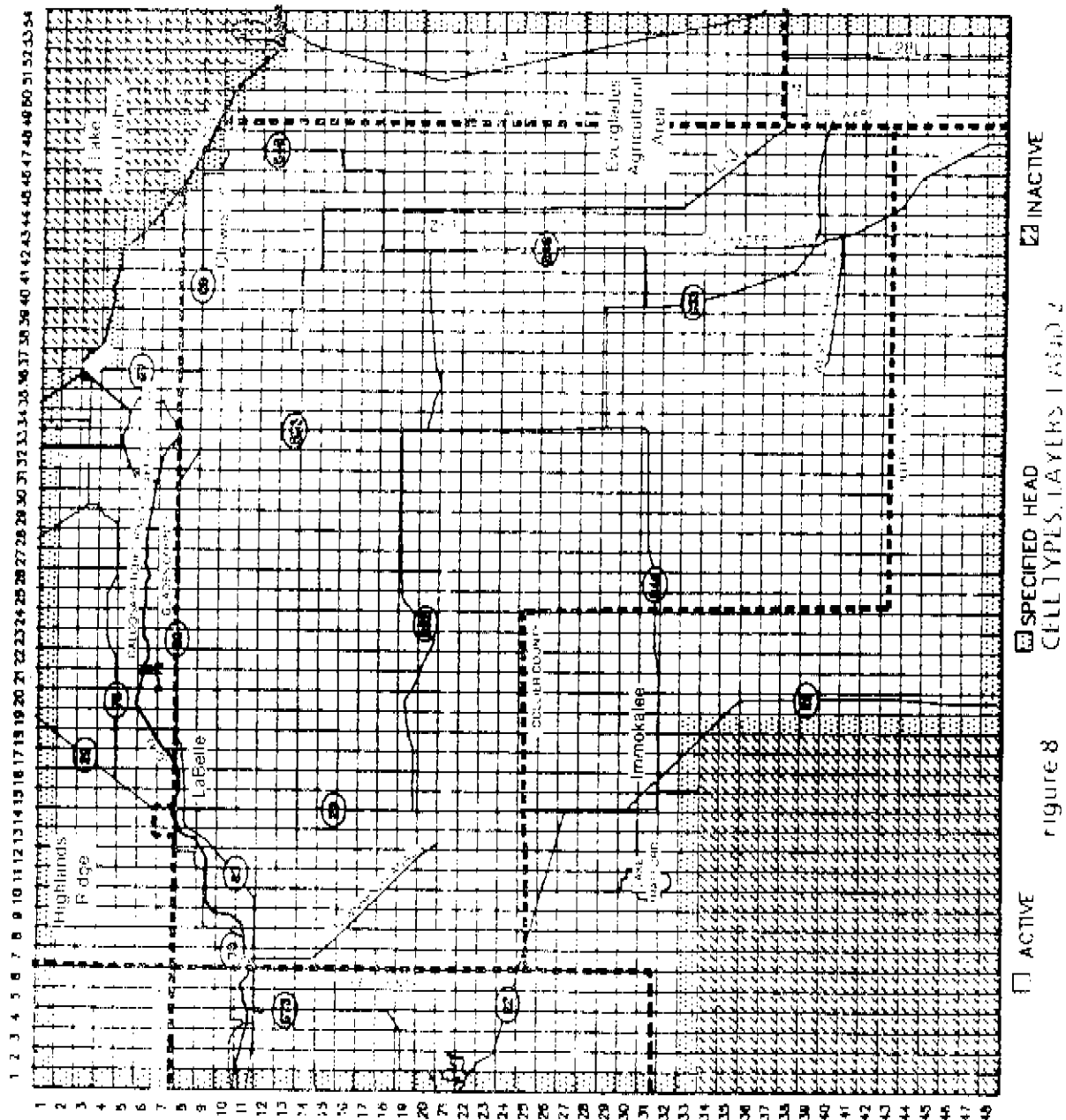
All data describing aquifer parameters, thicknesses, tops, bottoms, etc., are from Smith and Adams (1988), except when stated otherwise. This data is presented in Appendix A.

Transmissivity

Layer 1 (Water Table Aquifer). MODFLOW calculates the transmissivity of unconfined aquifers by multiplying the hydraulic conductivity by the saturated thickness of the aquifer. Initial saturated thickness is calculated from the starting head and aquifer bottom data, both of which are required input for an unconfined aquifer. Head changes throughout the simulation result in changes in the calculated transmissivity in an unconfined aquifer. When the simulated head in a cell drops to a level at or below the aquifer bottom elevation, the transmissivity of the cell becomes zero, resulting in the cell "going dry" and becoming inactive for the remainder of the simulation. This situation does not occur in the calibrated model or any of the runs simulating drought conditions.

Little data exists on the hydraulic conductivity of the water table aquifer in Hendry County. However, existing data ranges between 100 ft/day and 3500 ft/day, with most values being less than 800 ft/day. The distribution of hydraulic conductivity was based on lithologic and hydraulic descriptions of well cuttings from Smith and Adams (1988). Assigned values of hydraulic conductivity ranged from 100 ft/day for fine sand to 1000 ft/day for solutioned limestone. The bottom of layer 1 was based on data from Smith and Adams (1988).

Layer 2 (Lower Tamiami Aquifer). The transmissivity grid for layer 2 (lower Tamiami aquifer) was developed by regionalization of the transmissivity values reported in Smith and Adams (1988). The regionalization was accomplished using a kriging interpolation technique, and resulted in a range of transmissivity from 9544 ft²/day to 113,600 ft²/day.



Layer 3 (Sandstone Aquifer). The transmissivity grid for layer 3 (sandstone aquifer) was developed using the same procedure described for layer 2 (lower Tamiami aquifer). However, the grid resulting from the kriging algorithm did not accurately represent the sandstone aquifer in eastern Hendry County, where it does not occur (Figure 5). The grid was modified in these areas to more accurately simulate the easternmost extent of the aquifer. Resulting values of transmissivity representing the sandstone aquifer ranged from 390 ft²/day to 16,600 ft²/day.

Specific Yield

Data on specific yield of the water table aquifer in Hendry County is very limited. Therefore, specific yield for layer 1 (water table aquifer) was set at 0.2 (Fetter, 1980, Driscoll, 1986), which represents the average value for the type of sediments that comprise the water table aquifer.

Storage

The storage coefficient grids for layer 2 (lower Tamiami aquifer) and layer 3 (sandstone aquifer) were developed from the aquifer test data reported in Smith and Adams (1988). Resulting values for the storage coefficient in layer 2 (lower Tamiami aquifer) ranged from 0.0001 to 0.0006. Storage coefficient values for layer 3 (sandstone aquifer) ranged from 0.00008 to 0.0004.

Vertical Conductance

Tamiami Confining Zone. Vertical flow in the Tamiami confining zone is a function of the vertical conductance term (V_{cont}) entered in layer 1, and the head difference between layer 1 (water table aquifer) and layer 2 (lower Tamiami aquifer). Values of V_{cont} were obtained by dividing vertical hydraulic conductivities by the thickness of the confining zone. In those areas where the Surficial Aquifer System behaves as a single unconfined aquifer, the Tamiami confining zone is characterized by thin occurrences, high values of vertical hydraulic conductivity, or both. The resulting high values of V_{cont} cause layer 2 to react to stress in a similar manner as layer 1 in these areas. Reported values of vertical hydraulic conductivity of the Tamiami confining zone range from 0.01 ft/day to 1 ft/day. Reported thicknesses of the Tamiami confining zone range from 13 feet to 66 feet. The resulting values of V_{cont} range from 0.0000068 day⁻¹ to 0.075 day⁻¹.

Upper Hawthorn Confining Zone. The V_{cont} grid representing the upper Hawthorn confining zone was developed in the same manner as the V_{cont} grid representing the Tamiami confining zone. Reported values of vertical hydraulic conductivity of the upper Hawthorn confining zone range from 0.000007 ft/day to 0.56 ft/day. Reported thicknesses of the upper Hawthorn confining zone range from 15 feet to 260 feet. Resulting values of V_{cont} range from 0.00000014 day⁻¹ to 0.0053 day⁻¹.

SURFACE WATER INTERACTIONS

The river module of MODFLOW was used to simulate the interaction of ground water and surface water in distinct water bodies. The simulated flow between ground water and surface water is controlled by the river bottom sediment hydraulic conductance, river stage, aquifer head, and elevation of the river bottom. Flow can occur both into and out of the river, depending on the direction of the gradient between river stage and aquifer head. When the aquifer head is higher than the river

stage, flow is from the aquifer into the river, and conversely, when the river stage is higher than the aquifer head, flow is from the river into the aquifer. The rate of flow into or out of the river is determined by the difference between river stage and aquifer head, and is proportional to the conductance of the river bed. If the aquifer head falls below the bottom of the river, flow into the aquifer occurs at a rate equal to the difference between the river stage and river bottom elevation, and is proportional to the conductance of the river bed. Further reductions in aquifer head produce no increase in flow into the aquifer. River bed conductance for a cell is obtained by multiplying the hydraulic conductivity of the river bottom sediments by the wetted perimeter and the length of the river reach that occurs in the cell, and dividing by the thickness of the river bed sediments. MODFLOW assumes that the hydraulic conductivity of the river bottom and river channel sides is the same. In south Florida, this assumption may not be valid due to accumulation of fine sediments on the bottom of the channel which can significantly reduce flow. In this case, seepage through the sides of the channel may account for the majority of flow. This situation can be approximated by assigning different values of hydraulic conductivity to the bottom and sides of the river channel when calculating the river bed conductance term. The values of riverbed hydraulic conductivity used in the model ranged between 0.001 ft/day and 0.1 ft/day.

Only those surface water bodies with reliable information on widths, depths, and stages were simulated in the Hendry County model. They included the Caloosahatchee River (C-43), C-19, the rim canal surrounding Lake Okeechobee, the Miami Canal (L-23, 24, and 25), L-1, L-2, L-3, L-4, L-28 interceptor canal, north feeder canal, west feeder canal, the Townsend Canal, and Lake Trafford. Bottom elevations, profiles, and configuration of most canals were obtained from District records and aerial photographs. Bottom elevations for the Caloosahatchee River were obtained from U. S. Army Corps of Engineers soundings. District stage data were used to calculate average wetted perimeters. Cells containing river reaches are shown in Figure 10. Model input data for the river module is presented in Appendix B.

RECHARGE

Recharge resulting from precipitation was calculated using a method discussed in Bower et al. (1990). Recharge is calculated as a function of interception, depression storage loss, and surface drainage. In determining recharge from precipitation in Hendry County, it was assumed that there was only one precipitation event per rainy day. Interception and depression storage are satisfied early in an event, so large portions of many small events are intercepted or stored in small depressions (Linsley et al., 1982).

Interception is the amount of precipitation which wets and adheres to above ground objects until it returned to the atmosphere through evaporation (Viessman, et al., 1977). The amount of precipitation intercepted is a function of the storm character, season, and species, age, and density of the vegetation. Since Hendry County is predominantly agricultural, it was assumed that variations in these factors would be negligible in a regional model. Therefore, a uniform factor of 0.8 for interception (80% not intercepted) was used throughout the model.

The precipitation that reaches the ground may infiltrate, flow over the surface, or become trapped in small depressions from which the only escape is evaporation or infiltration. The maximum depression storage loss for impervious surfaces on a 1% slope is 0.11 inches. Since almost all of the modeled area exhibits slopes of less than

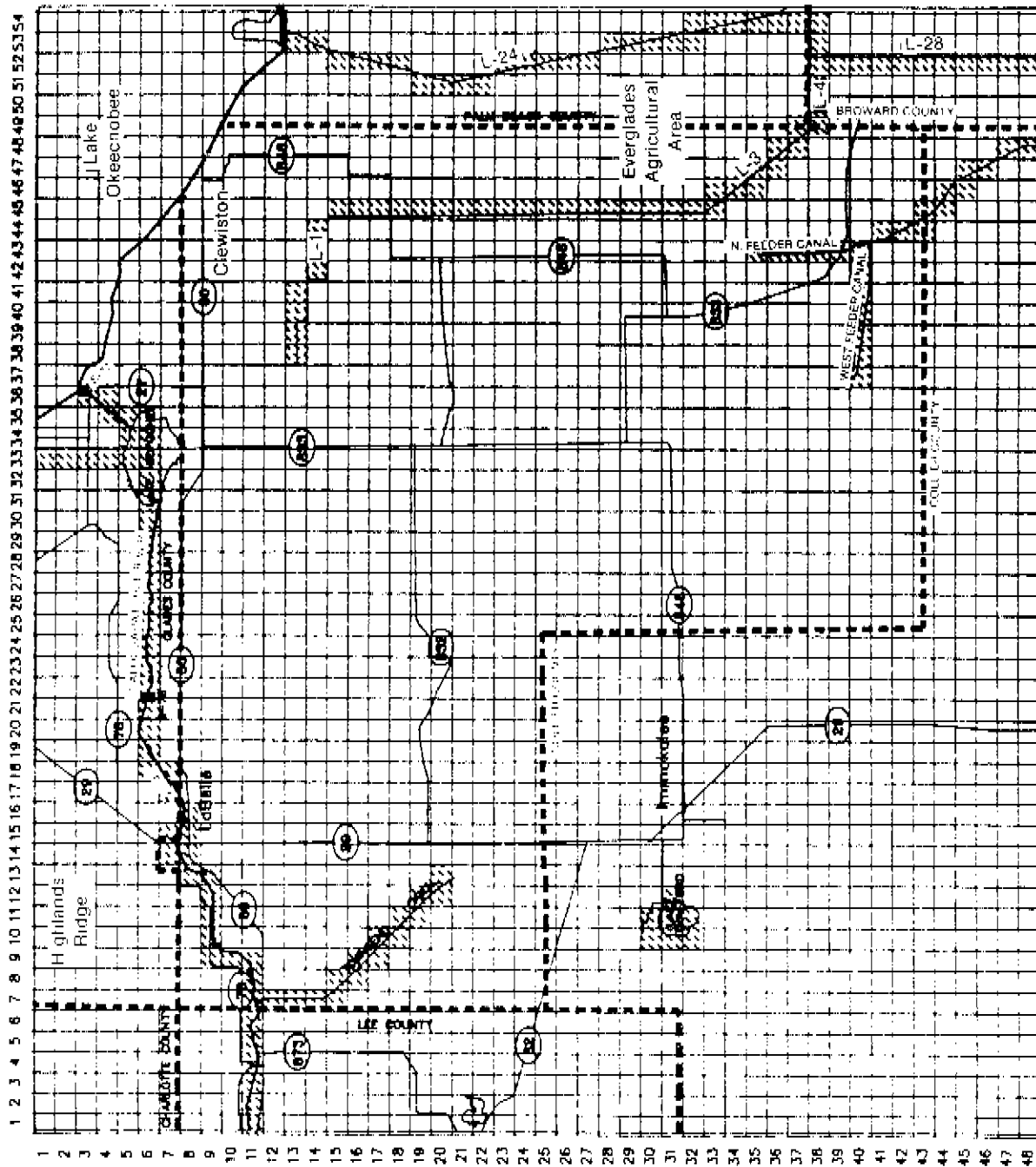


Figure 10 CELLS CONTAINING RIVER REACHES, LAYER 1

1%, the storage loss figure of 0.11 inches is assumed to be a valid maximum for the entire modeled area.

For permeable soil conditions (such as those found throughout Hendry County), infiltration normally occurs at a much faster rate than evaporation. Therefore, it was assumed that all of the water stored in depressions would infiltrate. To accomplish this, the value of instantaneous hydraulic conductivity was set to 10 ft/day, and the vertical hydraulic conductivity of the soil zone was set to 0.01 of the horizontal hydraulic conductivity of the water table aquifer. This resulted in an almost instantaneous infiltration of a depression storage of 0.11 inches. Readers desiring a more detailed discussion of the method used to calculate recharge are directed to Bower et al. (1990).

Surface drainage for south Florida conditions can be estimated as a function of the net precipitation and a coefficient relating the potential for runoff to surface drainage. Since Hendry County is extremely flat, it is assumed that these losses will be minor, and the coefficient was set to 0.01.

Use of this method resulted in a nearly uniform ratio of recharge to precipitation of 0.79. Monthly rainfall data was obtained from 45 rainfall stations located in and around the study area. The data was regionalized using a kriging interpolation technique, which produced a rainfall value for each cell. These values were multiplied by 0.79 to obtain a recharge value for each cell. Maps of the monthly rainfall distribution and locations of rainfall stations are presented in Appendix C.

EVAPOTRANSPIRATION

MODFLOW simulates evapotranspiration as a linear function, with the maximum rate occurring at a specified surface, decreasing to zero at a user specified extinction depth. The maximum evapotranspiration rate was set to the recorded monthly pan evaporation rate at stations located in Clewiston, Lehigh Acres, and Hurricane Gate 1, which is located at the outlet of Lake Okeechobee to the Caloosahatchee River. Since evaporation data is available from only three stations located in the northern portion of the modeled area and the evaporation rates at each station were similar, data from the three stations were averaged, and a uniform rate was applied throughout the model.

The maximum evapotranspiration rate was set to occur at land surface. Extinction depths were established for each cell based on the land uses occurring within the cell. Land use types and corresponding extinction depths used in the model are listed in Table 2. The area of each land use occurring in a cell was totalled, and a weighted average was used to determine the extinction depth for each cell. Model input data for the evapotranspiration module is presented in Appendix D.

GROUND WATER USE

Water use figures for the model were determined using data from individual water use permits issued by the District. Individual water use permits are required if the average daily water use equals or exceeds 100,000 gallons per day (gpd). An individual water use permit is also required of smaller uses (average daily use exceeding 10,000 gpd) in Reduced Threshold Areas (RTA). The southwest corner of Glades County, the northwest corner of Hendry County, and all of Lee County are designated RTA's. The District also issues general water use permits to all uses less

TABLE 2
EVAPOTRANSPIRATION EXTINCTION DEPTHS
(Modified from Florida Irrigation Guide (SCS 1982))

CROP TYPE	EXTINCTION DEPTH (Feet Below Land surface)
Small vegetables	0.5 - 2
Urban Landscape	2-6
Sugar Cane	3
Pine wetlands	1-3
Cypress wetlands	1-8
Pasture	2-6
Citrus	3-5
Forested uplands	1.5-3

than 100,000 gallons per day, with the exception of single family homes, duplexes, and water used strictly for fire-fighting (SFWMD, 1985).

General water use permits were not included in the determination of water use for the model because the total amount covered in general permits is insignificant when compared to individual permits. However, all legal uses of water, no matter how small, are important from a management standpoint because they are protected by the District's water use rules from adverse impacts caused by other water users. Therefore, impacts to the smaller users can effect larger users, requiring reduced withdrawals or mitigation of the adverse impacts. This can be of critical importance during the management of competing uses.

Agricultural

Agricultural water use accounts for over 99% of the permitted ground water use in Hendry County (Smith and Adams, 1988). Records of water withdrawn generally do not exist for agricultural uses. Therefore, agricultural water use was estimated. The irrigation water requirements of different crops was estimated using a method described by the U. S. Soil Conservation Service (USDA, 1970). This method uses the modified Blaney-Criddle formula to estimate the water requirements of various crops. Factors such as crop type, soil type, air temperature, daylight hours, effective rainfall, and irrigation system efficiency are used to calculate the irrigation requirements of different crops found throughout the modeled area.

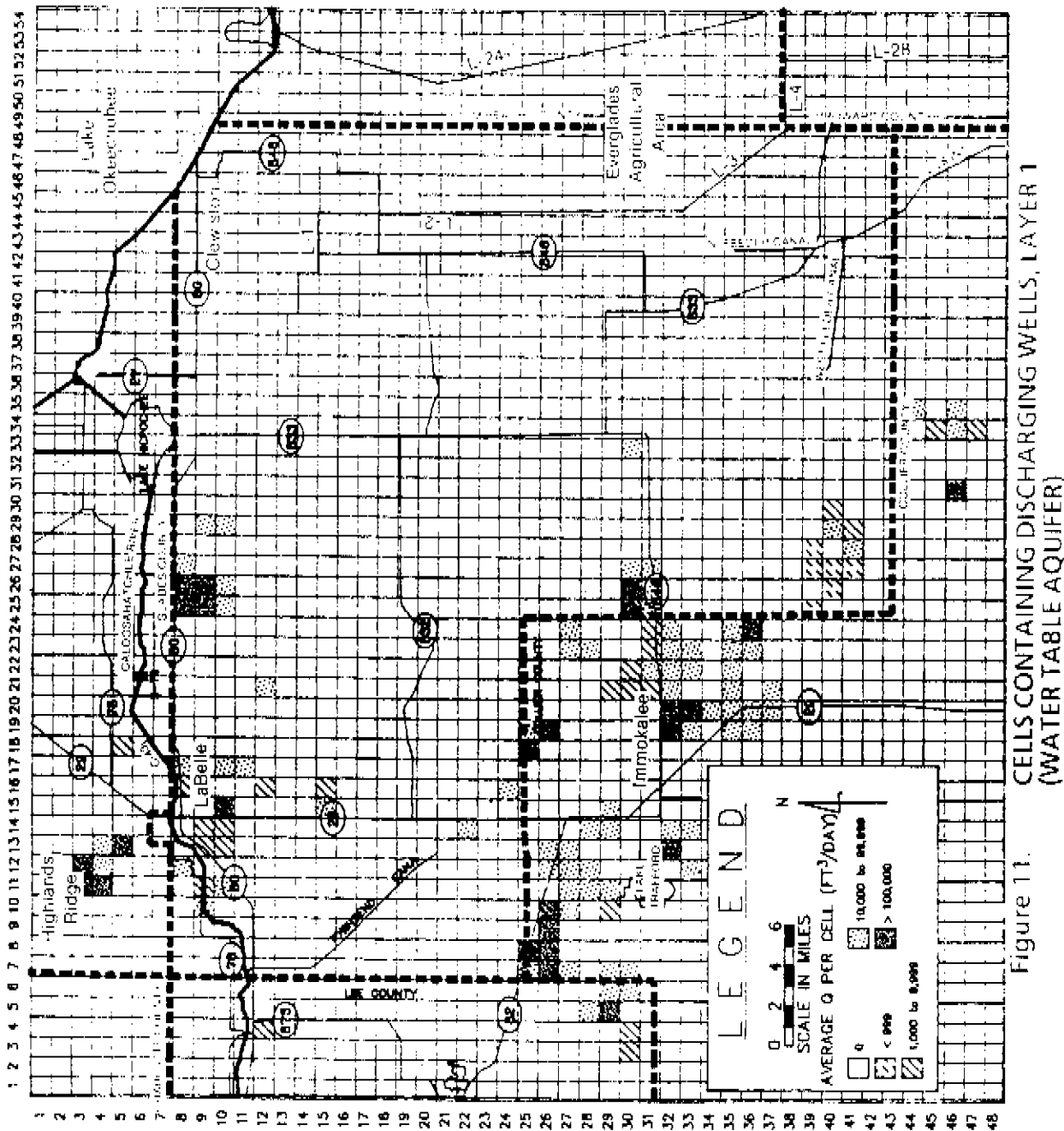
Data on all agricultural water uses with individual water use permits was assembled into a spreadsheet. This information included crop types, acreage, irrigation system data, well information, and soil types. Precipitation data from the LaBelle station was used to determine effective rainfall. The irrigation requirements for each permitted use were estimated for each month of the calibration period (January 1986 through December 1988). The monthly irrigation requirement for each permitted use was distributed among the permitted withdrawal facilities in proportion to their pump capacities. Individual wells were assigned to the proper model cell and then all the well withdrawals within a cell were summed to give a single withdrawal rate for that cell for a given month. Agricultural water use data is presented in Appendix E. Figures 11, 12, and 13 show the distribution of cells with well withdrawals simulated for layer 1 (water table aquifer), layer 2 (lower Tamiami aquifer), and layer 3 (sandstone aquifer), respectively.

Public Supply

There are five users of ground water for public supply in the study area with individual water use permits: LaBelle, Immokalee, Port LaBelle, Hendry County Department of Corrections, and a campground/trailer park. Withdrawal records are available for all of these except the Department of Corrections; their public supply use is combined with a much larger agricultural use. Public supply withdrawals were assigned to the proper cell and added to the agricultural withdrawal data file. Information on public supply ground water use is presented in Appendix E.

Other Ground Water Uses

Most of the other uses of ground water in Hendry County can be assigned to one of three types: rural self-supplied, industrial, and mining-dewatering. The mining-dewatering uses are short-term uses which require on-site impoundments to store withdrawn water. The only consumptive use in these operations is water lost to



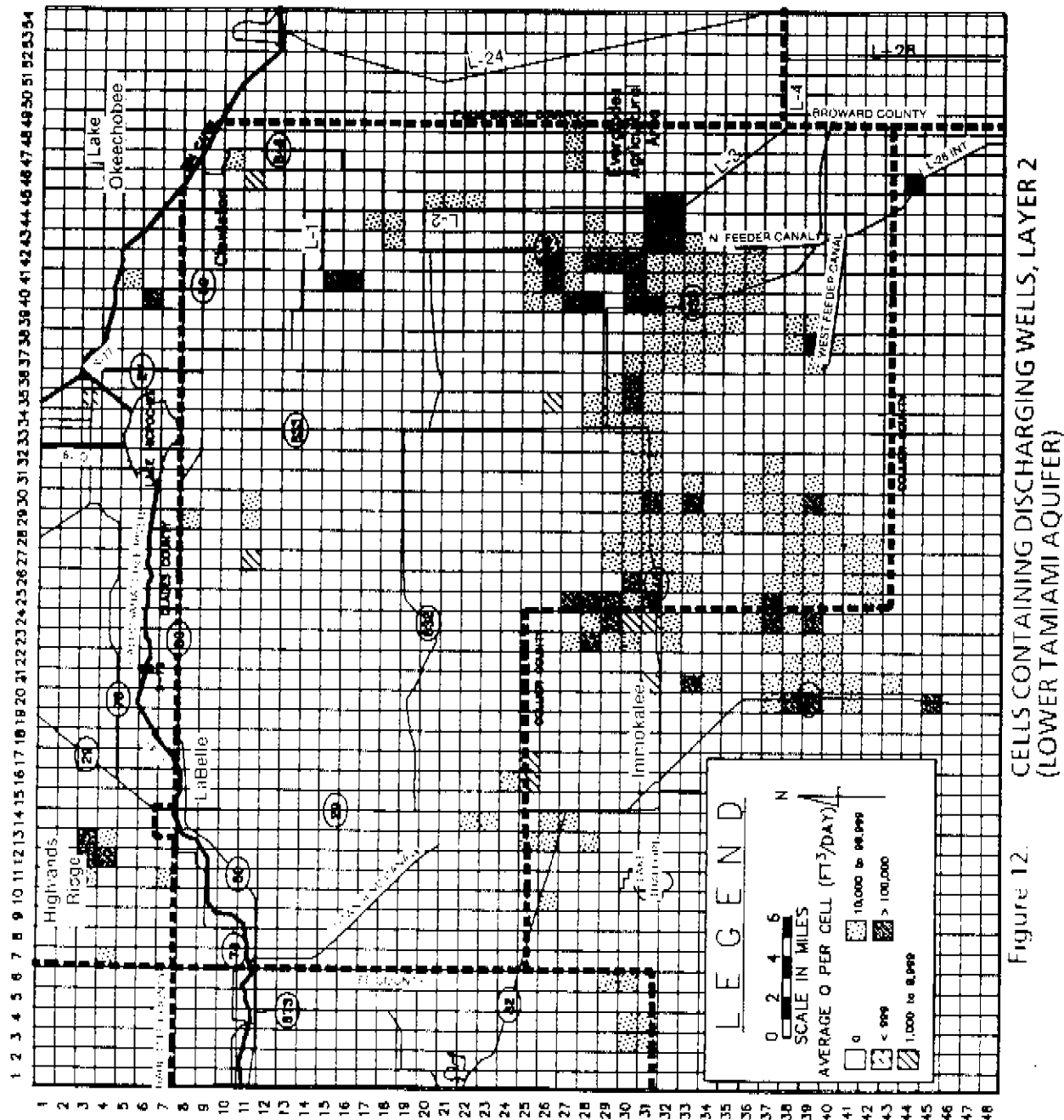


Figure 12. CELLS CONTAINING DISCHARGING WELLS, LAYER 2 (LOWER TAMIAMI AQUIFER)

evaporation, which is insignificant for a regional model with a coarse grid. Therefore, mining-dewatering uses were not simulated in the model. Rural self-supplied water use in Hendry County was estimated at 1.9 million gallons per day (mgd) by Leach (1980). Leach (1984) also projected rural self-supplied water use at 3.39 mgd in the year 2000. This amount is approximately 0.01% of the permitted ground water use in Hendry County, and is considered insignificant for purposes of this study. Therefore, rural self-supplied water use was not simulated in the model. There are several industrial uses of ground water in Hendry County, mainly small citrus processing plants and air conditioning uses. Permitted industrial ground water use in Hendry County total 8.6 million gallons per month, or 0.03% of all ground water use (Smith and Adams, 1988). Industrial water use is also widely distributed throughout the modeled area. Therefore, industrial water use was not simulated in the model.

CALIBRATION

The Hendry County model was calibrated to both steady state and transient conditions. Locations of the observation wells used in the calibration process are shown in Figures 14, 15, and 16. The calibration period was January 1986 through December 1988. This period was chosen because it is the most recent period represented by ample water level observations. An in-depth analysis and discussion of the water level data from the monitor network can be found in Smith and Adams (1988). A multi-year period was chosen so that the effect of annual variations in canal stage, evapotranspiration, irrigation, and seasonal rainfall could be seen.

STEADY STATE CALIBRATION

The steady state calibration was done in two parts. Initial steady state runs served to make the first adjustments to the aquifer parameters used in the model. Average values of recharge, evapotranspiration, pumpage, and surface water stage elevations were used. These average values were calculated from the monthly values within the calibration period. Head distributions resulting from these runs were compared to water levels in observation wells averaged over the calibration period. The adjusted aquifer parameter data sets were then used in the transient calibration runs, where they were refined further. Finally, the steady state model was re-run using the data sets from the transient calibration to obtain a final steady state run. This final steady state run provided much of the information used to describe the ground water flow regimes in Hendry County, and to act as the base case for most of the sensitivity analyses and predictive scenarios.

TRANSIENT CALIBRATION

The transient runs comprised 36 stress periods of one month each. Each stress period contained one time step. The model was also run using five time steps per stress period to determine if the number of time steps in a stress period affected the solution. The maximum head difference was 0.01 feet, and differences in the volumetric budget were insignificant. Therefore, to maximize computer utilization, the model was run using one time step per stress period.

Starting heads in each layer were calculated from water level data obtained from USGS monitor wells in December 1985, which is representative of a moderately stressed condition. The data was regionalized using a kriging interpolation technique, which provided a head for every cell.

It was attempted to calibrate so that agreement between observed water levels in monitor wells and simulated water levels in the cells which represent the location of those wells, averaged over the calibration period, were generally within the following ranges:

Layer 1 (water table aquifer)	+/- 2 feet
Layer 2 (lower Tamiami aquifer)	+/- 3 feet
Layer 3 (sandstone aquifer)	+/- 4 feet

This is the same procedure used to calibrate the Lee County model (Bower et al., 1990). The procedure was assumed to be valid for the Hendry County model because the hydrogeology of the two counties is similar, and they are within the same regional flow system. Tolerance is increased with depth for the following reasons:

1. In the water table aquifer, small changes in water levels reflect potentially large impacts, particularly to wetlands, and
2. The aquifer parameters typical of the deeper semi-confined aquifers in the area cause the heads within these aquifers to fluctuate more in response to stress when compared to unconfined aquifers.

Comparative hydrographs for observed and simulated water levels were generated for those cells that correspond to the locations of USGS monitor wells. These were used to aid in interpretation of the numerous model runs, particularly how the simulated water levels changed over time in response to varying stresses. These hydrographs are presented in Appendix F.

Agreement of simulated water levels with observed water levels can be affected by the following conditions:

1. MODFLOW simulates well withdrawals from a cell as a single stress located at the node, or center of the cell. In reality, the area represented by a cell may contain many pumping wells. This situation is common throughout the Hendry County model, due to the size of the cells. Combining all the well withdrawals located within a cell and locating the total withdrawal at the center of the cell is not a completely accurate simulation. In addition, the computed head in a cell represents the average of all heads within the cell. In reality, the head will vary throughout the area represented by a cell in response to the actual stresses. In areas of higher ground water gradients, such as those caused by intensive well withdrawals, water levels throughout a cell can vary significantly from the average. If a cell contains both a monitor well and intensive well withdrawals, or a monitor well is located in a cell adjacent to a cell or cells containing intensive well withdrawals, or if a monitor well is not located near the center of the corresponding cell, the agreement of simulated water levels with observed levels can be significantly affected. This situation is referred to as cell-wide averaging, and occurs at several locations in the Hendry County model.
2. The model was run using one month stress periods, and the simulated heads represent end of the month levels. Observed water levels were taken on various days throughout a given month. The discrepancy caused by this situation can be minimized by averaging the difference between observed and simulated heads over the calibration period when comparing the results.
3. Most of the rainfall in the study area occurs as intense short term events over relatively small areas. Ground water levels respond almost immediately to these events. Most of the observation wells are located a significant distance from a rainfall station, so an intense rainfall event causing water level fluctuations at a given well may not be represented in the rainfall data. In addition, the short duration of these storms is masked by using monthly stress periods. The discrepancy caused by these phenomena can also be minimized by averaging the difference between observed and simulated heads over the calibration period when comparing the results.
4. Inspection of aerial photographs reveals that Hendry County has a dense network of canals, ranging in width from several feet to 400 feet. Only those canals with reliable data on depths, profiles, configurations, and stage, were

included in the model. Errors can occur if an observation well is located near a canal that is not represented in the model, and water levels in the canal are maintained at a higher or lower levels than the adjacent ground water levels. It is not clear how this situation affects the overall calibration of the model. An in depth study to determine the effects of this situation is beyond the scope of this project. Investigation and analysis of ground water - surface water interactions in Hendry County is recommended.

Initially, the model was run with the input data sets as discussed in the Model Description section of this report. Modifications to these data sets necessary to achieve calibration are discussed in the following sections.

Layer 1 (Water Table Aquifer)

No changes were made to the hydraulic conductivity or specific yield values during the calibration process. Vertical conductance (Vcont) between layer 1 and layer 2 was varied in order to change the head distributions in both layers. The final distribution of Vcont ranged from 0.0006 day⁻¹ to 0.059 day⁻¹, which falls within the range of values obtained from aquifer test data. Final values of Vcont were multiplied by the thickness of the confining zone to ensure that the corresponding values of vertical hydraulic conductivity remained reasonable. The final Vcont array used in the calibration of the model is presented in Appendix A.

Figure 17 illustrates the agreement between simulated heads in layer 1 and observed water levels in observation wells in the water table aquifer. Of the 36 observation wells in this layer, 19 did not fall within the specified tolerance range (± 2 feet). Of these, nine were only slightly outside the range (errors less than 10 per cent of the total range of tolerance), which was considered to be an insignificant error. Of the remaining ten wells that did not fall within the tolerance range, five wells are influenced by surface water bodies (HE-339, HE-857, HE-858, HE-862, and C-1071), three wells are influenced by intense well withdrawals (C-462, C-532, and C-1078), and one well is influenced by its proximity to specified head cells on two sides (C-986). The remaining well that did not fall within the specified tolerance range (HE-856) has an average difference between observed and simulated water levels of 3.1 feet.

Layer 2 (Lower Tamiami Aquifer)

No changes were made to the transmissivity or storage values during the calibration process. The vertical conductance between layer 2 and layer 3 was altered to change the head distribution in both layers. Changes were made in the same way as they were when the Vcont values between layers 1 and 2 were changed. Final values of Vcont ranged from 0.0000044 day⁻¹ to 0.0016 day⁻¹, which are within the range of reported values obtained from aquifer tests. The final Vcont array used in the calibration of the model is presented in Appendix A.

Agreement between simulated heads in layer 2 and observed water levels in monitor wells in the lower Tamiami aquifer are shown in Figure 18. Of the 14 observation wells in this aquifer, two wells did not fall within the specified tolerance range (± 3 feet). Well HE-1075 is located in the Everglades Agricultural Area, and is influenced by canals not simulated in the model. Well HE-861 is surrounded by fields that, based on inspection of aerial photographs, appear to have a surface water management system. These fields probably undergo both flood irrigation from surface water sources, and drainage. It is possible that the water management

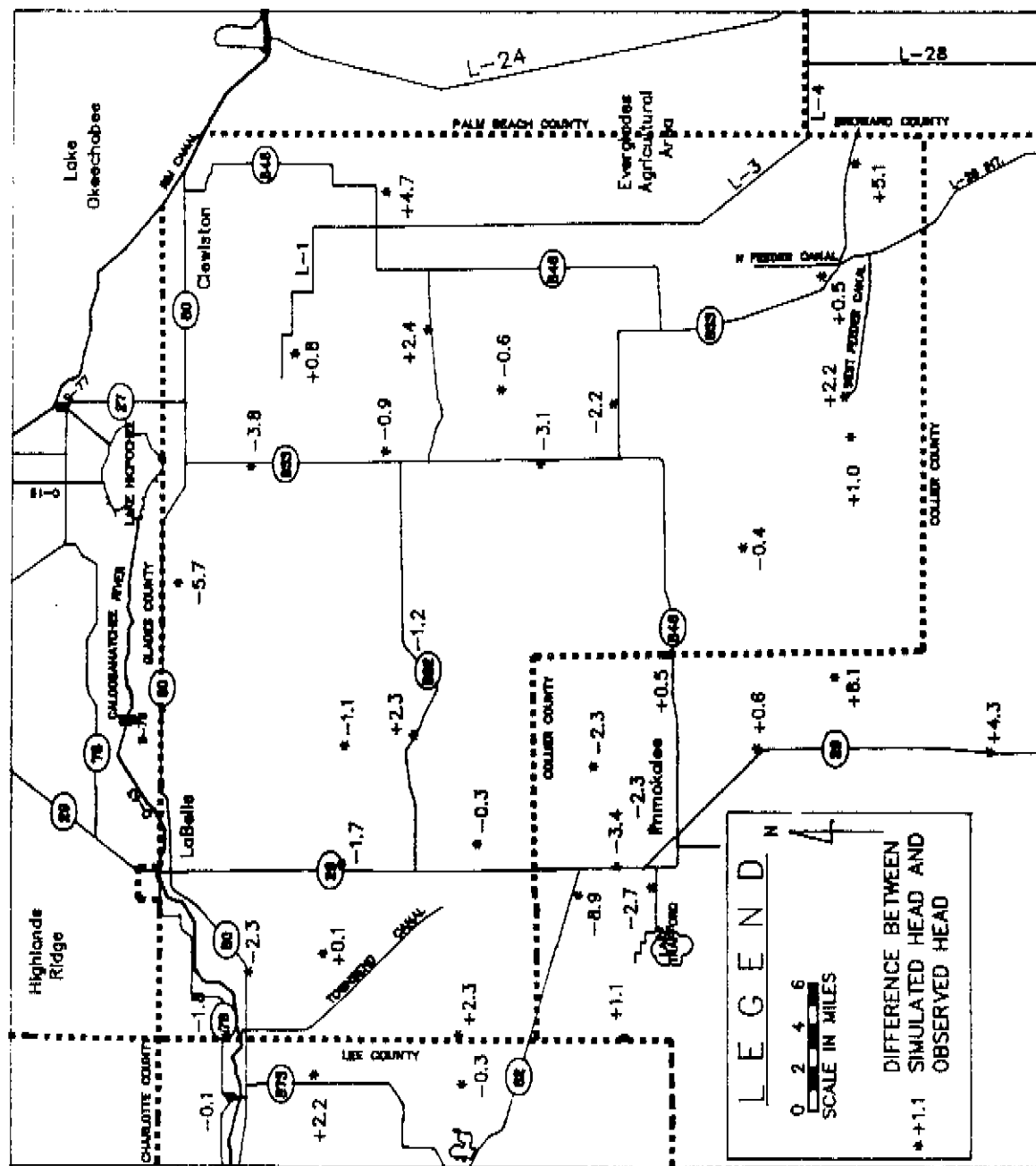


Figure 17. AVERAGE DIFFERENCE BETWEEN OBSERVED AND SIMULATED WATER LEVELS, LAYER 1 (WATER TABLE AQUIFER)

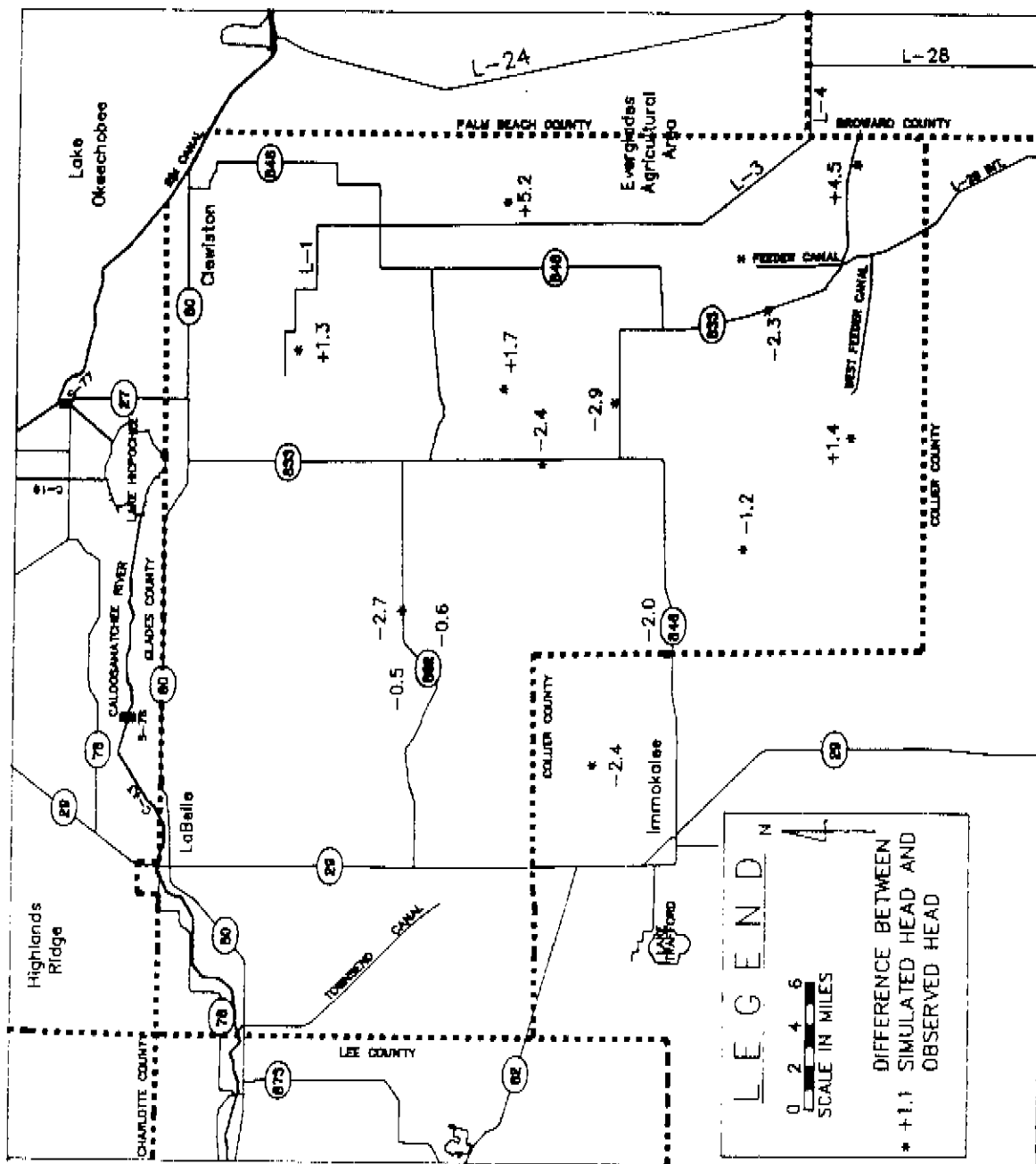


Figure 18. AVERAGE DIFFERENCE BETWEEN OBSERVED AND SIMULATED WATER LEVELS, LAYER 2 (LOWER TAMIAMI AQUIFER)

practices around both of these wells effect the ground water levels, which in turn may influence the rate at which leakage through the Tamiami confining zone takes place. Since surface water management systems were not simulated in the model, this may be a potential source of error.

Layer 3 (Sandstone Aquifer)

No changes were made to the transmissivity or storage values during the calibration process. Changes in the head distribution in this layer during calibration were caused by altering the Vcont array between layers 2 and 3.

Agreement between simulated heads in layer 3 and observed water levels in observation wells in the sandstone aquifer are shown in Figure 19. Of the 20 observation wells in this aquifer, two wells did not fall into the specified tolerance range (± 4 feet). Well L-2186 has only nine observed water levels randomly scattered throughout the calibration period; therefore, the observed data was determined to be unreliable. Well L-731 exhibits an extremely wide range of water level fluctuation (approaching 29 feet), and its water levels are significantly lower than several nearby wells. In addition, it is located in an area of intense withdrawals, therefore it was assumed that this well is subject to cell-wide averaging.

RESULTS

Transient Calibration

Layer 1 (Water Table Aquifer). Figures 20 and 21 show the simulated head distributions in April 1988 (end of wet season) and October 1988 (end of dry season) in layer 1 (water table aquifer). Generally, the highest water levels occur north of Immokalee, and water flows radially away from this area. The lowest levels occur along the Caloosahatchee River where the ground water discharges into the river, and in the Everglades Agricultural Area in eastern Hendry County. It can be seen that there is little seasonal head fluctuation. Most of this seasonal fluctuation takes place near concentrated withdrawals. The simulated head distributions are consistent with the water levels found in Smith and Adams (1988).

Layer 2 (Lower Tamiami Aquifer). Figures 22 and 23 show simulated head distributions in layer 2 (lower Tamiami aquifer) in April and October 1988. Comparison to figures 20 and 21 show the general head distributions, and therefore the regional flow patterns, to be similar to the water table aquifer. However, heads in the lower Tamiami aquifer are slightly lower than those in the water table aquifer, and seasonal fluctuations are more apparent. Larger, more intensive water uses are seen as large cones of depression on these maps. A regional cone of depression caused by concentrated withdrawals for agricultural irrigation occurs in southeastern Hendry County.

Layer 3 (Sandstone Aquifer). Figures 24 and 25 show the head distributions in the sandstone aquifer in April and October 1988. Due to its low values of hydraulic conductivity and thin occurrence, the effect of pumpage from the sandstone aquifer produces deep cones of depression of limited areal extent. Seasonal fluctuations are also more apparent, particularly near the withdrawals.

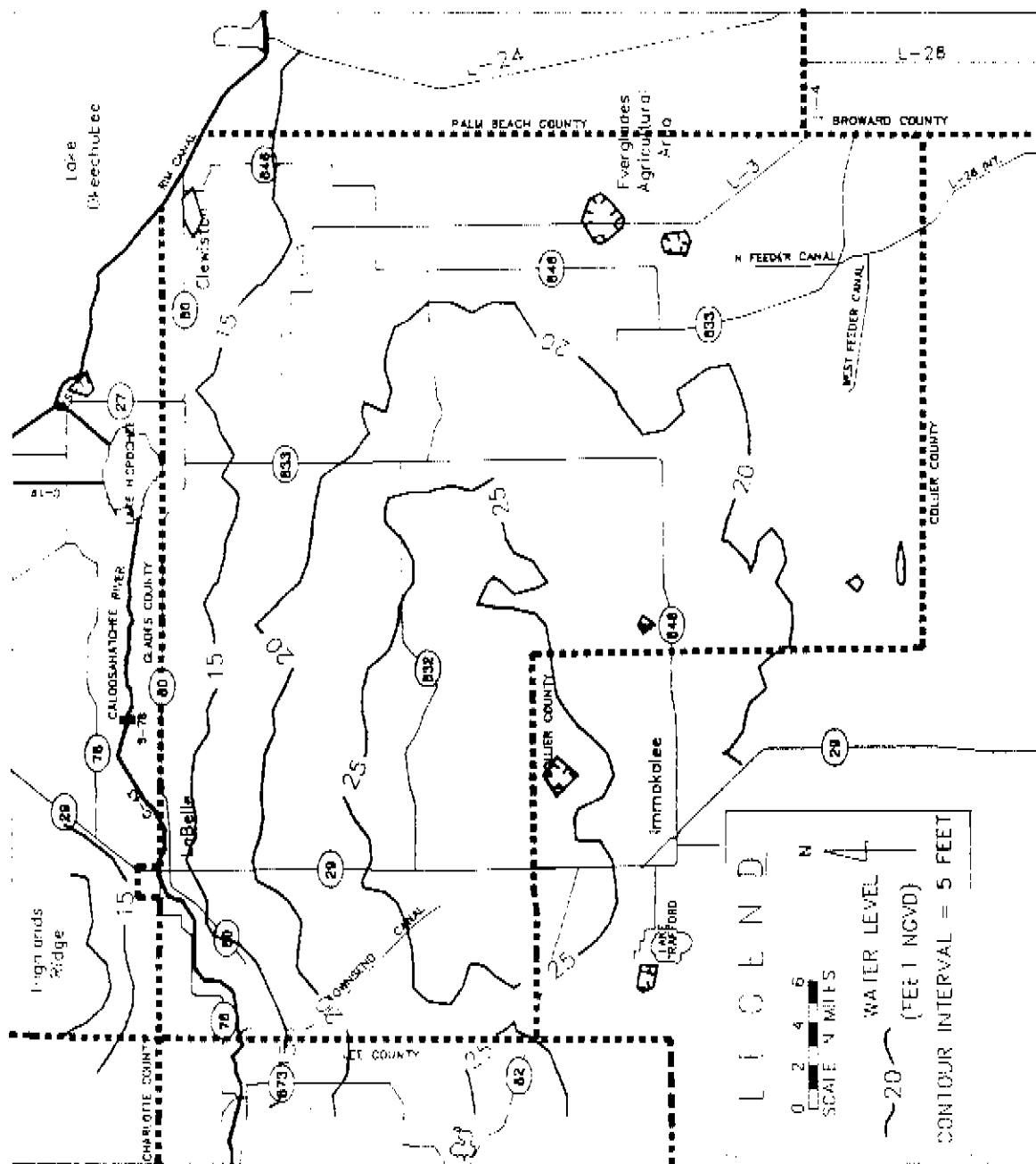


Figure 20. SIMULATED WATER LEVELS, LAYER 1 (WATER TABLE AQUIFER), APRIL 1988

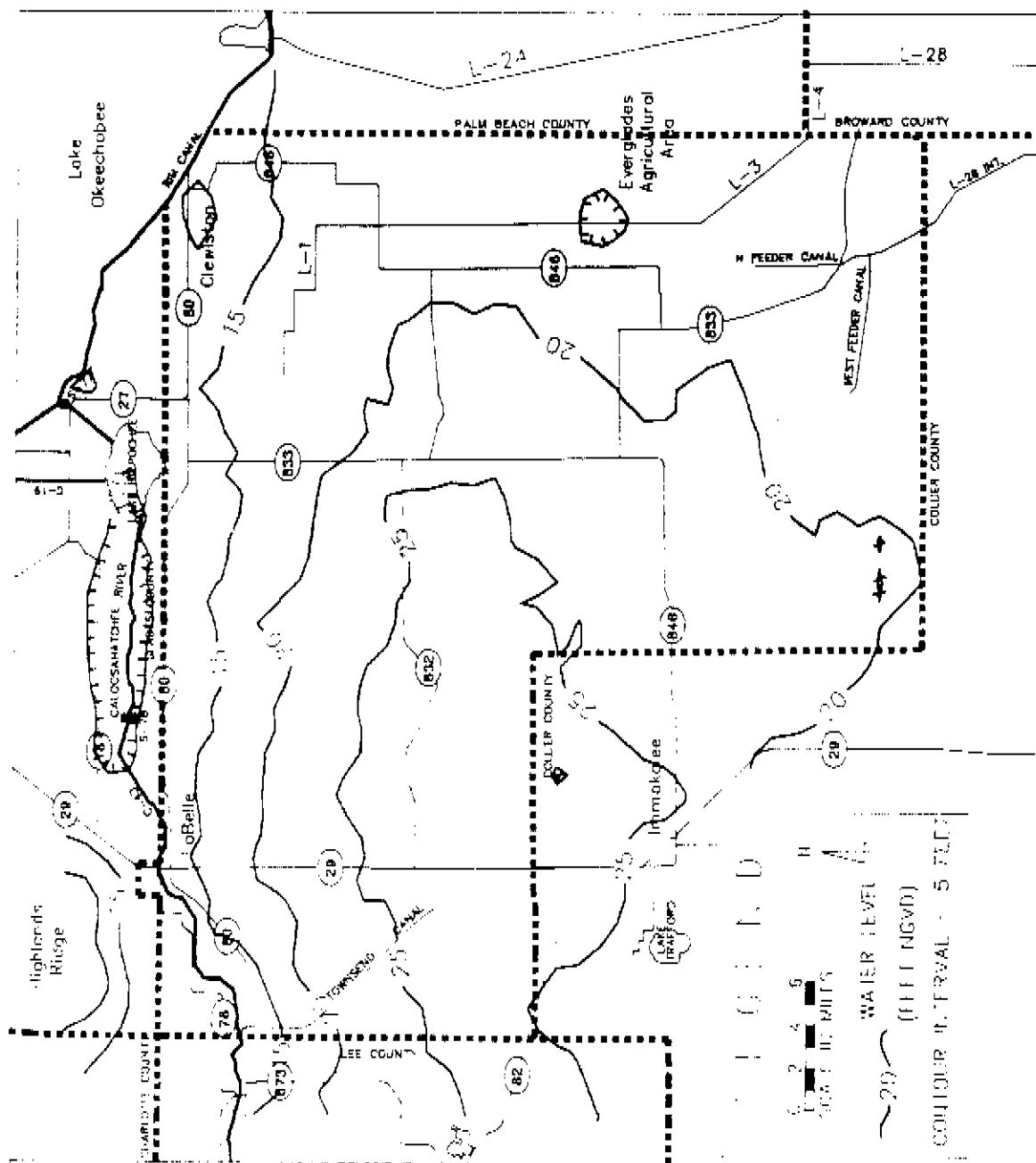


Figure 21. SIMULATED WATER LEVELS, LAYER 1 (WATER TABLE AQUIFER), OCTOBER 1988

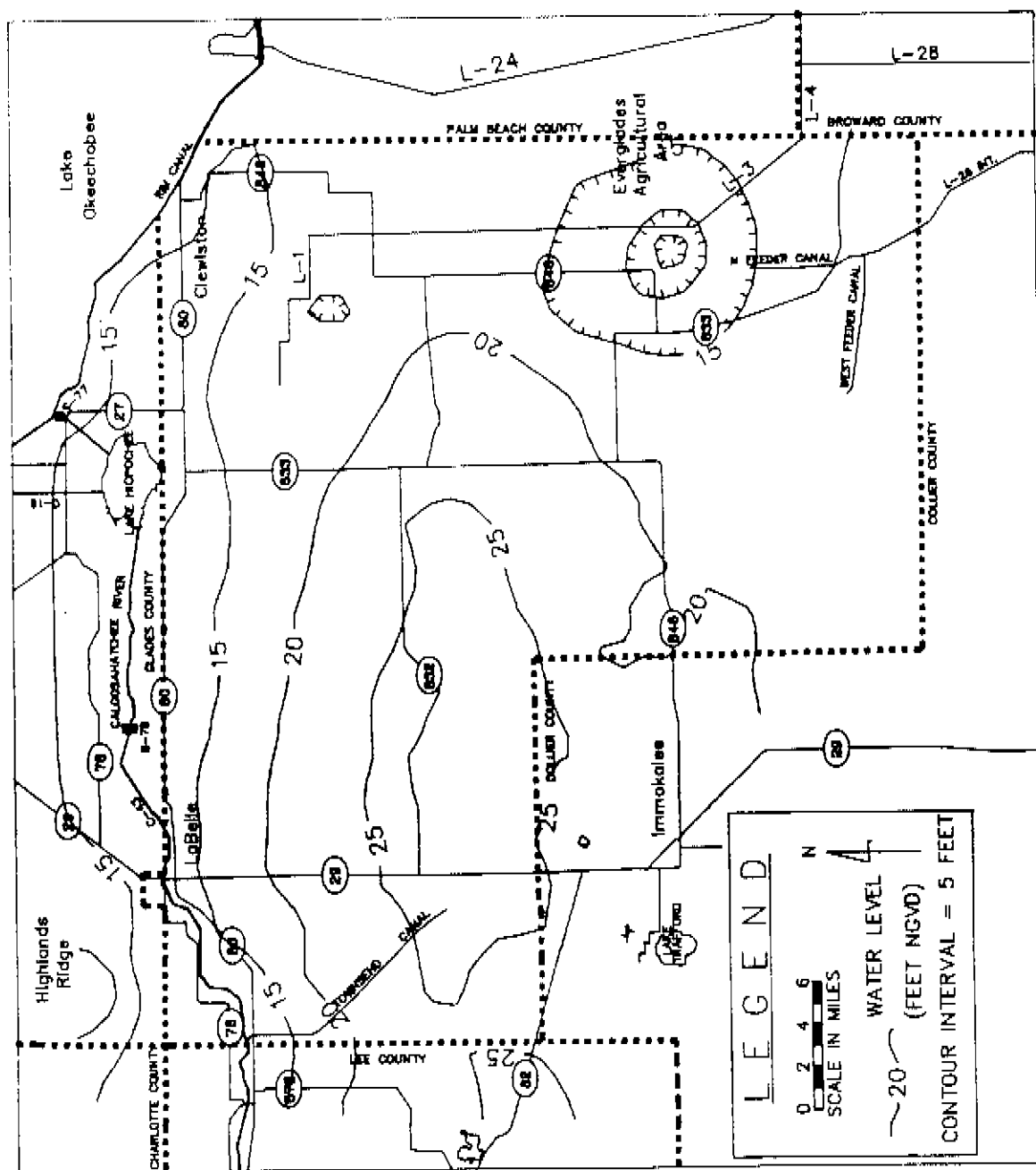


Figure 22. SIMULATED WATER LEVELS, LAYER 2 (LOWER TAMIAMI AQUIFER), APRIL 1988

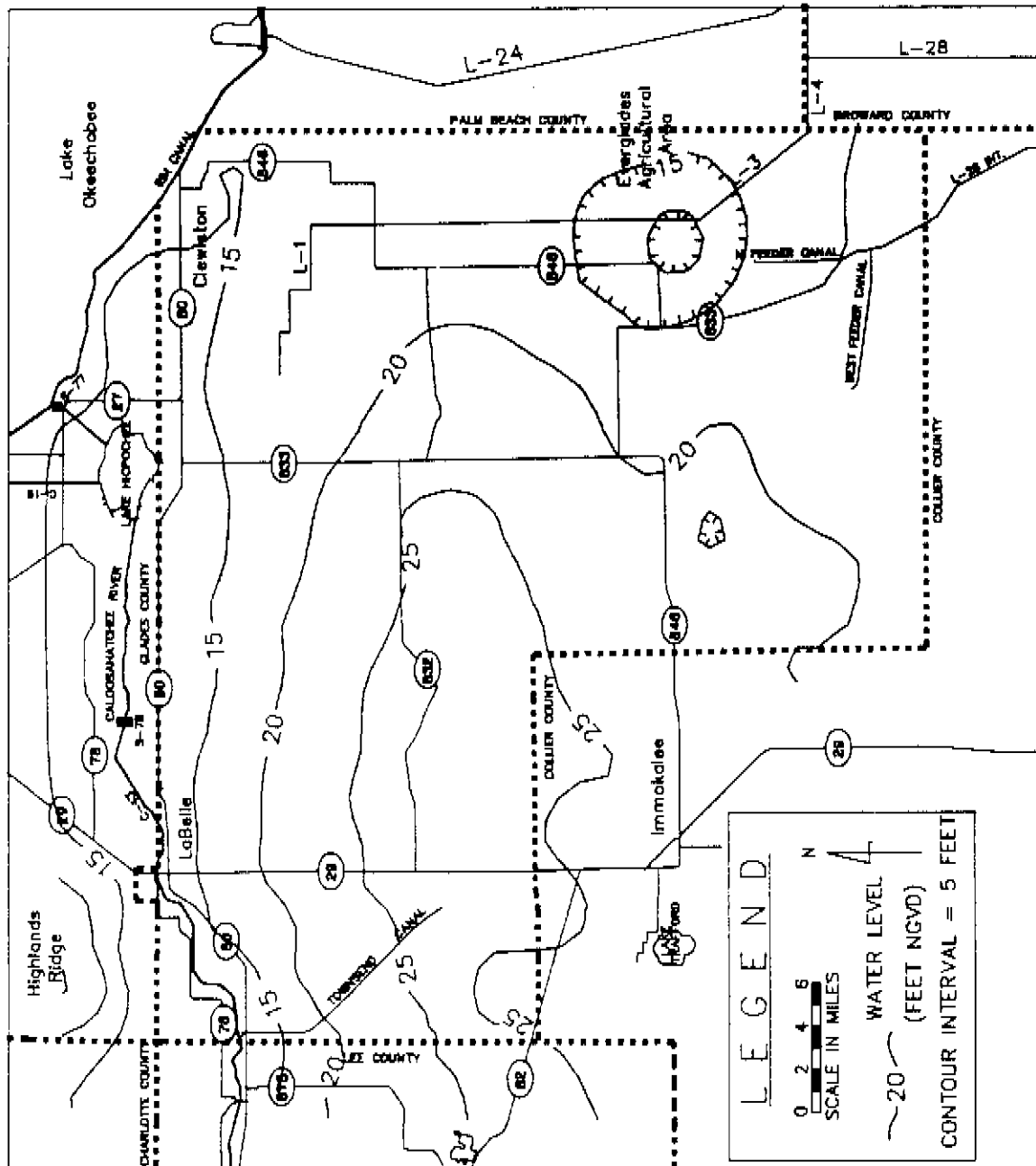


Figure 23. SIMULATED WATER LEVELS, LAYER 2 (LOWER TAMIAMI AQUIFER), OCTOBER 1988

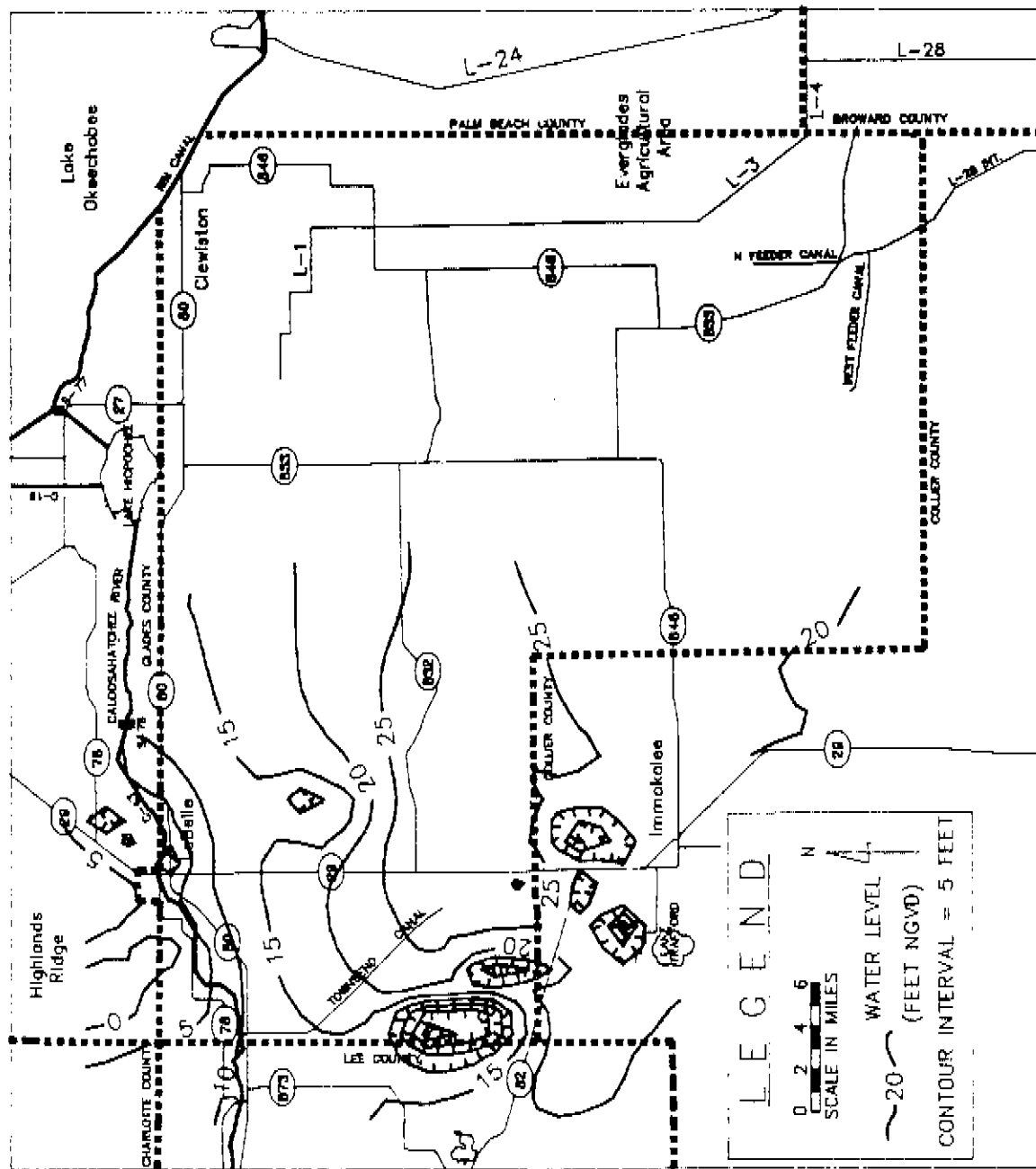


Figure 25. SIMULATED WATER LEVELS, LAYER 3 (SANDSTONE AQUIFER), OCTOBER 1988

Steady State

As previously stated, a final steady state run was completed using the aquifer parameter data used in the final transient calibration. Recharge, well withdrawals, evapotranspiration, and surface water stage levels were averaged over the three year calibration period. Data from this steady state run was used to provide information to describe the ground water flow regimes in Hendry County and to act as the base case for most of the sensitivity analyses and predictive scenarios.

Layer 1 (Water Table Aquifer). Figure 26 shows the direction and magnitude of simulated horizontal flow in the water table aquifer. Each arrow represents the flow from an individual cell. The majority of the larger flow vectors are associated with intensive ground water use or interactions with surface water bodies.

An analysis of the volumetric budget for layer 1 (water table aquifer) is shown in Figure 27. The majority of flow into this layer (96.2%) is derived from recharge (rainfall), 3.7% is upward leakage from layer 2, and 0.1% is from the specified head cells. Of the total flow out of layer 1, 87.1% is evapotranspiration, 7.0% is leakage to layer 2 (lower Tamiami aquifer), 1.5% is well pumpage, 0.7% is river leakage, and the remaining 3.7% is flow to the specified head cells, representing flow out of the modeled area, mainly to Lee and Collier Counties.

Layer 2 (Lower Tamiami Aquifer). Figure 28 shows the magnitude and direction of simulated horizontal flow in layer 2. The regional cone of depression in southeastern Hendry County is quite apparent as it influences regional flow patterns at distances up to 11 miles. This area can also be seen in Figure 29, which is a representation of the simulated vertical flow between the lower Tamiami aquifer from the overlying water table aquifer. The cone of depression in the lower Tamiami aquifer caused by the heavy pumpage in southeastern Hendry County induces a greater amount of leakage into the aquifer. Areas of high leakage in the western portion of the study area are also a result of withdrawals from the lower Tamiami aquifer, or are caused by withdrawals from the underlying sandstone aquifer.

Figure 30 illustrates the volumetric budget for layer 2 (lower Tamiami aquifer). Approximately 68.2% of the total inflow to this layer is recharge from the water table aquifer, 31.5% is from the specified head cells, and 0.3% is from upward leakage from the sandstone aquifer. The flow from the specified head cells represents flow into the modeled area from Glades County, and from Collier County south of Immokalee. Of the total outflows, 35.8% is upward leakage to the water table aquifer, 31.8% is to wells, 19.8% is downward leakage to the sandstone aquifer, and 12.6% is to the specified head cells. The upward leakage occurs mainly in the areas of western Hendry County where the Tamiami confining zone exhibits high values of vertical hydraulic conductivity. In these areas, the two model layers tend to act as if simulating a single, unconfined aquifer. Therefore, water is exchanged freely between the two layers. Flow to the specified head cells represents horizontal flow out of the modeled area, mainly to Lee and Collier counties.

Layer 3 (Sandstone Aquifer) Figure 31 shows the magnitude and direction of simulated horizontal flow in the sandstone aquifer. It can be seen that the effect of large withdrawals generally extend over a distance of two to three miles, as opposed to the eleven mile distance seen in the lower Tamiami aquifer. Figure 32 illustrates the simulated leakage into the sandstone aquifer from the overlying aquifers. It is clear that most of the large values of leakage correspond to areas of heavy

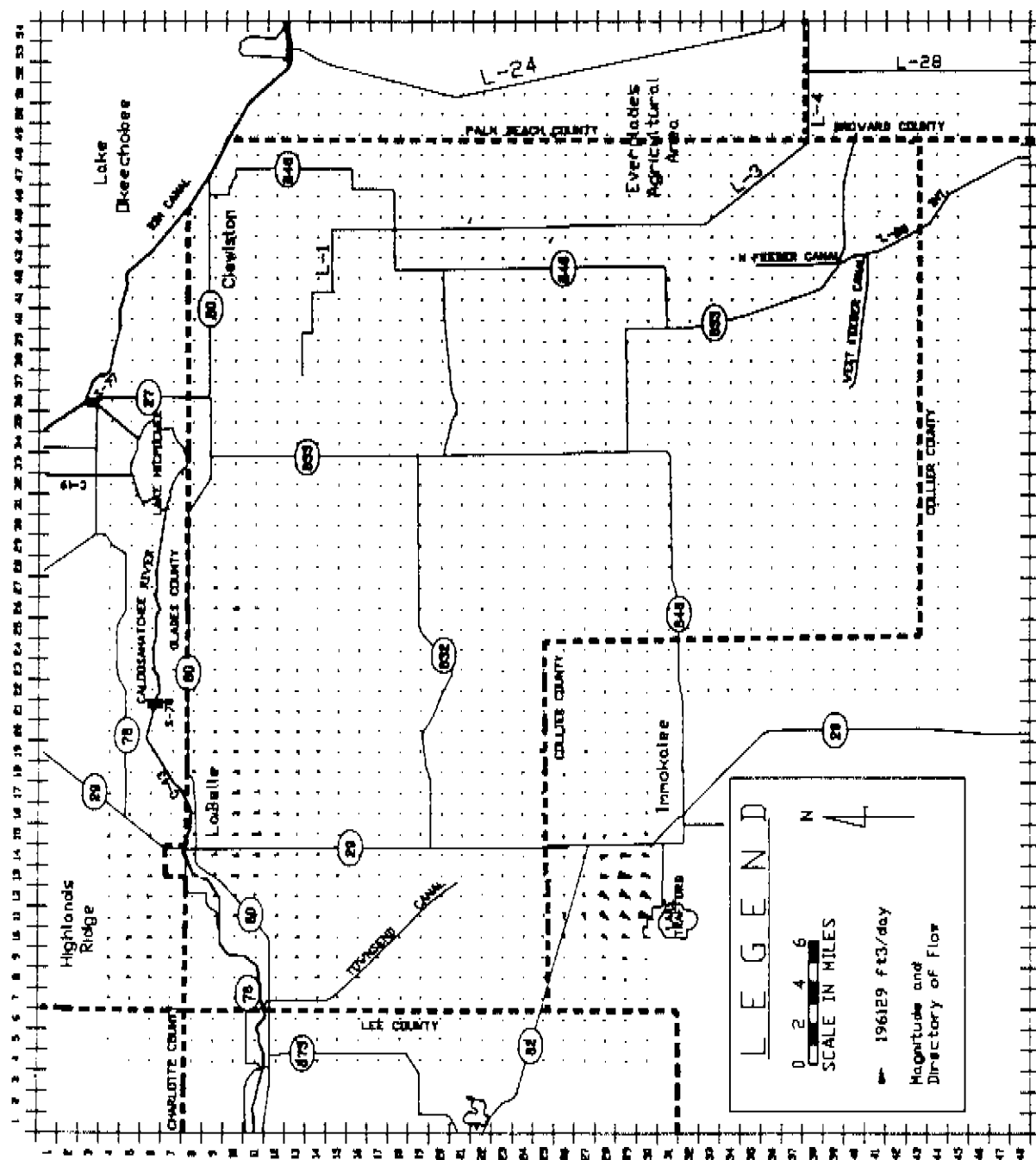


Figure 26 SIMULATED STEADY STATE HORIZONTAL FLOW VECTORS, LAYER 1 (WATER TABLE AQUIFER)

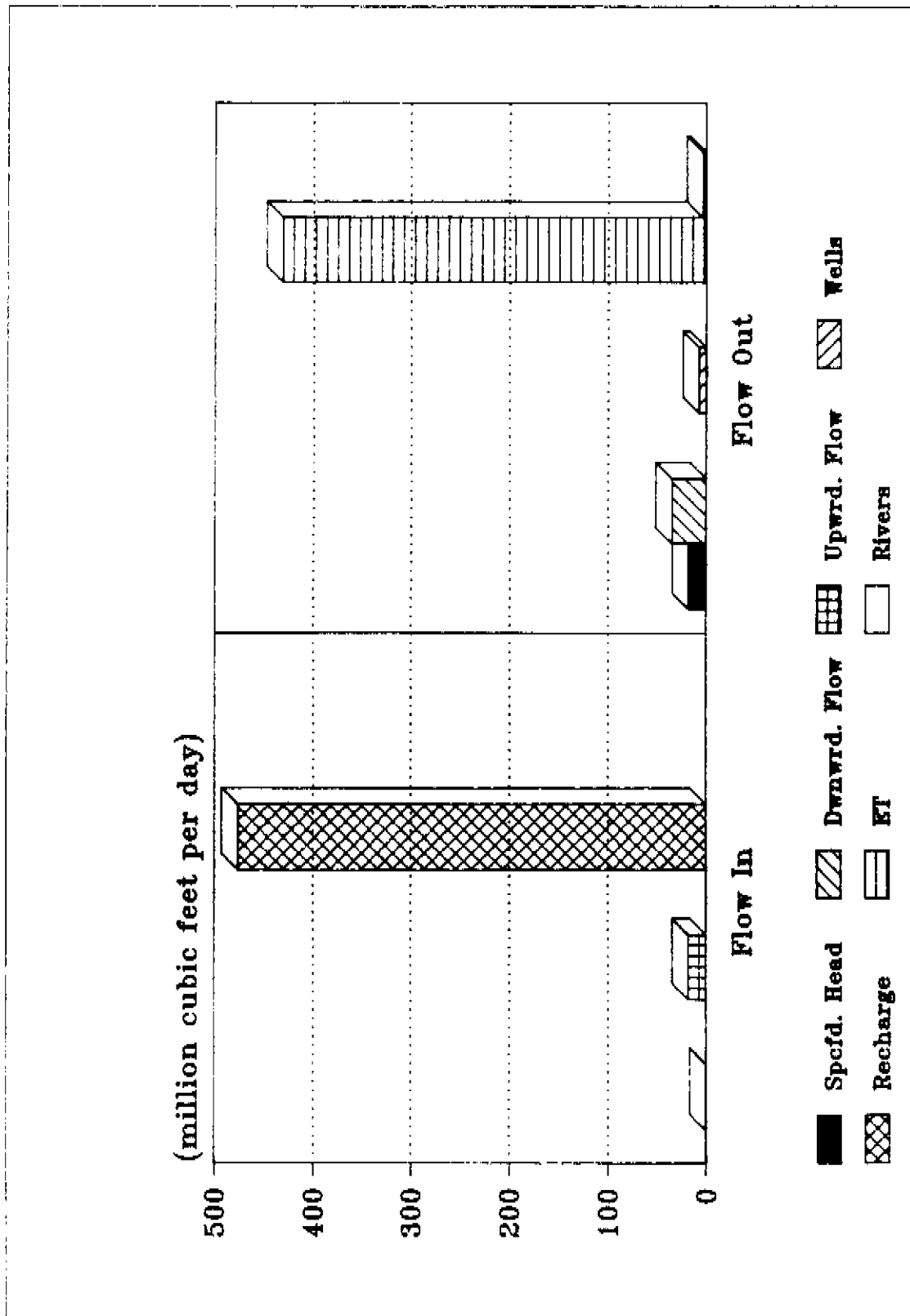


Figure 27. VOLUMETRIC BUDGET, LAYER 1 (WATER TABLE AQUIFER), STEADY STATE CONDITIONS

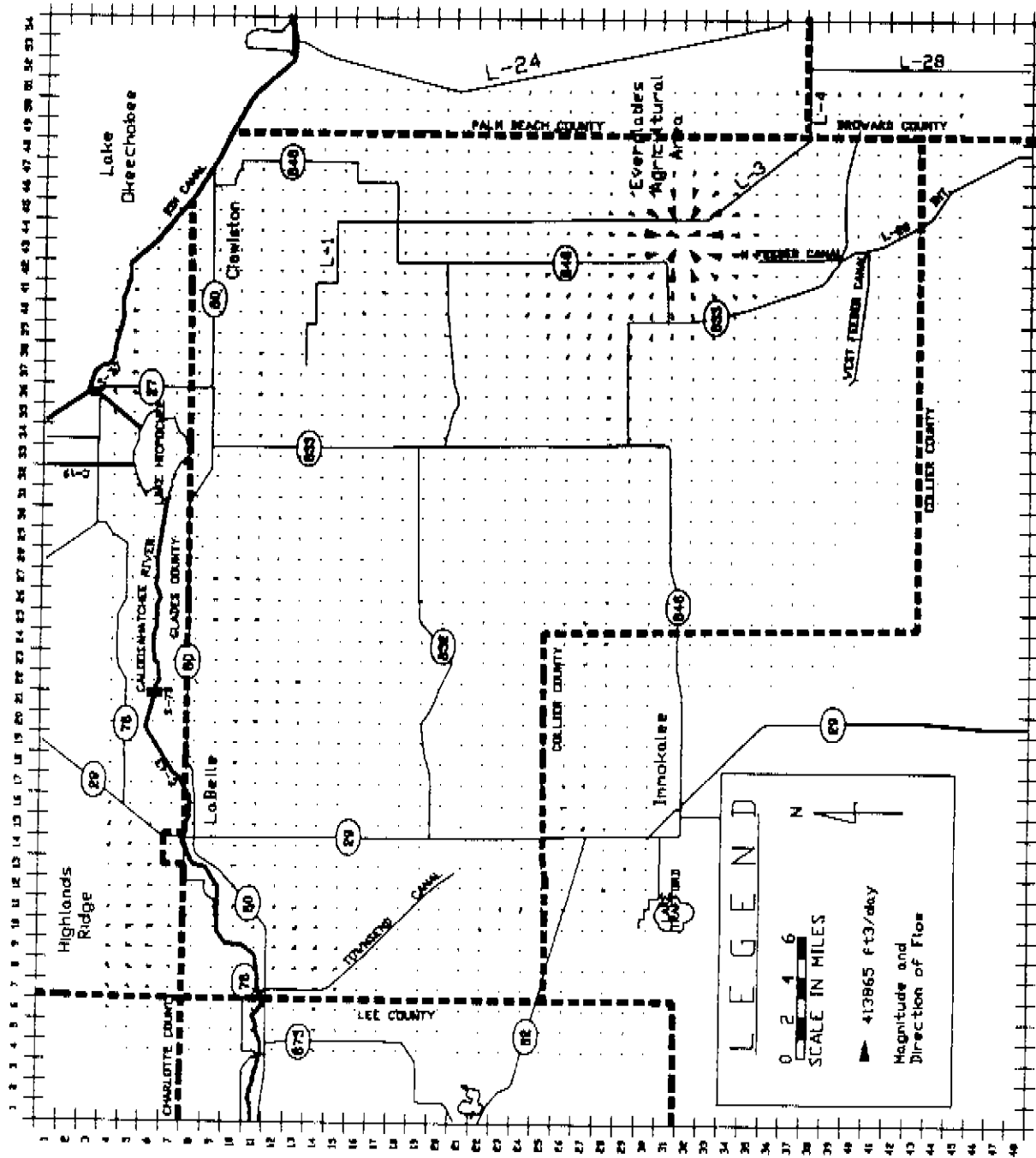
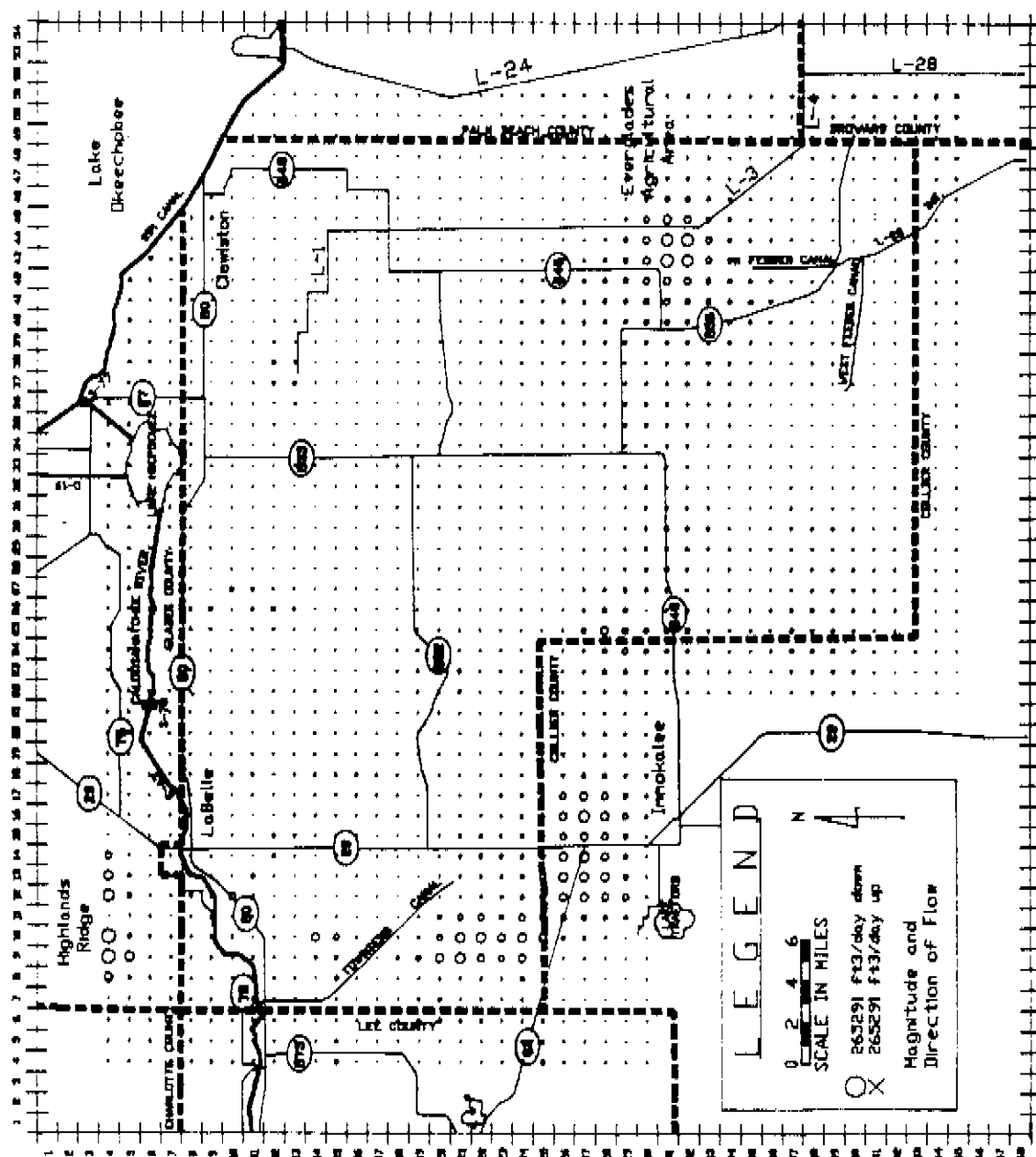


Figure 28. SIMULATED STEADY STATE HORIZONTAL FLOW VECTORS, LAYER 2 (LOWER TAMIAMI AQUIFER)



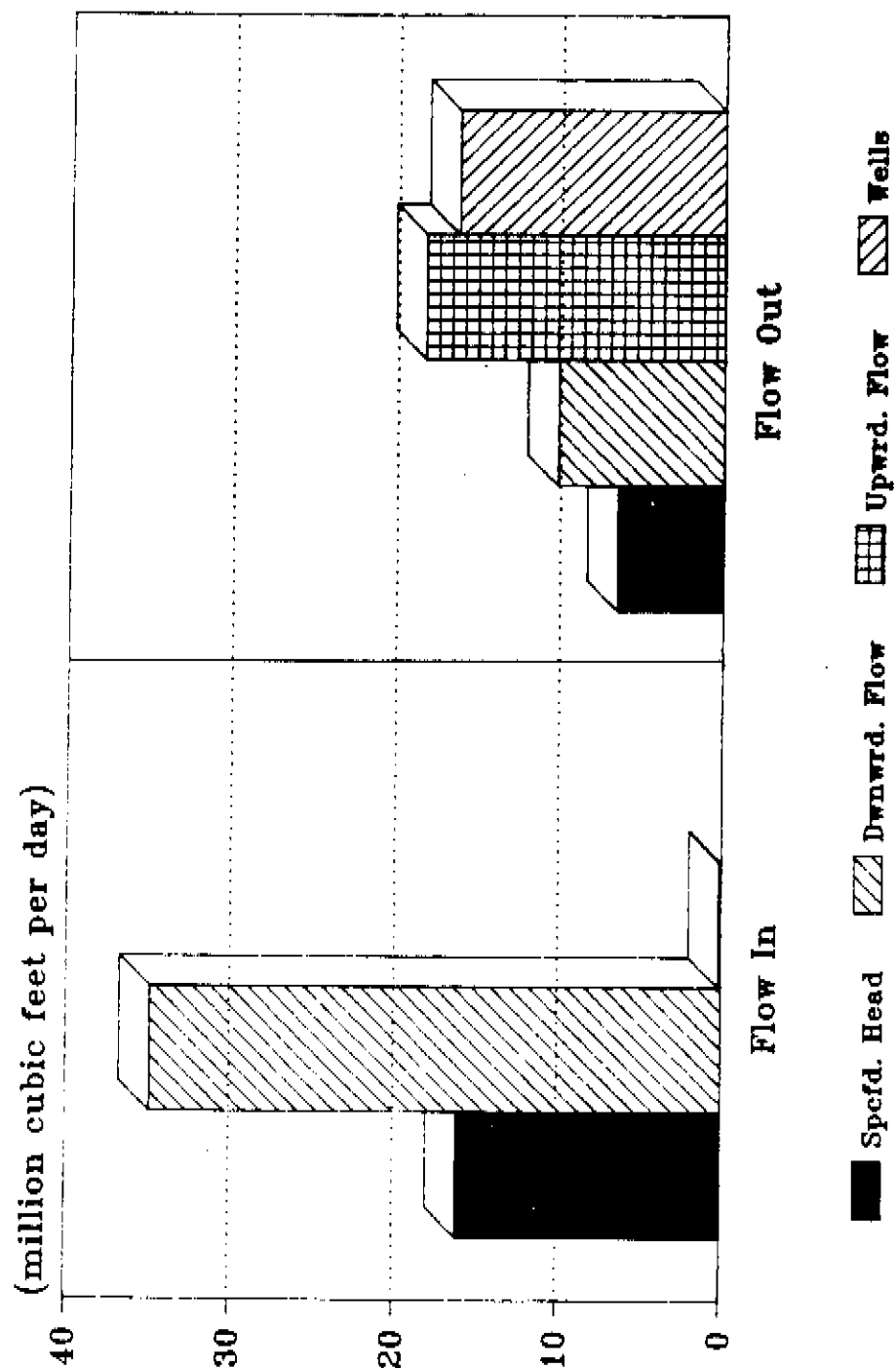


Figure 30. VOLUMETRIC BUDGET, LAYER 2 (LOWER TAMIAMI AQUIFER), STEADY STATE CONDITIONS

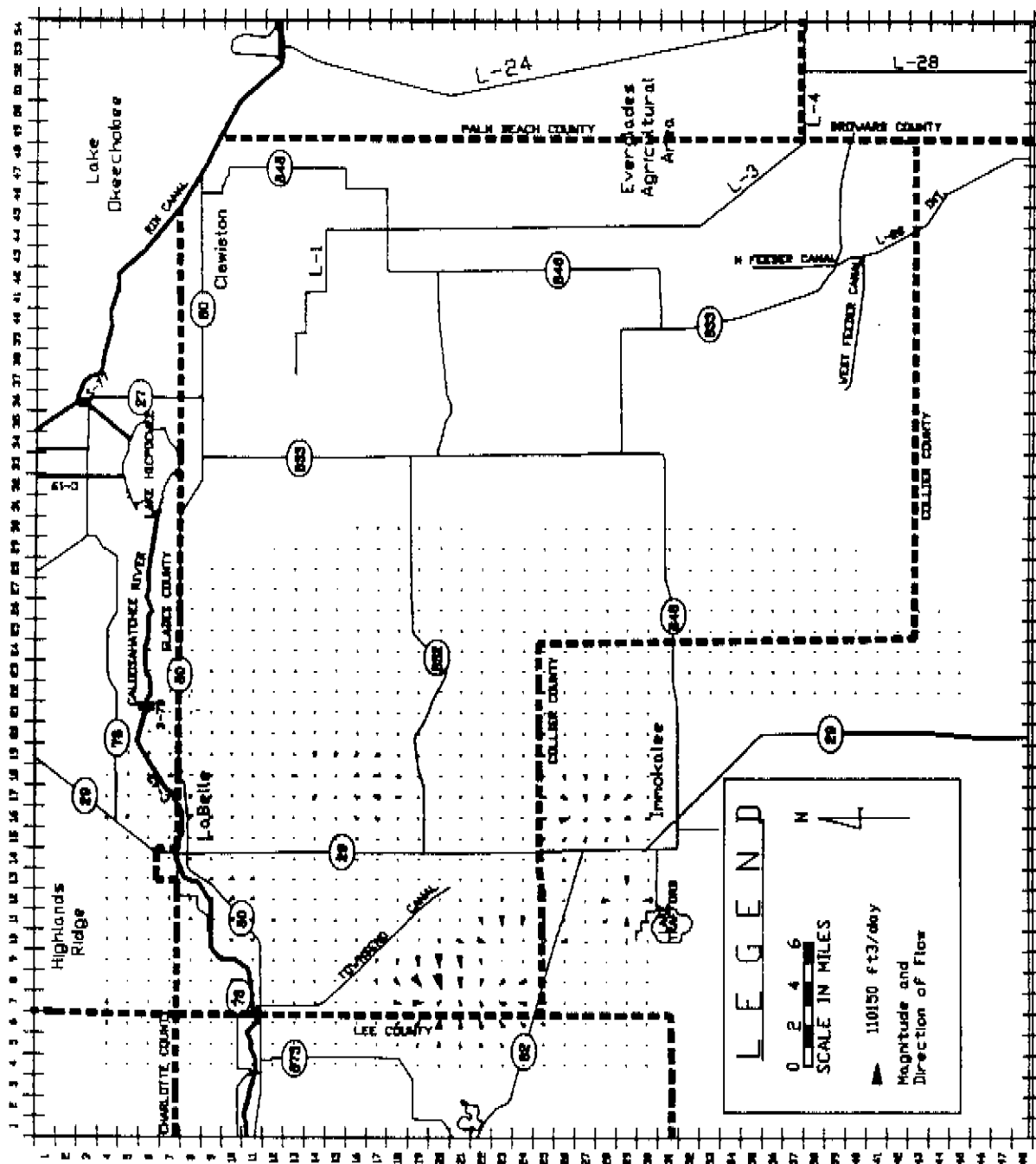


Figure 31. SIMULATED STEADY STATE HORIZONTAL FLOW VECTORS, LAYER 3 (SANDSTONE AQUIFER)

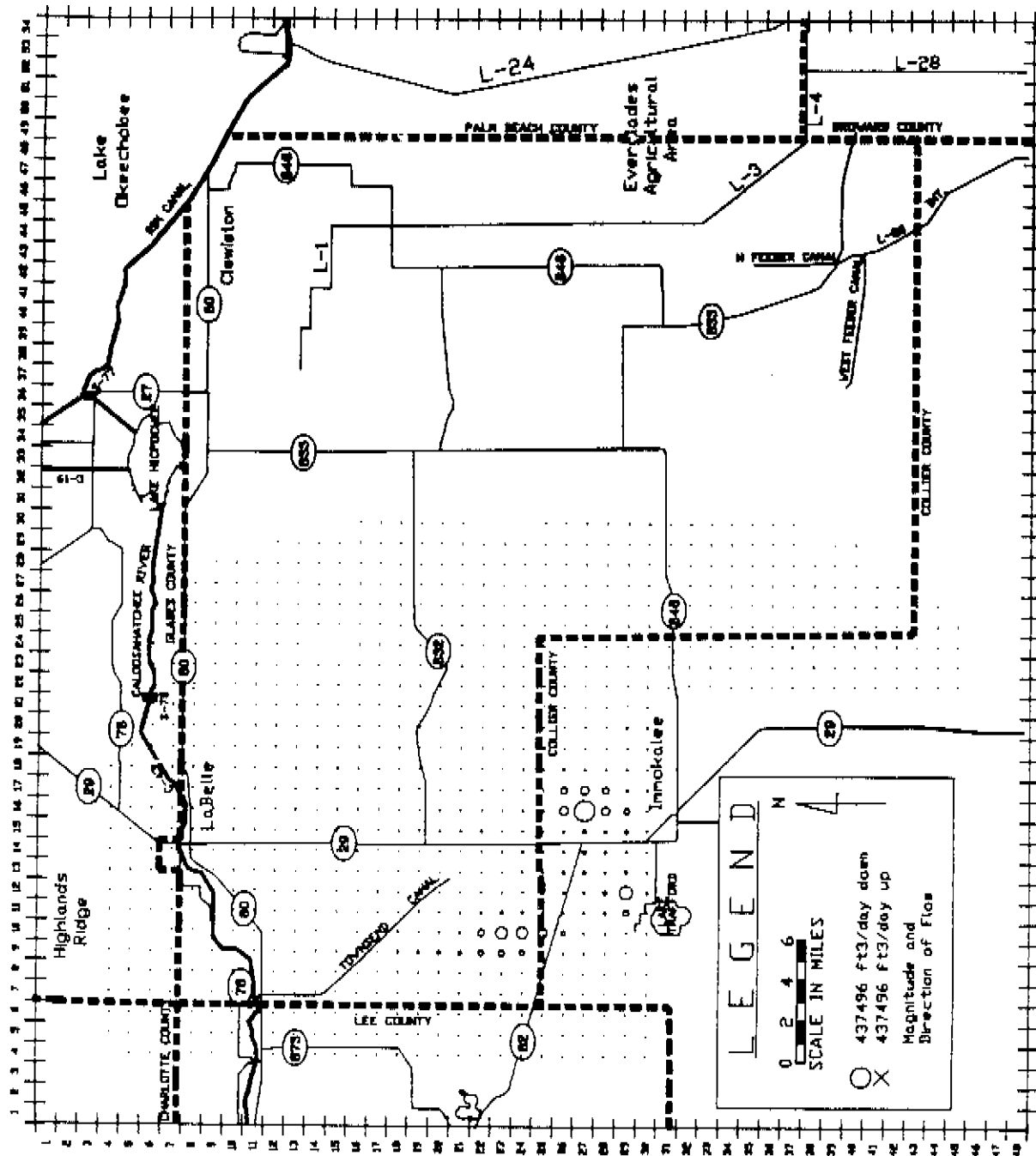


Figure 32. SIMULATED STEADY STATE VERTICAL FLOW BETWEEN LAYER 2 (LOWER TAMIAMI AQUIFER) AND LAYER 3 (SANDSTONE AQUIFER)

withdrawal from the sandstone aquifer. However, recharge to the sandstone aquifer from overlying layers occur throughout its extent.

The volumetric budget for layer 3 (sandstone aquifer) is illustrated in Figure 33. Almost all of the inflow to the sandstone aquifer (98.0%) is recharge from above. The remaining 2.0% comes from the specified head cells. Of the total outflow, 79.1% is to wells, 19.7% is to specified head cells, and 1.2% is upward leakage to the lower Tamiami aquifer. The outflow to the specified head cells represents horizontal flow out of the modeled area, mainly to Lee and Collier counties.

Figure 34 is a combined volumetric budget for all of the modeled area. Total inflow consists of 96.6% recharge (rainfall), and 3.4% flow from specified head boundaries (flow from outside the modeled area). Total outflow consists of 87.5% evapotranspiration, 6.4% to wells, 5.4% to specified head boundaries (flow out of the modeled area), and 0.7% discharge to surface water bodies.

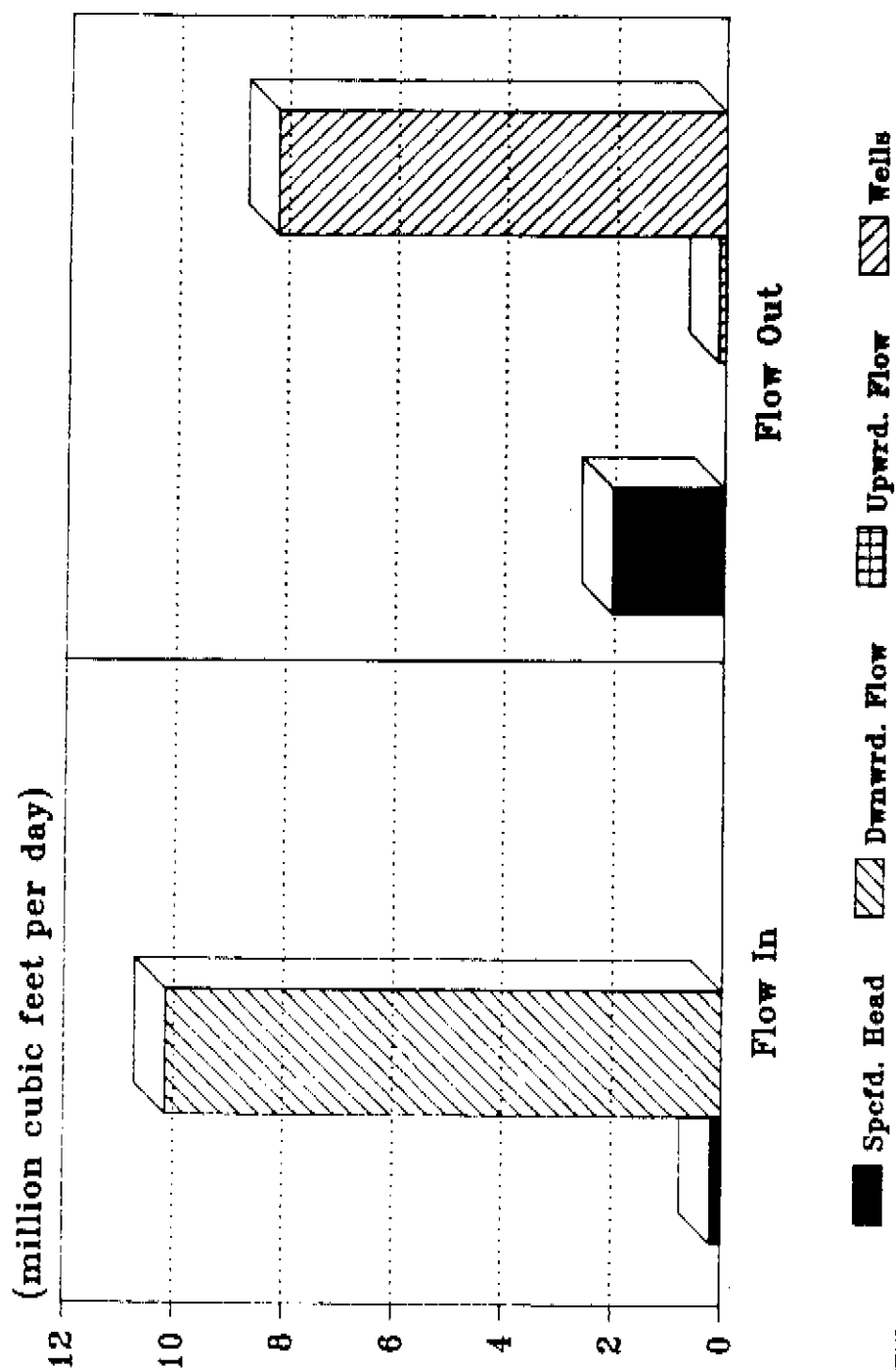


Figure 33. VOLUMETRIC BUDGET, LAYER 3 (SANDSTONE AQUIFER), STEADY STATE CONDITIONS

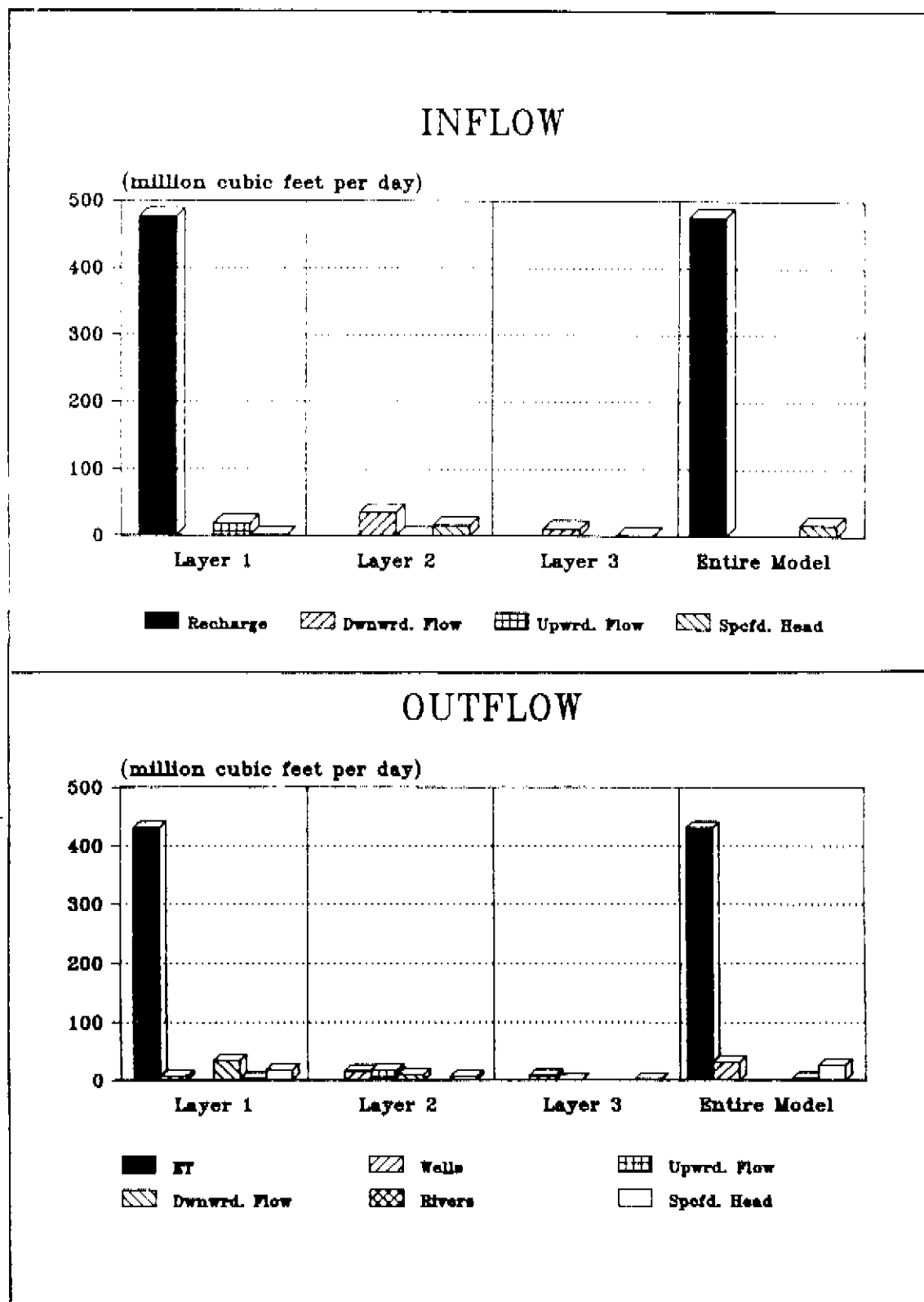


Figure 34. VOLUMETRIC BUDGET FOR ENTIRE MODEL, STEADY STATE CONDITIONS

SENSITIVITY TESTING

The model was tested to check its sensitivity to changes in the boundary conditions, aquifer parameters, and stresses. Boundary conditions were tested two ways: by moving the boundaries farther away from the center of the model, and by substituting specified flux boundaries for the specified head boundaries. The specified head cells were moved out from the center of the model a distance of approximately four miles by expanding the grid spacing of rows 1, 2, 3, 46, 48, and 49; and columns 1, 2, 3, 52, 53, and 54. The model was run using steady state conditions and this grid configuration, and the resulting heads at the Hendry County boundary were compared to the steady state calibration run. No significant differences in heads were found. Specified flux boundaries were simulated using the following procedure. First, all specified head cells were converted to active cells. Then, the flow was calculated between each of these cells and the cell immediately adjacent towards the center of the model, using the starting heads (December 1985) and the calibrated aquifer parameters. These fluxes were assigned to the proper cells and added to the well file. The model was run for steady state conditions, and both heads and volumetric budgets were compared. No significant difference in heads in Hendry County were found. Significant head differences resulting from the two types of boundary conditions are limited to a range of two cells from the location of the specified head boundary. Analysis of the volumetric budget showed that some overestimation of flow into the model resulted from the use of specified head boundaries, however the overall effects on the model are minimal. In the types of uses planned for this model, the specified head boundaries are not expected to be a problem. However, in those cases where it appears that a specified flux boundary will give a more conservative solution, it is recommended that specified flux boundaries be substituted.

Aquifer parameters were tested by altering the following parameters: Layer 1 conductivity and river bed conductance, V_{cont} between layers 1 and 2, layer 2 transmissivity, V_{cont} between layers 2 and 3, and layer 3 transmissivity. The sensitivity of the model to these parameters was tested by doubling, then halving each parameter, one at a time. It was assumed that testing this range of values would bracket the range of uncertainty for each parameter. This may not be true for the V_{cont} data, but changes in the V_{cont} values greater than the stated range resulted in the model becoming unstable. Head changes in each layer were examined to determine the relative sensitivity. The results of these tests are presented in Tables 3, 4, and 5. The model was tested for its sensitivity to the following stresses: recharge, maximum evapotranspiration rate, and evapotranspiration extinction depth. Recharge and ET rates were increased and decreased by 10%, and the ET extinction depth was raised and lowered by one foot. It was assumed that testing this range of values for the various stresses would bracket the range of uncertainty. Results of these sensitivity tests are presented in Table 6.

The strongly implicit procedure (SIP) was the solution method used in the calibration process. Overall, it resulted in a stable solution in an average of 14 iterations. However, when severe drought scenarios were tested, the model became unstable and would not converge. Therefore, the slice-successive over relaxation (SSOR) method was tested. Using the calibrated data, SSOR would reach a solution in 31 iterations. The maximum head difference between solutions generated by the two methods was 0.01 feet, which was considered insignificant. SSOR provided a stable solution for the drought scenarios.

TABLE 3
SENSITIVITY RESPONSES TO CHANGES IN LAYER 1
(Head Changes in Feet)

	MAXIMUM HEAD INCREASE	MINIMUM HEAD INCREASE	AVERAGE HEAD CHANGE	STD. DEV.
<u>Change in Layer 1</u>				
Conductivity Doubled	.99	-1.58	-.08	.26
Conductivity Halved	1.22	-.91	-.06	.18
Vcont Doubled	.65	-.66	.005	.10
Vcont Halved	.66	-.84	.007	.12
Riv. Cond. Doubled	.33	-.19	.0007	.04
Riv. Cond. Halved	.01	-.69	-.01	.05
<u>Change in Underlying Layer 2</u>				
Conductivity Doubled	.98	-1.47	-.05	.19
Conductivity Halved	1.12	-.45	.04	.12
Vcont Doubled	1.92	-.73	.16	.30
Vcont Halved	2.63	-.59	.29	.49
Riv. Cond. Doubled	.23	-.10	-.001	.03
Riv. Cond. Halved	.01	-.69	-.01	.04
<u>Change in Underlying Layer 3</u>				
Conductivity Doubled	.20	-.48	-.02	.07
Conductivity Halved	.38	-.09	.01	.04
Vcont Doubled	1.12	-.49	.05	.15
Vcont Halved	.32	1.74	-.10	.26
Riv. Cond. Doubled	.08	-.06	-.002	.009
Riv. Cond. Halved	.03	-.07	.001	.006

TABLE 4
SENSITIVITY RESPONSES TO CHANGES IN LAYER 2
(Head Changes in Feet)

	MAXIMUM HEAD INCREASE	MINIMUM HEAD INCREASE	AVERAGE HEAD CHANGE	STD. DEV.
<u>Change in Layer 2</u>				
Transmissivity Doubled	3.74	-1.13	.14	.70
Transmissivity Halved	1.49	-5.40	-.06	.51
Vcont Doubled	.12	-.40	.005	.03
Vcont Halved	.50	-.18	.006	.03
<u>Change in Overlying Layer 1</u>				
Transmissivity Doubled	3.31	-.88	.16	.57
Transmissivity Halved	1.46	-2.44	-.07	.34
Vcont Doubled	.06	-.12	-.004	.02
Vcont Halved	.16	-.07	.004	.02
<u>Change in Underlying Layer 3</u>				
Transmissivity Doubled	1.09	-.50	.06	.23
Transmissivity Halved	.39	-1.11	.03	.14
Vcont Doubled	6.83	-.48	.50	1.12
Vcont Halved	4.82	-9.30	-.73	1.52

TABLE 5
SENSITIVITY RESPONSES TO CHANGES IN LAYER 3
(Head Changes in Feet)

	MAXIMUM HEAD INCREASE	MINIMUM HEAD INCREASE	AVERAGE HEAD CHANGE	STD. DEV.
<u>Change in Layer 3</u>				
Transmissivity Doubled	10.47	-2.20	.11	.95
Transmissivity Halved	5.04	-9.76	-.09	1.07
<u>Change in Overlying Layer 1</u>				
Transmissivity Doubled	.13	-.16	-.004	.02
Transmissivity Halved	.09	-.11	.002	.02
<u>Change in Overlying Layer 2</u>				
Transmissivity Doubled	.57	-.45	-.01	.05
Transmissivity Halved	.28	-.46	.007	.04

TABLE 6
SENSITIVITY RESPONSES TO CHANGES IN STRESS
(Head Changes in Feet)

	MAXIMUM HEAD INCREASE	MINIMUM HEAD INCREASE	AVERAGE HEAD CHANGE	STD. DEV.
<u>Change in Layer 1</u>				
Recharge at 110%	3.11	0	.43	.45
Recharge at 90%	0	-1.42	-.33	.22
Max. ET Rate at 110%	0	-1.56	-.27	.21
Max ET Rate at 90%	3.93	0	.47	.60
ET ext. depth at 4 ft.	.61	0	.19	.14
ET ext. depth at 6 ft.	0	-.58	-.18	.13
<u>Change in Layer 2</u>				
Recharge at 110%	3.09	0	.40	.44
Recharge at 90%	0	-1.39	-.31	.21
Max ET Rate at 110%	0	-1.39	-.31	.21
Max ET Rate at 90%	3.90	0	.49	.57
ET ext. depth at 4 ft.	.53	0	.17	.12
ET ext. depth at 6 ft.	0	-.49	-.17	.12
<u>Change in Layer 3</u>				
Recharge at 110%	1.09	0	.17	.25
Recharge at 90%	0	-.56	-.13	.81
Max ET Rate at 110%	0	-.45	-.11	.15
Max ET Rate at 90%	1.36	0	.18	.29
ET ext. depth at 4 ft.	.48	0	.08	.12
ET ext. depth at 6 ft.	0	-.48	-.08	.12

Layer 1 (Water Table Aquifer)

Generally, simulated water levels in layer 1 were not sensitive to changes in aquifer parameters. Changing the hydraulic conductivity caused some changes in head levels near areas where withdrawals occur, but these changes are localized. Layers 2 and 3 react to changes in the aquifer parameters in layer 1 in a similar manner. As expected, simulated water levels in layer 1 are sensitive to changes in stress. This layer is most sensitive to recharge, followed by the ET rate, and ET extinction depth. Layers 2 and 3 react to changes in stresses in a similar manner.

Layer 2 (Lower Tamiami Aquifer)

Simulated heads in layer 2 are also insensitive to changes in aquifer parameters, with the exception of Vcont between layers 1 and 2. Doubling this parameter resulted in a maximum rise in simulated head of 3.79 feet (in a heavily pumped area), but on average the heads did not significantly change. However, when the layer 1 Vcont was halved, the average simulated head dropped almost 0.2 feet. This is expected, as leakage from layer 1 is the major source of flow into layer 2.

Layer 3 (Sandstone Aquifer)

Simulated heads in layer 3 are sensitive to changes in Vcont between layers 2 and 3, and only slightly sensitive to changes in the layer 3 transmissivity. Doubling transmissivity resulted in a maximum rise in head of 10.47 feet, with an average rise of 0.12 feet, while halving transmissivity caused simulated head to decline a maximum of 9.76 feet, with an average decline of 0.06 feet. The largest changes in heads are near areas of large withdrawals. Layer 3 is slightly more sensitive to changes in transmissivity than layer 2 because it has lower transmissivity values.

Simulated heads in layer 3 are most sensitive to changes in Vcont between layers 2 and 3. Doubling this parameter resulted in a maximum rise in simulated head of 6.83 feet, with an average rise of 0.47 feet. Halving the layer 2 Vcont resulted in a maximum decline in simulated head of 9.28 feet, with an average decline of 0.88 feet. This is expected, as leakage from the layer 2 accounts for 98% of the inflow to layer 3.

PREDICTIVE SCENARIO

INTRODUCTION

One steady state predictive scenario was evaluated. For this run, the following changes were made from the final calibration data:

1. Recharge was set to the amount expected in a 2-in-10 year drought event (rainfall approximately 80% of average),
2. The pumpage file was modified to represent the additional irrigation requirements during the 2-in-10 year drought, and
3. All proposed wells and crops requested in water use permits issued through November 1989 were represented in this scenario. Projected demands for public water supply were also included.

RESULTS

The simulated head and head declines discussed in this section are the average for a given model cell. Actual head decline caused by the simulated drought may be greater or lesser due to the effects of cell-wide averaging.

Layer 1 (Water Table Aquifer)

Figure 35 shows the water levels within layer 1 (water table aquifer) for average conditions. Figure 36 shows the predicted decline in simulated water levels expected in a 2-in-10 year drought. It can be seen that approximately 50% of the water table aquifer within the modeled area will undergo a simulated head decline of one foot or more. This is a regional effect of the decreased amount of recharge during the drought. There are several localized areas showing greater simulated head declines, all as a result of well withdrawals. The area in southeast Hendry County showing four feet of head decline is a result of increased withdrawals in the lower Tamiami aquifer. This causes a corresponding increase in the leakage from the water table aquifer into the lower Tamiami aquifer. The area northwest of Immokalee showing a simulated head decline of three feet is caused by increased withdrawals in both the water table and sandstone aquifers. The same is true for the area west of LaBelle that exhibits a simulated head decline of four feet. The area of simulated head decline of one foot that extends south into central Hendry County is caused by increased withdrawals from the water table aquifer just south of the Hendry County - Glades County border, and a proposed agricultural withdrawal from the lower Tamiami aquifer north of highway 832. Simulated water level declines in excess of one foot may impact the water levels and hydroperiods of some wetlands.

Layer 2 (Lower Tamiami Aquifer)

Figure 37 shows the simulated head distribution within layer 2 (lower Tamiami aquifer) for average conditions. Figure 38 shows the predicted decline in simulated head expected in a 2-in-10 year drought. As with layer 1 (water table aquifer), approximately 50% of the lower Tamiami aquifer in the modeled area shows a simulated head decline of one foot or more as a result of a decrease in the recharge rate. In addition, three localized areas show a larger simulated head decline. The first is a large area corresponding to the intense water withdrawals for agricultural

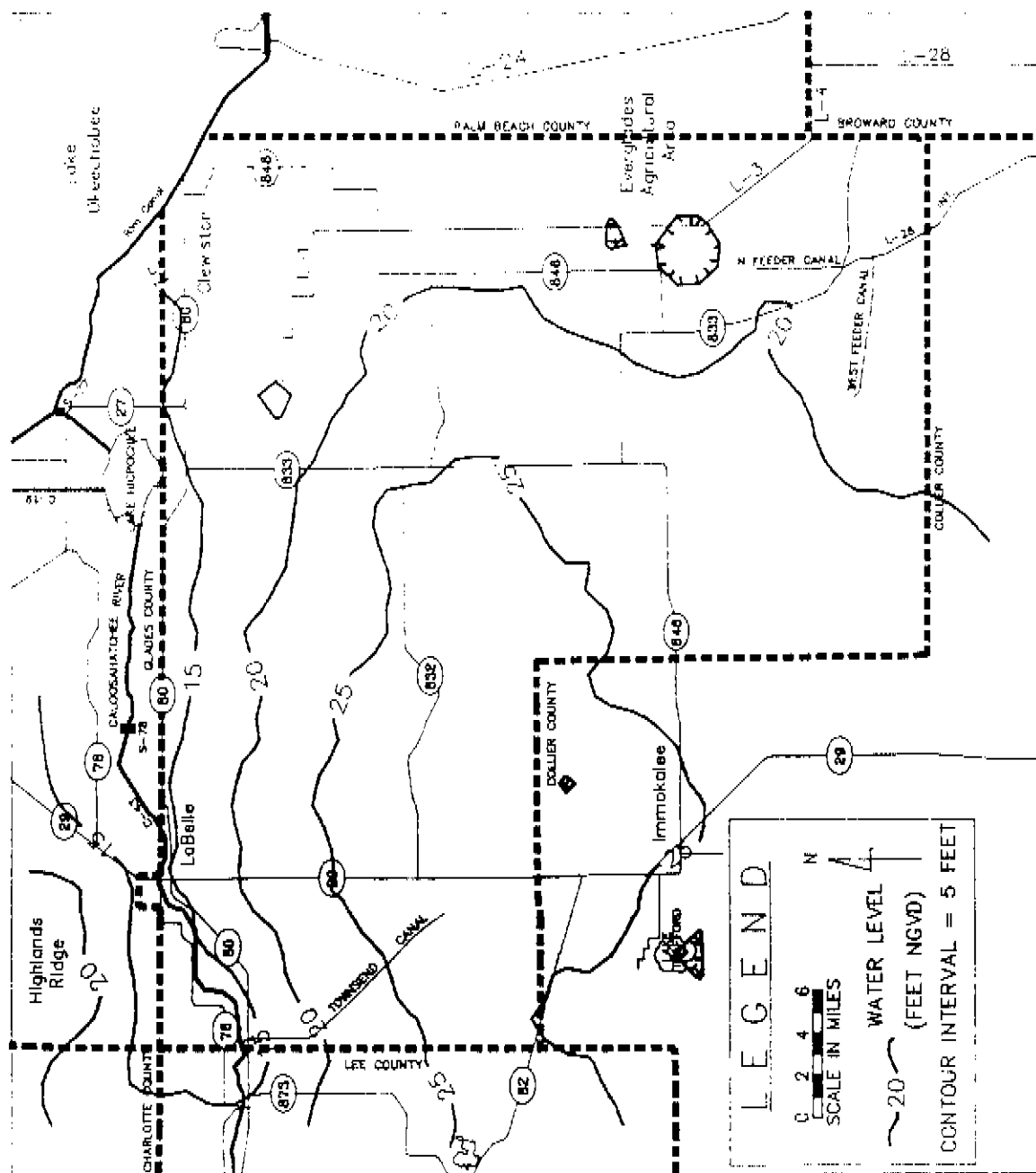


Figure 35. STEADY STATE WATER LEVELS, LAYER 1 (WATER TABLE AQUIFER)

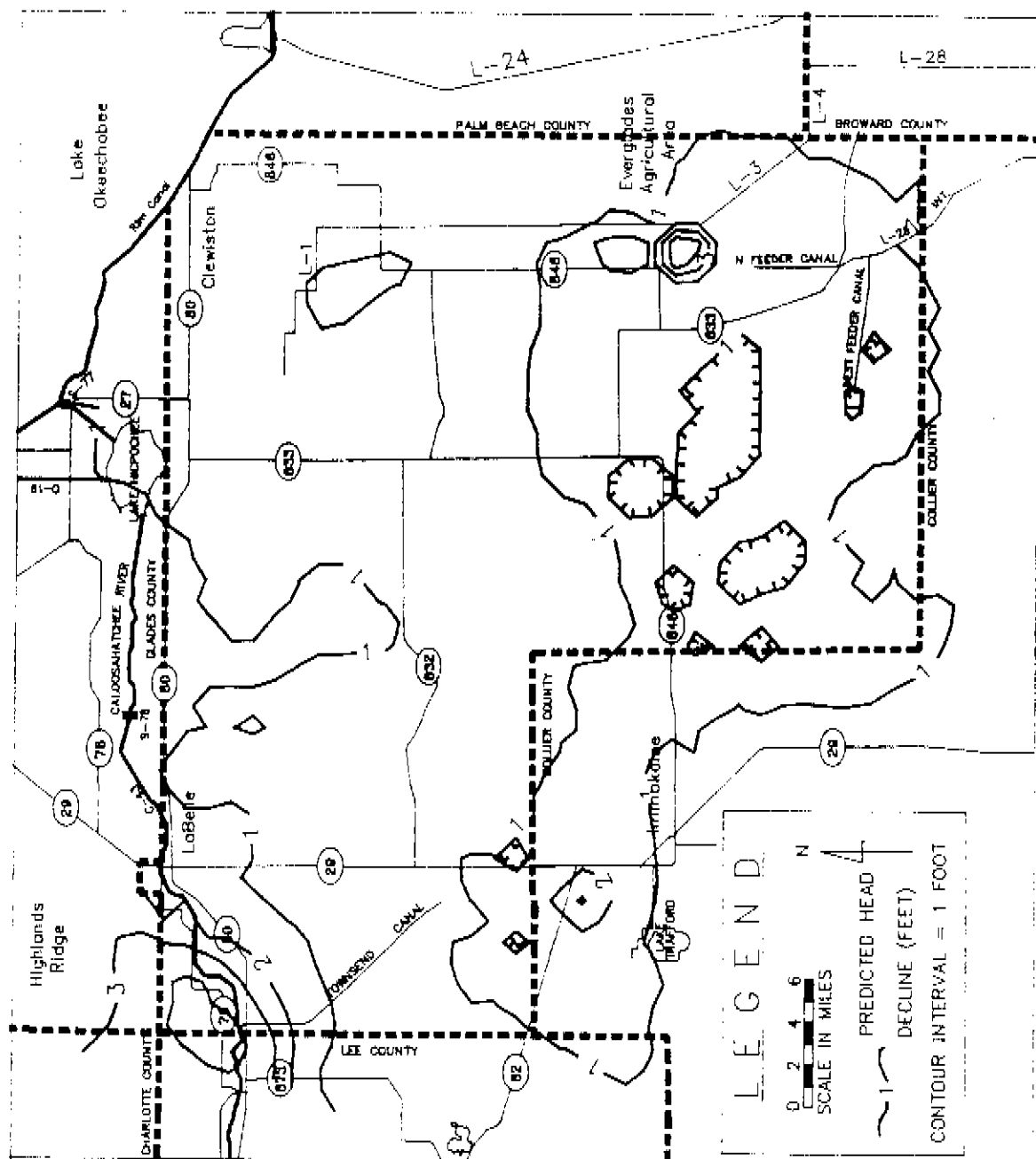


Figure 36. PREDICTED WATER LEVEL DECLINE, LAYER 1 (WATER TABLE AQUIFER), STEADY STATE CONDITIONS

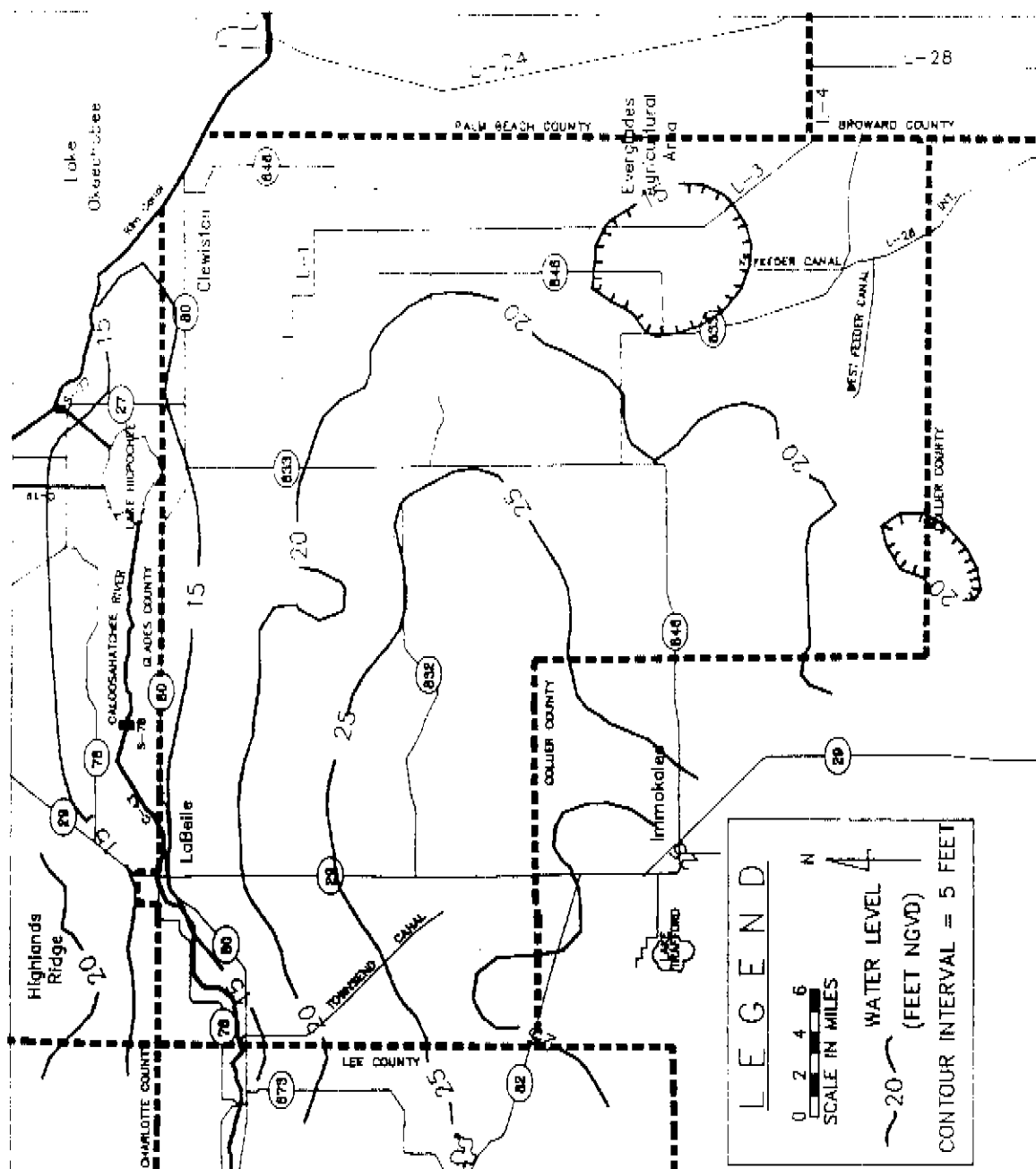


Figure 37. STEADY STATE WATER LEVELS, LAYER 2 (LOWER TAMIAMI AQUIFER)

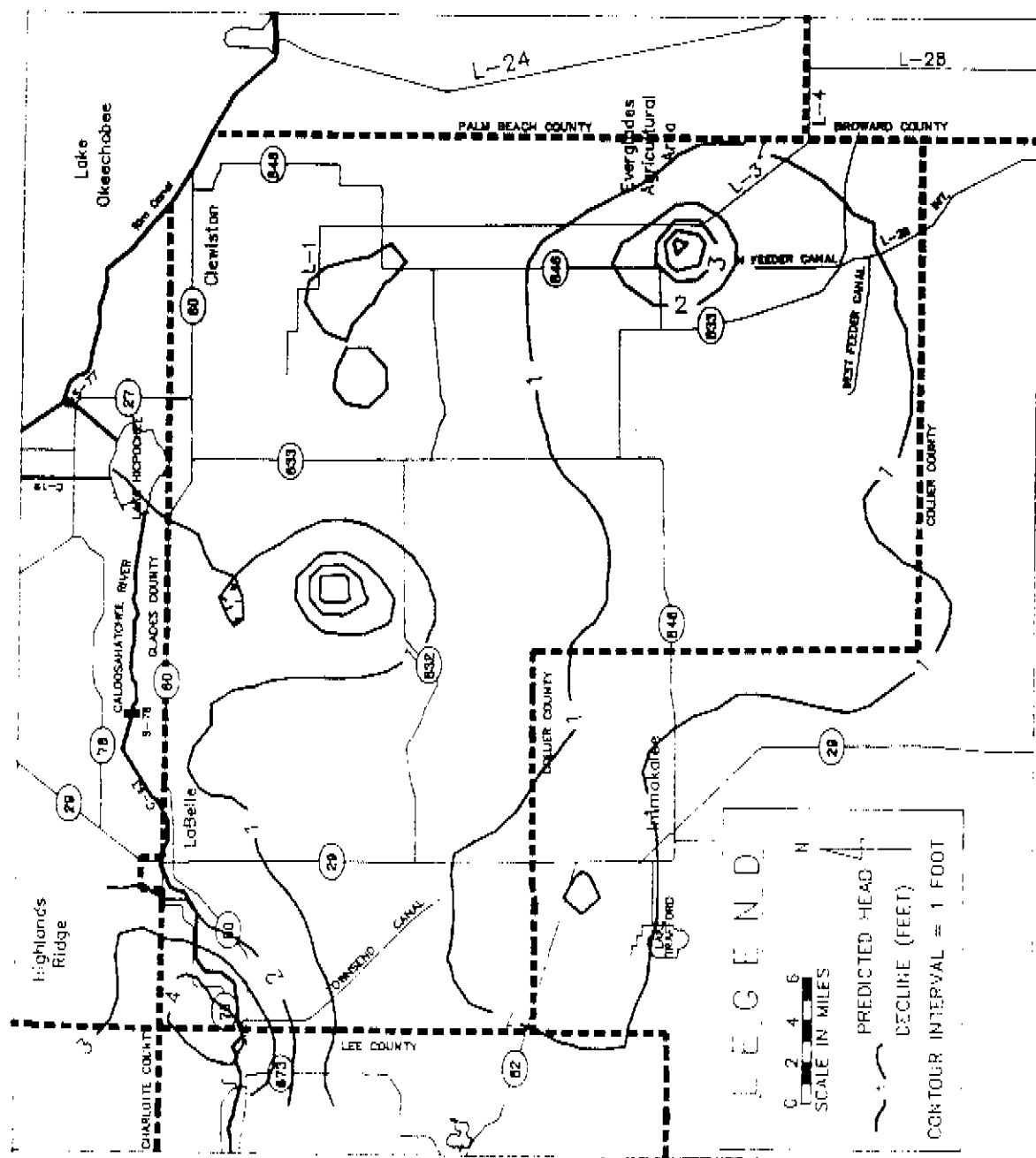


Figure 38. PREDICED WATER LEVEL DECLINE, LAYER 2 (LOWER TAMIAMI AQUIFER), STEADY STATE CONDITIONS

irrigation in southeast Hendry County. Expected head declines are in excess of four feet. The second area is in central Hendry County, and is a result of a proposed large scale agricultural operation. The third area is west of LaBelle and is a result of increased withdrawals in the underlying sandstone aquifer causing an increase in the amount of leakage from the water table and lower Tamiami aquifers into the sandstone aquifer. All of these simulated head declines may be reaching levels where they will affect adjacent users, particularly those with wells equipped with centrifugal pumps.

Layer 3 (Sandstone Aquifer)

Figure 39 shows the simulated head distribution within layer 3 (sandstone aquifer) for average conditions. Figure 40 shows the predicted decline in simulated head expected in a 2-in-10 year drought. As expected, cones of depression around intense water uses deepen, some in excess of 10 feet. In addition, predicted head declines greater than one foot cover more than 75% of the sandstone aquifer within the modeled area. The predicted declines are significant because they are at levels which are beginning to affect the overlying aquifers by inducing greater amounts of leakage, and thereby affecting heads in the overlying aquifers. Layer 3 (sandstone aquifer) shows greater impacts to well withdrawals than the shallower aquifers because it exhibits lower values of transmissivity and storage, and because well withdrawals account for almost 80% of the flow out of the sandstone aquifer.

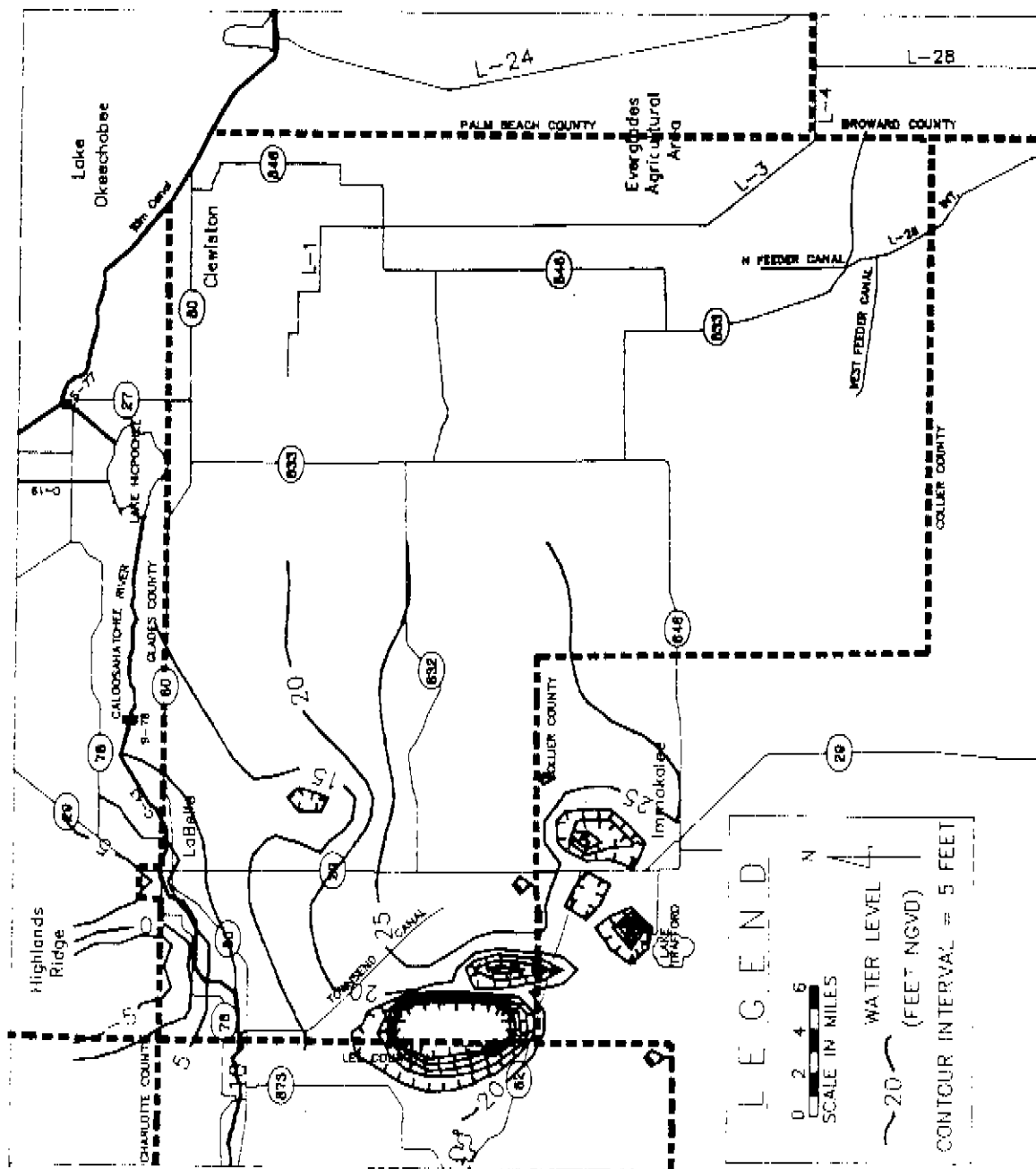


Figure 39. STEADY STATE WATER LEVELS, LAYER 3 (SANDSTONE AQUIFER)

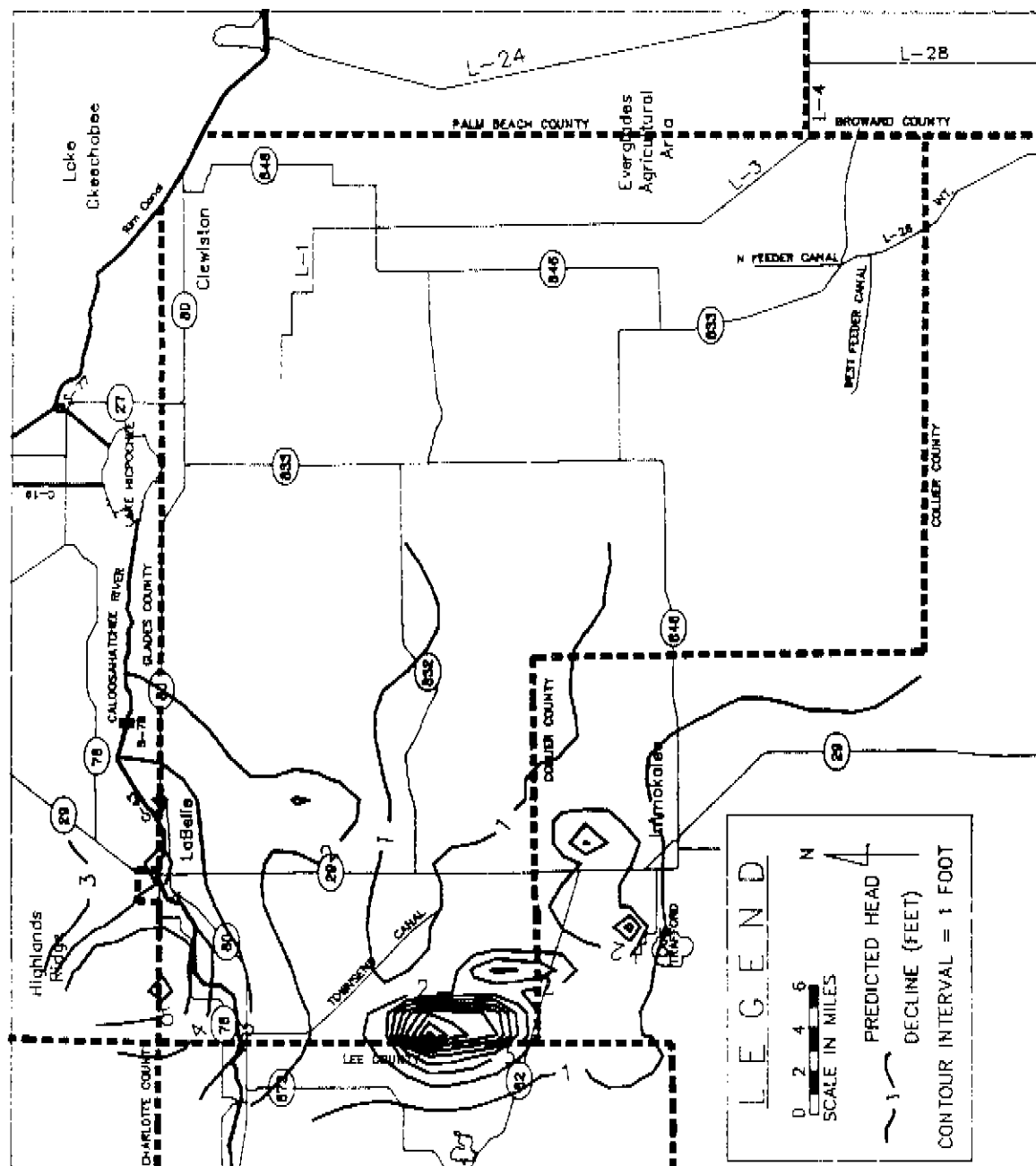


Figure 40. PREDICTED WATER LEVEL DECLINE, LAYER 3 (SANDSTONE AQUIFER), STEADY STATE CONDITIONS

RESULTS AND CONCLUSIONS

1. The most important source of recharge to the Surficial Aquifer System and Intermediate Aquifer System in Hendry County is rainfall. Under average conditions for the three year period 1986 through 1988, approximately 96% of the recharge in the study area was provided by rainfall. The remaining 4% came from ground water flow into the modeled area, primarily from Glades and Collier Counties.
2. Evapotranspiration accounts for the majority of outflow from the modeled area (approximately 87%). The remaining outflow is comprised of well withdrawals (7%), ground water flow out of the modeled area, primarily to Lee and Collier Counties (5%), and discharge to surface water bodies (less than 1%).
3. The water table aquifer is not significantly impacted on a regional basis by water use under average conditions. However, in southeastern Hendry County a localized area of significant impact occurs as a result of well withdrawals in the underlying lower Tamiami aquifer. The increased leakage through the Tamiami confining zone caused by these withdrawals results in lower water levels in the water table aquifer.

During simulations of moderate drought conditions (2-in 10 year drought), the water table aquifer begins to show some signs of stress. Regional water level declines of one foot or more cover approximately 50% of the aquifer in the modeled area. This regional decline is caused by a decrease in recharge due to the drought. In addition, several localized areas of water level decline due to well withdrawals in the water table or underlying aquifers appear. Simulated water level decline in these areas exceeds four feet. The affected areas are in southeastern Hendry County, northwest of Immokalee, and west of LaBelle. The simulated water level declines are enough to cause significant impacts to wetlands.

4. The model suggests that the lower Tamiami aquifer is beginning to show major impacts as a result of well withdrawals during average conditions. There is a regional cone of depression caused by agricultural irrigation in southeastern Hendry County. These withdrawals are influencing simulated regional flow patterns at distances up to eleven miles. Simulated water level declines range between ten and fifteen feet. However, as a result of cell-wide averaging, drawdowns at individual wells in the area may be much larger, and may be approaching the top of the aquifer. Other areas showing similar impacts, but on a smaller scale, are located near the north end of the L-1 canal, north-central Hendry County, the extreme southern portion of Hendry County, and along highway 82 near the Hendry County - Collier County - Lee County border. The lower Tamiami aquifer is also impacted by well withdrawals in the underlying sandstone aquifer in the area where Hendry, Lee, and Collier Counties meet.

During simulations of moderate drought conditions (2-in 10 year drought), the lower Tamiami aquifer shows signs of increasing stress. Regional water level declines of one foot or more cover approximately 50% of the aquifer in the modeled area. As with the water table aquifer, the regional decline is caused by a decrease in recharge due to the drought. In addition, several localized areas of water level decline (in excess of four feet due to well withdrawals from the lower Tamiami or underlying aquifers) appear throughout the county. For example,

the area in southeast Hendry County is a result of increased withdrawals for agricultural irrigation. The area in north central Hendry County is caused by a proposed agricultural operation. The area west of LaBelle is probably a result of decreased recharge and increased withdrawals on the underlying sandstone aquifer.

5. The model suggests that the sandstone aquifer is heavily impacted by current well withdrawals, which account for approximately 80% of the flow out of the aquifer within the study area during average conditions. Because of the hydraulic properties of the sandstone aquifer, cones of depression that form around pumped wells are deeper and exhibit a smaller areal extent than cones typically found in the lower Tamiami aquifer. The most significant cone of depression is located where Hendry, Lee and Collier Counties converge, where the cones from two large withdrawals are beginning to merge into one larger cone. A significant impacted area also occurs west of LaBelle, where the sandstone aquifer is characterized by very low values of transmissivity. Withdrawals from the sandstone aquifer also affecting water levels in the overlying aquifers. During simulations of moderate drought conditions (2-in 10 year drought), the sandstone aquifer shows the most stress of all the modeled aquifers. Regional water level declines of one foot or more cover more than 75% of the aquifer in the modeled area. Simulated head declines due to increased withdrawals exceed 10 feet in areas of heavy withdrawals for agricultural irrigation.

In the area west of LaBelle, domestic wells with centrifugal pumps are impacted during drought conditions. The model indicates that water levels in this area are five to ten feet below sea level during the simulated drought. Since land surface averages 20 feet above sea level, the resulting depth to water distance of 25 to 30 feet is at or beyond the lift capability of centrifugal pumps. Actual depth to water distances will vary depending on actual land surface elevations and head differences resulting from cell-wide averaging.

6. Agricultural irrigation accounts for over 99% of the ground water withdrawals in Hendry County. However, data on actual amounts withdrawn is almost nonexistent. Actual water use data would increase confidence in the calibration of the model, particularly in areas in heavy ground water use. In addition, accurate projections of future agricultural water use will be necessary for the development of a water supply plan for the area including Hendry County.
7. The model in its present configuration is not accurate in assessing impacts on a small scale, due to the regional nature of the model grid. As a result, small scale impacts on adjacent users or small wetland areas may be overlooked due to cell-wide averaging. Improved grid resolution is needed to better assess these small scale impacts. Specific areas of concern include southeast Hendry County (in and around the regional cone of depression), west of LaBelle (Ft. Denaud and Muse areas), and the area where Hendry, Lee, and Collier Counties meet.
8. The model was difficult to calibrate within the specified constraints in several localized areas. Probable reasons are cell-wide averaging or uncertainty in aquifer parameters or stress rates. Future revisions to the model should be concentrated in these areas to improve the confidence level of the model.

RECOMMENDATIONS

1. Strict management of the sandstone aquifer in Hendry County is needed in light of the projected declines in water levels. Minimum water levels should be established for the sandstone aquifer, and all permitted withdrawals should be managed in order to maintain these levels. Increased monitoring of water levels and water withdrawals are needed to ensure that the minimum levels are maintained. This can be accomplished through the regulatory process. Setting of minimum levels should be included in the development of the water supply plan for this area.
2. The lower Tamiami aquifer in southeastern Hendry County is also significantly impacted by existing withdrawals. Minimum water levels should be established for the lower Tamiami aquifer in this area. Permitted withdrawals should be managed in order to maintain these levels. Increased monitoring of water levels, both in the lower Tamiami and water table aquifers, is needed to ensure that the minimum levels are maintained. Withdrawals should also be monitored. This can be accomplished through the regulatory process. Setting of minimum levels should be included in the development of the water supply plan for this area.
3. The model should be used in the evaluation of water use permits, and in regional planning projects. Where a finer scale site specific model is required, the regional model could be used to provide the boundary conditions. The model should continue to be refined and updated whenever additional data becomes available. In doing this, emphasis should be placed on the parameters to which the model is most sensitive, including vertical conductance of the confining zone and evapotranspiration. Specific areas of concern are southeast Hendry County, the area west of LaBelle, and the area where Hendry, Lee, and Collier Counties meet.
4. Accurate projections of agricultural ground water use in Hendry County is essential to the planning process. These projections must include acreages, crop types, and locations likely to be developed, in order to supply reasonable projections of water conditions. This should be included in the development of the water supply plan for this area.
5. More monitor wells should be constructed, particularly in the lower Tamiami and sandstone aquifers, in areas of intense withdrawal and areas of lower confidence in the calibration of the model. These wells should be added to the USGS monitor network for long term data collection. This will provide additional data for the refined calibration of updated models.
6. An interface should be developed with the Lee County model, and the Collier County model currently under development. This will result in a truly regional model that will encompass the entire flow regime for the Surficial Aquifer System and the Intermediate Aquifer System in the lower west coast planning area. The interface with the Lee County model is of particular importance since the models indicate that much of the flow into the sandstone aquifer in Lee County consists of lateral flow originating in Hendry County.

7. Interactions between ground water and surface water should be investigated. The network of small canals found in Hendry County should be examined, their effects on ground water flows quantified, and input to the model for evaluation. This could improve the calibration of the water table aquifer.

REFERENCES

- Bower, R.F., K. M. Adams, and J. I. Restrepo. 1990. A Three Dimensional Finite Difference Ground Water Flow Model of Lee County, Florida. South Florida Water Management District Technical Publication 90-1.
- Cooke, C.W., and S. Mossom. 1929. Geology of Florida. Florida Geological Survey 20th Annual Report.
- Driscoll, F. G. 1986. Groundwater and Wells. Johnson Division.
- DuBar, J. R. 1958. Neogene Stratigraphy of Southwestern Florida. Gulf Coast Association of Geological Societies Transactions, Volume VIII.
- Fetter, C. W. 1980. Applied Hydrogeology. Charles E. Merrill Company.
- Fish, J. E., C. R. Causaras, and T. H. O'Donnell. 1983. Records of Selected Wells and Lithologic Logs of Test Holes, Hendry County and Adjacent Areas, Florida. U. S. Geological Survey Open-File Report 83-134.
- James M. Montgomery Consulting Engineers, Inc. 1988. Lee County Water Resources Management Project.
- Klein, H., M. C. Schroeder, and W. F. Lichtler. 1964. Geology and Ground Water Resource of Glades and Hendry Counties, Florida. Florida Geological Survey Report of Investigations No. 37.
- Knapp, M. S., W. S. Burns, and T. S. Sharp. 1986. Preliminary Assessment of the Ground Water Resources of Western Collier County, Florida. South Florida Water Management District Technical Publication No. 86-1.
- Kuiper, L. K. 1987. Computer Program for Solving Ground Water Flow Equations by the Preconditioned Conjugate Gradient Method. U.S. Geological Survey, Water Resources Investigations Report 87-4091.
- Leach, S. D. 1980. Source, Use, and Disposition of Water in Florida, 1980. U. S. Geological Survey Water Resources Investigations 82-4090.
- Leach, S. D. 1984. Projected Public Supply and Rural (Self-Supplied) Water Use in Florida Through Year 2020. U. S. Geological Survey Map Series No. 108.
- Matson, G. G., and F. G. Clapp. 1909. A Preliminary Report on the Geology of Florida With Special Reference to the Stratigraphy. Florida Geological Survey Second Annual Report.
- Matson, G. G., and S. Sanford. 1913. Geology and Ground Waters of Florida. U. S. Geological Survey Water-Supply Paper No. 319.
- McDonald, M. G. and A. W. Harbaugh. 1988. A Modular Three-Dimensional Finite-Difference Ground Water Flow Model. Techniques of Water Resources Investigations of the United States Geological Survey, Book 6, Chapter A1.
- Missimer, T. M. 1984. The Geology of South Florida: Environments of South Florida Present and Past. Miami Geological Society.

REFERENCES (continued)

- Parker, G. G., and C. W. Cooke. 1944. Late Cenozoic Geology of Southern Florida with a Discussion of the Groundwater. Florida Geological Survey Bulletin No. 50.
- Parker, G. G., G. E. Ferguson, S. K. Love, and others. 1955. Water Resource of Southeastern Florida. U. S. Geological Survey Water Supply Paper No. 1255.
- Peck, D. M., D. H. Slater, T. M. Missimer, S. W. Wise, and T. H. O'Donnell. 1979. Stratigraphy and Paleocology of the Tamiami Formation in Lee and Hendry Counties, Florida. Gulf Coast Association of Geological Societies Transactions, Volume 29.
- Puri, H. S., and R. O. Vernon. 1964. Summary of the Geology of Florida and a Guidebook to the Classic Exposures. Florida Geological Survey Special Publication No. 5 (revised).
- Scott, T. M. 1988. The Lithostratigraphy of the Hawthorn Group (Miocene) of Florida. Florida Geological Survey Bulletin No. 59.
- Shine, M. J., D. G. J. Padgett, and W. M. Barfknecht. 1989. Ground Water Resource Assessment Of Eastern Palm Beach County, Florida. South Florida Water Management District Technical Publication No. 88-4.
- Slater, D. H. 1978. The Stratigraphy and Paleocology of the Tamiami Formation in Hendry County, Florida. Unpublished Master's Thesis, Florida State University, Department of Geology.
- Smith, K. R., and K. M. Adams. 1988. Ground Water Resource Assessment of Hendry County, Florida. South Florida Water Management District Technical Publication No. 88-12.
- Smith, K. R., T. S. Sharp, and G. Shih. 1988. Investigation of Water Use, Land Use, and the Ground Water Monitor Network in Hendry County, Florida. South Florida Water Management District Technical Memorandum.
- Southeastern Geological Society Committee on Florida Hydrostratigraphic Units Definition. 1986. Hydrogeological Units of Florida. Florida Geological Survey Special Publication No. 28.
- South Florida Water Management District. 1985. Management of Water Use Permitting Information, Volume III.
- United States Department of Agriculture, Soil Conservation Service. 1970. Irrigation Water Requirements. Technical Release No. 21.
- Viessman, W., J. W. Knapp, G. L. Lewis, and T. E. Harbaugh, 1977. Introduction to Hydrology. A Dun-Donnelley Publisher, New York.
- Wedderburn, L. A., M. S. Knapp, D. P. Waltz, and W. S. Burns. 1982. Hydrogeologic Reconnaissance of Lee County, Florida. South Florida Water Management District Technical Publication No. 82-1.

APPENDIX A
AQUIFER PARAMETERS

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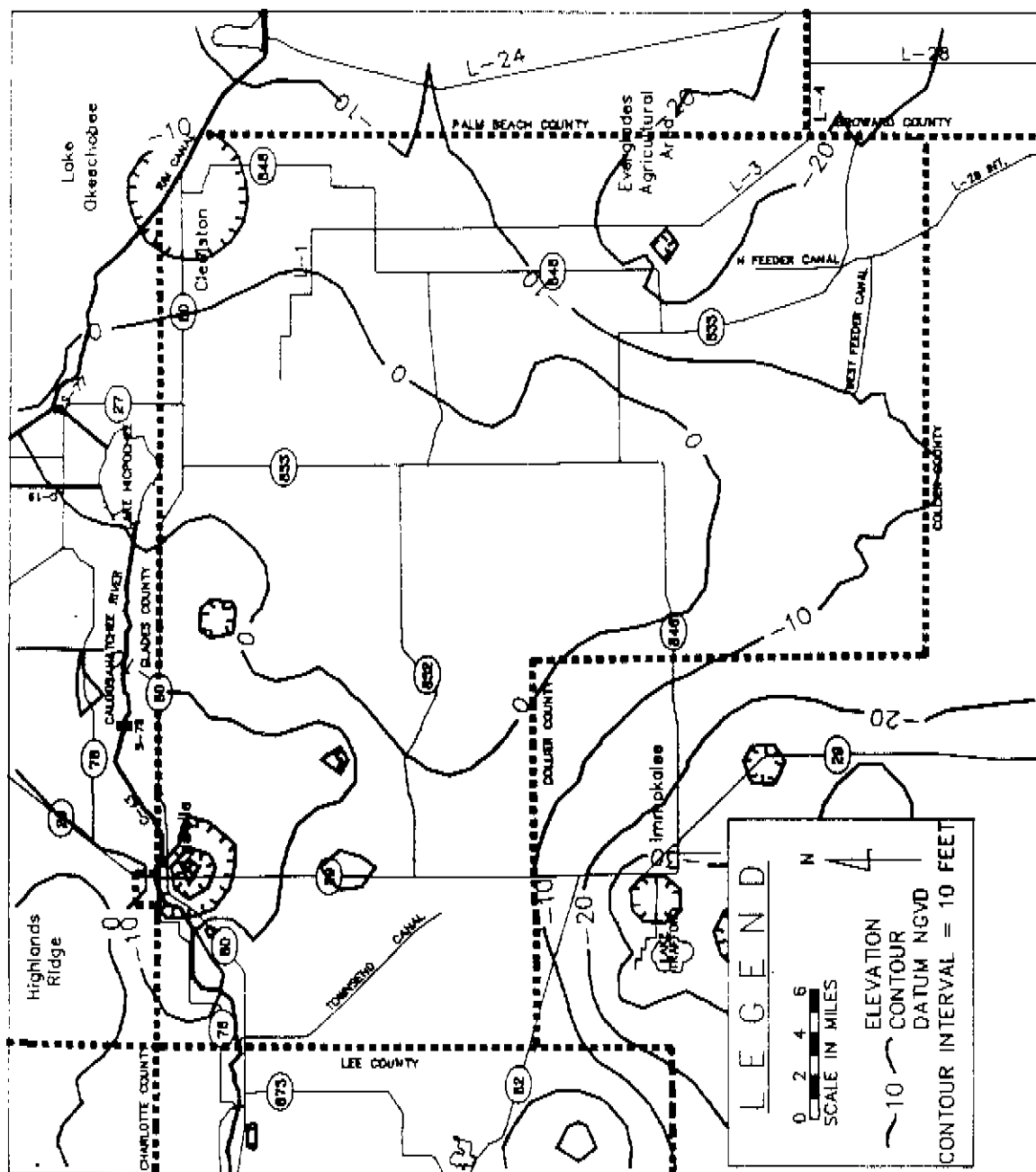


Figure A-1. BOTTOM OF LAYER 1 (WATER TABLE AQUIFER)

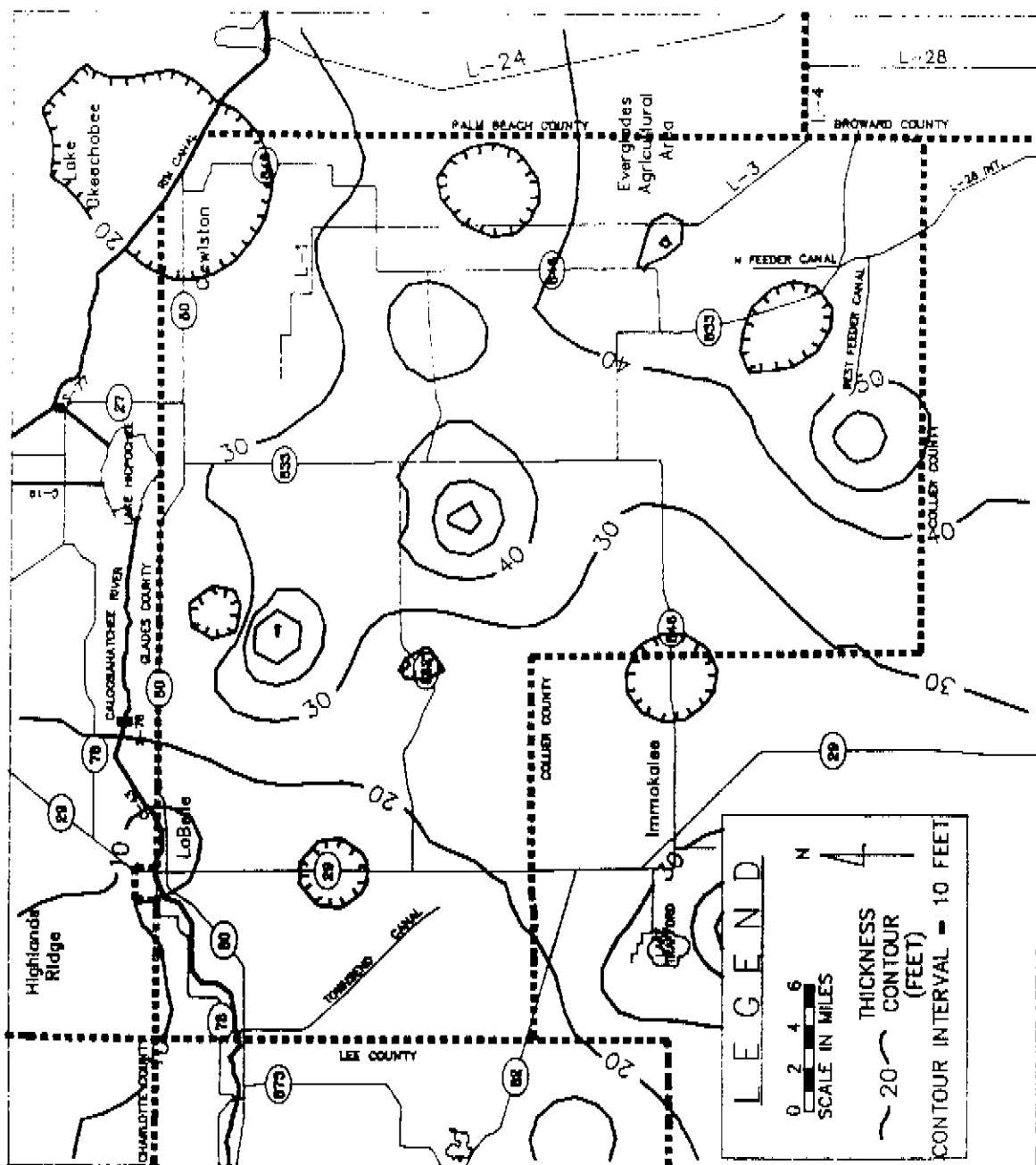
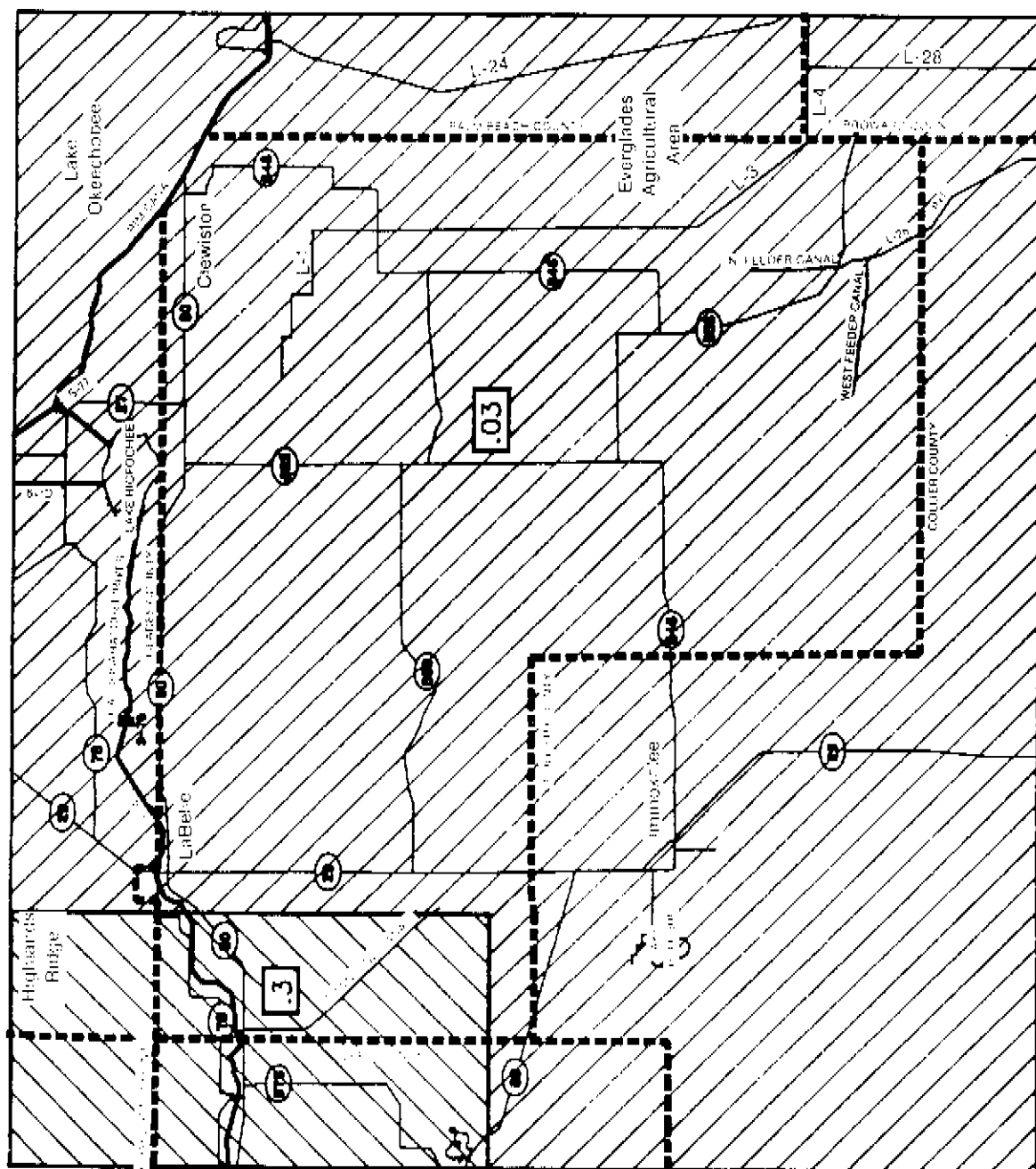


Figure A-3. THICKNESS OF THE TAMIAMI CONFINING ZONE



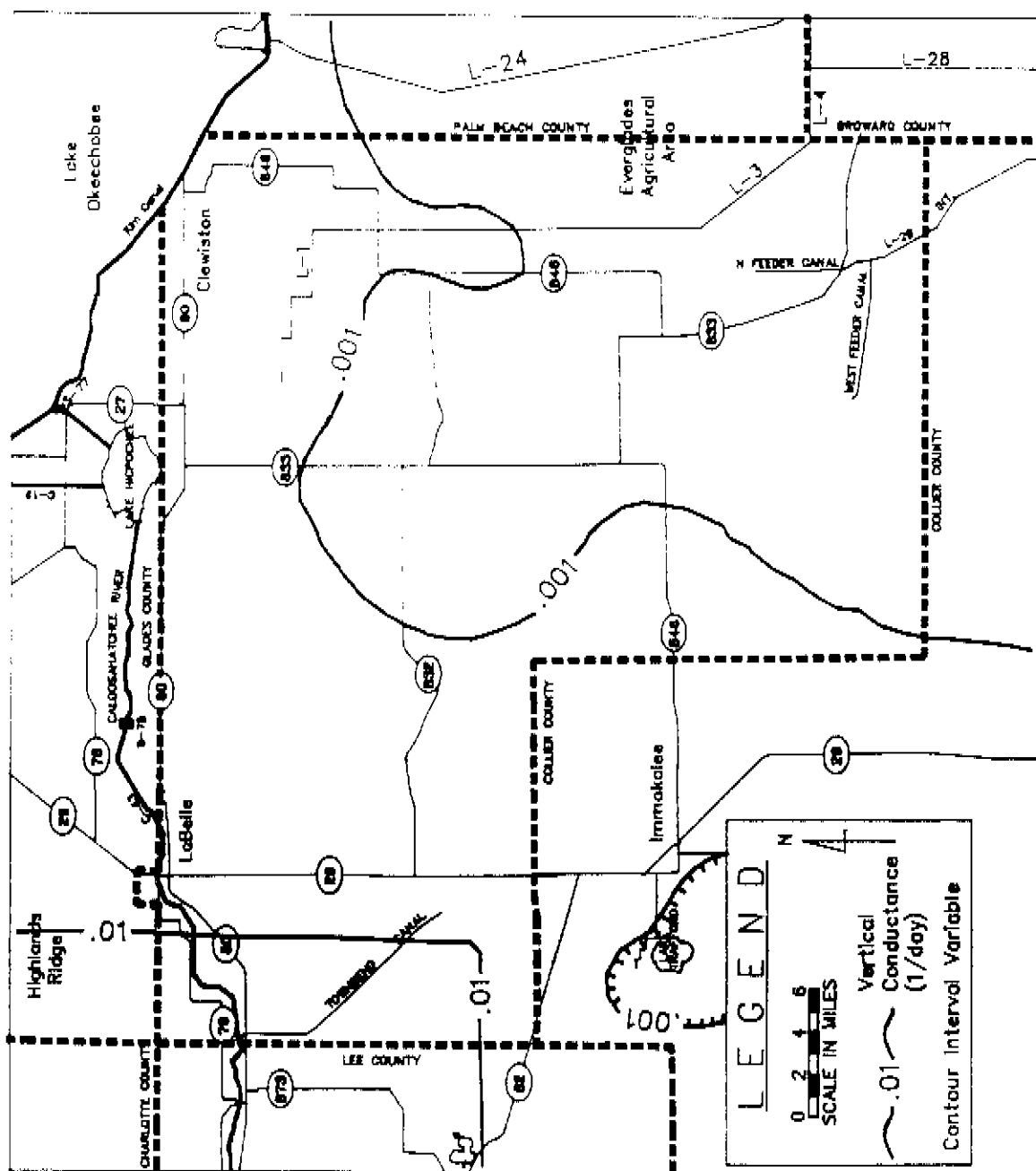


Figure A-5. Vcont, BOTTOM OF LAYER 1

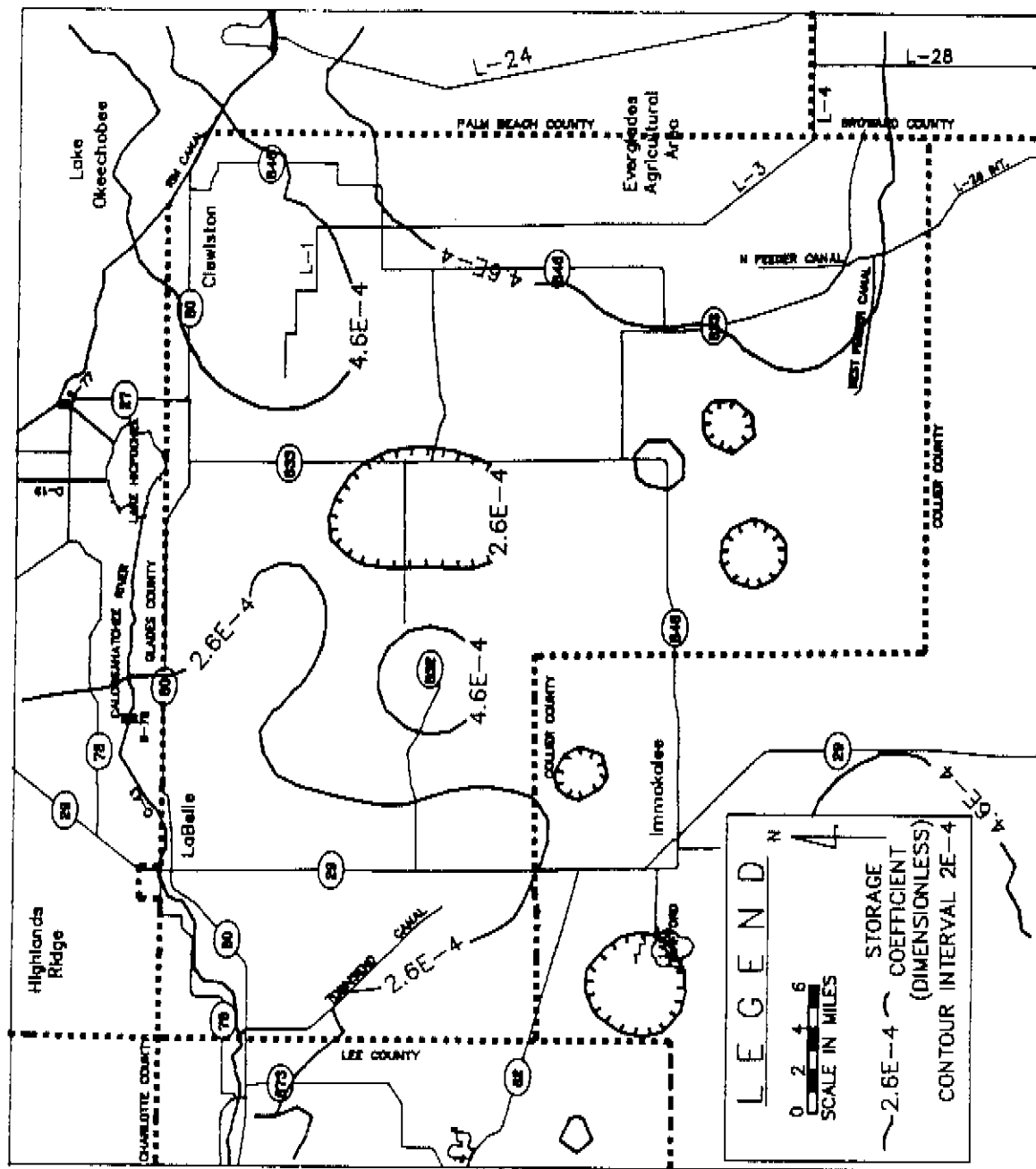


Figure A-6. STORAGE COEFFICIENT, LAYER 2 (LOWER TAMIAMI AQUIFER)

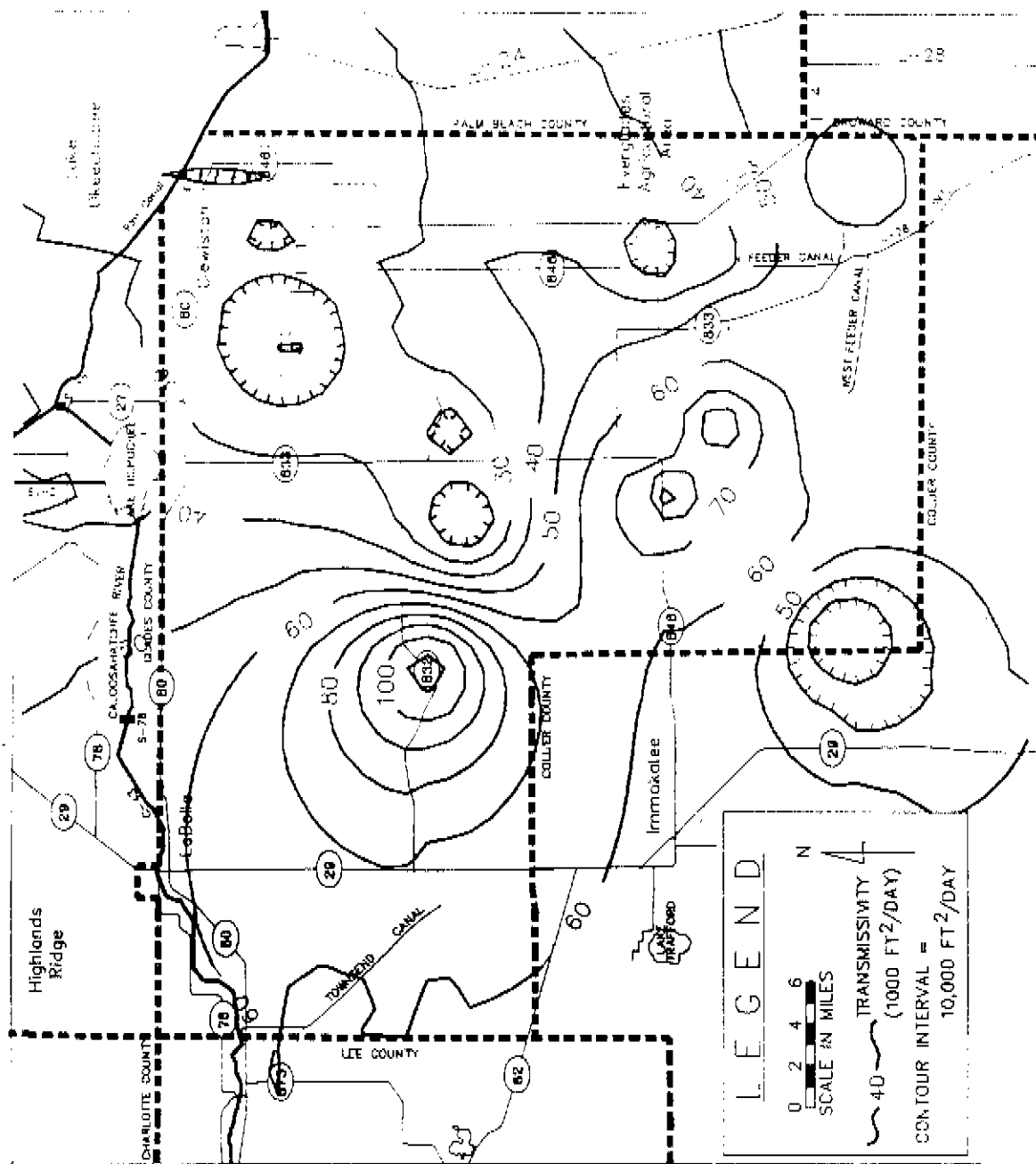


Figure A-7. TRANSMISSIVITY, LAYER 2 (LOWER TAMIAMI AQUIFER)

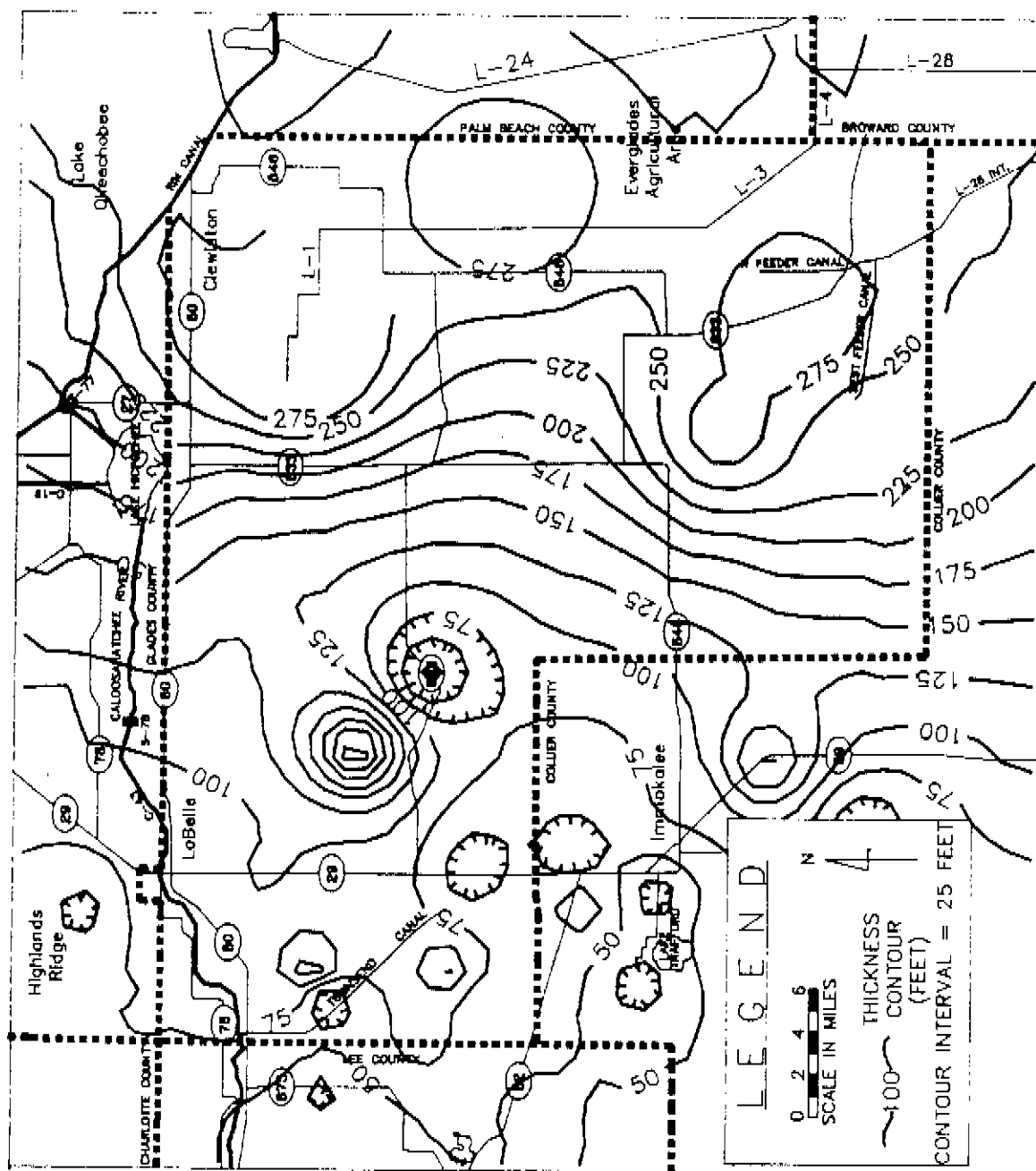


Figure A-8. THICKNESS OF THE UPPER HAWTHORN CONFINING ZONE

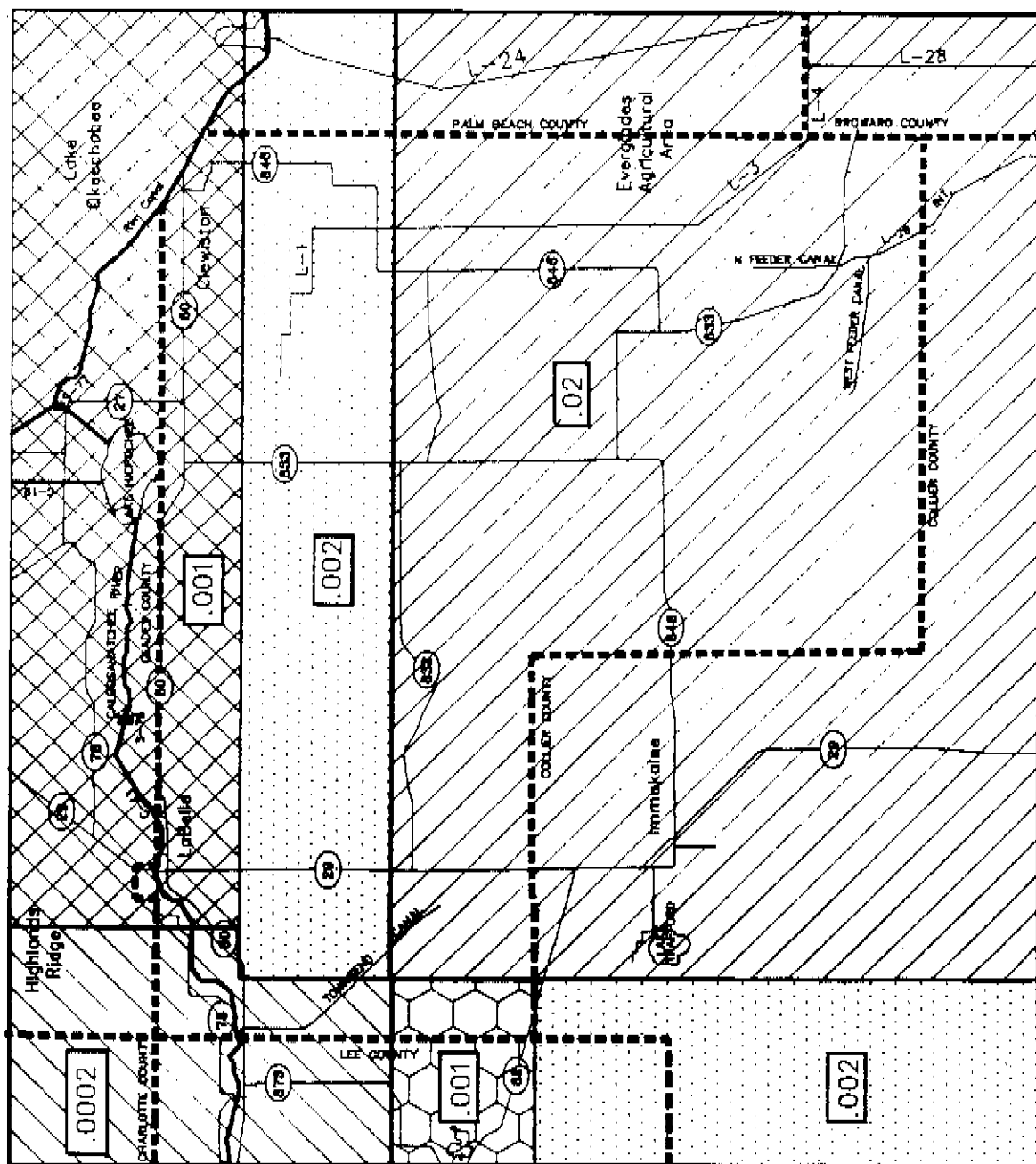


Figure A-9. VERTICAL HYDRAULIC CONDUCTIVITY OF THE UPPER HAWTHORN CONFINING ZONE

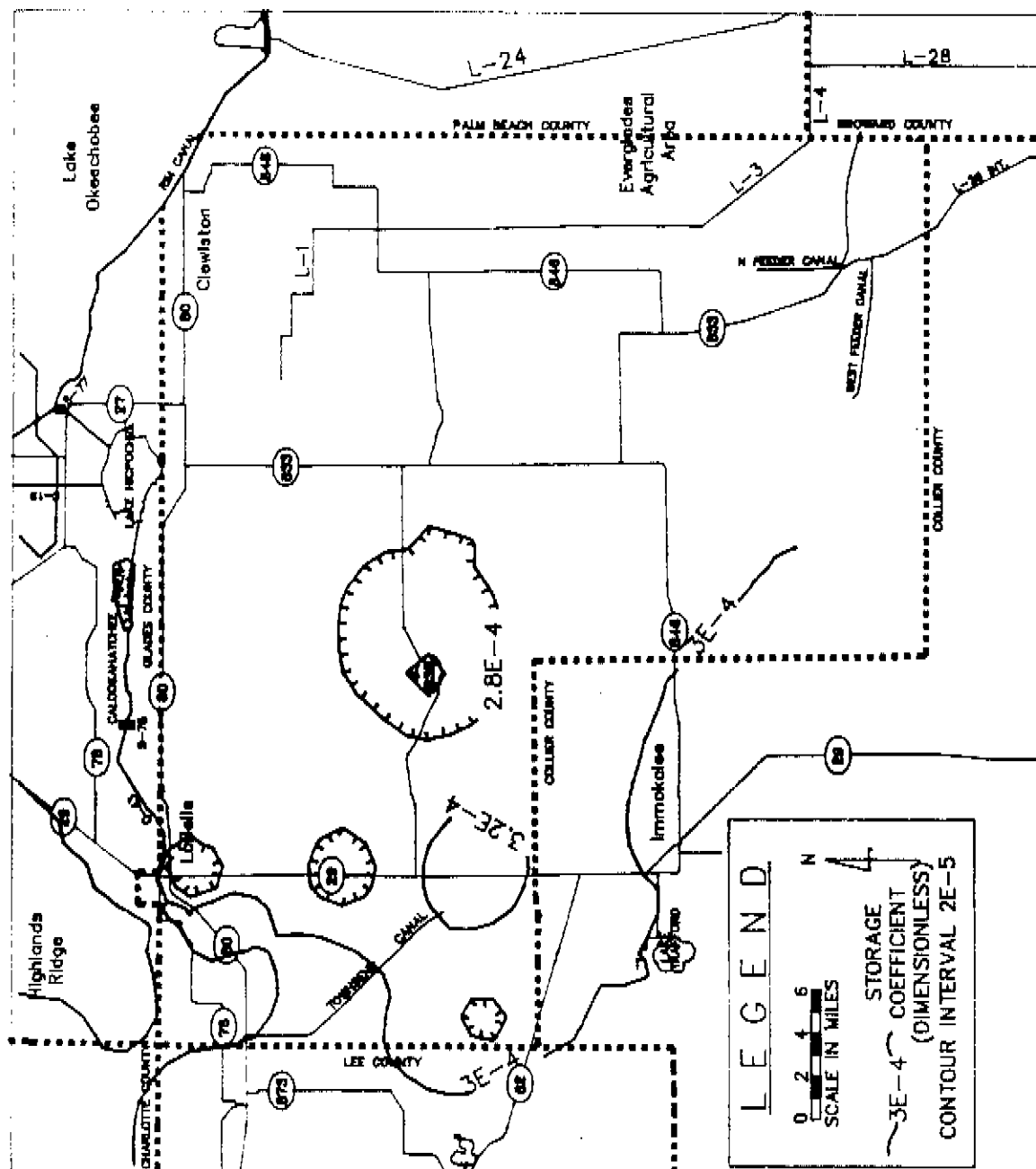


Figure A-11. STORAGE COEFFICIENT, LAYER 3 (SANDSTONE AQUIFER)

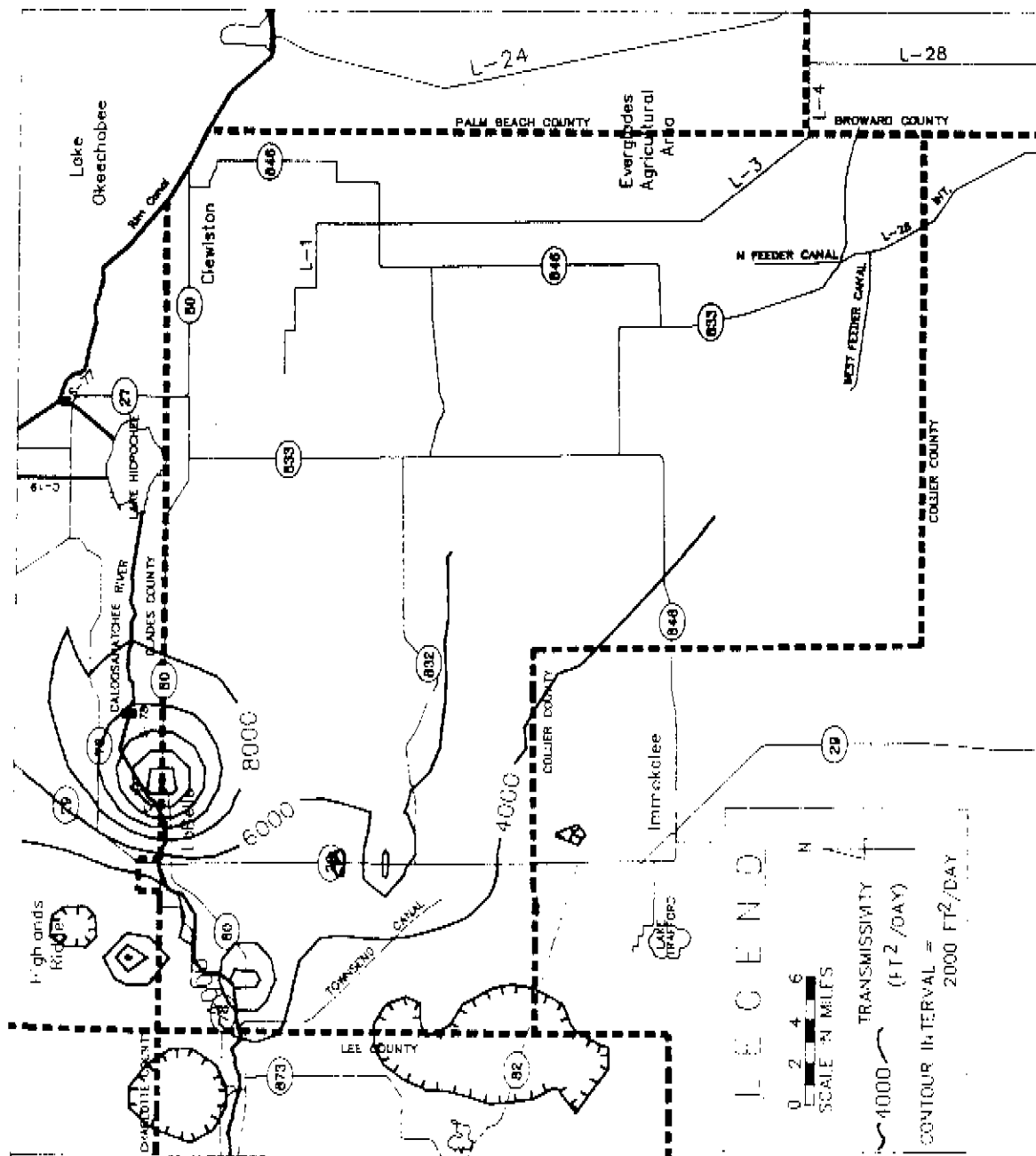


Figure A-12. TRANSMISSIVITY, LAYER 3 (SANDSTONE AQUIFER)

APPENDIX B
RIVER PACKAGE INPUT DATA

RIVER PACKAGE DATA

<u>Layer</u>	<u>Row</u>	<u>Column</u>	<u>Average Stage*</u>	<u>River Bed Conductance**</u>	<u>River Bottom Elevation (ft. NGVD)</u>
1	13	38	12.83	175.83	0
1	13	39	12.83	175.83	0
1	13	40	12.83	263.74	0
1	13	41	12.83	175.83	0
1	14	42	12.83	351.65	0
1	14	43	12.83	234.43	0
1	14	44	12.83	410.26	0
1	15	45	12.71	410.26	0
1	16	45	12.71	410.26	0
1	17	45	12.71	410.26	0
1	18	45	12.71	410.26	0
1	19	45	12.71	410.26	0
1	20	45	12.71	410.26	0
1	21	45	12.71	410.26	0
1	22	45	12.71	410.26	0
1	23	45	12.71	410.26	0
1	24	45	12.71	410.26	0
1	25	45	12.71	410.26	0
1	26	45	12.71	410.26	0
1	27	45	12.71	410.26	0
1	28	45	12.71	410.26	0
1	29	45	12.71	410.26	0
1	30	45	12.71	410.26	0
1	31	45	12.71	410.26	0
1	32	45	12.71	410.26	0
1	33	45	12.71	470.64	0
1	33	46	12.71	93.24	0
1	34	46	12.71	609.17	0
1	35	46	12.71	93.24	0
1	35	47	12.71	515.93	0
1	36	47	12.71	234.43	0
1	36	48	12.71	375.18	0
1	37	48	12.71	375.18	0
1	37	49	12.71	187.37	0
1	38	49	11.19	308.02	0
1	38	50	11.19	439.56	0
1	38	51	11.19	439.56	0
1	38	52	11.19	439.56	0

* Average monthly stage (1986-1988) used in steady state runs. Actual monthly values were use in transient runs.

** River bed conductance for each cell is calculated as the product of the average wetted perimeter of the river, the length of the river reach in a cell, and the hydraulic conductivity of the river bed; divided by the thickness of the river bed.

RIVER PACKAGE DATA

<u>Layer</u>	<u>Row</u>	<u>Column</u>	<u>Average Stage*</u>	<u>River Bed Conductance**</u>	<u>River Bottom Elevation (ft. NGVD)</u>
1	38	53	11.19	439.56	0
1	38	54	11.19	439.56	0
1	13	53	10.96	709.40	0
1	14	53	10.96	709.40	0
1	15	52	10.96	451.77	0
1	16	52	10.96	644.69	0
1	17	52	10.96	644.69	0
1	18	52	10.96	644.69	0
1	19	51	10.96	644.69	0
1	20	51	10.96	644.69	0
1	21	51	10.96	644.69	0
1	22	51	10.96	644.69	0
1	23	52	10.96	579.69	0
1	24	52	10.96	644.69	0
1	25	52	10.96	644.69	0
1	26	52	10.96	644.69	0
1	27	52	10.96	644.69	0
1	28	53	10.96	644.69	0
1	29	53	10.96	644.69	0
1	30	53	10.96	644.69	0
1	31	53	10.96	644.69	0
1	32	53	10.96	257.63	0
1	32	54	10.96	387.06	0
1	33	54	10.96	644.69	0
1	34	54	10.96	644.69	0
1	35	54	10.96	644.69	0
1	36	54	10.96	387.06	0
1	37	54	10.96	387.06	0
1	38	52	10.81	439.56	0
1	39	52	10.81	439.56	0
1	40	52	10.81	439.56	0
1	41	52	10.81	439.56	0
1	42	52	10.81	439.56	0
1	43	52	10.81	439.56	0
1	44	52	10.81	439.56	0
1	45	52	10.81	439.56	0
1	46	52	10.81	439.56	0
1	47	52	10.81	439.56	0

* Average monthly stage (1986-1988) used in steady state runs. Actual monthly values were use in transient runs.

** River bed conductance for each cell is calculated as the product of the average wetted perimeter of the river, the length of the river reach in a cell, and the hydraulic conductivity of the river bed; divided by the thickness of the river bed.

RIVER PACKAGE DATA

<u>Layer</u>	<u>Row</u>	<u>Column</u>	<u>Average Stage*</u>	<u>River Bed Conductance**</u>	<u>River Bottom Elevation (ft. NGVD)</u>
1	35	43	14.63	351.65	0
1	36	43	14.63	703.30	0
1	37	43	14.63	703.30	0
1	38	43	14.63	703.30	0
1	39	43	14.63	773.89	0
1	40	43	14.63	1353.87	0
1	41	43	14.63	234.21	0
1	41	44	14.63	351.87	0
1	42	44	14.63	644.91	0
1	43	44	14.63	177.60	0
1	43	45	14.63	579.98	0
1	44	45	14.63	351.19	0
1	44	46	14.63	644.91	0
1	45	46	14.63	175.38	0
1	45	47	14.63	468.98	0
1	46	47	14.63	644.91	0
1	47	47	14.63	66.60	0
1	47	48	14.63	586.08	0
1	40	37	14.63	515.87	0
1	40	38	14.63	644.69	0
1	40	39	14.63	644.69	0
1	40	40	14.63	644.69	0
1	40	41	14.63	644.69	0
1	40	42	14.63	7.33	0
1	11	2	3.22	2579.64	-10
1	11	3	3.22	2579.64	-10
1	11	4	3.22	2579.64	-10
1	11	5	3.22	2597.64	-10
1	11	6	3.22	2814.96	-10
1	11	7	3.22	2499.72	-10
1	11	8	3.22	2353.20	-10
1	11	9	3.22	1875.90	-10
1	10	9	3.22	2579.64	-10
1	9	9	3.22	710.40	-10
1	9	10	3.22	2814.96	10
1	9	11	3.22	2353.20	-10
1	9	12	3.22	2814.96	-10
1	9	13	3.22	1172.16	-10

* Average monthly stage (1986-1988) used in steady state runs. Actual monthly values were use in transient runs.

** River bed conductance for each cell is calculated as the product of the average wetted perimeter of the river, the length of the river reach in a cell, and the hydraulic conductivity of the river bed; divided by the thickness of the river bed.

RIVER PACKAGE DATA

Laver	Row	Column	Average Stage*	River Bed Conductance**	River Bottom Elevation (ft. NGVD)
1	8	13	3.22	2814.96	-10
1	8	14	3.22	936.84	-10
1	7	14	3.22	140.74	-10
1	7	15	3.22	1875.90	-10
1	8	15	3.22	710.40	-10
1	8	16	3.22	2579.64	-10
1	7	17	3.22	2353.20	-10
1	7	18	3.22	1875.90	-10
1	6	18	3.22	936.84	-10
1	6	19	3.22	2814.96	-10
1	6	20	3.22	2579.64	-10
1	6	21	3.22	2353.20	-10
1	6	22	11.21	2353.20	-5
1	6	23	11.21	2579.64	-5
1	6	24	11.21	2353.20	-5
1	6	25	11.21	2353.20	-5
1	6	26	11.21	2579.64	-5
1	6	27	11.21	2579.64	-5
1	6	28	11.21	2353.20	-5
1	6	29	11.21	2353.20	-5
1	6	30	11.21	2353.20	-5
1	6	31	11.21	2353.20	-5
1	6	32	11.21	2353.20	-5
1	6	33	11.21	2353.20	-5
1	6	34	11.21	2353.20	-5
1	5	33	11.21	2353.20	-5
1	5	34	11.21	2353.20	-5
1	5	35	11.21	2353.20	-5
1	2	33	11.21	2353.32	-5
1	3	33	11.21	2353.32	-5
1	4	33	11.21	2353.32	-5
1	5	33	11.21	2344.32	-5
1	4	35	11.21	2353.20	-5
1	4	36	11.21	444.00	-5
1	3	36	11.21	281.50	-5
1	12	7	3.63	351.65	-5
1	13	7	3.63	351.65	-4
1	14	7	3.63	470.64	-3

* Average monthly stage (1986-1988) used in steady state runs. Actual monthly values were use in transient runs.

** River bed conductance for each cell is calculated as the product of the average wetted perimeter of the river, the length of the river reach in a cell, and the hydraulic conductivity of the river bed; divided by the thickness of the river bed.

RIVER PACKAGE DATA

<u>Layer</u>	<u>Row</u>	<u>Column</u>	<u>Average Stage*</u>	<u>River Bed Conductance**</u>	<u>River Bottom Elevation (ft. NGVD)</u>
1	15	7	3.63	2353.20	-2
1	15	8	3.63	234.43	-1
1	16	8	3.63	218.50	0
1	16	9	3.63	328.56	1
1	17	9	3.63	328.56	2
1	17	10	3.63	328.56	3
1	18	10	3.63	284.16	4
1	18	11	3.63	375.18	5
1	19	11	3.63	284.16	6
1	19	12	3.63	328.56	7
1	20	12	3.63	375.18	8
1	20	13	3.63	239.76	9
1	31	10	19.96	4107.00	10
1	31	11	19.96	2.55E+06	10
1	32	10	19.96	8.14E+06	10
1	32	11	19.96	2.11E+07	10
1	32	12	19.96	2.89E+07	10
1	33	11	19.96	2.11E+07	10
1	33	12	19.96	77478.00	10

* Average monthly stage (1986-1988) used in steady state runs. Actual monthly values were use in transient runs.

** River bed conductance for each cell is calculated as the product of the average wetted perimeter of the river, the length of the river reach in a cell, and the hydraulic conductivity of the river bed; divided by the thickness of the river bed.

APPENDIX C
MAPS OF MONTHLY RAINFALL

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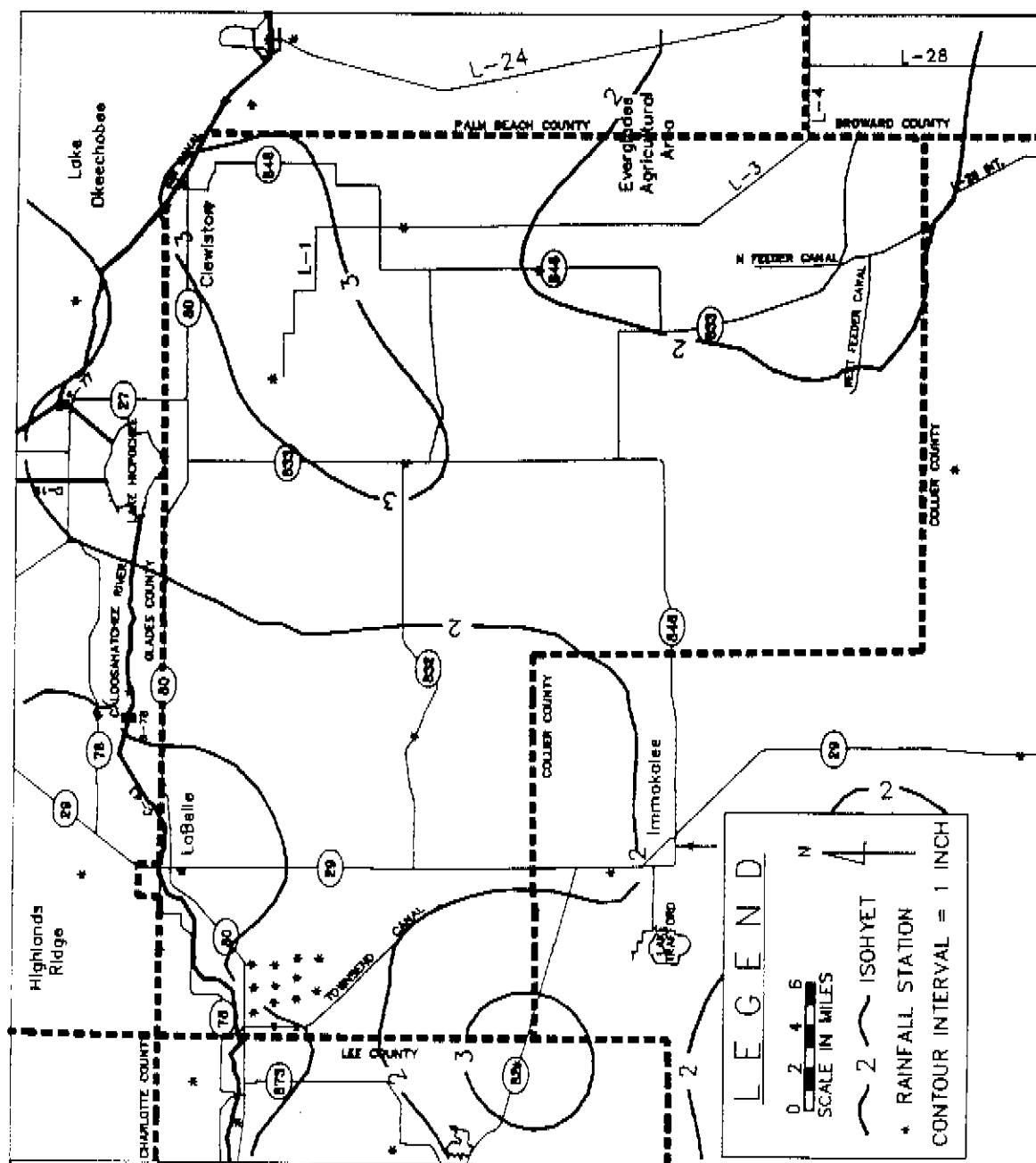


Figure C-1 RAINFALL, JANUARY 1986

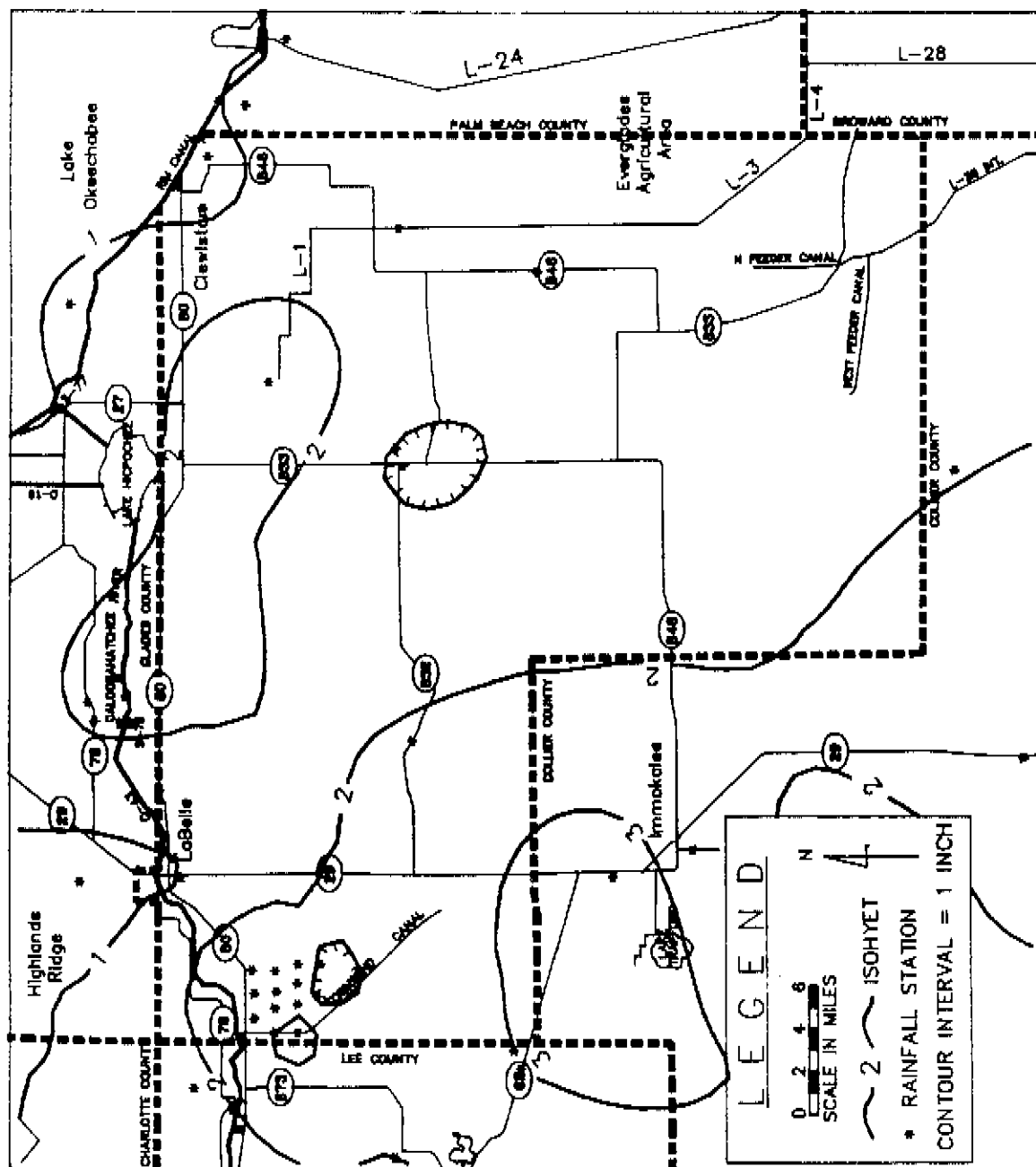


Figure C-2. RAINFALL, FEBRUARY 1986

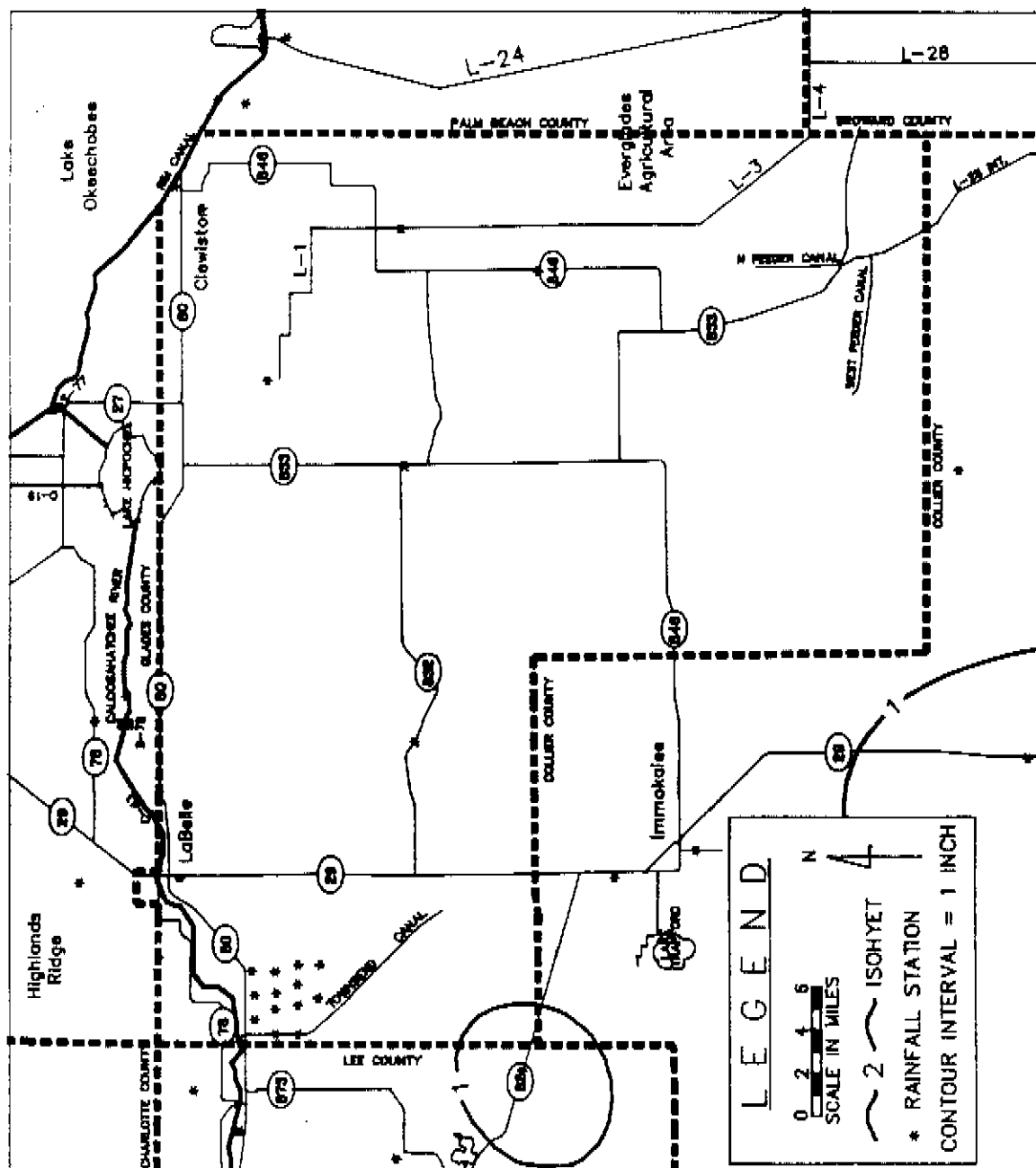


Figure C-4. RAINFALL, APRIL 1986

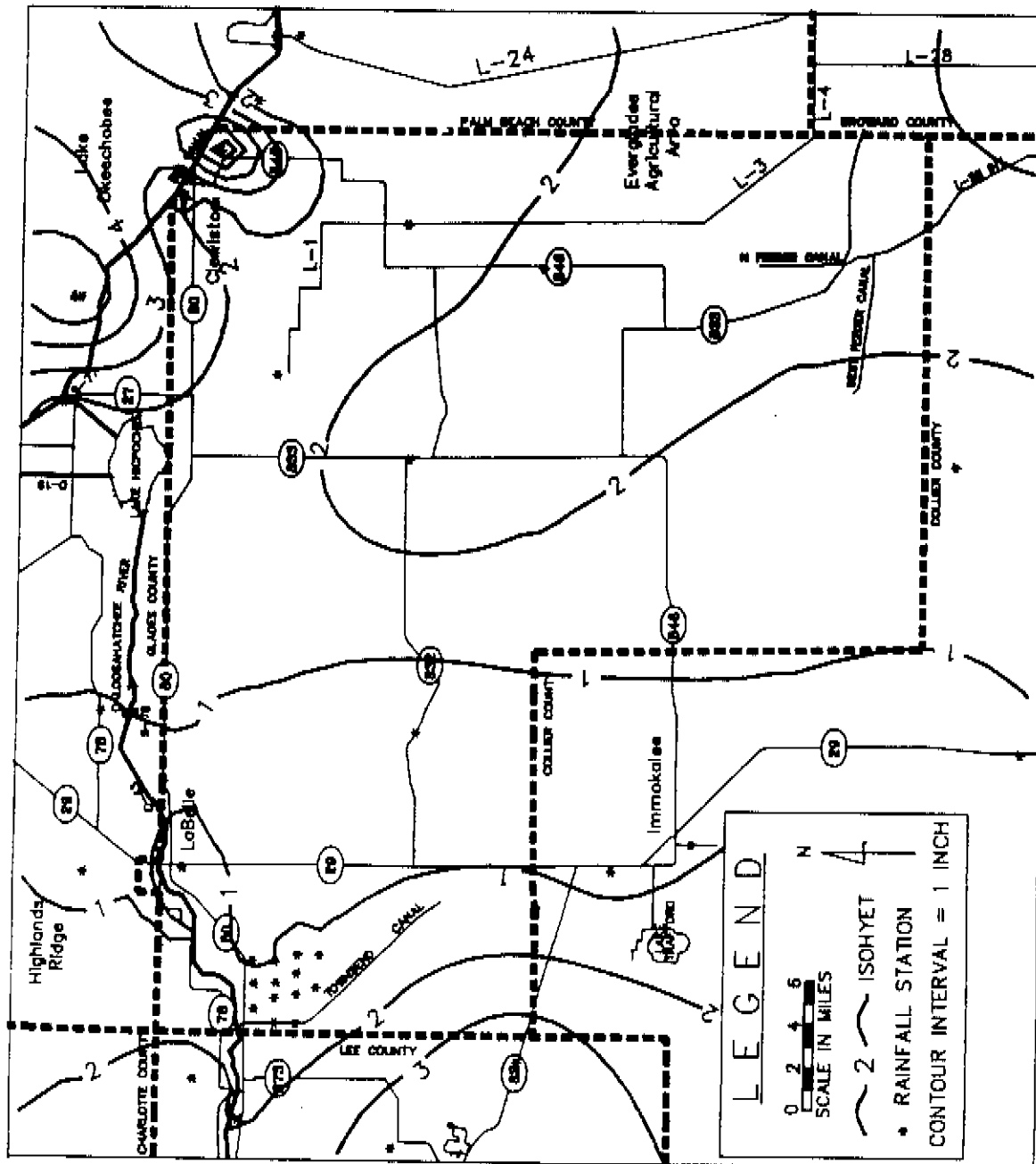


Figure C 5. RAINFALL, MAY 1986

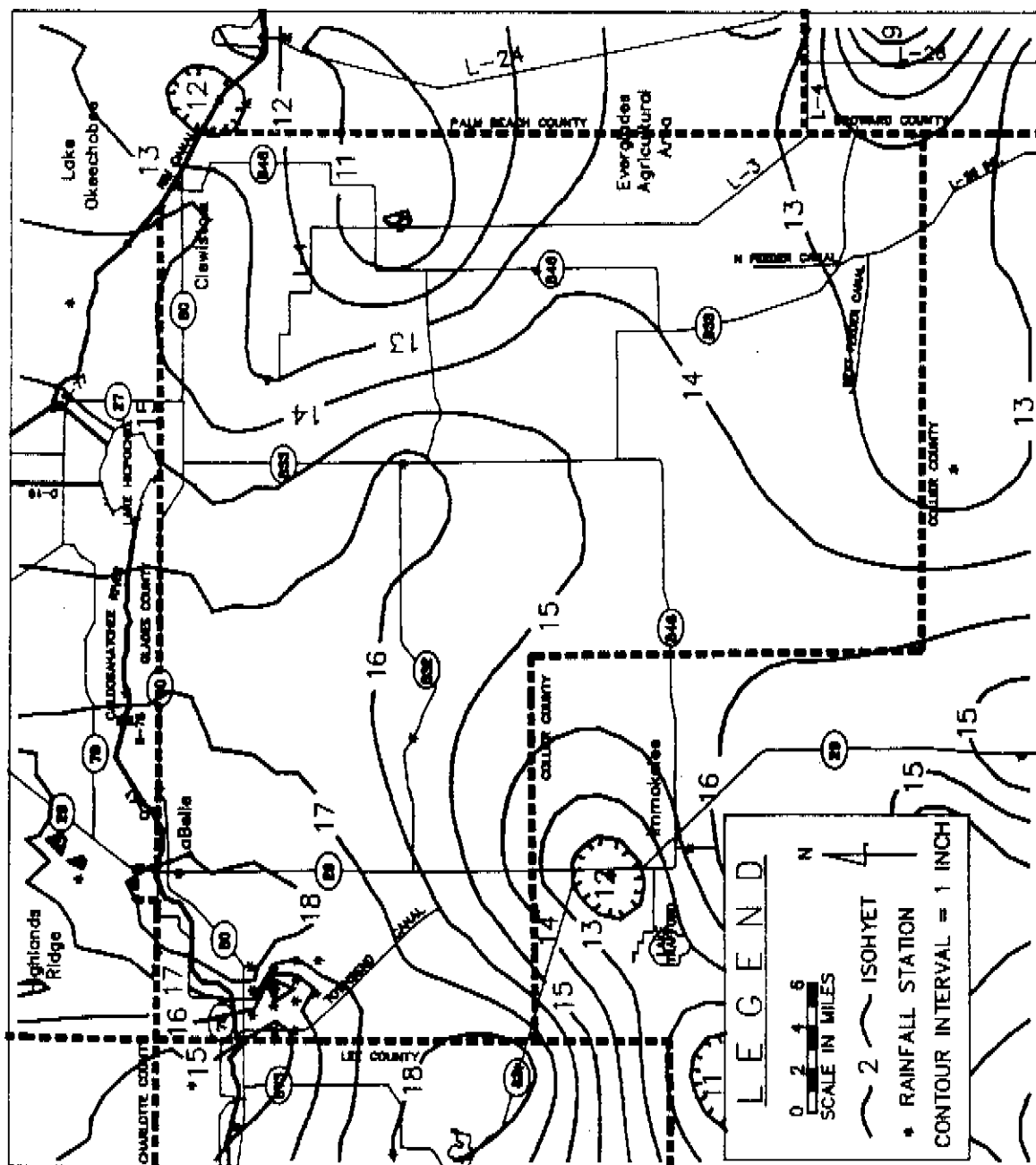


Figure C-6. RAINFALL, JUNE 1986

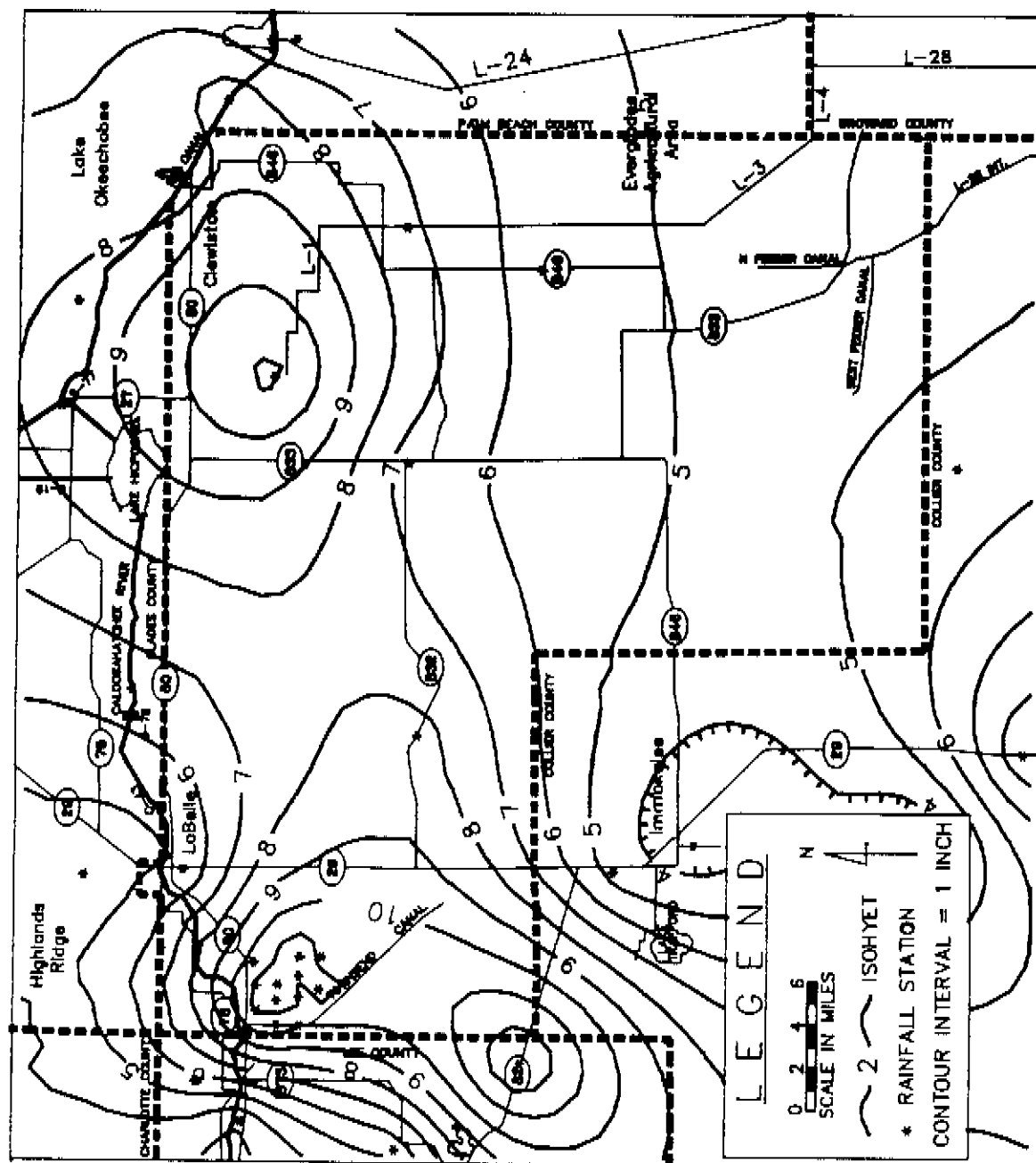


Figure C-7. RAINFALL, JULY 1986

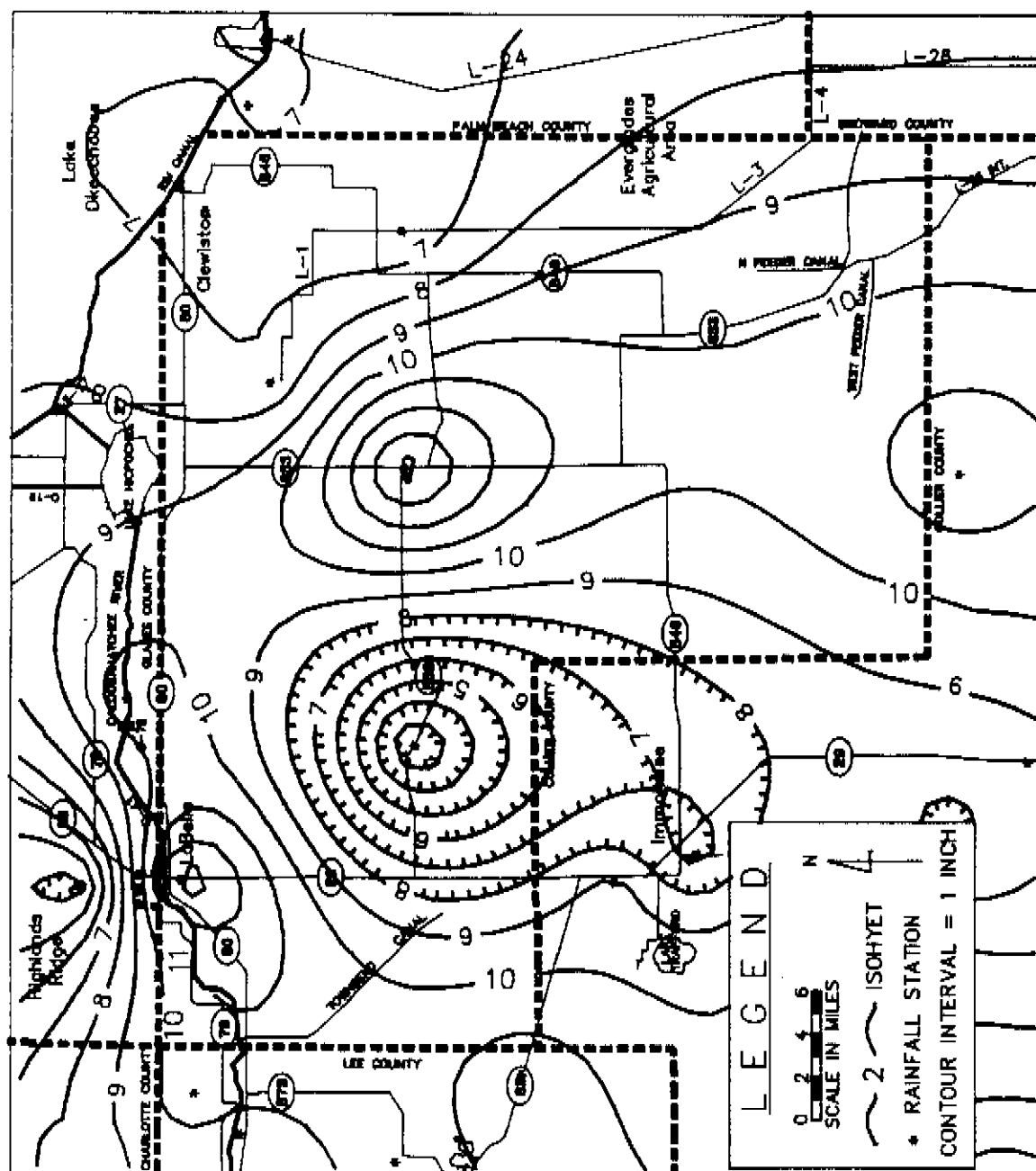


Figure C-8. RAINFALL, AUGUST 1986

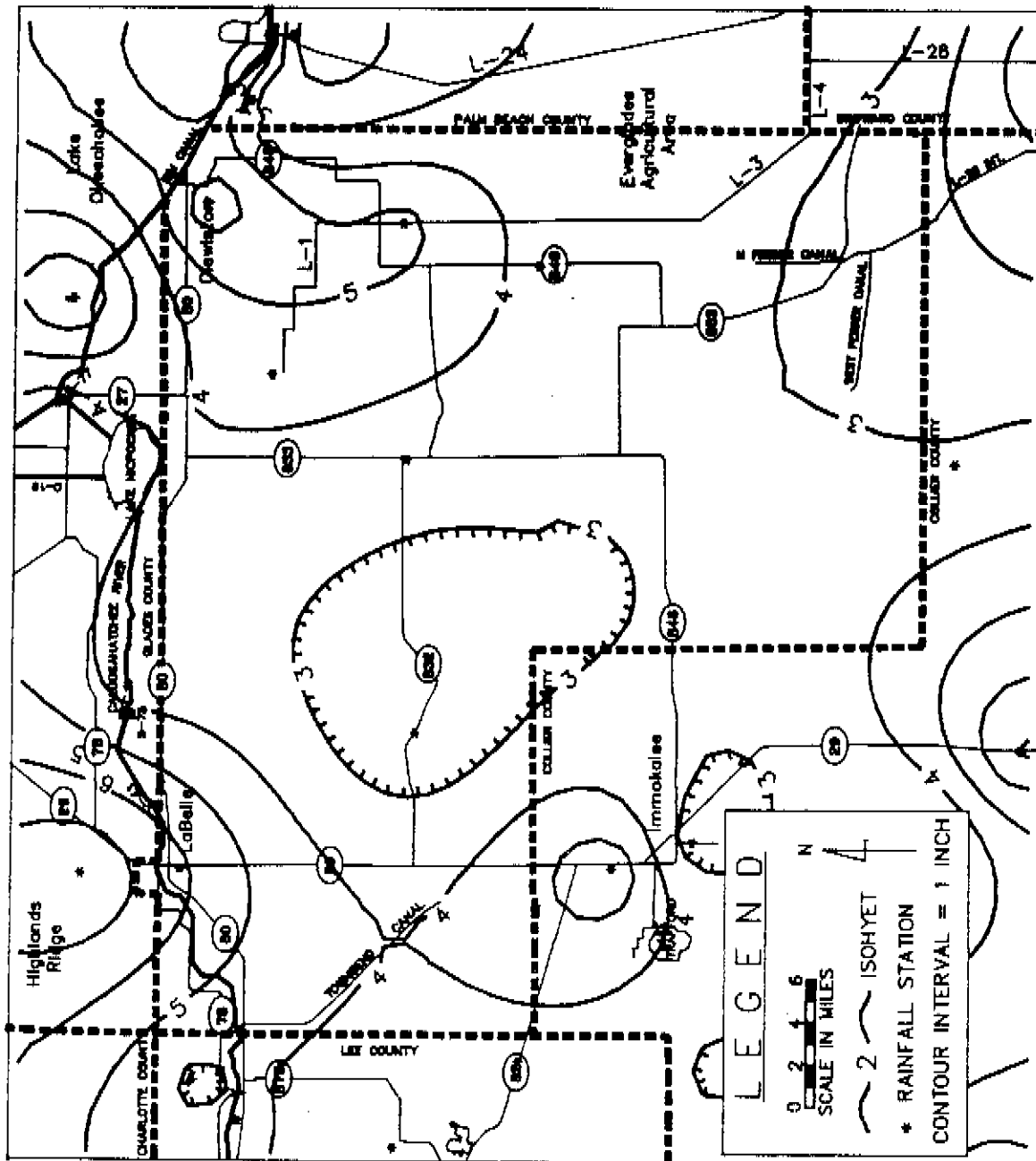


Figure C 9. RAINFALL, SEPTEMBER 1986

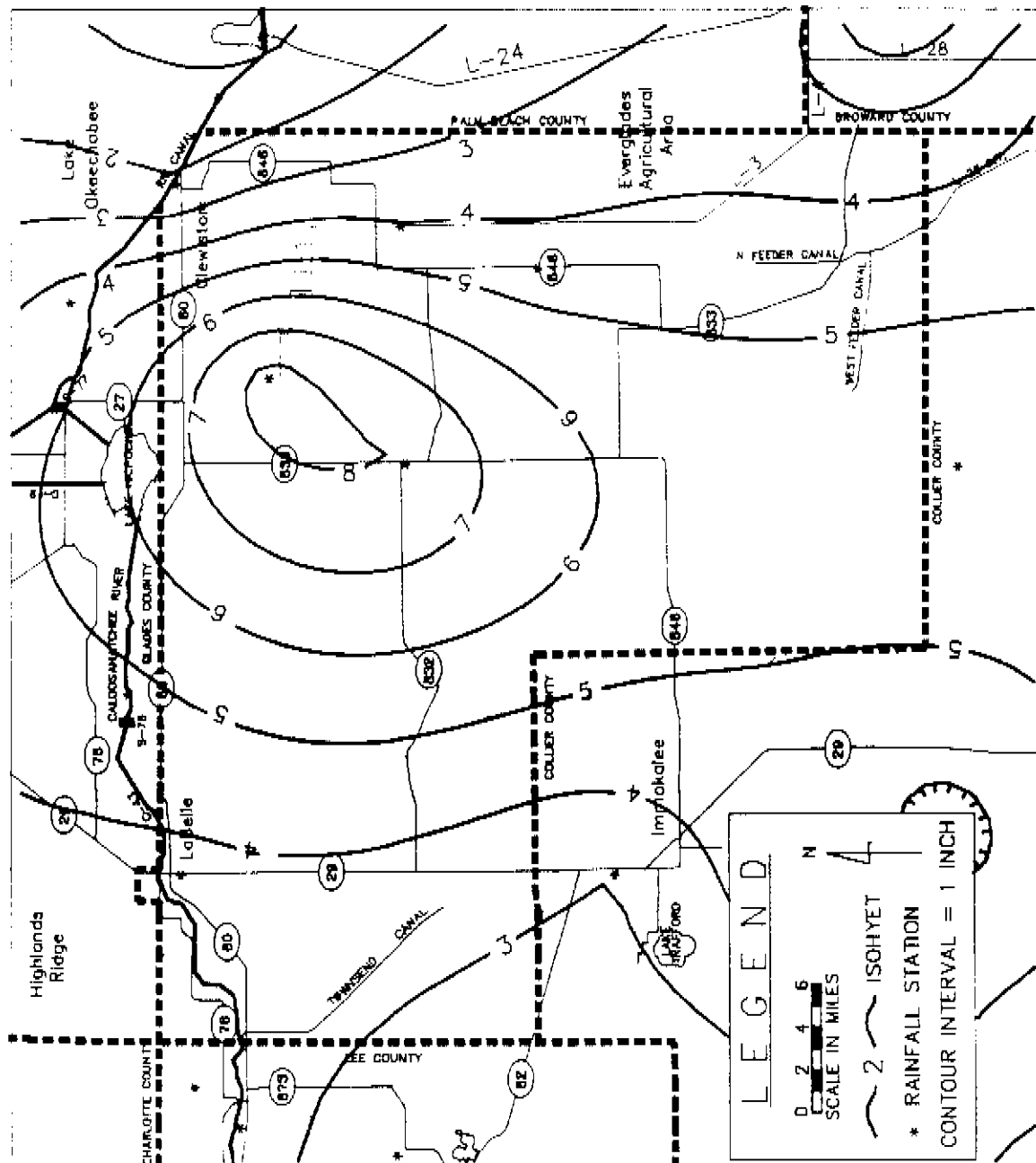


Figure C-10. RAINFALL, OCTOBER 1986

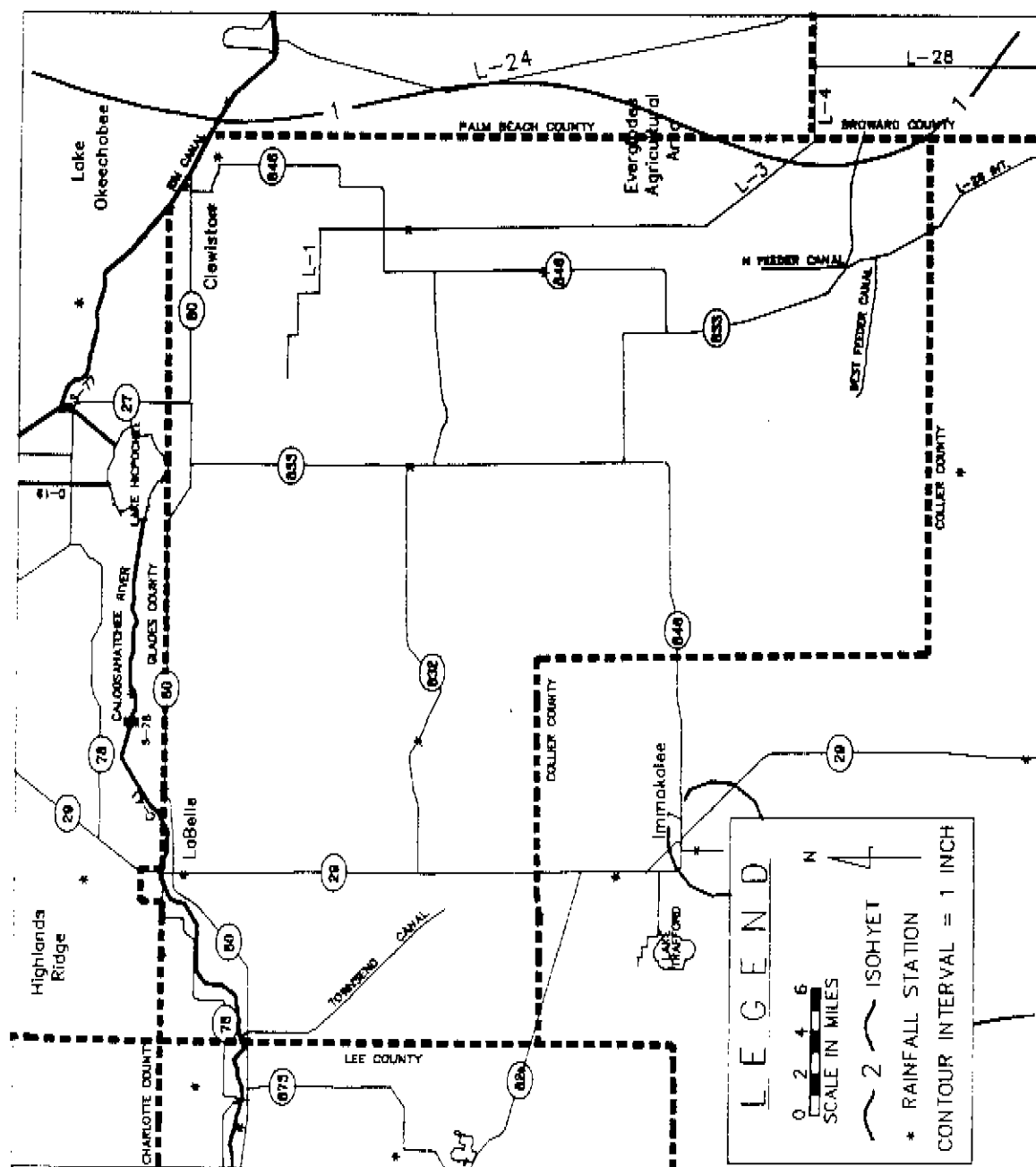


Figure C 11. RAINFALL, NOVEMBER 1986

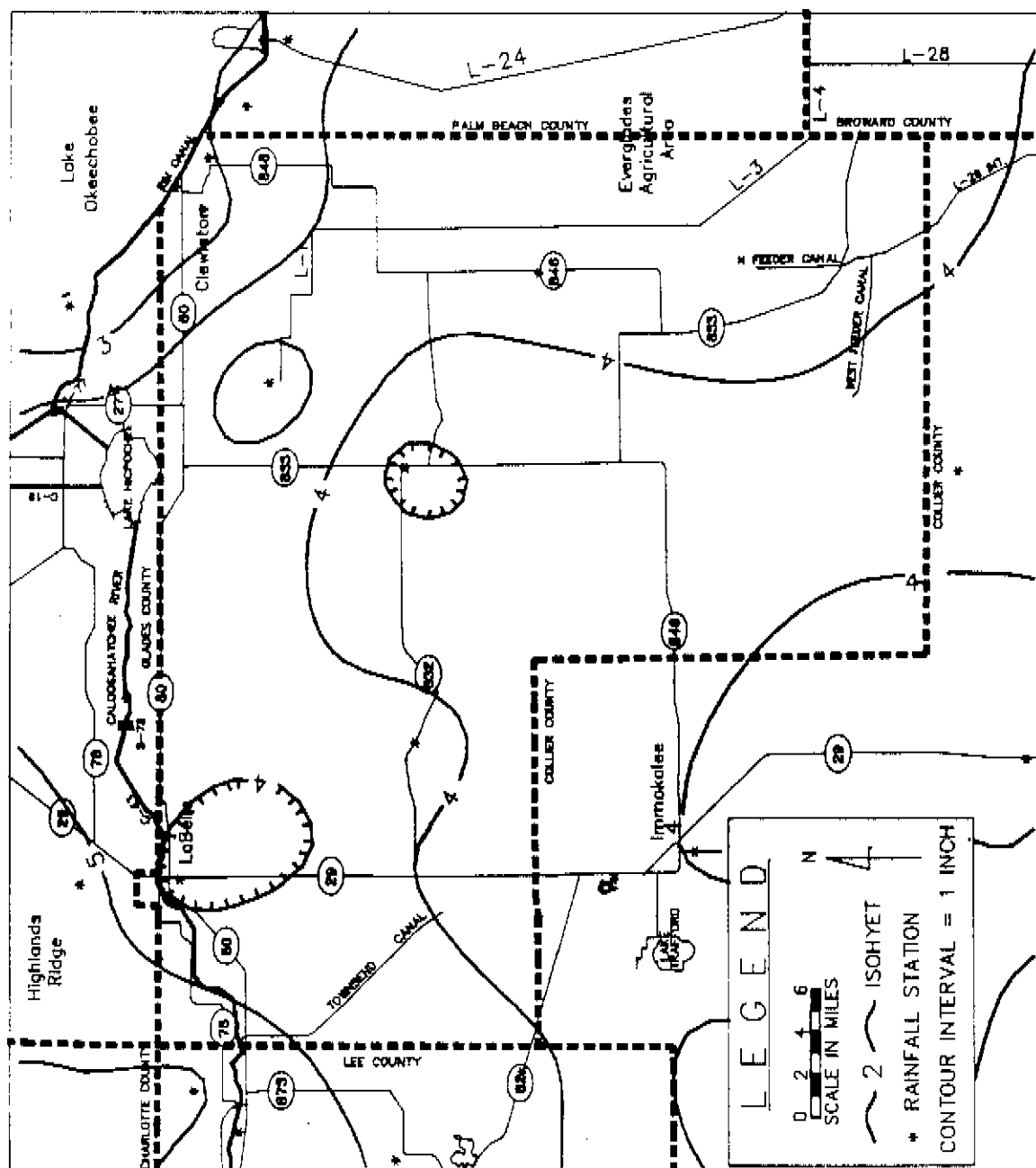


Figure C-12. RAINFALL, DECEMBER 1986

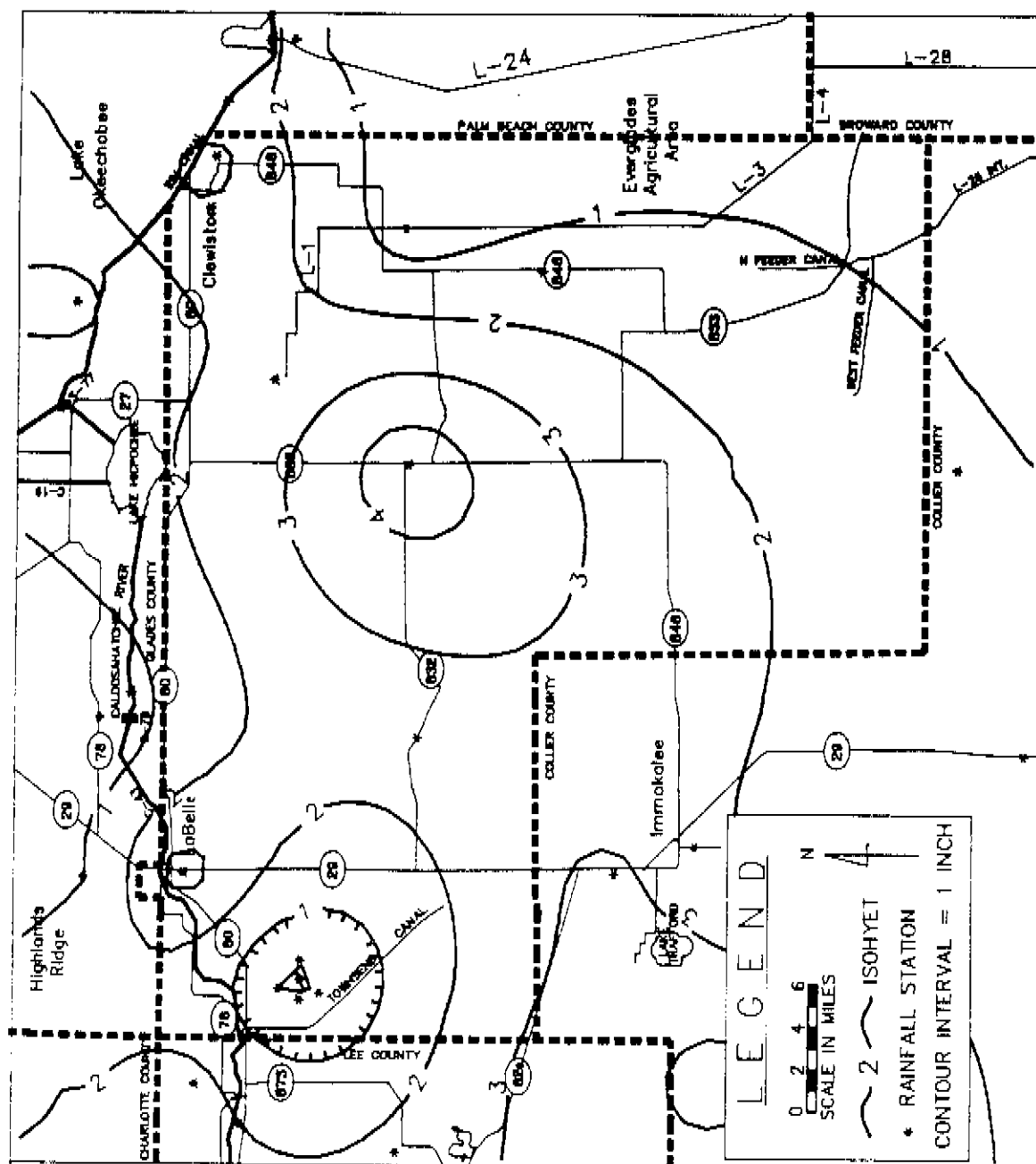


Figure C-13 RAINFALL, JANUARY 1987

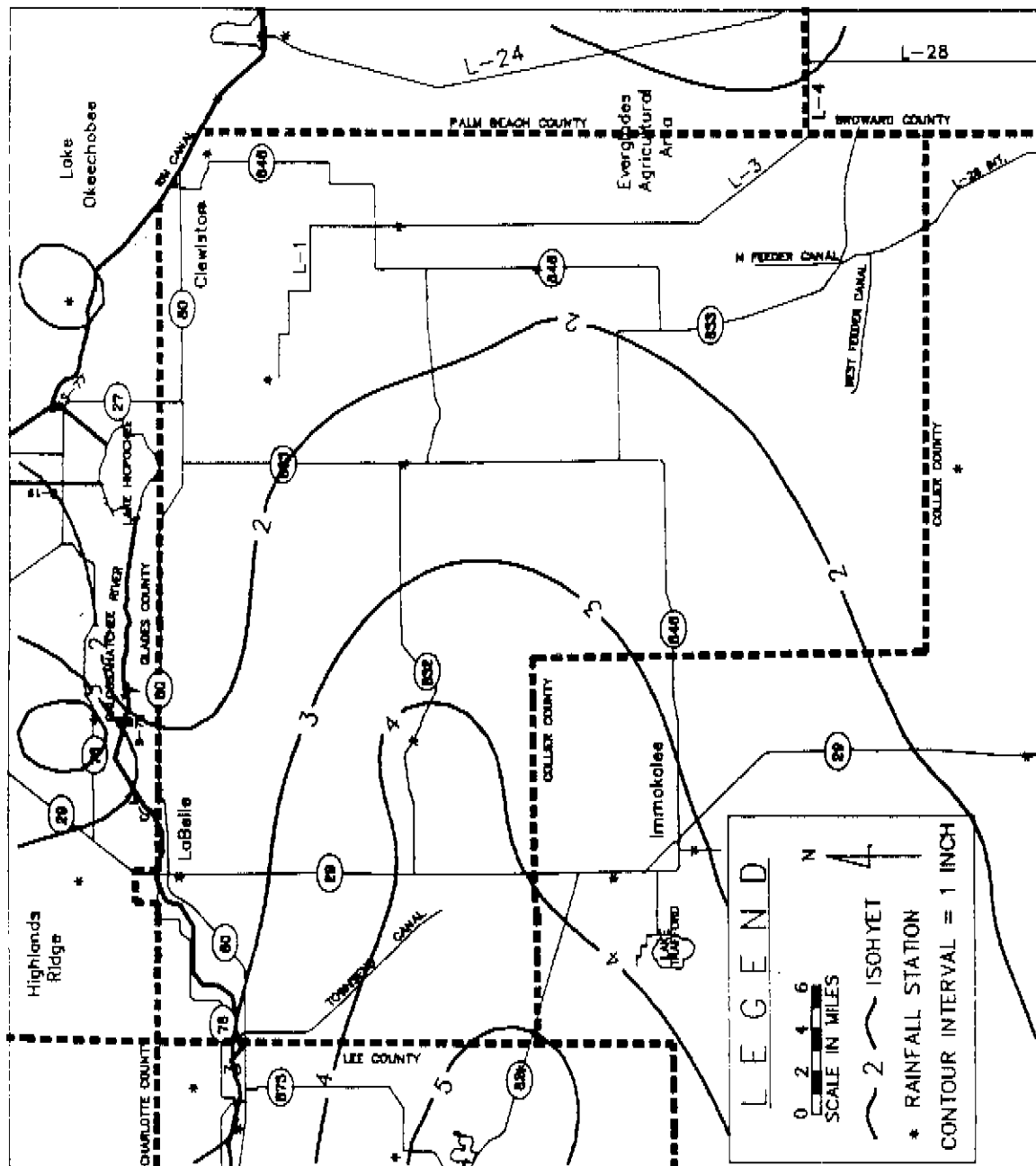


Figure C-14. RAINFALL, FEBRUARY 1987

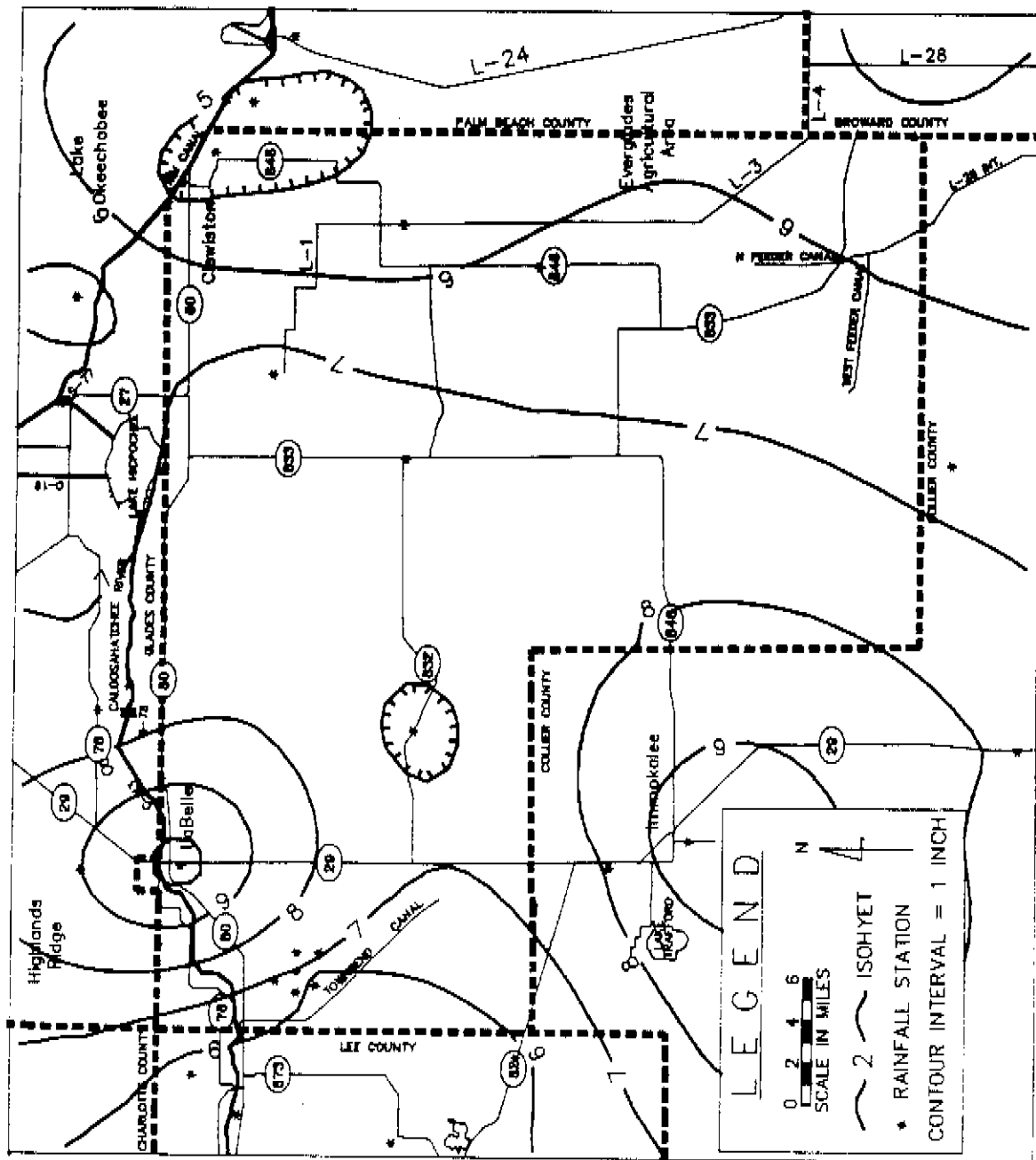


Figure C-15 RAINFALL, MARCH 1987

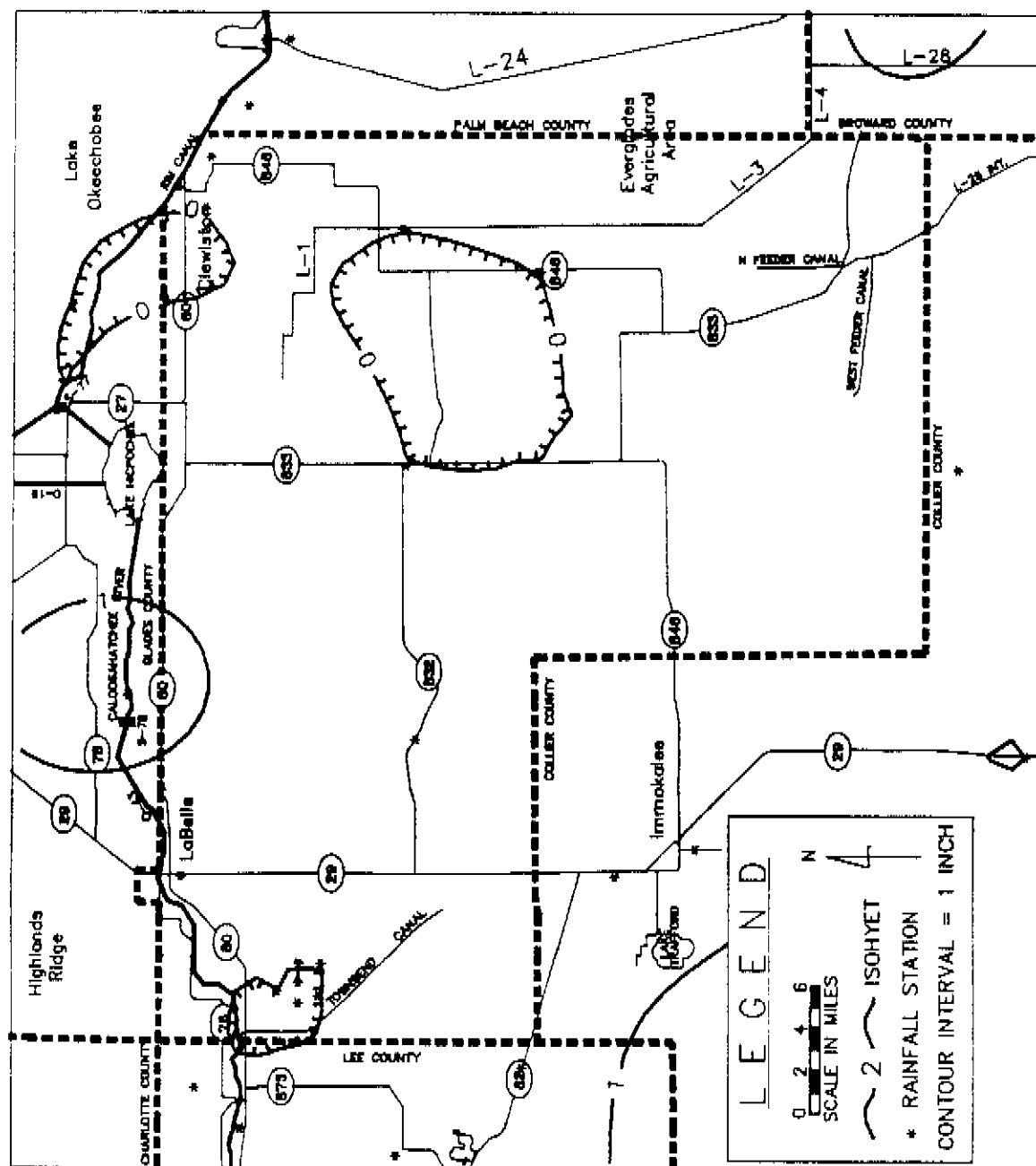


Figure C-16. RAINFALL, APRIL 1987

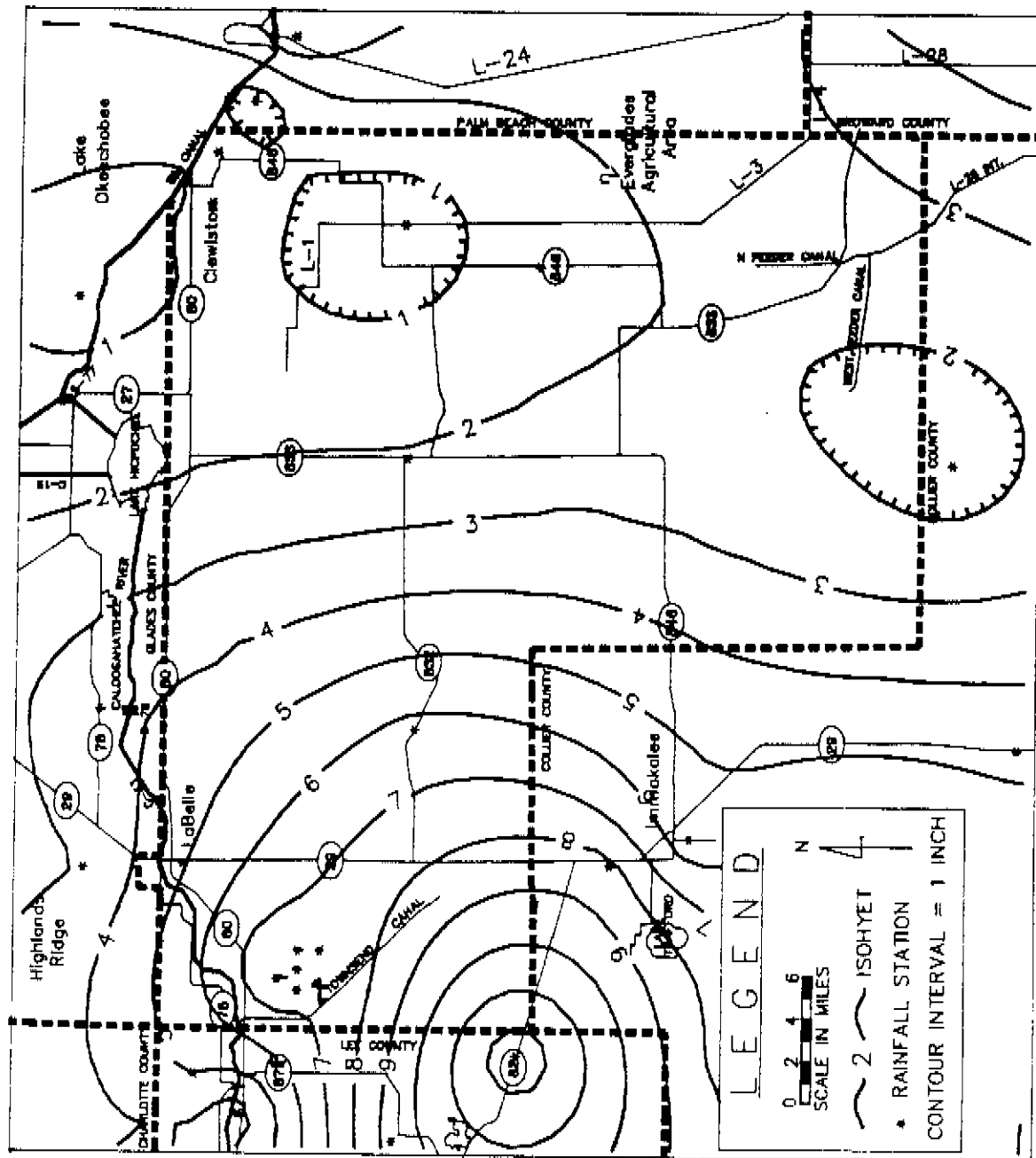


Figure C-17. RAINFALL, MAY 1987

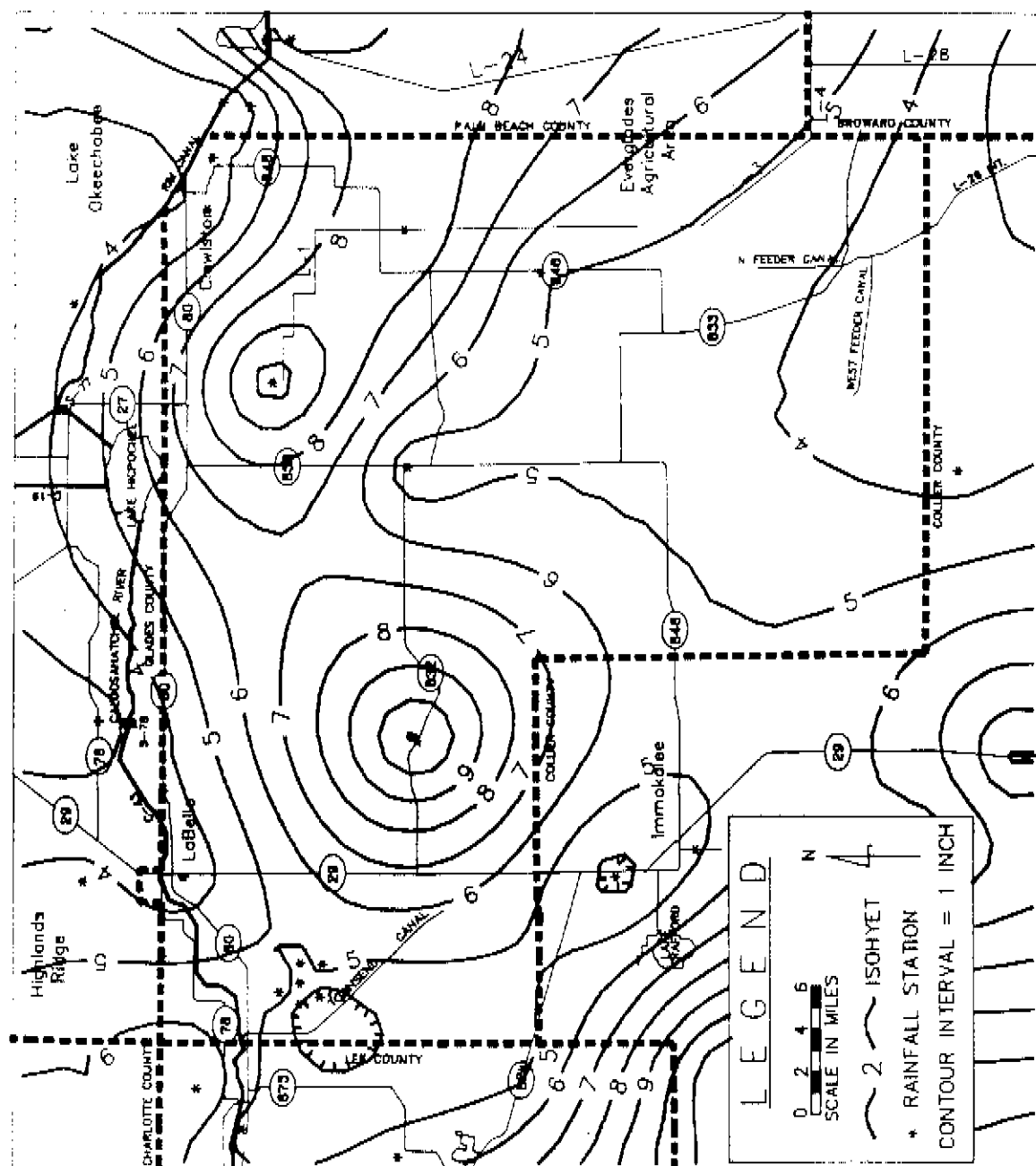


Figure C-18. RAINFALL, JUNE 1987

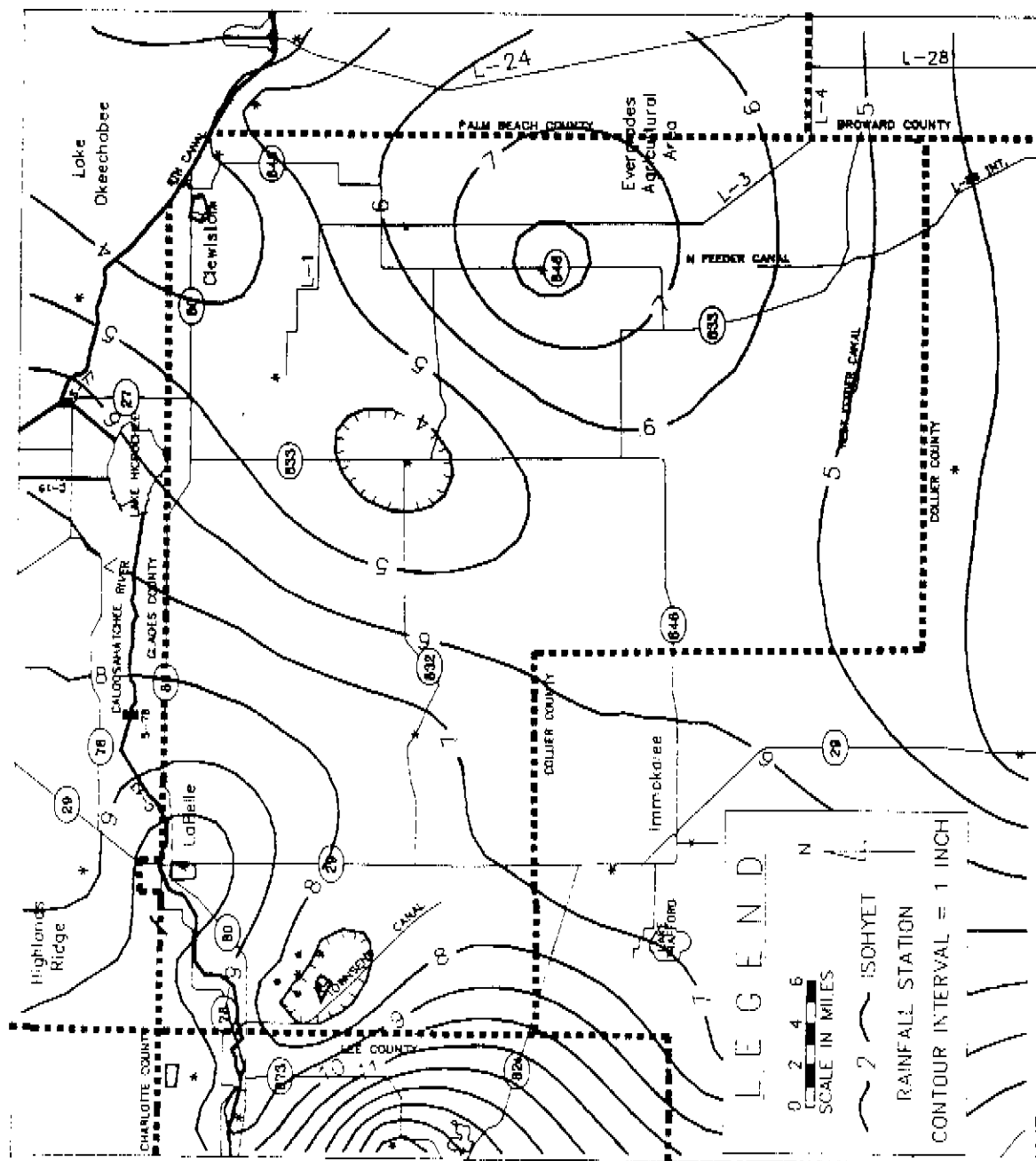


Figure C-19. RAINFALL, JULY 1987

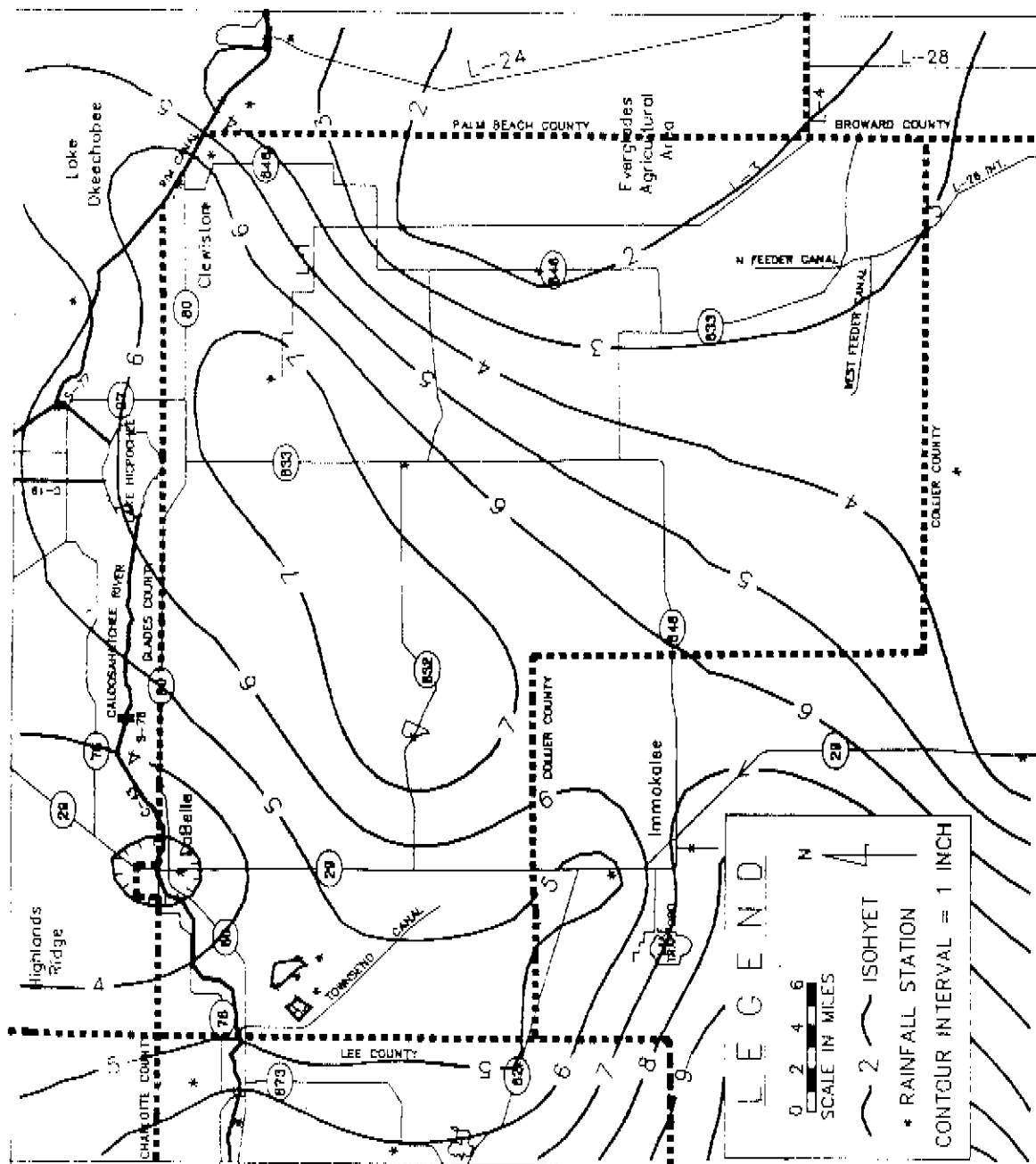


Figure C-20. RAINFALL, AUGUST 1987

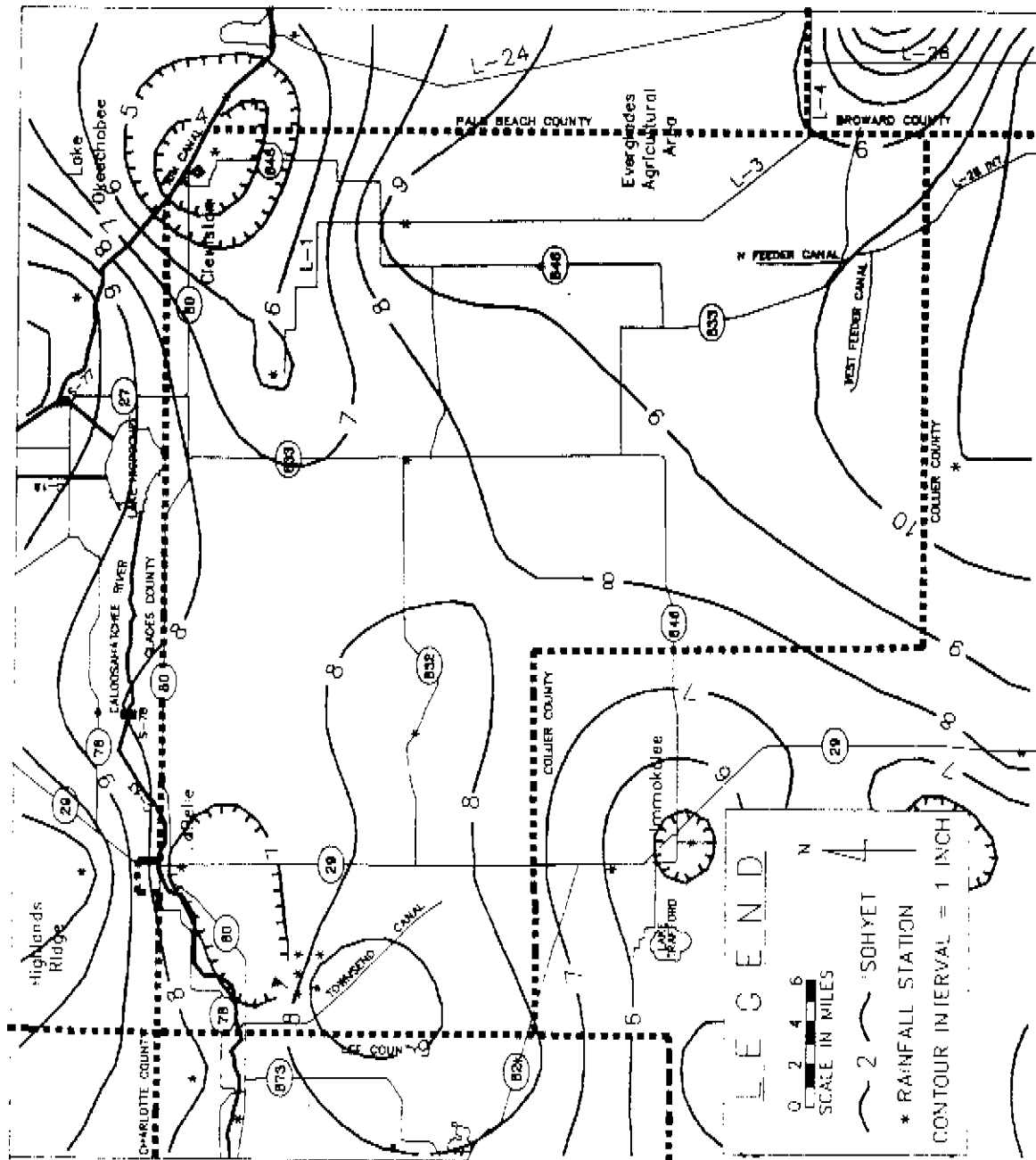


Figure C 21 RAINFALL, SEPTEMBER 1987

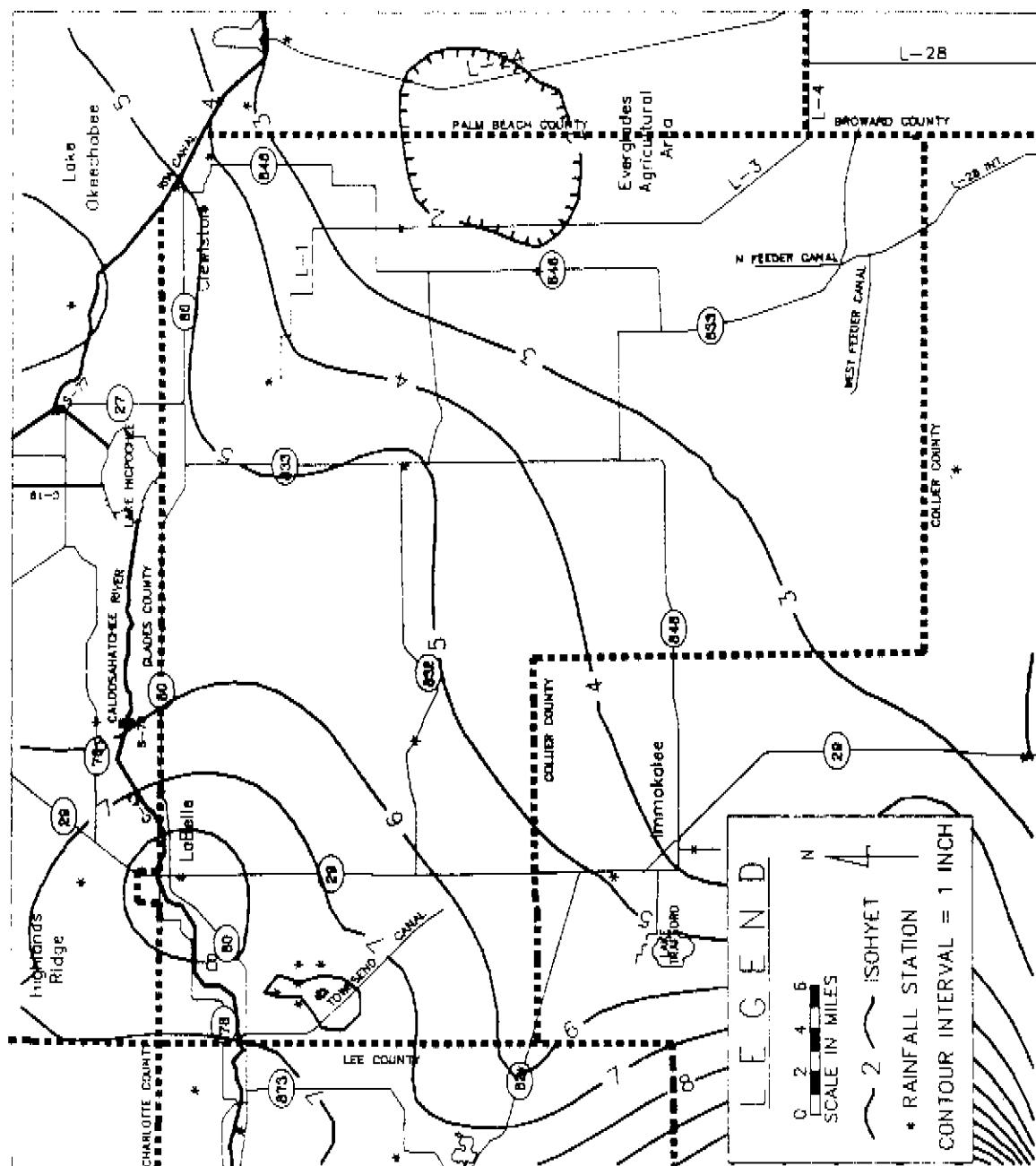


Figure C-22. RAINFALL, OCTOBER 1987

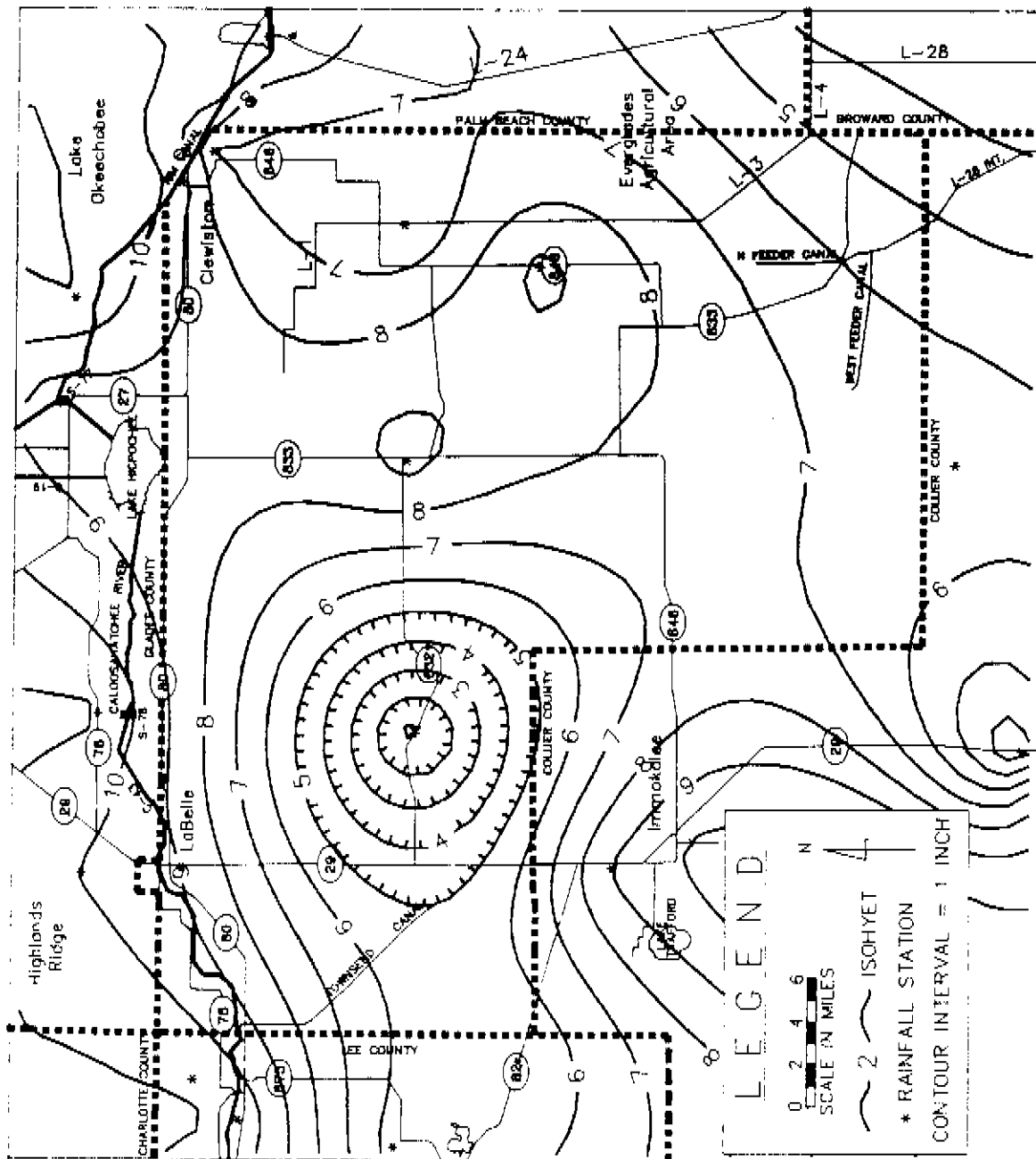


Figure C-23. RAINFALL, NOVEMBER 1987

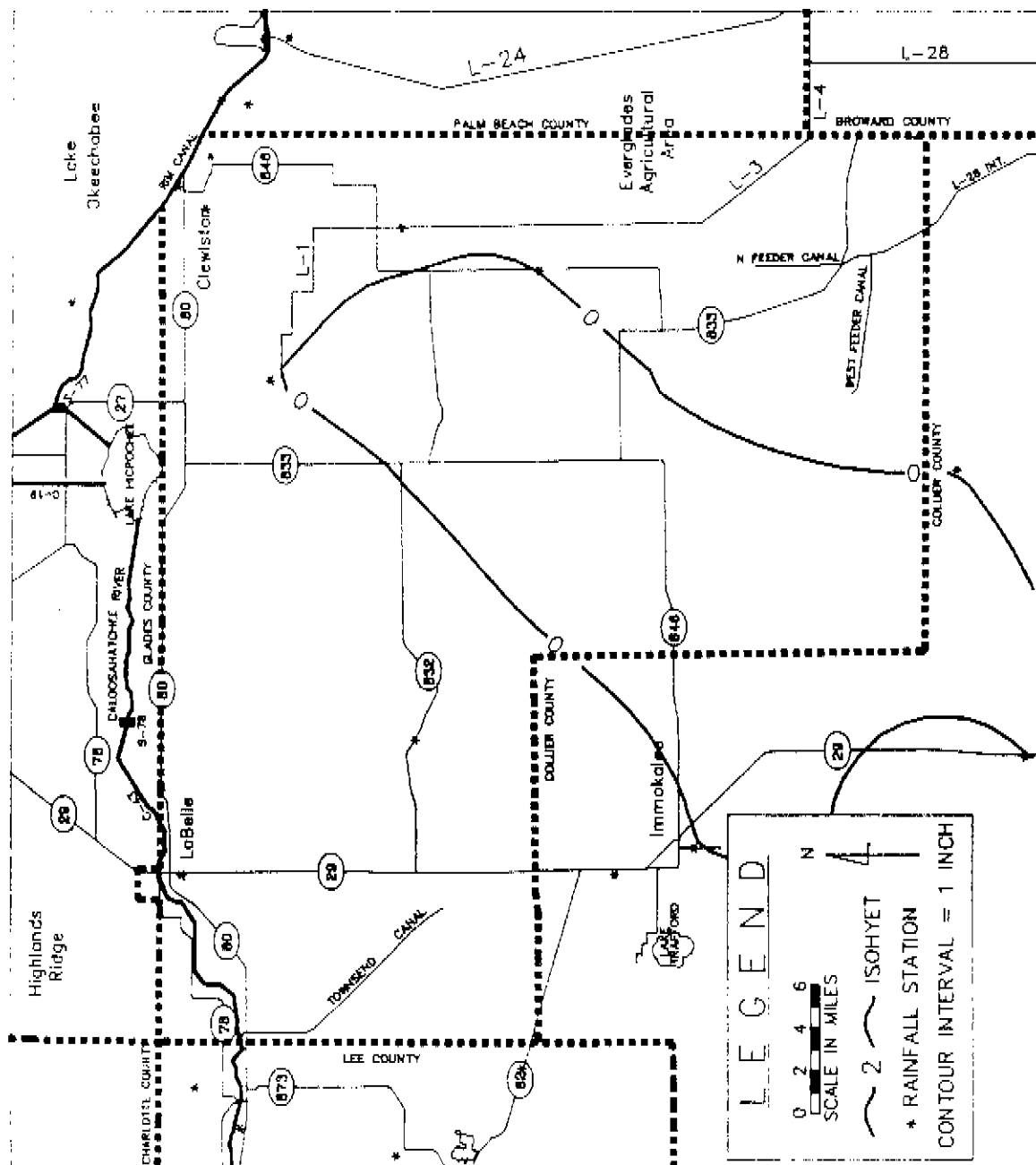


Figure C-24. RAINFALL, DECEMBER 1987

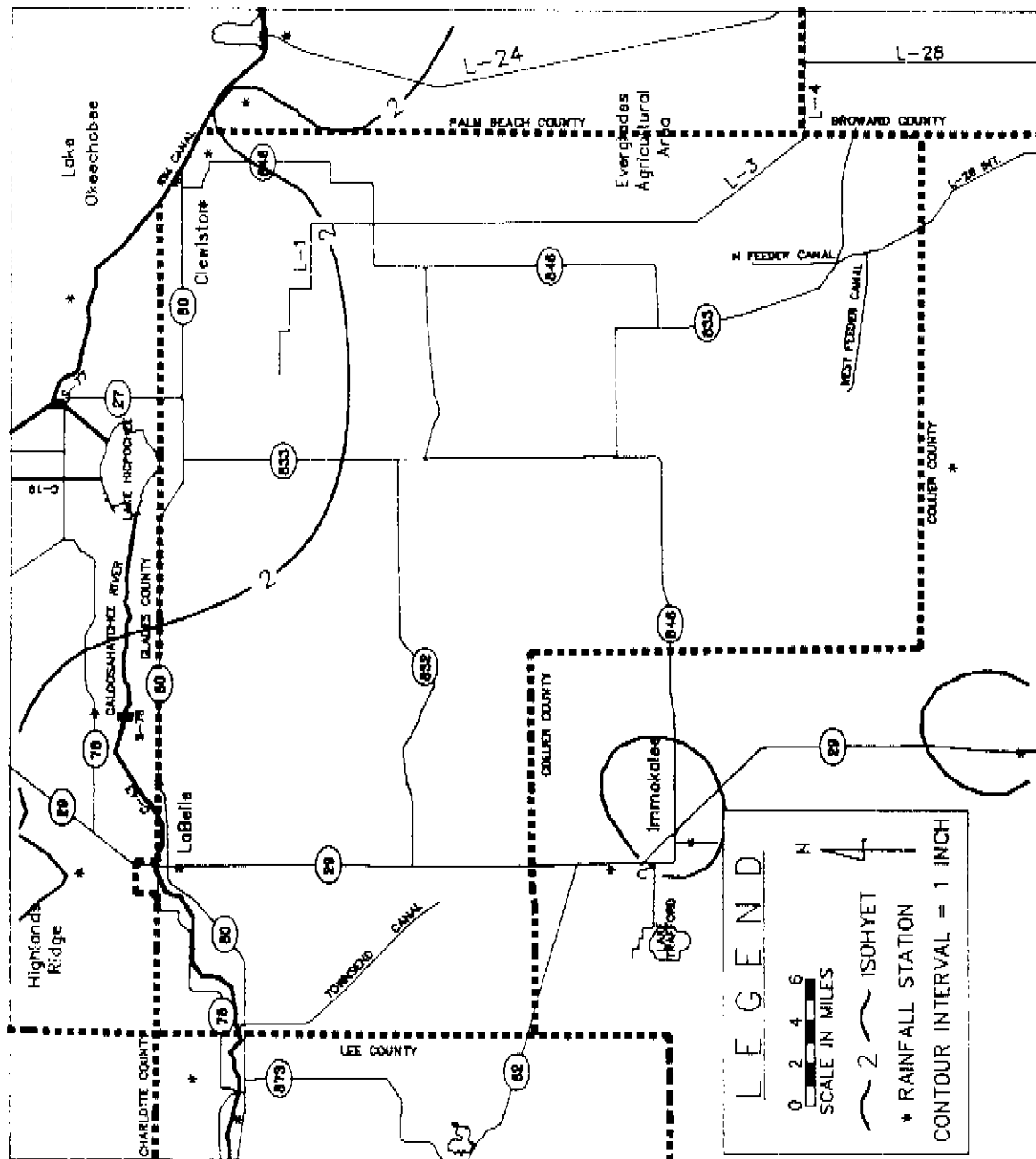


Figure C-26. RAINFALL, FEBRUARY 1988

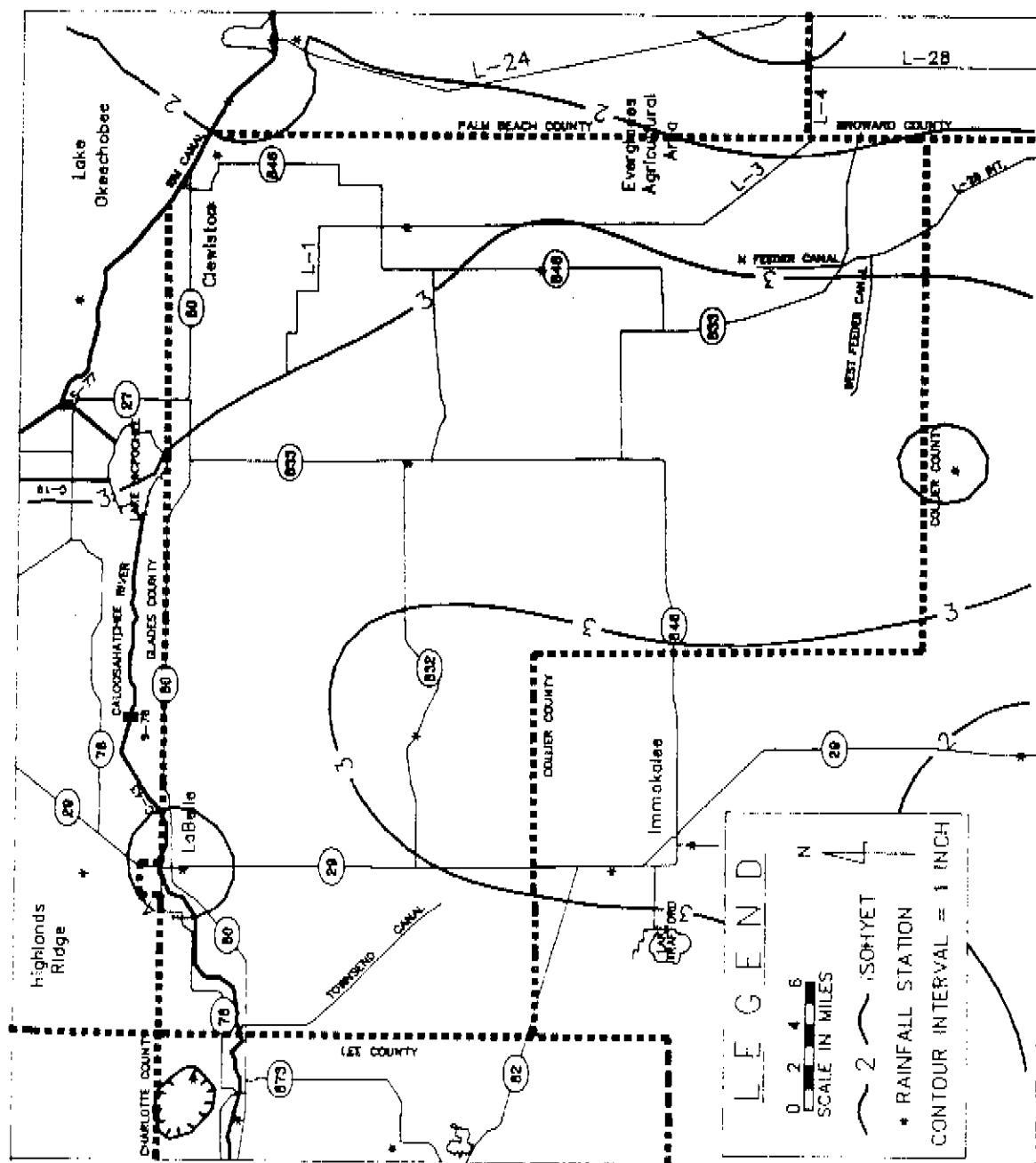


Figure C 27. RAINFALL, MARCH 1988

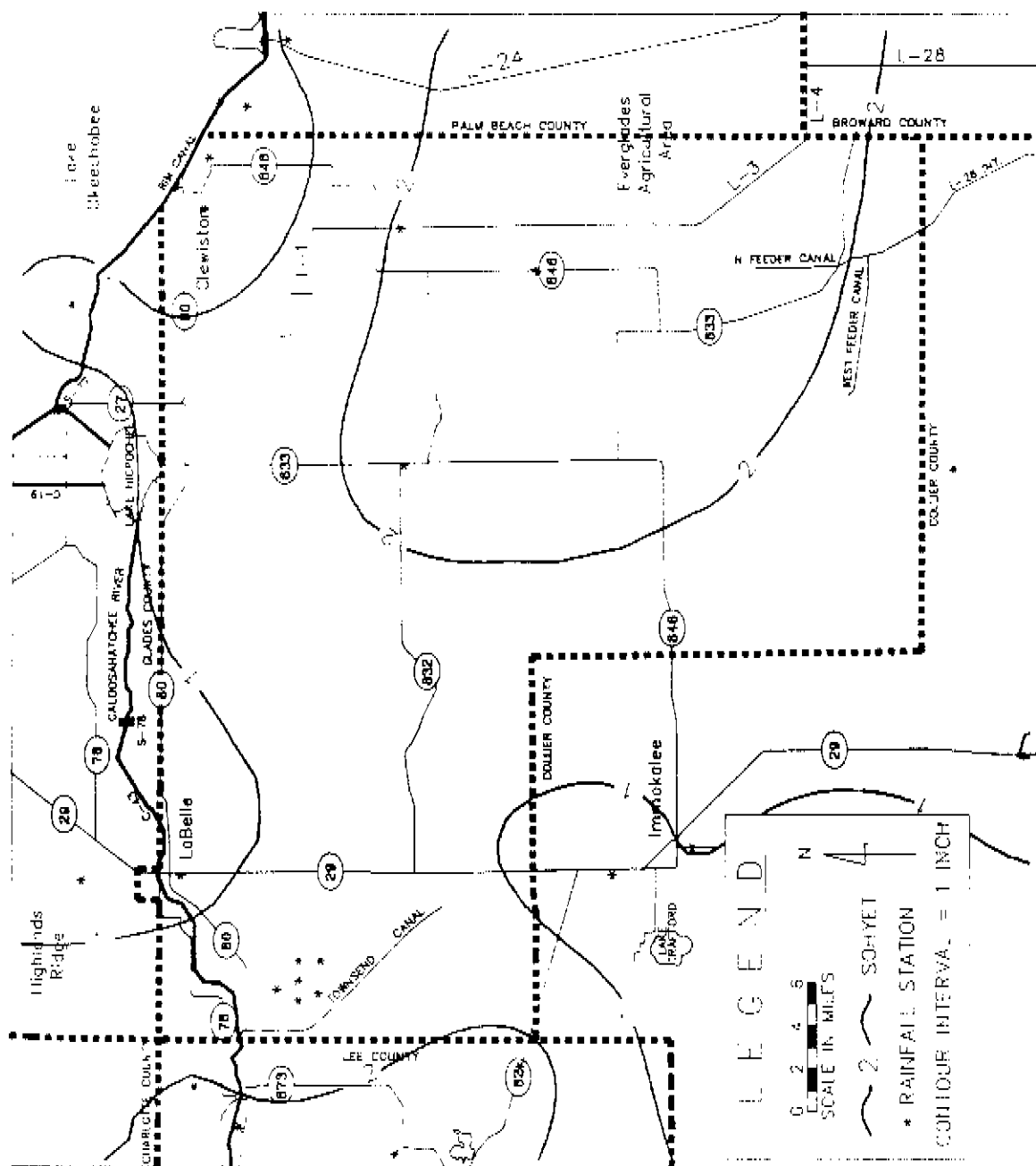


Figure C-28. RAINFALL, APRIL 1988

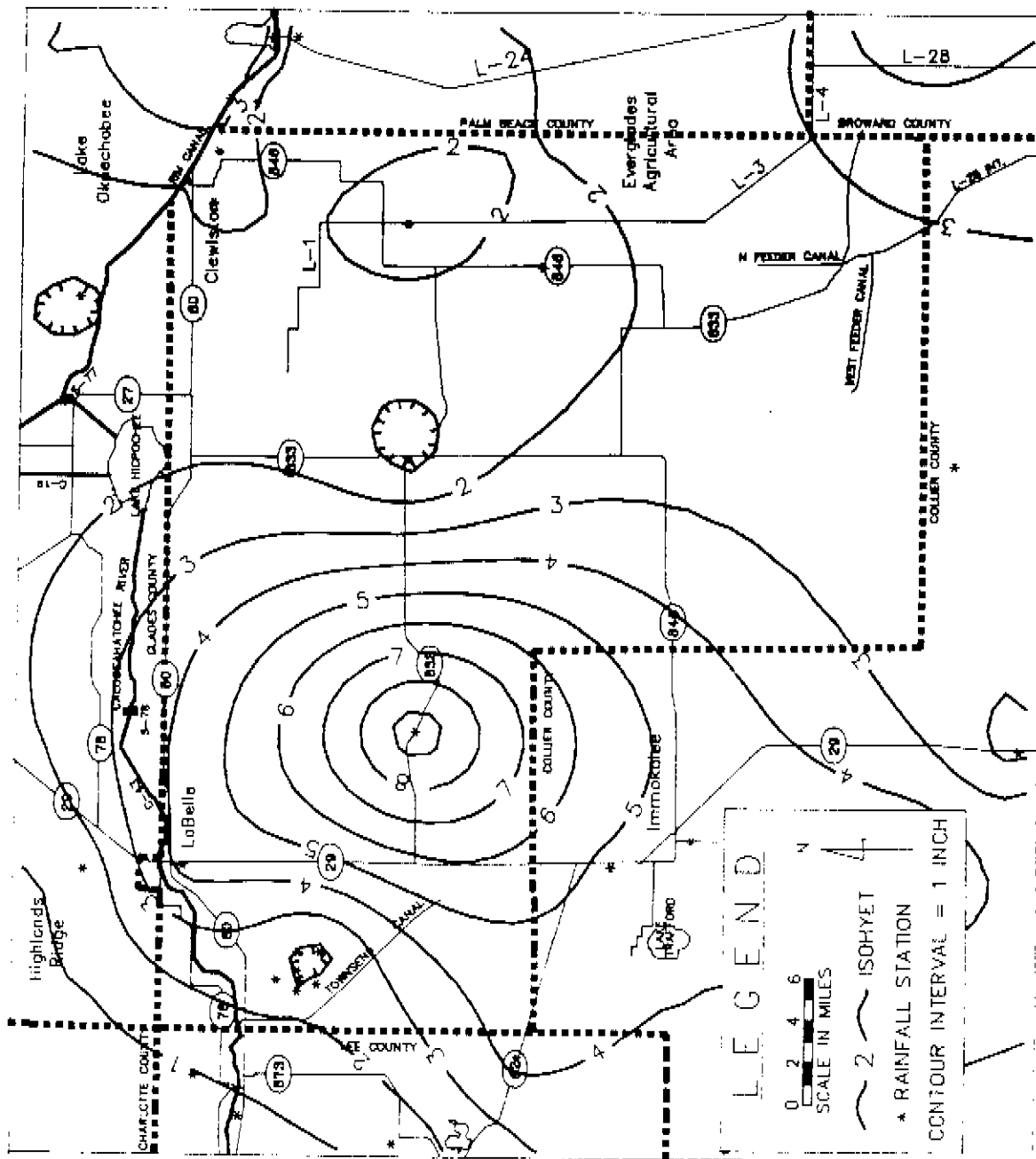


Figure C-29. RAINFALL, MAY 1988

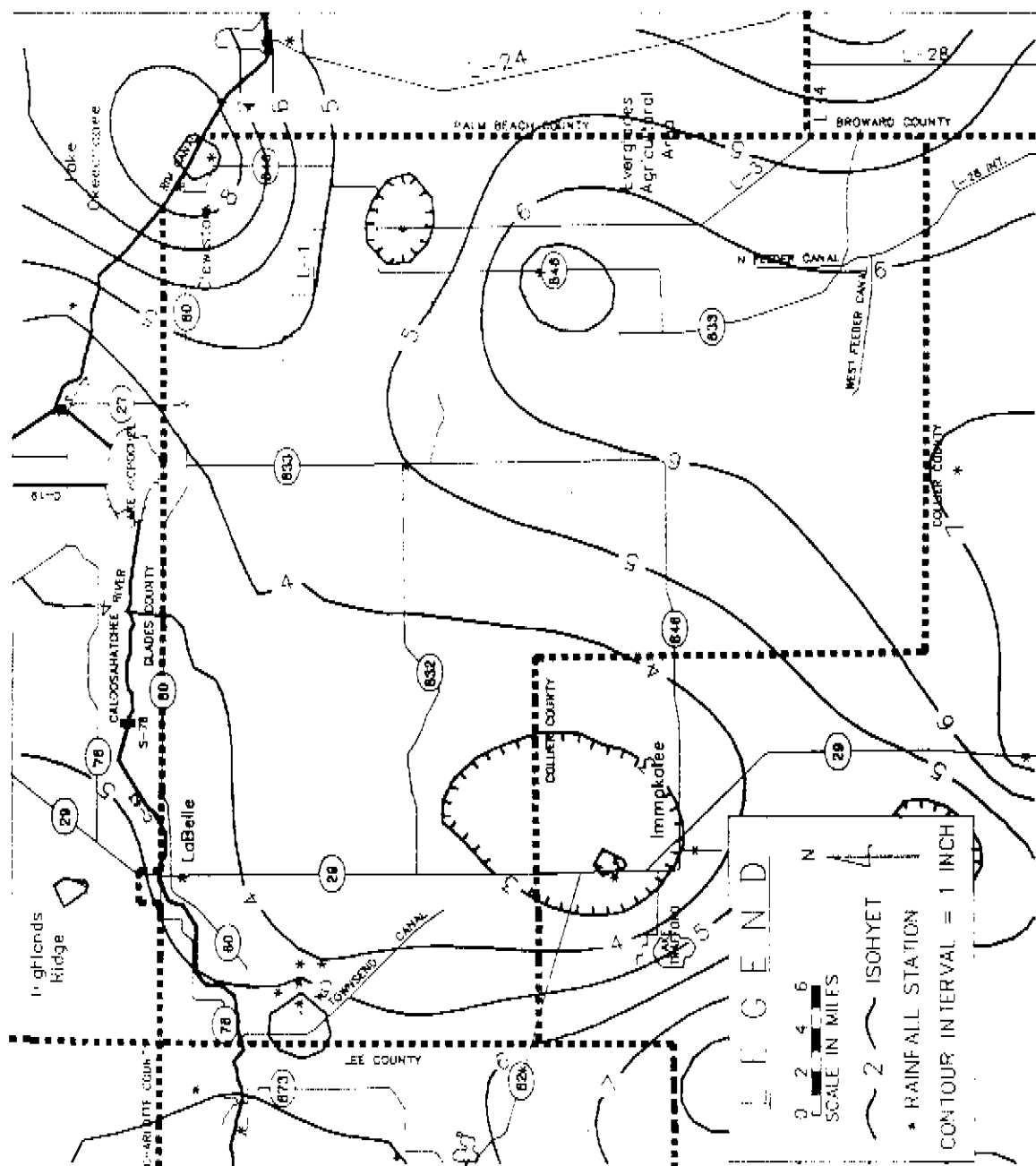


Figure C-30. RAINFALL, JUNE 1988

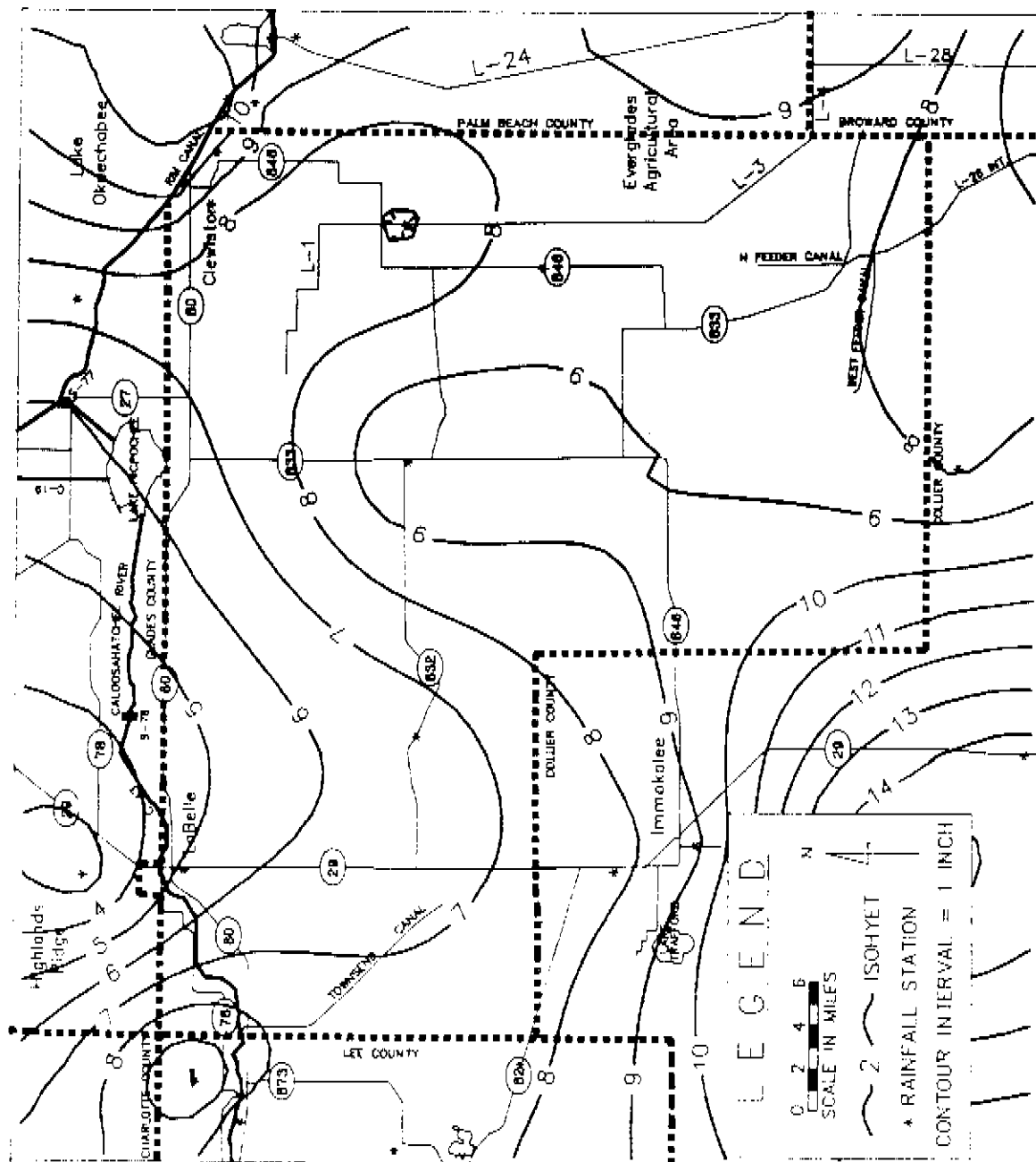


Figure C 31. RAINFALL, JULY 1988

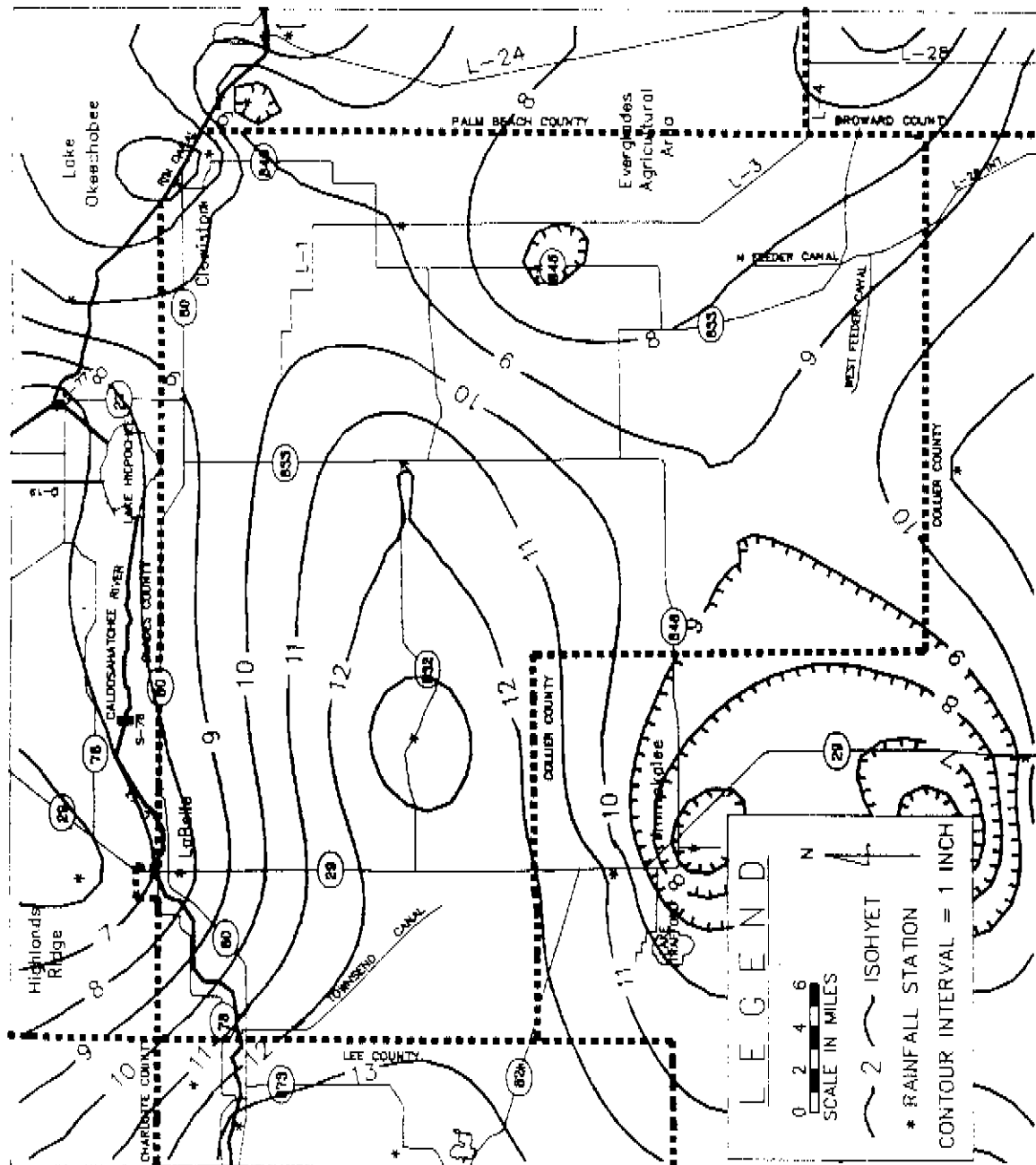


Figure C-32. RAINFALL, AUGUST 1988

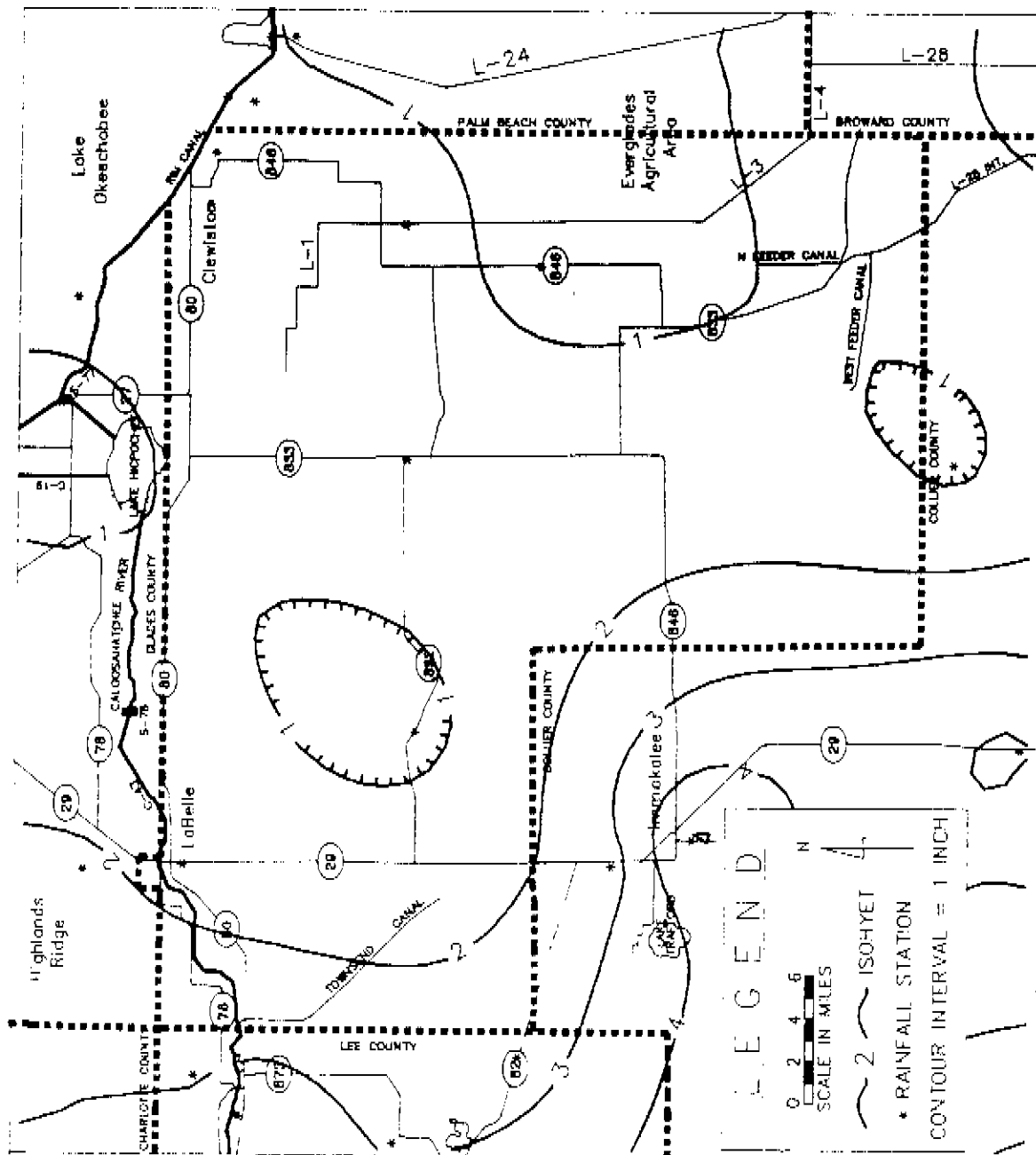


Figure C-33 RAINFALL, SEPTEMBER 1988

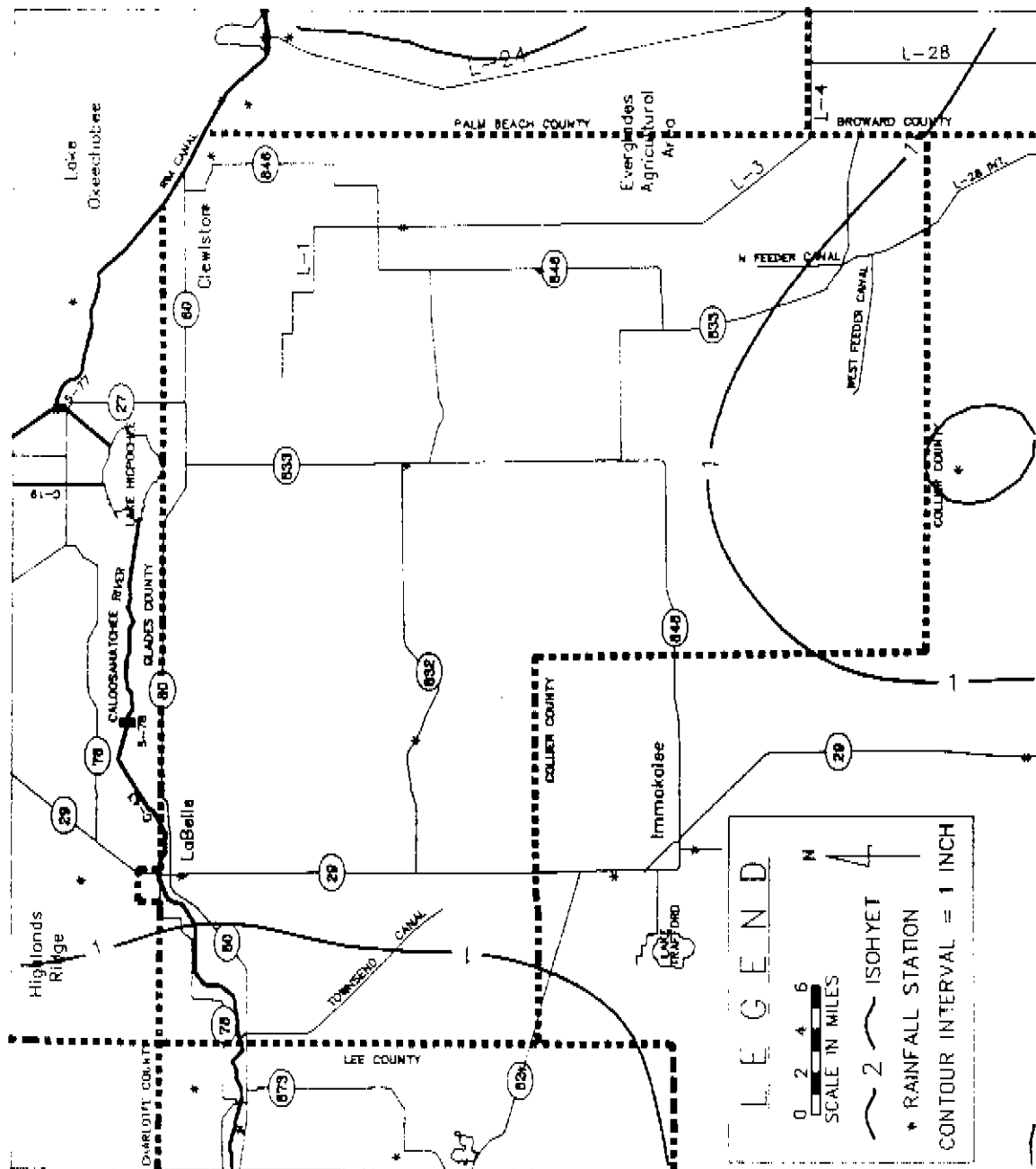


Figure C-34. RAINFALL, OCTOBER 1988

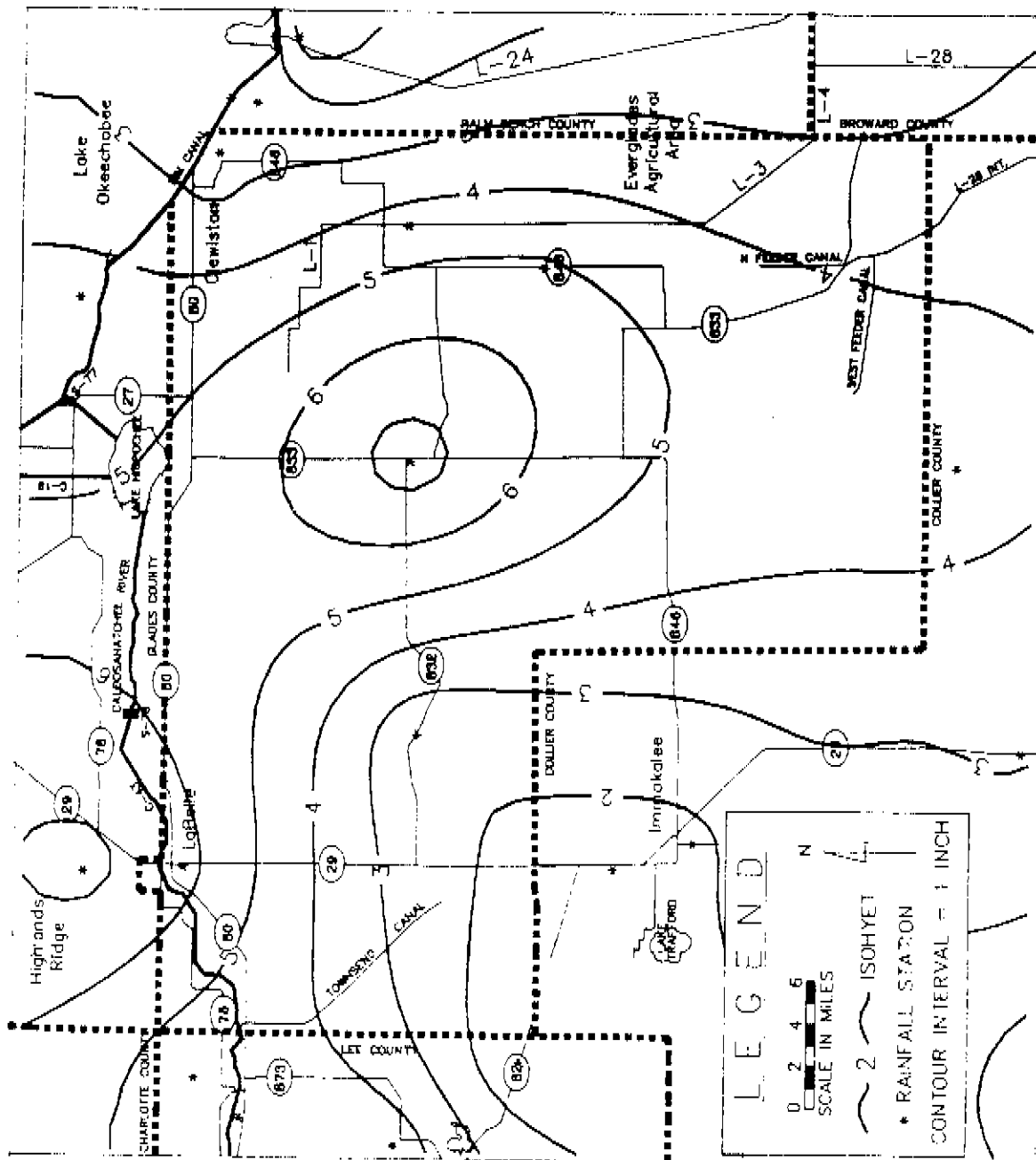


Figure C 35. RAINFALL, NOVEMBER 1988

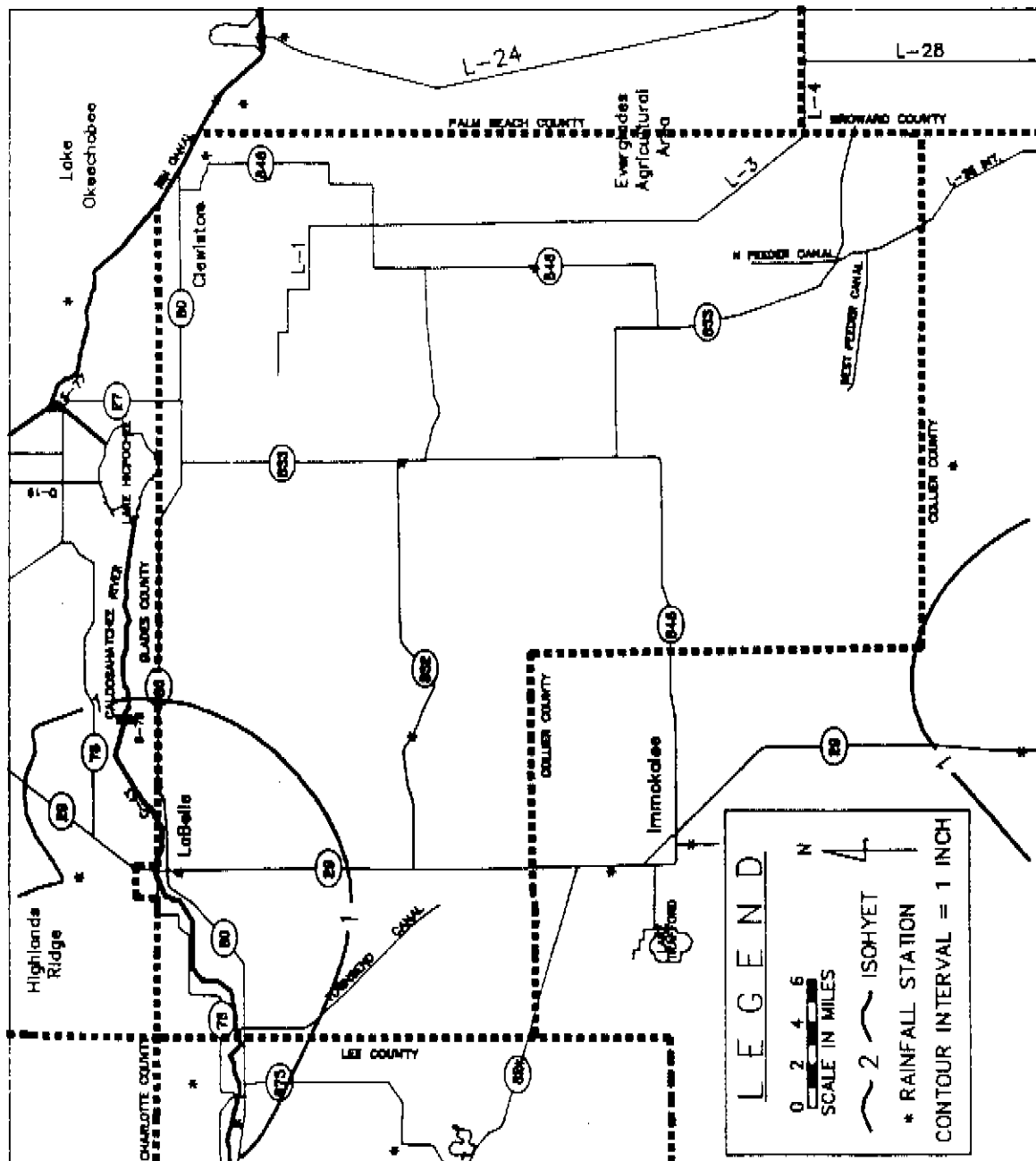


Figure C-36. RAINFALL, DECEMBER 1988

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APPENDIX D
EVAPOTRANSPIRATION INPUT DATA

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Figure 1

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EVAPOTRANSPIRATION DATA

<u>Stress Period</u>	<u>Month/Year'</u>	<u>Maximum ET Rate**</u>
1	January 1986	3.71
2	February 1986	4.91
3	March 1986	6.99
4	April 1986	8.83
5	May 1986	9.37
6	June 1986	7.74
7	July 1986	7.33
8	August 1986	8.44
9	September 1986	6.59
10	October 1986	5.47
11	November 1986	4.18
12	December 1986	3.06
13	January 1987	3.94
14	February 1987	4.33
15	March 1987	4.84
16	April 1987	7.78
17	May 1987	9.19
18	June 1987	7.96
19	July 1987	6.84
20	August 1987	7.89
21	September 1987	5.54
22	October 1987	5.28
23	November 1987	3.82
24	December 1987	3.72
25	January 1988	3.67
26	February 1988	4.21
27	March 1988	6.06
28	April 1988	7.02
29	May 1988	8.59
30	June 1988	7.54
31	July 1988	7.29
32	August 1988	7.11
33	September 1988	6.55
34	October 1988	6.21
35	November 1988	4.21
36	December 1988	3.83

* Average monthly pan evaporation rates from stations at Clewiston, Labelle, and Hurricane Gate 1.

** In inches per month. A rate of 3.72 inches per month was used in the steady state runs.

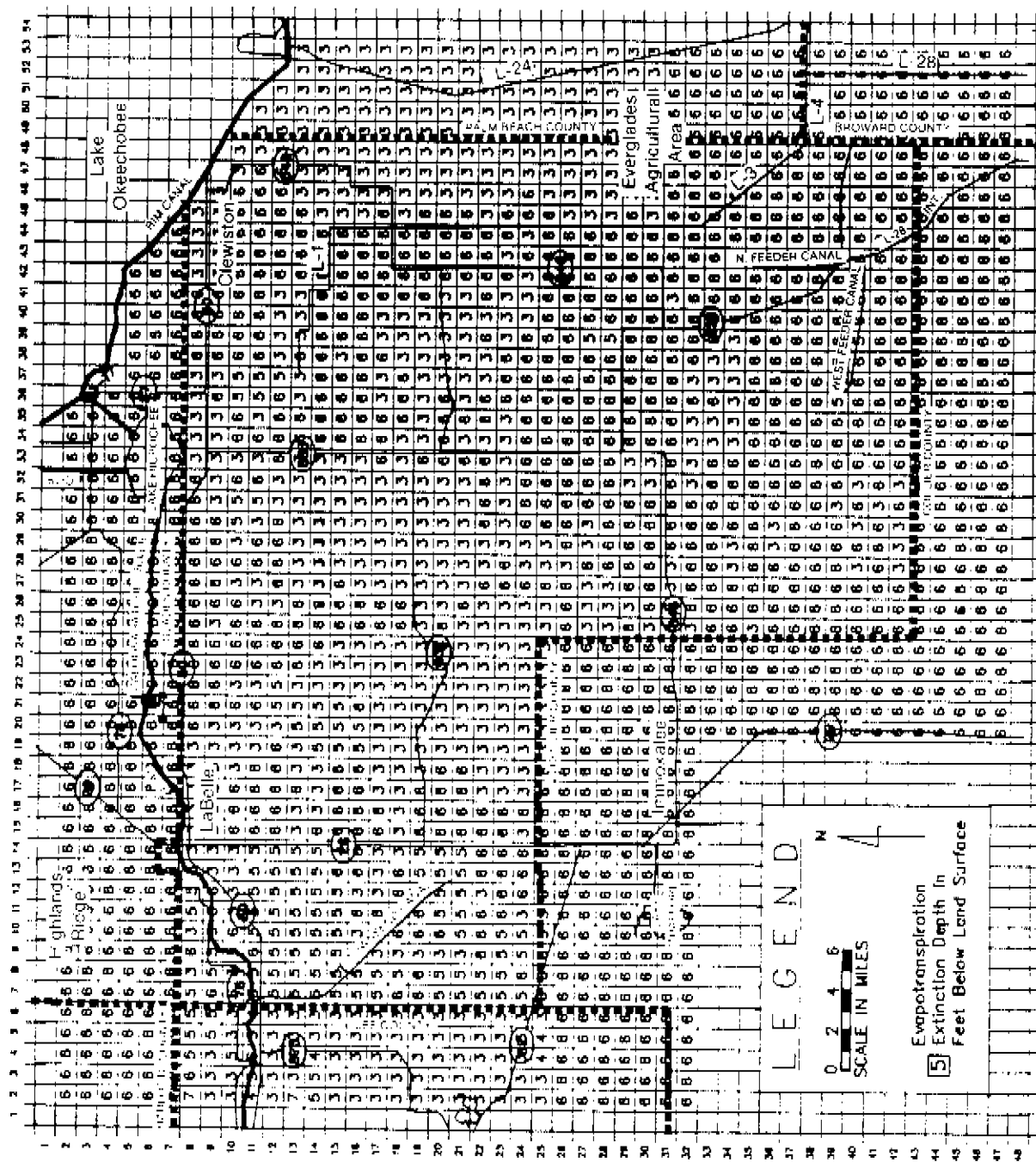


Figure D-1. EVAPOTRANSPIRATION EXTINCTION DEPTH

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APPENDIX E
WATER USE DATA

INTRODUCTION

This appendix contains information on the individual water use permits issued by the Water Use Division, Regulation Department, South Florida Water Management District. This information was used to compile the well withdrawal data file used in the model.

Permits issued through November 1989 are included in this appendix. The information is organized into four spreadsheets. The first two spreadsheets contain information on the individual water use permits for agricultural use within Hendry County. The third spreadsheet contains information on individual water use permits for agricultural use within the buffer areas of Lee, Collier, Broward, Palm Beach, Glades, and Charlotte Counties. A legend for these spreadsheets is included on page 141. The final spreadsheet contains information on individual water use permits for public supply, commercial, industrial, and mining uses within the study area. A legend for this spreadsheet can be found on page 193.

AN.ALL. - Annual Permit Allocation
 ALL.UNIT. - Annual Allocation Units
 01 - MGD
 02 - MCM
 03 - MGV
 04 - AC-FT
 MAXMO - Maximum Monthly Permitted Allocation
 01 - MGD
 02 - MCM
 03 - AC-FT
 CO - County Code (from permit number)
 DATE ISS - Date Permit Issued (mo/yr)
 USE TYPE - AG,IND,GLF,PWS,COM,REC
 SRC - Source (SW,CW, BOTH)
 NO.WBS. - Number of ACTIVE permitted wells
 SWPMPS - Number of Surface Water Pumps

 DEVNO. - Development Number(for projected uses only)
 AQ. - Aquifer
 01 - Water Table
 02 - Surficial (Semi-confined)
 03 - Lower Tertiary
 04 - Sandstone
 05 - mid-Hawthorn
 06 - Lower Hawthorn
 07 - Suwannee
 08 - Floridan
 09 - Biscayne
 CROP TYPE - Blaney-Criggale Code
 11 - Alfalfa
 12 - Avocado
 13 - Citrus
 14 - Grapes
 15 - Turf
 16 - Sugar Beet
 20 - Pasture
 51 - Dry Beans
 52 - Green Beans
 53 - Grain Corn
 54 - Silage Corn
 55 - Sweet Corn
 56 - Melons
 57 - Peas
 58 - Potato
 59 - Soybeans
 60 - Tomato
 61 - Small Vegetables
 5 or 70 - Nursery
 RAINST = Rain Station Code Number
 1 - NAPLES
 2 - FT. MYERS
 3 - WEST PALM BEACH
 4 - STUART
 5 - FT. LAUDERDALE
 6 - KISSIMMEE
 7 - MELBOURNE
 8 - ORLANDO
 9 - TITUSVILLE
 10 - FELLSMERE
 11 - FT. PIERCE
 12 - OKEECHOBEE
 13 - AVON PARK
 14 - MOORE HAVEN
 15 - LABELLE
 16 - WEDGE GLADE
 17 - LOXAHATCHEE
 18 - JUPITER
 21 - MIAMI 4
 22 - HOMESTEAD
 23 - POMPANO BEACH
 24 - INDIANTOWN
 25 - HYPOLEXO
 26 - BIG CYPRESS
 27 - EVERGLADES
 28 - HIALEAH
 29 - LAKE PLACID
 30 - MERRIT ISLAND
 31 - VERO BEACH

LOS = Level of Service (leave blank)
 STS = Status
 01 - Existing
 02 - Proposed
 03 - Stand By/Backup
 04 - To Be Plugged
 DPTH CODE - Datum for Elevations
 01 - NGVD
 02 - Land Surface
 PMPINT = Depth to Pump Intake (Wells Only)
 PUMP TYPE
 01 - Centrifical (suction)
 02 = Lift (turbine, jet, submersible)
 03 - Unknown
 PUMP CAP. = Capacity in GPM (SW & GW Facilities)
 01 - Unknown
 MTR? = Is Use Metered by Volume or Power
 Consumption and Reported to the District?
 Y = Yes
 N = No
 YPLNR = North Planar Coordinate
 XPLNR = East Planar Coordinate

LINE 1 READINGS Table 1 - Existing Water Use - Permit Information and Table 2 - Forecasted Agricultural Demand for Each Permit

PERMIT NO.	AS. ALL.	SEL. ENT.	MAX. NO.	MC. NO.	DATE	USE	SRC. NO.	SW	WLS.	PMPS	OWNER	CROPSOLD TYPE	RA. A. ST.	LOS	AGRS	REF	LOS
------------	----------	-----------	----------	---------	------	-----	----------	----	------	------	-------	---------------	------------	-----	------	-----	-----

LINE 21 READINGS Table 1 - Existing Water Use - Facilities Information for Each Permit

PERMIT NO.	FACILITY NUMBER	COND. NO.	WELL. SCS DIA.	DPTH	CODE	TD	CD	INT	TYPE	CA2.	MTR?	XPLR	YPLNK	SRC	AQ.	COMMENTS
------------	-----------------	-----------	----------------	------	------	----	----	-----	------	------	------	------	-------	-----	-----	----------

2600016 958.30 C3 346.35 C2 26 8/87 AG BOTH 28 500 N 480922 723955 GW 03 BIG CYPRESS CITRUS, INC. 13 0.8 26 1200 0.50

2600016-1	208 01	6.00	02	60	500 N	480922	723955	GW	03							
2600016-2	208 01	6.00	02	60	500 N	480922	723955	GW	03							
2600016-3	208 01	6.00	02	60	500 N	480419	723667	GW	03							
2600016-4	208 01	6.00	02	60	500 N	480208	723009	GW	03							
2600016-5	208 01	6.00	02	60	500 N	479908	722647	GW	03							
2600016-6	208 01	6.00	02	60	500 N	484362	722050	GW	03							
2600016-7	208 01	6.00	02	60	500 N	483924	721177	GW	03							
2600016-8	208 01	6.00	02	60	500 N	483301	723607	GW	03							
2600016-9	208 01	6.00	02	60	500 N	484926	723922	GW	03							
2600016-10	208 01	6.00	02	60	500 N	485696	720973	GW	03							
2600016-11	208 01	6.00	02	60	500 N	483258	720027	GW	03							
2600016-12	208 01	6.00	02	60	500 N	480239	721225	GW	03							
2600016-13	208 01	6.00	02	60	500 N	479649	720590	GW	03							
2600016-14	208 01	6.00	02	60	500 N	479339	720290	GW	03							
2600016-15	208 01	6.00	02	60	500 N	477051	720251	GW	03							
2600016-16	208 01	6.00	02	60	500 N	476261	719633	GW	03							
2600016-17	208 01	6.00	02	60	500 N	477097	719651	GW	03							
2600016-18	208 01	6.00	02	60	500 N	485124	719606	GW	03							
2600016-19	208 01	6.00	02	60	500 N	481951	718491	GW	03							
2600016-20	208 01	6.00	02	60	500 N	478930	719244	GW	03							
2600016-21	208 01	6.00	02	60	500 N	478605	718633	GW	03							
2600016-22	208 01	6.00	02	60	500 N	484848	717894	GW	03							
2600016-23	208 01	6.00	02	60	500 N	482343	717214	GW	03							
2600016-24	208 01	6.00	02	60	500 N	481473	716668	GW	03							
2600016-25	208 01	6.00	02	60	500 N	483621	715547	GW	03							
2600016-26	208 01	6.00	02	60	500 N	483621	715547	GW	03							
2600016-27	208 01	6.00	02	60	500 N	483909	716427	GW	03							
2600016-28	208 01	6.00	02	60	500 N	484514	716860	GW	03							
2600016-SW	208 01	9.00	02	60	10000 N	486300	713500	SW								

2600020 4625.28 C3 380.16 C2 26 6/87 AG GW 37 500 N 548931 723105 GW 03 JOE A. FILLIARD 20 0.8 26 16384 0.50

2600020-1	174 01	6.00	02	150	600 N	548931	723105	GW	03							
2600020-2	174 01	6.00	02	150	600 N	452745	723172	GW	03							
2600020-3	174 01	6.00	02	150	600 N	453916	723656	GW	03							
2600020-4	174 01	6.00	02	150	600 N	457620	723508	GW	03							
2600020-5	174 01	6.00	02	150	600 N	454346	723925	GW	03							
2600020-6	174 01	6.00	02	150	600 N	450952	723536	GW	03							
2600020-7	174 01	6.00	02	150	600 N	451963	723213	GW	03							
2600020-8	192 01	6.00	02	150	600 N											
2600020-9	192 01	6.00	02	150	600 N											

[illegible]

[illegible]

2600053-3	132 01	6.00 02	33	26 1777	AG	GW	3	600 N	352678	804185	GW	01	
2600053-4	132 01	6.00 02	33					600 N	353785	803721	GW	01	
2600054	373 73	03		26 1777	AG	GW	3		CHARLES W. WARD				
2600054-1	194 01	6.00 02	450					800 N	511253	764902	GW	05	
2600054-2	194 01	6.00 02	190					900 N	512447	763392	GW	03	
2600054-3	194 01	6.00 02	290					1800 N	513685	763448	GW	03	20 0.8 26 460 0.50
2600055	22 49	03		26 1777	AG	GW	3		DUDA - GENERAL GROVE				
2600055-1	135 01	6.00 02	27					500 N	313064	880241	GW	01	
2600055-2	135 01	6.00 02	34					500 N	313657	880247	GW	01	
2600055-3	135 01	6.00 02	34					500 N	314329	880233	GW	01	
2600055-4	135 01	6.00 02	34					500 N	315151	880513	GW	01	
2600055-5	135 01	6.00 02	34					500 N	315106	881155	GW	01	
2600055-SW	135 01							1500 N	315009	882289	SW		13 0.8 15 153 0.85
2600056	33 56	03		26 1777	AG	GW	2		FELDA RANCH				
2600056-1	132 01	6.00	33					600 N	354834	804624	GW	01	
2600056-2	132 01	6.00	33					600 N	354708	806053	GW	01	
2600057	20 12	03		26 1777	AG	GW	3		RAYMOND CRAWFORD				
2600057-1	154 01	6.00 02	47					400 N	319874	866245	GW	01	
2600057-2	154 01	6.00 02						400 N	312368	866079	GW	01	
2600057-3	154 01	6.00 02						400 N	312369	867252	GW	01	20 0.8 15 20 0.50
2600059	29 30	03		26 1777	AG	GW	1		STX L'S				
2600059-1	134 01	6.00 02	142					1000 K	330200	884200	GW	04	13 0.8 15 65 0.85
2600061	40 34	03		26 1777	AG	GW	4		N. G. WOOSLEY				
2600061-1	154 01	6.00 02	34					1000 K	356771	874756	GW	01	20 0.8 15 40 0.50
2600065	69 40	03		26 1777	AG	GW	5		PAUL O'BAYNON				
2600065-1	154 01	6.00 02	150					500 K	370436	851100	GW	04	
2600065-2	154 01	6.00 02	150					500 K	371336	849003	GW	04	
2600065-3	154 01	6.00 02	150					N	371118	848229	GW	04	
2600065-4	154 01	6.00 02	20					N	370861	847445	GW	01	
2600065-5	154 01	6.00 02	30					N	372512	846350	GW	01	20 1.5 15 320 0.50
2600066	16 39	03		26 1777	AG	GW	2		G. AUSTIN OR ALEX E. CARLSEN				
2600066-1	157 01	6.00 02	20					300 N	337241	878389	GW	01	13 1.5 15 30 0.85
2600066-2	157 01	6.00 02	140					400 N	337033	878842	GW	04	
2600067	17 31	03		26 1777	AG	GW	3		WESLEY HANSEN				
2600067-1	154 01	6.00 02	60					500 N	365197	863203	GW	01	13 0.8 15 80 0.85
2600067-2	154 01	6.00 02	150					500 N	367017	863768	GW	04	
2600067-3	154 01	6.00 02	290					500 N	365172	864004	GW	04	
2600069	96 12	03		26 1777	AG	GW	10		ASPRING, INC.				
2600069-1	151 01	6.00 02	97					600 N			GW	03	20 0.8 26 2400 0.50
2600069-2	151 01	6.00 02	90					600 N			GW	03	
2600069-3	151 01	6.00 02	90					600 N			GW	03	
2600069-4	151 01	6.00 02	90					600 N			GW	03	
2600069-5	151 01	6.00 02	90					600 N			GW	03	
2600069-6	151 01	6.00 02	90					600 N			GW	03	
2600069-7	151 01	6.00 02	90					600 N			GW	03	
2600069-8	151 01	6.00 02	90					600 N			GW	03	
2600069-9	151 01	6.00 02	90					600 N			GW	03	
2600069-10	151 01	6.00 02	90					600 N			GW	03	
2600069-11	151 01	6.00 02	90					600 N			GW	03	
2600069-12	151 01	6.00 02	90					600 N			GW	03	
2600069-13	151 01	6.00 02	90					600 N			GW	03	

2600069 154.11	03	43.20	02	26 6/87	AG	GW	5	E. C. MILLS	70	0.8	26	350 0.50
2600069-1	175 01	6.00	02	109			N	485966 792261 GW				
2600069-2	175 01	9.00	02	109			N	487153 789469 GW				
2600069-3	175 01	8.00	02	100			N	485985 791163 GW				
2600069-4	175 01	8.00	02	100			N	486061 793976 GW				
2600069-5	175 01	6.00	02	109			500 N	487176 794069 GW				
2600070 525.60	03	43.20	02	26 6/87	AG	GW	19	E. C. MILLS	70	0.8	26	2250 0.50
2600070-1	193 01	9.00	02	100			500 N	479995 785725 GW				
2600070-2	193 01	9.00	02	100			500 N	478576 785480 GW				
2600070-3	193 01	9.00	02	100			500 N	476313 785455 GW				
2600070-4	193 01	9.00	02	100			500 N	473456 785600 GW				
2600070-5	193 01	6.00	02	109	50		500 N	479090 783577 GW				
2600070-6	193 01	9.00	02	100			500 N	480484 781522 GW				
2600070-7	193 01	9.00	02	100			500 N	478725 781726 GW				
2600070-8	193 01	3.00	02	40	20		500 N	476488 781331 GW				
2600070-9	193 01	9.00	02	100			500 N	476092 781837 GW				
2600070-10	193 01	9.00	02	100			500 N	480605 779924 GW				
2600070-11	193 01	9.00	02	100			500 N	478977 783029 GW				
2600070-12	193 01	9.00	02	100			500 N	476405 779916 GW				
2600070-13	175 01	9.00	02	100			500 N	476141 790658 GW				
2600070-14	175 01	9.00	02	100			500 N	480053 788070 GW				
2600070-15	175 01	9.00	02	100			500 N	478478 788054 GW				
2600070-16	175 01	9.00	02	100			500 N	475985 788056 GW				
2600070-17	175 01	9.00	02	100			500 N	473577 788124 GW				
2600070-18	175 01	9.00	02	100			500 N	472948 788590 GW				
2600070-19	175 01	9.00	02	100			500 N	471676 787916 GW				
2600071 123.73	03	1.51	01	26 8/87	AG	GW	8	ALICO	13	0.8	15	269 0.50
2600071-14	154 01	8.00	02	60			750 N	359340 870459 GW				
2600071-15	154 01	8.00	02	60			750 N	359507 869537 GW				
2600071-16	154 01	10.00	02	60			1200 N	359063 871825 GW				
2600071-17	154 01	8.00	02	60			900 N	360398 870318 GW				
2600071-18	154 01	8.00	02	60			1000 N	361210 870366 GW				
2600071-19	154 01	4.00	02	1000			100 N	361231 870133 GW				
2600071-20	154 01	8.00	02	60			900 N	361355 869308 GW				
2600071-21	154 01	8.00	02	60			750 N	361674 869485 GW				
2600071-22	154 01	267.74	02	26 6/87	AG	BOTH	2	1 JOS. HILLIARD	31	0.8	26	1240 0.50
2600071-23	176 01	6.00	02	110			600 N	517263 815638 GW				
2600071-24	176 01	6.00	02	150			600 N	519188 809442 GW				
2600071-25	176 01						10000 N	522150 805500 SW				
2600073 1284.87	03	465.54	02	26 4/88	AG	GW	62	USSC - DEVILS GARDEN CITRUS SOUTH	13	0.8	26	2750 0.50
2600073-13	193 04	6.00	02	120	70		N	459385 772097 GW				
2600073-14	193 04	16.00	02	120	70		N	463078 772171 GW				
2600073-15	193 04	6.00	02	120	70		N	454240 777087 GW				
2600073-16	193 04	6.00	02	120	70		N	459312 779328 GW				
2600073-17	193 04	6.00	02	120	70		N	462601 778189 GW				
2600073-18	193 04	6.00	02	120	70		N	459400 768039 GW				
2600073-19	193 04	6.00	02	120	70		N	463045 764452 GW				
2600073-20	193 04	8.00	02	120	70		N	463965 765436 GW				
2600073-21	193 04	6.00	02	120	70		N	459542 764321 GW				
2600073-22	193 04	6.00	02	120	70		N	462860 763550 GW				
2600073-23	193 04	6.00	02	120	70		N	464226 763519 GW				
2600073-24	193 04	6.00	02	120	70		N	461402 762607 GW				
2600073-25	193 04	6.00	02	120	70		N	460606 770331 GW				

2600087-127	194 01	8.00 02 100	700 K	511271	777622 GW	03	13	0.8	26	3480 0.85
2600087-128	194 01	8.00 02 100	500 K	509507	777536 GW	03	61	0.8	26	1000 0.50
2600087-129	194 01	8.00 02 100	700 K	510401	778037 GW	03	20	0.8	26	3164 0.50
2600087-130	194 01	8.00 02 100	500 K	511115	778418 GW	03				
2600087-5W	194 01		3500 K			SW				
2600087		1480.00 02 26 1/83 RG GW	101	ROBERT E. MCDANIEL, SR.						
2600087-131	208 01	6.00 02 100	600 N	484278	741836 GW	03				
2600087-132	208 01	6.00 02 100	600 N	492689	741854 GW	03				
2600087-133	208 01	6.00 02 100	600 N	499692	740291 GW	03				
2600087-134	208 01	6.00 02 100	600 N	499041	737903 GW	03				
2600087-135	208 01	6.00 02 100	600 N	499993	738093 GW	03				
2600087-136	208 01	6.00 02 100	600 N	494097	740997 GW	03				
2600087-137	208 01	6.00 02 100	600 N	494095	738397 GW	03				
2600087-138	208 01	6.00 02 100	600 N	495472	736793 GW	03				
2600087-139	208 01	6.00 02 100	600 N	494152	734794 GW	03				
2600087-140	208 01	6.00 02 100	600 N	493805	733869 GW	03				
2600087-141	208 01	6.00 02 100	600 N	494605	733900 GW	03				
2600087-142	208 01	6.00 02 100	600 N	494284	732906 GW	03				
2600087-143	208 01	6.00 02 100	600 N	499994	733324 GW	03				
2600087-144	208 01	6.00 02 100	600 N	499800	742750 GW	03				
2600087-145	208 01	6.00 02 100	600 K	497464	761861 GW	03				
2600087-146	193 01	6.00 02 100	600 K	496769	761141 GW	03				
2600087-147	193 01	6.00 02 100	600 K	500021	750735 GW	03				
2600087-148	193 01	6.00 02 100	600 K	491687	761621 GW	03				
2600087-149	193 01	6.00 02 100	600 K	492504	761680 GW	03				
2600087-150	193 01	6.00 02 100	600 K	493369	761735 GW	03				
2600087-151	193 01	6.00 02 100	600 N	494997	761302 GW	03				
2600087-152	193 01	6.00 02 100	600 N	491527	760294 GW	03				
2600087-153	193 01	6.00 02 100	600 N	493372	760212 GW	03				
2600087-154	193 01	6.00 02 100	600 N	494397	760450 GW	03				
2600087-155	193 01	6.00 02 100	600 N	492880	758853 GW	03				
2600087-156	193 01	6.00 02 100	600 N	495658	759005 GW	03				
2600087-157	193 01	6.00 02 100	600 N	499825	754152 GW	03				
2600087-158	193 01	6.00 02 100	600 N	498574	753861 GW	03				
2600087-159	193 01	6.00 02 100	600 K	497231	754619 GW	03				
2600087-160	193 01	6.00 02 100	600 N	495509	757014 GW	03				
2600087-161	193 01	6.00 02 100	600 K	494366	755602 GW	03				
2600087-162	193 01	6.00 02 100	600 K	494942	755078 GW	03				
2600087-163	193 01	6.00 02 100	600 K	492708	754444 GW	03				
2600087-164	193 01	6.00 02 100	600 K	493438	753921 GW	03				
2600087-165	193 01	6.00 02 100	600 K	492167	752521 GW	03				
2600087-166	193 01	6.00 02 100	600 K	498150	751434 GW	03				
2600087-167	193 01	6.00 02 100	600 K	497151	751268 GW	03				
2600087-168	193 01	6.00 02 100	600 K	495676	748944 GW	03				
2600087-169	193 01	6.00 02 100	600 K	494703	749234 GW	03				
2600087-170	193 01	6.00 02 100	600 K	494534	750116 GW	03				
2600087-171	193 01	6.00 02 100	600 K	494606	750910 GW	03				
2600087-172	193 01	6.00 02 100	600 K	492303	751342 GW	03				
2600087-173	193 01	6.00 02 100	600 K	489066	760715 GW	03				
2600087-174	193 01	6.00 02 100	600 K	483492	760452 GW	03				
2600087-175	193 01	6.00 02 100	600 K	483895	760336 GW	03				
2600087-176	193 01	6.00 02 100	600 K	485302	757313 GW	03				
2600087-177	193 01	6.00 02 100	600 K	416391	760645 GW	03				
2600087-178	193 01	6.00 02 100	600 K	418874	760654 GW	03				
2600087-179	193 01	6.00 02 100	600 K	417325	757520 GW	03				

2600087-145	193 01	6.00 02 100	60	600 N	478830	758915 GW	03
2600087-146	193 01	6.00 02 100	60	600 N	476065	756039 GW	03
2600087-147	193 01	6.00 02 100	60	600 N	475537	755596 GW	03
2600087-148	193 01	6.00 02 100	60	600 N	477479	753661 GW	03
2600087-149	193 01	6.00 02 100	60	600 N	481377	753662 GW	03
2600087-150	193 01	6.00 02 100	60	600 N	481252	752789 GW	03
2600087-151	193 01	6.00 02 100	60	600 N	486262	756431 GW	03
2600087-152	193 01	6.00 02 100	60	600 N	487775	756794 GW	03
2600087-153	193 01	6.00 02 100	60	600 N	488567	753970 GW	03
2600087-154	193 01	6.00 02 100	60	600 N	486273	752170 GW	03
2600087-155	193 01	6.00 02 100	60	600 N	491126	747831 GW	03
2600087-156	193 01	6.00 02 100	60	600 N	492357	747542 GW	03
2600087-157	193 01	6.00 02 100	60	600 N	490276	75126 GW	03
2600087-158	193 01	6.00 02 100	60	600 N	488431	753344 GW	03
2600087-159	193 01	6.00 02 100	60	600 N	486278	749100 GW	03
2600087-160	193 01	6.00 02 100	60	600 N	483822	749812 GW	03
2600087-161	193 01	6.00 02 100	60	600 N	475351	753823 GW	03
2600087-162	193 01	6.00 02 100	60	600 N	476411	747338 GW	03
2600087-163	193 01	6.00 02 100	60	600 N	478386	746991 GW	03
2600087-164	193 01	6.00 02 100	60	600 N	479452	742733 GW	03
2600087-165	193 01	6.00 02 100	60	600 N	483403	743615 GW	03
2600087-166	193 01	6.00 02 100	60	600 N	485275	742350 GW	03
2600087-167	193 01	6.00 02 100	60	600 N	486275	742113 GW	03
2600087-168	193 01	6.00 02 100	60	600 N	487373	742139 GW	03
2600087-169	193 01	6.00 02 100	60	600 N	487308	743417 GW	03
2600087-170	193 01	6.00 02 100	60	600 N	491291	742704 GW	03
2600087-171	193 01	6.00 02 100	60	600 N	494114	745314 GW	03
2600087-172	193 01	6.00 02 100	60	600 N	498115	745830 GW	03
2600087-173	193 01	6.00 02 100	60	600 N	498068	743487 GW	03
2600087-174	193 01	6.00 02 100	60	600 N	496827	742866 GW	03
2600087-96	194 01	6.00 02 100	60	600 N	505391	762150 GW	03
2600087-97	194 01	6.00 02 100	60	600 N	504977	761071 GW	03
2600087-98	194 01	6.00 02 100	60	600 N	504977	758862 GW	03
2600087-99	194 01	6.00 02 100	60	600 N	504937	757189 GW	03
2600087-100	194 01	6.00 02 100	60	600 N	505723	757179 GW	03
2600087-101	194 01	6.00 02 100	60	600 N	506369	757260 GW	03
2600087-102	194 01	6.00 02 100	60	600 N	505559	753917 GW	03
2600087-103	194 01	6.00 02 100	60	600 N	505806	752678 GW	03
2600087-104	194 01	6.00 02 100	60	600 N	500823	756865 GW	03
2600087-105	194 01	6.00 02 100	60	600 N	503380	751682 GW	03
2600087-106	194 01	6.00 02 100	60	600 N	505414	752018 GW	03
2600087-107	194 01	6.00 02 100	60	600 N	505735	751517 GW	03
2600087-108	194 01	6.00 02 100	60	600 N	505187	749527 GW	03
2600087-109	194 01	6.00 02 100	60	600 N	503176	748991 GW	03
2600087-110	194 01	6.00 02 100	60	600 N	500081	750626 GW	03
2600087-111	194 01	6.00 02 100	60	600 N	500169	742808 GW	03
2600087-112	194 01	6.00 02 100	60	600 N	502331	744592 GW	03
2600087-113	194 01	6.00 02 100	60	600 N	504595	745158 GW	03
2600087-114	194 01	6.00 02 100	60	600 N	504783	744119 GW	03
2600087-115	194 01	6.00 02 100	60	600 N	503215	736674 GW	03
2600087-13	209 01	6.00 02 100	60	600 N	504405	737530 GW	03
2600087-14	209 01	6.00 02 100	60	600 N	505546	736544 GW	03
2600087-15	209 01	6.00 02 100	60	600 N			

2600088 323.77 33 31.18 02 26 7/87 AG GW 2 S. C. FRY 20 0.8 76 320 0.50

2600088-29 208 01 8.00 02 120 1200 N 484255 730321 GW 03

2600088-30 208 01 8.00 02 120 1200 N 484342 727190 GW 03

2600089 173.67 33 26 11/77 AG GW 2 CROOKS RANCH 20 0.8 76 800 0.50

2600394-5	209 03	U2			517157	740716	GN	03
2600394-6	209 03	02			517376	737182	GN	03
2600394-7	209 03	02			515228	737135	GN	03
2600394-8	209 03	02			517199	738146	GN	03
2600394-9	209 03	02			509247	738309	GN	03
2600394-10	209 03	02			508653	735362	GN	03
2600394-11	209 03	02			508853	732513		
2600394-12	209 03	10.00 02	120	80	518850	740787	GN	03
2600394-13	209 03	10.00 02	120	80	520547	740821	GN	03
2600394-14	209 03	10.00 02	120	80	522745	740846	GN	03
2600394-15	209 03	10.00 02	120	80	519465	737448	GN	03
2600394-16	209 03	10.00 02	120	80	521928	737467	GN	03
2600394-17	209 03	10.00 02	120	80	525077	737692	GN	03
2600394-18	209 03	10.00 02	120	80	527392	737738	GN	03
2600394-19	209 03	10.00 02	120	80	513361	731854	GN	03
2600394-20	209 03	10.00 02	120	80	516401	732081	GN	03
2600394-21	209 03	10.00 02	120	80	515721	734911	GN	03
2600394-22	209 03	10.00 02	120	80	517620	735000	GN	03
2600394-23	209 03	10.00 02	120	80	520445	734884	GN	03
2600394-24	209 03	10.00 02	120	80	522801	734881	GN	03
2600394-25	209 03	10.00 02	120	80	517745	732008	GN	03
2600394-26	209 03	10.00 02	120	80	520667	732436	GN	03
2600394-27	209 03	10.00 02	120	80	522783	732403	GN	03
2600394-28	209 03	10.00 02	120	80	524745	735214	GN	03
2600394-29	209 03	10.00 02	120	80	526496	735137	GN	03
2600394-30	209 03	10.00 02	120	80	524852	732578	GN	03
2600394-31	209 03	10.00 02	120	80	526598	732551	GN	03
2600394-32	209 03	10.00 02	120	80	529694	732513	GN	03
2600394-33	209 03	10.00 02	120	80	509155	729048	GN	03
2600394-34	209 03	10.00 02	120	80	512234	729123	GN	03
2600394-35	209 03	10.00 02	120	80	508556	726995	GN	03
2600394-36	209 03	10.00 02	120	80	511367	726964	GN	03
2600394-37	209 03	10.00 02	120	80	516622	729330	GN	03
2600394-38	209 03	10.00 02	120	80	516938	729346	GN	03
2600394-39	209 03	10.00 02	120	80	512757	726912	GN	03
2600394-40	209 03	10.00 02	120	80	515049	726941	GN	03
2600394-41	209 03	10.00 02	120	80	517394	726958	GN	03
2600394-42	209 03	10.00 02	120	80	519207	723667	GN	03
2600394-43	209 03	10.00 02	120	80	521766	729802	GN	03
2600394-44	209 03	10.00 02	120	80	521862	727487	GN	03
2600394-45	209 03	10.00 02	120	80	523238	729141	GN	03
2600394-46	209 03	10.00 02	120	80	525324	729161	GN	03
2600394-47	209 03	10.00 02	120	80	521593	729559	GN	03
2600394-48	209 03	10.00 02	120	80	523236	727583	GN	03
2600394-49	209 03	10.00 02	120	80	525681	727503	GN	03
2600394-50	209 03	10.00 02	120	80	527665	727331	GN	03
2600394-51	209 03	10.00 02	120	80	531274	729613	GN	03
2600394-52	209 03	10.00 02	120	80	530984	727520	GN	03
2600394-53	209 03	10.00 02	120	80	532710	727364	GN	03
2600394-54	209 03	10.00 02	120	80	513860	724660	GN	03
2600394-55	209 03	10.00 02	120	80	513927	721605	GN	03
2600394-56	209 03	10.00 02	120	80	516630	721537	GN	03
2600394-57	209 03	10.00 02	120	80	519093	724785	GN	03
2600394-58	209 03	10.00 02	120	80	521784	724672	GN	03
2600394-59	209 03	10.00 02	120	80	519053	721885	GN	03
2600394-60	209 03	10.00 02	120	80	521552	721898	GN	03
2600394-61	209 03	10.00 02	120	80	523206	724850	GN	03
2600394-62	209 03	10.00 02	120	80				
2600394-63	209 03	10.00 02	120	80				
2600394-64	209 03	10.00 02	120	80				
2600394-65	209 03	10.00 02	120	80				
2600394-66	209 03	10.00 02	120	80				

2600094-62	209 03	10.00 02	120	80	450	525509	724886	GW	03
2600094-63	209 03	10.00 02	120	80	450	526044	724926	GW	03
2600094-64	209 03	10.00 02	120	80	450	526316	721550	GW	03
2600094-65	209 03	10.00 02	120	80	450	526701	721518	GW	03
2600094-66	209 03	10.00 02	120	80	450	528127	721651	GW	03
2600094-67	209 03	10.00 02	120	80	450	530959	724738	GW	03
2600094-68	209 03	10.00 02	120	80	450	533155	724858	GW	03
2600094-69	209 03	10.00 02	120	80	450	531003	721610	GW	03
2600094-70	209 03	10.00 02	120	80	450				
2600095-4	153 01	6.00 02	780		50 N	332626	878630	GW	08
2600095-5	153 02	8.00 02	60	20	250 N	332991	878339	GW	03
2600095-6	153 02	8.00 02	60	20	250 N	333012	877562	GW	03
2600095-5W	153 03	8.00 02	60	20	250	332550	877500	SW	
2600098-57	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-58	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-59	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-60	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-61	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-62	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-63	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-64	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-65	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-66	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-67	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-68	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-69	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-70	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-71	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-73	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-74	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-75	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-78	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-79	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-80	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-81	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-82	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-83	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-84	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-85	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-86	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-87	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-88	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-89	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-90	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-91	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-92	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-93	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-94	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-96	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-102	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-103	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-105	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-109	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-110	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-112	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-113	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-147	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-148	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-161	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-173	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
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2600098-175	03	53.61	02	26 10/31	AG	80TH	3	1 R. C. MILLS	
2600098-176	03	53.61	02	26 10/31	AG	80TH	3	1	

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2600108-50	175 01	6.00 02	80	N	478719	736345	OK	03
2600108-51	175 01	6.00 02	80	N	477768	803704	OK	03
2600108-52	175 01	6.00 02	80	N	475752	854637	OK	03
2600108-53	175 01	6.00 02	80	N	478823	805025	OK	03
2600108-54	175 01	6.00 02	80	N	475897	808632	OK	03
2600108-55	175 01	6.00 02	80	N	475843	808838	OK	03
2600108-56	175 01	6.00 02	80	N	475985	807987	OK	03
2600108-57	175 01	6.00 02	80	N	479459	815188	OK	03
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2600108-66	175 01	6.00 02	80	N	473263	802057	OK	03
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2600108-75	175 01	6.00 02	80	N	469595	818004	OK	03
2600108-76	175 01	6.00 02	80	N	470536	821233	OK	03
2600108-77	175 01	6.00 02	80	800 N	469173	796457	OK	03
2600108-78	175 01	6.00 02	80	N	468368	801661	OK	03
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2600108-82	175 01	6.00 02	80	800 N	468081	813849	OK	03
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2600108-88	174 01	6.00 02	80	800 N	453491	796851	OK	03
2600108-89	174 01	6.00 02	80	800 N	457688	799141	OK	03
2600108-90	174 01	6.00 02	80	800 N	458293	811266	OK	03
2600108-91	174 01	6.00 02	80	600 N	452591	803268	OK	03
2600108-92	174 01	6.00 02	80	800 N	449582	801416	OK	03
2600108-93	174 01	6.00 02	80	800 N	451170	802132	OK	03
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2600108-98	174 01	6.00 02	80	N	446827	804761	OK	03
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2600108-101	174 01	6.00 02	80	N	442696	813456	OK	03
2600108-102	174 01	6.00 02	80	378 N	441362	795660	OK	03
2600108-103	174 01	6.00 02	80	800 N	441061	798419	OK	03
2600108-104	174 01	6.00 02	80	800 N	439637	798921	OK	03
2600108-105	174 01	6.00 02	80	800 N	439488	797811	OK	03
2600108-106	174 01	6.00 02	80	N	442029	812193	OK	03

2600108-28	174 01	6.00 02	80	N	441841	803799	GW	03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</
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2600:12-19	206 01	9.00 02 49	415774	723421	GW 03
2600:12-20	206 01	8.00 02 42	416316	722261	GW 03
2600:12-21	206 01	9.00 02 67	415329	720621	GW 03
2600:12-22	206 01	8.00 02 47	413105	721125	GW 03
2600:12-23	206 01	6.00 02 51	412927	719774	GW 03
2600:12-24	206 01	6.00 02 58	417366	722064	GW 03
2600:12-25	206 01	9.00 02 52	417395	720986	GW 03
2600:12-26	192 01	8.00 02 61	424993	759746	GW 03
2600:12-27	192 01	6.00 02 66	424726	757279	GW 03
2600:12-28	192 01	6.00 02 82	425830	757868	GW 03
2600:12-29	192 01	6.00 02 86	425393	758858	GW 03
2600:12-30	192 01	6.00 02 63	426792	758701	GW 03
2600:12-31	192 01	6.00 02 40	431528	756558	GW 03
2600:12-32	192 01	2.00 02	433196	757322	GW 03
2600:12-33	192 01	2.00 02	429540	760581	GW 03
2600:12-34	192 01	8.00 02 52	423414	755243	GW 03
2600:12-35	192 01	2.00 02	420076	759211	GW 03
2600:12-36	192 01	8.00 02 49	419334	757521	GW 03
2600:12-37	192 01	8.00 02 61	428056	754213	GW 03
2600:12-38	192 01	8.00 02 60	431829	767400	GW 03
2600:12-39	192 01	8.00 02 62	427980	764465	GW 03
2600:12-40	192 01	9.00 02 61	430532	762645	GW 03
2600:12-41	192 01	8.00 02 47	421884	759233	GW 03
2600:12-42	207 01	8.00 02 51	418177	722698	GW 03
2600:12-43	207 01	6.00 02 149	413151	723154	GW 03
2600:12-44	207 01	4.00 02 45	421004	720936	GW 03
2600:12-45	207 01	10.00 02 91	420102	719907	GW 03
2600:12-46	207 01	8.00 02 76	418176	719103	GW 03
2600:12-47	207 01	10.00 02 52	422323	721058	GW 03
2600:12-48	207 01	8.00 02 57	425862	720718	GW 03
2600:12-49	207 01	8.00 02 58	431655	723888	GW 03
2600:12-50	207 01	8.00 02 50	432731	725043	GW 03
2600:12-51	207 01	8.00 02 52	433275	723581	GW 03
2600:12-52	207 01	8.00 02 79	438534	723462	GW 03
2600:12-53	207 01	8.00 02 73	439839	723586	GW 03
2600:12-54	207 01	8.00 02 57	440124	722600	GW 03
2600:12-55	207 01	8.00 02 77	441493	720907	GW 03
2600:12-56	207 01	6.00 02 78	435538	722950	GW 03
2600:12-57	207 01	6.00 02 64	438341	720673	GW 03
2600:12-58	207 01	9.00 02 64	440111	720604	GW 03
2600:12-59	207 01	6.00 02 65	440824	720844	GW 03
2600:12-60	207 01	8.00 02 76	442149	719548	GW 03
2600:12-61	207 01	6.00 02 70	439008	719576	GW 03
2600:12-62	207 01	6.00 02 60	442067	716916	GW 03
2600:12-63	207 01	6.00 02 58	442400	717412	GW 03
2600:12-64	207 01	8.00 02 65	440596	716259	GW 03
2600:12-65	207 01	8.00 02 66	439837	715917	GW 03
2600:12-66	207 01	8.00 02 64	441532	716209	GW 03
2600:12-67	207 01	6.00 02 64	439786	714452	GW 03
2600:12-68	207 01	8.00 02 54	435235	718985	GW 03
2600:12-69	207 01	8.00 02 53	435428	717110	GW 03
2600:12-70	207 01	8.00 02 46	433307	714676	GW 03
2600:12-71	207 01	8.00 02 67	429933	715588	GW 03
2600:12-72	207 01	8.00 02 67	428232	715308	GW 03
2600:12-73	207 01	6.00 02 66	430286	714666	GW 03
2600:12-74	207 01	8.00 02 61	432853	717934	GW 03
2600:12-75	207 01	9.00 02 63	433747	718270	GW 03
2600:12-76	207 01	9.00 02 63	436490	719367	GW 03

2600112-50	207 01	9.00 02	63	43958	73761	GW	03				
2600112-51	207 01	8.00 02	44	445124	733896	GW	03				
2600112-52	207 01	6.00 02	30	444168	730597	GW	03				
2600112-53	207 01	8.00 02	34	445940	731651	GW	03				
2600112-54	207 01	8.00 02	39	447753	730507	GW	03				
2600112-55	207 01	9.00 02	61	447630	731884	GW	03				
2600112-56	207 01	9.00 02	60	439745	729655	GW	03				
2600112-57	207 01	8.00 02	58	438077	729009	GW	03				
2600112-58	207 01	9.00 02	60	442056	729257	GW	03				
2600112-59	207 01	10.00 02	78	433896	727615	GW	03				
2600112-60	207 01	8.00 02	54	442210	727588	GW	03				
2600112-61	207 01	8.00 02	116	438779	727299	GW	03				
2600112-62	207 01	8.00 02	101	438223	726380	GW	03				
2600112-63	207 01	8.00 02	74	441277	726344	GW	03				
2600112-64	207 01	8.00 02	77	438270	725596	GW	03				
2600112-65	207 01	6.00 02	62	435285	727403	GW	03				
2600112-66	207 01	8.00 02	61	428910	726192	GW	03				
2600112-67	207 01	8.00 02	61	431321	725920	GW	03				
2600114	27.72	46	26 11/87 AG	GN	3			13	1.5	15	82 0.83
2600114-1	153 01	4.00 02		SCHELEY CITRUS	878121	GW	08				
2600114-2	153 01	6.00 02	33	335957	877907	GW	01				
2600114-3	153 01	4.00 02	180	335664	878083	GW	04				
2600115	249.11	83	26 9/78 AG	BOTH	30 Y			20	0.8	26	18000 0.50
2600115-1	176 01	6.00 02		506546	828599	GW	03	61	0.8	26	600 0.50
2600115-2	176 01	6.00 02		507057	831074	GW	03	53	0.8	26	900 0.50
2600115-3	176 01	6.00 02		506295	831070	GW	03				
2600115-4	176 01	8.00 02		506780	831780	GW	03				
2600115-5	176 01	8.00 02		501502	831750	GW	03				
2600115-6	176 01	6.00 02		512016	829706	GW	03				
2600115-7	176 01	6.00 02		511416	831715	GW	03				
2600115-8	176 01	6.00 02		513753	831811	GW	03				
2600115-9	176 01	8.00 02		514458	832423	GW	03				
2600115-10	176 01	6.00 02		511300	832414	GW	03				
2600115-11	176 01	6.00 02		497610	847250	GW	03				
2600115-12	176 01	6.00 02		495061	847282	GW	03				
2600115-13	176 01	8.00 02		496235	845628	GW	03				
2600115-14	176 01	8.00 02		499249	843695	GW	03				
2600115-15	176 01	8.00 02		498671	845126	GW	03				
2600115-16	176 01	6.00 02		491743	845941	GW	03				
2600115-17	176 01	6.00 02		491636	844341	GW	03				
2600115-18	176 01	6.00 02		495162	843592	GW	03				
2600115-19	176 01	6.00 02		498341	840067	GW	03				
2600115-20	176 01	6.00 02		499788	840274	GW	03				
2600115-21	176 01	6.00 02		498261	840789	GW	03				
2600115-22	176 01	6.00 02		496889	840754	GW	03				
2600115-23	176 01	6.00 02		496239	840762	GW	03				
2600115-24	176 01	6.00 02		495522	840784	GW	03				
2600115-25	176 01	6.00 02		495430	838452	GW	03				
2600115-26	176 01	6.00 02		496162	838447	GW	03				
2600115-27	176 01	6.00 02		496342	838442	GW	03				
2600115-28	176 01	6.00 02		497771	838491	GW	03				
2600115-29	176 01	6.00 02		498499	838604	GW	03				
2600115-30	176 01	6.00 02		499689	838914	GW	03				
2600115-31	176 01	6.00 02									

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2600143-148	194 02	12.00 02	120	110	2400 N	503280	768279	GN	03				
2600144-149	194 02	12.00 02	120	110	2400 N	503256	763843	GN	03				
2600145-150	194 02	12.00 02	120	110	2400 N	504983	774432	GN	03				
2600146-SW1	03				20000 N	493540	790120						
2600147-SW12	03				15000 N	493540	782860						
2600148-SW13	03				15000 N	492003	764840						
2600149-SW11	03				15000 N	492003	773560						
2600151-SW25	03				15000 N	506740	774610						
2600152-SW7	03				15000 N	492200	774280						
2600153-SW32	03				8000 N	490900	762500						
2600154-SW14	03				10000 N	490900	494250						
2600155-SW24	03				20000 N	506740	773600						
2600156-SW22	03				20000 N	506740	783160						
2600157-SW19	03				15000 N	506740	790120						
2600144	03	5.67	02	26 7/87	AG	GW	02			13	0.8	15	34 2.85
2600144-4	154 01	8.00 02	140	80	180 N	424897	870274	GW	03				
2600144-5	154 01	8.00 02	16	5		424632	870187	GW	03				
2600144-6	154 01	8.00 02	16	5		424488	870070	GW	03				
2600145	03	1.62	02	26 8/87	AG	GW							
2600146-60	194 01	6.00 02	60	40	192 N	530494	757219	GW	03				
2600146-81	194 01	6.00 02	50	30	192 N	530808	747293	GW	03				
2600146-12	209 01	6.00 02	50	30	101 N	530801	736637	GW	03				
2600148	03	10.90	02	26 4/87	AG	BOTH				13	0.8	15	39 0.50
2600148-43	03				3	1 K-BOB, INC.							
2600148-49	154 01	2.00 02	22			361264	847023	GW	03				
2600148-50	154 01	6.00 02	16			362060	847223	GW	03				
2600148-51	154 01	6.00 02	18			362070	846819	GW	03				
2600148-SW	154 01				2000	360400	847900	SW					
2600150	03	94.98	02	26 5/82	AG	GW				20	0.8	26	400 0.50
2600150-31	208 01	8.00 02			2	FRED BARFIELD							
2600150-91	207 01	8.00 02				462282	702515	GN	03				
						456925	702241	GN	03				
2600151	03	667.00	02	26 8/88	AG	GW				20	0.5	15	190 0.50
2600151-52	154 01	6.00 02	150		1000 N	359736	845115	GW	04	61	0.8	15	300 0.50
2600151-53	154 01	8.00 02	150		1250 N	368581	843890	GW	04				
2600151-54	154 01	8.00 02	150		1250 N	368711	841175	GW	04				
2600151-55	154 01	8.00 02	150		1000 N	375861	845112	GW	04				
2600151-56	154 01	9.00 02	150		1450 N	374387	841167	GW	04				
2600151-123	154 02	12.00 02	200		150 N	360761	844375	GW	04				
2600151-124	154 02	12.00 02	200		150 N	362055	845227	GW	04				
2600151-125	154 02	12.00 02	200		150 N	360797	845271	GW	04				
2600152	03	401	01	26 4/87	AG	BOTH				13	0.8	15	11 0.85
2600152-64	154 01	10.00 02	40		100 N	365087	843357	GW	03				
2600152-65	154 01	6.00 02	140		250 N	347080	835852	GW	04				
2600152-SW	154 01				800 N	349550	874903	SW					
2600157	03	11.51	02	26 9/87	AG	BOTH				13	0.8	15	40 0.50
2600157-13	172 01	3.30 02	60	40	1	3 PAUL MIDILL & K. T. JOHNS							
2600157-SW	172 01				200 N	352329	807318	GN	03				
					6000 N	353356	809253	SW					
2600158	03	1.80	01	26 8/87	AG	BOTH				13	0.8	15	314 0.85
2600158-93	154 01	6.00 02	40	20	4	3 L. J. NOBLES							
2600158-96	154 01	6.00 02	40	20	01	351417	876974	GW	01				
					600 N	353072	874900	GW	01				

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2600159-01	1/1/01	8.00	02	125	65 -52 02	297 Y	316716	822663	OW	04		
2600159-02	1/1/01	8.00	02	125	85 -32 02	446 Y	318835	821910	OW	04		
2600159-03	1/1/01	8.00	02	110	80 -35 02	467 Y	315542	820163	OW	04		
2600159-04	1/1/01	8.00	02	240	155 -90 02	606 Y	316320	805544	OW	04		
2600159-05	1/1/01	12.00	02	234	158 -90 02	234 Y	320283	804563	OW	04		
2600159-06	1/1/01	12.00	02	230	159 -90 02	748 Y	317685	798801	OW	04		
2600159-07	1/1/01		02				0					
2600159-08	1/1/01	8.00	02	106	56 -90	236 Y	317496	801601	OW	04		
2600159-09	1/1/01		02				324969	803227	OW	04		
2600159-10	1/1/01	12.00	02	105	60 -38	310 Y	326135	808257	OW	04		
2600159-11	1/1/01	8.00	02	140	85 -90 02	280 Y	326107	807677	OW	04		
2600161	2/29/98	03	84.64	02	26 7/87 AG	2	R. B. GROVES			13	0.8	15
2600161-1	2/29/98	207 01	10.00	02	160 02	1000 N	316750	816750	OW	04		500 0.85
2600161-2	2/29/98	207 02	10.00	02	160 02	1000 N	318250	816750	OW	04		
2600162	94.14	03	35.97	02	26 7/87 AG	2	A. B. CURRY			13	0.8	26
2600162-35	2/29/98	207 01	8.00	02	55 42	800 N	431141	707413	OW	03		125 0.50
2600162-36	2/29/98	207 01	8.00	02	55 42	800 N	431095	705351	OW	03		
2600170	3/9/00	03	139.58	02	26 5/87 AG	4 2	DAYROCK INVESTMENT	CO. LUIS PERVIC	OW	13	3.6	26
2600170-02	2/29/98	194 01	8.00	02	105 85 -70	300 N	531200	781600	OW	03		485 0.50
2600170-03	2/29/98	194 01	8.00	02	95 85 -70	300 N	535180	781600	OW	03		
2600170-04	2/29/98	194 01	8.00	02	85 85 -70	300 N	537160	781600	OW	03		
2600170-05	2/29/98	194 01	8.00	02	95 85 -70	300 N	538140	781600	OW	03		
2600171	34.50	03	423	01	26 2/88 AG	3	BOWMAN BROTHERS			13	1.5	15
2600171-13	2/29/98	193 01	10.00	02	100 02	225 Y	335800	872500	OW	04		75 0.85
2600171-16	2/29/98	193 01	6.00	02	20 01	225 Y	336500	871850	OW	01		
2600171-17	2/29/98	193 01	6.00	02	20 01	225 Y	336400	872700	OW	01		
2600174	358.2	03	518.26	02	26 AG	38	2 A.L.L.C.O			CANE	0.8	15
2600174-1	2/29/98	196 02	12.00	02	250	1000			OW	04		2663 0.50
2600174-2	2/29/98	196 02	12.00	02	250	1000			OW	04		2663 0.85
2600174-3	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-4	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-5	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-6	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-7	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-8	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-9	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-10	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-11	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-12	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-13	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-14	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-15	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-16	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-17	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-18	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-19	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-20	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-21	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-22	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-23	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-24	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-25	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-26	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-27	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-28	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-29	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-30	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-31	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-32	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-33	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-34	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-35	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-36	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-37	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-38	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-39	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-40	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-41	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-42	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-43	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-44	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-45	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-46	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-47	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-48	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-49	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-50	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-51	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-52	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-53	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-54	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-55	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-56	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-57	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-58	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-59	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-60	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-61	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-62	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-63	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-64	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-65	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-66	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-67	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-68	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-69	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-70	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-71	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-72	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-73	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-74	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-75	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-76	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-77	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-78	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-79	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-80	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-81	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-82	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-83	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-84	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-85	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-86	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-87	2/29/98	196 02	12.00	02	250	1000			OW	04		
2600174-88	2/29/98	196 02	12.00	02	2							

[illegible]

HUNTER COUNTY CODED AREA WATER USE

LINE 1: NPAD/RGS (Table 1 - Existing Water Use - Permit Information and Table 2 - Forecasted Agricultural Demand for Each Permit)

PERMIT	AK.	ALL.	MAX	MO.	DATE	USE	SRC.NO.	SW	CROSSOIL	RAIN	IRR	CR
NO.	ALL.	UKT.	MO.	UTS.	CO	ISS.	TYPE	WLS.	PMPS	CWKR	ACRES	EFF
										ST		

TABLE 2. HIGHLIGHTS (Table 1) - Existing Water Use - Facilities Information for Each Permit

PERMIT NO.	FACILITY NUMBER	QUAD NO.	WELL DIA.	DEPTH	CD	INT TYPE	PUMP CAP.	PUMP MTR?	YFENR	SRC	AO.	COMMENTS
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2600259	31	1.22	4	AG GW	4	RIVER ROAD GROVES	19	0.8	15	199	6.85
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2600217	32.10	03	5.37	02	26	5/05	AG	GW	1	JULIAN HOWARD	13	0.8	1.5	32	0.35
2600217-46		154	02	12.00	02	30	20	01	N	362838	853273	GW	CI		

2600220	3.29	C5	.274	02	26	6/85	AG	GW	21	RICHARD ROBERTS
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[illegible]

2600271	635.30	03	233.79	02	26	6187	AG	GW	39	30 MAR E1, C1130S	13	C.E	15	1381	0.83	
2600272-56		172	02		90			01	N	338222	806238	GW	03			

2600266-129	192 01	8.00 02	98	N	419100	763918	GW	03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												</
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2600270-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-	02	12.00	02	250	1200	GW	04	
2600271-SW	02	12.00	02	250	9000	SW		
2600271-SW	02				5200	SW		
2600273 61.19	03	17.14	02	26 9/87	AG	GW		
2600273					3			
2600273-133	154 01	10.00	02	205	760 N	362312	841261	04
2600273-134	154 01	10.00	02	22	400 N	362385	841273	04
2600273-135	154 01	10.00	02	205	760 N	363446	846186	04
2600274 20.10	03	25.4	01	26 9/87	AG	GW		
2600274-82	134 02	10.00	02	150	1000	372806	881217	04
2600274-83	134 02	10.00	02	150	1000	372855	881618	04
2600277 234.5E	03	86.34	02	26 10/87	AG	GW		
2600277-45	172 02	12.00	02	200	420 N	338765	813190	04
2600277-46	172 02	12.00	02	200	425 N	338080	811812	04
2600277-47	172 02	12.00	02	200	465 N	338065	810550	04
2600277-48	172 02	12.00	02	200	550 N	339268	808852	04
2600277-49	172 02	12.00	02	200	500 N	341436	811270	04
2600278 215.81	03	2.65	01	26 12/88	AG	GW		
2600278-50	154 01	8.00	02	150	1250 N	373024	839787	04
2600278-58	154 01	8.00	02	150	1250 N	375047	840423	04
2600278-59	154 01	8.00	02	150	1250 N	373086	838055	04
2600278-60	154 01	8.00	02	150	1250 N	375418	837763	04
2600278-61	154 01	8.00	02	150	1000 N	373106	835745	04
2600278-62	154 01	8.00	02	150	1250 N	374854	835833	04
2600278-63	154 01	8.00	02	150	1250 N	376077	835753	04
2600279 592.25	03	199.60	02	26 10/87	AG	BOTH		
2600279-126	172 02	8.00	02	240	600 N	337933	794078	04
2600279-127	172 02	8.00	02	240	600 N	338011	792717	04
2600279-128	172 02	8.00	02	240	600 N	341660	793542	04
2600279-129	172 02	8.00	02	240	600 N	345252	796690	04
2600279-SW	172				1000 N	399299	854351	SW
2600279-SW	172				3000 N	399379	848999	SW
2600281 200.54	03	73.81	02	26 1/88	AG	GW		
2600281-122	171 02	10.00	02	260	420 Y	321820	796484	04
2600281-123	171 02	10.00	02	260	415 Y	324721	796526	04
2600281-124	171 02	10.00	02	260	532 Y	321831	795916	04
2600281-125	171 02	10.00	02	260	426 Y	322958	796469	04
2600281-126	171 02	10.00	02	260	527 Y	322328	793141	04
2600281-127	171 02	10.00	02	260	422 Y	326034	794091	04

2600282	515.15	C3	189.60	02	26	12/88	AG	GW	11	USSC - DEVIL'S GARDEN CITRUS NORTH	13	0.8	26	1120 0.85
2600282-200	193 02	10.00 02	100	60	600	47357	763117	GW	03					
2600282-201	193 02	10.00 02	100	60	600	471064	774238	GW	03					
2600282-202	193 02	10.00 02	100	60	600	473370	774329	GW	03					
2600282-203	193 02	10.00 02	100	60	600	471225	776488	GW	03					
2600282-204	193 02	10.00 02	100	60	600	473485	776608	GW	03					
2600282-205	193 02	10.00 02	100	60	600	471157	779119	GW	03					
2600282-206	193 02	10.00 02	100	60	600	473378	779180	GW	03					
2600282-207	193 02	10.00 02	100	60	600	471100	781556	GW	03					
2600282-208	193 02	10.00 02	100	60	600	473543	781591	GW	03					
2600282-209	193 02	10.00 02	100	60	600	473642	784815	GW	03					
2600282-210	193 02	10.00 02	100	60	600	473070	786915	GW	03					
2600293	163.77	03	36.68	02	26	12/88	AG	BOTH	1 Y	OSCAR TOWERS	20	0.8	15	127 0.50
2600293-9	156 01	8.00 02	25	15	500	434615	876841	GW	01		13	0.8	15	78 0.50
2600293-SW	156							SW						
2600294	43.70	03	16.08	03	26	3/88	AG	GW	1 Y	T. C. & C. M. PERRY	13	0.8	15	95 0.85
2600294-14	137 01	10.00 02	35		819 N	421300	881000	GW	01					
2600297	15.64	03	1.92	01	26	4/88	AG	GW	1 Y	JACKIE D. CORBIETT	13	1.5	15	34 0.85
2600297-52	153 01	6.00 02	100	65	150 N	324955	871486	GW	04					
2600300	1294.51	03	476.18	03	26	1/89	AG	GW	54	COLLIER ENTERPRISES - CROW'S NEST	13	0.8	26	2816 0.85
2600300-36	192 01	8.00 02	49		54	438402	758383	GW	03					
2600300-37	192 01	8.00 02	47			438418	758070	GW	03					
2600300-38	192 01	8.00 02	48			438418	757570	GW	03					
2600300-39	192 01	8.00 02	48			438532	757130	GW	03					
2600300-40	192 01	8.00 02	50			440035	760460	GW	03					
2600300-41	192 01	20.00 02	91			440018	759106	GW	03					
2600300-42	192 01	8.00 02	52			441398	759753	GW	03					
2600300-43	192 01	8.00 02	51			441400	758845	GW	03					
2600300-44	192 01	8.00 02	37			441418	757692	GW	03					
2600300-45	192 01	8.00 02	42			441958	759963	GW	03					
2600300-46	192 01	8.00 02	51			435540	751806	GW	03					
2600300-47	192 01	8.00 02	60			436325	747380	GW	03					
2600300-48	192 01	6.00 02	65			435251	746328	GW	03					
2600300-49	192 01	9.00 02	62			435181	743741	GW	03					
2600300-50	192 01	9.00 02	62			433723	742229	GW	03					
2600300-51	192 01	6.00 02	102			445642	760007	GW	03					
2600300-52	192 01	6.00 02	84			446982	758192	GW	03					
2600300-53	192 01	8.00 02	51			422523	764387	GW	03					
2600300-54	192 01	8.00 02	56			425984	762504	GW	03					
2600300-55	192 01	1.50 02				427700	765453	GW	03					
2600300-56	192 01	8.00 02	78			430831	765560	GW	03					
2600300-57	192 01	6.00 02	87			421577	764647	GW	03					
2600300-58	192 01	6.00 02	56			429008	763378	GW	03					
2600300-59	192 01	6.00 02	51			431358	764492	GW	03					
2600300-60	192 01	8.00 02	64			431315	763462	GW	03					
2600300-61	192 01	6.00 02	65			431349	762319	GW	03					
2600300-62	192 01	6.00 02	53			431018	761702	GW	03					
2600300-63	192 01	2.00 02				438156	763268	GW	03					
2600300-64	192 01	8.00 02	83			443679	765730	GW	03					
2600300-65	192 01	9.00 02				444544	765621	GW	03					
2600300-66	192 01	8.00 02				447023	765509	GW	03					
2600300-67	192 01	8.00 02	47			441743	763430	GW	03					
2600300-68	192 01	8.00 02	80			444208	762719	GW	03					

2600300-98	192 01	6.00 02							446915	763937	GN	03			
2600300-99	192 01	8.00 02							451818	766080	GN	03			
2600300-100	192 01	8.00 02							448966	765338	GN	03			
2600300-101	192 01	6.00 02							448508	764017	GN	03			
2600300-102	192 01	8.00 02							451571	764181	GN	03			
2600300-103	192 01	6.00 02							451842	762961	GN	03			
2600300-104	192 01	8.00 02							454251	765994	GN	03			
2600300-105	192 01	12.50 02	25						456946	765345	GN	01			
2600300-106	192 01	8.00 02	61						454105	764241	GN	03			
2600300-107	192 01	6.00 02							454727	762996	GN	03			
2600300-108	192 01	12.00 02							456409	764697	GN	03			
2600300-109	192 01	8.00 02							458707	763108	GN	03			
2600300-120	192 02	12.00 02	100					1400	441715	762384	GN	03			
2600300-121	192 02	12.00 02	100					1400	438383	762336	GN	03			
2600300-122	192 02	12.00 02	100					1400	438666	765116	GN	03			
2600300-123	192 02	12.00 02	100					1400	434626	762843	GN	03			
2600300-124	192 02	12.00 02	100					1400	433174	765174	GN	03			
2600300-125	192 02	12.00 02	100					1400	435777	765175	GN	03			
2600300-126	192 02	12.00 02	100					1400	430987	762376	GN	03			
2600300-127	192 02	12.00 02	100					1400	427971	762257	GN	03			
2600300-128	192 02	12.00 02	100					1400	430434	765419	GN	03			
2600310	49.56	03	18.26	02	26	8/88	AG	BOTH	2 Y	WITT BRCS. GROVES	13	0.8	15	108	0.85
2600310-45	156 01	8.00 02							N	431836	811798	GN	03		
2600310-47	156 02	6.00 02	100						800 N	433003	872325	GN	03		
2600310-SW	156														
2600312	32.43	03	11.99	02	26	8/88	AG	GN	1	MADDOX GROVE	13	0.8	15	11	0.85
2600312-126	154 01	9.00 02	200						600 N	367886	846218	GN	04		
2600315	459.95	03	169.29	02	26	8/88	AG	BOTH	22	6 ALICO					
2600315-24	155 02	8.00 02	270	240	02				600 Y	415400	835600	GN	04		
2600315-25	155 02	8.00 02	270	240	02				600 Y	415400	835600	GN	04		
2600315-26	155 02	8.00 02	270	240	02				600 Y	414800	840400	GN	04		
2600315-27	155 02	8.00 02	270	240	02				600 Y	412900	836300	GN	04		
2600315-28	155 02	8.00 02	270	240	02				600 Y	409800	836300	GN	04		
2600315-29	155 02	8.00 02	270	240	02				600 Y	413100	835300	GN	04		
2600315-30	155 02	8.00 02	270	240	02				600 Y	406100	833400	GN	04		
2600315-31	155 02	8.00 02	270	240	02				600 Y	407200	840100	GN	04		
2600315-32	155 02	8.00 02	270	240	02				600 Y	404900	838000	GN	04		
2600315-19	173 02	8.00 02	270	240	02				600 Y	406700	836300	GN	04		
2600315-20	173 02	8.00 02	270	240	02				600 Y	413700	827400	GN	04		
2600315-21	173 02	8.00 02	270	240	02				600 Y	415500	830100	GN	04		
2600315-22	173 02	8.00 02	270	240	02				600 Y	415400	831900	GN	04		
2600315-23	173 02	8.00 02	270	240	02				600 Y	409300	831900	GN	04		
2600315-24	173 02	8.00 02	270	240	02				600 Y	411100	830000	GN	04		
2600315-25	173 02	8.00 02	270	240	02				600 Y	409500	826400	GN	04		
2600315-26	173 02	8.00 02	270	240	02				600 Y	410000	822500	GN	04		
2600315-27	173 02	8.00 02	270	240	02				600 Y	410700	823100	GN	04		
2600315-28	173 02	8.00 02	270	240	02				600 Y	406300	826800	GN	04		
2600315-29	173 02	8.00 02	270	240	02				600 Y	405900	823900	GN	04		
2600315-30	173 02	8.00 02	270	240	02				600 Y	405900	818900	GN	04		
2600315-31	173 02	8.00 02	270	240	02				600 Y	405100	830400	GN	04		
2600315-32	173 02	8.00 02	270	240	02				1000	415600	827600	GN			
2600315-B	02								1000	415600	830800	GN			
2600315-C	02								1000	415500	834300	GN			
2600315-D	02								1200	415500	837800	GN			
2600315-E	02														

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SENTRY COUNTY MOVED AREA WATER USE

LINE 1 READINGS (Table 1 - Existing Water Use - Permit Information and Table 2 - Forecasted Agricultural Demand for Each Permit)

PERMIT NO.	AN.	ALL.	ALT.	MAX	NO.	UTS.	CO	ISS.	TYPE	WLS.	PMPS	OWNER	CROP/SCD.	RAIN	IRR	ACRES	EFF
													TYPE	57			

LINE 2 READINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY	QUAD	WELL	DEPTH	CODE	TD	CD	INT	TYPE	CAP.	MTR?	XPLR	YPLR	SRC	AO.	COMMENTS
	NUMBER	NO.	S75 DIA.													
800002	23930.41	C3	4389.23	C2	8	9/88	AG	GW	62	0	BABCOCK					
800002																
800002																
800002-68	152	C1		02				03				286559	871376	GW	C4	
800002-69	152	C1	6.00	02				03		600	N	283150	874588	GW	C4	
800002-70	152	C1		02	105			03			N	288859	877601	GW	C4	
800002-71	152	C1	6.00	02				03		400	N	289882	878182	GW	C4	
800002-72	152	C1		02				03			N	290215	876491	GW	C4	
800002-73	152	C1		02	70			03			N	291336	874764	GW	C4	
800002-74	152	C1	6.00	02	60			03		450	N	294963	876641	GW	C4	
800002-84	134	C1	8.00	02	60	20		03		650	N	337931	888945	GW	C3	
800002-85	134	C1	8.00	02	60	20		03		650	N	337808	885919	GW	C3	
800002-86	134	C1	8.00	02	60	20		03		650	N	343971	889828	GW	C3	
800002-87	134	C1	8.00	02	60	20		03		650	N	345324	890459	GW	C3	
800002-88	134	C1	8.00	02	60	20		03		650	N	345896	894616	GW	C3	
800002-89	134	C1	8.00	02	60	20		03		650	N	345424	894423	GW	C3	
800002-90	134	C1	8.00	02	13			03		600	N	348104	900700	GW	C1	
800002-91	134	C1	9.00	02				03		800	N	348485	900628	GW	C1	
800002-92	134	C1	8.00	02				03		600	N	347869	899293	GW	C1	
800002-93	134	C1	8.00	02				03		600	N	348079	899210	GW	C1	
800002-94	134	C1	8.00	02				03		600	N	347852	899014	GW	C1	
800002-95	134	C1	8.00	02	460			03		600	N	348095	898961	GW	C1	
800002-96	134	C1	10.00	02	40			03		350	N	348288	906545	GW	C5	
800002-97	134	C1	6.00	02	40			03		400	N	346193	905945	GW	C3	
800002-98	134	C1	6.00	02	40			03		400	N	346079	904422	GW	C3	
800002-99	134	C1	9.00	02				03		700	N	346009	902467	GW	C3	
800002-100	134	C1		02	30			03			N	347827	902567	GW	C3	
800002-101	134	C1	8.00	02	45			03		400	N	0	0	GW	C1	
800002-102	134	C1	9.00	02	100			03		600	N	341550	906461	GW	C3	
800002-103	134	C1	9.00	02	45			03		600	N	341293	905982	GW	C4	
800002-104	134	C1	9.00	02	30			03		600	N	341588	905746	GW	C3	
800002-105	134	C1	9.00	02	600			03		350	N	342018	903753	GW	C3	
800002-106	134	C1	6.00	02				03		300	N	342049	902775	GW	C5	
800002-107	134	C1	8.00	02				03		500	N	341806	902513	GW	C1	
800002-108	134	C1	8.00	02	26			03		200	N	341816	902263	GW	C1	
800002-109	134	C1	8.00	02	570			03		350	N	342282	902243	GW	C3	
800002-110	134	C1	12.00	02	45			03		1000	N	342363	901675	GW	C5	
800002-111	134	C1	9.00	02	34			03		600	N	342692	902143	GW	C3	
800002-112	134	C1	6.00	02	45			03		700	N	340191	906552	GW	C1	
800002-113	134	C1	6.00	02	27			03		600	N	339722	906563	GW	C3	
800002-114	134	C1	6.00	02				03		600	N	338412	906043	GW	C1	

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1100042-58	206 01	8.00 02	300	290	03	500 N	406200	731000 GW	04				
1100042-59	206 01	8.00 02	60	60	03	1000 K	404280	730600 GW	03				
1100042-60	206 01	8.00 02	290	240	03	800 K	404280	731000 GW	04				
1100042-61	206 01	8.00 02	65	58	03	600 K	401200	730600 GW	03				
1100042-62	206 01	8.00 02	79	32	02	1500 N	409800	729600 GW	03				
1100042-63	206 01	8.00 02	90	33	03	1000 K	409800	728400 GW	03				
1100042-64	206 01	8.00 02	90	33	03	1000 K	409800	727800 GW	03				
1100042-65	206 01	8.00 02	315	212	03	800 K	407300	728300 GW	04				
1100042-66	206 01	8.00 02	120	44	03	550 K	406500	728300 GW	03				
1100042-67	206 01	8.00 02	75	20	02	1500 K	411300	727000 GW	03				
1100042-68	206 01	8.00 02	70	20	02	1500 K	409600	727800 GW	03				
1100042-69	206 01	8.00 02	73	40	03	900 N	406500	727000 GW	03				
1100042-70	206 01	8.00 02	80	27	01	1000 K	409600	725300 GW	03				
1100042-71	206 01	8.00 02	300	200	03	500 N	409600	725600 GW	04				
1100042-72	206 01	8.00 02	300	200	03	500 N	408150	725600 GW	04				
1100042-73	206 01	8.00 02	200	100	03	500 K	405500	725600 GW	03				
1100042-74	206 01	10.00 02	90	33	03	1000 K	430150	731950 GW	03				
1100042-75	206 01	10.00 02	90	33	03	1000 K	430150	731400 GW	03				
1100042-76	206 01	10.00 02	90	33	03	1000 K	430400	730800 GW	03				
1100042-77	206 01	10.00 02	90	33	03	1000 K	430400	730000 GW	03				
1100042-78	206 01	10.00 02	90	33	03	1000 N	430400	729400 GW	03				
1100042-79	206 01	10.00 02	90	33	03	1000 N	430400	728600 GW	03				
1100042-80	206 01	13.00 02	45	28	02	1250 N	406900	732700 GW	01				
1100042-81	206 01	13.00 02	53	23	02	1250 N	407800	732700 GW	01				
1100042-82	206 01	13.00 02	53	34	02	1250 N	406800	732700 GW	01				
1100042-83	206 01	13.00 02	55	32	02	1250 N	409400	732700 GW	01				
1100042-84	206 01	13.00 02	46	39	02	1250 N	410100	732700 GW	01				
1100056 34.86	03		11 7/78 AG	GW			E.L. JOHNSON, JR.			15	0.8	15	155 0.50
1100056-1	190 01	8.00 02	200			1200	356444	777393 GW	04				
1100056-2	190 01	8.00 02	200				356787	778673 GW	04				
1100056-3	190 01	8.00 02	200				357257	778708 GW	04				
1100056-4	190 01	8.00 02	200				357600	779305 GW	04				
1100056-5	190 01	8.00 02	200				357572	776704 GW	04				
1100056-6	190 01	8.00 02	200				357901	776676 GW	04				
1100056-7	190 01	8.00 02	200				358029	779000 GW	04				
1100068 21.73	03		11 10/78 AG	GW		3	CARROLL & RENEZ ROLLINS			13	0.8	15	50 0.80
1100068										13	0.8	15	50 0.50
1100088 8.70	03		11 12/78 AG	GW		1	SAM E. BEATCH			13	0.8	15	40 0.50
1100088-1-29	190 01	8.00 02	135			500	352596	783831 GW	04				
1100088 635.37	03		11 12/78 AG	GW		6	GEORGE FORTSON			15	0.8	15	1100 0.50
1100088-31	190 01	8.00 02				1500	346758	770286 GW	04				
1100088-32	190 01	8.00 02					344824	770858 GW	04				
1100088-33	190 01	8.00 02					343428	770831 GW	04				
1100088-34	190 01	8.00 02					342376	770264 GW	04				
1100088-35	190 01	8.00 02					343596	769807 GW	04				
1100088-36	190 01	8.00 02					336589	770091 GW	04				
1100088 8.70	03		11 12/78 AG	GW		1	WILLARD DURRANCE			13	0.8	15	40 0.50
1100088-28	190 01	8.00 02	84			500	355570	783014 GW	03				
1100088 15.22	03		11 12/78 AG	GW		1	WILLIAM L. SCHNEBER			13	0.8	15	70 0.50

1100091 15.22	190 01	0.00 02	11 12/78 AG	GW	500	351637	785222 GW	01	13	0.8	13	40 0.50
1100091-26	190 01	6.00 02			500	R.A. BETHGA, JR.						
1100091-26	190 01	6.00 02			500	250635	784074 GW	01				
1100093 28.94	190 01	6.00 02	11 12/78 AG	GW	2	TONY ROSBOUGH			13	0.8	13	131 0.50
1100093-24	190 01	6.00 02			500	348903	784715 GW	01				
1100093-25	190 01	6.00 02			500	349322	784424 GW	01				
1100094 2774.00	190 01	576.36 02	11 12/78 AG	BOTH	53	3 TURNER CORPORATION			13	1.5	13	2515 0.85
1100094-135	190 01	8.00 02	60 40		600	342000	783203 GW	01				
1100094-136	190 01	8.00 02	60 40		600	242100	783803 GW	01				
1100094-137	190 01	8.00 02	60 40		600	242150	784503 GW	01				
1100094-138	190 01	8.00 02	60 40		600	341600	785703 GW	01				
1100094-139	190 01	8.00 02	60 40		600	338000	786150 GW	01				
1100094-140	190 01	8.00 02	100 100		600	342150	785050 GW	01				
1100094-141	190 01	8.00 02			600	341532	786547 GW	01				
1100094-142	190 01	8.00 02	260 140		600	342300	786203 GW	01				
1100094-143	190 01	8.00 02	60 40		900	343700	782403 GW	01				
1100094-144	190 01	8.00 02	80 50		600	343650	784550 GW	01				
1100094-145	190 01	8.00 02	215 138		1000	344800	784550 GW	01				
1100094-146	190 01	8.00 02	135 135		1000	345300	783503 GW	01				
1100094-147	190 01	8.00 02	300 250		600	346250	782703 GW	01				
1100094-148	190 01	8.00 02	60 40		600	347100	781100 GW	01				
1100094-149	190 01	8.00 02	60 40		600	343600	779703 GW	01				
1100094-150	190 01	8.00 02	60 40		600	342500	776600 GW	01				
1100094-151	190 01	8.00 02	60 40		1000	343700	777403 GW	01				
1100094-152	190 01	8.00 02	195 135		300	345700	777403 GW	01				
1100094-153	190 01	8.00 02	269 208		600	344800	780203 GW	01				
1100094-154	190 01	8.00 02	60 40		600	345950	780650 GW	01				
1100094-155	190 01	8.00 02	290 238		600	343800	778303 GW	01				
1100094-156	190 01	8.00 02	275 168		600	343300	777403 GW	01				
1100094-157	190 01	8.00 02	275 172		800	339600	777703 GW	01				
1100094-158	190 01	8.00 02	60 40		600	339600	780550 GW	01				
1100094-159	190 01	8.00 02	60 40		900	341900	779150 GW	01				
1100094-160	190 01	8.00 02	60 40		600	341900	780550 GW	01				
1100094-161	190 01	8.00 02	60 40		600	342000	781500 GW	01				
1100094-162	190 01	8.00 02	60 40		600	341350	777803 GW	01				
1100094-163	190 01	8.00 02	60 40		600	341950	776900 GW	01				
1100094-164	190 01	8.00 02	60 40		600	339650	772303 GW	01				
1100094-165	190 01	8.00 02	60 40		600	340700	775400 GW	01				
1100094-166	190 01	8.00 02	60 40		600	339600	776250 GW	01				
1100094-167	190 01	8.00 02	60 40		1000	339050	775050 GW	01				
1100094-168	190 01	8.00 02	236 174		1000	339700	773600 GW	01				
1100094-169	190 01	8.00 02	185 180		1000	338100	773600 GW	01				
1100094-170	190 01	8.00 02	235 167		2000	342500	771700 GW	01				
1100094-171	190 01	8.00 02	60 40		600	343100	772100 GW	01				
1100094-172	190 01	8.00 02	60 40		600	346200	772550 GW	01				
1100094-173	190 01	8.00 02	60 40		600	346100	775200 GW	01				
1100094-174	190 01	8.00 02	60 40		600	343150	775300 GW	01				
1100094-175	190 01	8.00 02	60 40		600	343150	776200 GW	01				
1100094-176	190 01	8.00 02	60 40		600	342000	771000 GW	01				
1100094-177	190 01	8.00 02	60 40		600	341500	770900 GW	01				
1100094-178	190 01	8.00 02	60 40		800	343800	777403 GW	01				
1100094-179	190 01	8.00 02	275 172		650	339600	776600 GW	01				
1100094-180	190 01	8.00 02	275 240		650	339600	778003 GW	01				
1100094-181	190 01	8.00 02	270 235		650	339600	779150 GW	01				
1100094-182	190 01	8.00 02	260 223		650	339600	779150 GW	01				

1100094-251	190 01	10.00 02	260	220	650	339600	780650	GW	04
1100094-252	190 01	10.00 02	260	220	730	339600	781600	GW	04
1100094-253	190 02	10.00 02	260	220	600	339469	784577	GW	04
1100094-254	190 02	10.00 02	260	220	600	339442	786023	GW	04
1100094-255	190 02	10.00 02	260	220	600	343825	766586	GW	04
1100094-SW1	190 01				2500	338000	772900	SW	
1100094-SW2	190 01				2500	338000	773200	SW	
1100094-SW3	190 01				6000	338000	776150	SW	

678.27 02 11 8/86 AG GW 31

BARACK COLLIER

1100100-34	191 01	02 21	406065	756853	GW	01
1100100-35	191 01	02 54	407923	756870	GW	01
1100100-36	191 01	02 60	408947	757586	GW	03
1100100-37	191 01	02 64	408626	755766	GW	03
1100100-38	191 01	02 62	403104	755757	GW	03
1100100-39	191 01	02 38	395865	759428	GW	01
1100100-40	191 01	02 02	392307	756289	GW	01
1100100-41	191 01	02 30	393423	755531	GW	01
1100100-42	191 01	02 26	383494	756881	GW	01
1100100-43	191 01	02 02	384054	757463	GW	01
1100100-44	191 01	02 25	382256	756891	GW	01
1100100-45	191 01	02 23	380251	757886	GW	01
1100100-46	191 01	02 02	379753	757159	GW	01
1100100-47	191 01	02 21	384001	755125	GW	01
1100100-48	191 01	02 28	383012	753227	GW	01
1100100-49	191 01	02 29	381830	750207	GW	01
1100100-50	191 01	02 02	388242	754522	GW	01
1100100-51	191 01	02 02	387622	750497	GW	01
1100100-52	191 01	02 62	385862	753166	GW	01
1100100-53	191 01	02 24	395378	752126	GW	01
1100100-54	191 01	02 22	397999	753152	GW	01
1100100-55	191 01	02 15	403716	754712	GW	01
1100100-56	191 01	02 31	404695	752173	GW	01
1100100-57	191 01	02 37	407314	752923	GW	01
1100100-58	191 01	02 34	384104	749417	GW	01
1100100-59	191 01	02 25	383033	748575	GW	01
1100100-60	191 01	02 54	387212	748088	GW	01
1100100-61	191 01	02 71	382743	746289	GW	03
1100100-62	191 01	02 32	384363	749942	GW	01
1100100-63	191 01	02 02	384062	748575	GW	01
1100100-64	191 01	02 30	384075	748077	GW	01

65.00 02 11 3/82 AG GW 2

THE COLLIER COMPANY

1100101-1	221 01	02 02	390733	682035	GW	01
1100101-2	221 01	02 02	390733	682035	GW	01

61 0.8 26

15 0.8 26

146 0.50

1104 0.50

1100102 1596.56

61 3.6 15

2157 0.50

1100102

61 3.6 15

2150 0.50

1100102-94	206 01	02 02	386745	728835	GW	03
1100102-95	206 01	02 02	386754	727863	GW	03
1100102-96	206 01	02 02	386849	726838	GW	03
1100102-97	206 01	02 02	386839	725902	GW	03
1100102-98	206 01	02 02	386912	724158	GW	03
1100102-99	206 01	02 02	384913	724393	GW	03
1100102-100	206 01	02 02	383620	726478	GW	03
1100102-101	206 01	02 02	389587	725111	GW	03
1100102-102	206 01	02 02	383627	728417	GW	03

COLLIER	DEVELOPMENT	CORPORATION	61	0.8	15	338	0.50
15	0.8	15	338	0.50	864	0.50	
380187	726877	GW	03				
380703	726386	GW	03				
383478	726344	GW	03				
373568	723855	GW	03				
379578	723488	GW	03				
381540	723528	GW	03				
382368	723512	GW	03				
384255	723524	GW	03				
384238	722407	GW	03				
381466	721750	GW	03				
381539	721174	GW	03				
384635	721266	GW	03				
382321	720908	GW	03				
382292	720306	GW	03				
380735	719890	GW	03				
380162	718387	GW	03				
406057	719990	GW	03				
410973	719225	GW	03				
406799	722395	GW	03				
401546	722386	GW	03				
380995	718027	GW	03				
382174	718037	GW	03				
383057	716648	GW	03				
382952	715850	GW	03				
380074	715319	GW	03				
379826	714053	GW	03				
COLLIER DEVELOPMENT CORPORATION			61	0.8	15	338	0.50
357691	771393	GW	04				
0	0	GW	04				
365750	783300	GW	04				
370400	786680	GW	04				
365750	781400	GW	04				
368400	780900	GW	04				
BASCON COLLIER			61	0.8	26	160	0.50
391904	768663	GW	01				
392614	763306	GW	01				
393391	761761	GW	01				
394255	762027	GW	03				
397075	764295	GW	01				
404781	763681	GW	03				
404864	764717	GW	03				
403195	765111	GW	03				
403212	765667	GW	03				
402186	765819	GW	03				
403067	763371	GW	03				
401460	762481	GW	03				
402158	761771	GW	03				
407450	761272	GW	01				
410096	761974	GW	03				
COLLIER DEVELOPMENT CORPORATION			61	0.8	26	354	0.50
385179	722336	GW	03				
386403	720631	GW	03				
386428	719427	GW	03				

1100108-132	206 01	9.00 02	40	30	900	385252	716691	GW	03	13	1.5	15	1800	0.50
1100119		223	02	11	11/86	ALICO FELDA GROVE								
1100119-33	173 01	10.00 02	170	150	600	380900	792550	GW	04					
1100119-34	173 01	10.00 02	40	50	600	380500	790850	GW	01					
1100119-35	173 01	10.00 02	40	50	600	378200	790500	GW	01					
1100119-36	173 01	10.00 02	40	50	600	378800	789000	GW	01					
1100119-37	173 01	10.00 02	50	50	600	378800	787650	GW	01					
1100119-38	173 01	10.00 02	50	50	600	378600	787700	GW	01					
1100119-39	191 01	10.00 02	50	50	600	378989	784966	GW	01					
1100119-121	191 01	10.00 02	50	50	600	378759	786484	GW	01					
1100119-122	191 01	10.00 02	50	50	600	381112	787414	GW	01					
1100119-123	191 01	10.00 02	50	50	600	382424	787591	GW	01					
1100119-124	191 01	6.00 02	50	50	600	383301	787164	GW	01					
1100119-134	172 01	6.00 02	50	50	600	375809	791232	GW	01					
1100120	03	26.44	02	11	12/88	BOB PAUL, INC.				13	0.8	15	175	0.85
1100120-64	190 01	12.00 02	210		500	349431	77537	GW	04					
1100120-65	190 01	8.00 02	80		250	350454	776467	GW	03					
1100120-66	190 01	8.00 02	80		250	351121	776453	GW	03					
1100120-67	190	8.00 02	80			351614	776455	GW	03					
1100120-68	190 01	8.00 02	80		450	350606	775206	GW	03					
1100120-69	190 01	8.00 02	80		450	351418	775191	GW	03					
1100128		1415.00	01	11	9/81	ALICO				13	1.5	15	3455	0.50
1100128-204	189 01	8.00 02	30		600	318734	787715	GW	01					
1100128-205	189 01	8.00 02	30		600	319407	787660	GW	01					
1100128-206	189 01	8.00 02	44		600	320776	785500	GW	01					
1100128-207	189 01	6.00 02	78		600	318378	784756	GW	01					
1100128-208	189 01	9.00 02	41		600	318202	781523	GW	01					
1100128-209	189 01	6.00 02	45		600	334723	783071	GW	01					
1100128-210	189 01	6.00 02	45		500	333385	784507	GW	01					
1100128-211	189 01	6.00 02	55		500	334168	784656	GW	01					
1100128-212	189 01	6.00 02	55		500	322745	787685	GW	01					
1100128-213	189 01	6.00 02	50		500	329628	785595	GW	01					
1100128-214	189 01	6.00 02	90		500	331994	786998	GW	03					
1100128-128	171 01	8.00 02	190		650	334530	791410	GW	04					
1100128-129	171 01	8.00 02	190		650	335678	791091	GW	04					
1100128-130	171 01	6.00 02	60		500	336215	790122	GW	04					
1100128-131	171 01	6.00 02	150		500	336215	789608	GW	04					
1100128-132	171 01	10.00 02	196		1100	335974	788155	GW	04					
1100128-133	171 01	4.00 02	48		350	329939	788177	GW	01					
1100128-134	171 01	6.00 02	30		500	329405	789057	GW	01					
1100128-135	171 01	6.00 02	45		500	329382	789205	GW	01					
1100128-136	171 04	7.00 02				315806	790673	GW	01					
1100128-137	171 01	10.00 02	45			319980	791368	GW	01					
1100128-138	171 01	9.00 02	39			322822	791611	GW	01					
1100128-139	171 01	9.00 02	38			321103	789451	GW	01					
1100128-140	171 01	9.00 02	46			322600	789637	GW	01					
1100128-141	171 01	9.00 02	33			323823	789630	GW	01					
1100140	03	22.60	02	11	5/79	HARRY C. McDONALD				13	0.8	15	84	0.50
1100140-17	190 01	8.00 02	175		250	352585	781673	GW	04					
1100140-18	190 01	8.00 02	175		250	352604	780947	GW	04					
1100146		22.60	02	11	7/86	HARRY C. McDONALD				13	0.8	15	40	0.50
1100146-53	190 01	6.00 02	84			354736	784631	GW	03					
1100146-54	190 01	6.00 02	84			354638	783403	GW	03					

13 0.8 26 240 0.50

100216	50900	03	130.00 02	11 12/81	AG	GW	10 CHRIS SAPP	402239	715629	GW	03
1100214-133	206 01	8.00 02	100					402239	715629	GW	03
1100214-134	206 01	8.00 02	100					401712	715680	GW	03
1100214-135	206 01	8.00 02	100					401076	716016	GW	03
1100214-136	206 01	8.00 02	100					401185	717250	GW	03
1100214-137	206 01	8.00 02	100					402061	717485	GW	03
1100214-138	206 01	8.00 02	100					404263	717522	GW	03
1100214-139	206 01	8.00 02	100					404629	716994	GW	03
1100214-140	206 01	8.00 02	100					406097	717903	GW	03
1100214-141	206 01	8.00 02	100					406182	718700	GW	03
1100214-142	206 01	8.00 02	100					405254	718677	GW	03

61 0.8 26 280 0.50

1100217			52.40 02	11 1/81	AG	GW	C. M. HEARTLAND				
1100217-1	223 01	8.00 02	60	20				465000	694300	GW	01
1100217-2	223 01	8.00 02	60	20				465000	694300	GW	01
1100217-3	223 01	8.00 02	60	20				466000	681000	GW	01
1100217-4	223 01	8.00 02	60	20				466000	681000	GW	01
1100217-5	223 01	8.00 02	60	20				462000	681000	GW	01
1100217-6	223 01	8.00 02	60	20				462000	681000	GW	01
1100217-7	223 01	8.00 02	60	20				464000	681000	GW	01
1100217-8	223 01	8.00 02	60	20				464000	681000	GW	01
1100217-9	223 01	8.00 02	60	20				461000	678000	GW	01
1100217-10	223 01	8.00 02	60	20				461000	678000	GW	01
1100217-11	223 01	8.00 02	60	20				463000	683000	GW	01
1100217-12	223 01	8.00 02	60	20				463000	683000	GW	01

61 0.4 26 490 0.50

1100223			302.00 02	11 3/81	AS	GW	THE COLLIER COMPANY				
1100223-1	221 01	6.00 02	70					305000	687000	GW	03
1100223-2	221 01	6.00 02	70					305000	687000	GW	03
1100223-3	221 01	6.00 02	70					305000	687000	GW	03
1100223-4	221 01	6.00 02	70					305000	687000	GW	03
1100223-5	221 01	6.00 02	70					305000	687000	GW	03
1100223-6	221 01	6.00 02	70					305000	687000	GW	03
1100223-7	221 01	6.00 02	70					305000	687000	GW	03
1100223-8	221 01	6.00 02	70					305000	687000	GW	03
1100223-9	221 01	8.00 02	70					305000	687000	GW	03

13 0.8 15 5010 0.85

1100233	2394.36	03	848.13 02	11 9/81	AG	GW	BARROW COLLIER SILVER STRAND DIVISION				
1100233-260	206 01	10.00 02	190	130				354680	786300	GW	04
1100233-261	206 01	10.00 02	190	130				355990	786300	GW	04
1100233-262	206 01	10.00 02	185	130				355440	783600	GW	04
1100233-263	206 01	10.00 02	190	130				378730	786530	GW	04
1100233-264	206 01	10.00 02	185	130				359200	783600	GW	04
1100233-265	206 01	10.00 02	190	130				356500	780640	GW	04
1100233-266	206 01	10.00 02	190	130				357890	780640	GW	04
1100233-267	206 01	10.00 02	190	130				358300	778660	GW	04
1100233-268	206 01	10.00 02	190	130				358330	777350	GW	04
1100233-269	206 01	10.00 02	200	140				354610	780670	GW	04
1100233-270	206 01	10.00 02	200	140				353090	780670	GW	04
1100233-271	206 01	10.00 02	200	140				351480	779360	GW	04
1100233-272	206 01	10.00 02	200	140				359290	779360	GW	04
1100233-273	206 01	10.00 02	200	140				359310	776630	GW	04
1100233-274	206 01	10.00 02	200	140				351630	775330	GW	04
1100233-275	206 01	10.00 02	200	140				354360	775480	GW	04
1100233-276	206 01	10.00 02	200	140				356660	775480	GW	04
1100233-277	206 01	10.00 02	200	140				357010	772860	GW	04
1100233-278	206 01	10.00 02	200	140				354690	772810	GW	04
1100233-279	206 01	10.00 02	200	140				351630	772740	GW	04

1100233-280	C2	12.00	02	200	140	800	359650	772700	GW	04																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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1100262-120	172 02	10.00 02	260	120	C2	500 Y	799196 GW	04
1100262-121	172 02	10.00 02	260	120	C2	493 Y	798891 GW	04
1100262-122	172 02	10.00 02	260	120	C2	345 Y	797712 GW	04
1100262-123	172 02	10.00 02	260	120	C2	745 Y	796846 GW	04
1100262-124	172 02	10.00 02	260	120	C2	463 Y	796324 GW	04
1100262-125	172 02	10.00 02	260	120	C2	465 Y	795014 GW	04
1100262-126	172 02	10.00 02	260	120	C2	405 Y	794070 GW	04
1100262-127	172 02	10.00 02	260	120	C2	405 Y	792717 GW	04
1100262-128	172 02	10.00 02	260	120	C2	645 Y	792542 GW	04
1100262-129	172 02	10.00 02	260	120	C2	647 Y	796690 GW	04
1100262-130	172 02	10.00 02	260	120	C2	470 Y	794239 GW	04
1100262-246	190 01	10.00 02	275	172	C2	800 Y	785500 GW	04

1100318

49.29 02 11 37/95 AG GW

THOMAS & REONDA BAKER

1100318-	02	8.00 02	95	15	C2	200 Y	699320 GW	03
1100318-	02	8.00 02	95	15	C2	200 Y	699348 GW	03
1100318-	02	8.00 02	95	15	C2	200 Y	699120 GW	03
1100318-	02	8.00 02	85	15	C2	200 Y	698224 GW	03
1100318-	02	8.00 02	85	15	C2	200 Y	696792 GW	03
1100318-	02	8.00 02	85	15	C2	200 Y	695812 GW	03
1100318-	02	8.00 02	85	15	C2	200 Y	694922 GW	03

1100320

8.45 02 11 7/95 AG GW

COLLIER ENTERPRISES (NURSERY)

1100320-	03	12.00 02	90	C2	1400	736423 GW	03
1100320-	03	12.00 02	90	C2	1400	735561 GW	03
1100320-	03	12.00 02	90	C2	1400	736451 GW	03
1100320-	03	12.00 02	90	C2	1400	736015 GW	03
1100320-151	206 02	12.00 02	90	C2	1355	737221 GW	03

1100321

533.27 02 11 7/95 AG GW

COLLIER ENTERPRISES

1100321-154	206 01	6.00 02				739833 GW	01
1100321-155	206 01	6.00 02				738672 GW	01
1100321-156	206 01	6.00 02				737839 GW	01
1100321-157	206 01	6.00 02				737413 GW	01
1100321-158	206 01	6.00 02				736773 GW	01
1100321-159	206 01	6.00 02				736289 GW	01
1100321-160	206 01	6.00 02				738106 GW	01
1100321-161	206 01	6.00 02				738024 GW	01
1100321-162	206 01	6.00 02				737340 GW	01
1100321-163	206 01	6.00 02				737248 GW	01
1100321-164	206 01	6.00 02				738448 GW	01
1100321-165	206 01	6.00 02				738787 GW	01
1100321-166	206 01	6.00 02				739336 GW	01
1100321-167	206 01	6.00 02				738537 GW	01
1100321-168	206 01	6.00 02				734143 GW	01
1100321-169	206 01	6.00 02				734142 GW	01
1100321-170	206 01	6.00 02				734028 GW	01
1100321-171	206 01	6.00 02				729297 GW	01
1100321-172	206 01	6.00 02				729770 GW	01
1100321-173	206 01	6.00 02				730301 GW	01
1100321-174	206 01	6.00 02				729503 GW	01
1100321-175	206 01	6.00 02				747640 GW	01
1100321-67	191 01	6.00 02				746764 GW	01
1100321-68	191 01	6.00 02				744953 GW	01
1100321-69	191 01	6.00 02				744927 GW	01
1100321-70	191 01	6.00 02				747674 GW	01
1100321-71	191 01	6.00 02				745264 GW	01

1100321-72

191 01

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1100354	1100354-143	206 01	59.76	02	11 1/87	AG	GW	4	JAMES E. WILLIAMS	13	0.8	26	353 0.85
								1000	410387 718607 GW 03				
								1000	408126 718457 GW 03				
								1000	407687 717640 GW 03				
								1000	409732 717528 GW 03				
1100356	1100356-146	206 01	234.9	02	11 1/87	AG	GW	22	BASRON COLLIER COMPANY	15	0.4	26	309 0.50
								900 N	356280 717350 GW 01				
								600 N	356280 714350 GW 03				
								800 N	383590 713300 GW 01				
								800 N	383580 712740 GW 01				
								900 N	383270 708400 GW 01				
								500 N	382800 708000 GW 01				
								1000 Y	384200 714430 GW 03				
								1000 Y	385500 714910 GW 03				
								1000 Y	382250 713180 GW 03				
								1000 Y	384600 713200 GW 03				
								1000 Y	380300 711710 GW 03				
								1000 Y	381460 712060 GW 03				
								1000 Y	380240 709450 GW 03				
								1000 Y	383820 710430 GW 03				
								1000 Y	383240 710230 GW 03				
								1000 Y	384530 710200 GW 03				
								1000 Y	380310 707840 GW 02				
								1000 Y	381200 707840 GW 03				
								1000 Y	384390 707860 GW 03				
								1000 Y	385540 707890 GW 03				
								1000 Y	384490 706890 GW 03				
								1000 Y	383380 705120 GW 03				
1100386	1100386-234	190 01	195.89	02	11 3/87	AG	GW	10	JAMES E. WILLIAMS, JR.	60	0.8	15	900 0.50
								800	356100 755300 GW 01				
								800	350300 756200 GW 01				
								800	351100 753800 GW 01				
								600	349800 753500 GW 01				
								1000	352400 750800 GW 01				
								1000	347700 752700 GW 01				
								1000	346200 750900 GW 01				
								800	350500 755500 GW 01				
								600	353000 755600 GW 01				
								1000	348400 754800 GW 01				
								500	350400 752800 GW 01				
								500	345200 750400 GW 01				
1100440	1100440-256	190 02	12.00	02	11 3/87	AG	GW	3	REX PROPERTIES - KNIGHT GROVES	13	1.5	16	430 0.85
								1100	342081 710281 GW 01				
								1100	347451 768895 GW 01				
								1100	349563 786638 GW 01				
2200002	2200002-5	137 03	349.34	02	22 2/77	AG	BOTH	3	1 THE GRAHAM COMPANY	20	0.8	14	2136 0.50
								800	443803 920651 GW 03				
								800	443775 919399 GW 03				
								800	443753 918064 GW 03				
								16000					
2200039	2200039-4	136 01	6.00	02	22 7/77	AG	GW	1	PAUL O'BAYNON	20	0.8	15	30 0.75
								500	387158 886216 GW 01				

2200047	537.62	03	22 1/88	AG	GW	4	LYKES BROTHERS, INC.	20	0.8	15	640 0.50
2200047-23		135 01	8.00 02	700		450	368479 904786 GW 08				
2200047-24		135 01	6.00 02	700		300	369513 906103 GW 08				
2200047-25		135 01	10.00 02	700		400	371457 902662 GW 08				
2200047-26		135 01	10.00 02	700		800	375089 901889 GW 08				
2200065	149.51	03	27.38 02	22 8/87	AG GW	2	FRIERSON FARMS	01	3.6	14	181 0.50
2200065-7		138 01	8.00 02	150		800	498572 900569 GW 03				
2200065-8		138 01	8.00 02	150		800	498587 898634 GW 03				
2200066	377.00	03	71.4 02	22 5/87	AG GW	2	FRIERSON FARMS	01	3.6	14	487 0.50
2200066-9		138 01	8.00 02	150		800	494316 893639 GW 03				
2200066-10		138 01	8.00 02	150		800	494327 892703 GW 03				
2200069	18.4	03	0.27 02	22 7/89	AG GW	1	HOWLAND WALKER	13	0.8	15	40 0.85
2200069-11		134 01	6.00 02	150		150	367519 905696 GW 04				
2200070	759.71	03	8.74 02	22 8/88	AG GW	34	SIX S'S	61	0.8	15	370 0.50
2200070-12		134 01	12.00 02	750		150	326100 913900 GW 08	13	0.8	15	155 0.85
2200070-13		134 01	10.00 02	120		700	326100 911100 GW 04				
2200070-14		134 01	10.00 02	90		700	325000 911300 GW 04				
2200070-15		134 01	12.00 02	750		750	324000 911300 GW 08				
2200070-16		134 01	8.00 02	110		700	322600 911300 GW 04				
2200070-17		134 01	8.00 02	110		700	321600 909000 GW 04				
2200070-18		134 01	9.63 02	165		700	318400 906100 GW 04				
2200070-19		134 01	9.63 02	165		700	317500 906100 GW 04				
2200070-20		134 01	9.63 02	280		700	317500 904300 GW 04				
2200070-21		134 01	9.63 02	50		700	316800 903500 GW 03				
2200070-22		134 01	10.00 02	220		750	318400 903250 GW 04				
2200070-23		134 01	9.63 02	260		750	323000 906250 GW 04				
2200070-24		134 01	9.63 02	145		750	324500 906250 GW 04				
2200070-25		134 01	9.63 02	165		750	324800 904600 GW 04				
2200070-26		134 01	9.63 02	150		750	326000 903700 GW 04				
2200070-27		134 01	10.00 02	135		750	325200 901000 GW 04				
2200070-28		134 01	10.00 02	165		700	326300 901000 GW 04				
2200070-29		134 01	10.00 02	155		700	326300 899600 GW 04				
2200070-30		134 01	9.63 02	150		750	324100 897400 GW 04				
2200070-31		134 01	9.63 02	130		750	326150 896000 GW 04				
2200070-32		134 01	9.63 02	165		750	329000 903650 GW 04				
2200070-33		134 01	9.63 02	120		750	330300 903650 GW 04				
2200070-34		134 01	9.63 02	165		700	331650 903650 GW 04				
2200070-35		134 01	9.63 02	50		700	316300 902900 GW 03				
2200070-36		134 01	9.63 02	50		700	316300 902200 GW 03				
2200070-37		134 01	9.63 02	50		700	316300 901500 GW 03				
2200070-38		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-39		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-40		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-41		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-42		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-43		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-44		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-45		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-46		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-47		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-48		134 01	2.00 02	145		700	311060 903597 GW 04				
2200070-49		134 01	2.00 02	145		700	311060 903597 GW 04				
2200068	9.20	03	11.3 02	22 6/83	AG GW	1	C.M. & S.P. FANSEN	13	0.8	15	20 0.85
2200068-10		134 01	6.00 02	120		100	336000 906850 GW 04				

2200071	7.82	03	22 5/87	AG	GW	2	CHARLES W. COFFMAN	13	0.8	15	17 0.85
2200071-42		134 03	6.00 02	180	140		375727 897928 GW 04				
2200071-43		134 03	6.00 02	55	30	01	375146 898021 GW 01				
2200072	2.81	03	22 4/87	AG	GW	3	DERNIS S. SMALL	13	0.8	15	6 0.85
2200072-44		134 01	2.00 02	130		01	361290 886255 GW 04				
2200072-45		134 01	4.00 02	130		02	361291 886409 GW 04				
2200072-46		134 01	6.00 02	130		02	361297 886127 GW 04				
2200078	23.00	03	22 7/84	AG	GW	2	PERKINS GROVE	13	0.4	15	62 0.85
2200078-27		135 01	10.00 02	300	155	02	338992 909980 GW 04				
2200078-28		135 01	6.00 02	138	80	02	339009 910662 GW 05				
2200079	27.6	03	22 4/88	AG	GW	3	GERALD W. MURRAY	13	0.8	15	60 0.85
2200079-47		134 01	12.00 02	180	30	02	325200 893700 GW 04				
2200079-48		134 02	12.00 02	180	30		326000 893700 GW 04				
2200079-49		134 02	6.00 02	60	30		326200 893700 GW 01				
2200101	23.00	03	22 7/87	AG	GW	3	WALTER FERGUSON	13	0.8	15	148 0.85
2200101-55		134 02	3.00 02	123	80		374062 895525 GW 04				
2200101-56		134 02	9.00 02	120	100	02	373136 894729 GW 04				
2200101-63		134 01	12.00 02	135	99	02	373433 891823 GW 04				
2200111	32.84	03	22 7/87	AG	BOTH	3	1 JACK A. FREEMAN - BEE BRANCH GROVING	13	0.8	15	71 0.85
2200111-55		135 01	18.00 02	90	46	02	345187 914085 GW 04				
2200111-56		135 03	6.00 02	120	120	02	346085 914119 GW 04				
2200111-57		135 02	8.00 02	75	45	02	345986 912885 GW 04				
2200111-SW1		135 03				1300	345900 913650 SW				
2200115	13.23	03	22 5/87	AG	BOTH	1	2 FRANK M. WOODS - GRADES TREE FARM	13	0.8	15	14 0.85
2200115-50		134 01	6.00 02	126	122	02	331900 899200 GW 04				
2200115-SW1		134 01				40	333000 899300 SW				
2200115-SW2		134 01				40	333000 899300 SW				
2200118	125.11	03	22 10/87	AG	BOTH	6	FRANK C. SHAPER - S BAR W RANCH	13	0.8	15	272 0.85
2200118-51		134 02	6.00 02	50	20	02	368380 898826 GW 01				
2200118-52		134 02	6.00 02	50	20	02	368428 897979 GW 01				
2200118-53		134 02	6.00 02	50	20	02	368443 897014 GW 01				
2200118-54		134 02	6.00 02	50	20	02	370097 897021 GW 01				
2200118-64		134 01	6.00 02	150	100	02	369645 897596 GW 04				
2200118-65		134 01	6.00 02	150	100	02	371859 896776 GW 04				
2200118-SW2		134 02				300	328478 898201 SW				
2200118-SW4		134 02				300	328476 897797 SW				
2200118-SW5		134 02				300	328475 897494 SW				
2200120	12.28	03	22 5/87	AG	GW	1	JOHN R. PAUL, JR., TRUSTEE	13	0.8	15	27 0.85
2200120-30		135 02	6.00 02	50		130	338937 900496 GW 01				
2200122	12.19	03	22 5/87	AG	GW	1	JOHN R. PAUL, JR., TRUSTEE	13	0.8	15	27 0.85
2200122-31		135 02	6.00 02	50		130	337456 899181 GW 01				
2200126	147.00	03	22 5/87	AG	GW	6	JEFFERY B. FREEYAN	13	0.8	15	300 0.85
2200126-40		135 02	6.00 02	100	65	200	337815 901697 GW 04				
2200126-41		135 02	6.00 02	100	65	200	337707 903598 GW 04				
2200126-78		134 02	6.00 02	100	65	200	375796 905791 GW 04				
2200126-79		134 02	6.00 02	100	65	200	377608 905874 GW 04				
2200126-80		134 02	6.00 02	100	65	200	375534 904357 GW 04				
2200126-81		134 02	6.00 02	100	65	200	375569 904364 GW 04				

2200134 41.40	03	22 12-87 AG	GM	1	AUSTIN - MURRAY CITRUS GROVE	13	0.8	15	90 0.85
2200134-38	135 01	185 100	02	650	338338 897690 GW 04				
2200138 12.50	03	22 C AG	GM	1	JOSEPH F. PHILLIPS	13	0.8	15	30 0.85
2200138-39	135 02	150 100	02	300	338615 892556 GW 04				
2200144 91.99	03	22 4/88 AG	NOTH	8	1 DAVID LEE	13	0.8	15	200 0.85
2200144-70	134 02	50 15	02	300	364555 895695 GW 01				
2200144-71	134 02	50 15	02	300	365786 895716 GW 01				
2200144-72	134 02	50 15	02	300	365401 894468 GW 01				
2200144-73	134 02	50 15	02	300	365323 895560 GW 01				
2200144-74	134 02	200	02	300	362770 894083 GW 04				
2200144-75	134 02	200	02	300	363320 895352 GW 04				
2200144-76	134 02	200	02	300	365641 895299 GW 04				
2200144-77	134 01	100 02	180	300	364124 894852 GW 04				
2200144-SW5	134 02			500	SW				
2200144-SW6	134 02			500	SW				
3600016 69.00	03	36 7/77 AG	GM	10	T. H. HAXER	20	0.8	15	213 0.50
3600016-61	134 01	4.00 02	20		355671 880035 GW 01				
3600016-62	134 01	4.00 02	20		343021 878703 GW 01				
3600016-63	134 01	4.00 02	20		305310 877692 GW 01				
3600016-64	134 01	4.00 02	200		306001 877458 GW 08				
3600016-65	134 01	4.00 02	20		205387 876262 GW 01				
3600016-66	134 01	0.75 02	20		306006 875238 GW 01				
3600016-67	134 01	2.00 02	20		304774 877847 GW 01				
3600016-68	134 01	2.00 02	10		304928 877488 GW 01				
3600016-69	134 01	1.50 02	20		304778 877080 GW 01				
3600016-70	134 01	2.00 02	20		304789 876303 GW 01				
3600069 81.00	03	36 4/82 AG	GM	1	LEIGH ACRES DEVELOPMENT, INC.	20	0.8	2	120 0.50
3600069-2	170 01	6.00 02	80	1000	294597 812765 GW 04				
3600077 156.00	03	64.8 02	24	3	TONY ROSBOUGH	13	0.8	2	200 0.50
3600077-1	189 01	6.00 02		500	304050 764760 GW 03				
3600077-2	189 01	6.00 02		500	302800 764700 GW 03				
3600077-3	189 01	8.00 02		500	303100 762200 GW 03				
3600085 358.27	03	36 17/87 AG	BOTH	2	YODER BROTHERS	15	0.8	15	126 0.85
3600085-66	152 01	6.00 02	120	75	293842 865724 GW 04				
3600085-67	152 01	6.00 02	120	75	264470 859569 GW 04				
3600085-SW	152 01				SW				
3600085 6.29	03	36 11/78 AG	GM	4	YESS GROVES	13	0.8	15	17 0.50
3600085-27	152 01	2.00 02	40	50	303564 861642 GW 01				
3600085-28	152 01	2.00 02	40	50	303639 861431 GW 01				
3600085-29	152 01	2.00 02	90	50	303483 861073 GW 04				
3600085-30	152 01	2.00 02	90	50	303512 860829 GW 04				
3600076 18.47	03	36 12-78 AG	GM	2	CHARLES CONLEY	60	0.8	7	85 0.50
3600076-6	189 01	10.00 02	20 60	2200	298689 763822 GW 03				
3600076-7	189 01	4.00 02	20 20	120	298902 763801 GW 01				
3600080 15.00	03	36 2/79 AG	GM	2	RACPH G. BEARDSLEE	61	0.8	2	20 0.50
3600080-1	189 01	8.00 02	24 20	1500	299087 767706 GW 01	60	0.8	2	30 0.50
3600080-2	189 01	8.00 02	24 20	1500	299530 767778 GW 01				

GRAVITY FED FROM CALOOSAHATCHEE RIVER

3600094	13.03	03	02	36 2/86	AG	GW	5	PENINSULAR GROVES, INC.	12	0.8	2	60 0.85
3600094-8	189 01	10.00	02	130	40	02	1200	296000 759927 GW 03				
3600094-9	189 02	10.00	02	130	40	02	1200	296021 759912 GW 03				
3600094-10	189 01	8.00	02	190	160	02	500	295665 759971 GW 04				
3600094-48	188 01	13.00	02	130	25	02	1200	295083 760003 GW 03				
3600094-49	188 01	10.00	02	130	40	02	1200	295480 759999 GW 03				
3600095	10.85	03	02	36 2/79	AG	GW	5	PENINSULAR GROVES, INC.	12	0.8	2	32 0.85
3600095-30	188 01	13.00	02	100	40	02	1200	286555 770165 GW 03				
3600095-31	188 01	13.00	02	100	40	02	1200	286580 770702 GW 03				
3600095-52	188 01	13.00	02	100	40	02	1200	286615 771448 GW 03				
3600095-53	188 01	13.00	02	100	40	02	1200	286692 772111 GW 03				
3600095-54	188 01	8.00	02	200	116	02	500	286946 771419 GW 04				
3600113	8.70	03	02	36 12/87	AG	GW	2	CHARLES FLINT	20	0.8	2	40 0.50
3600113-75	171 01	6.00	02	80			500	298478 817427 GW 04				
3600113-76	171 01	2.00	02	200			1	298684 817949 GW 05				
3600119	141.08	03	02	36 3.79	AG	GW	3	CHARLES FLINT	20	0.8	2	525 0.50
3600119-72	171 01		02				500	304053 795847 GW 01				
3600119-73	171 01	6.00	02				500	302220 797393 GW 01				
3600119-74	171 01	6.00	02				500	300906 797350 GW 01				
3600129	565.03	03	02	36 7/82	AG	GW	57	SEB GROVE MAINTENANCE	12	0.8	2	1265 0.50
3600129-128	189 01	9.00	02	47	26			315572 769287 GW 01				
3600129-129	189 01	9.00	02	42	29			315119 769311 GW 01				
3600129-130	189 01	9.00	02	37	32			314686 769291 GW 01				
3600129-131	189 01	9.00	02	45				314191 769252 GW 01				
3600129-132	189 01	9.00	02	34				313762 769204 GW 01				
3600129-133	189 01	9.00	02	176				313687 768773 GW 03				
3600129-134	189 01	9.00	02	174				313595 769603 GW 03				
3600129-135	189 01	9.00	02	37				313365 769132 GW 01				
3600129-136	189 01	9.00	02	37				312742 769115 GW 01				
3600129-137	189 01	9.00	02	42				312318 769132 GW 01				
3600129-138	189 01	9.00	02	40	33			311836 769093 GW 01				
3600129-139	189 01	9.00	02	65	32			311105 769029 GW 01				
3600129-140	189 01	12.00	02	41	32			315444 767826 GW 01				
3600129-141	189 01	12.00	02	31	27			314968 767817 GW 01				
3600129-142	189 01	12.00	02	30	26			314446 767794 GW 01				
3600129-143	189 01	12.00	02	35	25			313977 767771 GW 01				
3600129-144	189 01	12.00	02	35	25			313394 767646 GW 01				
3600129-145	189 01	10.00	02	246	78			312354 767627 GW 04				
3600129-146	189 01	12.00	02	35	25			312531 767535 GW 01				
3600129-147	189 01	12.00	02	35	25			312132 767484 GW 01				
3600129-148	189 01	9.00	02	155	87			314820 766874 GW 03				
3600129-149	189 01	12.00	02	35	25			311751 767302 GW 01				
3600129-150	189 01	12.00	02	44	36			315350 765447 GW 01				
3600129-151	189 01	12.00	02	36	31			315002 765596 GW 04				
3600129-152	189 01	12.00	02	36	31			314591 765596 GW 01				
3600129-153	189 01	12.00	02	35	25			314191 765623 GW 01				
3600129-154	189 01	12.00	02	35	25			313640 765643 GW 01				
3600129-155	189 01	10.00	02	246	98			312977 765625 GW 04				
3600129-156	189 01	12.00	02	35	25			312507 765727 GW 01				
3600129-157	189 01	12.00	02	50	37			312084 765692 GW 01				
3600129-158	189 01	12.00	02	50	37			310179 770133 GW 01				
3600129-159	189 01	12.00	02	50	39			309549 770729 GW 01				

3600:29-160	189 01	12.00 02	60	39	308975	770637 GW	01
3600:29-161	189 01	12.00 02	60	39	308952	770601 GW	01
3600:29-162	189 01	9.00 02	430	227	308070	771022 GW	05
3600:29-163	189 01	8.00 02	450	212	308030	770628 GW	05
3600:29-164	189 01	8.00 02	65	50	308038	770290 GW	01
3600:29-165	189 01	12.00 02	60	39	307035	770739 GW	01
3600:29-166	189 01	12.00 02	47	35	308623	770491 GW	01
3600:29-167	189 01	12.00 02	51	36	308098	770451 GW	01
3600:29-168	189 01	12.00 02	43	34	308285	770354 GW	01
3600:29-169	189 01	12.00 02	50	33	309058	772125 GW	01
3600:29-170	189 01	12.00 02	55	35	310020	773459 GW	01
3600:29-171	189 01	12.00 02	27	22	309419	772077 GW	01
3600:29-172	189 01	12.00 02	60	40	309571	773430 GW	01
3600:29-173	189 01	12.00 02	54	39	308985	772619 GW	01
3600:29-174	189 01	12.00 02	57	39	308644	772577 GW	01
3600:29-175	189 01	12.00 02	41	34	308198	772582 GW	01
3600:29-176	189 01	12.00 02	37	31	308093	772570 GW	01
3600:29-177	189 01	12.00 02	42	28	307917	772858 GW	01
3600:29-178	189 01	10.00 02	260	114	307879	773225 GW	04
3600:29-179	189 01	12.00 02	39	31	308153	774996 GW	01
3600:29-180	189 01	12.00 02	47	34	309727	774737 GW	01
3600:29-181	189 01	9.00 02	223	115	309770	774133 GW	04
3600:29-182	189 01	12.00 02	60	31	307247	772595 GW	01
3600:29-183	189 01	12.00 02	60	32	306987	772577 GW	01
3600:29-184	189 01	12.00 02	63	32	306503	771855 GW	01

AN.ALL. = Annual Permitted Allocation
 ALL.UNIT. = Annual Allocation Units
 01 = MGD
 02 = MGM
 03 = MGY
 04 = AC-FT
 MAXMO = Maximum Monthly Permitted Allocation
 01 = MGD
 02 = MGM
 03 = AC-FT
 CC = County Code (from permit number)
 DATE ISS = Date Permit Issued (mo/yr)
 USE TYPE = AC, IND, GLE, PWS, COM, RHC
 SRC = Source (SW, GW, BOTH)
 NO.WLS. = Number of ACTIVE permitted wells
 SWPMPS = Number of Surface Water Pumps

 SAID = Service Area ID
 LAD = Low Average Demand (Million Gallons per Month)
 HAD = High Average Demands (Million Gallons per Month)
 LMMD = Low Max. Month Demand (Million Gallons per Month)
 HMMD = High Max. Month Demand (Million Gallons per Month)
 AQ = Aquifer
 01 = Water Table
 02 = Surficial (semi-confined)
 03 = Lower Tamiami
 04 = sandstone
 05 = mid-Hawthorn
 06 = lower Hawthorn
 07 = Suwannee
 08 = Floridan
 09 = Biscayne
 PPOP = Permanent Population (1000's)
 SPOP = Seasonal Population (1000's)

 STS = Status
 01 = Existing
 02 = Proposed
 03 = Standby/Backup
 04 = To Be Plugged
 DPRH CODE = Datum for Elevations
 01 = NGVD
 02 = Land Surface
 PMPINT = Depth to Pump Intake (Wells Only)
 PUMP TYPE
 01 = Centrifical (suction)
 02 = Lift (turbine, jet, submersible)
 03 = Unknown
 PUMP CAP = Capacity in GPM (GW & SW Facilities)
 01 = Unknown
 MTR? = Is use Metered by Volume or Power
 Consumption and Reportrd to the District?
 Y = Yes
 N = No
 XPLNR = East Planar Coordinate
 YPLNR = North Planar Coordinate

RY COUNTY MOBILE AREA WATER USE

1 READINGS (Table 1 - Existing Water Use - Permit Information and Table 3 - Forecasted Demands for Each Permit)

CIT	AN.	ALL.	MAX	MO.	DATE	USE	SRC.	NO.	SW
ALL.	CNT.	NO.	QTS.	CC	ISS.	TYPE	WLS.	PMFS	OWNER

24 READINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

CI	FACILITY NUMBER	SYS DIA.	WELL	DEPTH	CODE	ID	CD	INC	PUMP	PUMP PUMP	MER3	XPIK3	YPLNR	SRC	AQ.	COMMENTS
	841.00	03	3.30	01	11	10/87	PWS	GW	15	IMMOKALEE WATER & SEWER DISTRICT						
		01	4.00	02	275	236	237	02	110	Y	358536	748424	GW	04		
		01	6.00	02	255	220	211	02	289	Y	365418	748456	GW	04		
		03	6.00	02		154	155	02	250	Y	357288	764573	GW	04		
		01	8.00	02	315	229	230	02	358	Y	358508	748829	GW	04		
		01	8.00	02	275	250	251	02	350	Y	357872	748826	GW	04		
		01	8.00	02	175	95	96	02	350	Y	358417	748727	GW	04		
		01	8.00	02	310	234	235	02	350	Y	358599	748728	GW	04		
		01	8.00	02	280	145	146	02	350	Y	354382	765579	GW	04		
		01	8.00	02	261	140	141	02	350	Y	351799	754453	GW	04		
		01	8.00	02	180	100	101	02	350	Y	366366	760576	GW	04		
		01	8.00	02	180	100	101	02	350	Y	369093	760588	GW	04		
		02	8.00	02	200	140	141	02	250	Y	366600	762100	GW	04		
		02	8.00	02	200	140	141	02	250	Y	366600	761350	GW	04		
		02	8.00	02	200	140	141	02	250	Y	349600	763200	GW	04		
		02	8.00	02	200	140	141	02	250	Y	349850	763200	GW	04		
826	313.00	03	22	8/76	IND	GW			4	GLADES COUNTY SUGAR CROVERS						
	2280026-1	01	12.00	02	75	40					413682	897572	GW	03		
	2280026-2	01	12.00	02	75	40					474081	897621	GW	03		
	2280026-3	01	12.00	02	75	40					476492	897563	GW	03		
	2280026-4	01	12.00	02	75	40					472224	897485	GW	03		
1045	120.45	02	13	01	22	7/87	PWS	GW	6	CITY OF MOORE HAVEN						
	2280045-5	01	10.00	02	100	60	02		400	Y	469457	908242	GW	03		
	2280045-6	03	10.00	02	100	60	02				469623	909197	GW	03		MONITOR WELL
		02	10.00	02	50	30			200		466900	921050	GW	01		
		02	10.00	02	50	30			200		466000	921050	GW	01		
208013	5.48	03	30	01	22	7/87	PWS	GW		2	MUSPERING PINES MOBILE HOME PARK					
	2280073-29A	02	4.00	02	100	70			50		348687	889013	GW	04		
	2280073-29B	02	4.00	02	100	70			50		348713	889324	GW	04		
108113		01	12.00	02	50	20	02		500	N	402000	934000	GW	01		
		02	12.00	02	50	20	02		500	N	402000	934000	GW	01		
		01							1000	N	402000	934000	GW			
		01							1000	N	402000	934000	GW			
125.03		03	105	01	22	7/87	PWS	GW	3	WILSON CREEK (LABELLE OAKS)						
		01	6.00	02	130	80	70	02	50	Y	357250	892400	GW	04		
		01	6.00	02	130	80	70	02	50	Y	357250	892400	GW	04		

THIS IS A CLOSED SYSTEM SAND MINING OPERATION

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APPENDIX F
COMPARATIVE HYDROGRAPHS

STATION: HE-3 LAYER: 1 ROW: 39 COLUMN: 43

Water Levels in Feet, Datum NGVD

	12	22	32	42	52	62
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	++					
MAR 86 :	*					
APR 86 :	++					
MAY 86 :	++					
JUN 86 :	+ *					
JUL 86 :	++					
AUG 86 :	++					
SEP 86 :	*					
OCT 86 :	++					
NOV 86 :	++					
DEC 86 :	++					
JAN 87 :	++					
FEB 87 :	*					
MAR 87 :	++					
APR 87 :	*					
MAY 87 :	*					
JUN 87 :	++					
JUL 87 :	*					
AUG 87 :	++					
SEP 87 :	++					
OCT 87 :	*					
NOV 87 :	++					
DEC 87 :	*					
JAN 88 :	*					
FEB 88 :	*					
MAR 88 :	++					
APR 88 :	++					
MAY 88 :	++					
JUN 88 :	*					
JUL 88 :	*					
AUG 88 :	++					
SEP 88 :	++					
OCT 88 :	*					
NOV 88 :	++					
DEC 88 :	*					

* = simulated water levels
 + = observed water levels
 M = observed data missing
 (if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-5

LAYER: 1

ROW: 18

COLUMN: 34

Water Levels in Feet, Datum NGVD

	18	28	38	48	58	68
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*					
MAR 86 :	*					
APR 86 :	* +					
MAY 86 :	*+					
JUN 86 :	++					
JUL 86 :	*+					
AUG 86 :	*					
SEP 86 :	*					
OCT 86 :	* +					
NOV 86 :	++					
DEC 86 :	*+					
JAN 87 :	*+					
FEB 87 :	*+					
MAR 87 :	*+					
APR 87 :	*+					
MAY 87 :	*+					
JUN 87 :	*+					
JUL 87 :	*+					
AUG 87 :	*+					
SEP 87 :	*+					
OCT 87 :	*+					
NOV 87 :	*					
DEC 87 :	*+					
JAN 88 :	*+					
FEB 88 :	* +					
MAR 88 :	* +					
APR 88 :	* +					
MAY 88 :	*					
JUN 88 :	*+					
JUL 88 :	* +					
AUG 88 :	*+					
SEP 88 M	*					
OCT 88 :	*+					
NOV 88 :	*					
DEC 88 :	*+					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-339

LAYER: 1

ROW: 18

COLUMN: 47

Water Levels in Feet, Datum NGVD

	8	18	28	38	48	58
	+	+	+	+	+	+
JAN 86 :	+	*				
FEB 86 :	+	*				
MAR 86 :	+	*				
APR 86 :	+	*				
MAY 86 :	+	*				
JUN 86 :	+	*				
JUL 86 :	+	*				
AUG 86 :	+	*				
SEP 86 :	+	*				
OCT 86 :	+	*				
NOV 86 :	+	*				
DEC 86 :	+	*				
JAN 87 :	+	*				
FEB 87 :	+	*				
MAR 87 :	+	*				
APR 87 :	+	*				
MAY 87 :	+	*				
JUN 87 :	+	*				
JUL 87 :	+	*				
AUG 87 :	+	*				
SEP 87 :	+	*				
OCT 87 :	+	*				
NOV 87 :	+	*				
DEC 87 :	+	*				
JAN 88 :	+	*				
FEB 88 :	+	*				
MAR 88 :	+	*				
APR 88 :	+	*				
MAY 88 :	+	*				
JUN 88 :	+	*				
JUL 88 :	+	*				
AUG 88 :	+	*				
SEP 88 M		*				
OCT 88 :	+	*				
NOV 88 :	+	*				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: Well located near canal, affected by cell wide averaging.

STATION: HE-554

LAYER: 1

ROW: 22

COLUMN: 16

Water Levels in Feet, Datum NGVD

	25	35	45	55	65	75
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*+					
MAR 86 :	*+					
APR 86 :	*+					
MAY 86 :	*+					
JUN 86 :	+ *					
JUL 86 :	*					
AUG 86 :	*+					
SEP 86 :	*+					
OCT 86 :	*	+				
NOV 86 :	*+					
DEC 86 :	*+					
JAN 87 :	*+					
FEB 87 :	*+					
MAR 87 :	*					
APR 87 :	*+					
MAY 87 :	*					
JUN 87 :	*					
JUL 87 :	+*					
AUG 87 :	+ *					
SEP 87 :	+ *					
OCT 87 :	*					
NOV 87 :	*+					
DEC 87 :	*					
JAN 88 :	*					
FEB 88 :	*+					
MAR 88 :	*					
APR 88 :	*					
MAY 88 :	*					
JUN 88 :	* +					
JUL 88 :	+*					
AUG 88 M	*					
SEP 88 :	*+					
OCT 88 :	*+					
NOV 88 :	*					
DEC 88 :	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-558

LAYER: 1

ROW: 11

COLUMN: 9

Water Levels in Feet, Datum NGVD

	7	17	27	37	47	57
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*	+				
MAR 86 :	*	+				
APR 86 :	*	+				
MAY 86 :	*	+				
JUN 86 :	*	+				
JUL 86 :	*	+				
AUG 86 :	*	+				
SEP 86 :	*	+				
OCT 86 :	*	+				
NOV 86 :	*	+				
DEC 86 :	*	+				
JAN 87 :	*	+				
FEB 87 :	*	+				
MAR 87 :	*	+				
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :	*	+				
JUL 87 :	*	+				
AUG 87 :	*	+				
SEP 87 :	*	+				
OCT 87 :	*	+				
NOV 87 :	*					
DEC 87 :	*					
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 :	*	+				
APR 88 :	*	+				
MAY 88 :	*	+				
JUN 88 :	*	+				
JUL 88 :	*	+				
AUG 88 :	*	+				
SEP 88 :	*	+				
OCT 88 :	*	+				
NOV 88 :	*	+				
DEC 88 :	*	+				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-569

LAYER: 1

ROW: 15

COLUMN: 10

Water Levels in Feet, Datum NGVD

	17	27	37	47	57	67
	+	+	+	+	+	+
JAN 86 :	*+					
FEB 86 :	*					
MAR 86 :	*					
APR 86 :	*					
MAY 86 :	*+					
JUN 86 :	+	*				
JUL 86 :	+	*				
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		*				
NOV 86 :		*+				
DEC 86 :		*				
JAN 87 :		*				
FEB 87 :		*+				
MAR 87 :		*				
APR 87 :		*+				
MAY 87 :		*				
JUN 87 :		*				
JUL 87 :		*				
AUG 87 :		+	*			
SEP 87 :		+	*			
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		*				
JAN 88 :		*				
FEB 88 :		*+				
MAR 88 :		*+				
APR 88 :		*+				
MAY 88 :		*+				
JUN 88 :		*+				
JUL 88 :		*				
AUG 88 :		+	*			
SEP 88 :		*				
OCT 88 :		*+				
NOV 88 :		*+				
DEC 88 :		*+				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-851

LAYER: 1

ROW: 16

COLUMN: 15

Water Levels in Feet, Datum NGVD

	19	29	39	49	59	69
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*					
MAR 86 :	*					
APR 86 :	*+					
MAY 86 :	*					
JUN 86 :	+	*				
JUL 86 :		*				
AUG 86 :		*				
SEP 86 :		*+				
OCT 86 :		*	+			
NOV 86 :		*	+			
DEC 86 :		*	+			
JAN 87 :		*	+			
FEB 87 :		*	+			
MAR 87 :		*	+			
APR 87 :		*	+			
MAY 87 :		*	+			
JUN 87 :		*+				
JUL 87 :		*	+			
AUG 87 :		*+				
SEP 87 :		*	+			
OCT 87 :		*	+			
NOV 87 :		*	+			
DEC 87 :		*	+			
JAN 88 :		*	+			
FEB 88 :		*	+			
MAR 88 :		*	+			
APR 88 :		*	+			
MAY 88 :		*+				
JUN 88 :		*+				
JUL 88 :		*	+			
AUG 88 :		*	+			
SEP 88 :		*	+			
OCT 88 :		*	+			
NOV 88 :		*	+			
DEC 88 :		*	+			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-852

LAYER: 1

ROW: 19

COLUMN: 21

Water Levels in Feet, Datum NGVD

	14	24	34	44	54	64
	+	+	+	+	+	+
JAN 86 :		*				
FEB 86 :		+	*			
MAR 86 :	+	*				
APR 86 :	+	*				
MAY 86 :	+	*				
JUN 86 :	+	*				
JUL 86 :		+	*			
AUG 86 :		+	*			
SEP 86 :	+	*				
OCT 86 :		+	*			
NOV 86 :		+	*			
DEC 86 :		+	*			
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		+	*			
MAY 87 :		+	*			
JUN 87 :		+	*			
JUL 87 :		+	*			
AUG 87 :		+	*			
SEP 87 :		+	*			
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		+	*			
APR 88 :		+	*			
MAY 88 :		+	*			
JUN 88 :		+	*			
JUL 88 :		+	*			
AUG 88 M			*			
SEP 88 :		+	*			
OCT 88 :		+	*			
NOV 88 :		+	*			
DEC 88 :		+	*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-854

LAYER: 1

ROW: 20

COLUMN: 40

Water Levels in Feet, Datum NGVD

	14	24	34	44	54	64
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :		+	*			
MAR 86 :		+	*			
APR 86 :		+	*			
MAY 86 :	+	*				
JUN 86 :		+	*			
JUL 86 :		+	*			
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		+	*			
NOV 86 :		+	*			
DEC 86 :	+	*				
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		+	*			
MAY 87 :		+	*			
JUN 87 :		+	*			
JUL 87 :		+	*			
AUG 87 :		+	*			
SEP 87 :		+	*			
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		+	*			
APR 88 M		*				
MAY 88 M		*				
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 M		*				
OCT 88 M		*				
NOV 88 M		*				
DEC 88 M		*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-856

LAYER: 1

ROW: 25

COLUMN: 34

Water Levels in Feet, Datum NGVD

	19	29	39	49	59	69
	+	+	+	+	+	+
JAN 86 :						*+
FEB 86 :						* +
MAR 86 :						* +
APR 86 :						* +
MAY 86 :						* +
JUN 86 :						* +
JUL 86 :						* +
AUG 86 :						* +
SEP 86 :						* +
OCT 86 :						* +
NOV 86 :						* +
DEC 86 :						* +
JAN 87 :						* +
FEB 87 :						* +
MAR 87 :						* +
APR 87 :						* +
MAY 87 :						* +
JUN 87 :						* +
JUL 87 :						* +
AUG 87 :						* +
SEP 87 :						* +
OCT 87 :						* +
NOV 87 :						* +
DEC 87 :						* +
JAN 88 :						* +
FEB 88 :						* +
MAR 88 :						* +
APR 88 :						* +
MAY 88 :						* +
JUN 88 :						* +
JUL 88 :						* +
AUG 88 :						* +
SEP 88 M :						*
OCT 88 :						* +
NOV 88 :						*+
DEC 88 :						* +

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-857

LAYER: 1

ROW: 8

COLUMN: 28

Water Levels in Feet, Datum NGVD

	9	19	29	39	49	59
	+	+	+	+	+	+
JAN 86 :		+				
FEB 86 :		+				
MAR 86 :		+				
APR 86 :		+				
MAY 86 :		+				
JUN 86 :		+				
JUL 86 :		+				
AUG 86 :		+				
SEP 86 :		+				
OCT 86 :		+				
NOV 86 :		+				
DEC 86 :		+				
JAN 87 :		+				
FEB 87 :		+				
MAR 87 :		+				
APR 87 :		+				
MAY 87 :		+				
JUN 87 :		+				
JUL 87 :		+				
AUG 87 :		+				
SEP 87 :		+				
OCT 87 :		+				
NOV 87 :		+				
DEC 87 :		+				
JAN 88 :		+				
FEB 88 :		+				
MAR 88 :		+				
APR 88 :		+				
MAY 88 :		+				
JUN 88 :		+				
JUL 88 :		+				
AUG 88 :		+				
SEP 88 M :						
OCT 88 :		+				
NOV 88 :		+				
DEC 88 :		+				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: Well located near canal, affected by cell wide averaging.

STATION: HE-858

LAYER: 1

ROW: 11

COLUMN: 34

Water Levels in Feet, Datum NGVD

	12	22	32	42	52	62
	+	+	+	+	+	+
JAN 86 :		+				
FEB 86 :		+				
MAR 86 :		+				
APR 86 :		+				
MAY 86 M :						
JUN 86 M :						
JUL 86 M :						
AUG 86 M :						
SEP 86 M :						
OCT 86 :						
NOV 86 :						
DEC 86 :						
JAN 87 :						
FEB 87 :						
MAR 87 :						
APR 87 :						
MAY 87 :						
JUN 87 :						
JUL 87 :						
AUG 87 :						
SEP 87 :						
OCT 87 :						
NOV 87 :						
DEC 87 :						
JAN 88 :						
FEB 88 :						
MAR 88 :						
APR 88 :						
MAY 88 :						
JUN 88 :						
JUL 88 :						
AUG 88 :						
SEP 88 :						
OCT 88 :						
NOV 88 :						
DEC 88 :						

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: Well located near canal, affected by cell wide averaging.

STATION: HE-860

LAYER: 1

ROW: 29

COLUMN: 37

Water Levels in Feet, Datum NGVD

	16	26	36	46	56	66
	+	+	+	+	+	+
JAN 86 :	*+					
FEB 86 :	* +					
MAR 86 :	* +					
APR 86 :	* +					
MAY 86 :	* +					
JUN 86 :	+*					
JUL 86 :	* +					
AUG 86 :	* +					
SEP 86 :	* +					
OCT 86 :	* +					
NOV 86 :	* +					
DEC 86 :	* +					
JAN 87 :	* +					
FEB 87 :	* +					
MAR 87 :	* +					
APR 87 :	* +					
MAY 87 :	* +					
JUN 87 :	* +					
JUL 87 :	* +					
AUG 87 :	*+					
SEP 87 :	* +					
OCT 87 :	* +					
NOV 87 :	* +					
DEC 87 :	* +					
JAN 88 :	* +					
FEB 88 :	* +					
MAR 88 :	* +					
APR 88 :	* +					
MAY 88 M	*					
JUN 88 M	*					
JUL 88 M	*					
AUG 88 M	*					
SEP 88 M	*					
OCT 88 M	*					
NOV 88 M	*					
DEC 88 M	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-862 LAYER: 1 ROW: 40 COLUMN: 48

Water Levels in Feet, Datum NGVD

	6	16	26	36	46	56
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :		+	*			
MAR 86 :		+	*			
APR 86 :		+	*			
MAY 86 :		+	*			
JUN 86 :		+	*			
JUL 86 :		+	*			
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		+	*			
NOV 86 :		+	*			
DEC 86 :		+	*			
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		+	*			
MAY 87 :		+	*			
JUN 87 :		+	*			
JUL 87 :		+	*			
AUG 87 :		+	*			
SEP 87 :		+	*			
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		+	*			
APR 88 :		+	*			
MAY 88 :		+	*			
JUN 88 :		+	*			
JUL 88 :		+	*			
AUG 88 :		+	*			
SEP 88 :		+	*			
OCT 88 :		+	*			
NOV 88 :		+	*			
DEC 88 :		+	*			

* =simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: Well located near canal, affected by cell wide averaging.

STATION: HE-884

LAYER: 1

ROW: 40

COLUMN: 37

Water Levels in Feet, Datum NGVD

	11	21	31	41	51	61
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 :	+	*				
NOV 86 :	+	*				
DEC 86 :	+	*				
JAN 87 :	+	*				
FEB 87 :	+	*				
MAR 87 :	+	*				
APR 87 :	+	*				
MAY 87 :	+	*				
JUN 87 :	+	*				
JUL 87 :	+	*				
AUG 87 :	+	*				
SEP 87 :	+	*				
OCT 87 :	+	*				
NOV 87 :	+	*				
DEC 87 :	+	*				
JAN 88 :	+	*				
FEB 88 :	+	*				
MAR 88 :	+	*				
APR 88 :	+	*				
MAY 88 :	+	*				
JUN 88 :		*				
JUL 88 :	+	*				
AUG 88 :	+	*				
SEP 88 M		*				
OCT 88 :	+	*				
NOV 88 :	+	*				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: Well located near canal, affected by nodal averaging.

STATION: HE-1027 LAYER: 1 ROW: 20 COLUMN: 24

Water Levels in Feet, Datum NGVD

	22	32	42	52	62	72
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M		*				
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 M		*				
MAY 87 M		*				
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 M		*				
NOV 87 :		*+				
DEC 87 :		*+				
JAN 88 M		*				
FEB 88 :		* +				
MAR 88 M		*				
APR 88 M		*				
MAY 88 M		*				
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 M		*				
OCT 88 M		*				
NOV 88 M		*				
DEC 88 M		*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1036

LAYER: 1

ROW: 23

COLUMN: 37

Water Levels in Feet, Datum NGVD

	19	29	39	49	59	69
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M	*					
JUL 86 M	*					
AUG 86 M	*					
SEP 86 M	*					
OCT 86 M	*					
NOV 86 M	*					
DEC 86 M	*					
JAN 87 M	*					
FEB 87 M	*					
MAR 87 M	*					
APR 87 M	*					
MAY 87 M	*					
JUN 87 M	*					
JUL 87 M	*					
AUG 87 M	*					
SEP 87 M	*					
OCT 87 :	*					
NOV 87 :	*					
DEC 87 :	*					
JAN 88 :	*+					
FEB 88 :	*+					
MAR 88 :	*+					
APR 88 :	*+					
MAY 88 :	* +					
JUN 88 :	*+					
JUL 88 :	*+					
AUG 88 :	*+					
SEP 88 :	*+					
OCT 88 :	*+					
NOV 88 :	*					
DEC 88 :	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is plotted)

Comments: none

STATION: HE-1043

LAYER: 1

ROW: 35

COLUMN: 30

Water Levels in Feet, Datum NGVD

	15	25	35	45	55	65
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M		*				
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 M		*				
MAY 87 M	*					
JUN 87 M	*					
JUL 87 M	*					
AUG 87 M	*					
SEP 87 M		*				
OCT 87 :		*				
NOV 87 :		*				
DEC 87 :		*				
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 :	*	+				
APR 88 :	*					
MAY 88 :	*					
JUN 88 :	*					
JUL 88 M		*				
AUG 88 M		*				
SEP 88 :	*	+				
OCT 88 :	*					
NOV 88 :	*					
DEC 88 :	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1062 LAYER: 1 ROW: 40 COLUMN: 35

Water Levels in Feet, Datum NGVD

	10	20	30	40	50	60
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M	*					
JUL 86 M	*					
AUG 86 M	*					
SEP 86 M	*					
OCT 86 M	*					
NOV 86 M	*					
DEC 86 M	*					
JAN 87 M	*					
FEB 87 M	*					
MAR 87 M	*					
APR 87 M	*					
MAY 87 M	*					
JUN 87 M	*					
JUL 87 M	*					
AUG 87 M	*					
SEP 87 M	*					
OCT 87 :	+	*				
NOV 87 :	+	*				
DEC 87 :	+	*				
JAN 88 :	*					
FEB 88 :	+	*				
MAR 88 :	*					
APR 88 :	+	*				
MAY 88 :	+	*				
JUN 88 :	+	*				
JUL 88 :	+	*				
AUG 88 :	+	*				
SEP 88 :	*					
OCT 88 :	+	*				
NOV 88 :	+	*				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1069

LAYER: 1

ROW: 14

COLUMN: 39

Water Levels in Feet, Datum NGVD

	13	23	33	43	53	63
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M	*					
JUL 86 M	*					
AUG 86 M	*					
SEP 86 M	*					
OCT 86 M	*					
NOV 86 M	*					
DEC 86 M	*					
JAN 87 M	*					
FEB 87 M	*					
MAR 87 M	*					
APR 87 M	*					
MAY 87 M	*					
JUN 87 M	*					
JUL 87 M	*					
AUG 87 M	*					
SEP 87 M	*					
OCT 87 :	+ *					
NOV 87 :	+ *					
DEC 87 :	+ *					
JAN 88 :	+*					
FEB 88 :	*					
MAR 88 :	+*					
APR 88 :	*					
MAY 88 :	*					
JUN 88 :	*+					
JUL 88 :	*+					
AUG 88 :	*+					
SEP 88 M	*					
OCT 88 :	* +					
NOV 88 :	*+					
DEC 88 :	*+					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1077

LAYER: 1

ROW: 16

COLUMN: 20

Water Levels in Feet, Datum NGVD

	20	30	40	50	60	70
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M	*					
DEC 86 M	*					
JAN 87 M	*					
FEB 87 M	*					
MAR 87 M	*					
APR 87 M	*					
MAY 87 M	*					
JUN 87 M	*					
JUL 87 M	*					
AUG 87 M	*					
SEP 87 M	*					
OCT 87 M	*					
NOV 87 M	*					
DEC 87 M	*					
JAN 88 :	* +					
FEB 88 :	* +					
MAR 88 :	* +					
APR 88 :	* +					
MAY 88 :	*					
JUN 88 :	*					
JUL 88 :	*+					
AUG 88 :	*+					
SEP 88 :	*+					
OCT 88 :	*+					
NOV 88 :	*+					
DEC 88 :	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: L-1137

LAYER: 1

ROW: 15

COLUMN: 5

Water Levels in Feet, Datum NGVD

	13	23	33	43	53	63
	+	+	+	+	+	+
JAN 86 :	+	*				
FEB 86 :	+	*				
MAR 86 :	+	*				
APR 86 :	+	*				
MAY 86 :	+	*				
JUN 86 :	+	*				
JUL 86 :		+	*			
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		+	*			
NOV 86 :		+	*			
DEC 86 :		+	*			
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		+	*			
MAY 87 :		+	*			
JUN 87 :		+	*			
JUL 87 :		+	*			
AUG 87 :		+	*			
SEP 87 :		+	*			
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		+	*			
APR 88 :		+	*			
MAY 88 :		+	*			
JUN 88 :		+	*			
JUL 88 :		+	*			
AUG 88 :		+	*			
SEP 88 :			*			
OCT 88 :		+	*			
NOV 88 :		+	*			
DEC 88 :		+	*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: L-1138 LAYER: 1 ROW: 29 COLUMN: 6

Water Levels in Feet, Datum NGVD

	18	28	38	48	58	68
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*					
MAR 86 :	*					
APR 86 :	*					
MAY 86 :	++					
JUN 86 :	*					
JUL 86 :	++					
AUG 86 :	++					
SEP 86 :	+ *					
OCT 86 :	+ *					
NOV 86 :	*					
DEC 86 :	+ *					
JAN 87 :	++					
FEB 87 :	+ *					
MAR 87 :	+ *					
APR 87 :	*					
MAY 87 :	++					
JUN 87 :	+ *					
JUL 87 :	+ *					
AUG 87 :	+ *					
SEP 87 :	+ *					
OCT 87 :	+ *					
NOV 87 :	+ *					
DEC 87 M	*					
JAN 88 :	+ *					
FEB 88 :	++					
MAR 88 :	+ *					
APR 88 :	++					
MAY 88 :	*					
JUN 88 :	++					
JUL 88 :	*					
AUG 88 :	++					
SEP 88 :	+ *					
OCT 88 :	*					
NOV 88 :	*					
DEC 88 :	*					

* = simulated water levels
 + = observed water levels
 M = observed data missing
 (if observed agrees with simulated, only a * is printed)

Comments: none

STATION: L-1964

LAYER: 1

ROW: 22

COLUMN: 4

Water Levels in Feet, Datum NGVD

	20	30	40	50	60	70
	+	+	+	+	+	+
JAN 86 :	*+					
FEB 86 :	*+					
MAR 86 :	*+					
APR 86 :	*+					
MAY 86 :	*+					
JUN 86 :	*					
JUL 86 :	*+					
AUG 86 :	++					
SEP 86 :	++					
OCT 86 :	*					
NOV 86 :	*					
DEC 86 :	*					
JAN 87 :	*+					
FEB 87 :	* +					
MAR 87 :	*					
APR 87 :	*					
MAY 87 :	* +					
JUN 87 :	*+					
JUL 87 :	*+					
AUG 87 :	*					
SEP 87 :	* +					
OCT 87 :	* +					
NOV 87 :	* +					
DEC 87 :	*					
JAN 88 :	*					
FEB 88 :	*					
MAR 88 :	*					
APR 88 :	*					
MAY 88 :	*					
JUN 88 :	++					
JUL 88 :	*+					
AUG 88 :	*+					
SEP 88 :	*					
OCT 88 :	*					
NOV 88 :	*					
DEC 88 :	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: L-1978

LAYER: 1

ROW: 11

COLUMN: 3

Water Levels in Feet, Datum NGVD

	8	18	28	38	48	58
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	+	*				
MAR 86 :	*					
APR 86 :	*					
MAY 86 :	*					
JUN 86 :	*					
JUL 86 :	*	+				
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		*				
NOV 86 :		+	*			
DEC 86 :	+	*				
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		+	*			
MAY 87 :		+	*			
JUN 87 :		+	*			
JUL 87 :		*				
AUG 87 :		*				
SEP 87 :		+	*			
OCT 87 :		*				
NOV 87 :			*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		*				
APR 88 :		*				
MAY 88 :		+	*			
JUN 88 :		+	*			
JUL 88 :		*	+			
AUG 88 M			*			
SEP 88 :		*	+			
OCT 88 :		+	*			
NOV 88 :		*				
DEC 88 :		*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: L-1992

LAYER: 1

ROW: 21

COLUMN: 6

Water Levels in Feet, Datum NGVD

	18	28	38	48	58	68
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :		+	*			
MAR 86 :		+	*			
APR 86 :		+	*			
MAY 86 :		+	*			
JUN 86 :		+	*			
JUL 86 :		+	*			
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		+	*			
NOV 86 :		+	*			
DEC 86 :		+	*			
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		+	*			
MAY 87 :		+	*			
JUN 87 :		+	*			
JUL 87 :		+	*			
AUG 87 :		+	*			
SEP 87 :		+	*			
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		+	*			
APR 88 :		+	*			
MAY 88 :		+	*			
JUN 88 :		+	*			
JUL 88 :		+	*			
AUG 88 :		+	*			
SEP 88 :		+	*			
OCT 88 :		+	*			
NOV 88 :		+	*			
DEC 88 :		+	*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: L-2202

LAYER: 1

ROW: 10

COLUMN: 6

Water Levels in Feet, Datum NGVD

	7	17	27	37	47	57
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*+					
MAR 86 :	* +					
APR 86 :	*+					
MAY 86 :	*					
JUN 86 :	* +					
JUL 86 :	* +					
AUG 86 :	* +					
SEP 86 :	* +					
OCT 86 :	* +					
NOV 86 :	* +					
DEC 86 :	* +					
JAN 87 :	* +					
FEB 87 :	* +					
MAR 87 :	*+					
APR 87 :	* +					
MAY 87 :	*+					
JUN 87 :	* +					
JUL 87 :	*+					
AUG 87 :	* +					
SEP 87 :	* +					
OCT 87 :	* +					
NOV 87 :	* +					
DEC 87 :	*+					
JAN 88 :	*+					
FEB 88 :	*+					
MAR 88 :	* +					
APR 88 :	*+					
MAY 88 :	* +					
JUN 88 :	*+					
JUL 88 :	* +					
AUG 88 :	* +					
SEP 88 :	* +					
OCT 88 :	* +					
NOV 88 M	*					
DEC 88 :	* +					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: C-131

LAYER: 1

ROW: 31

COLUMN: 25

Water Levels in Feet, Datum NGVD

	16	26	36	46	56	66
	+	+	+	+	+	+
JAN 86 :		*				
FEB 86 :		*				
MAR 86 :		*				
APR 86 :		*				
MAY 86 :	+	*				
JUN 86 :		++				
JUL 86 :		* +				
AUG 86 :		*				
SEP 86 :		++				
OCT 86 :		++				
NOV 86 :		* +				
DEC 86 :		++				
JAN 87 :		*				
FEB 87 :		*				
MAR 87 :		++				
APR 87 :		++				
MAY 87 :		*				
JUN 87 :		*				
JUL 87 :		++				
AUG 87 :	+	*				
SEP 87 :	+	*				
OCT 87 :	+	*				
NOV 87 :		*				
DEC 87 :		*				
JAN 88 :		*				
FEB 88 :		++				
MAR 88 :		*				
APR 88 :		++				
MAY 88 :	+	*				
JUN 88 :		*				
JUL 88 :		++				
AUG 88 :		+	*			
SEP 88 :		++				
OCT 88 :	+	*				
NOV 88 :	+	*				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: C-363

LAYER: 1

ROW: 31

COLUMN: 16

Water Levels in Feet, Datum NGVD

	20	30	40	50	60	70
	+	+	+	+	+	+
JAN 86 :		*	+			
FEB 86 :		*	+			
MAR 86 :		*	+			
APR 86 :		*	+			
MAY 86 :	*	+				
JUN 86 :		*		+		
JUL 86 :		*		+		
AUG 86 :		*		+		
SEP 86 :		*		+		
OCT 86 :		*		+		
NOV 86 :	*	+				
DEC 86 :		++				
JAN 87 :	*		+			
FEB 87 :	*		+			
MAR 87 :		*		+		
APR 87 :	*		+			
MAY 87 :	*			+		
JUN 87 :	*		+			
JUL 87 :		*		+		
AUG 87 :		++				
SEP 87 :		++				
OCT 87 :		++				
NOV 87 :		++				
DEC 87 :	*		+			
JAN 88 :		++				
FEB 88 :	*		+			
MAR 88 :		++				
APR 88 :	*		+			
MAY 88 :		++				
JUN 88 :		++				
JUL 88 :		++				
AUG 88 :		*		+		
SEP 88 :		*				
OCT 88 :	++					
NOV 88 :	++					
DEC 88 :		++				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: C-462

LAYER: 1

ROW: 29

COLUMN: 15

Water Levels in Feet, Datum NGVD

	22	32	42	52	62	72
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	+	*				
MAR 86 :	*	+				
APR 86 :	*	+				
MAY 86 :	*	+				
JUN 86 :	*					
JUL 86 :	*	+				
AUG 86 :	*	+				
SEP 86 :	*		+			
OCT 86 :	*	+				
NOV 86 :	*	+				
DEC 86 :	*	+				
JAN 87 :	*	+				
FEB 87 :	*	+				
MAR 87 :	*	+				
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :	*	+				
JUL 87 :	*	+				
AUG 87 :	*	+				
SEP 87 :	*	+				
OCT 87 :	*	+				
NOV 87 :	*		+			
DEC 87 :	*		+			
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 :	*	+				
APR 88 :	*	+				
MAY 88 :	*	+				
JUN 88 :	*	+				
JUL 88 :	*	+				
AUG 88 :	*	+				
SEP 88 :	*		+			
OCT 88 :	*	+				
NOV 88 :	*	+				
DEC 88 :	*	+				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

Water Levels in Feet, Datum NGVD

	26	36	46	56	66	76
	+	+	+	+	+	+
JAN 86 :		*	+			
FEB 86 :		*	+			
MAR 86 :		*	+			
APR 86 :	*		+			
MAY 86 :	*		+			
JUN 86 :	*		+			
JUL 86 :	*		+			
AUG 86 :	*		+			
SEP 86 :	*		+			
OCT 86 :	*		+			
NOV 86 :	*		+			
DEC 86 :	*		+			
JAN 87 :	*		+			
FEB 87 :	*		+			
MAR 87 :	*		+			+
APR 87 :	*		+			
MAY 87 :	*		+			
JUN 87 :	*		+			
JUL 87 :	*		+			
AUG 87 :	*		+			
SEP 87 :	*		+			
OCT 87 :	*		+			
NOV 87 :	*		+			
DEC 87 :	*		+			
JAN 88 :	*	+				
FEB 88 :	*		+			
MAR 88 :	*		+			
APR 88 :	*		+			
MAY 88 :	*		+			
JUN 88 :	*	+				
JUL 88 M *						
AUG 88 M *						
SEP 88 M *						
OCT 88 M *						
NOV 88 M *						
DEC 88 M*						

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: Well located in cell with several intense ground water uses, affected by cell wide averaging.

STATION: C-966

LAYER: 1

ROW: 36

COLUMN: 20

Water Levels in Feet, Datum NGVD

	13	23	33	43	53	63
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*					
MAR 86 :	*					
APR 86 :	++					
MAY 86 :	++					
JUN 86 :		++				
JUL 86 :		++				
AUG 86 :		*				
SEP 86 :		*				
OCT 86 :		+ *				
NOV 86 :		++				
DEC 86 :		++				
JAN 87 :		++				
FEB 87 :		++				
MAR 87 :		*				
APR 87 :		++				
MAY 87 :		++				
JUN 87 :		++				
JUL 87 :		*				
AUG 87 :		++				
SEP 87 :		++				
OCT 87 :		++				
NOV 87 :		++				
DEC 87 :		++				
JAN 88 :		*				
FEB 88 :		*				
MAR 88 :		*				
APR 88 :		++				
MAY 88 :		++				
JUN 88 :		+ *				
JUL 88 :		++				
AUG 88 :		++				
SEP 88 :		++				
OCT 88 :		*				
NOV 88 :		++				
DEC 88 :		*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is plotted)

Comments: none

STATION: C-986

LAYER: 1

ROW: 47

COLUMN: 20

Water Levels in Feet, Datum NGVD

	6	16	26	36	46	56
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :		+	*			
MAR 86 :		+	*			
APR 86 :		+	*			
MAY 86 :	+		*			
JUN 86 :	+					*
JUL 86 :		+				*
AUG 86 :		+				*
SEP 86 :		+				*
OCT 86 :		+				*
NOV 86 :		+				*
DEC 86 :		+				*
JAN 87 :		+				*
FEB 87 :		+				*
MAR 87 :		+				*
APR 87 :		+				*
MAY 87 :		+				*
JUN 87 :		+				*
JUL 87 :		+				*
AUG 87 :		+				*
SEP 87 :		+				*
OCT 87 :	+					*
NOV 87 :		+				*
DEC 87 :		+				*
JAN 88 :		+				*
FEB 88 :		+				*
MAR 88 :		+				*
APR 88 :		+				*
MAY 88 :		+				*
JUN 88 :		+				*
JUL 88 :		+				*
AUG 88 M						*
SEP 88 :		+				*
OCT 88 :		+				*
NOV 88 :		+				*
DEC 88 :		+				*

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: Well located in corner of model with specified head cells on two sides.

STATION: C-1071 LAYER: 1 ROW: 39 COLUMN: 24

Water Levels in Feet, Datum NGVD

	4	14	24	34	44	54
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :		+	*			
MAR 86 :		+	*			
APR 86 M			*			
MAY 86 M			*			
JUN 86 M				*		
JUL 86 M				*		
AUG 86 M				*		
SEP 86 M				*		
OCT 86 :		+	*			
NOV 86 M			*			
DEC 86 M			*			
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*	*		
APR 87 :		+	*	*		
MAY 87 :			+	*		
JUN 87 :		+	*	*		
JUL 87 :		+	*	*		
AUG 87 :		+	*	*		
SEP 87 :		+	*	*	*	
OCT 87 :			+	*	*	
NOV 87 :			+	*	*	*
DEC 87 :			+	*	*	*
JAN 88 :			+	*	*	*
FEB 88 :			+	*	*	*
MAR 88 :			+	*	*	*
APR 88 :		+	*	*	*	*
MAY 88 :		+	*	*	*	*
JUN 88 :			+	*	*	*
JUL 88 :			+	*	*	*
AUG 88 :			+	*	*	*
SEP 88 :			+	*	*	*
OCT 88 :	+		*	*	*	*
NOV 88 :	+		*	*	*	*
DEC 88 :	+		*	*	*	*

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: Well located near canal, affected by cell wide averaging.

STATION: C-1075

LAYER: 1

ROW: 28

COLUMN: 19

Water Levels in Feet, Datum NGVD

	22	32	42	52	62	72
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	++					
MAR 86 :	* +					
APR 86 :	* +					
MAY 86 M *						
JUN 86 M *						
JUL 86 M *						
AUG 86 M *						
SEP 86 M *						
OCT 86 :	* +					
NOV 86 :	* +					
DEC 86 :	* +					
JAN 87 :	* +					
FEB 87 :	* +					
MAR 87 :	* +					
APR 87 :	* +					
MAY 87 :	* +					
JUN 87 :	* +					
JUL 87 :	* +					
AUG 87 :	* +					
SEP 87 :	* +					
OCT 87 :	* +					
NOV 87 :	* +					
DEC 87 :	* +					
JAN 88 :	* +					
FEB 88 :	* +					
MAR 88 :	* +					
APR 88 :	* +					
MAY 88 :	* +					
JUN 88 :	* +					
JUL 88 :	* +					
AUG 88 M *						
SEP 88 :	* +					
OCT 88 :	* +					
NOV 88 :	* +					
DEC 88 :	* +					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: C-1078

LAYER: 1

ROW: 31

COLUMN: 14

Water Levels in Feet, Datum NGVD

	19	29	39	49	59	69
	+	+	+	+	+	+
JAN 86 :	*+					
FEB 86 :	*					
MAR 86 :	*					
APR 86 :	*+					
MAY 86 M *						
JUN 86 M	*					
JUL 86 M	*					
AUG 86 M	*					
SEP 86 M	*					
OCT 86 :	* +					
NOV 86 :	*+					
DEC 86 :	*					
JAN 87 :	* +					
FEB 87 :	* +					
MAR 87 :	*	+				
APR 87 :	*+					
MAY 87 :	*	+				
JUN 87 :	*	+				
JUL 87 :	*	+				
AUG 87 :	*		+			
SEP 87 :	*	+				
OCT 87 :	*	+				
NOV 87 :	*	+				
DEC 87 :	*	+				
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 :	*	+				
APR 88 :	* +					
MAY 88 :	*+					
JUN 88 :	* +					
JUL 88 :	*	+				
AUG 88 :	*		+			
SEP 88 :	*	+				
OCT 88 :	* +					
NOV 88 :	* +					
DEC 88 :	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-629

LAYER: 2

ROW: 13

COLUMN: 37

Water Levels in Feet, Datum NGVD

	13	23	33	43	53	63
	+	+	+	+	+	+
JAN 86 :	+	*				
FEB 86 :	+	*				
MAR 86 :	+	*				
APR 86 :		*				
MAY 86 :	+	*				
JUN 86 :	+	*				
JUL 86 :		+	*			
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		+	*			
NOV 86 :		+	*			
DEC 86 :		+	*			
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		*				
MAY 87 :		+	*			
JUN 87 :		*				
JUL 87 :		+	*			
AUG 87 :		+	*			
SEP 87 :		+	*			
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		+	*			
APR 88 :		*				
MAY 88 :		+	*			
JUN 88 :		*				
JUL 88 :		*	+			
AUG 88 :		*				
SEP 88 :		+	*			
OCT 88 :		*				
NOV 88 :		+	*			
DEC 88 :		*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-853

LAYER: 2

ROW: 19

COLUMN: 27

Water Levels in Feet, Datum NGVD

	21	31	41	51	61	71
	+	+	+	+	+	+
JAN 86 :	*	+				
FEB 86 :	*	+				
MAR 86 :	*	+				
APR 86 :	*	+				
MAY 86 M	*					
JUN 86 M	*					
JUL 86 M	*					
AUG 86 M	*					
SEP 86 M	*					
OCT 86 :	*	+				
NOV 86 :	*	+				
DEC 86 :	*	+				
JAN 87 :	*	+				
FEB 87 :	*	+				
MAR 87 :	*	+				
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :	*	+				
JUL 87 :	*	+				
AUG 87 :	*	+				
SEP 87 :	*	+				
OCT 87 :	*	+				
NOV 87 :	*	+				
DEC 87 :	*	+				
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 :	*	+				
APR 88 :	*	+				
MAY 88 :	+					
JUN 88 :	*					
JUL 88 :	+					
AUG 88 :	+					
SEP 88 :	+					
OCT 88 :	+					
NOV 88 :	+					
DEC 88 :	+					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-855

LAYER: 2

ROW: 25

COLUMN: 34

Water Levels in Feet, Datum NGVD

	19	29	39	49	59	69
	+	+	+	+	+	+
JAN 86 :		*	+			
FEB 86 :		*	+			
MAR 86 :		*	+			
APR 86 :		*	+			
MAY 86 :	*	+				
JUN 86 :	+	*				
JUL 86 :		*	+			
AUG 86 :		*	+			
SEP 86 :		*	+			
OCT 86 :		*	+			
NOV 86 :		*	+			
DEC 86 :		*	+			
JAN 87 :		*	+			
FEB 87 :		*	+			
MAR 87 :		*	+			
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :	*	+				
JUL 87 :	*					
AUG 87 :	*	+				
SEP 87 :	*	+				
OCT 87 :	*	+				
NOV 87 :	*	+				
DEC 87 :	*	+				
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 :	*	+				
APR 88 :	*	+				
MAY 88 :	*	+				
JUN 88 :	*	+				
JUL 88 :	*	+				
AUG 88 :	*	+				
SEP 88 :	*	+				
OCT 88 :	*	+				
NOV 88 :	*					
DEC 88 :	*	+				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-859

LAYER: 2

ROW: 29

COLUMN: 37

Water Levels in Feet, Datum NGVD

	14	24	34	44	54	64
	+	+	+	+	+	+
JAN 86 :		*	+			
FEB 86 :		*	+			
MAR 86 :		*	+			
APR 86 :	*		+			
MAY 86 :	*		+			
JUN 86 :		+	*			
JUL 86 :			*			
AUG 86 :		*		+		
SEP 86 :		*	+			
OCT 86 :		*	+			
NOV 86 :		*	+			
DEC 86 :		*	+			
JAN 87 :		*	+			
FEB 87 :		*	+			
MAR 87 :		*		+		
APR 87 :	*		+			
MAY 87 :	*		+			
JUN 87 :	*		+			
JUL 87 :	*		+			
AUG 87 :	*		+			
SEP 87 :		*		+		
OCT 87 :		*		+		
NOV 87 :		*		+		
DEC 87 :		*		+		
JAN 88 :		*		+		
FEB 88 :		*		+		
MAR 88 :	*			+		
APR 88 :	*			+		
MAY 88 :	*			+		
JUN 88 :	*			+		
JUL 88 :	*				+	
AUG 88 :	*					+
SEP 88 M	*					
OCT 88 :	*			+		
NOV 88 :	*			+		
DEC 88 :	*			+		

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-861

LAYER: 2

ROW: 40

COLUMN: 48

Water Levels in Feet, Datum NGVD

	7	17	27	37	47	57
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :		+	*			
MAR 86 :		+	*			
APR 86 :		+	*			
MAY 86 :	+		*			
JUN 86 :		+	*			
JUL 86 :		+	*			
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		+	*			
NOV 86 :		+	*			
DEC 86 :		+	*			
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		+	*			
MAY 87 :	+		*			
JUN 87 :		+	*			
JUL 87 :		+	*			
AUG 87 :	+		*			
SEP 87 :		+	*			
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		+	*			
APR 88 :		+	*			
MAY 88 :	+		*			
JUN 88 :		+	*			
JUL 88 :		+	*			
AUG 88 :		+	*			
SEP 88 :		+	*			
OCT 88 :	+		*			
NOV 88 :	+		*			
DEC 88 :	+		*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: Observed water levels exhibit high variation coefficient.

STATION: HE-868 LAYER: 2 ROW: 36 COLUMN: 41

Water Levels in Feet, Datum NGVD

	12	22	32	42	52	62
	+	+	+	+	+	+
JAN 86 :	*	+				
FEB 86 :	*	+				
MAR 86 :	*	+				
APR 86 :	*	+				
MAY 86 :	*	+				
JUN 86 :	**	+				
JUL 86 :	*	+				
AUG 86 :	*	+				
SEP 86 :	**	+				
OCT 86 :	**	+				
NOV 86 :	*	+				
DEC 86 :	*	+				
JAN 87 :	*	+				
FEB 87 :	*	+				
MAR 87 :	**	+				
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :	*	+				
JUL 87 :	*	+				
AUG 87 :	*	+				
SEP 87 :	*	+				
OCT 87 :	**	+				
NOV 87 :	*	+				
DEC 87 :	*	+				
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 :	*	+				
APR 88 :	*	+				
MAY 88 :	*	+				
JUN 88 :	*	+				
JUL 88 :	*	+				
AUG 88 :	*	+				
SEP 88 M	*					
OCT 88 :	**	+				
NOV 88 :	**	+				
DEC 88 :	**	+				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1028 LAYER: 2 ROW: 20 COLUMN: 24

Water Levels in Feet, Datum NGVD

	22	32	42	52	62	72
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M	*					
JUL 86 M	*					
AUG 86 M	*					
SEP 86 M	*					
OCT 86 M	*					
NOV 86 M	*					
DEC 86 M	*					
JAN 87 M	*					
FEB 87 M	*					
MAR 87 M	*					
APR 87 M	*					
MAY 87 M	*					
JUN 87 M	*					
JUL 87 M	*					
AUG 87 M	*					
SEP 87 M	*					
OCT 87 :	*+					
NOV 87 :	*+					
DEC 87 :	*+					
JAN 88 M	*					
FEB 88 :	* +					
MAR 88 :	*+					
APR 88 :	*+					
MAY 88 :	+*					
JUN 88 :	+*					
JUL 88 :	*					
AUG 88 :	*					
SEP 88 :	*+					
OCT 88 :	*+					
NOV 88 :	*					
DEC 88 :	*+					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1029 LAYER: 2 ROW: 20 COLUMN: 24

Water Levels in Feet, Datum NGVD

	22	32	42	52	62	72
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M		*				
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 M		*				
MAY 87 M		*				
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :		*+				
NOV 87 :		*+				
DEC 87 :		* +				
JAN 88 M		*				
FEB 88 :		* +				
MAR 88 :		*+				
APR 88 :		*+				
MAY 88 :		*				
JUN 88 :		*+				
JUL 88 :		* +				
AUG 88 :		*+				
SEP 88 :		*				
OCT 88 :		*+				
NOV 88 :		*				
DEC 88 :		*+				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1037

LAYER: 2

ROW: 23

COLUMN: 31

Water Levels in Feet, Datum NGVD

	18	28	38	48	58	68
	+	+	+	+	+	+
JAN 86 M		*				
FEB 86 M		*				
MAR 86 M		*				
APR 86 M		*				
MAY 86 M		*				
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M		*				
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 M		*				
MAY 87 M		*				
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :	+	*				
NOV 87 :	+	*				
DEC 87 :	+	*				
JAN 88 :	+	*				
FEB 88 :	+	*				
MAR 88 :	+	*				
APR 88 :	+	*				
MAY 88 :		*				
JUN 88 :	+	*				
JUL 88 :		+	*			
AUG 88 :		+	*			
SEP 88 M		*				
OCT 88 :	+	*				
NOV 88 :	+	*				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1042

LAYER: 2

ROW: 35

COLUMN: 30

Water Levels in Feet, Datum NGVD

	14	24	34	44	54	64
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M		*				
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 M		*				
MAY 87 M		*				
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :		*+				
NOV 87 :		* +				
DEC 87 :		* +				
JAN 88 :		* +				
FEB 88 :		* +				
MAR 88 :		* +				
APR 88 :		* +				
MAY 88 :		*+				
JUN 88 :		++				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 :		*+				
OCT 88 :		*				
NOV 88 :		*				
DEC 88 :		*+				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1063

LAYER: 2

ROW: 40

COLUMN: 35

Water Levels in Feet, Datum NGVD

	11	21	31	41	51	61
	+	+	+	+	+	+
JAN 86 M	*					
FEB 86 M	*					
MAR 86 M	*					
APR 86 M	*					
MAY 86 M	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M		*				
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 M		*				
MAY 87 M		*				
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :	+	*				
NOV 87 :	+	*				
DEC 87 :	+	*				
JAN 88 :	+	*				
FEB 88 :	+	*				
MAR 88 :	+	*				
APR 88 :	+	*				
MAY 88 :	+	*				
JUN 88 :	+	*				
JUL 88 :	+	*				
AUG 88 :	+	*				
SEP 88 :	+	*				
OCT 88 :	+	*				
NOV 88 :	+	*				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: HE-1068

LAYER: 2

ROW: 14

COLUMN: 39

Water Levels in Feet, Datum NGVD

	10	20	30	40	50	60
	+	+	+	+	+	+
JAN 86 M		*				
FEB 86 M		*				
MAR 86 M		*				
APR 86 M		*				
MAY 86 M		*				
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M		*				
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 M		*				
MAY 87 M		*				
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :		+	*			
NOV 87 :		+	*			
DEC 87 :		+	*			
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		*				
APR 88 :		*	+	*		
MAY 88 :		*				
JUN 88 :		*				
JUL 88 :		*				
AUG 88 :		+	*			
SEP 88 M		*				
OCT 88 :	+	*				
NOV 88 :	+	*				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-1075

LAYER: 2

ROW: 23

COLUMN: 46

Water Levels in Feet, Datum NGVD

	7	17	27	37	47	57
	+	+	+	+	+	+
JAN 86 M		*				
FEB 86 M		*				
MAR 86 M		*				
APR 86 M		*				
MAY 86 M		*				
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M		*				
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 M		*				
MAY 87 M		*				
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :	+	*				
NOV 87 :	+	*				
DEC 87 :	+	*				
JAN 88 :	+	*				
FEB 88 :	+	*				
MAR 88 :	+	*				
APR 88 :	+	*				
MAY 88 :	+	*				
JUN 88 :	+	*				
JUL 88 :	+	*				
AUG 88 :	+	*				
SEP 88 :	+	*				
OCT 88 :	+	*				
NOV 88 :	+	*				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: Well located in Everglades Agricultural Area, water levels artificially maintained.

STATION: C-1074

LAYER: 2

ROW: 31

COLUMN: 25

Water Levels in Feet, Datum NGVD

	15	25	35	45	55	65
	+	+	+	+	+	+
JAN 86 :		*	+			
FEB 86 :		*	+			
MAR 86 :		*	+			
APR 86 M	*					
MAY 86 M	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 M		*				
NOV 86 M	*					
DEC 86 M	*					
JAN 87 :	*	+				
FEB 87 :		*	+			
MAR 87 :		*	+			
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :		*	+			
JUL 87 :		+				
AUG 87 :		+				
SEP 87 :		+				
OCT 87 :		+				
NOV 87 :	*	+				
DEC 87 :	*	+				
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 :	*	+				
APR 88 :	*	+				
MAY 88 :	*	+				
JUN 88 :	*	+				
JUL 88 :		*				
AUG 88 :		*				
SEP 88 :		+				
OCT 88 :	*					
NOV 88 :	*					
DEC 88 :	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agrees with simulated, only a * is printed)

Comments: none

STATION: C-1076

LAYER: 2

ROW: 28

COLUMN: 19

Water Levels in Feet, Datum NGVD

	21	31	41	51	61	71
	+	+	+	+	+	+
JAN 86 :						
FEB 86 :						
MAR 86 :						
APR 86 :	*					
MAY 86 M *						
JUN 86 M						
JUL 86 M						
AUG 86 M						
SEP 86 M						
OCT 86 M	*					
NOV 86 M						
DEC 86 M						
JAN 87 :	*	+				
FEB 87 :	*	+				
MAR 87 :	*	+				
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :	*	+				
JUL 87 :	*	+				
AUG 87 :	*	+				
SEP 87 :	*	+				
OCT 87 :	*	+				
NOV 87 :	*	+				
DEC 87 :	*	+				
JAN 88 :	*	+				
FEB 88 :	*	+				
MAR 88 M	*					
APR 88 M	*					
MAY 88 M	*					
JUN 88 M	*					
JUL 88 M	*					
AUG 88 M	*					
SEP 88 M	*					
OCT 88 M	*					
NOV 88 M	*					
DEC 88 M	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: C-687

LAYER: 3

ROW: 31

COLUMN: 12

Water Levels in Feet, Datum NGVD

	7	17	27	37	47	57
	+	+	+	+	+	+
JAN 86 :		+				*
FEB 86 :		+				*
MAR 86 :			+			*
APR 86 :			+	*		
MAY 86 :	+			*		
JUN 86 :		+				*
JUL 86 :						*
AUG 86 :				+	*	
SEP 86 :			+	*		
OCT 86 :		+		*		
NOV 86 :		+		*		
DEC 86 :		+		*		
JAN 87 :			+	*		
FEB 87 :			+	*		
MAR 87 :				+	*	
APR 87 :	+			*		
MAY 87 :				*		
JUN 87 :				+	*	
JUL 87 :				*		
AUG 87 :				+	*	
SEP 87 :				*		
OCT 87 :				*		
NOV 87 :					*	
DEC 87 :			+	*		
JAN 88 :			+	*		
FEB 88 :		+		*		
MAR 88 :	+			*		
APR 88 :	+			*		
MAY 88 :			*			
JUN 88 :		+	*			
JUL 88 :			*			
AUG 88 :			+	*		
SEP 88 :		+	*			
OCT 88 :	+		*			
NOV 88 :	+		*			
DEC 88 :	+		*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-2192

LAYER: 3

ROW: 29

COLUMN: 2

Water Levels in Feet, Datum NGVD

	7	17	27	37	47	57
	+	+	+	+	+	+
JAN 86 :	+	*				
FEB 86 :	+	*				
MAR 86 :	+	*				
APR 86 :	+	*				
MAY 86 :		+	*			
JUN 86 :		+	*			
JUL 86 :		*	+			
AUG 86 :		+	*			
SEP 86 :		+	*			
OCT 86 :		+	*			
NOV 86 :		+	*			
DEC 86 :		*	+			
JAN 87 :		+	*			
FEB 87 :		+	*			
MAR 87 :		+	*			
APR 87 :		+	*			
MAY 87 :		*				
JUN 87 :		*				
JUL 87 :		*				
AUG 87 :		*				
SEP 87 :		*				
OCT 87 :		*				
NOV 87 :		*				
DEC 87 M		*				
JAN 88 :		+	*			
FEB 88 :		+	*			
MAR 88 :		+	*			
APR 88 :		+	*			
MAY 88 :		+	*			
JUN 88 :		+	*			
JUL 88 :		+	*			
AUG 88 :		*	+			
SEP 88 :		*				
OCT 88 :		+	*			
NOV 88 :		+	*			
DEC 88 :		+	*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-731

LAYER: 3

ROW: 29

COLUMN: 6

Water Levels in Feet, Datum NGVD

	-8	2	12	22	32	42
	+	+	+	+	+	+
JAN 86 :			+	*		
FEB 86 :			+	*		
MAR 86 :				+	*	
APR 86 :		+		*		
MAY 86 :		+		*		
JUN 86 :				+	*	
JUL 86 :				+	*	
AUG 86 :					*	
SEP 86 :			+		*	
OCT 86 :			+		*	
NOV 86 :		+			*	
DEC 86 :			+		*	
JAN 87 :			+		*	
FEB 87 :				+	*	
MAR 87 :				+	*	
APR 87 :	+			*		
MAY 87 :				+	*	
JUN 87 :				+	*	
JUL 87 :				+	*	
AUG 87 :		+			*	
SEP 87 :			+		*	
OCT 87 :		+			*	
NOV 87 :			+		*	
DEC 87 :			+		*	
JAN 88 :				+	*	
FEB 88 :			+		*	
MAR 88 :			+		*	
APR 88 :	+			*		
MAY 88 :		+		*		
JUN 88 :	+				*	
JUL 88 :				+	*	
AUG 88 :					*	
SEP 88 :		+			*	
OCT 88 :	+				*	
NOV 88 :		+			*	
DEC 88 :	+				*	

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: Unreliable observed data.

STATION: C-531

LAYER: 3

ROW: 27

COLUMN: 13

Water Levels in Feet, Datum NGVD

	8	18	28	38	48	58
JAN 86 :	+	+	+	+	+	+
FEB 86 :		+	*			
MAR 86 :		+	*			
APR 86 :		*	+			
MAY 86 :	+	*				
JUN 86 :		+	*			
JUL 86 :		*		+		
AUG 86 :		*			+	
SEP 86 :		*	+			
OCT 86 :		*	+			
NOV 86 :		++				
DEC 86 :		*	+			
JAN 87 :		++				
FEB 87 :		*		+		
MAR 87 :		*		+		
APR 87 :		*				
MAY 87 :		*		+		
JUN 87 :		+	*			
JUL 87 :		*	+			
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :		*	+			
NOV 87 M		*				
DEC 87 M		*				
JAN 88 M		*				
FEB 88 M		*				
MAR 88 M		*				
APR 88 :	+	*				
MAY 88 M		*				
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 :	+	*				
OCT 88 :	+	*				
NOV 88 :		*	+			
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-2215 LAYER: 3 ROW: 24 COLUMN: 5

Water Levels in Feet, Datum NGVD

	7	17	27	37	47	57
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :		+	*			
MAR 86 :			*			
APR 86 M		*				
MAY 86 :	+	*				
JUN 86 :			+	*		
JUL 86 :				*		
AUG 86 :			*		+	
SEP 86 :			*		+	
OCT 86 :		*	+			
NOV 86 :		*				
DEC 86 :		+	*			
JAN 87 :			*			
FEB 87 :			+	*		
MAR 87 :			*			
APR 87 :		*	+			
MAY 87 :		*			+	
JUN 87 :			+	*		
JUL 87 :			*	+		
AUG 87 :			*	+		
SEP 87 :			+	*		
OCT 87 :			*		+	
NOV 87 :			*		+	
DEC 87 :			*			
JAN 88 :			*			
FEB 88 :		+	*			
MAR 88 :			*	+		
APR 88 :		+	*			
MAY 88 :	+	*				
JUN 88 :		+	*			
JUL 88 :			+	*		
AUG 88 :			*		+	
SEP 88 :			+	*		
OCT 88 :		+	*			
NOV 88 :		+	*			
DEC 88 :		+	*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-529

LAYER: 3

ROW: 22

COLUMN: 16

Water Levels in Feet, Datum NGVD

	14	24	34	44	54	64
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :	+		*			
MAR 86 :		+	*			
APR 86 :		+	*			
MAY 86 :		+	*			
JUN 86 :			+	*		
JUL 86 :			*			
AUG 86 :			+	*		
SEP 86 :			*			
OCT 86 :			*	+		
NOV 86 :			*	+		
DEC 86 :			*	+		
JAN 87 :			*	+		
FEB 87 :			+	*		
MAR 87 :			*			
APR 87 :			+	*		
MAY 87 :			+	*		
JUN 87 :			*			
JUL 87 :			+	*		
AUG 87 M			*			
SEP 87 M			*			
OCT 87 :			*			
NOV 87 M			*			
DEC 87 M			*			
JAN 88 M			*			
FEB 88 M			*			
MAR 88 M			*			
APR 88 :			+	*		
MAY 88 M			*			
JUN 88 M			*			
JUL 88 M			*			
AUG 88 M				*		
SEP 88 :			+	*		
OCT 88 :			+	*		
NOV 88 :			*			
DEC 88 :			+	*		

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-1963

LAYER: 3

ROW: 22

COLUMN: 4

Water Levels in Feet, Datum NGVD

	9	19	29	39	49	59
	+	+	+	+	+	+
JAN 86 :		*				
FEB 86 :		*				
MAR 86 :		* +				
APR 86 :	*					
MAY 86 :	*		+			
JUN 86 :		*	+			
JUL 86 :		*		+		
AUG 86 :		*	+			
SEP 86 :		++				
OCT 86 :		*+				
NOV 86 :		* +				
DEC 86 :		*		+		
JAN 87 :		* +				
FEB 87 :		* +				
MAR 87 :		* +				
APR 87 :	*	+				
MAY 87 :	*		+			
JUN 87 :		++				
JUL 87 :		*	+			
AUG 87 :		* +				
SEP 87 :		*	+			
OCT 87 :		*		+		
NOV 87 :		*		+		
DEC 87 :		* +				
JAN 88 :		*				
FEB 88 :		*+				
MAR 88 :		* +				
APR 88 :	++					
MAY 88 :	++					
JUN 88 :		+ *				
JUL 88 :		*	+			
AUG 88 :		*		+		
SEP 88 :		*				
OCT 88 :	+	*				
NOV 88 :		*+				
DEC 88 :		++				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-2186

LAYER: 3

ROW: 22

COLUMN: 4

Water Levels in Feet, Datum NGVD

	10	20	30	40	50	60
	+	+	+	+	+	+
JAN 86 M		*				
FEB 86 M		*				
MAR 86 M		*				
APR 86 M	*					
MAY 86 :	*					
JUN 86 M		*				
JUL 86 M		*				
AUG 86 M		*				
SEP 86 M		*				
OCT 86 :	*	+				
NOV 86 M	*					
DEC 86 M		*				
JAN 87 M		*				
FEB 87 M		*				
MAR 87 M		*				
APR 87 :	*	+				
MAY 87 M	*					
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 M		*				
NOV 87 :	*	+				
DEC 87 M		*				
JAN 88 M		*				
FEB 88 M		*				
MAR 88 M		*				
APR 88 :	+	*				
MAY 88 M	*					
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 :		*				
OCT 88 :	+	*				
NOV 88 :	*	+				
DEC 88 :	+	*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is plotted)

Comments: Unreliable observed data.

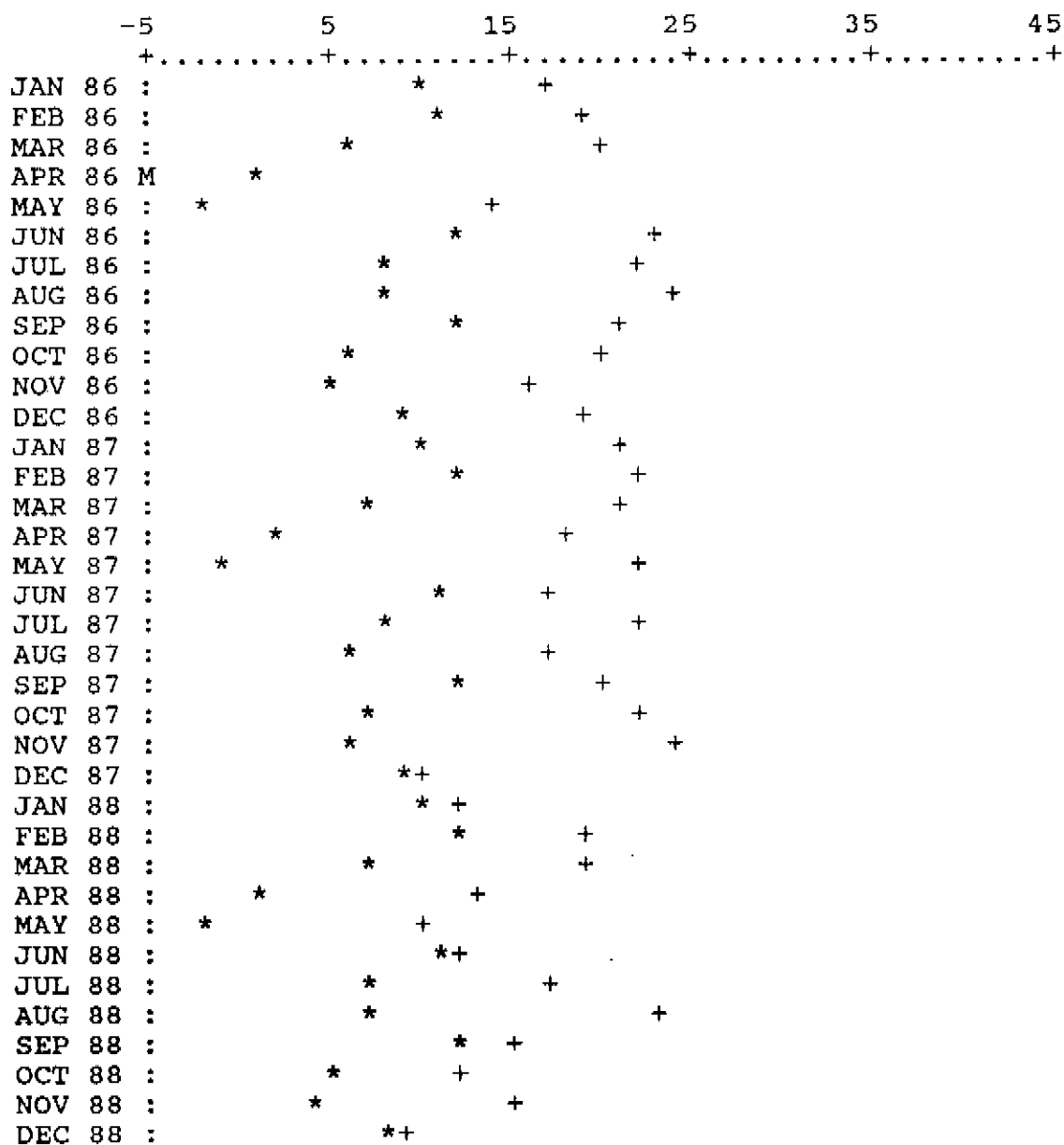
STATION: L-1965

LAYER: 3

ROW: 21

COLUMN: 6

Water Levels in Feet, Datum NGVD



* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is plotted)

Comments: none

STATION: HE-556

LAYER: 3

ROW: 16

COLUMN: 15

Water Levels in Feet, Datum NGVD

	11	21	31	41	51	61
	+	+	+	+	+	+
JAN 86 :		*				
FEB 86 :		+ *				
MAR 86 :		* +				
APR 86 :	*+					
MAY 86 :	*+					
JUN 86 :		+ *				
JUL 86 :		+*				
AUG 86 :		*+				
SEP 86 :		*+				
OCT 86 :		* +				
NOV 86 :		* +				
DEC 86 :		* +				
JAN 87 :		*+				
FEB 87 :		*				
MAR 87 :		* +				
APR 87 :	*		+			
MAY 87 :	*	+				
JUN 87 :		+*				
JUL 87 :		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :		* +				
NOV 87 M		*				
DEC 87 M		*				
JAN 88 M		*				
FEB 88 M		*				
MAR 88 M		*				
APR 88 :	*	+				
MAY 88 :	+*					
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 :	+	*				
OCT 88 :	+	*				
NOV 88 :		+*				
DEC 88 :		+ *				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-727 LAYER: 3 ROW: 15 COLUMN: 5

Water Levels in Feet, Datum NGVD

	8	18	28	38	48	58
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*					
MAR 86 :	*	+				
APR 86 M	*					
MAY 86 :	*	+				
JUN 86 :		++				
JUL 86 :		++				
AUG 86 :		*	+			
SEP 86 :		++				
OCT 86 :		++				
NOV 86 :	*	+				
DEC 86 :		++				
JAN 87 M	*					
FEB 87 M		*				
MAR 87 M		*				
APR 87 :	*	+				
MAY 87 M	*					
JUN 87 M		*				
JUL 87 M		*				
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :		++				
NOV 87 M		*				
DEC 87 M		*				
JAN 88 M		*				
FEB 88 M		*				
MAR 88 M		*				
APR 88 :		++				
MAY 88 M	*					
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 :		*				
OCT 88 :		*				
NOV 88 :		++				
DEC 88 :		++				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-559

LAYER: 3

ROW: 15

COLUMN: 10

Water Levels in Feet, Datum NGVD

	13	23	33	43	53	63
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*					
MAR 86 :	*+					
APR 86 :	* +					
MAY 86 :	* +					
JUN 86 :	+ *					
JUL 86 :	*+					
AUG 86 :	*+					
SEP 86 :	*+					
OCT 86 :	*+					
NOV 86 :	* +					
DEC 86 :	*+					
JAN 87 :	*+					
FEB 87 :	*+					
MAR 87 :	*+					
APR 87 :	* +					
MAY 87 :	* +					
JUN 87 :	*					
JUL 87 :	*+					
AUG 87 :	* +					
SEP 87 :	*					
OCT 87 :	*+					
NOV 87 :	*+					
DEC 87 :	*+					
JAN 88 :	*					
FEB 88 :	*+					
MAR 88 :	* +					
APR 88 :	* +					
MAY 88 :	*+					
JUN 88 :	*					
JUL 88 :	*+					
AUG 88 :	*+					
SEP 88 :	+ *					
OCT 88 :	+*					
NOV 88 :	*					
DEC 88 :	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-560

LAYER: 3

ROW: 15

COLUMN: 10

Water Levels in Feet, Datum NGVD

	13	23	33	43	53	63
	+	+	+	+	+	+
JAN 86 :		* +				
FEB 86 :		++				
MAR 86 :		* +				
APR 86 :	*	+				
MAY 86 :	*	+				
JUN 86 :		++				
JUL 86 :		*+				
AUG 86 :		* +				
SEP 86 :		* +				
OCT 86 :		* +				
NOV 86 :		* +				
DEC 86 :		* +				
JAN 87 :		* +				
FEB 87 :		* +				
MAR 87 :		* +				
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :		*+				
JUL 87 :		* +				
AUG 87 :		* +				
SEP 87 :		*+				
OCT 87 :		* +				
NOV 87 :		* +				
DEC 87 :		* +				
JAN 88 :		* +				
FEB 88 :		* +				
MAR 88 :		* +				
APR 88 :	*	+				
MAY 88 :	*	+				
JUN 88 :		*+				
JUL 88 :		* +				
AUG 88 :		* +				
SEP 88 :		*				
OCT 88 :		*+				
NOV 88 :		* +				
DEC 88 :		* +				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-2187

LAYER: 3

ROW: 15

COLUMN: 5

Water Levels in Feet, Datum NGVD

	8	18	28	38	48	58
	+	+	+	+	+	+
JAN 86 :	*					
FEB 86 :	*					
MAR 86 :	*	+				
APR 86 :	*	+				
MAY 86 :	*		+			
JUN 86 :		*	+			
JUL 86 :		*	+			
AUG 86 :		*	+			
SEP 86 :		*				
OCT 86 :		*				
NOV 86 :		*	+			
DEC 86 :		*	+			
JAN 87 :		*	+			
FEB 87 :		*				
MAR 87 :		*	+			
APR 87 :		*	+			
MAY 87 :		*	+			
JUN 87 :		*				
JUL 87 :		*	+			
AUG 87 :		*	+			
SEP 87 :		*				
OCT 87 :		*	+			
NOV 87 :		*	+			
DEC 87 :		*				
JAN 88 :		*	+			
FEB 88 :		*				
MAR 88 :		*	+			
APR 88 M	*					
MAY 88 M	*					
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 M		*				
OCT 88 M		*				
NOV 88 M		*				
DEC 88 M		*				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-557

LAYER: 3

ROW: 11

COLUMN: 9

Water Levels in Feet, Datum NGVD

	1	11	21	31	41	51
	+	+	+	+	+	+
JAN 86 :		*	+			
FEB 86 :		*	+			
MAR 86 :		*	+			
APR 86 :	*		+			
MAY 86 :	*		+			
JUN 86 :		+	*			
JUL 86 :		*	+			
AUG 86 :		*	+			
SEP 86 :		*	+			
OCT 86 :		*	+			
NOV 86 :		*	+			
DEC 86 :		*	+			
JAN 87 :		*	+			
FEB 87 :		*	+			
MAR 87 :		*	+			
APR 87 :	*		+			
MAY 87 :	*		+			
JUN 87 :		+	*			
JUL 87 :		*	+			
AUG 87 :		*	+			
SEP 87 :		*	+			
OCT 87 :		*	+			
NOV 87 :		*	+			
DEC 87 :		*	+			
JAN 88 :		+	*			
FEB 88 :		*	+			
MAR 88 :		*	+			
APR 88 :	*		+			
MAY 88 :	*	+				
JUN 88 :		+	*			
JUL 88 :		*	+			
AUG 88 :		*	+			
SEP 88 :		+	*			
OCT 88 :		+	*			
NOV 88 :		*	+			
DEC 88 :		+	*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-1977

LAYER: 3

ROW: 11

COLUMN: 3

Water Levels in Feet, Datum NGVD

	2	12	22	32	42	52
	+	+	+	+	+	+
JAN 86 :		* +				
FEB 86 :		* +				
MAR 86 :		* +				
APR 86 M :	*					
MAY 86 :	*	+				
JUN 86 :		* +				
JUL 86 :		* +				
AUG 86 :		* +				
SEP 86 :		* +				
OCT 86 :		* +				
NOV 86 :		* +				
DEC 86 :		* +				
JAN 87 :		* +				
FEB 87 :		* +				
MAR 87 :		* +				
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :		* +				
JUL 87 :		* +				
AUG 87 :		* +				
SEP 87 :		* +				
OCT 87 :		* +				
NOV 87 :		* +				
DEC 87 :		* +				
JAN 88 :		* +				
FEB 88 :		* +				
MAR 88 :		* +				
APR 88 :	*	+				
MAY 88 :	*	+				
JUN 88 :		* +				
JUL 88 :		* +				
AUG 88 :		* +				
SEP 88 :		* +				
OCT 88 :		* +				
NOV 88 :		* +				
DEC 88 :		* +				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: L-2200

LAYER: 3

ROW: 10

COLUMN: 6

Water Levels in Feet, Datum NGVD

	-1	9	19	29	39	49
	+	+	+	+	+	+
JAN 86 :		* +				
FEB 86 :		* +				
MAR 86 :		* +				
APR 86 :	*	+				
MAY 86 :	*		+			
JUN 86 :		* +				
JUL 86 :		* +				
AUG 86 :		*	+			
SEP 86 :		* +				
OCT 86 :		* +				
NOV 86 :		* +				
DEC 86 :		*	+			
JAN 87 :		* +				
FEB 87 :		* +				
MAR 87 :		* +				
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :		*				
JUL 87 :		* +				
AUG 87 :		* +				
SEP 87 :		* +				
OCT 87 :		* +				
NOV 87 :		* +				
DEC 87 :		* +				
JAN 88 :		* +				
FEB 88 :		+	*			
MAR 88 :		*	+			
APR 88 M	*					
MAY 88 M	*					
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 M		*				
OCT 88 M		*				
NOV 88 M	*					
DEC 88 M	*					

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-620

LAYER: 3

ROW: 10

COLUMN: 12

Water Levels in Feet, Datum NGVD

	-1	9	19	29	39	49
JAN 86 :	*	+				
FEB 86 :		*	+			
MAR 86 :		*		+		
APR 86 :	*				+	
MAY 86 :	*		+			
JUN 86 :			+	*		
JUL 86 :			*		+	
AUG 86 :			*		+	
SEP 86 :				*	+	
OCT 86 :		*			+	
NOV 86 :		*			+	
DEC 86 :		*			+	
JAN 87 :		*	+			
FEB 87 :		*		+		
MAR 87 :		*		+		
APR 87 :	*			+		
MAY 87 :	*			+		
JUN 87 :		*	+			
JUL 87 :		*		+		
AUG 87 :		*		+		
SEP 87 :		*	+			
OCT 87 :		*		+		
NOV 87 :		*		+		
DEC 87 :		*		+		
JAN 88 :		*		+		
FEB 88 :		*		+		
MAR 88 :		*		+		
APR 88 :	*		+			
MAY 88 :	*		+			
JUN 88 :		*	+			
JUL 88 :		*		+		
AUG 88 :		*		+		
SEP 88 :		*				
OCT 88 :		*	+			
NOV 88 :	*		+			
DEC 88 :		*	+			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-517

LAYER: 3

ROW: 7

COLUMN: 18

Water Levels in Feet, Datum NGVD

	-3	7	17	27	37	47
	+	+	+	+	+	+
JAN 86 :		*	+			
FEB 86 :		*	+			
MAR 86 :		*		+		
APR 86 :	*			+		
MAY 86 :	*		+			
JUN 86 :			*	+		
JUL 86 :		*		+		
AUG 86 :		*			+	
SEP 86 :		*		+	+	
OCT 86 :		*			+	
NOV 86 :		*			+	
DEC 86 :		*			+	
JAN 87 :		*		+		
FEB 87 :		*	+			
MAR 87 :		*		+		
APR 87 :	*			+		
MAY 87 :	*			+		
JUN 87 :		*	+			
JUL 87 :		*	+			
AUG 87 :		*	+			
SEP 87 :		*		+	+	
OCT 87 :		*		+		
NOV 87 :		*		+		
DEC 87 :		*		+		
JAN 88 :		*	+			
FEB 88 :		*	+			
MAR 88 :		*		+		
APR 88 :	*			+		
MAY 88 :	*		+			
JUN 88 :		*	+			
JUL 88 :		*		+		
AUG 88 :		*		+		
SEP 88 :		*	+			
OCT 88 :	*		+			
NOV 88 :	*		+			
DEC 88 :	*		+			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: HE-516

LAYER: 3

ROW: 8

COLUMN: 19

Water Levels in Feet, Datum NGVD

	3	13	23	33	43	53
	+	+	+	+	+	+
JAN 86 M		*				
FEB 86 M		*				
MAR 86 M		*				
APR 86 M	*					
MAY 86 M	*					
JUN 86 :		+	*			
JUL 86 M			*			
AUG 86 M			*			
SEP 86 :		+	*			
OCT 86 :		++				
NOV 86 :		*				
DEC 86 :		++				
JAN 87 :		++				
FEB 87 :	+	*				
MAR 87 :		++				
APR 87 :	++					
MAY 87 :	++					
JUN 87 :		+	*			
JUL 87 :		+	*			
AUG 87 :		++				
SEP 87 :		+	*			
OCT 87 :		*	+			
NOV 87 :		++				
DEC 87 :		*				
JAN 88 :		*				
FEB 88 :		+	*			
MAR 88 :		*	+			
APR 88 :	++					
MAY 88 :	* +					
JUN 88 :		+	*			
JUL 88 :		*	+			
AUG 88 :		*	+			
SEP 88 :		++				
OCT 88 :	++					
NOV 88 :		++				
DEC 88 :		++				

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none

STATION: GL-517

LAYER: 3

ROW: 7

COLUMN: 19

Water Levels in Feet, Datum NGVD

	1	11	21	31	41	51
	+	+	+	+	+	+
JAN 86 :		+	*			
FEB 86 :		+	*			
MAR 86 :		*	+			
APR 86 :	*	+				
MAY 86 :	*	+				
JUN 86 :		+	*			
JUL 86 :		*	+			
AUG 86 :		*	+			
SEP 86 :		*	+			
OCT 86 :		*	+			
NOV 86 :		*	+			
DEC 86 :		*	+			
JAN 87 :		*	+			
FEB 87 :		*				
MAR 87 :		*	+			
APR 87 :	*	+				
MAY 87 :	*	+				
JUN 87 :		*				
JUL 87 :		*	+			
AUG 87 M		*				
SEP 87 M		*				
OCT 87 :		*	+			
NOV 87 M		*				
DEC 87 M		*				
JAN 88 M		*				
FEB 88 M		*				
MAR 88 M		*				
APR 88 :	*	+				
MAY 88 M	*					
JUN 88 M		*				
JUL 88 M		*				
AUG 88 M		*				
SEP 88 :		*				
OCT 88 :	*	+				
NOV 88 :	*	+				
DEC 88 :		+	*			

* = simulated water levels

+ = observed water levels

M = observed data missing

(if observed agree with simulated, only a * is printed)

Comments: none