

Technical Publication 92-03

**A THREE-DIMENSIONAL
FINITE DIFFERENCE GROUND
WATER FLOW MODEL OF
THE FLORIDAN AQUIFER
SYSTEM IN MARTIN,
ST. LUCIE AND EASTERN
OKEECHOBEE COUNTIES,
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by

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April 1992

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



EXECUTIVE SUMMARY

The Upper East Coast Planning Area (UECPA) ground water flow model simulating conditions in the Floridan Aquifer System was developed using the U.S. Geological Survey modular three-dimensional finite-difference ground water flow code, commonly known as MODFLOW. This code 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 also can be simulated, such as recharge and well withdrawals.

The Upper East Coast Planning Area consists of Martin, St. Lucie, and portions of eastern Okeechobee counties. It is underlain by two aquifer systems: the Surficial Aquifer System and the deeper Floridan Aquifer System. Ground water in the Floridan Aquifer System ranges from moderately to highly mineralized and is currently used almost exclusively for agricultural irrigation. The Floridan Aquifer System includes an upper aquifer and a lower aquifer. The upper aquifer contains major producing zones which yield water for agricultural and potable purposes. The lower aquifer is highly mineralized.

The ground water flow model is composed of four layers representing the Surficial Aquifer System, the Upper Floridan Aquifer, and two of the uppermost portions of the Lower Floridan Aquifer. Confining zones between aquifers are not represented by separate layers within the model. Rather, the confining zones are represented by vertical conductance terms within the top three layers of the model. The horizontal model grid has 54 rows and 53 columns, with a uniform spacing of one mile.

The model was calibrated by adjusting aquifer parameters to match computed water levels with observed levels for the period May 1989 through March 1991. Ground water withdrawal information for the calibration period was obtained from individual water use permits for irrigation issued by the South Florida Water Management District and St. John's River Water Management District. The permits supplied information on the location of wells,

their capacities and well construction data. Further information was obtained by asking the permit holders to estimate their water usage during the calibration period. This was done by mailing questionnaires to the majority of permit holders in the UECPA. The responses to these questionnaires, combined with data from the permits, were used to estimate actual monthly water use during the calibration period. In some cases, agricultural and public water supply monthly water use reports were submitted to the District. These also were used in the model.

Recommendations

This model should be used in the evaluation of water-use permit applications for the Floridan Aquifer System in the UECPA. Where a finer scale or site-specific model is required, the regional model could be used to provide the boundary conditions. The current SFWMD Basis of Review manual specifies a Floridan Aquifer System restricted allocation of 1.5 acre inches for areas within the eastern Okeechobee-northwestern St. Lucie Basin. The current maximum month restriction of 1.5 acre inches should be reviewed using this model. This should be done by making predictive model runs using the maximum withdrawals allowed and observing the impacts on water levels in the aquifer system. The model should continue to be refined and updated whenever additional information becomes available.

Minimum water levels should be established for the Upper Floridan Aquifer in the Upper East Coast Planning Area. All permitted withdrawals should be regulated to ensure the minimum levels are maintained. The establishment of minimum water levels should be a part of the development of the water-supply plan for this area. Model results indicate water quality deterioration in the Upper Floridan Aquifer is likely in the future, therefore, increased monitoring for dissolved solids and chlorides in the Floridan Aquifer System well water is recommended for areas where large water withdrawals are occurring.

Agricultural water use accounted for 90 percent of the Floridan Aquifer System water outflows in the UECPA for the 23 month time period modeled. Accurate estimates of the amount of water being used from Floridan Aquifer wells are essential

in maintaining an accurate ground water flow model. It is recommended that permittees be required to submit monthly water use reports to the District. The reports should indicate the amount of time wells were allowed to flow freely in each month of the year.

Model results and field observations indicate that water levels fluctuate as much as eight feet in three distinct areas in St. Lucie County where intense citrus irrigation withdrawals from the Floridan Aquifer System occur. Caution should be exercised when allocating new withdrawals, and restrictions on additional development of the Floridan Aquifer System should be considered in these areas.

Hydrogeologic studies should be undertaken in areas where existing information is scarce. The areas should be located where future use of the Floridan Aquifer System as a public water supply source is probable. Cities in Martin and St. Lucie counties are currently using the Surficial Aquifer System as a sole source of potable water. There is concern that this source may not provide enough water to meet future demands. The availability of water from the Surficial Aquifer System is limited due to the lack of storage capacity, problems with wetland impacts and susceptibility of the aquifers to contamination by various land use activities.

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ABSTRACT

A three-dimensional ground water flow model representing the Floridan Aquifer System (FAS) in the Upper East Coast Planning Area (the study area) was developed as a tool for evaluating the impacts on the aquifer system resulting from present and future water uses. The FAS flows naturally at land surface and is used primarily for citrus irrigation in the study area. The water is moderately to highly mineralized and is usually blended with surface waters before being applied to citrus trees. Despite its high total dissolved solids content, the aquifer is utilized extensively, especially in St. Lucie County.

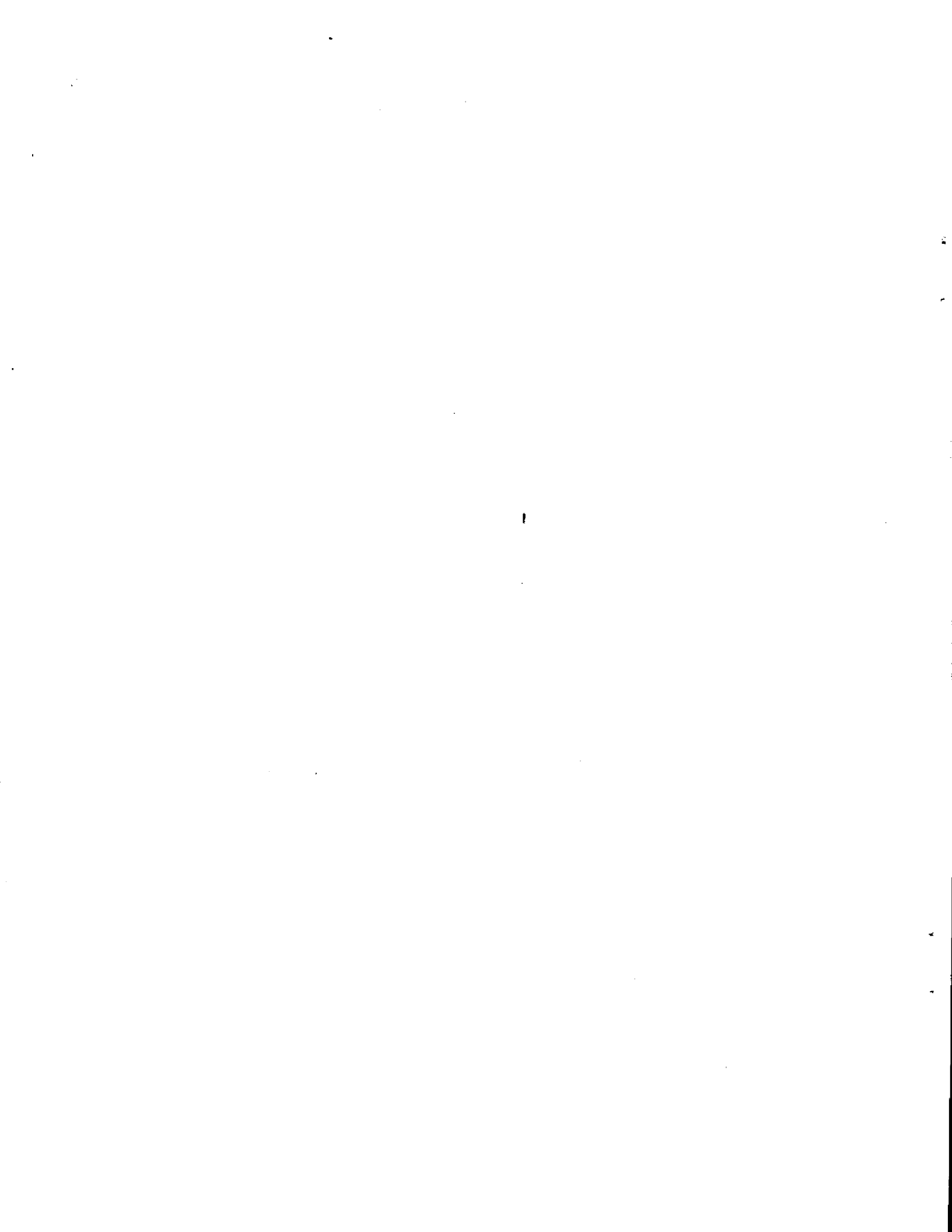
The extent and composition of the FAS and three permeable zones within it were defined using previously available and newly collected data. With few exceptions, agricultural ground water supply wells are drilled to the upper portion of the FAS where water quality is best and adequate yields are attained. Model results showed the majority of recharge to the Upper Floridan Aquifer is from deeper portions of the Aquifer System. A smaller, less important, source of recharge is from the north and west model boundaries, coinciding with the boundaries of Okeechobee and Indian River counties.

Present permitted allocations seasonally lower ground water levels as much as eight feet in three distinct areas of St. Lucie County. Survey results indicate that permittees in these areas are observing increasing chlorides in their FAS well water. Water quality degrades with depth in the

FAS and intensive withdrawals increase the potential for upward movement of that degraded water. Additional development of the FAS is not recommended in these three areas encompassing 28 square miles in St. Lucie County.

At present demand levels, ground water from the FAS should be available to meet present and future agricultural needs in the UECPA without adversely impacting water quality or the ability for wells to flow naturally at land surface. The potential for further ground water development will be analyzed using this model by simulating future water use scenarios.

The FAS is utilized on a small scale as a source for public water supply on Hutchinson Island. The water is processed by reverse osmosis to render it potable. The aquifer is providing an adequate quantity for the current level of use. Model results indicate the FAS does not have large scale production potential east of the Intracoastal Waterway, north of Stuart. Previous studies indicate a structural anomaly (possible fault) exists, the axis of which follows the Intracoastal Waterway in a north to south direction. Permeability in the upper FAS is drastically reduced east of this anomaly as is the vertical hydraulic connection between the upper and lower FAS. These factors taken together are responsible for the low yielding wells observed on Hutchinson Island and limit future large scale development of the aquifer in this area.



INTRODUCTION

PURPOSE AND SCOPE

The purpose of this study was to develop a calibrated three-dimensional ground water flow model simulating the Floridan Aquifer System (FAS) underlying the Upper East Coast Planning Area (UECPA). Two aquifer systems underlie the study area, the shallow Surficial Aquifer System and the deeper FAS. There are over 1,300 permitted wells tapping the FAS in the study area, the predominant use being citrus irrigation. Agricultural water demands in the study area are met primarily by surface water and secondarily by FAS water. Public water supplies presently rely primarily on the Surficial Aquifer System rather than the FAS. However, attention is shifting toward the high yielding FAS to augment current public water supplies.

The model was developed as part of the South Florida Water Management District's (SFWMD) effort to develop regional comprehensive water supply plans. These plans will be based on quantitative assessments of the available water resources, of which the Floridan Aquifer is a significant component. Evaluation of existing water supply problem areas, identification of potential problem areas, and development of management guidelines will be integral components of these water supply plans. The model will have immediate use as a regulatory tool to the SFWMD in evaluating requests for large ground water withdrawals.

This report represents the third phase of a four phase Floridan Aquifer System resource assessment of the UECPA. The first phase was completed in 1980 and involved collection and compilation of data in the UECPA, namely structural, flow zone, and water quality mapping (Brown and Reece, 1979), aquifer test data and analysis (Brown, 1980) and lithologic, geophysical, and well construction data (Reece, Brown and Hynes, 1980). The second phase involved developing an interim two-dimensional numerical flow model to evaluate immediate permitting issues arising from large FAS water withdrawal requests (Bower, 1988). One of the recommendations of phase two was that as part of phase three, a three-dimensional calibrated model be developed using the USGS MODFLOW code. This three-dimensional model will be followed by a fourth phase which will include documenting and analyzing the latest resource assessment data gathered over the past three years. The next publication will

include recently gathered water quality data, structural and flow zone mapping, results from a multi-zone FAS Aquifer Performance Test (APT) conducted by the SFWMD in St. Lucie County, and discussions regarding water level fluctuations.

LOCATION OF STUDY AREA

The UECPA is located on the southeast coast of Florida and covers all of St. Lucie, Martin, and parts of Okeechobee counties within the SFWMD (Figure 1). The model area includes all of the UECPA and includes an area approximately five miles outward from the UECPA into the adjacent counties of Indian River, Palm Beach, Okeechobee, and Osceola. It lies generally within Townships 33 through 41 South and Ranges 35 through 43 East, and encompasses approximately 2,862 square miles, 1,500 of which are in the UECPA (Figure 2).

TOPOGRAPHY

Land surface is relatively featureless, with elevations ranging from 0 feet to 60 feet above the National Geodetic Vertical Datum (NGVD), averaging approximately 25 feet NGVD in most of the study area. The major feature is a ridge trending southeast, which occurs in the western portion of the study area. The ridge trends southeast starting in the northwest portion of the UECPA with a maximum elevation of approximately 60 feet above NGVD (Figure 3). The Floridan Aquifer System potentiometric surface is 5-35 feet above land surface in most of the study area, but is at or below land surface in the topographically high areas along the ridge where land surface is 45 feet (NGVD) or higher.

HYDROGEOLOGY

The two major aquifer systems underlying the study area are the Surficial Aquifer System and the Floridan Aquifer System. They extend from land surface to over 1,500 feet in depth. Figure 4 is a generalized hydrogeologic cross section taken from A-A' as shown in Figure 1. The scope of this document includes a brief summary of the hydrogeology which supports the model development. Readers interested in a more detailed discussion of the geology of the Floridan Aquifer System are referred to the following publications: Applin and Applin (1944), Cooke (1945), Puri and Vernon (1959), Stringfield (1966) and Tibbals (1991).

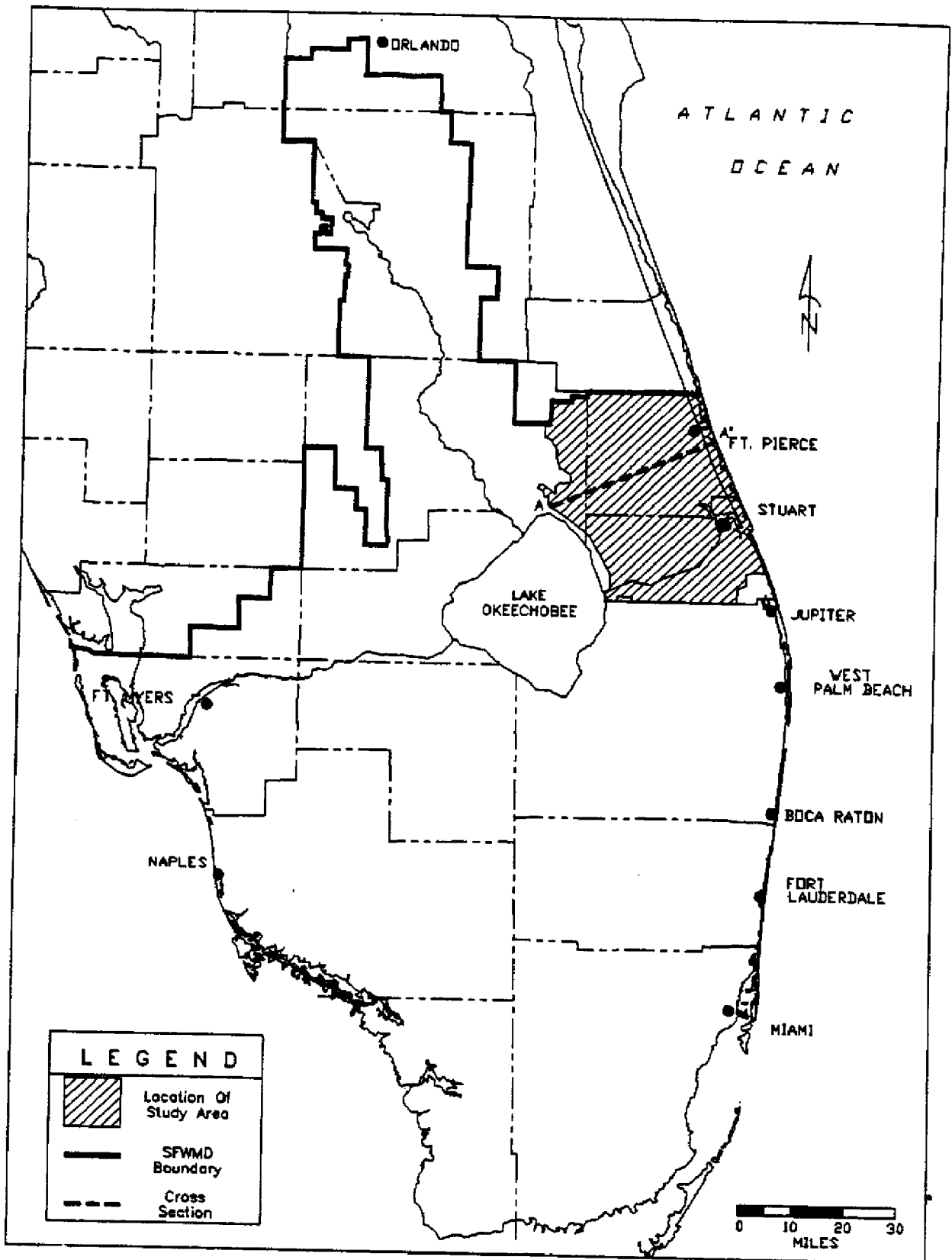


FIGURE 1: Location Map

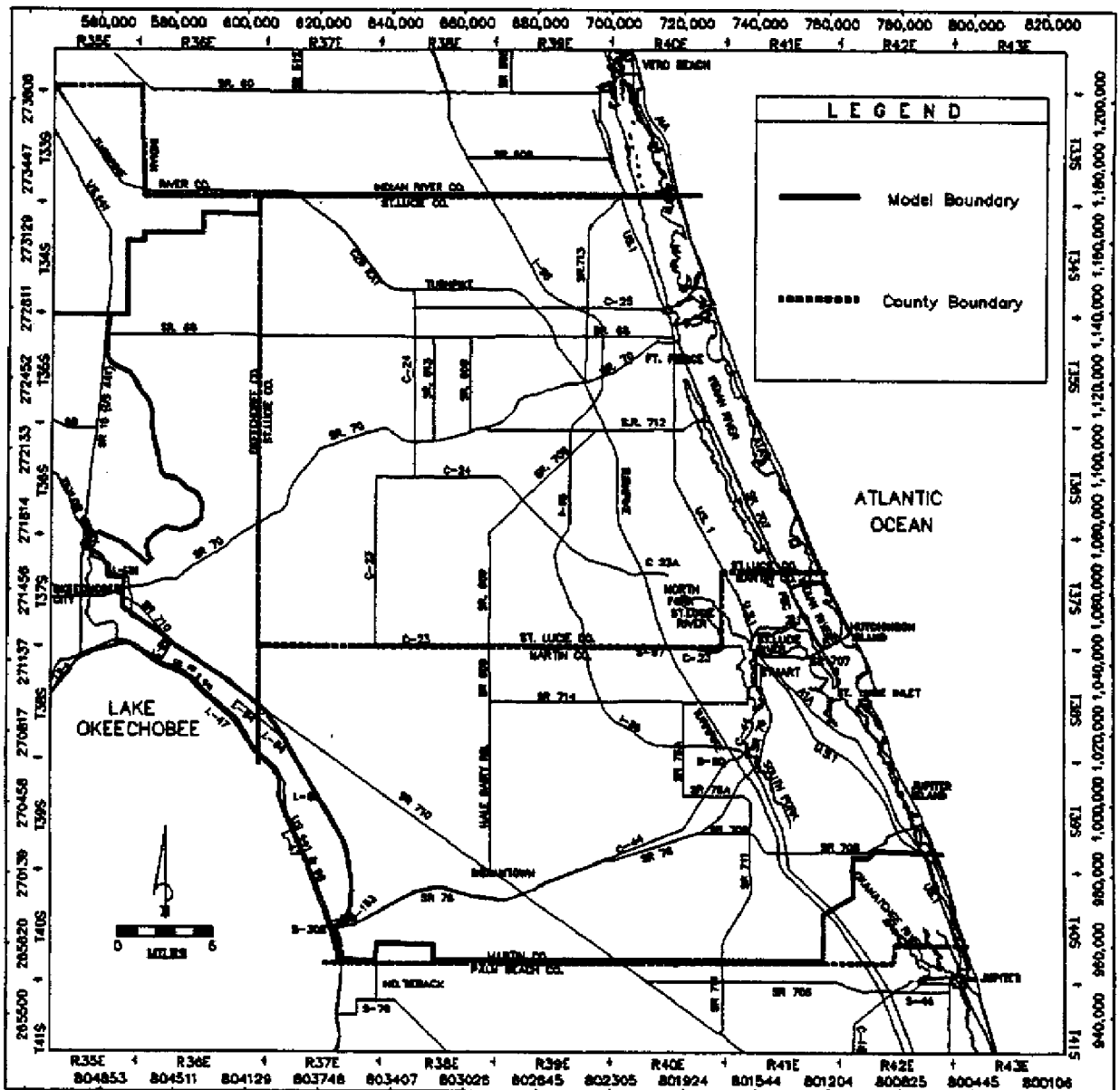


FIGURE 2. Study Area

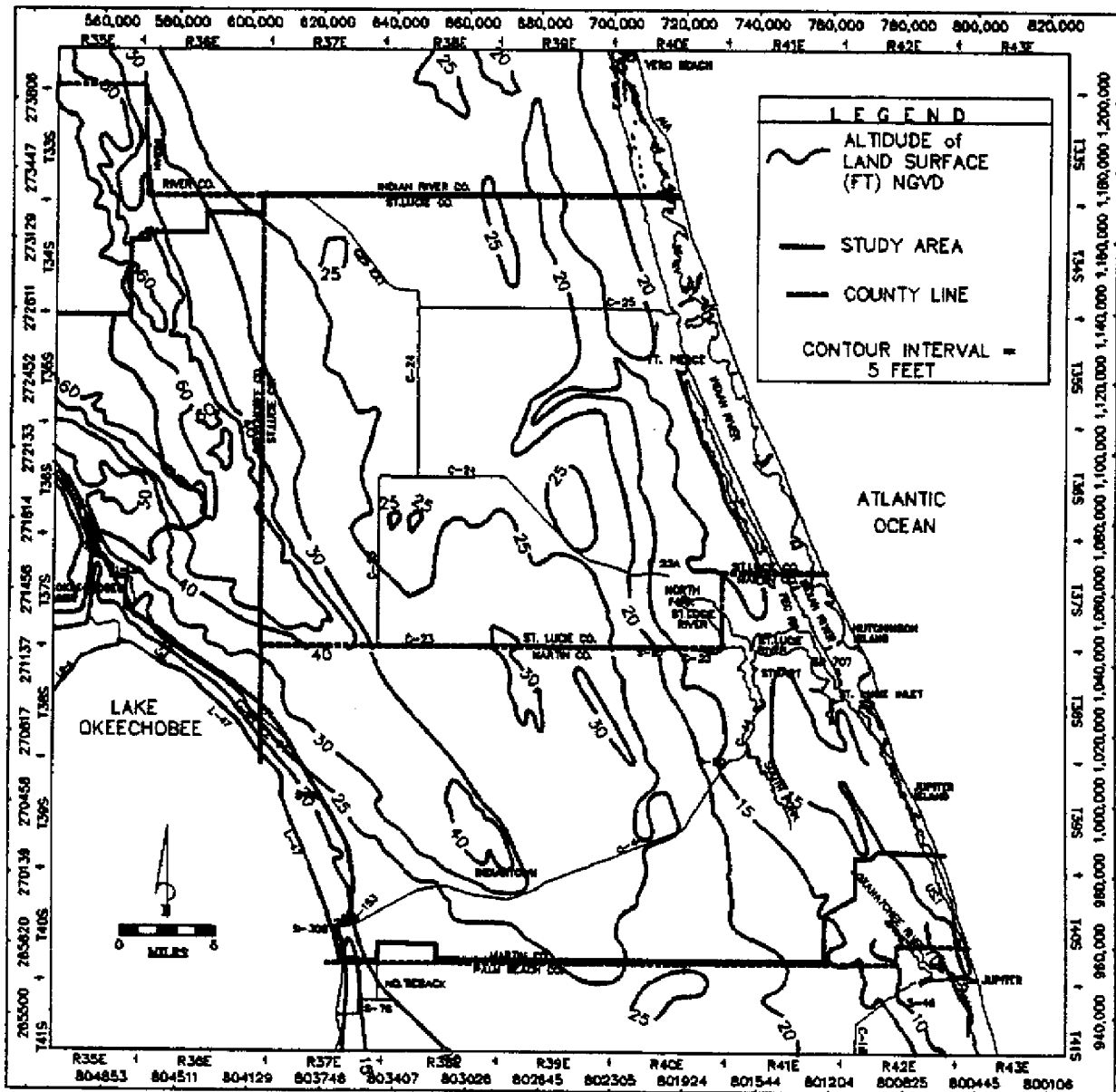


FIGURE 3: Topography of Study Area

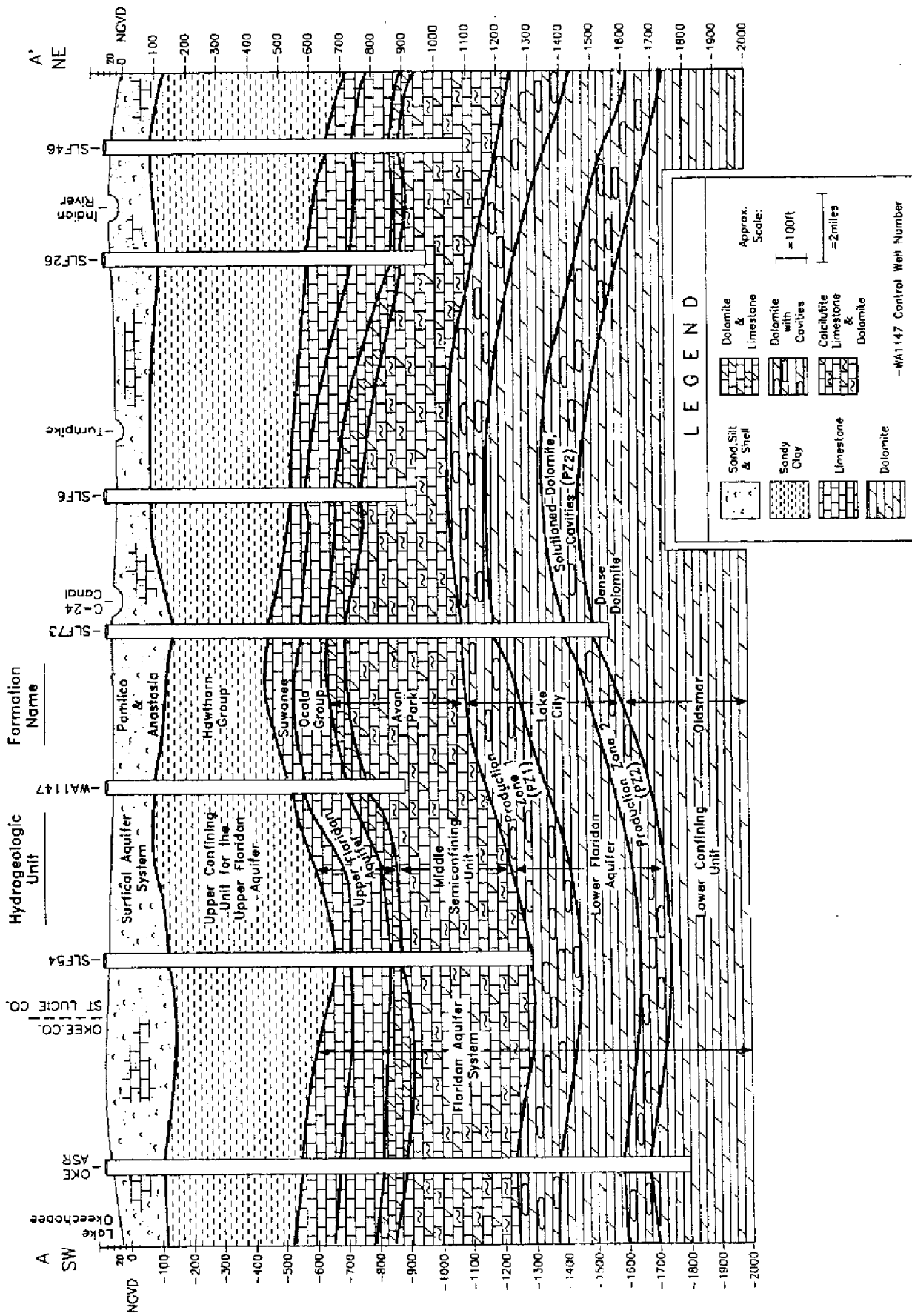


FIGURE 4. Generalized Hydrogeologic Cross Section

Surficial Aquifer System

The uppermost water-bearing interval in the UECPA is the Surficial Aquifer System (SAS). The SAS is the source of most of the potable water used in Martin, St. Lucie and Okeechobee counties. It is comprised of all saturated sediments and rocks from the water table down to the clays and silts of the Hawthorn confining unit and is generally composed of two producing zones. The sediments are composed of unconsolidated fine to medium quartz sand with interbedded lenses of limestone, sandstone, shell and clay of late Miocene and Pleistocene age. These surficial geologic units are areally discontinuous and extremely difficult to correlate stratigraphically over large areas. Aquifer thicknesses range from less than 50 to greater than 250 feet (Brown and Reece, 1979).

The Surficial Aquifer System is unconfined and is recharged locally by rainfall, canals, ditches, small reservoirs, and irrigation water. A small amount of recharge is derived from downward seepage of irrigation water derived from the Floridan Aquifer System (Lichtler, 1960) and, to a lesser extent, upward leakage from the FAS.

Water leaves the Surficial Aquifer System by seepage to canals and ditches, direct flow into the Atlantic Ocean, evapotranspiration where the water table is near land surface, and by pumping wells.

The scope of this investigation does not include a detailed discussion of the Surficial Aquifer System. Due to its role as a primary supply of fresh water to the public, it is covered in two separate studies currently in review: A Three-Dimensional Finite Difference Ground Water Flow Model of the Surficial Aquifer System in Martin County, Florida (Adams, 1992) and A Three-Dimensional Finite Difference Ground Water Flow Model of the Surficial Aquifer in St. Lucie County, Florida (Padgett, in press). The reader is referred to these publications for a more detailed discussion of this aquifer system.

Upper Confining Unit

The upper confining unit consists of Miocene age sediments of the Hawthorn Group. The geologic contact between the Pliocene age basal surficial sediments and Miocene age Hawthorn sediments is conformable and nearly imperceptible. Lithologic logs generally describe the contact as a change from a gray-green silty sand to a dark green fairly dense clay. The upper confining beds are equated with the upper portion of the Hawthorn Group and are contained wholly within the Hawthorn Group (Wedderburn and Knapp, 1983). The sequence is composed of low permeability, phosphatic, silty and clayey sediments that separate and effectively

confine the FAS from the SAS over the entire UECPA study area.

The top of the upper confining beds in the study area is shown in Figure 5. Structurally, the top of the Hawthorn is highest in the northwest corner of St. Lucie County (-80 feet NGVD). It gently dips to the southeast across the study area, occurring as deep as -200 feet NGVD in the extreme southeast portion of Martin County. The thickness of the Hawthorn is somewhat variable (Figure 6), and follows a general thickening trend to the southeast. It is thinnest (250 to 300 feet thick) in the northwest corner of the study area, thickens gradually to the south up to State Road 70 (St. Lucie County), where it flattens out and remains a constant 400-450 feet of thickness into Martin County near State Road 76. Here the Hawthorn Group begins to thicken to the southeast, getting as thick as 750 feet in extreme southeast Martin County.

The Hawthorn Group is separated into two formations (Scott, 1988). They include an upper silty, clayey, phosphatic, fine to very fine grained clastic zone (Peace River Formation) and a lower carbonate zone (Arcadia Formation) that is interbedded with low permeability carbonate muds and clays. The upper zone is generally devoid of permeable intervals. It varies in thickness from 100 to 300 feet. Rubble beds are sometimes present near the base of the upper zone and give a characteristically high response on natural gamma ray logs (Knapp, 1988).

Directly below the rubble beds is a dense dolomite layer sometimes described by local drillers as chert. This dolomite layer is typically between 3 to 10 feet thick and marks the top of the lower carbonate zone. Because of its consolidated, indurated nature, drilling contractors typically use this interval as an anchor to set the base of surface pipe when constructing FAS wells. Most FAS wells are completed as open hole below this dolomite layer. Below the dolomite bed and above the Floridan Aquifer are low permeability, poorly indurated limestones interbedded with calcareous clays and silts. The clay content typically increases with depth until the unit becomes dominated by sandy, plastic, olive gray clay. Thin beds of silty sand and shell also are found in this interval. The potential of the lower section of the Hawthorn to yield water was investigated by Hydro Designs (1988). The results were inconclusive; however, the potential is generally considered poor.

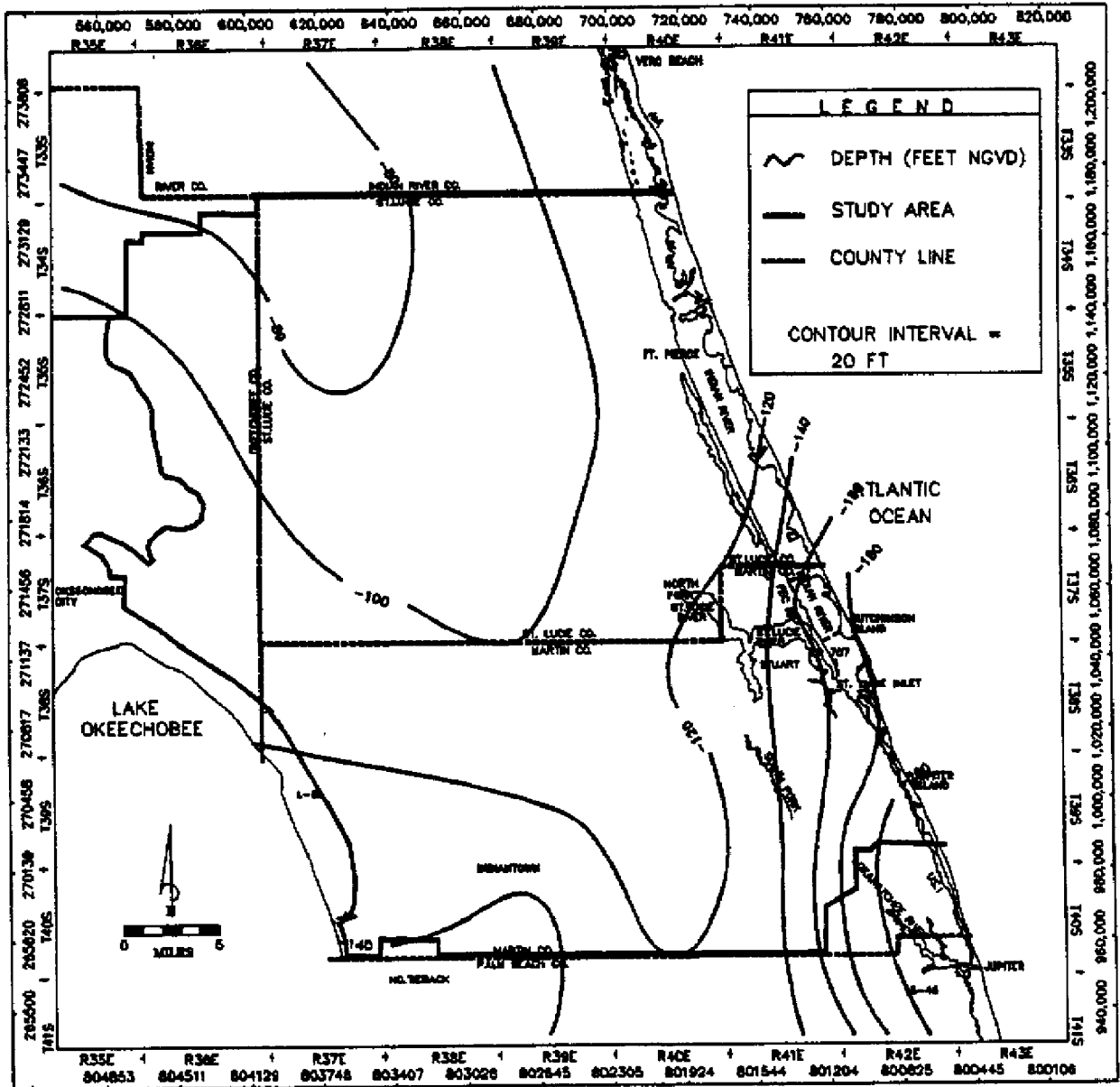


FIGURE 5: Top of the Upper Confining Interval

Floridan Aquifer System

Underlying the upper confining beds is a sandy, chalky, phosphatic limestone. Based on the definition by Parker and others (1955), this limestone unit is considered to comprise the upper portion of the Floridan Aquifer System. The phosphatic component of this unit makes it easily identifiable on gamma ray logs as peaks or intervals of high natural gamma ray activity. Wells completed to this interval or deeper flow naturally at ground level in most of the UECPA.

The Floridan Aquifer System is composed of a sequence of limestones, dolomitic limestones, and dolomites ranging in age from Eocene to early Miocene. It persists areally and ranges from 2,700 to 3,400 feet thick in the UECPA (Miller, 1982). The top occurs at -300 feet NGVD in the extreme northwest corner of the study area and dips to the southeast where it is found at -900 feet NGVD in the extreme southeast corner (Figure 7). Few wells penetrate the entire thickness of the FAS.

The Floridan Aquifer System is classified as an aquifer "system" because multiple permeable intervals sandwiched between confining materials exist in this thick sequence of carbonates. Permeable zones are identified using downhole flowmeter and temperature tools. Flow meter and temperature logs show that each permeable zone contributes varying amounts of flow to the borehole. Flow (permeable) zones are associated with solution cavities and formational unconformities, the latter being correlatable over large regions (Brown and Reece, 1979).

Tibbals (1991) divided the FAS into two aquifers based on the vertical occurrence of two highly permeable zones. These two aquifers are the "Upper Floridan" and the "Lower Floridan" aquifers. The two are separated by a low permeability confining interval dubbed the "middle semi-confining unit". The term Lower Floridan Aquifer should not be confused with the basal portion of the Lower Floridan Aquifer typically referred to as the "boulder zone". Tibbals' nomenclature is adopted in describing the hydrogeology and in model conceptualization for this UECPA study.

The Upper Floridan Aquifer (UFA), in the UECPA, is approximately 500 feet thick and composed of two continuous, correlatable flow zones. These flow zones are penetrated by most wells in the UECPA. They occur along unconformities between the Suwannee Formation and the Ocala Group, and the Ocala Group and the Avon Park Formation (Figures 8 and 9). These stratigraphic

unconformities are areally persistent and easily mapped over the study area (Brown and Reece, 1979). However, additional flow zones exist in the UFA that are much harder to correlate. These somewhat random zones are created by solutioning and dolomitization and are not stratigraphically controlled. The UFA was found to have from one to as many as eight separate flow zones associated with it.

The middle semi-confining unit was found at -900 feet NGVD in test well SLF-73 located in central St. Lucie County (C-24 & Shinn Road). It is approximately 200 feet thick and consists largely of chalky calcilutite interbedded with limestones and dolomites. Chalk and calcilutite are relatively impermeable and account for the confining nature of this unit at SLF-73. Few wells in the UECPA fully penetrate the middle semi-confining unit; therefore, data on its variability in thickness and lithology are limited. The confining unit is evident in deep well data (wells generally deeper than 1,000 feet) in the study area.

The upper permeable portion of the Lower Floridan Aquifer (ULFA) was penetrated by deep wells drilled in the study area. It follows the same structural trend as the UFA and is found 200 to 400 feet below its base (Figure 10). The ULFA is 400 feet thick and occurs approximately -1,100 feet NGVD in well SLF-73, central St. Lucie County. Hydraulic testing of this zone was conducted at three sites in St. Lucie and Okeechobee counties. One of these tests was conducted for the SFWMD by an engineering firm (CH2M Hill, 1989); a second test was conducted by the SFWMD (unpublished C-24, St. Lucie County APT Test at SLF 73) and a third test was conducted by Ebasco for Florida Power and Light (1990). The well names respectively are OKEEASR-DEEP, SLF-73, LFM-1. The first two aquifer performance tests (APT's) listed above were performed by the SFWMD to determine the ability of the Lower Floridan interval to store water. The technology of injecting and storing fresh water in an aquifer for future recovery is commonly referred to as Aquifer Storage and Recovery (ASR). This portion of the Lower Floridan was determined to have good potential as an ASR target horizon due to its capacity to receive large volumes of injected water pumped from surface water bodies. This capacity is due to its high porosity and permeability.

The ULFA is traceable throughout the study area. Sources of available data include the two ASR sites mentioned above (CH2M Hill, 1989, SLF-73), two Florida Power and Light cooling water supply wells near Indiantown (Ebasco, 1990), as well as lithologic and geophysical logs from injection wells.

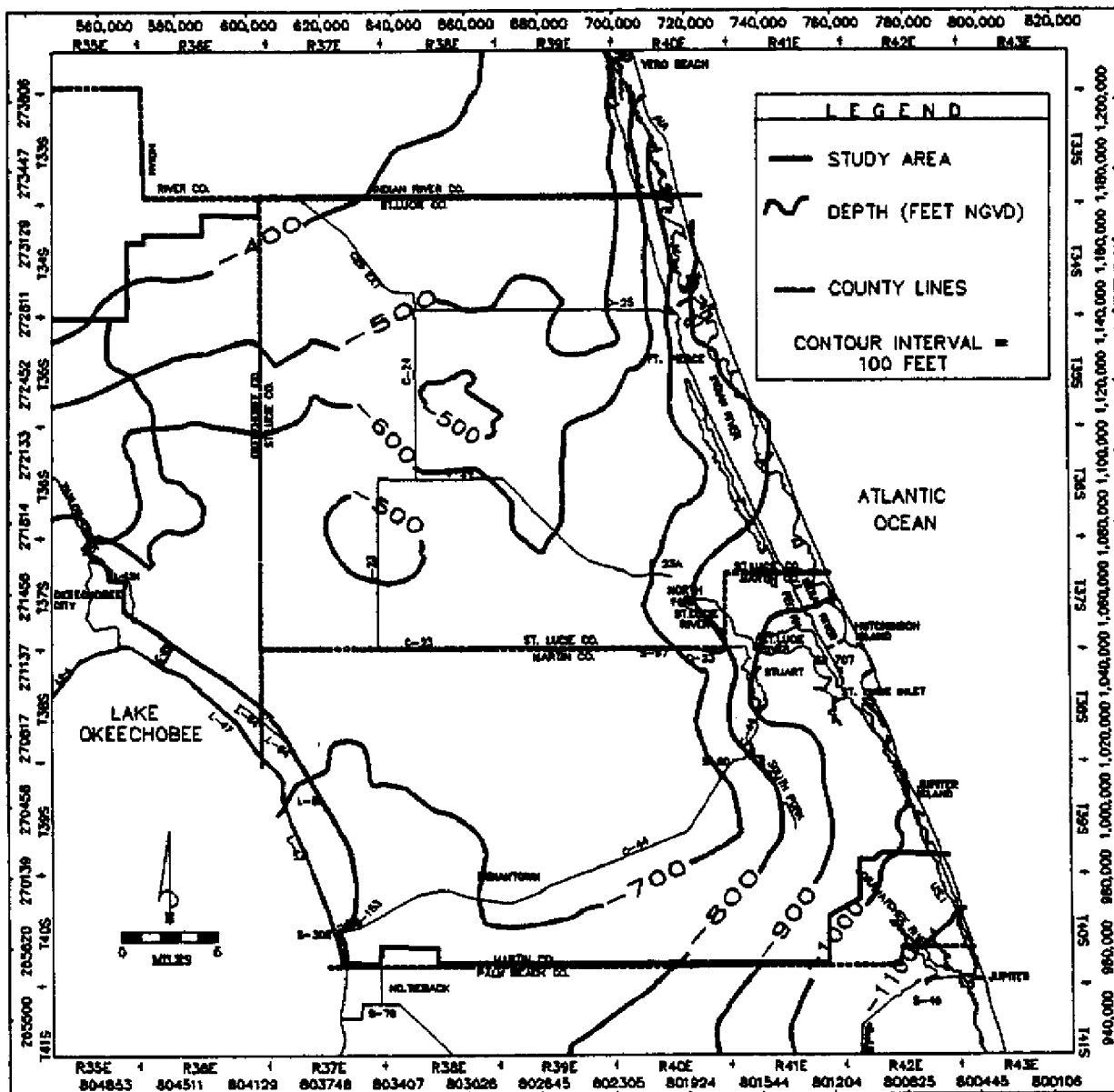


FIGURE 8: Depth to the Unconformity Between the Suwannee Formation and the Ocala Group

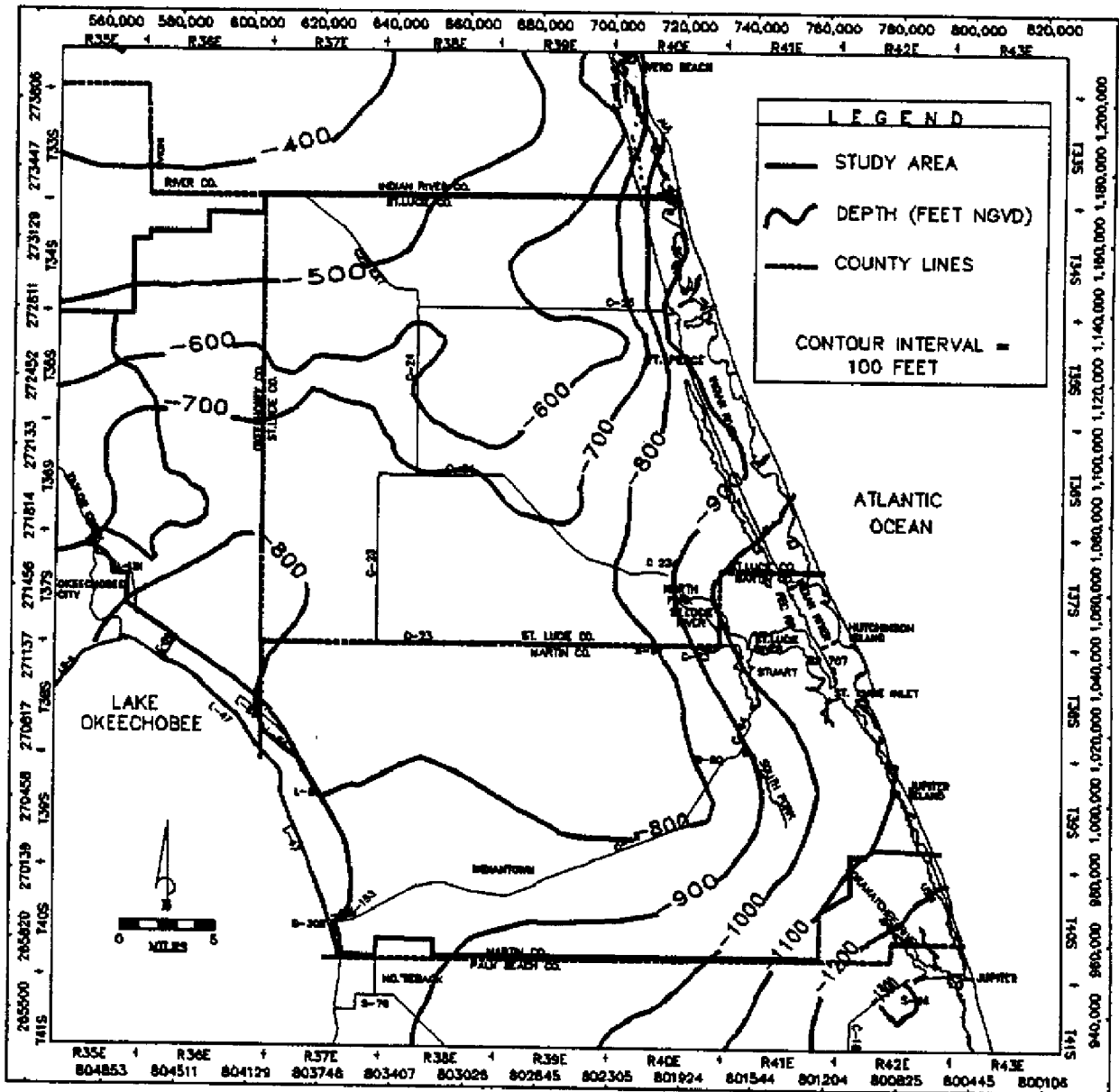


FIGURE 9: Depth to the Unconformity Between the Ocala Group and the Avon Park Formation

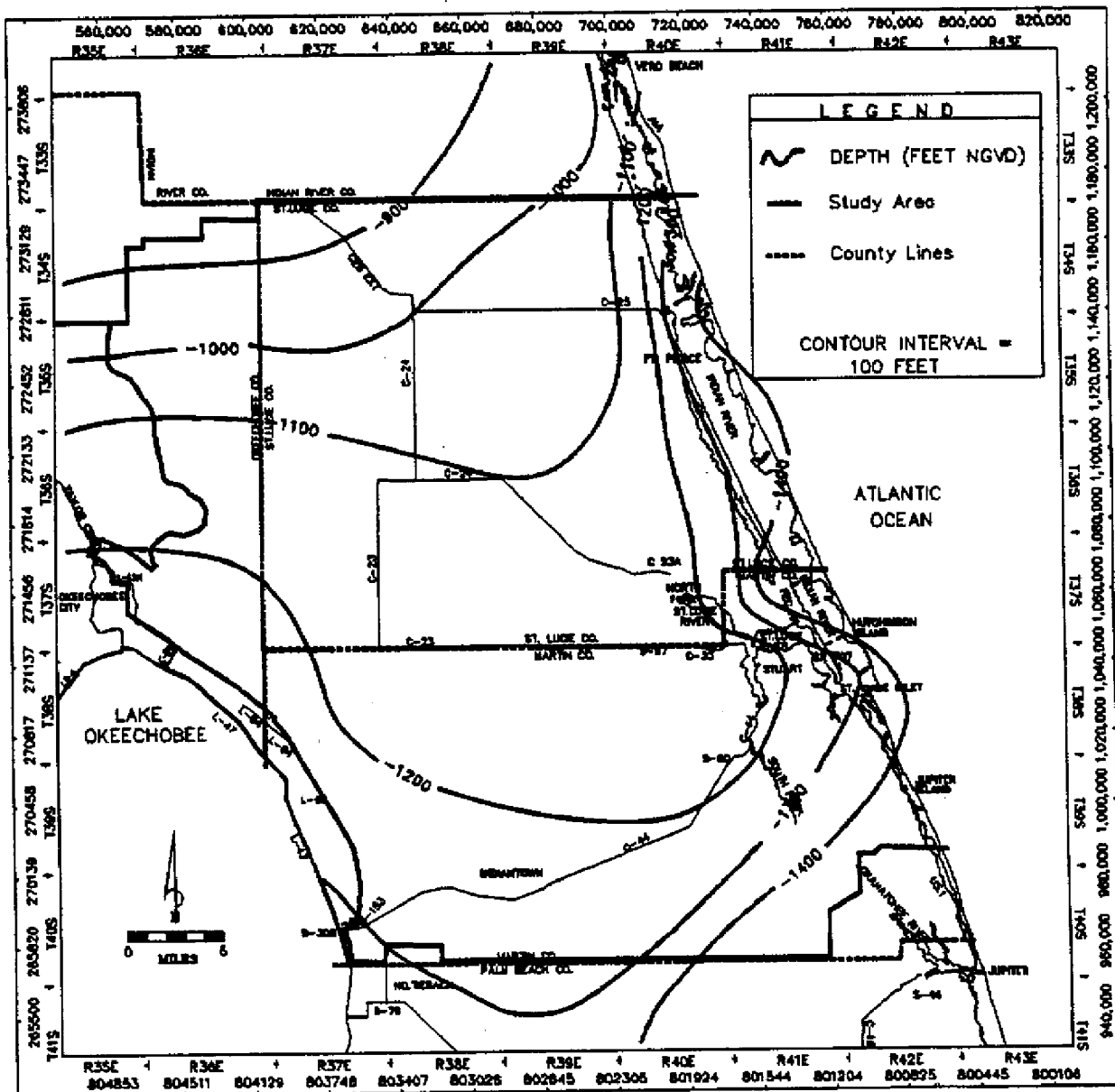


FIGURE 10: Top of Lower Floridan Aquifer Producing Zone 1

Data collection associated with the construction of injection wells typically does not provide detailed data for this portion of the aquifer; the target (the Boulder Zone) is approximately 1,500 feet deeper. However, in most cases, open hole geophysical logs are run before casing is set, and flowmeter and temperature logs from injection wells demonstrate the persistence of the ULFA in the study area.

Borehole geophysical and drill stem tests performed at ASR sites indicate the permeability is cavernous in nature. The cavities occur in two distinct places within the upper 400 feet of the ULFA, separated by an interval of low permeability. The top of the upper and lower cavity systems are found at -1,100 feet NGVD and -1,400 feet NGVD, respectively, at well SLF-73. For ease of reference, hereafter these zones are referred to as the Lower Floridan Aquifer permeable zone 1 (LFAPZ1) and the Lower Floridan Aquifer permeable zone 2 (LFAPZ2) in descending order (refer to Figure 14). Water samples were collected from the LFAPZ1 and the LFAPZ2 intervals using drill stem packers in well SLF-73 and were analyzed for several parameters including, total dissolved solids (TDS) and chlorides. Water samples also were collected from the confining unit between the two intervals and analyzed for TDS and chlorides. The laboratory analyses of the samples collected indicate that water quality is significantly different in each of the permeable zones. Dual packer tests and geophysical logs run in the 250 foot thick interval between flow zones demonstrate its confining nature. Measured heads in LFAPZ1 and LFAPZ2 were nearly the same (approximately 39 feet above NGVD).

Below the ULFA, water quality deteriorates rapidly with depth. An extremely thick confining interval of dense limestones and dolomites extends approximately 1,500 feet below the ULFA. The thickness and lack of porosity in these confining beds effectively preclude water movement.

Underneath the thick confining interval below the ULFA is a highly permeable interval known informally as the Boulder Zone. The Boulder Zone is an extremely permeable, cavernous section at the base of the lower FAS. Its unofficial name was coined from drillers who describe it as drilling a layer of loose, boulder size rocks. It does not significantly affect the Floridan Aquifer System (Tibbals, 1991), because it is hydraulically separated from it. The water levels generally fall below ground level, considerably lower than levels in the Floridan Aquifer System which rise on average 15 feet above ground level. The Boulder Zone is important in south Florida only from the perspective of disposing wastewater through injection wells. Injection wells are receptacles for secondarily treated wastewater and industrial wastes and are located throughout most of southeast Florida (Figure 11). Stratigraphically, the Boulder Zone is in the Oldsmar Formation, which represents the oldest Eocene Age sediments in the section. It is approximately 3,100 to 4,100 feet deep in the UECPA (Miller, 1982b).

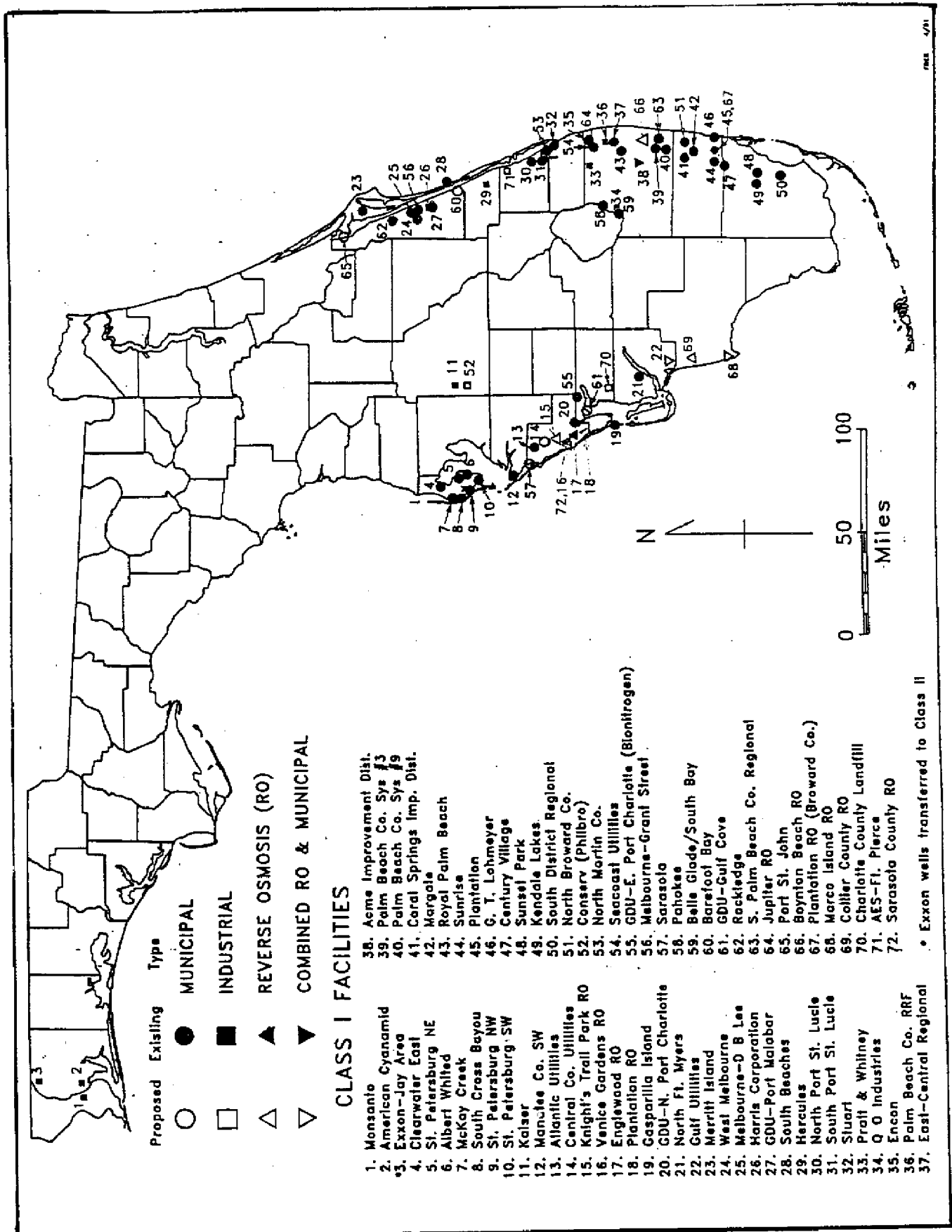


FIGURE 11. Location of Class I Injection Facilities in Florida (Adapted from DER)

MODEL DESCRIPTION

INTRODUCTION

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

1. It is available in the public domain.
2. It is compatible with most computers with only minor modifications.
3. The modular structure and excellent documentation allow easy modification and the addition of new modules for specialty applications.
4. MODFLOW allows good flexibility of data file structure and management. This facilitates the utilization of and interaction with other software for data manipulation.
5. The ability to record cell-by-cell flow terms 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. The modules utilized for this model are shown in Table 1. 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. SIP was used for this model application with favorable results.

DISCRETIZATION

Discretization is the process of breaking a continuous section into a set of discrete elements or cells by use of a grid to represent the system numerically. The study area was discretized into a horizontal grid of 54 rows and 53 columns. The cells in the grid are equidimensional and measure one

mile (5,280 feet) a side. 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 (Figure 12). Variations in the survey grid made this somewhat difficult, especially in Okeechobee County, but overall the fit was good.

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 (Vcont) for beds separating 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 the UECPA.

The UEC FAS model contains four layers (Figure 13). Layer 1 represents the Surficial Aquifer System, layer 2 the UFA, layer 3 and 4 represent LFAPZ1 and LFAPZ2, respectively. A more thorough breakdown including brief layer description follows.

Layer 1: Surficial Aquifer System (SAS). The interval between ground level and the top of the Hawthorn Group is approximately 90-240 feet in depth and composed of fine to medium sands, shell, limestone, sandstone, silt and clays. Lithology alternates in composition with depth and is lumped together as one unconfined layer.

Layer 2: Upper Floridan Aquifer (UFA). The UFA includes a series of flow zones associated with solution cavities and erosional surfaces. The UFA, despite its multiple flow zones, was simulated as one model layer rather than multiple layers for three reasons: 1) the vast majority of permitted irrigation wells completed into the Upper Floridan Aquifer

TABLE 1. MODFLOW PACKAGES USED IN THE UECPA MODEL

MODFLOW PACKAGE	FUNCTION	USE IN MODEL
BASIC	Model Administration	Used
BLOCK CENTERED FLOW	Computation of conductance and storage components of finite-difference equations.	Used
WELL	Simulates a source/sink to the aquifer that is not affected by heads in the aquifer.	Used to represent discharge from irrigation and public water supply water use.
GENERAL HEAD BOUNDARY	Simulates a source/sink of water providing recharge/discharge to the aquifer at a rate proportional to the head difference between the source/sink and the aquifer.	Used along all model boundaries in layers 2 and 3.
STRONGLY IMPLICIT PROCEDURE (SIP)	Solves the model's finite difference equations using the Strongly Implicit Procedure.	Used
OBSERVATION NODES	Generates a file of computed water levels for selected model cells.	Used to generate comparative hydrographs and calibration agreement.

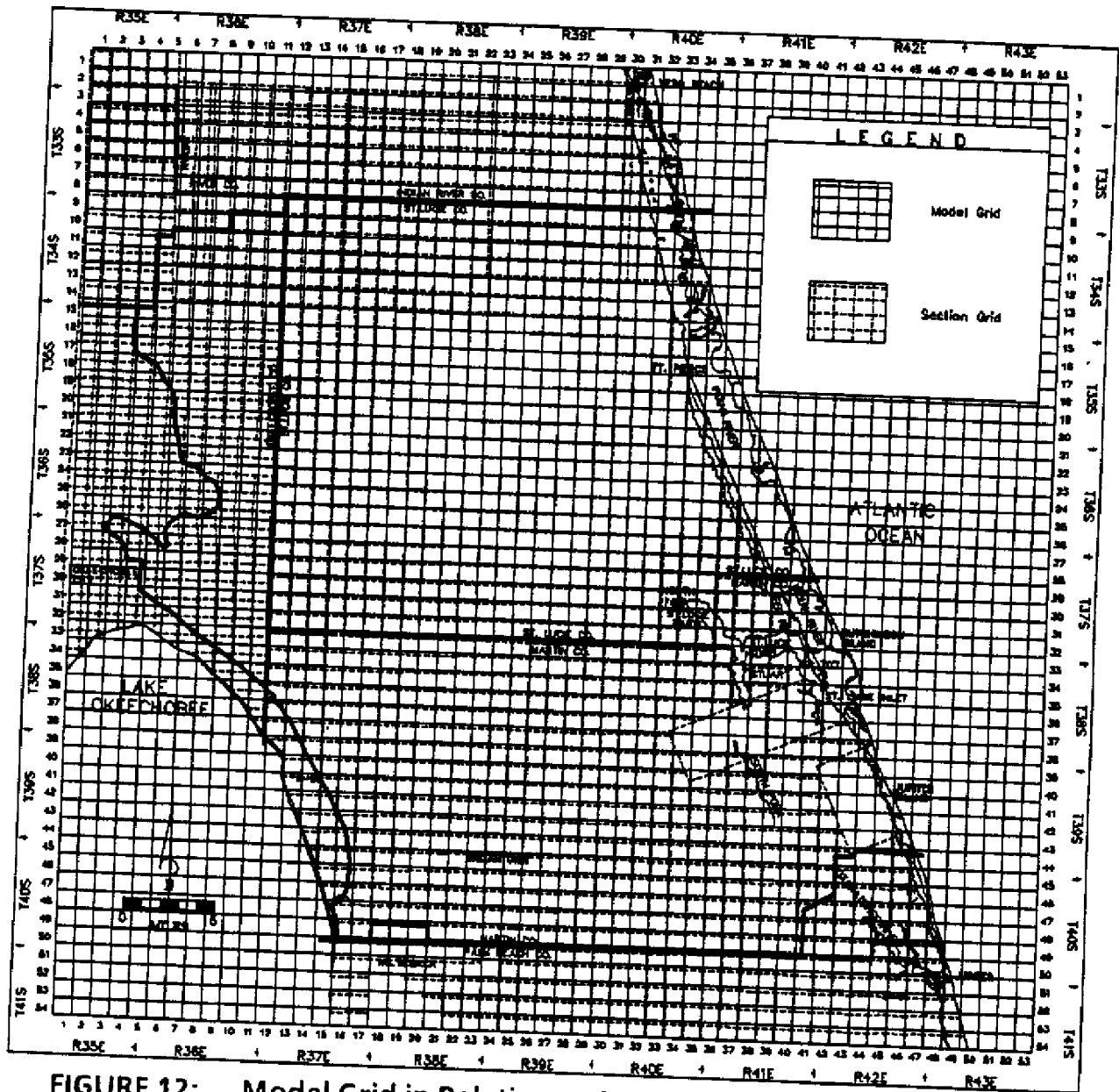


FIGURE 12: Model Grid in Relation to Surveyed Section Borders

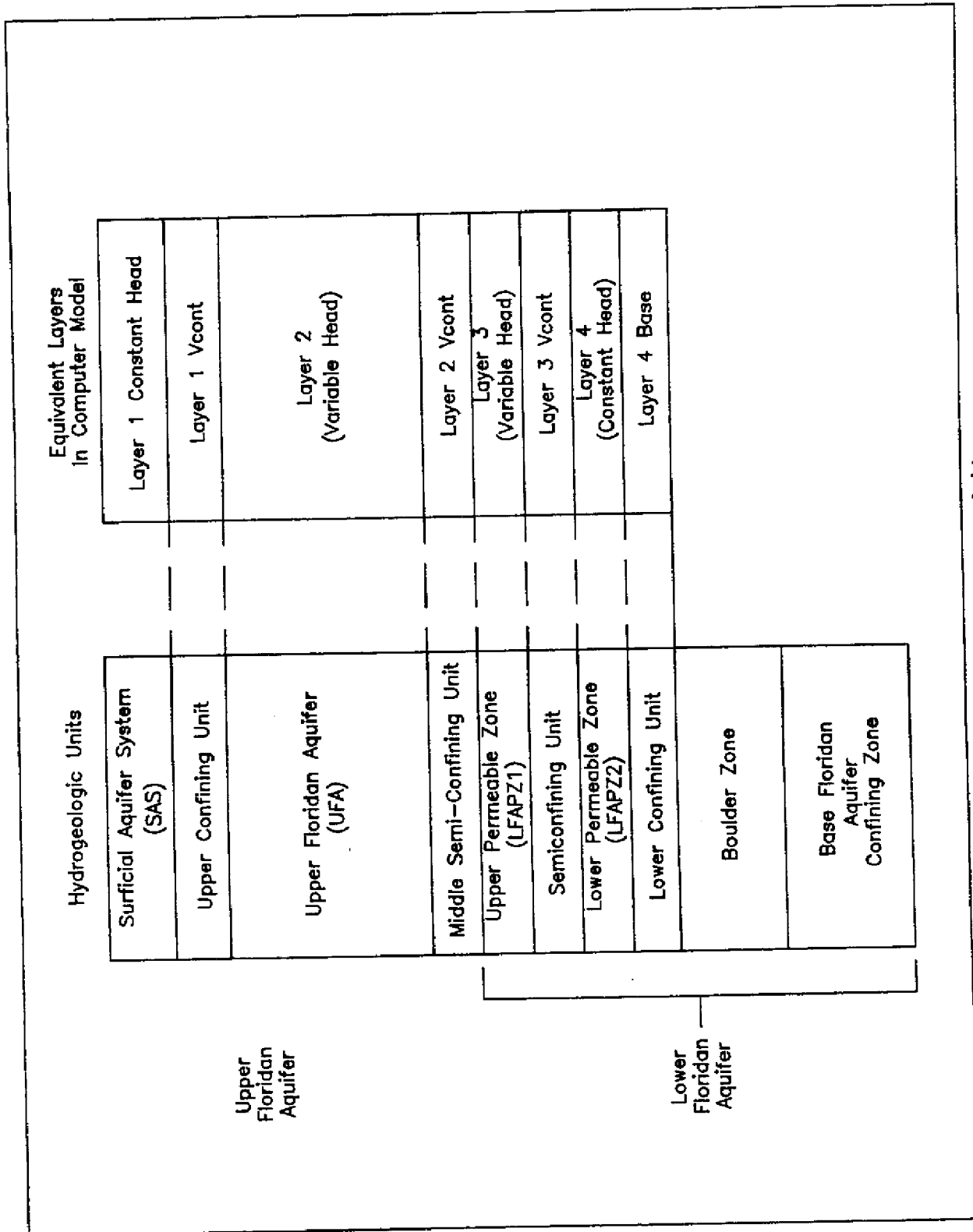


FIGURE 13: Hydrogeologic Units and Corresponding Model Layers

penetrate all or most of the flow zones mentioned above so that withdrawals are from a composite of zones, 2) monitor wells used to calibrate the model are open to multiple zones within the Upper Floridan, making calibration of multiple layers impossible and 3) previous model work by the U. S. Geological Survey discretized the Floridan in East Central Florida in the same manner (Tibbals, 1991).

Geophysical and lithological data abound for the Upper Floridan, because the vast majority of water users in the area complete wells into this portion of the aquifer. There are much less data available for the Lower Floridan Aquifer and the middle semi-confining unit.

The middle semi-confining unit separates the UFA from the LFAPZ1. It is approximately 200-400 feet thick and leaky. The hydraulic connection between the Upper and Lower Floridan Aquifers has been tested via aquifer performance tests in three District-sponsored studies within the modeled area (Wedderburn & Knapp, 1981; CH2M Hill, 1989; SLF-73, SFWMD unpublished APT data). Leakance values obtained from these tests are very similar and average 0.04/day. With few exceptions, this leakance value was employed throughout the modeled area.

Layer 3 and 4: LFAPZ1 and LFAPZ2, respectively. The portion of the Lower Floridan Aquifer reflected by these layers is approximately -1,000 to -1,500 feet NGVD, and 500 feet thick. It is composed of limestones, dolomitic limestones, and dolomites of Eocene age. The entire Lower Floridan Aquifer is 2,000 feet thick in the study area and extends vertically to the top of the Cedar Keys formation (3,000 feet deep). The model conceptualization includes only the upper 500-foot portion of the Lower Floridan, the base of which is commonly found just above the 10,000 mg/l TDS water quality demarcation. An erosional surface exists at the contact between the middle confining interval and the top of the Lower Floridan Aquifer. The surface is considered the top of the Lake City Limestone as described by Applin and Applin (1944). It is easily recognized in borehole geophysical logs by its relatively high electrical resistance and is persistent throughout the study area. It marks the top of layer 3 in the model. In recent writings, the USGS has chosen to meld the former Lake City limestone with the Avon Park formation.

Recent drill stem packer tests (SFWMD, unpublished 1991) indicate the top 500-foot portion of the Lower Floridan contains at least two separate flow zones hydraulically separated by a semi-confining interval composed of homogeneous dolomitic limestones. These two flow systems,

LFAPZ1 and LFAPZ2, are conceptualized in the model as layers 3 and 4, respectively.

BOUNDARY CONDITIONS

The function of boundaries is to impose the effects of the external regional flow system on the modeled area. Several types of boundary conditions are available in MODFLOW. Prescribed flux, specified or constant head and no-flow boundaries were used in this model. Specified head boundaries are those where the head at the boundary remains constant for the model duration. Prescribed flux is used to simulate boundary head changes with time. No-flow boundaries are used where the ground water flow regime is such that flow across a boundary is not expected to occur.

The general head boundary package was used to generate prescribed flux boundaries in layers two and three. According to McDonald and Harbaugh (1988), a general head boundary consists of a water source outside the modeled area which supplies or removes water to a model cell at a rate proportional to the head difference between the source and the adjacent cell. The rate at which water is supplied to a cell is given by:

$$Q_m = C_m(H_m - h) \quad (1)$$

where

Q_m is the flow rate to or from the cell from boundary m (ft³/day)

C_m is the constant of proportionality for boundary m (ft³/day)

H_m is the average head at the source boundary m (ft), and

h is the average head in the cell (ft)

The constant of proportionality for boundary m defined herein as the horizontal conductance, C_m , (ft²/day) was calculated using equation 2:

$$C_m = K_h b W / F_c L \quad (2)$$

where

K_h is the horizontal hydraulic conductivity of the cell (ft/day);

b is the average thickness of the layer (ft);

W is the width of the cell (ft)

F_c is a dimensionless calibration factor for general head boundary representation;

L is the length of the assumed flow path line (ft)

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. A breakdown of boundary cell types and geographic limits are discussed below.

Boundary Cell Types

Constant Head

Layer 1: All cells in layer 1 (SAS), are assigned specified (constant) heads. Layer 1 is effectively separated from layer 2 (FAS) by thick clays and silts of the Hawthorn confining zone. Since the SAS is independent of the FAS and because the scope of this project does not include calibrating the SAS, layer 1 heads were held constant to reduce unnecessary work in further simulating this unconfined system. For the purposes of this study, water levels for layer 1 were assumed to be approximately 5 feet lower than ground level elevation. Topographic levels were obtained from USGS quadrangle maps of the study area, heads for each cell were obtained by subtracting five feet from the topographic levels as referenced to mean sea level. The resultant heads were not permitted to fall below zero. The resultant levels are presented graphically in Appendix A, Figure A-3.

The Surficial Aquifer System was modeled independently in two separate studies currently in press (Adams, 1992, and Padgett, in press).

Layer 4: All cells in layer 4 (LFAPZ2), are assigned specified heads. Heads in this layer were found to be approximately equivalent to heads in layers 2 and 3, however, there were no temporal data available documenting head changes if they exist. Calibration of this layer was not possible due to the lack of head data. Water levels in the Upper Floridan Aquifer (layer 2) fluctuate seasonally in response to stresses induced by pumping. However, since there were no significant well withdrawals from the Lower Floridan Aquifer (layers 3 and 4) and because there is over 500 feet of confinement between layers 2 and 4 it was assumed that fluctuations in layer 4 heads were minimal. Based on those assumptions, all cells in layer 4 were simulated as constant head. The specified head value for each boundary cell in layer 4 was set equal to the boundary cell heads in layer 2 observed in March, 1990.

Head Dependent Flux Boundary

Layers 2 and 3: Potentiometric data have been gathered monthly in the Upper Floridan Aquifer (layer 2) corresponding to each stress period in the model simulation and were used to develop a general head package. Figure 14 shows the type cells comprising both layers 2 and 3. Potentiometric

maps indicate a small change in flux with time across the boundaries, justifying the need for a specified flux boundary. The water levels in the LFAPZ1 (layer 3) are influenced by and nearly equal to those in the UFA (layer 2) as evidenced by hydrographs in wells completed into these zones. Therefore, it was assumed the heads at all boundaries in layers 2 and 3 were equal. These head values were determined for each cell of all boundaries by interpolating existing monthly UFA (layer 2) water level data.

Conductance terms are required input for specified flux cells. Conductance values are initially based on the length, width, layer thickness, and hydraulic conductivity of the boundary cell and adjacent variable head cell. The physical basis for conductance between two adjacent cells was previously discussed and is expressed by equation 2 in the Boundary Conditions section. Equation 2 simplifies to $C=T$ when the following assumptions and conditions are met:

$$L = W ; \text{ given for equidimensional cells}$$

$$K_h * b = T ; \text{ given}$$

$$F_c = 1.0 ; \text{ default calibration factor}$$

In general, however, it should be recognized that formulation of a single conductance term to account for a three-dimensional flow process is inherently an empirical exercise, and that adjustment during calibration is almost always required (McDonald and Harbaugh, 1988). In order to better simulate a constant head boundary around the active edges of the model and to best calibrate the transient model, the calibration factor F_c , as shown in equation 2, was set to 0.1. Using the assumptions given above for values of L and T , and setting F_c equal to 0.1, the solution to equation 2 is $C=10T$. Therefore, the conductance value for all boundary cells was set equal to ten times the cell's transmissivity.

Increasing the conductance term caused the prescribed flux boundary cells to function as prescribed head cells. Prescribed head cells differ from constant head cells in that the head values can change between stress periods. The setting of $F_c = 0.1$ was considered the best adjustment for two reasons:

- 1) Monitor wells on the boundaries calibrated better.
- 2) Volumetric budget data reflect a significant influx of water into the system from the boundaries rather than exclusively from below through vertical leakage.

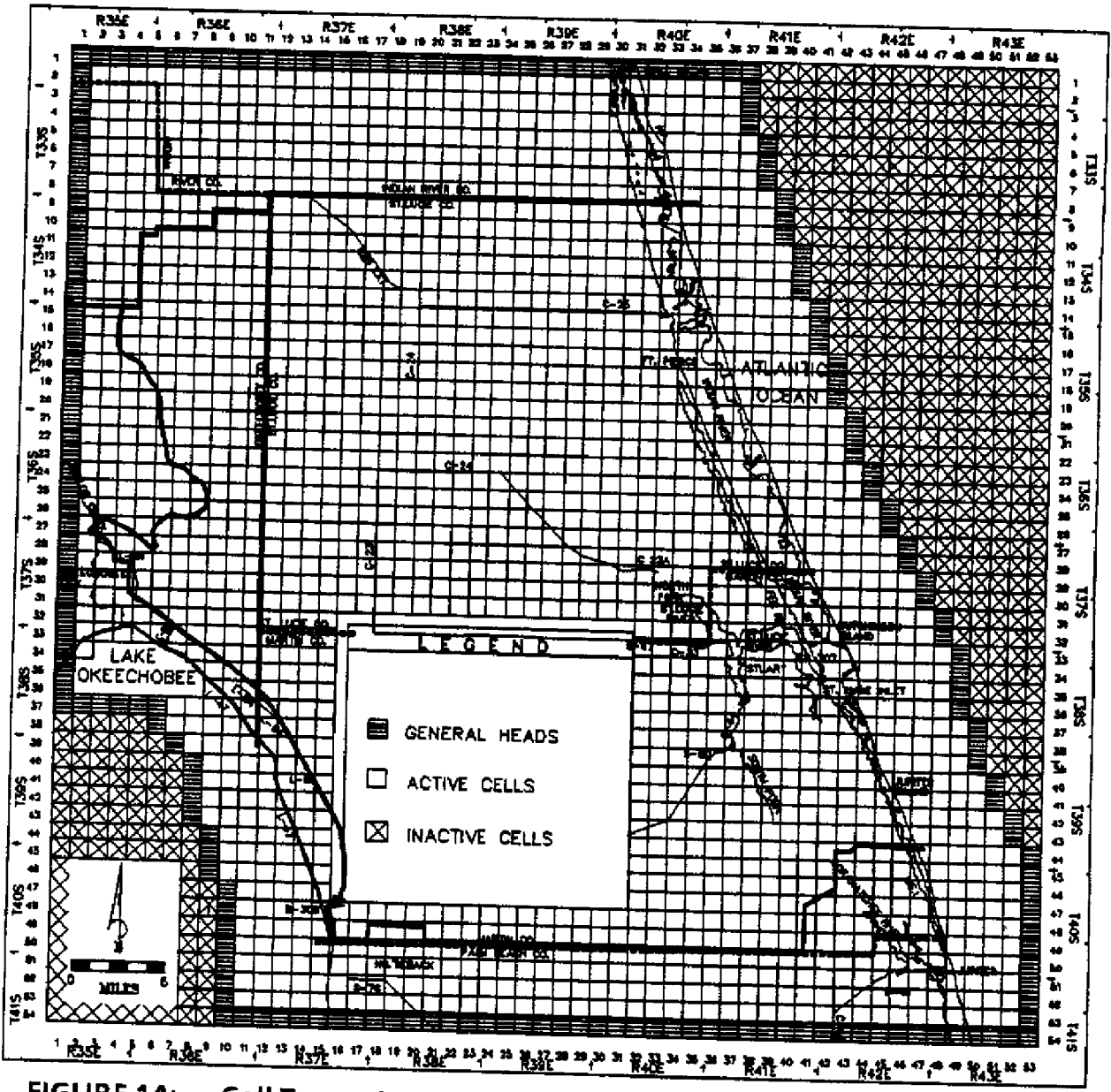


FIGURE 14: Cell Types, Layer 2 and Layer 3

Geographic Limits and Locations of Boundaries

Figure 15 shows the boundaries and type cells used for every layer in the model. Layer 1 (SAS) is composed entirely of constant head cells. The boundaries are also constant head cells and were set varying distances outside the study area. In a clockwise direction, the distance each boundary extends outside the study area were: north eight miles, east five miles from the coastline, south five miles, and west approximately five miles. Layers 2 and 3 consist of general head boundaries which extend outside the study area the same distance as layer 1 in all directions except the east. This eastern boundary was extended five miles east of the barrier island toward the Atlantic Ocean. Layer 4, like layer 1, is composed of constant head cells, its boundaries are located in the same place as layers 2 and 3.

In all layers, the north boundary was set eight miles (cells) into Indian River County in order to include the large withdrawals from the UFA north of the study area political boundary (St. Lucie-Indian River County Line). Dense citrus groves irrigate with Floridan Aquifer System water from more than 500 wells in this northern eight miles of the model area. Utilities in southern Indian River County operate R.O. plants which together withdrew approximately 70 million gallons in March, 1990. The combined agricultural and public water supply stresses alter the flow system in the study area and are, therefore, necessarily included in the simulation.

Layers 2 and 3 are composed of active cells and are represented at the boundaries by general head cells (head dependent flux). The placement of the boundaries for these two layers is identical. Layer 2 (the UFA) and layer 3 (the LFAPZ1) are confined and occur -400 to -1,000 feet NGVD and -600 to -1,300 feet NGVD respectively near the coast. These layers are not hydraulically connected with the ocean at the east model boundary. The FAS outcrops ten to twenty miles east of the coast in the Straits of Florida at a depth of approximately 900 feet below sea level (Figure 16). The boundary was placed five miles east of the coast to avoid boundary effects within the study area. For this modeled system, five miles is an acceptable buffer area separating an area of interest from a boundary (Richard Bower, verbal communication, 1989).

The remaining south and west model boundaries were set a minimum of five miles (cells) outside the study area to avoid boundary effects as explained above.

HYDRAULIC CHARACTERISTICS

Transmissivity

Layer 1

MODFLOW requires input of hydraulic conductivity values for unconfined layers. However, as discussed previously, all cells in layer 1 are the prescribed head (constant head) type. This designation causes one value of head for each cell to be maintained throughout the simulation, thus heads are not calculated for cells in this layer. Therefore, aquifer parameter values provided, with the exception of starting head and Vcont values, are irrelevant to the model run.

Layer 1 is specified as unconfined in the model. MODFLOW calculates the transmissivity of unconfined aquifers by multiplying the user-specified 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.

A hydraulic conductivity of 50 ft/day was applied regionally for layer 1 representing the SAS. This value represents an approximate average of values obtained in APT tests in the area (Padgett, Adams, verbal communications). Elevation at the layer bottom was identified using borehole geophysical logs and available lithological information (Appendix A-1). A matrix of values was obtained by applying a kriging interpolation technique to these data points.

Layer 2

Layer 2 (UFA) is specified as confined in the model. In a confined system, the water level does not usually fall below the top of the aquifer, so the transmissivity remains constant since the aquifer remains completely saturated. Therefore, a direct value for transmissivity is the required input rather than hydraulic conductivity and thickness.

Transmissivity values were obtained from several sources:

- Bower (1988) specific capacity regression curve methodology. A new, but similar regression curve was generated for this study.
- Recent consultant reports.
- Indian River Hydrogeology publication; USGS (1988).
- Results of a recent drilling and testing project conducted by the SFWMD on C-24 canal (SLF73), St. Lucie County.

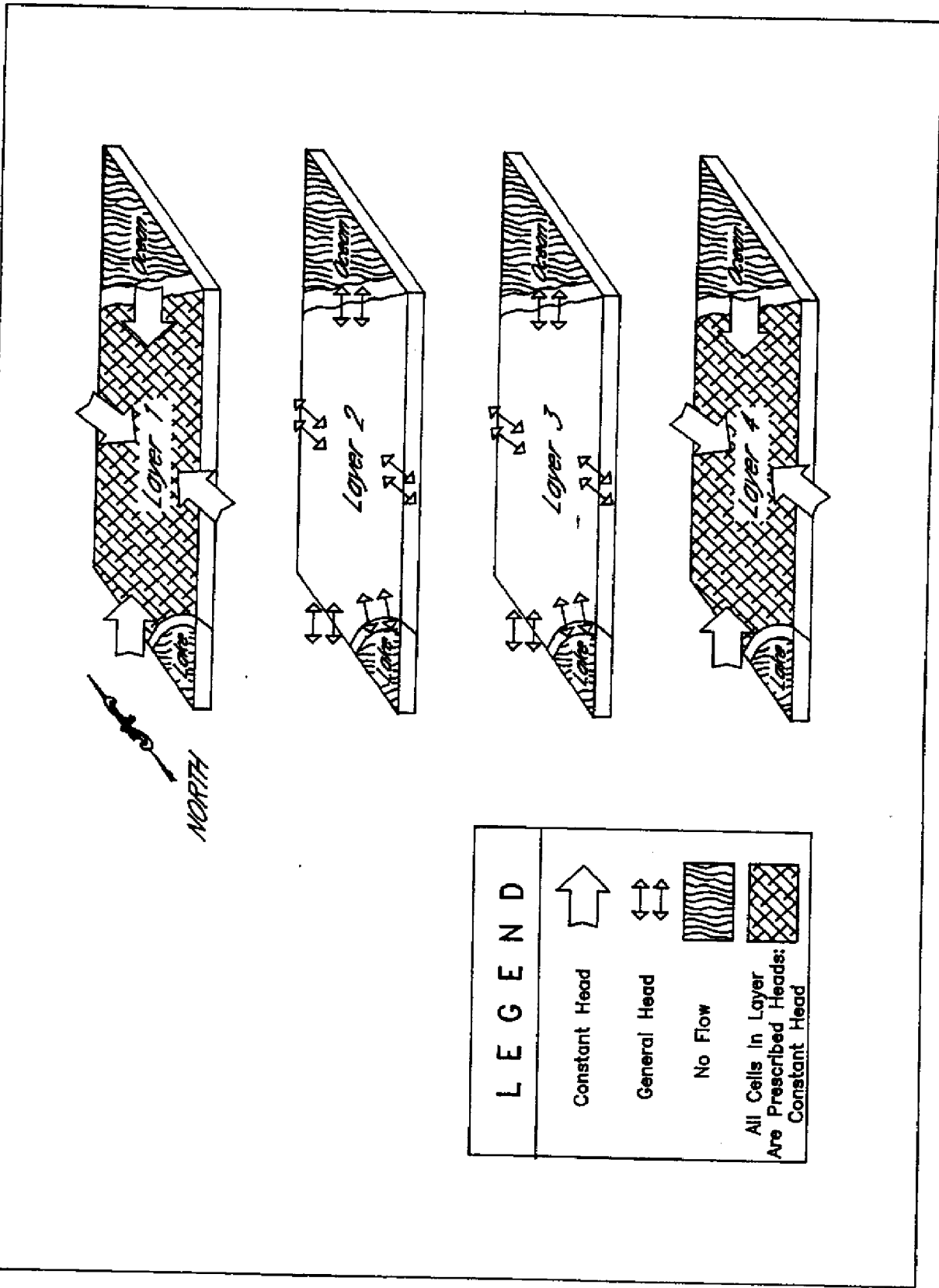


FIGURE 15: Model Boundary Conceptualization, Layers 1 through 4

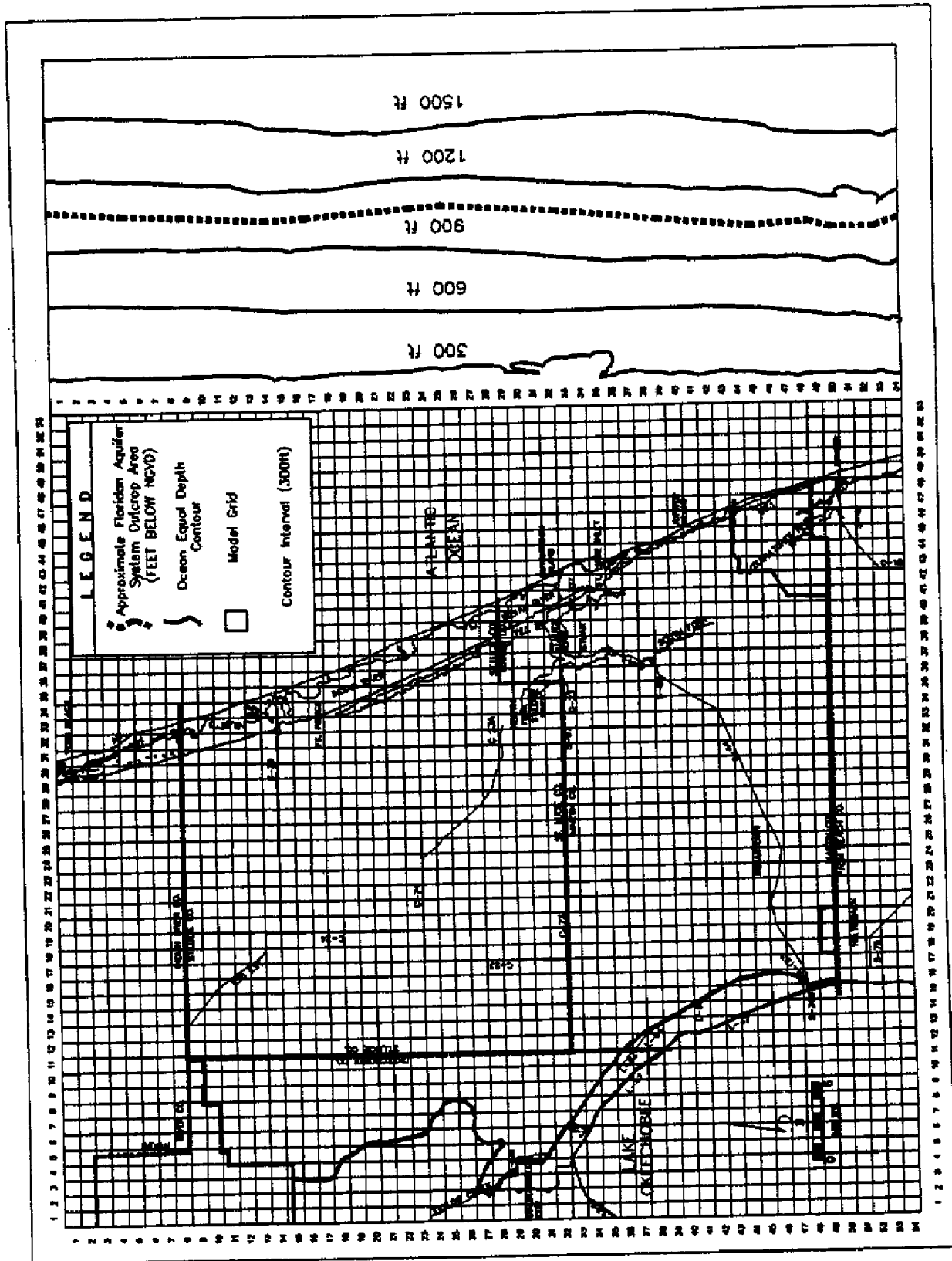


FIGURE 16: Bathymetry in Respect to Floridan Aquifer System Outcrop Area

Most transmissivity values were obtained using the same procedure originally outlined by Trost (unpublished report, 1985) and later adopted by Bower (1988). Here, specific capacity values are related to transmissivity by using a regression analysis on 19 values of corrected specific capacity and associated values of transmissivity. The relationship is described in the equation:

$$\log_{10}(T_e) = 4.056 + 0.816(\log_{10}(S_{cc})) \quad (3)$$

where

T_e = estimated transmissivity value (gpd/ft)

S_{cc} = corrected specific capacity value (gpm/ft)

The correlation coefficient, r , determined in the regression analysis was 0.83 (Bower, 1988).

For this study, a new regression curve was generated (Figure 19) using the same data originally used by Trost (Brown, 1980) with minor modifications. When generating the regression curve, three new data points were incorporated into the analysis. The transmissivity and specific capacity data added are denoted in Tables 2 and 3. Where possible, the raw data from the aquifer performance tests were analyzed by the author to determine aquifer parameters independently. The new regression curve is presented in Figure 17. The new correlation coefficient calculated was 0.73 which indicates a statistically high reliability for the linear relationship established. Specific capacity data for 56 wells in the UECPA then were used to predict transmissivity for those wells. The locations of all transmissivity values from sources listed above are shown in Figure 18. Their values are cross referenced to Table 2. These values were regionalized using a kriging interpolation technique to create an array. A regional map of transmissivity for layer 2 (UFAS) used in this model is presented in Figure 19.

Transmissivity was altered to 670 ft²/day (5,000 gpd/ft) in grid cells east of a structural feature indicative of faulting or downwarping. A trace of this feature follows the Intracoastal Waterway from Vero Beach to north Martin County, where it veers east toward the ocean (Figure 20). Hydraulic discontinuity is suspected along this line. For ease of reference, the term "fault" is applied loosely in describing the hydraulic characters associated with this structural and hydrogeologic anomaly. The emphasis here is not the cause of the feature, but the effects it has on the hydrogeology of the area. Previous works by Lichtler (1960), Law Engineering (1975), Mooney (1980), and Armstrong (1980) describe and discuss its nature in detail.

Permeability contrasts are observed between FAS wells on either side of the fault. East of the fault, wells have lower yield and drastically reduced permeability than wells on the west side. The model's sensitivity to transmissivity near the fault trace has a limited effect on modeled water levels in cells on either side of the fault. The value applied regionally to the downthrown (eastern) portion of the fault was estimated based on well yields and APT's from wells drilled in the FAS at Brynn Mawr Boy's Club and Joe's Point. Both wells indicate very low permeability in the UFAS. Hydrographs of observation wells SLF-46 and SLF-47 on the east (downthrown) side show considerably more drawdown than would be expected if transmissivity were higher. The geographic location and placement of the fault trace was based on the following:

- 1) the assumption that the wells discussed above with anomalously low permeability in the FAS are located east of the fault line,
- 2) study of cores in the Martin County area by Armstrong (1980), and
- 3) a thorough analysis of the available geophysical logs along both sides of the fault.

Layers 3 and 4

Figure 21 shows the locations of all wells in the modeled area where aquifer parameters are available for layers 3 and 4. Well construction and aquifer parameters are listed in Table 3 along with the model layers penetrated by each well.

Only three composite (layers 3 and 4) transmissivity values exist for these layers: the Lake Okechobee ASR project (535,000 ft²/day), the C-24 canal Floridan drilling project (100,000 ft²/day (tentative)) and the Florida Power & Light study near Indiantown (334,000 ft²/day, Ebasco Envir., 1990). It was conservatively assumed that these transmissivity values may be higher than the regional value, so a composite estimate of 66,845 ft²/day was used. The 66,845 ft²/day (500,000 gpd/ft) value is divided equally between layer 3 (LFAPZ1), and layer 4 (LFAPZ2) and applied regionally for every cell in both layers. The model's sensitivity to changes in transmissivity was analyzed for layers 3 and 4; it was found to be minimal.

Specific Yield

Specific yield of the SAS (layer 1) was set at 0.2, which represents the average value of the sediments that make up the aquifer (Fetter, 1980). Since the layer is comprised of cells assigned constant heads, the value given is irrelevant but necessary to input.

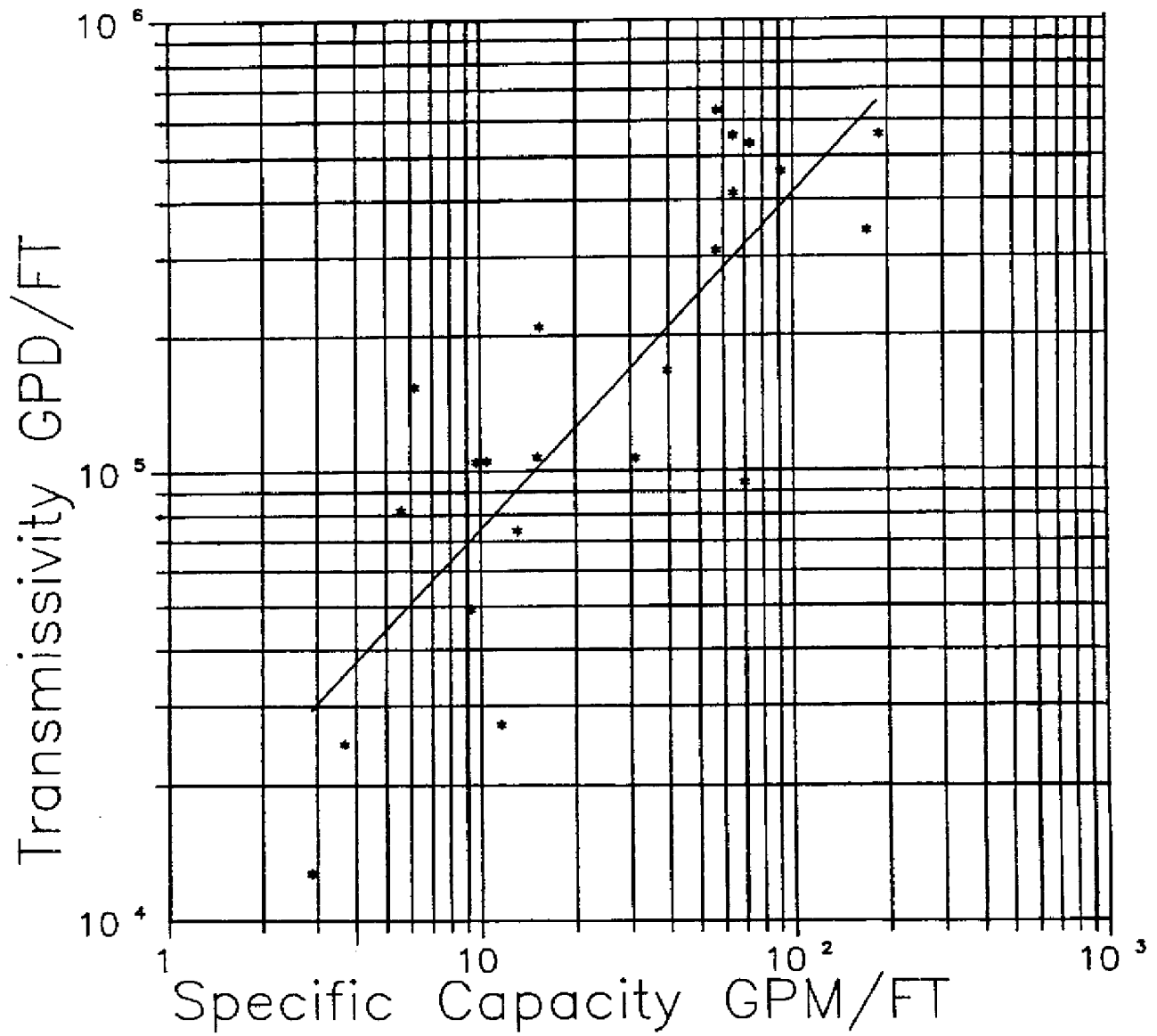


FIGURE 17: Modified Regression Curve Used to Calculate Transmissivity using Specific Capacity Data

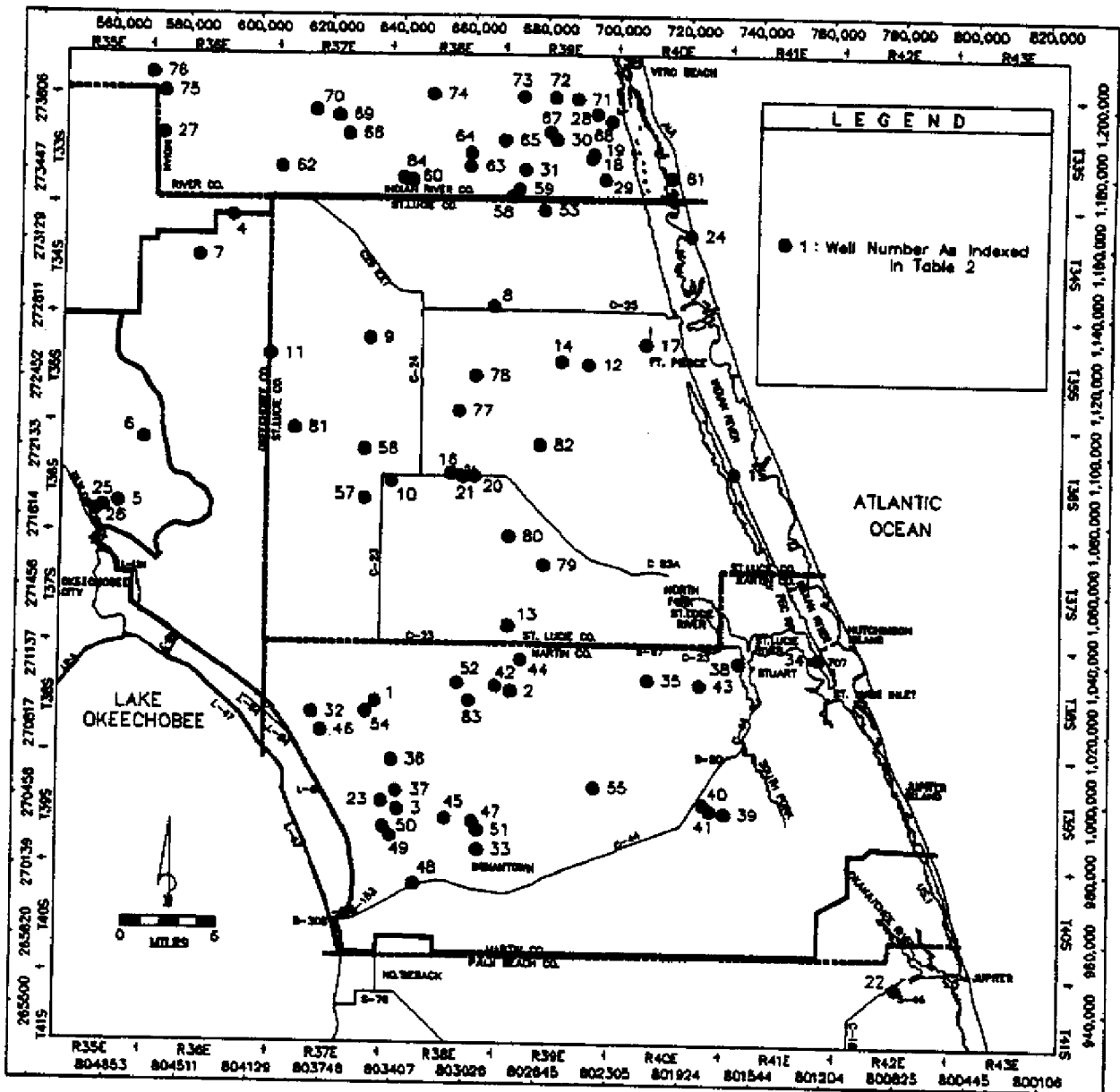


FIGURE 18: Location of Wells with Transmissivity and Specific Capacity Data Used in Model, Layer 2

TABLE 2: LAYER 2 (Upper Floridan Aquifer) AQUIFER PERFORMANCE TEST DATA USED IN MODEL

MAP #	WELL NAME	STATE PLANE COORDINATES (FT)		TOTAL DEPTH (Feet)	CASING DEPTH (Feet)	TRANS-MISSIVITY (gpd/ft)	ANALYSIS METHOD	STORATIVITY (E-4/D)	SOURCE
		X	Y						
1	MF-6*	635487	1027110	1052	400	104900	SR		BROWN, 80-1
2	MF-9*	673410	1030384	880	342	104300	SR		BROWN, 80-1
3	MF-23*	642188	996134	1119	456	73500	SR		BROWN, 80-1
4	OKF-2*	593433	1166945	666	218	153400	SR		BROWN, 80-1
5	OKF-6*	562688	1083782	1181	440	341600	SR		BROWN, 80-1
6	OKF-7*	569511	1102271	963	412	27200	SR		BROWN, 80-1
7	OKF-13*	584276	1155313	1200	600	556000	SR		BROWN, 80-1
8	SLF-4*	667351	1141435	993	482	461700	SR		BROWN, 80-1
9	SLF-9*	632615	1131915	1058	256	531526	SR		BROWN, 80-1
10	SLF-15*	639063	1090535			629200	MR	9.5	BROWN, 80-1
11	SLF-20*	604518	1127187	896	311	81495	SR		BROWN, 80-1
12	SLF-21*	693823	1124791	707	156	49000	SR		BROWN, 80-1
13	SLF-23*	672337	1049363	894	350	106700	SR		BROWN, 80-1
14	SLF-24*	686340	1125563			208500	MR	1.9	BROWN, 80-1
15	SLF-28*	734915	1093704	883	200	24600	SR		BROWN, 80-1

LEGEND FOR METHODS OF ANALYSIS:

WAL: WALTON TYPE CURVE MATCHING, MONITOR WELL AVAILABLE

SR: SINGLE WELL RECOVERY TEST/JACOB STRAIGHT LINE

USGS: USGS WATER INVESTIGATIONS REPORT 88-4073

SC: SPECIFIC CAPACITY FIT TO REGRESSION CURVE

MR: MONITOR WELL RECOVERY TEST/JACOB STRAIGHT LINE

USGS: USGS PROVISIONAL DATA TYPE UNKNOWN; TROST UNPUB.

WALT: WALTON TYPE CURVE MATCHING

*: DENOTES WELLS USED IN REGRESSION ANALYSIS

** : NEWEST DATA USED IN REGRESSION ANALYSIS

TABLE 2: LAYER 2 (Upper Floridan Aquifer) AQUIFER PERFORMANCE TEST DATA USED IN MODEL

MAP #	WELL NAME	STATE PLANE COORDINATES (FT)		TOTAL DEPTH (Feet)	CASING DEPTH (Feet)	TRANS-MISSIVITY (gpd/ft)	ANALYSIS METHOD	STORATIVITY (E-4/D)	SOURCE
		X	Y						
16	SLF-51*	662505	1092238	1000	600	107077	WALT	2.7	Wedderburn, 83-7
17	FBW-1**	709923	1130728	904	508	309000	SR		CH2MHILL, 1988
18	GM-IR37F	693717	1184269	745	N/A	50000	USGS	4	Schiner, 1988
19	SJ-IR40F	694252	1185282	704	N/A	56800	USGS	3.9	Schiner, 1988
20	SLF75	659259	1092023	700	480	210000	WALT	2.3	SFWMD, Unpublished
21	SLF76	659259	1092023	860	790	110000	WALT	6.4	SFWMD, Unpublished
22	JUP-R.O.	781929	945861	1500	1073	36890	MR	8	Geraghty & Miller, 1989
23	LFM1-S**	642688	996090	1202	800	94000	WALT	7.0	Ebasco Environ., 1990
24	BRYN MAWR	722002	1162199	1730	640	253	SR		Geraghty & Miller, 1990
25	OKF-26	556377	1081248	825	625	54945	SC		Trost, Unpublished
26	OKF-27	556377	1081248	725	477	51695	SC		Trost, Unpublished
27	FGS-IR202	573587	1190634	700	209	126082	SC		Trost, Unpublished
28	FGS-IR243	695094	1197000	900	220	81666	SC		Trost, Unpublished
29	FGS-IR245	697706	1178129	850	220	100083	SC		Trost, Unpublished
30	FGS-IR251	683885	1189474	700	220	123915	SC		Trost, Unpublished
31	FGS-IR253	675286	1180751	800	220	119582	SC		Trost, Unpublished
32	FGS-M-29	617612	1023723	1100	450	82750	SC		Trost, Unpublished
33	FGS-M-34	664652	984707	1100	450	372713	SC		Trost, Unpublished
34	FGS-M-88	759605	1040536	1180	700	75167	SC		Trost, Unpublished
35	FGS-M-143	711689	1033897	958	272	139804	SC		Trost, Unpublished
36	FGS-M-146	640332	1010264	1155	432	217440	SC		Trost, Unpublished

TABLE 2: LAYER 2 (Upper Floridan Aquifer) AQUIFER PERFORMANCE TEST DATA USED IN MODEL

MAP #	WELL NAME	STATE PLANE COORDINATES (FT)		TOTAL DEPTH (Feet)	CASING DEPTH (Feet)	TRANSMISSIVITY (gpd/ft)	ANALYSIS METHOD	STORATIVITY (E-4/D)	SOURCE
		X	Y						
37	FGS-M-168	641808	1001484	1080	500	183136	SC		Trost, Unpublished
38	FGS-M-443	737038	1039085	951	275	70472	SC		Trost, Unpublished
39	FGS-M-740	733492	995745	990	474	278827	SC		Trost, Unpublished
40	FGS-M-741	727512	998235	890	460	71917	SC		Trost, Unpublished
41	FGS-M-742	729510	996530	1003	460	67945	SC		Trost, Unpublished
42	FGS-M-746	669159	1031881	510	360	103332	SC		Trost, Unpublished
43	FGS-M-748	726237	1032561	773	397	76611	SC		Trost, Unpublished
44	FGS-M-759	676080	1039584	853	650	164719	SC		Trost, Unpublished
45	FGS-M-901	655486	993658	1110	490	91777	SC		Trost, Unpublished
46	FGS-M-909	620247	1018480	1095	470	99360	SC		Trost, Unpublished
47	FGS-M-913	663174	992779	1100	500	93944	SC		Trost, Unpublished
48	FGS-M-919	646966	974744	950	636	176636	SC		Trost, Unpublished
49	FGS-M-920	640226	988554	1033	488	74444	SC		Trost, Unpublished
50	FGS-M-921	638228	991072	1032	455	87444	SC		Trost, Unpublished
51	FGS-M-923	664539	990361	1000	500	155692	SC		Trost, Unpublished
52	FGS-M-927	658408	1032645	792	450	109110	SC		Trost, Unpublished
53	FGS-STL44	680828	1169163	691	126	150637	SC		Trost, Unpublished
54	USGS-M-1	632877	1024072	NA	NA	104700	SC		Trost, Unpublished
55	USGS-M-2	696936	1002924	NA	NA	112200	SC		Trost, Unpublished
56	USGS-STL2	631458	1099699	NA	NA	464000	SC		Trost, Unpublished
57	USGS-STL3	631684	1085563	NA	NA	168000	SC		Trost, Unpublished

TABLE 2: LAYER 2 (Upper Floridan Aquifer) AQUIFER PERFORMANCE TEST DATA USED IN MODEL

MAP #	WELL NAME	STATE PLANE COORDINATES (FT)		TOTAL DEPTH (Feet)	CASING DEPTH (Feet)	TRANS-MISSIVITY (gp/d/ft)	ANALYSIS METHOD	STORATIVITY (E-4/D)	SOURCE
		X	Y						
58	IR7F	671990	1172961	940	NA	258319	SC		Schiner, 1988
59	IR12F	673781	1175190	900	NA	279472	SC		Schiner, 1988
60	IR20F	643803	1177697		NA	323745	SC		Schiner, 1988
61	IR21F	716332	1178730	943	NA	40508	SC		Schiner, 1988
62	IR26F	606897	1181217	900	NA	284558	SC		Schiner, 1988
63	IR28F	660076	1181596	880	NA	734668	SC		Schiner, 1988
64	IR42F	660240	1185434	836	NA	366662	SC		Schiner, 1988
65	IR47F	669582	1189108	860	NA	149033	SC		Schiner, 1988
66	IR53F	625673	1190764		NA	507890	SC		Schiner, 1988
67	IR54F	682166	1191587	900	NA	344646	SC		Schiner, 1988
68	IR57F	699153	1194798	660	NA	94309	SC		Schiner, 1988
69	IR61F	622778	1196107	960	NA	539193	SC		Schiner, 1988
70	IR64F	616298	1197602	670	NA	238340	SC		Schiner, 1988
71	IR72F	689587	1201215	671	NA	55619	SC		Schiner, 1988
72	IR76F	683379	1201691	750	NA	61336	SC		Schiner, 1988
73	IR77F	674565	1201853	746	NA	86492	SC		Schiner, 1988
74	IR80F	649290	1202357		NA	165091	SC		Schiner, 1988
75	IR84F	573834	1202752		NA	111344	SC		Schiner, 1988
76	IR95F	570407	1208199	960	NA	237501	SC		Schiner, 1988
77	SLF27	657833	1111002	900	300	229062	SC		Trost, Unpublished
78	SLF40	662479	1121219	NA	376	111367	SC		Trost, Unpublished

TABLE 2: LAYER 2 (Upper Floridan Aquifer) AQUIFER PERFORMANCE TEST DATA USED IN MODEL

MAP #	WELL NAME	STATE PLANE COORDINATES (FT)		TOTAL DEPTH (Feet)	CASING DEPTH (Feet)	TRANS-MISSIVITY (gpd/ft)	ANALYSIS METHOD	STORATIVITY (E-4/D)	SOURCE
		X	Y						
79	SLF61	682099	1066875	695	350	61119	SC		Trost, Unpublished
80	SLF62	672318	1075011	935	480	83132	SC		Trost, Unpublished
81	SLF67	611696	1105597	NA	300	107007	SC		Trost, Unpublished
82	SLF69	680591	1101403	NA	300	218429	SC		Trost, Unpublished
83	MF2	661770	1027509	NA	300	94933	SC		Trost, Unpublished
84	IR370	643803	1177697	NA	300	260087	SC		Trost, Unpublished

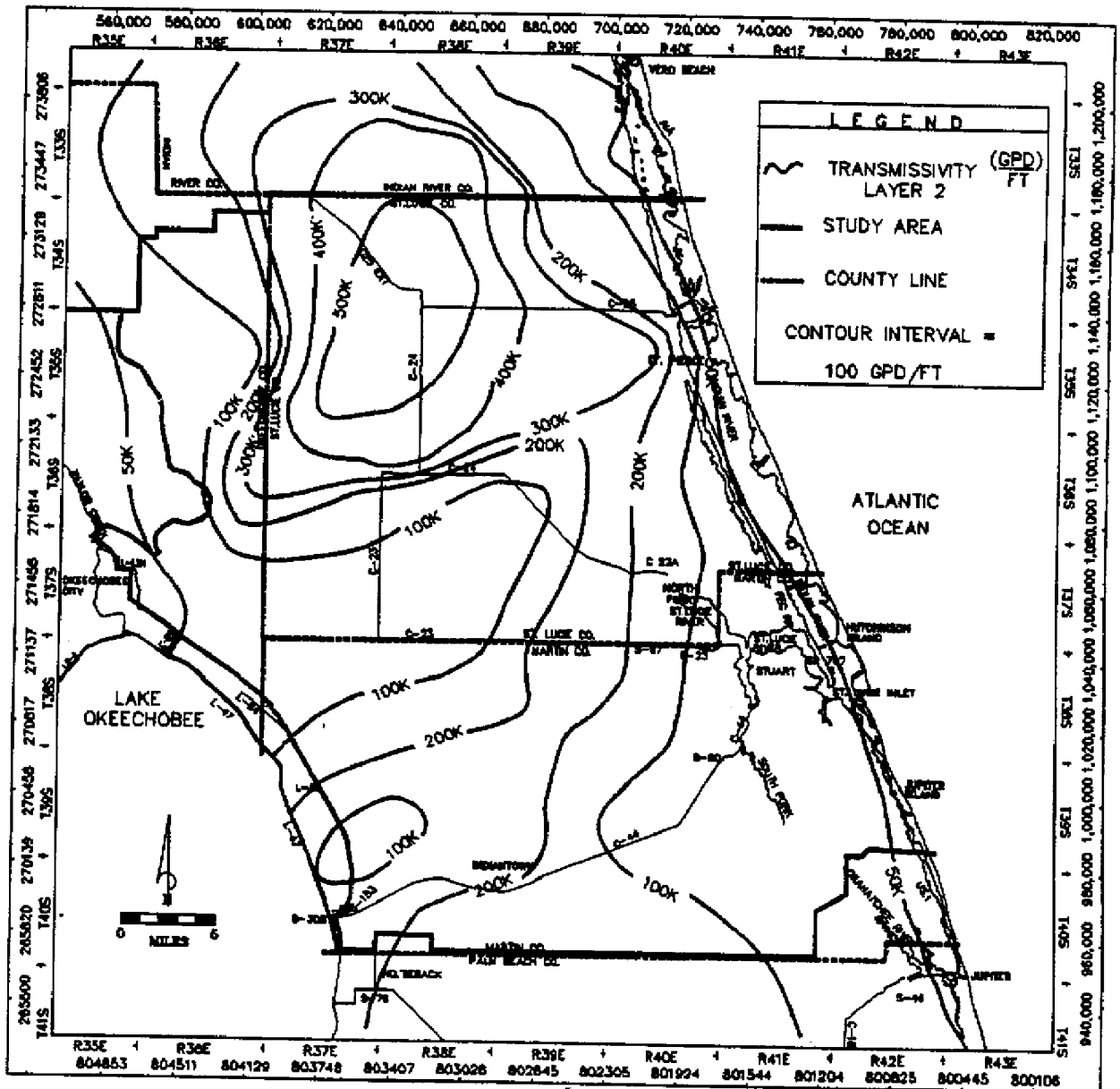


FIGURE 19: Transmissivity of the Upper Floridan Aquifer

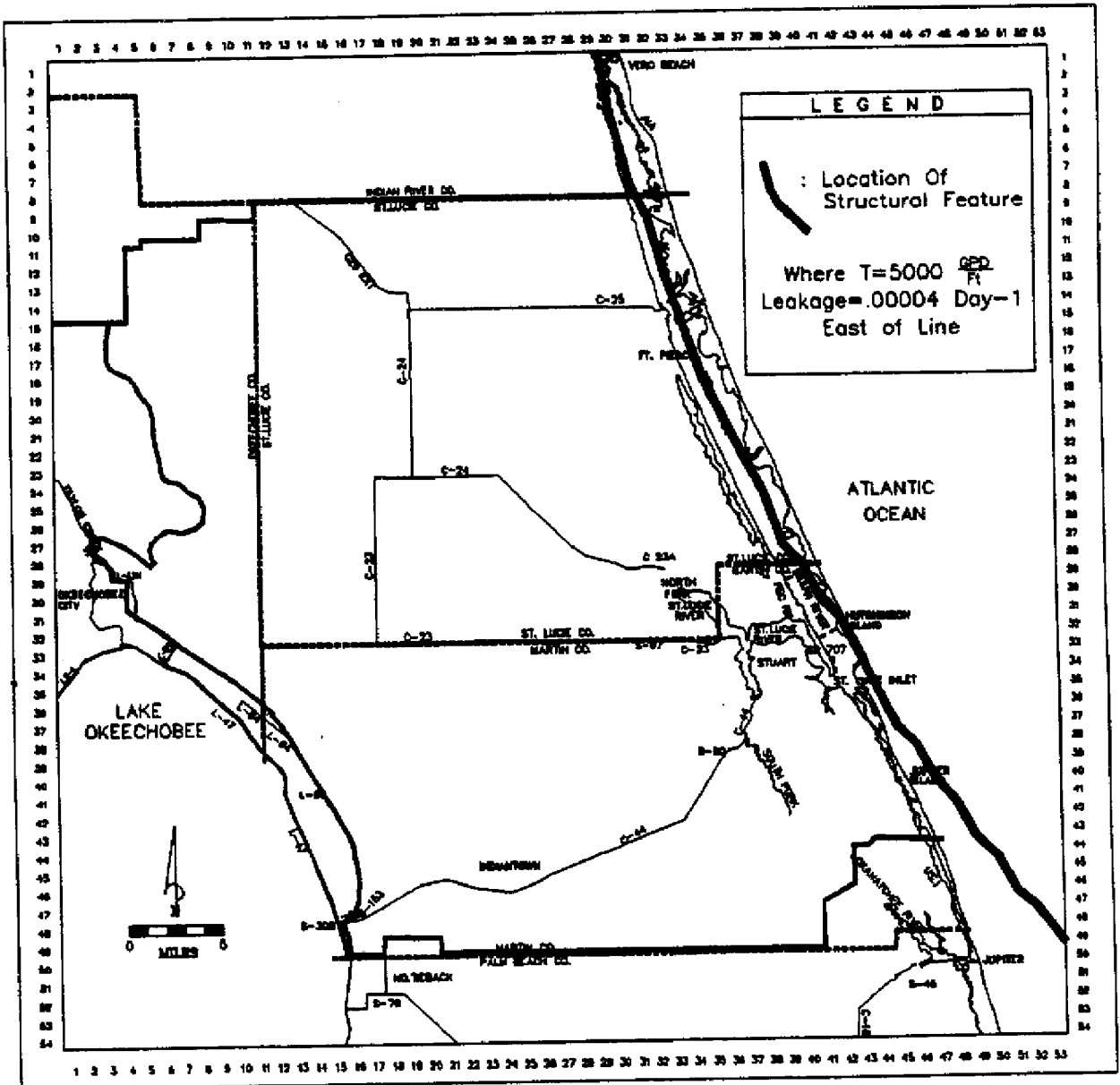


FIGURE 20: Location of Structural Feature Associated with Hydraulic Discontinuity, Transmissivity and Vertical Conductance Variance Used in Model

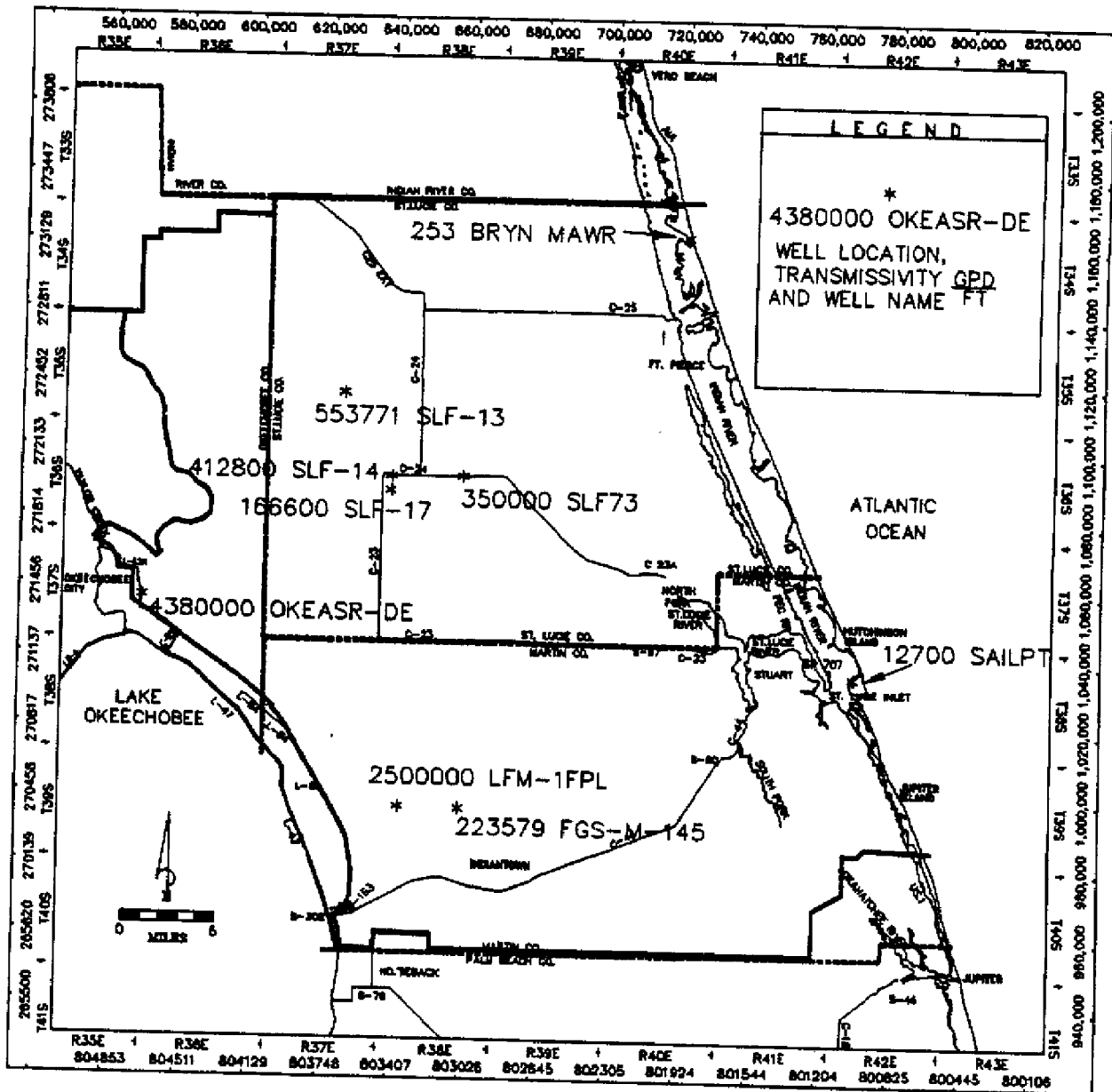


FIGURE 21: Location of Wells with Transmissivity Data, Layer 3 and Layer 4

TABLE 3: LAYER 2, 3 & 4 (FAS) - AQUIFER PERFORMANCE TEST DATA USED IN MODEL

WELL NAME	STATE PLANE COORDINATES (FT)		TOTAL DEPTH (Feet)	CASING DEPTH (Feet)	TRANS-MISSIVITY (gpd/ft)	ANALYSIS METHOD	STORATIVITY (E-4/D)	LEAKANCE (Day ⁻¹)	SOURCE	MODEL LAYERS PENE-TRATED
	X	Y								
OKEASR-DEE	569590	1056025	1700	1268	4,380,000	HANJ	12.5	.01-.001	CH2M HILL, 1989	3, 4
LFM-1DEEP**	642688	996090	1648	800	2,500,000	HANJ	7	.0022	EBASCO ENVIR, 1990	3, 4
SLF-13*	625457	1116937	1238	344	553,771	SR			BROWN, 80-1	2,3
SLF-14*	639149	1091949	1286	318	412,800	SR			BROWN, 80-1	2,3
SLF-17*	639073	1087809	1286	320	166,600	SR			BROWN, 80-1	2,3
BRYN MAWR	722002	1162199	1730	640	253	SR			CARTER ASSOC., 1990	2,3
FGS-M-145	659636	995794	1485	425	223,579	SC			TROST, UNPUBLISHED	2,3, 4
SLF73	659259	1092023	1550	1080	350,000	WALT	2.6	0.044	SPWMD, UNPUBLISHED	3, 4
SAILPT	770566	1035356	1525	630	12,700	HANJ	6		GEE & JENSON, 1977	2,3

LEGEND FOR METHODS OF ANALYSIS:

WALT: WALTON TYPE CURVE MATCHING, MONITOR WELL AVAILABLE

HANJ: HANTUSH-JACOB CURVE MATCHING

SR: SINGLE WELL RECOVERY TEST/JACOB STRAIGHT LINE

SC: SPECIFIC CAPACITY FIT TO REGRESSION CURVE

*: DENOTES WELLS USED IN REGRESSION ANALYSIS

** : NEWEST DATA USED IN REGRESSION ANALYSIS

Storage

Storage coefficients for the UFA (layer 2) were obtained from aquifer tests in the area, are limited in number, and range between 0.00019 and 0.00095 (Table 2). Based on these available data and a review of recent model literature (Bower, 1988), a uniform storage coefficient of 0.0004 was assigned to all of the active model cells in layer 2. Very few storage coefficients for layers 3 and 4 are available. Those existing range from 0.0012 (CH2M Hill, ASR, 1989) to 0.00026 (SFWMD). A sensitivity analysis of this parameter shows very little change in water levels with large changes to the storage coefficient. Since the lithologic and permeability characteristics of this lower Floridan Aquifer section are very similar to those in the Upper Floridan Aquifer section, the same value of 0.0004 was used for storage coefficient for all cells in layers 3 and 4.

Vertical Conductance

Base Layer 1: (Upper Confining Unit)

MODFLOW uses the term V_{cont} to define the degree of confinement between layers. It is employed in the quasi-three-dimensional modeling approach discussed in the previous section. It is defined for each cell and is the average vertical hydraulic conductivity of the confining unit divided by the thickness of that confining unit. The vertical hydraulic conductivity of the upper confining unit (in this case the Hawthorn) was estimated based on the lithologic composition of the Hawthorn (Driscoll, 1986). A standard vertical hydraulic conductivity of 3.1×10^{-4} ft/day was applied regionally throughout the model. The upper confining unit ranges from 250 to 800 feet thick in the study area; thickness was estimated using lithologic and geophysical data compiled for this project (see Appendix A). Values of thickness for each cell were determined using a kriging interpolation technique. The range of leakance values used was from 7.7×10^{-2} to 3.8×10^{-7} per day.

Base Layer 2: (Middle Semi-Confining Unit)

Three values of leakance were obtained in the study area via aquifer performance tests. The APT leakance results are similar and far enough apart areally to justify a regional assumption of leakance. The values range between 0.05/day to 0.001/day. Most of the more reliable data report leakance values of 0.04/day to 0.05/day. Paucity of data for both vertical hydraulic conductivity and thickness of this confining unit necessitated the broad application of a v_{cont} (leakance) value of 0.04/day over the entire model area with the exception of the coastal area.

V_{cont} was reduced three orders of magnitude from the St. Lucie-Indian River County border south to Martin County, and east of the Intracoastal Waterway along the structural anomaly shown in Figure 20. Structural and lithologic data support a plausible fault or downwarping hinged on this boundary. Hydrographs of the two available monitor wells on the St. Lucie barrier island suggest very low overall leakage rates and are successfully brought into calibration using this method.

Base Layer 3:

No direct V_{cont} (leakance) data is available for the base of layer 3. One value was used regionally determined through sensitivity analysis. The thickness of this confining interval is approximately 250 feet at SLF-74 and the Okeechobee ASR well. The value of V_{cont} applied regionally is 0.00032/day. The approximate value of vertical hydraulic conductivity for the above wells where thickness is defined at 250 feet is 0.08 ft/day.

Base Layer 4:

MODFLOW does not require a V_{cont} term for the base of the lowest layer. It is implicit that there is no flow at this boundary.

GROUND WATER USE

Upper Floridan Aquifer water use estimates for the model were determined using data from individual water use permits issued by the District coupled with the results of a comprehensive questionnaire issued to permit holders in the UECPA. Individual water use permits are required by the District if the average daily water withdrawals equals or exceeds 100,000 gallons per day (gpd). The District also issues general water use permits to all uses less than 100,000 gallons per day. The only exceptions are single family homes, duplexes, and water use strictly for fire-fighting (SFWMD, 1985). General water use permits were not included in the determination of water use estimates because few exist for the FAS. By far, the major use of water from the FAS is for agricultural purposes.

A modification to the MODFLOW code was made to enable the program to input three individual well package files. This modification was used to segregate into files three classifications of wells. The classifications used were: agricultural wells within the District boundaries, agricultural wells outside the boundaries and all wells with monthly pumping reports submitted to the SFWMD including public water supplies, agricultural and industrial wells. The wells are indexed in separate files by row and column, each line represents one well and is referenced by permit number.

Agricultural

Agricultural water use accounts for over 99 percent of the permitted FAS ground water use in the UECPA. Figure 22 shows the estimated agricultural water use for each cell in the model. Most agricultural enterprises are involved in citrus production. With a few exceptions, records of water withdrawn generally do not exist for agricultural uses. Therefore, agricultural water use was estimated.

Data on all agricultural water uses from individual water use permits were assembled into several spreadsheets organized by county (Appendix C). Information pertinent to calculating water withdrawals included permit number, well construction data, capacity (natural flow rate in gallons per minute), planar coordinates (location) of the wells, and status (e.g. is well currently existing or proposed). Data for wells in Indian River County were obtained from St. John's River Water Management District and compiled into separate spreadsheets. Other data in the water use spreadsheets include crop type, permitted annual allocation, soil type, irrigation efficiency, total irrigated acres, rain station code, etc. These additional permit data were included to provide flexibility in applying the traditional Blaney-Criddle method for estimating water withdrawals.

Water requirements of various crops generally is estimated by the District using a method described by the U. S. Soil Conservation Service (USDA, 1970). This method uses the modified Blaney-Criddle formula. Factors such as crop type, soil type, air temperature, daylight hours, effective rainfall, and irrigation system efficiency are used to estimate the irrigation requirements of various crops. This method is useful for estimating crop water needs but does not address the source water for these needs. In the study area, surface water systems in the form of major canals and feeder ditches are the dominant

irrigation source. Unblended FAS water is highly mineralized and marginally tolerable to citrus.

The tolerance range of citrus trees to chloride levels in irrigation waters varies depending on the tree type (e.g. orange, grapefruit, tangerine, etc.) and the irrigation method. The leaves of the trees are more sensitive to saline irrigation water than their roots are; therefore, methods of irrigation like overhead spray require water with lower chloride concentrations than a method like drip or flood. The tolerance range for the average citrus tree type for three common irrigation methods employed in the UECPA are listed in Table 4 (Calvert, 1982). Chloride concentrations in waters from FAS wells range between 300 milligrams per liter (mg/l) to 3,000 mg/l and average 900 mg/l throughout the UECPA. It was found that in areas where surface water supply is available (close to major canals, etc.), existing FAS wells are only occasionally used during the normal growing season.

To address the FAS utilization issue, a questionnaire was developed and distributed to the majority of permit holders in the UECPA (Appendix F). Agricultural water withdrawals were estimated using the results of this questionnaire. They were distributed to 360 agricultural permit holders in the study area. A comprehensive series of questions about FAS water use was included in the survey. Among other things, the questions were designed to allow quantitative analysis of the water withdrawn for the 1989 to 1990 time period as well as "average year" patterns. Part of the questionnaire asked for the amount of time FAS wells were allowed to flow freely during each month of the calibration period (May 1989 to March 1991). Responses to 130 questionnaires, 36 percent of those delivered, were entered into a database software program (DBASE). The program was used to calculate the average hours Floridan aquifer wells were allowed to flow freely

Table 4. Citrus Chloride Tolerance Levels for Common Irrigation Methods (Calvert, 1982)

<u>Irrigation Method</u>	<u>Chloride Concentration Tolerance Level (ppm)</u>
Overhead Sprinkler	800 to 1,000
Drip	1,500 to 2,000
Flood	<2,000

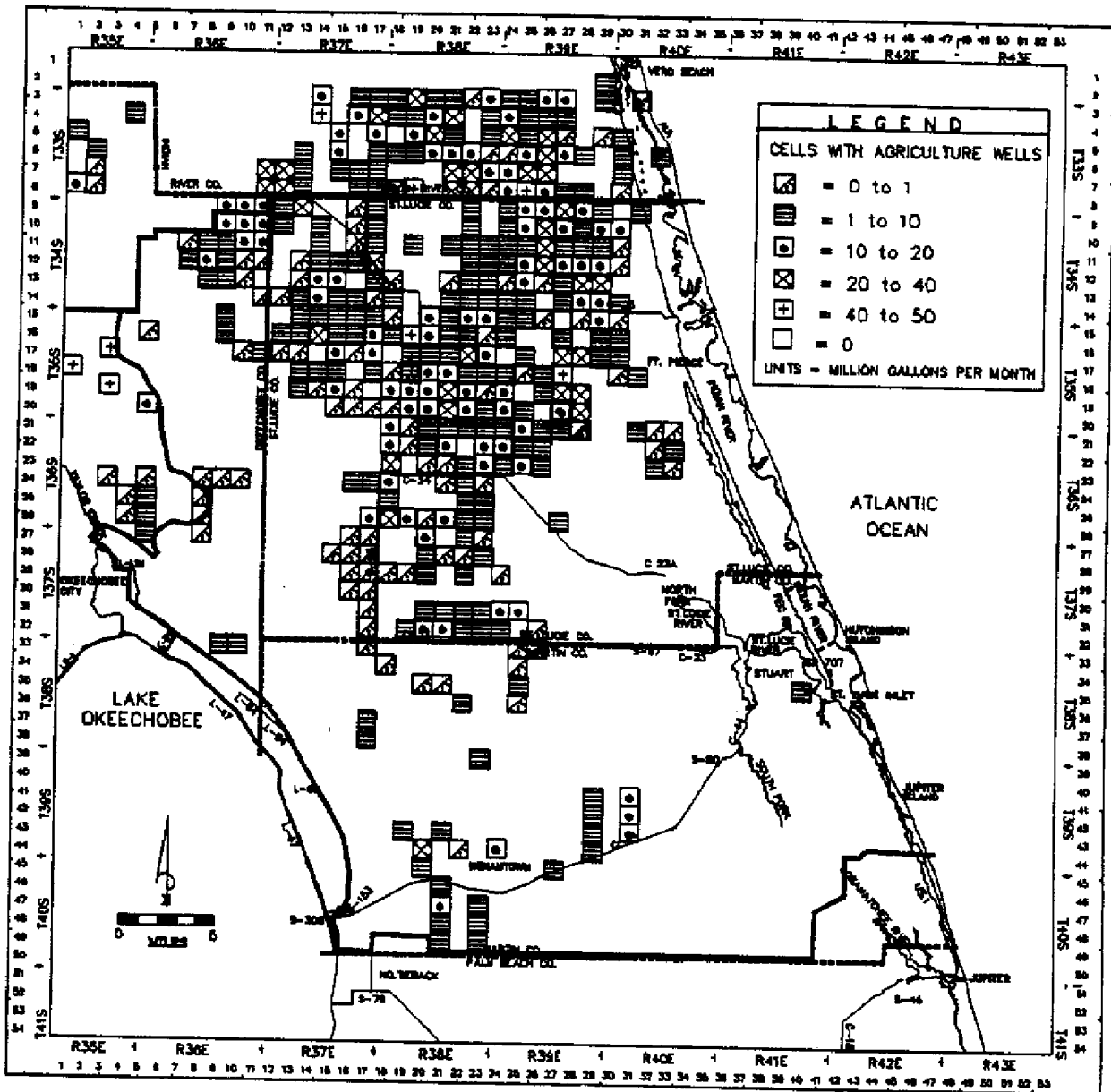


FIGURE 22: Estimated Agricultural Water Use for March 1990 Used in Steady State Model

during each month of the model simulation. The results are listed in Table 5.

The assumption made in the water use calculations was that the hours a well is open and flowing in any one month (hrs/month), multiplied by that well's capacity (gals/hr.), will equal the water volume withdrawn for that well in that month (gals/month). The capacity of each well was taken from the permits where available, or was estimated based on well diameter (Trost, unpublished). A program was developed to perform the above calculations for each permitted FAS well in the study area. The months of June 1990 through March 1991 were not included on the questionnaire; therefore, the previous years' monthly averages were used in the calculations. Fortunately, precipitation was very similar in these months for 1990 and 1991, so water use was likely very similar.

In cases where no questionnaire response was received for a specific permit, withdrawals were calculated using the average hours outlined above. For those permits where a response was received, the hours per month response was used directly to calculate withdrawals.

In some circumstances, agricultural pumpage reports are submitted to the District on a monthly basis (Appendix B). Those reports were updated using phone contacts and are represented in a separate model file. In all cases, each line (well) includes the permit number for reference. The agricultural pumpage reports and public water supply wells are combined into this file.

Public Water Supply Wells

FAS water is rarely used for public water supply due to its high chloride content. The exceptions are reverse osmosis (R.O.) water purifying facilities on Hutchinson Island, R.O. facilities in southern Indian River County, a Fort Pierce Utilities FAS blending well, and Jupiter R.O. wells. Monthly pumpage from the above wells was obtained either from DER operating reports or verbally from utility operators (Appendix B). The locations of cells with public water supply wells and their total discharge in March 1990 is shown in Figure 23. In cases where there were multiple wells per facility, utility personnel were contacted to obtain a breakdown of water withdrawn per well. All verbal and written contacts were documented in spreadsheet form. The public water supply wells are represented in the same file as mentioned above.

Industrial Uses

One industrial water use of the FAS was found in the study area: Caulkins Fruit Processing Plant near Indiantown, Martin County. Water withdrawal volumes were obtained verbally from the plant operator. This well also appears in the same model file mentioned above.

TABLE 5: AVERAGE HOURS FLORIDAN AQUIFER SYSTEM AGRICULTURAL WELLS USED PER MONTH FROM 1990 SURVEY (HOURS LEFT FLOWING NATURALLY PER MONTH)

<u>YEAR</u>	<u>MONTH</u>	<u>HOURS</u>
1989	January	71
	February	84
	March	107
	April	132
	May	135
	June	59
	July	45
	August	37
	September	42
	October	51
	November	76
	December	100
1990	January	79
	February	83
	March	130
	April	158
	May	165

Note: Date of Questionnaire, May 1990.

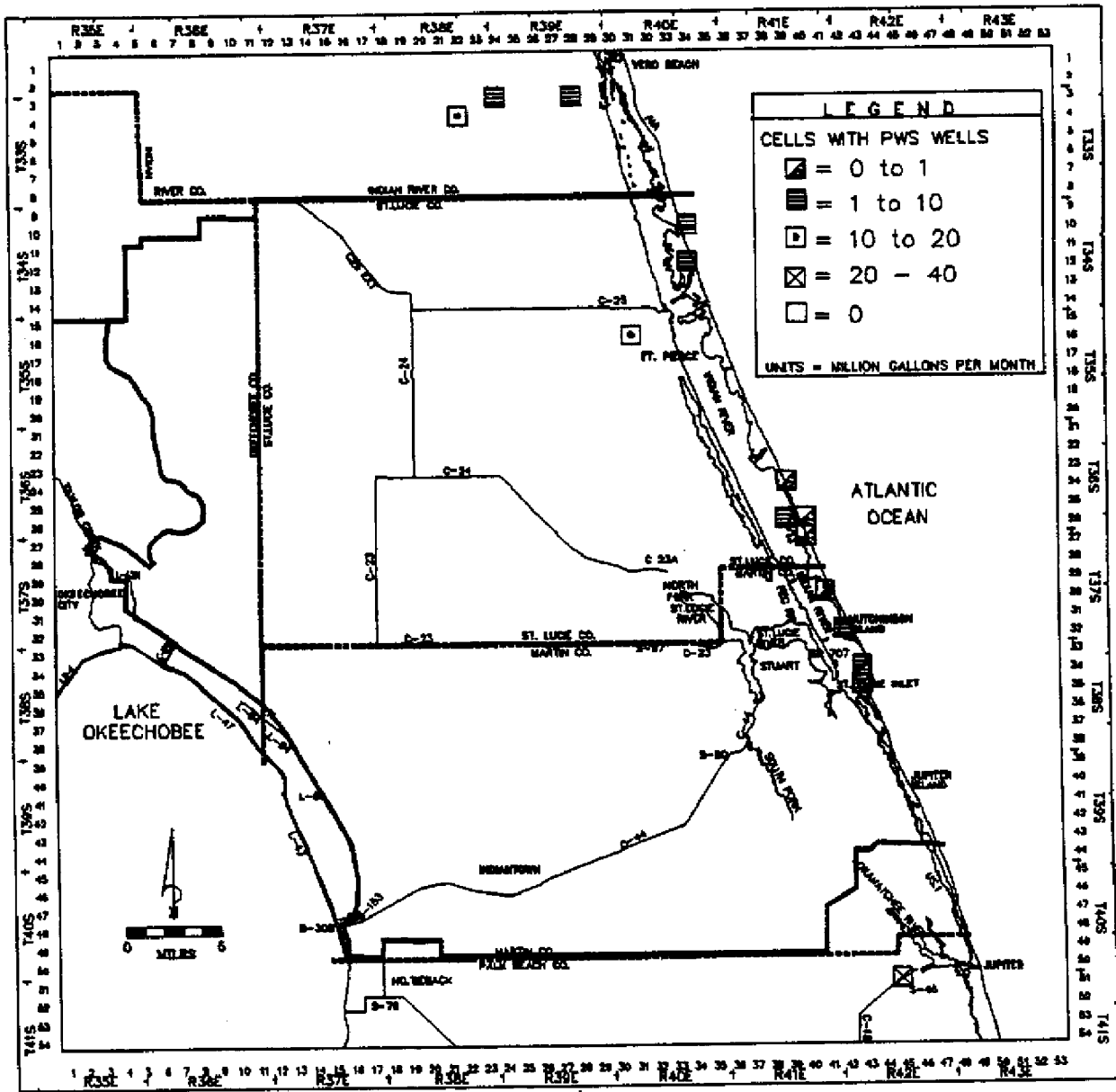


FIGURE 23: Public Water Supply Use for March 1990 Used in Steady State Model

CALIBRATION

The UECPA model was calibrated to both steady state and transient conditions. Layer 2 is the only calibrated layer in this model; it represents the Upper Floridan Aquifer. Wells providing temporal head data in the lower layers were non-existent in the study area; therefore, calibration of those layers was not possible. Locations of observation wells used in the calibration process are shown in Figure 24. The calibration period was May 1989 through March 1991, an interval of 23 months. It was chosen to correspond with the period that monthly UFA water levels were collected by the District. UFA water levels have been collected semi-annually by the District since 1979 as part of a cooperative program with the USGS. During the period between September 1989 and August 1991, the frequency of data collection was increased to monthly, and the number of wells on the monitor well network was increased to 54 specifically for this study. The last five months of the data collection period (April to August 1991) were not used in this model but may be incorporated into future versions. All monitor wells in the network were surveyed by District personnel. Each well's elevation, referenced to NGVD datum, was obtained and used for all head calculations in the model. A multi-year period was chosen so that the effect of annual variations in irrigation practices could be seen.

STEADY STATE CALIBRATION

Methods

Steady state is a theoretical condition which defines the aquifer system in a state of equilibrium. In other words, given the average water budget (inflows and outflows) of the aquifer and given enough time for water levels to stabilize, a definable water level will be attained. Heads computed by the steady state model should emulate that theoretical water level.

The theoretical steady state water level is not a physical property measurable in the field. Rather, it is based on an educated guess of what that equilibrium level should be. Measuring the degree of calibration of the steady state model, therefore, is not an exact science and is assessed by comparing how close the model comes to computing a hypothetical steady state water level based on speculative average budget conditions.

The goal was to simulate steady state water levels representing the average month in a year. Therefore, average month conditions were input into the model. Those conditions included well

withdrawals and boundary fluxes. Hydrographs of FAS wells in the study area demonstrate water level fluctuations ranging from as little as one foot to as high as eight feet between the ends of wet (September) and dry seasons (May). The larger fluctuations are found in areas of high well densities. The average observed water levels for the majority of UFA wells occur in the month of March. Therefore, March 1990 levels were assumed to approximate steady state levels under average annual conditions. March 1990 stresses and fluxes were implemented as inputs to the steady state model. The resultant computed heads were compared to March 1990 observed water levels. A well was considered calibrated if the difference between computed levels and March 1990 observed levels fell within the minimum to maximum annual water level range for that well. Figure 25 illustrates the difference between the simulated steady state levels and the March 1990 levels.

The steady state and transient models were calibrated interactively. Changes made to one were incorporated into the other. Initial steady state runs served to make the first adjustments to the model parameters. Transient calibration runs were then made and aquifer parameters as well as pumping estimates were refined. These refinements then were applied back into the steady state model. This iterative process was repeated until both models were satisfactorily calibrated.

Results

Layer 2 (Upper Floridan Aquifer)

Figure 26 shows the simulated head distributions within layer 2 (Upper Floridan Aquifer) for March 1990 conditions. All wells fell within the calibration tolerance range. Meeting that criteria was somewhat difficult in one area of the model in particular, which extends from north central St. Lucie County north into south central Indian River County. This area was considered a problem because it displayed the largest difference between computed and March 1990 observed heads. The difference was between 5 to 8 feet and can be seen in Figure 27. This area has a high density of FAS wells, which combined withdrew several million gallons per day in March. Observation wells in this area include SLF-3, SLF-70 and IR-312. Minimum and maximum annual water levels range 6.5, 6, and 8 feet respectively in these wells. Satisfactory calibration was attained but just within the range

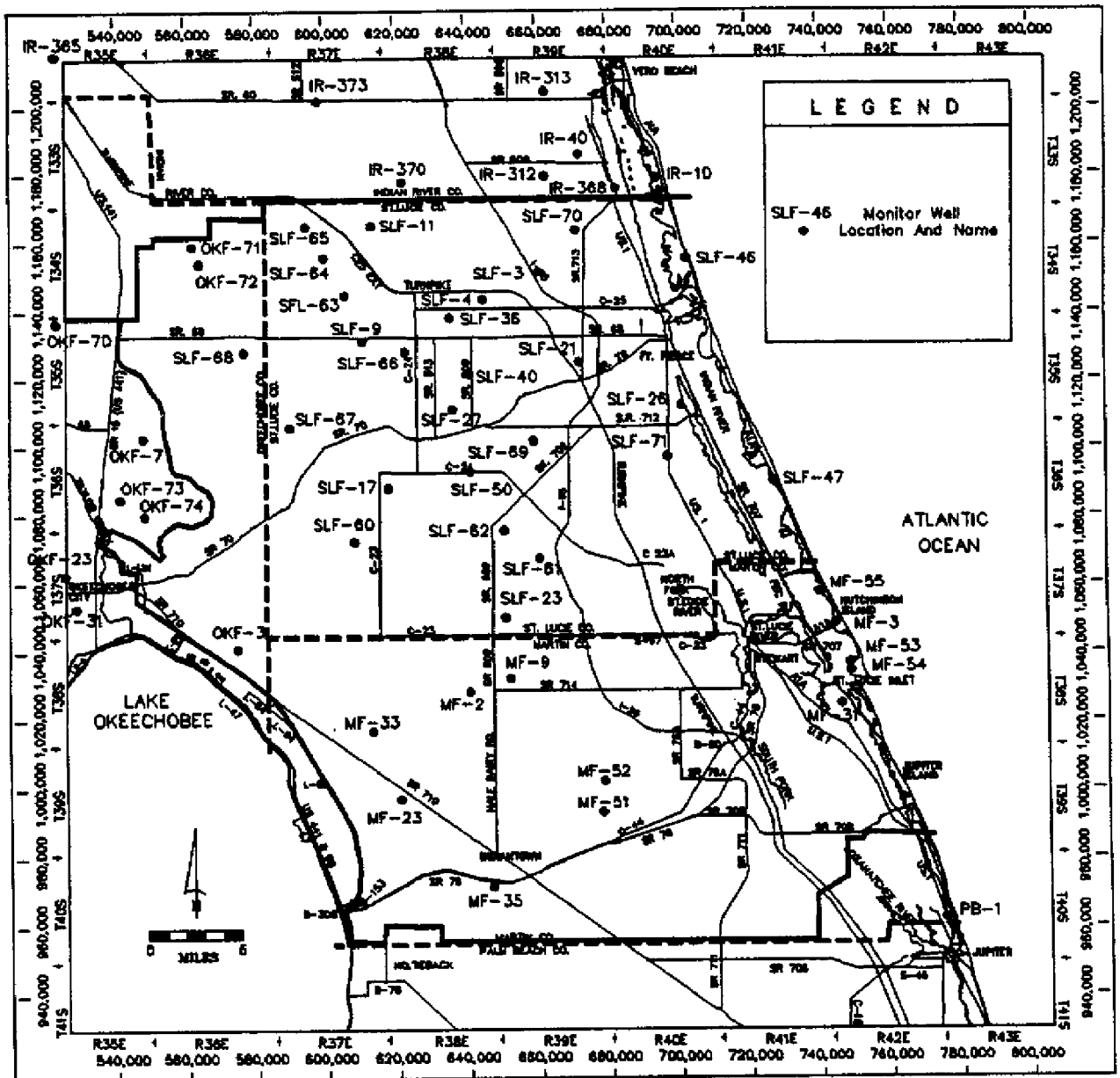


FIGURE 24: Location of Monitoring Wells Used to Verify Modeled Water Levels

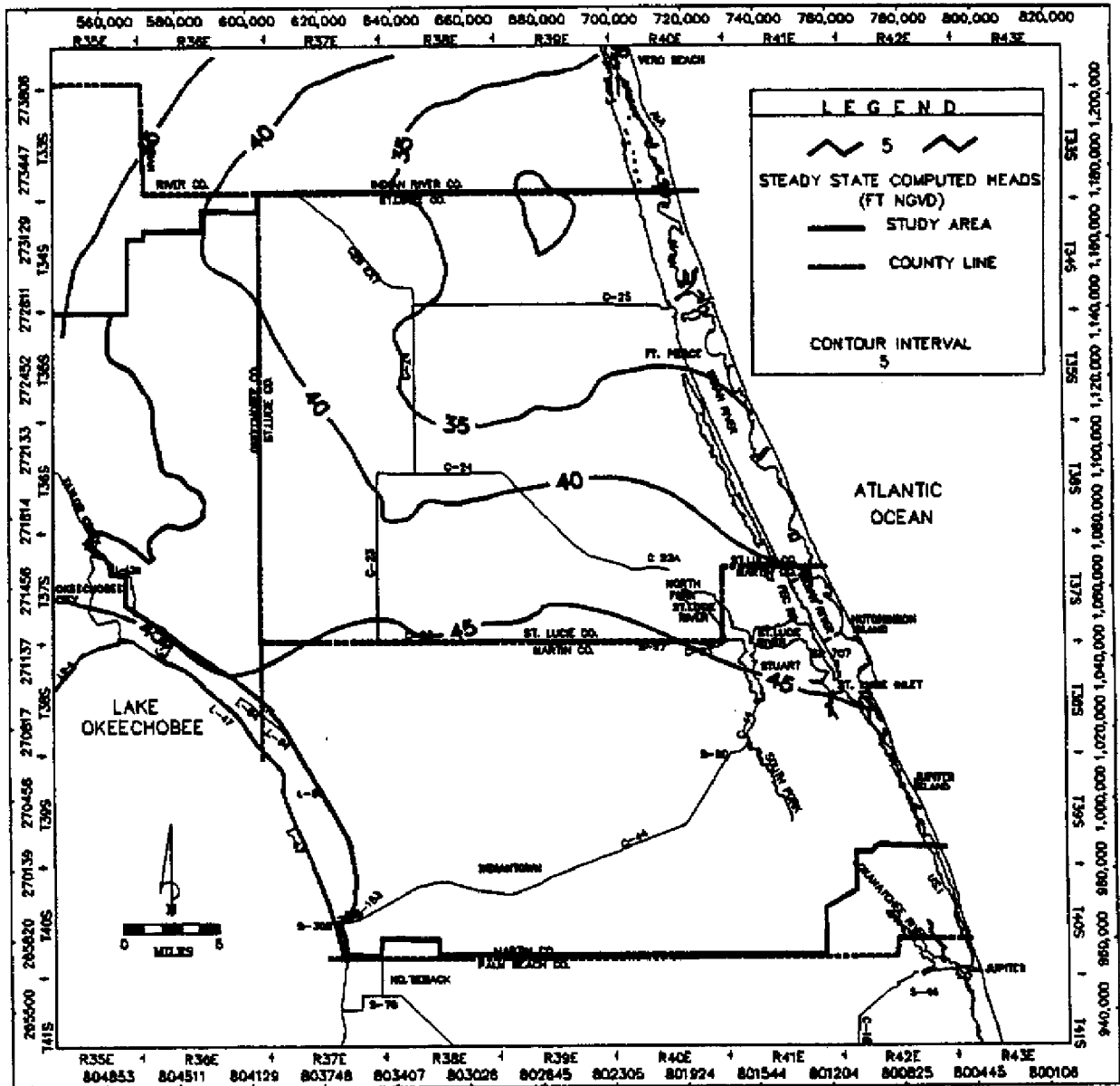


FIGURE 26: Simulated Steady State Computed Water Levels, Layer 2

defined. In all other model areas, the difference between computed and March levels was much closer and easily met the calibration criteria.

Figure 28 shows the direction and magnitude of simulated horizontal flow in the Upper Floridan Aquifer. Each arrow represents the direction and magnitude of flow from an individual cell. The horizontal flow arrows generally point toward areas of intensive ground water use. The largest and most numerous flow vectors are in west central and north central St. Lucie County. These two dense clusters point toward two areas of intense water use from the FAS. Large clusters of flow vectors are also seen in all the north central and western portions of Indian River County. Figure 29 is a representation of the vertical flow vectors between layer 1 and layer 2. Downward flow from layer 1 to layer 2 is seen in the Highlands area of Okeechobee County where water levels of the SAS are higher than the FAS because of the high ground level elevation. Upward flow is generally the rule since water levels are higher in the FAS than in the SAS over the rest of the study area. Figure 30 illustrates the simulated vertical flow vectors between layer 2 and layer 3. It can be seen that most vectors are upward and the largest flow vectors are associated with areas of intense well discharges.

Figure 31 illustrates the volumetric budget in layer 2 for steady state conditions. Approximately 91.1% or 140 million gallons per day (MGD) of the total inflow to this layer is recharge from the LFAPZ1 (layer 3), 8.7% (13.4 MGD) is from the general head cells, and 0.2% (0.25 MGD) is from downward leakage from the Surficial Aquifer System (layer 1). The flow from the general head (specified flux) cells represents flow into the modeled area from Okeechobee and Indian River counties. Of the total outflows, 4.8% (7.4 MGD) is downward leakage to layer 3 (LFAPZ1), 4.5% (6.6 MGD) is upward leakage to the Surficial Aquifer (layer 1), .01% (1.5 MGD) is to general head cells, 53.3% (81.8 MGD) is to agricultural wells in the UECPA, 27.2% (41.7 MGD) is to wells in Indian River County, 9.4% (14.5 MGD) is to all other wells whose pumpage is reported. Generally, water supply pumpage is balanced by upward leakage from lower parts of the FAS. Outflow to the general head cells represents horizontal flow out of the modeled area, mainly to northeastern Indian River County and to a limited degree to the ocean.

Layer 3 (Lower Floridan Aquifer Producing Zone 1)

Figure 32 shows the water levels within layer 3 (LFAPZ1) for March 1990 conditions. Layer 3 observed minus steady state computed heads is

shown in Figure 33; they range between 0 and 9 feet with the highest drawdowns in areas with intense agricultural water withdrawals from layer 2 (UFA). Figure 34 shows the magnitude and direction of simulated horizontal flow in layer 3 (LFAPZ1). It can be seen that the vectors are similar to those in layer 2. The larger clusters point in the direction of intensive water use from layer 2. Although there is negligible pumping from layer 3, water in layer 3 flows in response to pumping from layer 2 (the UFA). The vertical flow representing leakage between layers 3 and 4 can be seen in Figure 35. Most of the flow is upward providing recharge to layer 3. Large upward flows are seen in areas of intensive withdrawals from layer 2.

The volumetric budget for layer 3 is illustrated in Figure 36. The majority of inflow, 82.8% (134.8 MGD) is upward leakage from the LFAPZ2, 12.7% (20.6 MGD) comes from general head cells, 4.5% (7.4 MGD) comes in from layer 2 (UFAS). The flow from the general head cells represent flow into the modeled area from Okeechobee and Indian River counties. Total outflow consists of 85.9% (139.9 MGD) to upward leakage, 13.1% (21.3 MGD) to downward leakage, 0.01% (1.5 MGD) to general head cells. The outflow to general head cells represents flow out of the modeled area into northeastern Indian River County and partially to the ocean.

Figure 37 shows the combined volumetric budget for the entire model. Total inflow consists of 79.7% (4.12 billion gallons per day (BGD)) from constant head cells, 20.3% (1.0 BGD) from general head cells. Constant head sources are either layer 4 (LFAPZ2) or the north and west boundaries of layer 4. Total outflow consists of 16.6% (851.7 MGD) to constant head cells, 1.9% (100.1 MGD) to general head cells, 48.3% (2.5 BGD) to UECPA agricultural wells, 24.6% (1.3 BGD) to Indian River wells, 8.6% (446.4 MGD) to other reported well pumping including public water supplies. The outflow through the constant head cells represents movement out of the northeastern boundary of layer 4 (LFAPZ2) boundaries, layer 4 itself, and to a smaller extent layer 1 (SAS).

TRANSIENT CALIBRATION

Methods

The transient model differs from the steady state in that several time periods (stress periods) representing months are simulated. The model calculates heads for each stress period of the simulation based on defined boundary conditions and stresses for each month simulated in the model. The transient model comprised 23 stress periods

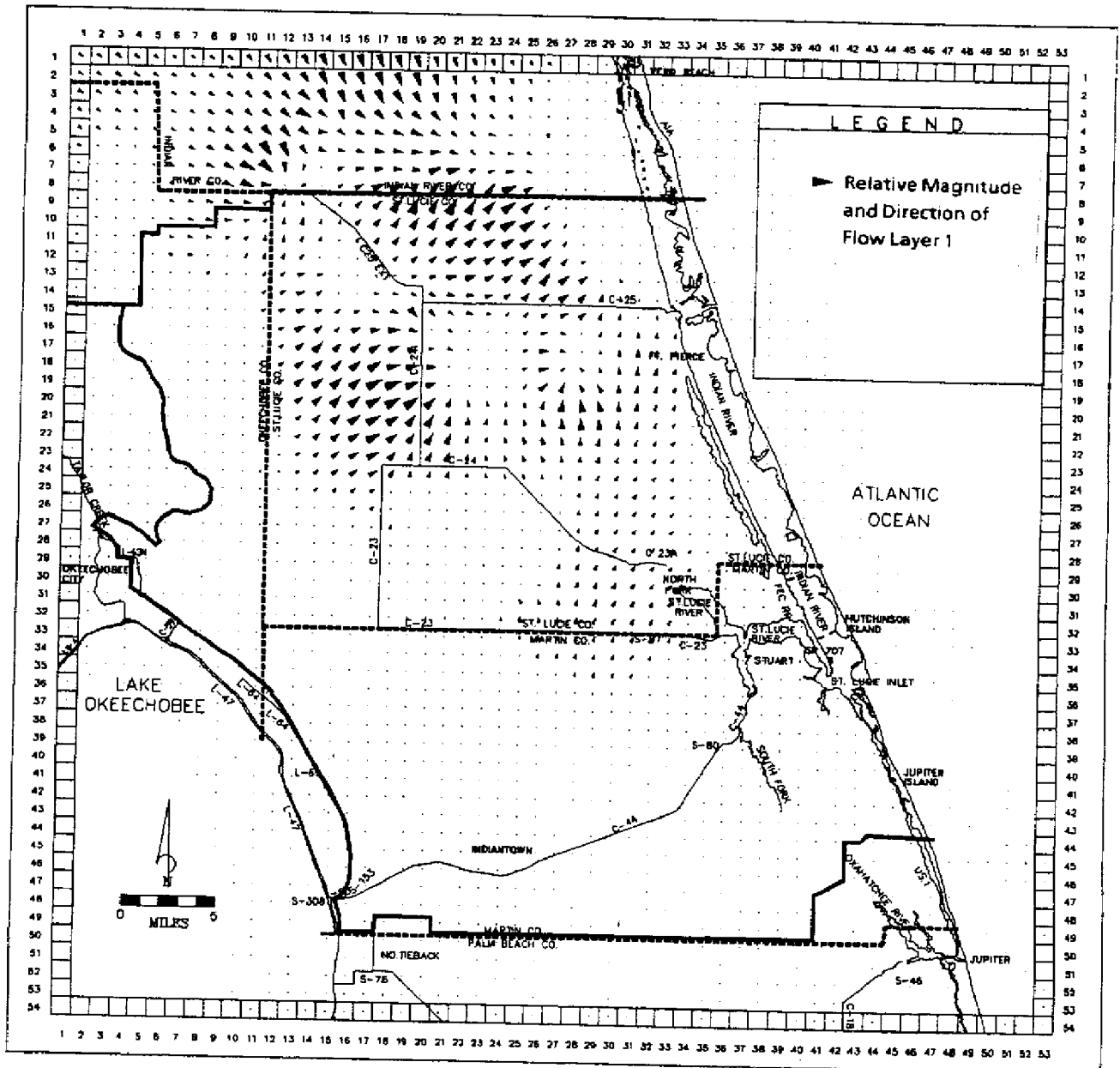


FIGURE 28: Simulated Steady State Horizontal Flow Vectors, Layer 2 (Upper Floridan Aquifer System)

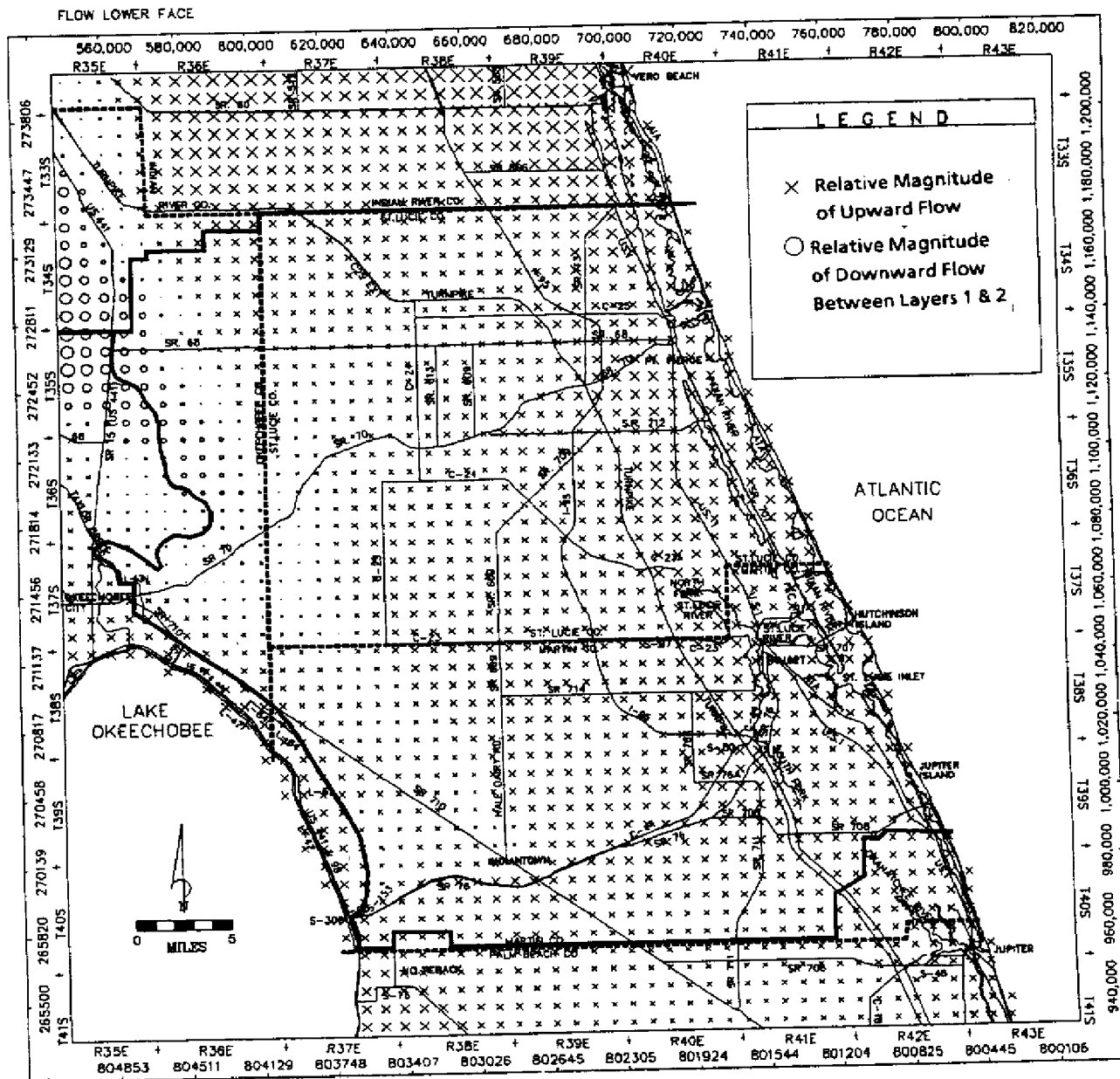


FIGURE 29: Simulated Steady State Vertical Flow Vectors Between Layers 1 and 2

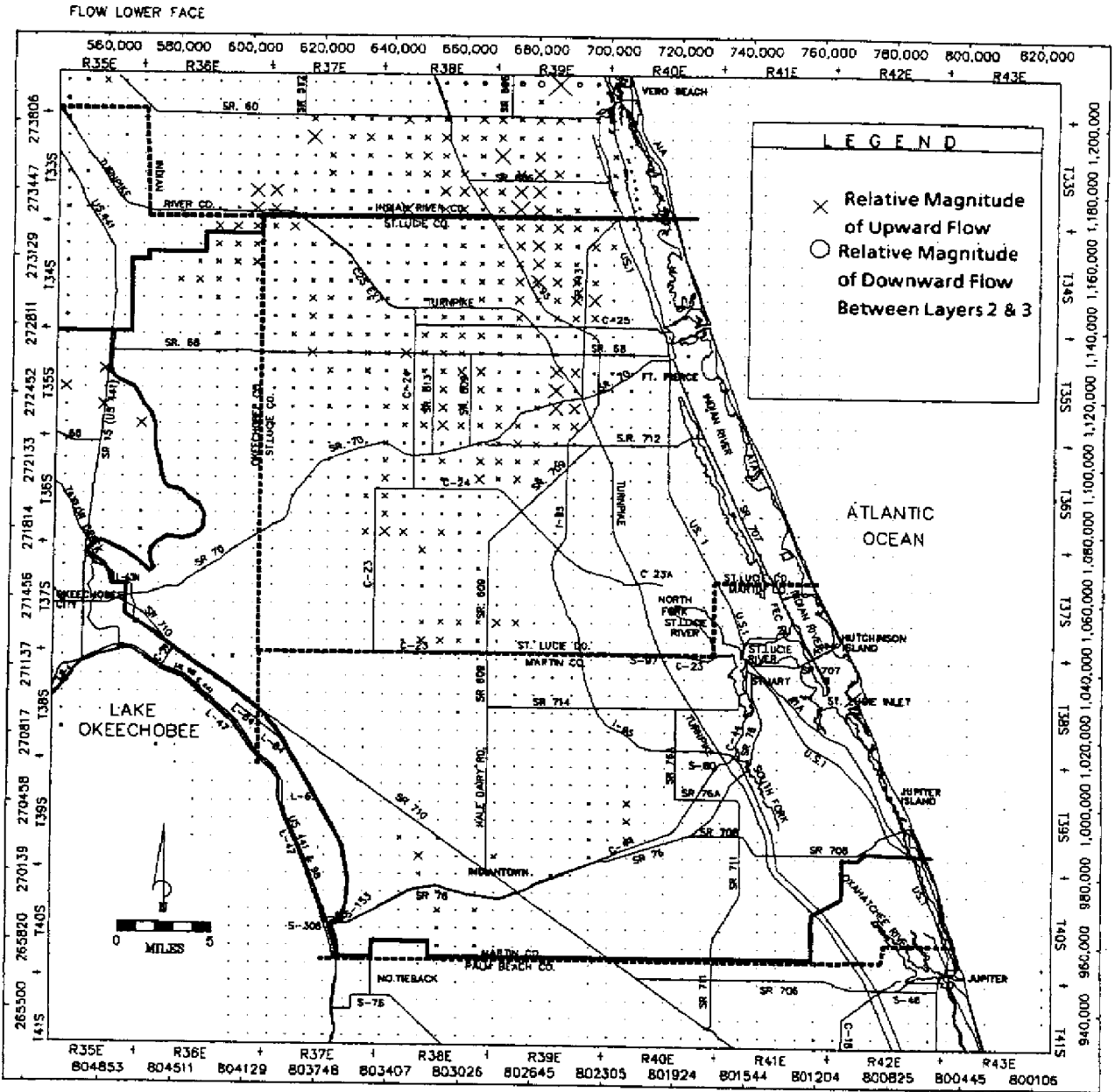


FIGURE 30: Simulated Steady State Vertical Flow Vectors Between Layers 2 and 3

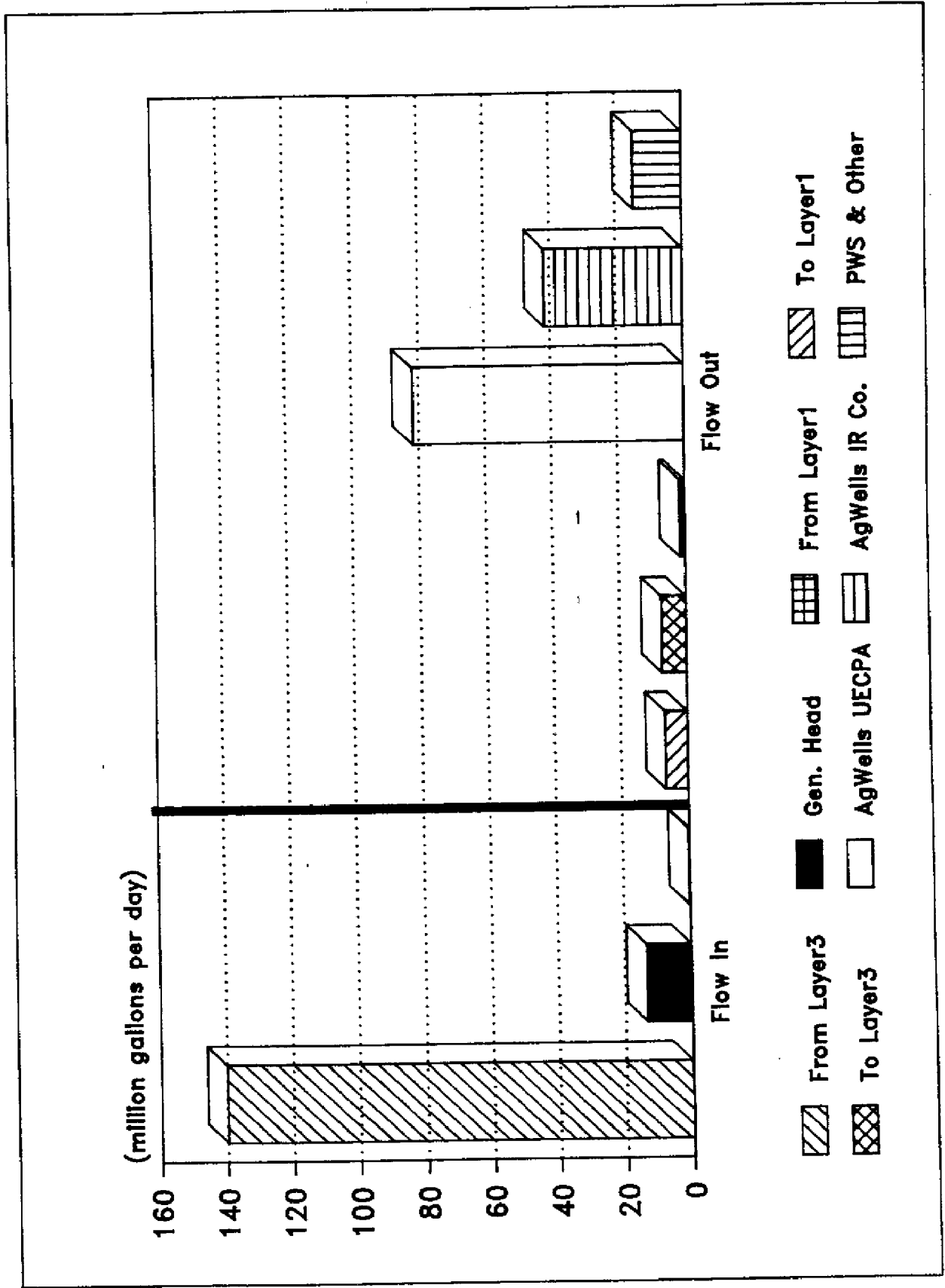


FIGURE 31: Volumetric Budget, Layer 2 (Upper Floridan Aquifer), Steady State Conditions

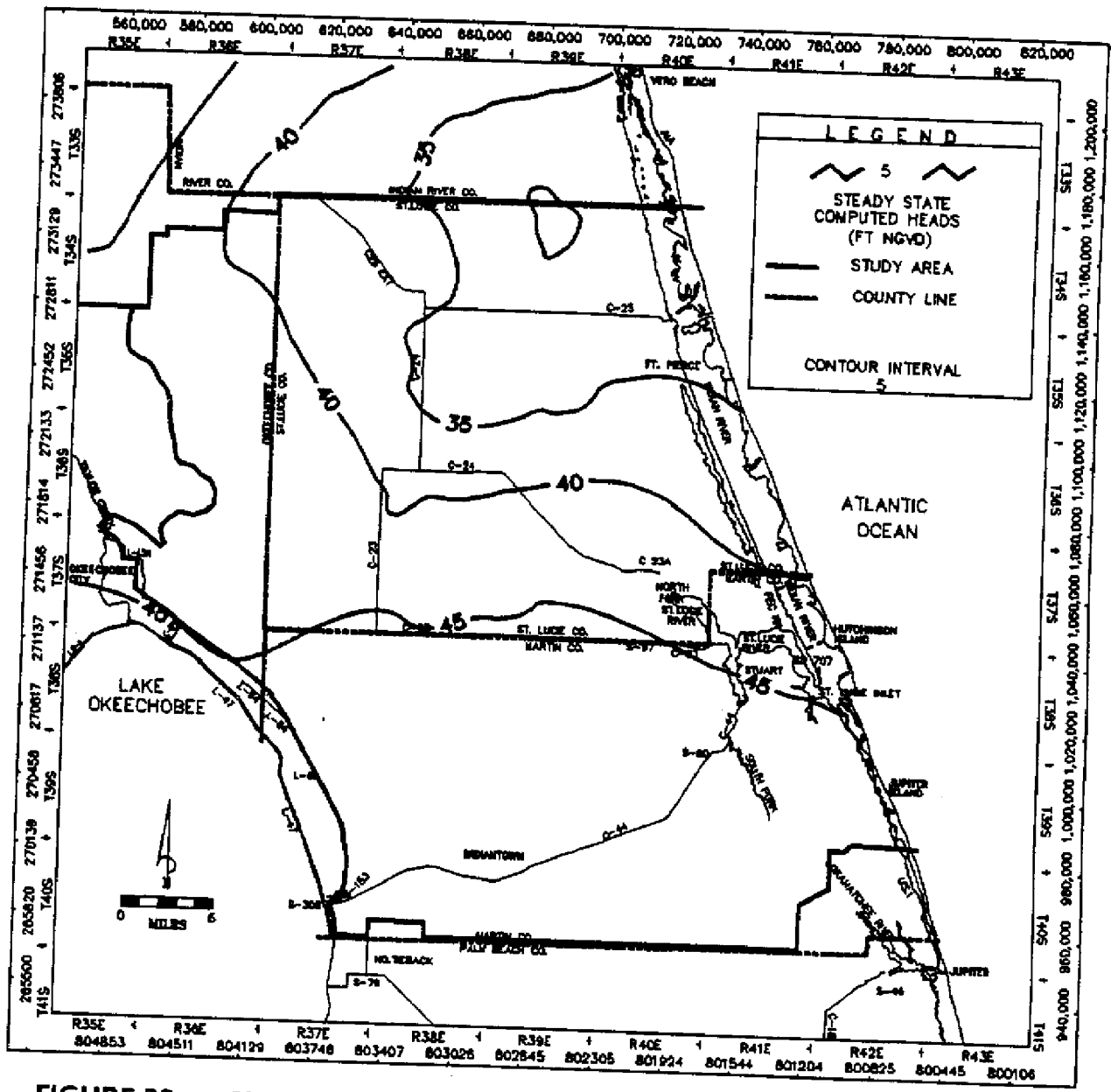


FIGURE 32: Simulated Steady State Water Levels , Layer 3

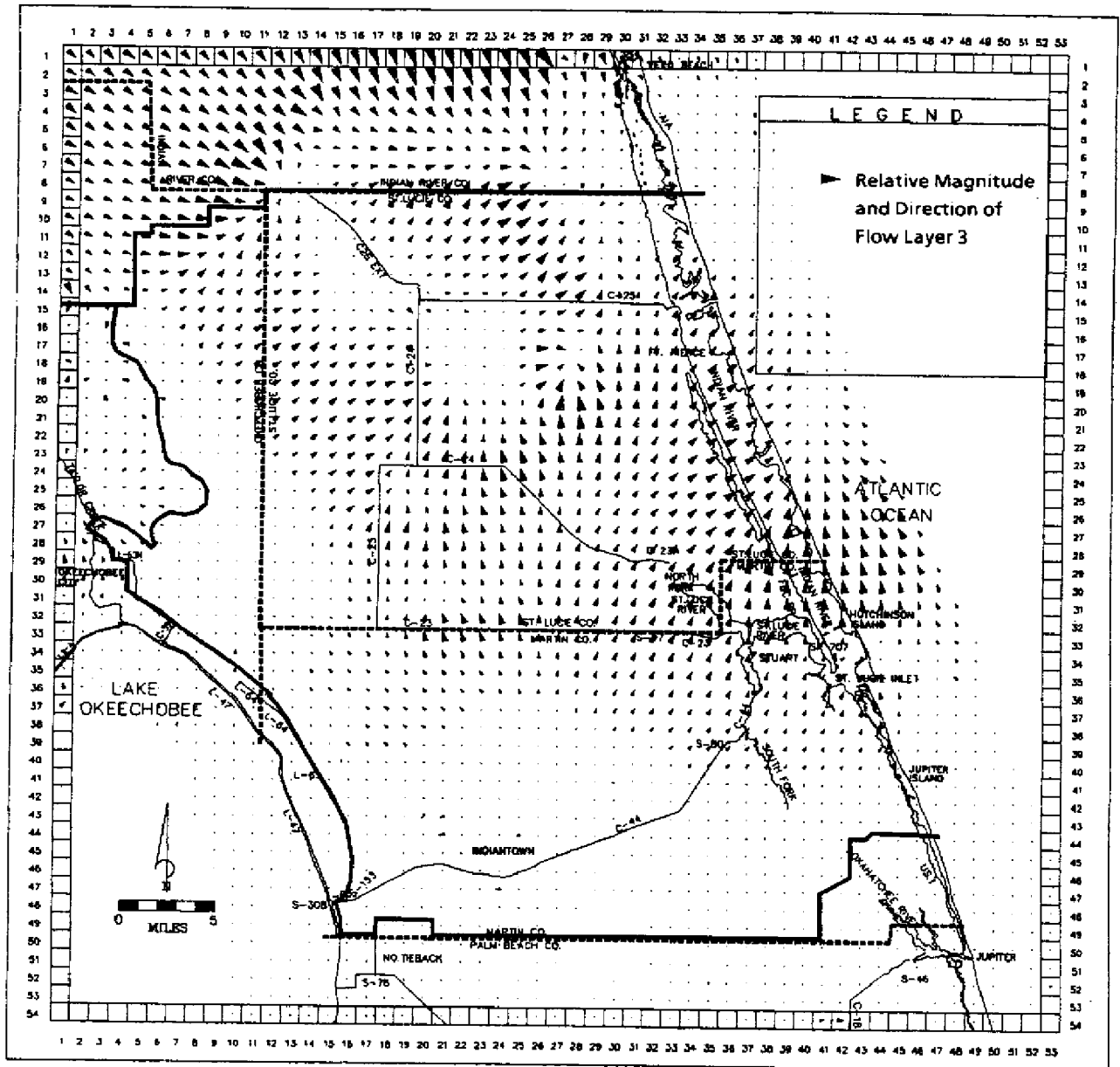


FIGURE 34: Simulated Steady State Horizontal Flow Vectors, Layer 3

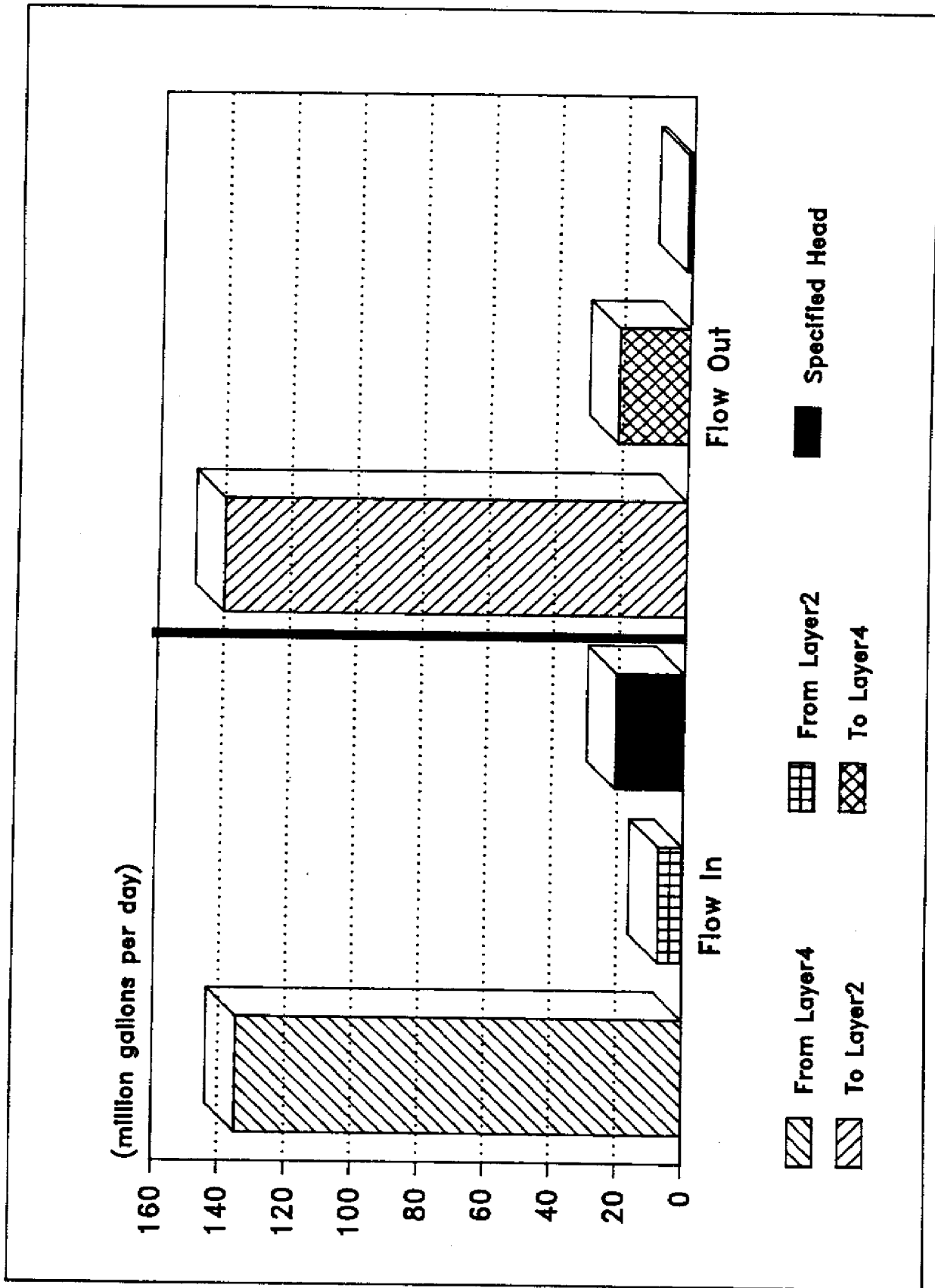


FIGURE 36: Volumetric Budget, Layer 3 (LFAPZ1), Steady State Conditions

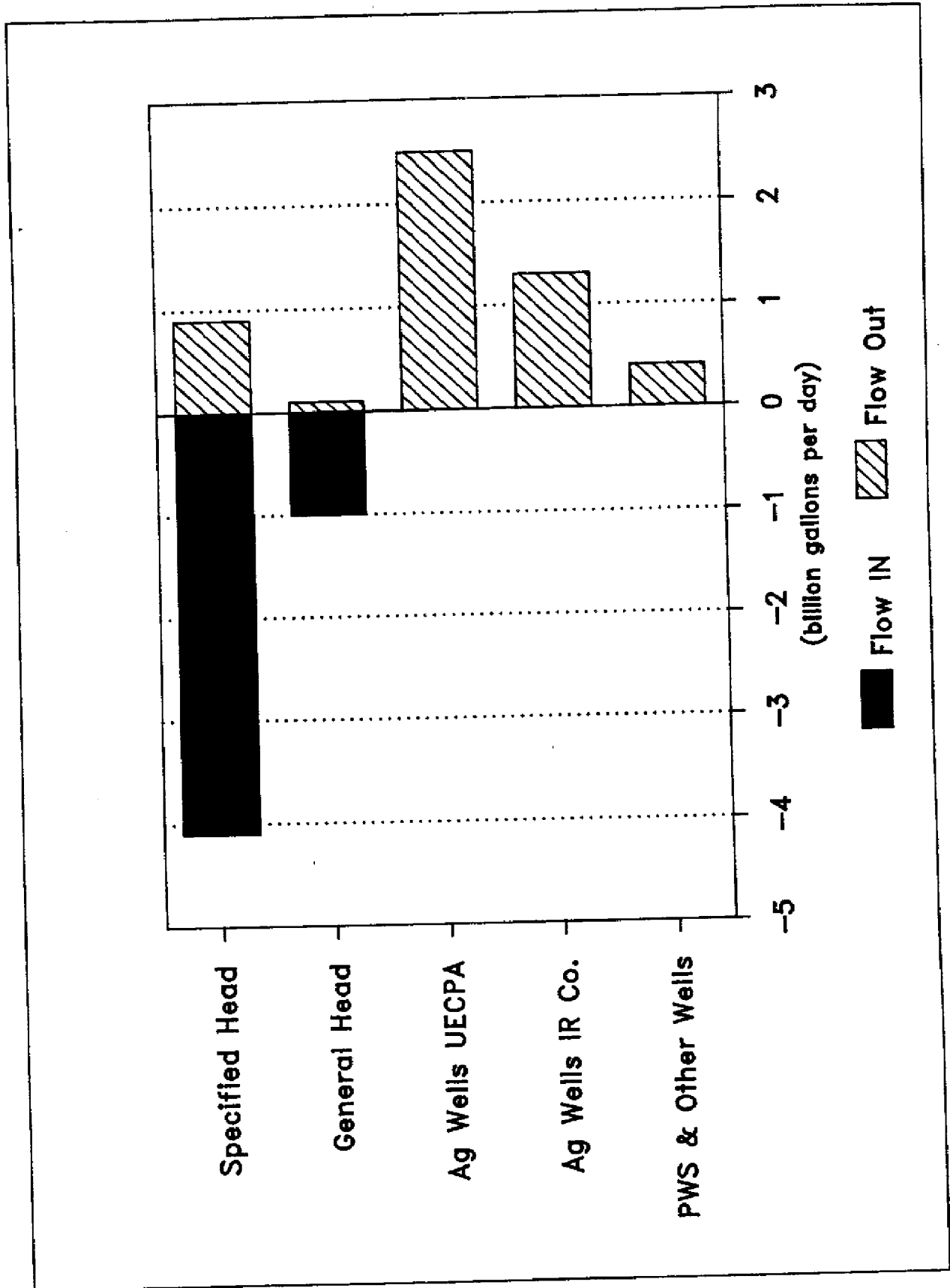


FIGURE 37: Volumetric Budget for Entire Model

representing 23 months. Each stress period contained five time steps. The number of time steps was found to have little effect on final computed head solutions.

Calibration is based on a good match between computed heads for each stress period and monthly water levels observed at monitor wells. Computed and observed heads cannot always match perfectly for reasons which will be addressed later. A tolerance range is typically defined for calibration criteria. In this case, the tolerance range for the average difference between modeled and observed heads averaged over the calibration period was ± 4 feet. This range was chosen based on previous studies where ranges from 4 to 5 feet were applied to deeper confined aquifer systems (Bower, 1990; Smith, 1990). The model was considered to be satisfactorily calibrated, within the tolerance range, to all 54 observation wells on the network. The range of observed versus simulated average head differences was between -2.0 and +2.7 feet (Figure 38).

The tolerance range for confined aquifers is generally higher than the range for unconfined for the following reasons:

1. In unconfined aquifers, small changes in water levels reflect potentially large impacts, particularly to wetlands, and
2. The aquifer parameters, especially storativity, of the deeper confined aquifers cause 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 monitor wells (Appendix E). These were used to aid in the interpretation of the numerous model runs. Where a month's data was not available, a value of 20.10 feet was assigned to fill in the data gap. This was necessary due to limitations in the program that generated the plot. Therefore, all 20.10 foot values on the comparison plots should be disregarded.

The agreement of a computed water level with its counterpart observed level 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 UECPA model, due to the large 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 intense 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 affected significantly. This situation is referred to as cell-wide averaging, and occurs at several locations in the UECPA 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.

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 2 (UFA) is the only layer calibrated in this model so most changes were made to the parameters and pumping estimates of this layer. Layer 1 (Surficial Aquifer System) had no effect on layer 2 calibration because the layer 1 Vcont (leakance) term was extremely small. Confidence in layer 1 Vcont is relatively high since the thickness and impermeable nature of the Hawthorn confining unit is well known. The SAS was modeled as a separate layer primarily to see the amount of recharge it received from the UFA. That volume was determined in the steady state run volumetric budget and is approximately 6 million gallons per day.

The adjustments to the model were made in three ways listed in order of importance:

1. Vertical conductance (Vcont) of layer 2 and layer 3

- 2) Refinements to water use estimates, and
- 3) Prescribed head levels in layer 4.

Each of these adjustments merit their own discussion and are documented in the following three subsections.

Vertical Conductance

Because layer 2 (UFA) is well confined and because the natural head gradient favors upward flow, very little water enters layer 2 from above. The only exception is in the high ground level elevation areas where the flow gradient is reversed. Most of the recharge sources typical for an unconfined system such as rivers, canals, and rainfall do not reach the UFA (layer 2) in the study area. Rather, the recharge source is either from below through upward vertical leakage or from the boundaries. It became clear early in the calibration process that most water taken from the UFA via wells is replaced with vertically migrating water from below the UFA.

The model was sensitive to vertical conductance (V_{cont}) adjustments to both layers 2 and 3. Relatively little is known about the degree of interconnection between the UFA (layer 2) and LFAPZ1 (layer 3). Less is known about the interconnection between the LFAPZ1 (layer 3) and LFAPZ2 (layer 4). Layer 2 and layer 3 vertical conductance was varied from 0.05 day^{-1} to 0.00001 day^{-1} , which represents the range reported in UFA (layer 2) aquifer performance tests. It was determined that calibration of layer 2 could be attained using many combinations of layer 2 V_{cont} and layer 3 V_{cont} . One of the two unknown V_{cont} variables had to be held constant and the other adjusted to proceed with calibration. Lacking any information on layer 3 V_{cont} and knowing the average layer 2 V_{cont} value obtained from aquifer performance tests, V_{cont} in layer 2 was uniformly set to .04/day in most of the cells in this layer. The cells not set to this value are east of the coastal fault.

UFA water levels fluctuate radically in monitor wells east of the fault in response to small volumes of withdrawn water. Relatively small volumes are used because agricultural enterprises are virtually non-existent east of the Intracoastal Waterway. Observed and computed heads best matched in barrier island monitor wells when a uniform V_{cont} value of 0.00004 day^{-1} for layer 2 was used east of the fault. The positioning of this fault is discussed in the Transmissivity Section of this report. A large data gap exists in the FAS on the barrier island between monitor well SLF-46 and

SLF-47. Refinements to the model should be made here in the future if data becomes available.

After layer 2 V_{cont} was established, layer 3 V_{cont} was adjusted until computed and observed water levels in layer 2 best matched. The final uniform value of V_{cont} used for all cells in layer 3 was 0.00032 day^{-1} . This value was multiplied by the thickness of the confining zone to ensure that the corresponding values of vertical hydraulic conductivity remained reasonable. The range for vertical hydraulic conductivity was 0.064 to 0.16 ft/day, which is within the expected range for dolomitic limestone (Driscoll, 1986).

Refinements to Wells Package

Once the V_{cont} terms were specified, pumping estimates needed to be adjusted. The pumping estimates were adjusted up in some areas, down in others. The estimates were adjusted upward in all wells for the following months:

May 1989	+ 30%
June 1989	+ 20%
May 1990	+ 34%
June 1990	+ 32%
July 1990	+ 5%

This represents changes made to five out of 23 stress periods. Based on model results, actual UFA water use was higher than the average survey response reflected in these months. Water use estimates may have been low for the following reasons:

- 1) Withdrawals by non permitted users were not factored in to the estimates.
- 2) Since these were unusually dry years more water was used than the average permittee responding to the survey was aware of.
- 3) The estimates of use in these months were understated in the survey responses due to concerns about exceeding permitted allocations.

All well withdrawals in Indian River County were decreased by 30 percent. Thirty one percent of all water discharged to wells in the model was from cells in Indian River County. A regional cone of depression caused by these concentrated withdrawals for agricultural irrigation occurred in the south-central portion of the county. The initial estimates were decreased to bring both the steady state and transient models into calibration. Initial water use estimates may have been high because all survey responses were from permittees inside the

SFWMD boundaries and did not reflect Indian River County water use. It appears FAS wells may have been used less there than in the UECPA during the calibration period. The changes to cells in Indian River County do not directly impact model results within the UECPA; they merely alter the fluxes at the boundary of the UECPA. The impacts were considered minimal.

Decreases in water use estimates were made for all stress periods to four small areas in the model where initial estimates created unrealistically high cones of depression. The cells affected and percentage decrease are listed in Table 6 and plotted in Figure 39.

Cells in these four areas have the highest water withdrawals in the model. It is possible those withdrawals were overestimated by 20-30% due to decreased capacity of wells caused by lowered heads. The inherent property of artesian wells to flow less in areas with lower heads is not addressed in this model. Well capacities were obtained either directly from the permit file or were assumed based on the diameter of the wells. The assumptions based on well diameter are based on the average observed capacities relative to casing size. Relatively low heads were observed in those cells where the modifications to pumpage were applied. Therefore, wells in those areas produce less than the original estimates. Modifications to account for this problem is needed in future model versions.

Additions to the initial well package were made in one case where unpermitted wells were withdrawing substantial volumes of water. Lakewood Park is a residential community in north-central St. Lucie County that uses FAS water to fill its numerous man made ponds. Monitor well SLF-70 is owned by the community and used to fill one of approximately 20 ponds on site. There are no records of water withdrawals for the calibration period so estimates were made knowing the number of wells and their capacities. Those estimates were refined by running the model enough times to closely match the observed monthly heads seen at SLF-70.

One addition was made on the St. Lucie County coast where an irrigation well exists, is utilized, and no pumpage reports are kept. That addition was for a single well named SLF-46. The well is also a monitor well. There are no other known FAS wells in the same cell as SLF-46. Reasonable withdrawal estimates were made knowing the well's capacity and purpose. Those estimates were refined by numerous transient model runs until the computed and observed heads closely matched for that cell.

Prescribed Head Levels Layer 4

Prescribed heads in layer 4 were generated initially by interpolating layer 2 (UFAS) March 1990 observed water levels to obtain an array with a head value for each cell in the layer. This was done based on the observation that heads in layers 2, 3 and 4 are generally the same to within ± 3 feet. During the transient calibration process, that array was altered slightly. Initial model runs computed heads in some cells both higher and lower than observed in monitor wells corresponding to those cell locations. The differences between computed and observed values at cells corresponding to monitor wells were recorded. They ranged between -2 to +5 feet. Where those recordings were one foot or higher, they were added to the original March 1990 observed recordings for each respective well. This modified list of water levels then was used to generate a new array of prescribed heads using the interpolative statistical method of kriging. This new array was substituted for the original layer 4 prescribed heads file in subsequent model runs resulting in an improved transient calibration. The modified heads used to generate layer 4 prescribed heads as well as the amount and percent the original value of head changed are listed in Table 7. The cell locations of those wells with modified heads are shown in Figure 40.

The layer 4 prescribed heads represent the steady state water level in that layer. There are not enough data available on layer 4 heads spatially to dispute the final values used in the model calibration.

Results

Layer 2 (Upper Floridan Aquifer)

The model was considered to be satisfactorily calibrated, within the tolerance range, to all 54 observation wells on the network. The range of observed versus simulated average differences was between -2.0 and +2.7 feet. Figures 41 and 42 show the simulated head distributions in May 1990 (end of dry season) and September 1990 (end of wet season), respectively in layer 2. Generally, the highest water levels occur in the south portion of the model. Higher water levels represented by the 48 foot contour line are furthest north in central Martin County. The highest water levels are found in Palm Beach County. The natural flow direction is best described by the end of wet season map when water levels are rebounded fully. This map shows the direction of flow is north in Palm Beach and Martin counties. Soon after crossing the St. Lucie County border, the direction of flow veers more easterly,

TABLE 6: DECREASES TO INITIAL PUMPING ESTIMATES FOR CALIBRATION ENHANCEMENT

AREA	ROW	COLUMN	% DECREASE
Area 1	10	25-26	30%
	11	25-26	30%
	12	25-26	30%
	13	25	30%
Area 2	18	20-22	30%
	19	18-22	30%
	20	19-22	30%
Area 3	26	18-20	30%
	27	19-20	30%
	28	19-20	30%
Area 4	6	25-26	20%
	7	25-26	20%
	8	25	20%

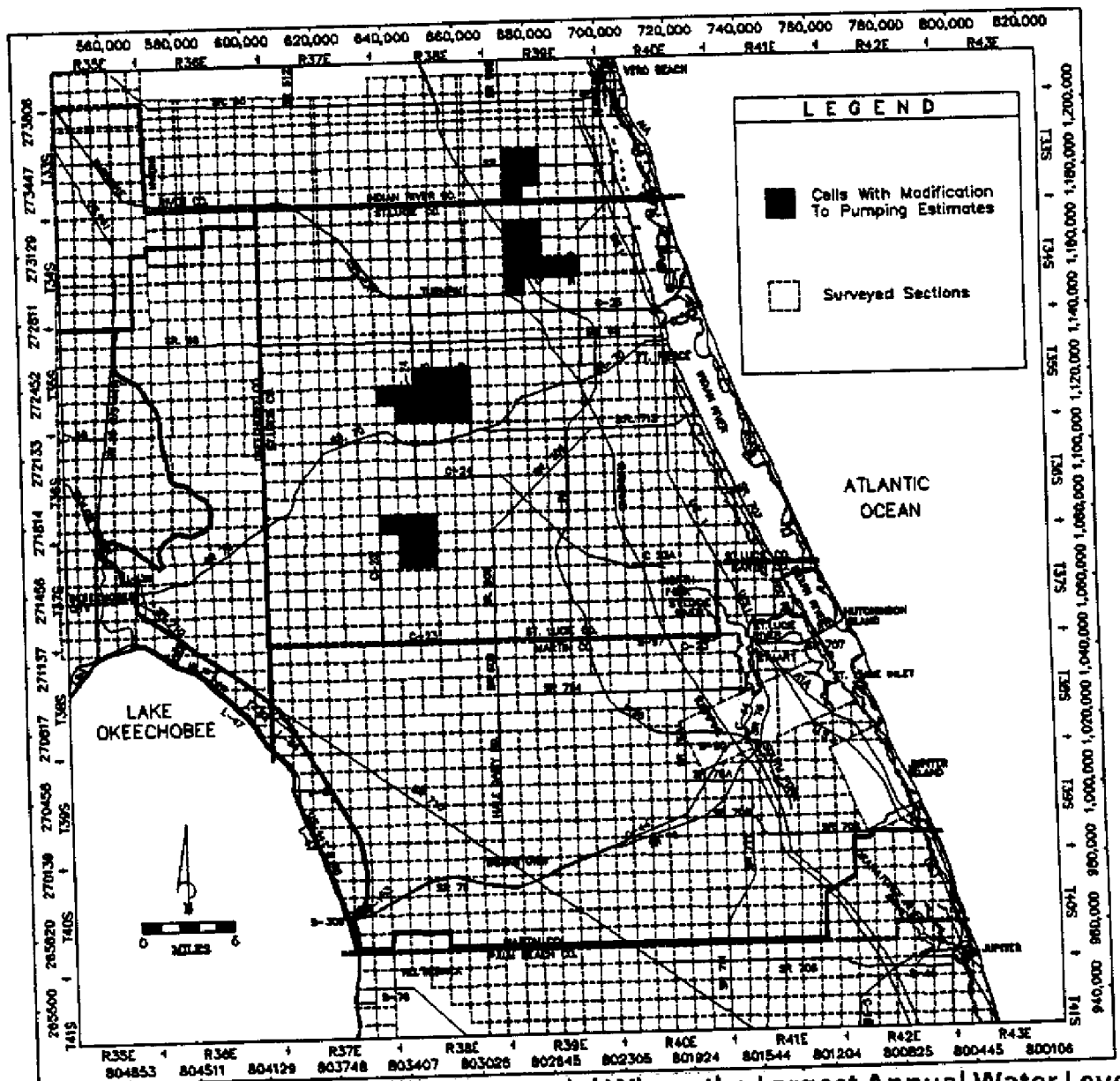


FIGURE 39: Location of Areas in Model Where the Largest Annual Water Level Fluctuations Occur in Layer 2 (Upper Floridan Aquifer) and Where Original Water Use Estimates were Decreased

TABLE 7: CHANGES MADE TO SPECIFIED HEAD LAYER 4 FROM MARCH 1990 OBSERVED HEADS

Monitor Well Name	Original Mar/90 Head NGVD (ft)	New Mod. Head NGVD (ft)	Changes (ft)
MF-3	45.0	47.0	2.0
MF-33	45.7	46.7	1.0
MF-55	42.1	41.1	-1.0
OKF-31	44.5	45.5	1.0
OKF-73	41.3	40.3	-1.0
SLF-3	37.9	43.0	5.1
SLF-4	38.4	39.4	1.0
SLF-17	42.4	44.4	2.0
SLF-21	36.1	37.1	1.0
SLF-36	38.9	42.9	4.0
SLF-40	39.3	41.3	2.0
SLF-50	40.8	41.8	1.0
SLF-61	45.8	43.8	-2.0
SLF-64	40.4	41.4	1.0
SLF-69	40.7	43.7	3.0
SLF-71	39.3	40.3	1.0
IR-312	35.6	37.6	2.0

becoming eastward near the City of Ft. Pierce, St. Lucie County. At this point, the water seems to flow out under the Atlantic Ocean. The end of dry season map shows a marked warping of the end of wet season contour lines. The contours move in toward areas of intense water well withdrawals. Water levels change between 0 to 8 feet between wet and dry season; the average change is approximately three feet.

Layer 3 (Lower Floridan Aquifer Producing Zone 1)

Figures 43 and 44 show the simulated head distribution in May and September for layer 3. Comparison to figures 41 and 42 show the general head distributions, and, therefore, the regional flow patterns, to be similar to the UFA. Water levels in the LFAPZ1 (layer 3) react fairly quickly to changes in water levels in the UFA (layer 2) due to its fairly good hydraulic connection to it and the large differences in gradient established by lowered heads in layer 2 resulting from pumping.

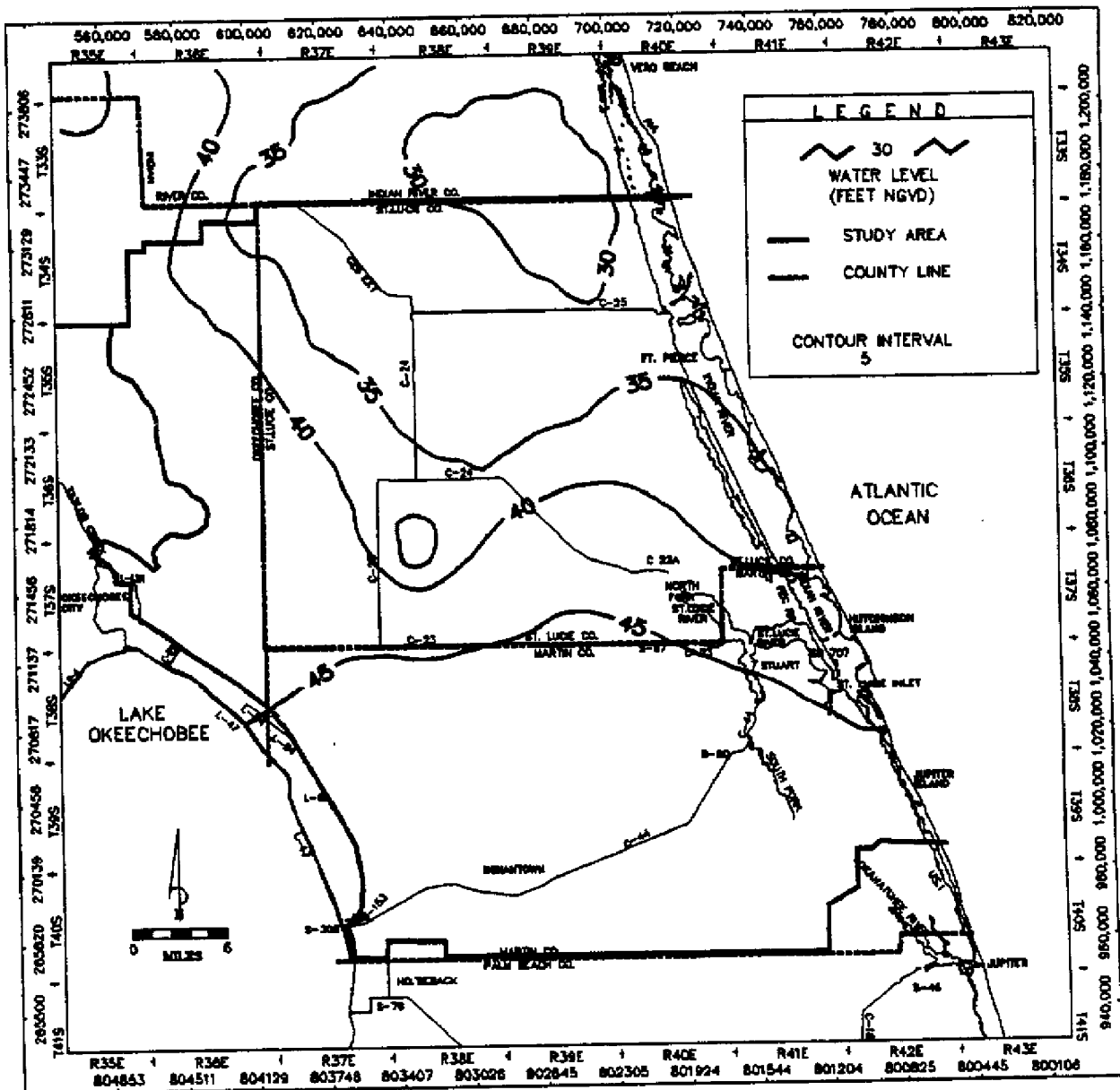


FIGURE 43: Simulated Water Levels, Layer 3 (Lower Floridan Aquifer Producing Zone 1), May 1990

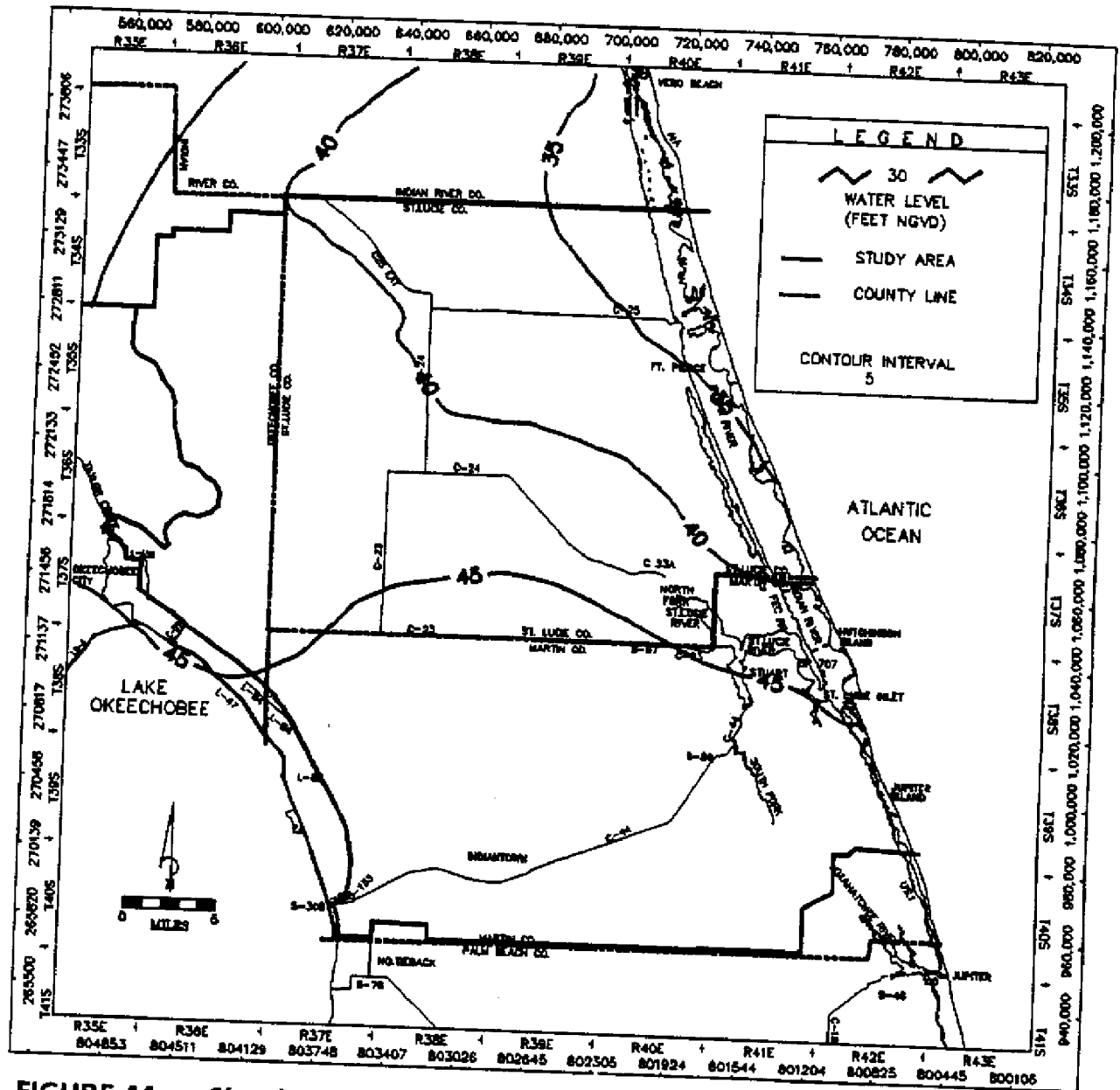


FIGURE 44: Simulated Water Levels, Layer 3 (Lower Floridan Aquifer Producing Zone 1), September 1990

SENSITIVITY TESTING

The model was tested to check its sensitivity to changes in the boundary conditions, aquifer parameters, and layer 4 prescribed head conditions. Boundary conditions were tested two ways:

1. By replacing the existing specified boundaries with constant head boundaries. This, in effect, provided the boundary cells with a constant head through all stress periods of the simulation. The model then was run using steady state conditions and the constant head configuration, and the resulting heads were compared to the steady state calibration run (baserun). This resulted in an average head difference of -0.12 feet, the majority of that change was in the boundary cells themselves. The impact on layer 2 (Upper Floridan Aquifer System) volumetric budget was a 6.7 percent decrease of net inflows and outflows.
2. MODFLOW was modified by SFWMD personnel to permit the user to incorporate a multiplier to conductance values in the General Heads package. The conductance multiplier used in the general head package (specified flux boundary cells) was changed from the initial value of 10.0 to 0.1, 1.0, 100.0, 1000.0, and 10,000.0. The conductance parameter controls the rate of flow through the boundary cells.

The results of these changes demonstrated small, relatively insignificant changes in computed heads ranging between (-0.18 to 0.02 feet). Most head differences occurred in boundary cells, whereas very little changes occurred in the majority of model cells. The percent the volumetric budget change inflows and outflows changed from the base run ranged from -2.6% for a conductance multiplier of 0.1 to +1.1% differences for conductance multiplier greater than or equal to 100.0. Significant head differences resulting from the various types of boundary conditions are limited to a range of two cells inward from the location of the specified boundary. The specified flux boundary used is considered a conservative and accurate method of defining boundaries and should be valid for the various uses planned for this model.

Aquifer parameters were tested by altering the following: prescribed heads in constant head layer 1, layer 2 transmissivity, V_{cont} between layers 1 and 2, storage coefficient in layer 2, layer 3 transmissivity, V_{cont} between layers 2 and 3, V_{cont}

between layers 3 and 4, and prescribed heads in constant head layer 4. The impacts these changes had on layer 2 computed steady state heads and volumetric budgets are presented in Tables 8 and 9. It was assumed that testing this range of values would bracket the range of uncertainty for each parameter. Only head and volumetric changes which occurred in layer 2 (UFAS) cells were recorded since this was the only calibrated layer in the model and represents the most important portion of the FAS from a water resource point of view.

LAYER 2 (UPPER FLORIDAN AQUIFER)

Simulated heads in layer 2 are highly sensitive to the following changes: V_{cont} between layers 2 and 3, V_{cont} between layers 3 and 4 and, prescribed heads in layer 4 (constant head layer). Computed heads were moderately sensitive to transmissivity of layers 2 and 3, and generally insensitive to changes to all other parameters. Doubling V_{cont} in layer 2 resulted in a maximum change of +1.85 feet, with an average change of +0.01 feet, the volumetric budget showed a 0.15% increase in water originating from layer 3. Halving layer 2 V_{cont} caused a maximum change in simulated heads of -2.0 feet, with an average change of -0.02 feet, the volumetric budget demonstrated water supplied to layer 2 from layer 3 decreased 0.2%. Doubling V_{cont} in layer 3 resulted in a maximum change of +2.49 feet, with an average change of +0.38 feet, the budget shows 3.3% more water was supplied from layer 3. Halving layer 3 V_{cont} resulted in a maximum decrease in layer 2 simulated heads of -3.56 feet, with an average change of -0.71 feet, 2.5% less water was supplied by layer 3. Doubling transmissivity in layer 2 resulted in a maximum increase of +2.34 feet, with an average rise of +0.20 feet in layer 2, the budget showed a 0.4% increase of water from all sources into layer 2. Doubling the transmissivity of layer 3 resulted in a maximum head rise of 0.88 feet and an average of 0.04 feet, a 3.0% increase of water from all sources was indicated by the volumetric budget. Layer 2 is more sensitive to changes in transmissivity than layer 3 because it has lower transmissivity values. The largest changes in head were near areas of large withdrawals. Therefore, impacts parameter changes had on computed heads were most evident near large withdrawals and negligible where withdrawals were nonexistent.

TABLE 8. SENSITIVITY RESPONSES IN LAYER 2 COMPUTED HEADS DUE TO CHANGES IN MODEL PARAMETERS (In feet above steady-state base run)

Layer in Which Change Made	Parameters Changed from Calibration Run	Max. Increase in Water Level (Layer 2)	Max. Decline in Water Level (Layer 2)	Average Change in Water Level (Layer 2)	Standard Deviation (Layer 2)
Layer 1	Starting Head + 5	0.07	0.00	0.01	0.01
	Starting Head -5	0.03	-0.03	-0.01	0.01
	Layer 1-2, VCONT x2	0.01	-0.46	-0.06	0.05
	Layer 1-2, VCONT x10	0.23	-3.51	-0.38	0.41
	Layer 1-2, VCONT x.5	0.22	-0.01	0.02	0.02
	Layer 1-2, VCONT x.1	0.39	0.07	0.04	0.02
Layer 2	Starting Head + 10	0.00	0.00	0.00	0.00
	Transmissivity x2	2.34	-0.32	0.20	0.20
	Transmissivity x5	4.89	-0.85	0.13	0.22
	Layer 2-3, VCONT x2	1.85	-0.08	0.01	0.02
	Layer 2-3, VCONT x10	4.85	-0.17	0.03	0.22
	Layer 2-3, VCONT x.5	0.09	-2.00	-0.02	0.12
	Layer 2-3, VCONT x.1	0.25	-6.14	-0.13	0.44
	Storage Coeff. x.1	0.07	-0.03	0.00	0.01
	Storage Coeff. x10	0.15	-0.06	0.02	0.04
	Storage Coeff. x100	1.18	-0.31	0.13	0.29
Layer 2 (Layer 2 Gen. Heads Package Conductivity Term Adjusted)	Constant Head	1.38	-1.94	-0.12	0.26
	Cond. x.1	0.44	-4.45	-0.18	0.39
	Cond. x1	0.37	-3.09	-0.08	0.19
	Cond. x100	1.61	-0.20	0.02	0.06
	Cond. x1,000	1.95	-0.24	0.02	0.07
	Cond. x10,000	1.96	-0.24	0.02	0.07
Layer 3	Transmissivity x2	0.88	-0.40	0.04	0.20
	Transmissivity x10	3.37	-1.93	0.18	0.95
	Transmissivity x.5	0.28	-0.86	-0.03	0.15
	Transmissivity x.1	0.84	-3.67	-0.06	0.32
	Layer 3-4, VCONT x2	2.49	-0.56	0.38	0.57
	Layer 3-4, VCONT x10	5.88	-1.36	0.70	0.70
	Layer 3-4, VCONT x.5	0.60	-3.56	-0.71	0.90
	Layer 3-4, VCONT x.1	0.51	-16.56	-4.63	4.59
Layer 4	Starting Head + 5	4.97	-28.04	-0.12	7.68
	Starting Head -5	0.00	-29.73	-7.23	5.80

TABLE 9. SENSITIVITY RESPONSES IN LAYER 2 VOLUMETRIC BUDGETS DUE TO CHANGES IN MODEL PARAMETERS

Layer in Which Change Made	Parameters Changed from Calibration Run	% Change into Layer 2 from:				% Change out of Layer 2 to:			
		IN				OUT			
		Layer 1	Layer 3	Head Dep Bounds	Total In	Layer 1	Layer 3	Head Dep Bounds	Total Out
Layer 1	Starting Head +5	61.4	-1.0	-0.8	-0.7	-2.6	0.9	1.1	0.6
	Starting Head -5	-44.9	0.8	0.8	0.7	19.7	-1.9	-1.2	0.7
	Layer 1-2, VCONT x2	10.1	5.4	4.2	5.3	138.9	-12.2	-6.1	5.3
	Layer 1-2, VCONT x10	894.5	35.8	24.3	36.3	880.4	-26.2	-26.2	36.3
	Layer 1-2, VCONT x.5	-50.0	-1.8	-1.3	-1.8	-49.9	6.3	2.1	-1.8
	Layer 1-2, VCONT x.1	-90.0	-3.1	-2.3	-3.2	-90.0	12.7	4.0	-3.2
Layer 2	Starting Head + 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Transmissivity x2	0.7	-1.4	20.1	0.4	0.3	6.5	12.8	0.5
	Transmissivity x5	2.2	-2.2	68.2	4.0	1.0	69.5	58.4	4.0
	Layer 2-3, VCONT x2	0.0	0.2	1.6	0.3	0.0	5.0	3.3	0.3
	Layer 2-3, VCONT x10	0.0	0.3	6.9	0.9	0.1	16.9	6.8	0.9
	Layer 2-3, VCONT x.5	0.0	-0.2	-1.8	-0.4	-0.1	-6.6	-5.4	-0.4
	Layer 2-3, VCONT x.1	0.3	-1.3	-7.2	-1.8	-0.6	-31.9	-24.7	-1.8
	Storage Coeff. x.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Storage Coeff. x10	0.1	-0.2	-0.8	0.0	0.2	0.0	-1.1	0.0
Layer 2 (Layer 2 Gen. Heads Package Conductivity Term Adjusted)	Constant Head	-22.7	-1.4	-100.0	-6.7	-5.5	-73.9	-100.0	-6.7
	Cond. x.1	4.3	3.6	-86.4	-4.2	-1.0	-66.4	-98.0	-4.2
	Cond. x1	2.0	1.0	-39.6	-2.6	-0.5	-37.0	-78.0	-2.6
	Cond. x100	-0.5	0.9	3.0	1.1	0.1	-14.0	177.1	1.1
	Cond. x1,000	-0.6	1.3	-8.0	0.5	0.1	-46.3	275.1	0.5
	Cond. x10,000	-0.6	1.0	-10.0	0.1	0.1	-56.9	286.3	0.1
Layer 3	Transmissivity x2	0.7	0.7	26.4	3.0	0.3	54.1	35.6	3.0
	Transmissivity x10	2.2	3.3	156.0	16.6	1.5	307.3	169.8	16.6
	Transmissivity x.5	-0.4	1.2	-11.4	0.1	-0.2	1.1	-5.4	0.5
	Transmissivity x.1	-0.7	2.5	-21.5	0.5	-0.4	12.1	-9.7	0.5
	Layer 3-4, VCONT x2	-2.2	3.3	156.0	16.6	1.5	307.3	169.8	16.6
	Layer 3-4, VCONT x10	-4.1	6.8	72.0	12.4	4.8	243.0	52.1	12.4
	Layer 3-4, VCONT x.5	1.8	-2.5	12.2	-1.2	-4.5	-20.7	-4.3	-1.2
Layer 3-4, VCONT x.1	40.0	-11.1	98.8	-1.4	-26.6	6.1	-59.1	-1.4	
Layer 4	Starting Head + 5	-29.9	48.8	751.1	110.0	13.0	1,954.1	1,526.0	109.8
	Starting Head -5	39.4	9.5	1,182.8	111.7	-22.3	2,357.3	-100.0	111.7

RESULTS

1. Regional water levels identified by well observations have been simulated by a ground water flow model for the upper Floridan Aquifer in the Upper East Coast Planning Area. The impacts of additional FAS water use now can be determined with the aid of the three dimensional ground water flow model which was developed and validated using 54 wells to 23 months of water level data.
2. Model results indicate that the most significant source of recharge to the Upper Floridan Aquifer in the Upper East Coast Planning Area is leakage from the Lower Floridan Aquifer. Approximately 91 percent (140 MGD) of the recharge in the study area was provided by upward leakage. The remaining nine percent (13.4 MGD) mostly comes from the borders of the study area across Okeechobee and Indian River counties. Leakage values more than transmissivity values are critical for determining expected well yields in the FAS.
3. Withdrawals from agricultural wells account for approximately 90 percent (138 MGD) of the outflow from the modeled area. The remaining outflow is comprised of 4.5 percent (6.6 MGD) upward and 4.8 percent (7.4 MGD) downward leakage. Ground water flow out of the modeled area boundaries is minor and accounts for 1.0 percent of the total (1.5 MGD). The majority of that water escapes to the Atlantic Ocean east of St. Lucie and Indian River counties.
4. Permeability and vertical leakage in the UFA is drastically reduced east of a structural anomaly, a trace of which follows the Intracoastal Waterway from Vero Beach to north Martin County, where it veers east toward the ocean. These factors are responsible for low yielding wells observed on Hutchinson Island and limit future large scale development of the aquifer in this area.

CONCLUSIONS AND RECOMMENDATIONS

1. Currently, portions of the UECPA are limited by the SFWMD to allocations of 1.5 acre-inches per month. The FAS model can be used to test the basis for this number.
2. Since the water quality of the lower Floridan Aquifer is probably inferior to that of the upper Floridan Aquifer, and the lower Floridan Aquifer System is the major source of recharge to the upper system, water quality deterioration in the upper Floridan Aquifer System can be expected in the future, especially in areas of intense water withdrawals. Model results and field observations indicate that water levels fluctuate annually as much as eight feet in three areas of intense citrus irrigation located in north and north-central St. Lucie County (refer to Figure 42). Permitted FAS user surveys showed that water quality deterioration has already been observed in these areas. Additional development of the FAS should not be permitted in these three areas.
3. Since deteriorating water quality is a probability in the future, water from selected Floridan Aquifer wells should be monitored for total dissolved solids and chlorides on a quarterly basis. The monitor wells should be in areas of high water use. Water quality changes with time then can be used to characterize the water quality of the lower Floridan Aquifer and continue to verify current assumptions about upward leakage and its impacts on the Upper Floridan Aquifer.
4. Leakage and head differentials between the Upper and Lower portions of the Floridan Aquifer proved to be the most important parameters in the calibration process. Such data are obtained by drilling a test site containing two lower Floridan Aquifer wells to approximately -1,600 feet NGVD and two upper Floridan Aquifer wells to approximately -1,000 feet NGVD, followed by two aquifer performance tests. There were only three aquifer performance tests of this type performed in the entire study area. It is recommended that at least two additional test sites be constructed and tested to obtain verification of the leakage and water level parameters used in the model. The well sites should be located in areas where the FAS is projected to be used for future public water supply. The FAS will probably be utilized as a public water supply source in the near future in parts of Martin and St. Lucie counties because of problems with Surficial Aquifer ground water contamination and wetland impacts.
5. This was the first calibrated three dimensional regional Floridan Aquifer system model developed for SFWMD needs. It is recommended that future regional FAS modeling projects incorporate information regarding leakage and head values in the lower portions of the FAS. Those data are obtained by testing the interconnection between the upper and lower Floridan Aquifer by drilling and testing deep wells as described in Recommendation 4 above. Since construction of deep aquifer performance test sites is very expensive, it is recommended that the feasibility of developing future regional models of the Floridan Aquifer System with respect to budgetary constraints be carefully analyzed.
6. The accuracy of any model depends on proper assumptions. It was found that agricultural water use accounted for 90 percent of the FAS water withdrawals in the study area. Accurate estimates of the amount of agricultural withdrawals were paramount in developing this model. A survey was used to obtain critical information on water withdrawals in the period modeled. It was found that water use habits of UFA permittees in the study area varied considerably. The survey provided adequate answers for making crude water use estimates, but more exact data are necessary to be able to model the system more precisely. It is recommended that permittees in the study area be required to submit monthly pumpage reports to the District. The reports should show the amount of time wells were allowed to flow freely for each month of the year. A small percentage of UFA permittees already are submitting these monthly reports since it was stipulated as a special condition in their water use permit. Actual water use records would provide valuable data in the calibration of future

models, particularly in areas of heavy ground water use.

7. This model can be used to simulate proposed water use scenarios on a regional basis. Where a finer scale or site-specific evaluation is required, the regional model can be used to provide boundary conditions. The District is currently working on a software program capable of zooming in on user-specified areas of the regional model and extracting data to form a submodel, or model within a model.

Submodels will have a finer grid resolution and be capable of simulating small scale impacts on adjacent users. The model in its present configuration is limited in its ability to assess impacts on a small scale due to the regional nature of the model grid. As a result, small scale impacts on adjacent users may be overlooked due to cell-wide averaging. Improved grid resolution is needed to better assess these small scale impacts.

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APPENDIX A
GEOLOGIC AND HYDROSTRATIGRAPHIC DATA

**APPENDIX A
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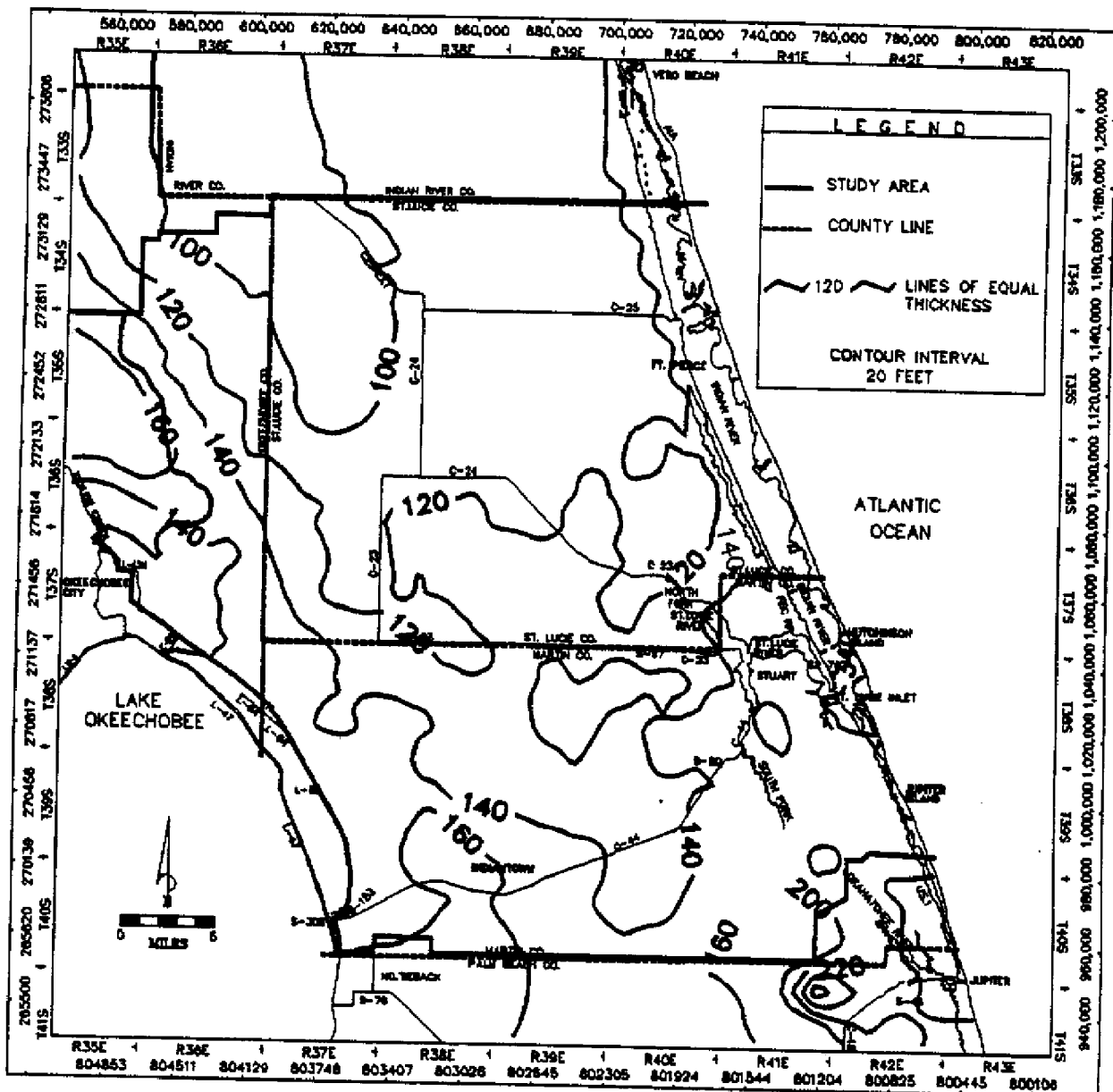


FIGURE A-2: Thickness of the Surficial Aquifer in Study Area

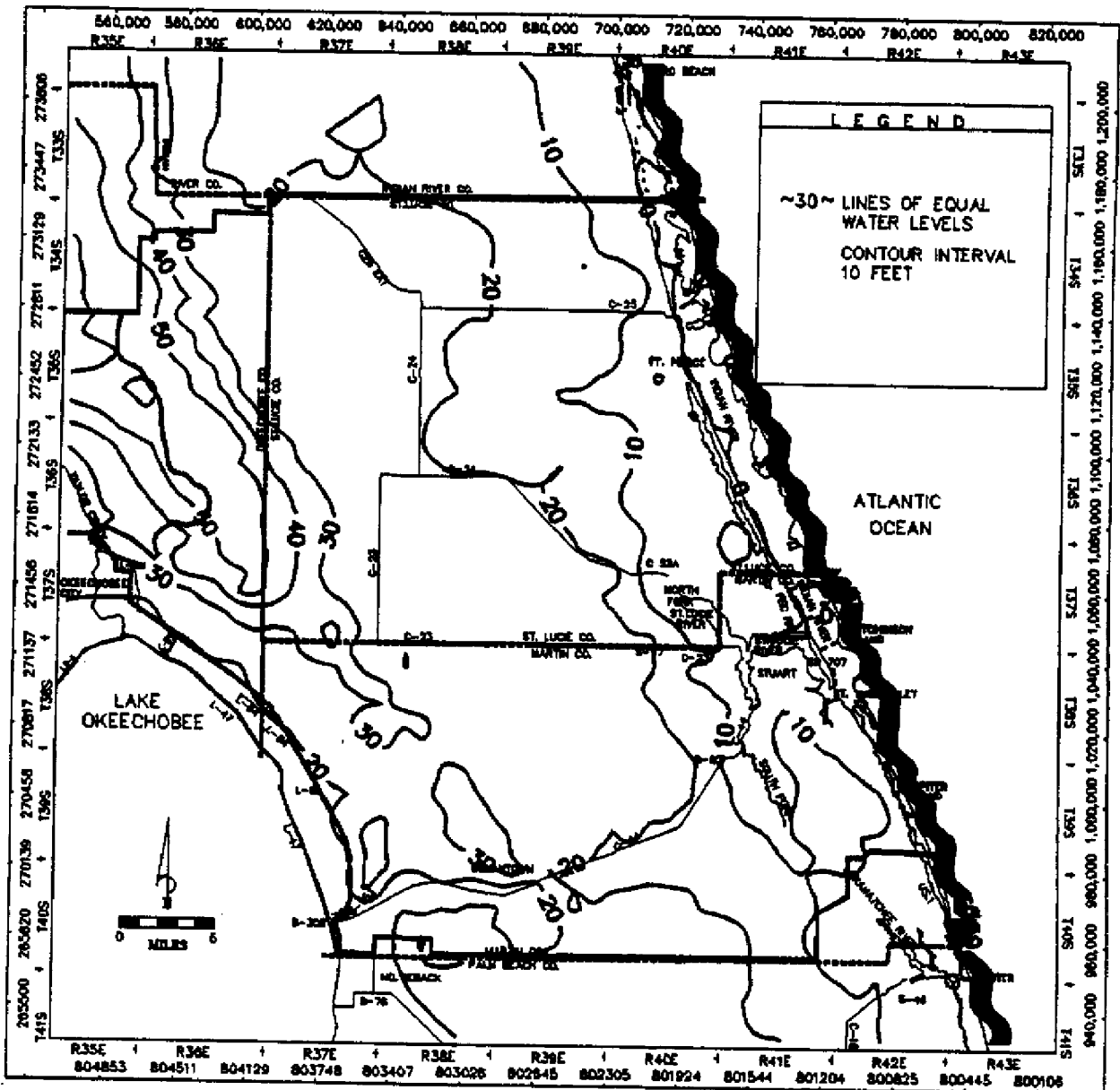


FIGURE A-3: Water Levels in the Surficial Aquifer in Study Area

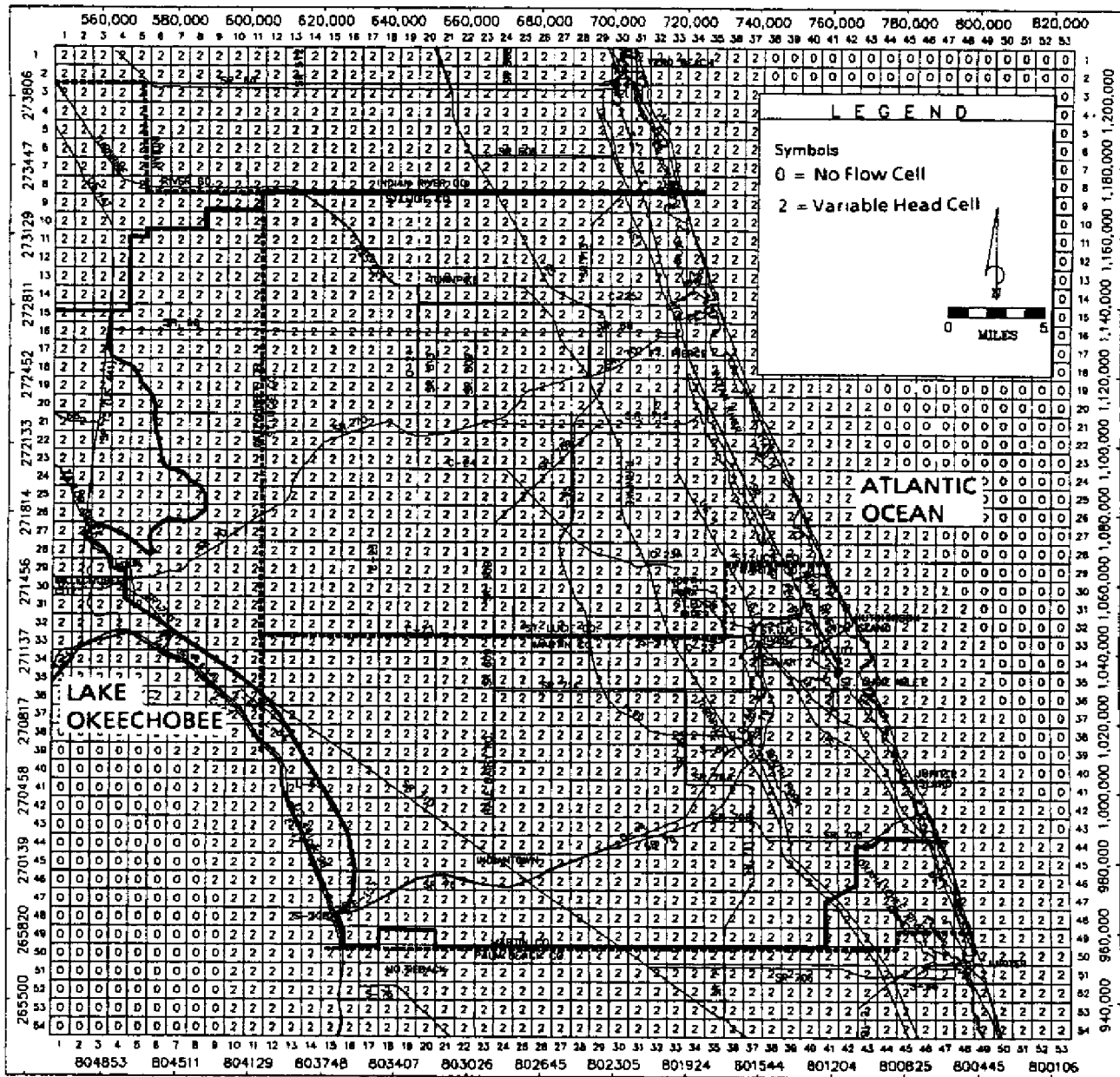


FIGURE A-5: Cell Types Used in Model, Layer 2

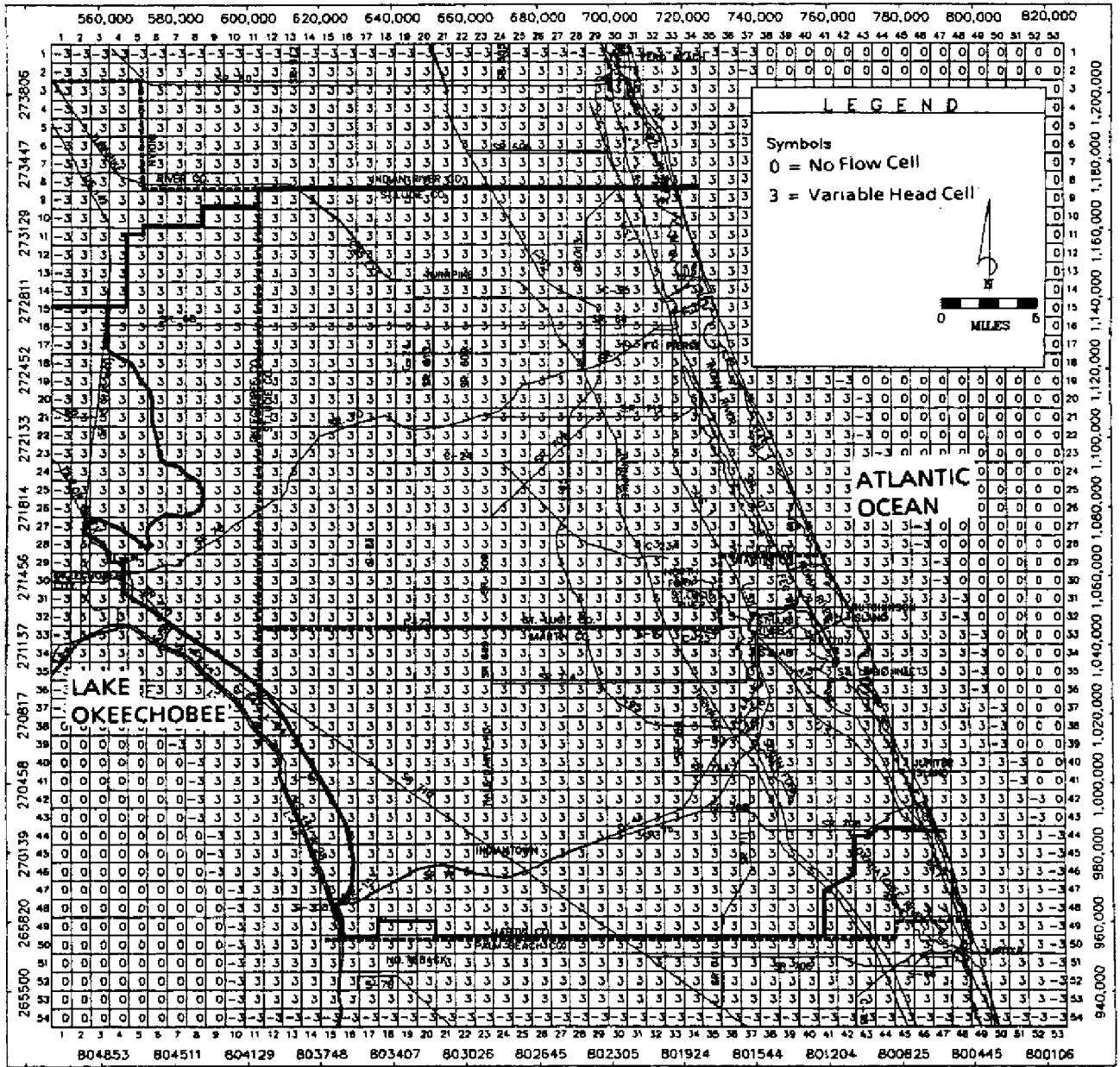


FIGURE A-6: Cell Types Used in Model, Layer 3

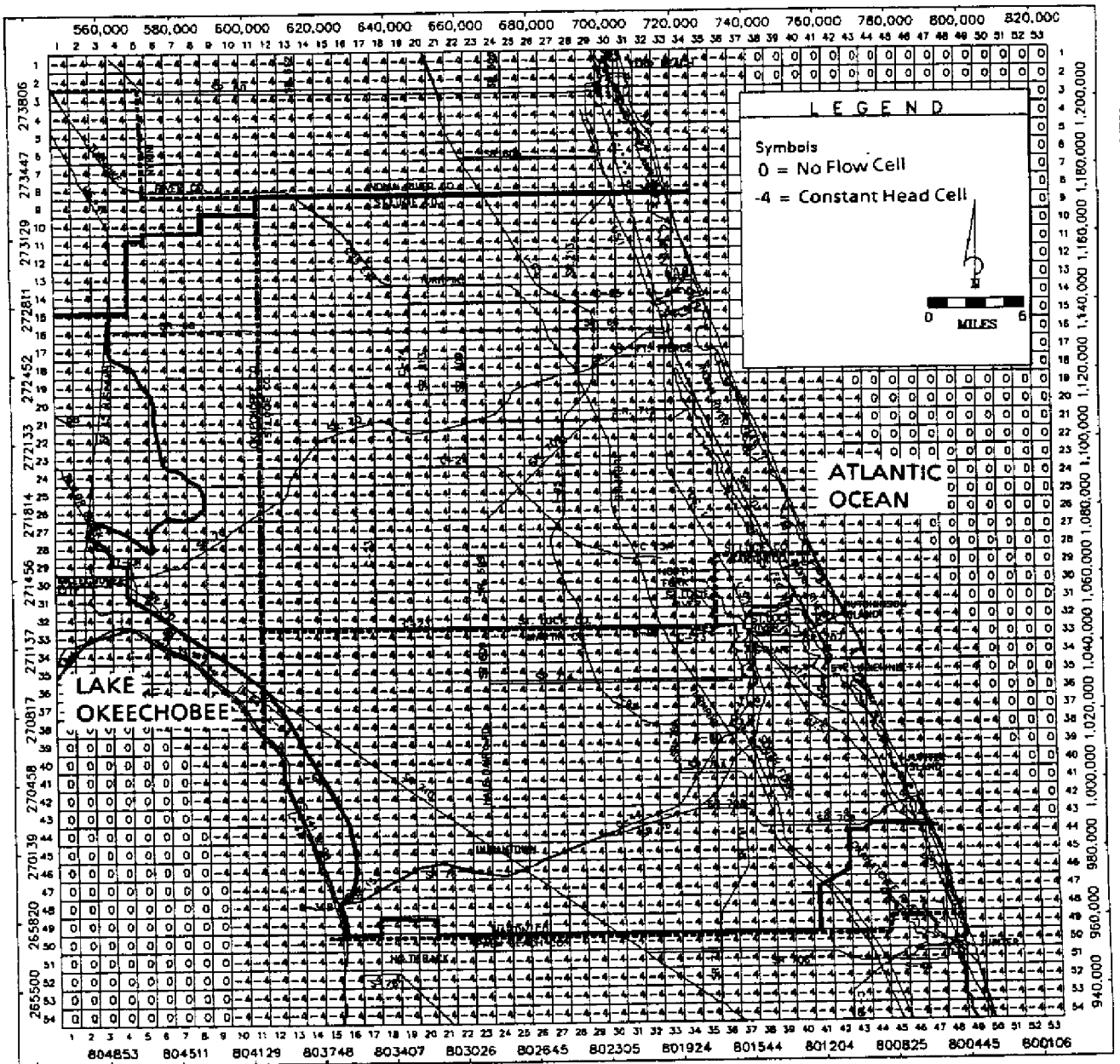


FIGURE A-7: Cell Types Used in Model, Layer 4

TABLE A-1: Specific Capacity Data Used to Calculate Transmissivity

SPECIFIC CAPACITY DATA USED TO CALCULATE TRANSMISSIVITY										
WELL NAME	TOTAL DEPTH (FT)	CASING DEPTH (FT)	CASING DIA. (INCH)	AQUIF PENET. (FT)	DISCH Q (GPM)	W.L. DRWD (FT)	UNCOR. SP.CAP GAL/M	CORR. DRWD (FT)	CORR. SP.CAP GAL/M	CALC. TRANS. GAL/D/FT
MF-2		300	6		217	15.0	14.5	13.5	16.1	94933
MF-4	1525	630	6	400	240	83.0	2.9	83.0	2.9	12700
MF-6	1052	400	5	653	72	7.5	9.6	6.8	10.5	104900
MF-9	880	342	6	538	83	9.0	9.2	8.6	9.7	104300
MF-23	1119	456	5.5	663	167	15.3	10.9	12.7	13.1	73500
LFM-1	1282	800	8	482	600	15.2	39.5	8.6	70.0	94000
FGS-M-29	1100	450	4	650	150	20.8	7.2	11.8	12.7	82750
FGS-M-34	1100	450	6	650	400	12.2	32.8	4.3	93.0	372713
FGS-M-88	1180	700	5	380	250	36.3	6.9	23.7	10.6	75167
FGS-M-143	958	272	6	686	550	27.5	20.0	19.3	28.5	139804
FGS-M-146	1155	432	5	723	300	16.8	17.9	6.0	50.0	217440
FGS-M-168	1080	500	5	580	300	19.9	15.1	7.4	40.5	183136
FGS-M-443	951	275	6	676	300	35.0	8.6	32.3	9.3	70472
FGS-M-740	990	474	6	516	650	28.7	22.6	9.7	67.0	278827
FGS-M-741	890	460	6	430	235	27.5	8.5	24.3	9.7	71917
FGS-M-742	1003	460	6	543	225	29.0	7.8	26.2	8.6	67945
FGS-M-746	510	360	6	150	325	22.0	14.8	17.7	18.4	103332
FGS-M-748	773	397	6	376	300	31.2	9.6	27.2	11.0	76611
FGS-M-759	853	650	6	203	400	23.0	17.4	11.3	35.4	164719
FGS-M-901	1110	490	8	620	150	10.3	14.6	9.9	15.2	91777
FGS-M-909	1095	470	6	625	300	22.0	13.6	17.3	17.3	99360
FGS-M-913	1100	500	6	600	120	8.0	15.0	7.6	15.8	93944
FGS-M-919	950	636	8	314	750	27.0	27.8	19.4	38.7	176636
FGS-M-920	1033	488	5	585	225	28.0	8.0	21.7	10.4	74444
FGS-M-921	1032	455	5	577	250	26.0	9.6	17.8	14.0	87444
FGS-M-923	1000	500	8	500	300	10.3	29.1	9.1	32.9	155692
FGS-M-927	792	450	6	342	350	23.8	14.7	17.5	20.0	109110
FGS-STL44	691	125	5	691	350	15.0	23.3	11.1	31.5	150637
OKF-2	666	218	5.7	468	93	15.3	6.1	14.9	6.2	153400
OKF-5	1181	440	6	593	176	1.5	117.3	1.0	172.5	341600
OKF-7	963	412	8	515	265	26.2	10.1	22.8	11.6	27200
OKF-13	1200	600	12	600	789	7.0	112.7	4.2	188.8	556000
OKF-26	825	625	12	216	400	80.0	5.0	79.6	5.0	54945

TABLE A-1: Specific Capacity Data Used to Calculate Transmissivity (Continued)

SPECIFIC CAPACITY DATA USED TO CALCULATE TRANSMISSIVITY										
WELL NAME	TOTAL DEPTH (FT)	CASING DEPTH (FT)	CASING DIA. (INCH)	AQUIF PENET (FT)	DISCH Q (GPM)	W.L. DRWD (FT)	UNCOR. SP.CAP GAL/M	CORR. DRWD (FT)	CORR. SP.CAP GAL/M	CALC. TRANS. GAL/D/FT
OKF-27	725	477	12	248	346	85.0	4.1	84.8	4.1	51695
SLF-4	993	482	9	511	752	11.8	63.7	8.2	91.7	461700
SLF-9	1058	256	10	795	906	14.0	64.7	12.4	73.1	531526
SLF-13	1238	344	12	894	881	14.5	60.7	13.6	64.8	553771
SLF-14	1700	1268	24	950	688	14.1	48.8	10.6	64.9	412800
SLF-15					808	14.1	57.3	14.1	57.3	629200
SLF-20	896	311	5	585	71	13.3	5.3	12.7	5.6	81495
SLF-21	707	156	3.5	544	91	12.4	7.3	9.8	9.3	49000
SLF-23	894	350	6	544	283	12.2	23.2	9.1	31.1	106700
SLF-24			10		229	15.3	14.9	14.8	15.5	208500
SLF-27	900	300	8	600	463	10.2	45.4	8.7	53.2	229062
SLF-28	883	200	4	683	28	7.9	3.5	7.6	3.7	24600
SLF-40		376	6		264	15.6	16.9	12.8	20.6	111367
SLF-51	1000	600	6	175	388	35.4	10.9	25.5	15.2	107077
SLF61	695	350	5	345	104	16.6	6.3	15.5	6.7	61119
SLF62	935	480	5	455	178	18.0	9.9	13.9	12.8	83132
SLF67		300	6		200	11.6	17.2	10.3	19.4	107007
SLF69		300	6		734	16.6	44.2	14.6	50.3	218429
SLF75	700	480	8	220	550	13.7	40.1		40.1	210000
SLF76	860	790	8	70	260	14.44	18.0	13.0	18.0	110000
FBW-1	904	508	12	396	700	13.0	54.0	12.22	57.0	309000
FGS-IR202	700	209	6	491	440	22.0	20.0	17.8	24.7	126082
FGS-IR243	900	220	6	680	450	41.0	11.0	36.2	12.4	81666
FGS-IR245	850	220	4	630	330	37.0	8.9	18.9	17.5	100083
FGS-IR251	700	220	4	480	200	16.0	12.5	8.3	24.1	123915
FGS-IR253	800	220	5	580	240	14.0	17.1	10.5	22.9	119582
IR7F	940		8		650	12.0	54.0	10.6	61.3	258319
IR12F	900		8		700	12.0	64.0	10.42	67.2	279472
IR20F			8		850	13.0	94.0	10.7	79.4	323745
IR21F	943		6		30	30.0	1.0	29.94	1.0	40508

TABLE A-1: Specific Capacity Data Used to Calculate Transmissivity (Continued)

SPECIFIC CAPACITY DATA USED TO CALCULATE TRANSMISSIVITY										
WELL NAME	TOTAL DEPTH (FT)	CASING DEPTH (FT)	CASING DIA (INCH)	AQUIF PENET (FT)	DISCH Q (GPM)	W.L. DRWD (FT)	UNCOR. SP.CAP GAL/M	CORR. DRWD (FT)	CORR. SP.CAP GAL/M	CALC. TRANS. GAL/D/FT
IR26F	900		12		1000	15.0	200.0	14.58	68.6	284558
IR28F	880		8		1600	12.0	152.0	8.28	193.2	734668
IR42F	836		4		400	12.0	67.0	4.38	91.3	366662
IR47F	860		8		300	10.0	33.0	9.66	31.1	149033
IR53F			20		1800	14.0	180.0	13.8	130.4	507890
IR54F	900		6		450	8.0	64.0	5.28	85.2	344646
IR57F	660		8		450	29.0	18.0	28.3	15.9	94309
IR61F	960		10		1800	16.0	150.0	12.94	139.1	539193
IR64F	570		10		800	15.0	100.0	14.34	55.8	238340
IR72F	671		4		50	10.0	12.0	9.64	5.2	55619
IR76F	750		4		70	11.0	14.0	10.34	6.8	61336
IR77F	746		4		50	4.0	12.0	3.64	13.7	86492
IR80F			8		240	7.0	34.0	6.76	35.5	165091
IR84F			6		40	2.0	20.0	1.94	20.6	111344
IR95F	960		8		600	12.0	50.0	10.8	55.6	237501
IR370		300	8		717	15.0	47.8	11.6	61.8	260087

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC

MAP #	WELL NAME	DATA	STATE PLANARS		TOP OF FORMATION NGVD (FEET)				DEPTH FT B.L.S	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.L. ELEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCALA	AVON							
1	WA-727	G	681817	1169470	-80	-410	-464	-568	1000	6010	1770	84.6	2430	10	20
2	WA-815	G	718920	1133099	-113	-641	-763	-830	995	2982	530	79	600	8	5
3	WA-820	G	681712	1112819	-90	-446	-520	-570	922	1260	420	79.6	254	8	20
4	WA-823	G	664197	1141826	-96	-428	-472	-528	640	1280	350	82	135	4	20
5	WA-825	G	702475	1124530	-124	-494	-574	-625	670	1390	250	80	360	3	16
6	WA-826	G	663853	1137987	-100	-486	-530	-594	814	3230	870	82.9	249	5	20
7	WA-827	G	606769	1127698	-85	-435	-485	-575	830	1510	870	81	153	4	25
8	WA-829	G	674420	1089763	-100	-530	-580	-660	741	3050	967	84	360	5	20
9	WA-875	G	663214	1117587	-90	-472	-520	-584	704	2080	510	81	95	4	20
10	WA-878	G	648530	1115814	-90	-434	-488	-574	766	3050	811	82	1000	10	20
11	WA-887	G	704887	1128784	-89	-455	-521	-583	894	1450	214	78	243	5	17
12	WA-1000	G	672933	1100158	-104	-464	-537	-608	888	3710	726	82	258	5	15
13	WA-1005	G	668690	1101352	-100	-474	-518	-590	830	2975	885	82	217	4	20
14	WA-1009	G	695779	1148834	-112	-404	-468	-630	904	2168	492	79.2	221	5	20
15	WA-1016	G	680298	1106451	-117	-489	-553	-613	876	2838	695	82	425	8	20
16	WA-1031	G	693006	1163564	-90	-392	-450	-616	686	1935	283	79	135	4	20
17	WA-1032	G	728097	1151125	-108	-706	-910	-990	1020	6270	1734	76.5	250	5.5	20
18	WA-1033	G	694281	1160541	-84	-368	-428	-622	740	1990	367	78.1	219	4	20
19	WA-1083	G	672844	1120959	-100	-459	-504	-568	646	612	275	76.8	156	4	20
20	WA-1085	G	666933	1111846	-98	-456	-496	-568	784	1780	375	79.8	124	4	20
21	WA-1087	G	671903	1109141	-90	-460	-500	-572	624	2046	435	79.4	202	4	20

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC
(Continued)

MAP #	WELL NAME	DATA	STATE PLANARS		TOP OF FORMATION NGVD (FEET)				DEPTH FT B.L.S	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.L. ELEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCALA	AVON							
22	WA-547	G	635843	1109508	-90	-540	-618	-714	820	2870	-	80.6	20	6	25
23	SLF-3A	G	679473	1150071	-	-465	-501	-609	1215	-	-	-	-	-	15
24	SLF-4	G	667351	1141435	-93	-433	-500	-543	993	2960	-	81.6	-	9	27
25	SLF-5	GL	673614	1151257	-115	-456	-500	-615	1227	3680	-	79.5	-	12	25
26	SLF-6	G	693308	1119537	-97	-459	-519	-	596	1518	-	77.5	-	3	20
27	SLF-9	G	632615	1131915	-68	-440	-485	-556	1058	3880	1500	81.5	-	-	25
28	SLF-11	G	634038	164435	-78	-350	-412	-464	946	2300	-	80.8	-	8	26
29	SLF-14	GL	639149	1091949	-99	-531	-615	-713	1286	-	-	83.5	-	-	25
30	SLF-17	G	639073	1087809	-96	-555	-625	-742	1287	2700	-	84	-	-	25
31	SLF-20	G	604518	1127187	-93	-462	-515	-620	896	1465	-	83.3	-	-	29
32	SLF-21	G	693823	1124791	-93	-444	-509	-580	707	1300	300	78.8	-	4	21
33	SLF-23	GL	672337	1049363	-87	-508	-625	-734	894	-	-	89.2	-	-	30
34	SLF-26	G	723635	1111413	-125	-600	-750	-870	958	-	-	74.6	-	-	15
35	SLF-28	G	734915	1093704	-64	-595	-735	-855	883	-	-	76.1	-	-	26
36	SLF-31	G	695810	1067948	-105	-605	-695	-775	1008	2579	-	82	-	-	25
37	SLF-40	G	662479	1121219	-90	-442	-490	-552	786	2424	-	81	-	6	20
38	SLF-42	G	722662	1156952	-118	-594	-775	-895	1060	3900	-	76.2	-	6	5
39	SLF-44	G	754882	1073628	-145	-638	-840	NDE	876	2712	-	76	500	6	5
40	SLF-45	G	721463	1162095	-75	-595	-795	-910	1100	4310	-	75.8	-	6	5
41	SLF-46	G	724669	1152217	-113	-657	-809	-955	1100	3754	-	75.8	100	6	5

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC
(Continued)

MAP #	WELL NAME	DATA	STATE PLANNERS		TOP OF FORMATION NGVD (FEET)				DEPTH FT B.L.S	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.L. ELEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCALA	AVON							
42	SLF-47	G	749646	1088844	-162	-643	-845	-992	1230	1088	203	75.6	50	6	5
43	SLF-48	G	687102	1077803	-115	-533	-605	-710	800	-	-	-	-	-	25
44	SLF-50	GL	662956	1092240	-112	-570	-646	-740	1000	-	1000	84	-	12	31
45	SLF-53	G	647734	1130958	-85	-511	-565	-635	906	-	1000	82	500	10	25
46	SLF-54	G	606948	1059741	-131	-675	-725	-845	1304	-	-	-	-	10	25
47	SLF-73	GL	664600	1108000	-125	-480	-540	-620	1450	-	-	-	-	-	-
48	WA-1107	G	616134	1129642	-78	-472	-514	-	636	2012	410	78.8	164	5	26
49	WA-1117	G	719842	1096043	-101	-537	-667	-803	820	3752	920	74.6	246	5	13
50	WA-1134	G	701631	1131292	-110	-410	-492	-542	923	2000	420	78	320	5.5	20
51	WA-1136	G	661167	1111116	-90	-414	-472	-550	674	3110	775	78	100	4	205
52	WA-1139	G	693411	1154377	-114	-376	-448	-630	987	2764	665	81	478	8	20
53	WA-1111	G	617795	1116419	-85	-550	-601	-711	1108	4500	1125	83	110	6	25
54	WA-1119	G	612108	1119533	-78	-455	-500	-600	673	2052	410	80.4	50	5	25
55	WA-1140	G	663896	1104967	-80	-450	-492	-570	792	4500	1188	83	126	4	20
56	WA-1142	G	690791	1156081	-100	-390	-446	-630	823	1984	468	79	209	4	20
57	WA-1144	G	688502	1144962	-94	-434	-500	-630	891	2347	538	79	245	5	20
58	WA-1147	G	638282	1081546	-93	-530	-583	-721	891	2080	403	82	184	5	25
59	WA-1158	G	678998	1115028	-100	-520	-576	-630	840	3218	742	81.8	161	4	20
60	WA-565	G	697021	1078759	-105	-534	-653	-725	763	3610	894	83	170	6	25
61	WA-582	G	690777	1082768	-105	-531	-605	-685	930	2913	739	80	130	6	25

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC
(Continued)

MAP #	WELL NAME	DATA	STATE PLANARS		TOP OF FORMATION NGVD (FEET)				DEPTH FT B.L.S	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.I. SLEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCALA	AVON							
62	WA-699	G	699517	1121486	-100	-495	-575	-640	900	1910	420	79	600	6	25
63	WA-708	G	715616	1127527		-570	-690	-800	920	1496	708	75	125	4	10
64	WA-1082	G	628231	1065255	-91	-517	-625	-761	1324	4558	1098	85	571	7	25
65	WA-1175	G	632262	1074457	-95	-421	-519	NDE	750	1512	325	77.7	150	4	5
66	WA-1186	G	716989	1140258	-110	-580	-720	-804	824	1928	330	76.6	500	6	10
67	WA-1195	G	651586	1045645	-100	-530	-630	-770	950	3138	778	82.1	1000	8	30
68	WA-612	G	693638	1069251	-110	-620	-726	-800	870	1590	799	79.6	75	5	0
69	WA-611	G	701918	1073633	-100	-516	-590	-666	750	3582	940	79.2	25	6	0
70	WA-615	G	695629	1068048	-100	-620	-700	-804	970	4580	880	78.2	100	6	0
71	WA-625	G	715418	1046034	-	-	-	-	1012	4060	1010	81.6	50	4	0
72	HD-3	G	678795	1160772	-88	-393	-443	-	934	-	-	-	-	-	-
73	HD-4	G	653763	1090790	-105	-550	-613	-715	1125	-	-	-	-	-	-
74	HD18	G	624888	1124923	-61	-451	-511	-	638	-	-	-	-	-	28
75	HD22	G	682541	1068795	-101	-531	-594	-	695	-	-	-	-	-	29
76	HD23	G	682380	1064453	-120	-573	-678	-780	930	-	-	-	-	-	24
77	FB-1	GL	709923	1130728	-70	-486	-556	-632	904	630	320	-	-	-	27
78	NPSLI	GL	710753	1092360	135	-563	-705	-815	3324	-	-	-	-	12	20
79	SPSLI	GL	727706	1060642	-	-685	-860	-985	35007	4500	1500	-	-	-	15
80	W-4086	G	704804	1091723	-	-594	-660	-800	5159	-	-	-	-	-	15?
81	FPLAG	GL	722748	1092424	-	-523	-680	-	711	-	-	-	-	-	31
															15?

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC
(Continued)

MAP #	WELL NAME	D A T A	STATE PLANARS		TOP OF FORMATION NGVD (FEET)				DEPTH FT B.L.S	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.L. ELEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCALA	AVON							
82	SL-3	G	675831	1138442	-97	-437	-527	-	-	-	-	-	-	-	23
83	SL-6	G	684732	1102835	-78	-538	-588	-	900	-	-	-	-	-	22
84	SL-11	G	673586	1157821	-92	-400	-458	-	705	-	-	-	-	-	22
85	W1023	L	684748	1118992	-81	-	-481	-	930	-	-	-	-	-	19
86	W1052	L	690151	1120027	-101	-481	-591	-	-	-	-	-	-	-	19
87	W1393	L	690037	1105889	-78	-518	-623	-	1000	-	-	-	-	-	17
88	W3018	L	705847	1169990	-119	-419	-519	-	714	-	-	-	-	-	6
89	W3023	L	684512	1170492	-122	-377	-413	-	691	-	-	-	-	-	20
90	W7677	L	689186	1133655	-103	-369	-474	-	576	-	-	-	-	-	22
91	W14703	L	721911	1146243	-86	-583	-651	-	1092	-	-	-	-	-	5
92	W15106	L	632801	1157463	-65	-355	-415	-	900	-	-	-	-	-	35
Martin Co. Well Data															
93	MF-1	G	667888	105504	-	-534	-644	-760	840	4170	-	90.8	-	7	-
94	MF-3	GL	766873	1047651	-	-697	-875	-	1025	2618	-	77.7	-	8	-
95	MF-6	G	635484	1027817	-	-585	-676	-750	1052	1638	-	81	-	4	-
96	MF-9	G	673410	1030384	-	-510	-594	-716	880	4777	-	86.1	-	6	-
97	MF-10	G	731133	997246	-	-564	-646	-790	993	4160	-	78.6	-	5.5	20
98	MF-20	GL	628261	102688	-	-590	-650	-710	1200	-	-	81.3	-	8	30
99	MF-23	G	642188	996134	-	-675	-740	-850	1119	1200	-	81	-	6	16
100	MF-25	GL	647112	984337	-	-	-722	-840	1220	1468	-	82.2	-	8	28

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC
(Continued)

MAP #	WELL NAME	DATA	STATE PLANNERS		TOP OF FORMATION NGVD (FEET)				DEPTH FT B.L.S.	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.L. ELEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCALA	AVON							
101	MF-27	GL	755137	1033035	-	-735	-895	-	1180	-	75.2	-	8	15	
102	MF-28	G	760322	1041348	-	-780	-926	-	3140	-	75.2	-	5	10	
103	MF-30	G	758942	1031140	-	-728	-900	-	2765	-	75	-	4	16	
104	MF-31	GL	767575	1023218	-	-795	-980	-	3042	-	75	-	6	5	
105	MF-32	G	633253	1019631	-	-620	-694	-776	2375	-	82.4	-	8	20	
106	MF-33	G	632994	1015995	-	-642	-692	-800	1470	-	82.4	-	8	12.5	
107	MF-34	G	730735	1035717	-	-590	-700	-	3602	-	77	-	6	20	
108	MF-35	GL	668237	970484	-	-610	-680	-850	3078	-	84.6	-	10	20	
109	MF-36B	G	761509	1025199	-	-746	-900	-	2150	-	75	-	6	20	
110	MF-37	G	658684	984784	-	-614	-726	-850	1984	-	82	-	10	20	
111	W-5441	L	611429	1005429	-	-625	-698	-818	-	-	-	-	-	25	
112	W-5442	L	619011	977582	-	-644	-724	-759	-	-	-	-	-	6	
113	WA-1151	G	676983	1039689	-	-530	-642	-770	5086	-	88	-	6	20	
114	WA-1155	G	622340	1013336	-	-610	-704	-780	3600	-	81	-	5	20	
115	JENSON	L	738649	1056968	-	-735	-873	-1060	-	-	-	-	-	15	
116	W-14666	L	625110	1023543	-	-568	-648	-708	-	-	-	-	-	32	
117	W-13966	L	755121	1035559	-	-734	-904	-	-	-	-	-	-	16	
118	W-4212	L	622877	1015256	-	-655	-705	-830	-	-	-	-	-	30	
119	W-4160	L	635099	1007722	-	-552	-680	-	-	-	-	-	-	32	
120	W-2861	L	710059	1034797	-	-568	-648	-712	958	-	-	-	-	20	

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC
(Continued)

MAP #	WELL NAME	DATA	STATE PLAYERS		TOP OF FORMATION NGVD (FEET)				DEPTH FT B.L.S	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.L. ELEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCALA	AVON							
121	W-4399	L	740255	1029410	-	-798	-955	-	1057	-	-	-	-	-	12
122	W-14754	L	647747	983835	-	-712	-752	-	1220	-	-	-	-	-	28
123	W-15816	L	612766	1012299	-	-	-681	-	1019	-	-	-	-	-	15
124	W-15817	L	612528	1000080	-	-	-708	-	1007	-	-	-	-	-	15
125	W-15818	L	619642	978089	-	-695	-725	-	1013	-	-	-	-	-	15
126	BOG-22	G	642129	987248	-	-675	-775	-	997	-	-	-	-	-	25
127	BOG-23	G	636042	996113	-	-660	-790	-	1119	-	-	-	-	-	25
128	BOG-25	G	635629	984298	-	-674	-794	-	1042	-	-	-	-	-	24
129	BOG-26	G	632607	996001	-	-640	-746	-	1056	-	-	-	-	-	24
130	PBF-2	G	80931	953978	-	-980	-1085	-1197	1337	-	-	-	-	-	5
131	C.Stuart	GL	743799	1041044	-	-790	-945	-1055	1055	-	-	-	-	-	20
132	L-143	G	712219	1036121	-	-568	-648	-712	958	-	-	-	-	-	40
133	L-146	G	632365	1014781	-	-716	-737	-758	1155	-	-	-	-	-	10
134	L-841	G	743856	1031451	-	-856	-957	-	1057	-	-	-	-	-	12
135	JUP-R/O	GL	781929	945861	-	-1076	-1188	-1328	1500	-	-	-	-	-	12
OKRECHOBER WELL DATA															
136	OKF-2	G	593433	1166945	-	-342	-372	-438	686	1022	-	78.8	-	6	28
137	OKF-5	G	562688	1083782	-	-474	-550	-700	1181	7176	-	82.6	-	8	36
138	OKF-7	G	569511	1102271	-	-587	-619	-749	1050	504	-	76	-	8	51
139	OKF-6*	G	519921	1110295	-	-416	-470	-607	872	-	-	80	-	8	45

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC
(Continued)

MAP #	WELL NAME	DATA	STATE PLANARS		TOP OF FORMATION NGVD (FEET)			DEPTH FT B.L.S	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.L. ELEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCALA							
140	OKF-16*	G	525882	1090508	-	-438	-552	-698	-	-	82	-	4	42
141	OKF-17*	G	526333	1091315	-	-518	-554	-683	782	-	79.4	-	6	42
142	OKF-18*	G	496486	1129273	-	-381	-421	-555	480	-	80.1	-	8	55
143	OKF-19*	G	511261	1132809	-	-308	-364	-478	1576	-	79	-	8	66
144	OKF-29	G	551354	1129710	-	-367	-397	-533	320	-	77	-	6	67
145	OKF-34*	G	492168	1162192	-	-305	-373	-505	430	-	76.4	-	10	65
146	OKF-36*	G	491087	1159062	-	-249	-303	-419	1780	-	78.2	-	9	65
147	OKF-37*	G	500180	1144016	-	-420	-474	-600	510	-	81.3	-	6	62
148	OKF-42*	GL	462326	114851	-	-341	-371	-565	718	-	80.6	-	6	35
149	OKF-54*	G	525904	1197341	-	-250	-280	-380	648	-	76.3	-	12	70
150	HD-16	G	586715	1151683	-	-375	-390	-475	-	-	-	-	-	6
151	HD-13	G	567690	1083782	-	-575	-590	-960	-	-	-	-	-	5
152	W50	L	556412	1056005	-	-	-583	-	-	-	-	-	-	10
153	W51	L	547833	1060033	-	-549	-619	-	-	-	-	-	-	5
154	W2844	L	547290	1061446	-	-568	-601	-	-	-	-	-	-	5
155	W2855	L	583047	1052011	-	-800	-865	-	-	-	-	-	-	5
156	W2857*	L	510831	1056573	-	-424	-479	-	-	-	-	-	-	-
157	W4480	L	556377	081248	-	-566	-577	-	-	-	-	-	-	-
158	W4572	L	554574	1080741	-	-540	-611	-645	-	-	-	-	-	-
159	W4699*	L	490986	1110493	-	-370	-490	-	-	-	-	-	-	-

TABLE A-2: Geologic and Water Quality Data from FAS Well Inventory in UEC
(Continued)

MAP #	WELL NAME	D A T A	STATE PLANNERS		TOP OF FORMATION NGVD (FEET)				DEPTH FT B.L.S	COND M.S.	CHLOR MG/L	TEMP °F	FLOW GPM	DIAM INCH	G.L. ELEV FT. NGVD
			EAST (FEET)	NORTH (FEET)	HAWTH	OLIG	OCAJA	AVON							
160	W4896	L	598879	1037910	-	-453	-543	-	1313	-	-	-	-	-	-
161	W4984	L	569587	1058044	-	-419	-454	-650	1000	-	-	-	-	-	-
162	W5405	L	599652	1017212	-	-578	-631	-	1008	-	-	-	-	-	-
163	W6173*	L	529799	1037801	-	-	-396	-	772	-	-	-	-	-	-
164	W6175	L	557578	1187781	-	-	-385	-	764	-	-	-	-	-	-
165	W12541	L	593749	1108581	-	-514	-604	-	11277	-	-	-	-	-	-
166	W15813*	L	513069	1113523	-	-376	-406	-	10836	-	-	-	-	-	20
167	OKE-ASR	GL	569235	1052692	-	-560	-686	-820	1800	-	-	-	-	-	3
168	IR-320	G	716333	1178427	-	-655	-840	-890	943	-	-	-	-	-	23
169	IR-321	G	693982	1185280	-	-335	-410	-490	888	-	-	-	-	-	2
170	IR-322	G	715125	1185489	-	-562	-756	-	843	-	-	-	-	-	11
171	IR-326	G	699072	1193081	-	-363	-431	-476	703	-	-	-	-	-	5
172	IR-198	G	700048	1195712	-	-435	-526	-585	941	-	-	-	-	-	21
173	IR-333	G	674565	1201853	-	-310	-344	-472	746	-	-	-	-	-	16
174	IR-335	G	693429	1206585	-	-348	-464	-628	673	-	-	-	-	-	21
175	IR-336	G	686857	1208069	-	-350	-420	-530	620	-	-	-	-	-	21

* : denotes wells West of the study area boundaries, not portrayed in location map.

G: Geophysical logs available

L: Lithologic logs available

APPENDIX B
MONTHLY WATER USE REPORTS
SUBMITTED TO THE
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

**APPENDIX B
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TABLE B-1: 1989 Monthly Agricultural Pumpage Reports

PERMIT/ FACILITY #	MODEL COORDS			1989 PUMPAGE IN MILLION GALLONS PER MONTH											
	LAY	ROW	COL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
5600035-1	2	12	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-2	2	11	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-3	2	11	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-4	2	11	16	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-5	2	10	16	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-6	2	11	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-7	2	10	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-8	2	10	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-9	2	10	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-10	2	10	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-11	2	9	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-12	2	9	16	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-13	2	9	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600035-14	2	8	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75	1.52	1.40	1.26	1.62	1.52
5600071-1	2	24	21	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600071-2	2	24	21	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600071-3	2	24	21	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600071-4	2	24	21	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600096-1	2	14	24	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-2	2	14	24	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-3	2	14	24	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-4	2	13	24	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-5	2	13	23	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-6	2	14	23	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-7	2	14	23	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-8	2	14	23	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-9	2	14	23	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-10	2	14	23	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-11	2	14	23	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-12	2	13	23	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-13	2	13	22	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-14	2	14	22	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55

TABLE B-1: 1989 Monthly Agricultural Pumpage Reports (Continued)

PERMIT/ FACILITY #	MODEL COORDS			1989 PUMPAGE IN MILLION GALLONS PER MONTH											
	LAY	ROW	COL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
5600096-15	2	14	22	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600096-16	2	14	22	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-17	2	14	21	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-18	2	14	21	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-19	2	14	21	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-20	2	13	21	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600096-21	2	13	24	3.60	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5600098-7	2	11	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600098-10	2	8	13	0.07	0.07	0.06	4.22	15.79	12.67	0.00	0.00	0.00	0.00	0.00	2.30
5600098-11	2	9	13	0.07	0.07	0.06	4.22	15.79	12.67	0.00	0.00	0.00	0.00	0.00	2.30
5600098-12	2	9	13	0.03	0.07	0.06	4.22	12.98	4.61	0.00	0.00	0.00	0.00	0.00	0.00
5600098-13	2	9	13	0.00	0.00	14.40	4.22	4.43	4.61	0.00	0.00	0.00	0.00	0.00	0.00
5600098-13A	2	9	13	7.20	0.00	0.00	10.56	11.04	11.52	0.00	0.00	0.00	0.00	0.00	9.21
5600098-14	2	10	13	0.00	0.00	0.00	0.00	11.04	11.52	0.00	0.00	0.00	0.00	0.00	9.21
5600098-14A	2	9	13	2.88	0.00	14.40	10.56	11.04	11.52	0.00	0.00	0.00	0.00	0.00	9.21
5600098-15	2	10	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600098-16	2	11	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.88
5600098-18	2	11	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.88
5600098-19	2	11	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.20
5600098-20	2	12	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.88
5600101-1	2	10	30	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46
5600116-1	2	27	16	0.02	0.03	0.07	0.27	1.17	0.08	0.01	0.00	0.00	0.00	0.03	0.00
5600116-2	2	27	17	0.01	0.02	0.04	0.14	0.58	0.04	0.00	0.00	0.00	0.00	0.01	0.00
5600116-3	2	28	15	0.02	0.03	0.07	0.27	1.17	0.08	0.01	0.00	0.00	0.00	0.03	0.00
5600116-4	2	28	16	0.03	0.05	0.11	0.41	1.75	0.12	0.01	0.00	0.00	0.00	0.04	0.00
5600116-5	2	28	17	0.03	0.05	0.11	0.41	1.75	0.12	0.01	0.00	0.00	0.00	0.04	0.00
5600116-6A	2	29	16	0.03	0.05	0.11	0.41	1.75	0.12	0.01	0.00	0.00	0.00	0.04	0.00
5600116-7	2	29	17	0.03	0.05	0.11	0.41	1.75	0.12	0.01	0.00	0.00	0.00	0.04	0.00
5600116-8	2	30	16	0.01	0.02	0.04	0.14	0.58	0.04	0.00	0.00	0.00	0.00	0.04	0.00
5600116-9	2	30	17	0.02	0.03	0.07	0.27	1.17	0.08	0.01	0.00	0.00	0.00	0.03	0.00
5600116-10	2	31	17	0.01	0.02	0.04	0.14	0.58	0.04	0.00	0.00	0.00	0.00	0.01	0.00
5600116-11	2	32	17	0.01	0.02	0.04	0.14	0.58	0.04	0.00	0.00	0.00	0.00	0.01	0.00
5600116-12	2	33	17	0.01	0.02	0.04	0.14	0.58	0.04	0.00	0.00	0.00	0.00	0.01	0.00

TABLE B-1: 1989 Monthly Agricultural Pumpage Reports (Continued)

PERMIT/ FACILITY #	MODEL COORDS			1989 PUMPAGE IN MILLION GALLONS PER MONTH											
	LAY	ROW	COL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
5600116-13	2	34	18	0.01	0.02	0.04	0.14	0.58	0.04	0.00	0.00	0.00	0.00	0.01	0.00
5600147-1	2	15	23	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	3.02	0.00	0.00	0.00
5600147-2	2	15	23	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	3.02	0.00	0.00	0.00
5600147-3	2	15	23	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	3.02	0.00	0.00	0.00
5600147-4	2	15	23	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	3.02	0.00	0.00	0.00
5600417-1	2	17	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417-2	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417-3	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428-16	2	30	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428-19	2	28	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428-21	2	27	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428-22	2	27	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428-23	2	27	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428-25	2	27	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428-18	2	30	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600473-1	2	10	14	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-3	2	11	14	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-4	2	12	14	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-5	2	12	15	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-6	2	12	14	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-7	2	12	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-8	2	12	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-9	2	14	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-10	2	14	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-11	2	14	17	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-12	2	12	17	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-13	2	15	17	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-14	2	15	17	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-16	2	13	17	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-17	2	15	18	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-18	2	15	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-19	2	15	18	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-20	2	15	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11

TABLE B-1: 1989 Monthly Agricultural Pumpage Reports (Continued)

PERMIT/ FACILITY #	MODEL COORDS			1989 PUMPAGE IN MILLION GALLONS PER MONTH											
	LAY	ROW	COL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
5600473-21	2	15	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-22	2	15	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-23	2	12	14	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-24	2	12	14	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-25	2	11	14	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-26	2	10	14	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-27	2	12	15	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-28	2	16	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-29	2	16	16	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-30	2	15	17	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-31	2	13	17	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
5600473-32	2	13	17	6.39	6.80	0.00	0.24	8.76	3.45	0.60	0.00	0.00	0.00	1.98	3.11
4300030-3	2	34	43	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
4300030-4	2	34	43	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
4300030-5	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48	3.69	4.76	3.82	3.86	3.33
4300030-7	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48	3.69	4.76	3.82	3.86	3.33
4300030-9	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48	3.69	4.76	3.82	3.86	3.33
4300030-10	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48	3.69	4.76	3.82	3.86	3.33
4300030-11	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48	3.69	4.76	3.82	3.86	3.33
4300030-12	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48	3.69	4.76	3.82	3.86	3.33
4300030-13	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48	3.69	4.76	3.82	3.86	3.33
4300031-7	2	35	40	13.82	13.82	13.82	13.82	13.82	13.82	0.00	0.00	0.00	0.00	13.82	13.82
430082	2	32	39	0.00	0.00	0.96	0.83	0.72	0.00	0.60	0.00	0.00	0.00	0.00	0.00
4300140-1	2	48	46	3.95	116.62	0.09	0.12	0.14	3.34	1.94	0.00	0.00	0.00	0.00	0.00
4300260-1	2	44	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.40
4700003-1	2	31	1	5.92	1.26	0.00	1.97	3.29	3.95	2.63	0.00	0.00	1.95	3.95	3.74
4700007-1	2	12	8	0.58	4.45	6.84	8.84	20.75	14.70	3.67	0.00	2.45	0.82	9.88	11.80
4700008-7	2	12	7	0.00	9.44	3.39	4.21	9.48	6.55	2.57	0.01	5.46	1.40	6.43	12.60
4700008-2	2	12	8	0.00	9.48	3.35	4.60	9.01	7.02	3.74	1.64	2.30	1.68	6.36	6.43
4700017-1	2	11	7	9.88	99.18	7.12	5.89	13.73	8.20	3.21	1.64	1.65	1.93	8.94	5.72
4700082-4	2	19	3	22.66	20.47	22.66	21.93	22.66	21.93	21.93	21.93	21.93	21.93	21.93	21.93
4700082-2	2	17	3	22.66	20.47	22.66	21.93	22.66	21.93	21.93	21.93	21.93	21.93	21.93	21.93
4700082-3	2	18	1	22.66	20.47	22.66	21.93	22.66	21.93	21.93	1.93	21.93	21.93	21.93	21.93

TABLE B-2: 1990 Monthly Agricultural Pumpage Reports

PERMIT/ FACILITY #	MODEL COORDS			1990 PUMPAGE IN MILLION GALLONS PER MONTH						
				JAN	FEB	MAR	APR	MAY	JUN	JUL
	LAY	ROW	COL							
5600035/1	2	12	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/2	2	11	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/3	2	11	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/4	2	11	16	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/5	2	10	16	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/6	2	11	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/7	2	10	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/8	2	10	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/9	2	10	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/10	2	10	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/11	2	9	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/12	2	9	16	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/13	2	9	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600035/14	2	8	17	1.32	1.62	1.19	2.34	2.95	1.28	0.75
5600071/1	2	24	21	2.00	0.00	0.00	2.00	2.00	0.00	0.00
5600071/2	2	24	21	2.00	0.00	0.00	2.00	2.00	0.00	0.00
5600071/3	2	24	21	2.00	0.00	0.00	2.00	2.00	0.00	0.00
5600071/4	2	24	21	2.00	0.00	0.00	2.00	2.00	0.00	0.00
5600096/1	2	14	24	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/2	2	14	24	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/3	2	14	24	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/4	2	13	24	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/5	2	13	23	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/6	2	14	23	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/7	2	14	23	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/8	2	14	23	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/9	2	14	23	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/10	2	14	23	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/11	2	14	23	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/12	2	13	23	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/13	2	13	22	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/14	2	14	22	0.00	0.00	0.75	0.00	0.00	0.00	0.00

TABLE B-2: 1990 Monthly Agricultural Pumpage Reports (Continued)

PERMIT/ FACILITY #	MODEL COORDS			1990 PUMPAGE IN MILLION GALLONS PER MONTH						
	LAY	ROW	COL	JAN	FEB	MAR	APR	MAY	JUN	JUL
5600096/15	2	14	22	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/16	2	14	22	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/17	2	14	21	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/18	2	14	21	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/19	2	14	21	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/20	2	13	21	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600096/21	2	13	24	0.00	0.00	0.75	0.00	0.00	0.00	0.00
5600098/7	2	11	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600098/10	2	8	13	0.07	0.07	0.06	4.22	15.79	12.67	0.00
5600098/11	2	9	13	0.07	0.07	0.06	4.22	15.79	12.67	0.00
5600098/12	2	9	13	0.03	0.07	0.06	4.22	12.98	4.61	0.00
5600098/13	2	9	13	0.00	0.00	14.40	4.22	4.43	4.61	0.00
5600098/13a	2	9	13	7.20	0.00	0.00	10.56	11.04	11.52	0.00
5600098/14	2	10	13	0.00	0.00	0.00	0.00	11.04	11.52	0.00
5600098/14a	2	9	13	2.88	0.00	14.40	10.56	11.04	11.52	0.00
5600098/15	2	10	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600098/16	2	11	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600098/18	2	11	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600098/19	2	11	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600098/20	2	12	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600101/1	2	10	30	11.88	11.88	11.88	3.46	3.46	3.46	3.46
5600116/1	2	27	16	0.02	0.03	0.07	0.27	1.17	0.08	0.01
5600116/2	2	27	17	0.01	0.02	0.04	0.14	0.58	0.04	0.00
5600116/3	2	28	15	0.02	0.03	0.07	0.27	1.17	0.08	0.01
5600116/4	2	28	16	0.02	0.05	0.11	0.41	1.75	0.12	0.01
5600116/5	2	28	17	0.02	0.05	0.11	0.41	1.75	0.12	0.01
5600116/6	2	29	16	0.02	0.05	0.11	0.41	1.75	0.12	0.01
5600116/7	2	29	17	0.02	0.05	0.11	0.41	1.75	0.12	0.01
5600116/8	2	30	16	0.01	0.02	0.04	0.14	0.58	0.04	0.00
5600116/9	2	30	17	0.02	0.03	0.07	0.27	1.17	0.08	0.01
5600116/10	2	31	17	0.01	0.02	0.04	0.14	0.58	0.04	0.00
5600116/11	2	32	17	0.01	0.02	0.04	0.14	0.58	0.04	0.00
5600116/12	2	33	17	0.01	0.02	0.04	0.14	0.58	0.04	0.00
5600116/13	2	34	18	0.01	0.02	0.04	0.14	0.58	0.04	0.00

TABLE B-2: 1990 Monthly Agricultural Pumpage Reports (Continued)

PERMIT/ FACILITY #	MODEL COORDS			1990 PUMPAGE IN MILLION GALLONS PER MONTH						
				IAN	FEB	MAR	APR	MAY	JUN	JUL
	LAY	ROW	COL							
5600147/1	2	15	23	0.00	0.00	0.78	0.00	0.00	1.30	0.00
5600147/2	2	15	23	0.00	0.00	0.78	0.00	0.00	1.30	0.00
5600147/3	2	15	23	0.00	0.00	0.78	0.00	0.00	1.30	0.00
5600147/4	2	15	23	0.00	0.00	0.78	0.00	0.00	1.30	0.00
5600417/1	2	17	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/2	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/3	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/4	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/5	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/6	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/7	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/8	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/9	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/10	2	17	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/11	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/12	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/13	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600417/14	2	17	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/16	2	30	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/19	2	28	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/21	2	27	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/22	2	27	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/23	2	27	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/24	2	27	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/25	2	30	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/26	2	33	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600428/27	2	33	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600473/1	2	10	14	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/2	2	11	14	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/3	2	12	14	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/4	2	12	15	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/5	2	12	14	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/6	2	12	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/7	2	12	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21

TABLE B-2: 1990 Monthly Agricultural Pumpage Reports (Continued)

PERMIT/ FACILITY #	MODEL COORDS			1990 PUMPAGE IN MILLION GALLONS PER MONTH						
	LAY	ROW	COL	JAN	FEB	MAR	APR	MAY	JUN	JUL
5600473/8	2	14	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/9	2	14	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/10	2	14	17	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/11	2	12	17	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/12	2	15	17	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/13	2	15	17	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/14	2	13	17	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/15	2	15	18	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/16	2	15	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/17	2	15	18	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/18	2	15	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/19	2	15	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/20	2	15	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/21	2	12	14	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/22	2	12	14	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/23	2	11	14	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/24	2	10	14	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/25	2	12	15	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/26	2	16	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/27	2	16	16	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/28	2	15	17	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/29	2	13	17	1.38	0.49	1.38	0.24	15.74	4.54	1.21
5600473/30	2	13	17	1.38	0.49	1.38	0.24	15.74	4.54	1.21
4300030/1	2	34	43	4.21	4.21	4.21	4.21	4.21	4.21	4.21
4300030/2	2	34	43	4.21	4.21	4.21	4.21	4.21	4.21	4.21
4300030/3	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48
4300030/4	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48
4300030/5	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48
4300030/6	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48
4300030/7	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48
4300030/8	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48
4300030/9	2	35	43	3.13	3.10	3.45	3.59	4.08	4.00	3.48
4300031/7	2	35	40	13.82	13.82	7.09	13.82	13.82	13.82	0.00
4300082/1	2	32	39	0.00	0.00	1.00	1.00	1.00	0.00	0.60

TABLE B-2: 1990 Monthly Agricultural Pumpage Reports (Continued)

PERMIT/ FACILITY #	MODEL COORDS			1990 PUMPAGE IN MILLION GALLONS PER MONTH						
	LAY	ROW	COL	JAN	FEB	MAR	APR	MAY	JUN	JUL
4300140/1	2	48	46	0.00	0.00	0.00	0.12	0.14	3.34	1.94
4300260/1	2	44	24	14.40	14.40	14.40	14.40	0.00	0.00	0.00
4700003/1	2	31	1	5.92	0.00	0.00	1.97	3.29	3.95	2.63
4700007/1	2	12	8	0.58	4.45	6.84	8.84	20.75	14.70	3.67
4700008/1	2	12	7	0.00	2.18	5.42	4.21	9.48	6.55	2.57
4700008/2	2	12	8	0.31	2.34	5.42	4.60	9.01	7.02	3.74
4700017/1	2	11	7	0.00	0.02	0.02	5.89	13.73	8.20	3.21
4700082/1	2	19	3	22.66	22.66	22.66	21.93	22.66	21.93	21.93
4700082/2	2	17	3	22.66	22.66	22.66	21.93	22.66	21.93	21.93
4700082/3	2	18	1	22.66	22.66	22.66	21.93	22.66	21.93	21.93

TABLE B-3: 1989 Monthly Public Water Supply Pumpage Reports

PUBLIC WATER SUPPLY REPORTS - 1989 - PUMPAGE IN MILLION GALLONS PER MONTH															
SFWD PERMIT #	LAY	ROW	COL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4300130	3	30	41	0.00	0.00	1.40	1.13	1.05	0.00	1.13	0.00	0.00	0.00	0.00	0.00
4300328	3	32	42	2.79	3.96	0.00	3.53	2.86	2.57	3.64	3.02	0.00	2.88	5.34	0.00
4300067	2	36	43	0.00	0.00	0.00	0.00	4.68	2.01	2.01	1.30	0.00	0.00	0.00	0.00
5600085	2	16	31	10.35	8.40	13.29	11.78	12.48	14.11	12.80	13.52	13.66	12.93	13.75	15.59
5600300	2	24	39	0.30	0.30	0.30	0.30	0.29	0.26	0.25	0.45	0.22	0.25	0.42	0.50
*456-1954	2	26	39	1.00	1.00	1.00	1.00	1.92	1.57	1.78	1.67	1.45	1.66	1.73	1.73
*456-5007	2	27	40	1.00	1.00	1.00	1.00	4.31	4.00	4.01	2.67	1.96	1.07	1.38	1.62
*456-4001	2	26	40	-	-	-	-	0.66	0.51	0.60	0.66	0.56	0.85	0.84	0.86
4300362-1	2	10	34	3.38	3.36	3.78	0.00	2.60	3.15	3.12	2.79	3.12	2.90	2.75	2.81
6100089-1	2	1	28	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46
6100089-2	2	1	27	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46
6100089-3	2	2	28	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00
6100089-4	2	2	28	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45
61-00093	2	3	24	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86
61-00099	2	4	22	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
61-00129	2	3	28	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
61-00514	2	4	22	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90

* : FDER permit number.

TABLE B-4: 1990 Monthly Public Water Supply Pumpage Reports

SFWMD PERMIT #	LAY	ROW	COL	PUBLIC WATER SUPPLY REPORTS 1990—PUMPAGE IN MILLION GALLONS PER MONTH													
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
4300130	3	30	41	1.31	1.31	1.43	1.34	9.90	7.69	7.47	0.86						
4300030	2	34	43	1.77	1.70	2.10	1.58	1.38	1.19	1.27							
4300030	2	35	43	1.77	1.70	2.10	1.58	2.86	1.19	1.27							
4300328	2	32	42	2.79	3.96	5.46	4.37	3.22	2.57	3.64	3.02	0.00	2.88	0.00	5.34	0.00	0.00
4300067	2	36	43	0.00	0.00	0.00	0.90	1.00	0.80	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5600085	2	16	31	10.35	8.33	13.29	11.78	12.48	14.11	12.80							
5600300	2	24	39	0.45	0.48	0.44	0.44	0.40	0.41	0.40	0.47	0.40	0.40	0.40	0.40	0.40	0.45
* 456-1954	2	26	39	2.21	2.45	2.63	1.96	1.47	1.47	1.68	1.62	1.26	1.70	1.26	1.83	2.43	2.43
* 456-5007	2	27	40	1.52	1.69	1.23	1.23	0.77	0.77	0.92	0.76	0.46	0.92	0.46	1.00	1.98	1.98
* 456-4001	2	26	40	1.19	1.07	1.27	1.14	0.84	0.65	0.70	0.78	0.79	1.24	0.79	1.03	1.07	1.07
4300362-1	2	10	34	3.67	3.84	4.33	3.90	3.65	3.15	3.12							
6100089-1	2	1	28	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46
6100089-2	2	1	27	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46	41.46
6100089-3	2	2	28	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00
6100089-4	2	2	28	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45
6100093	2	3	24	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86
6100099	2	4	22	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
6100129	2	3	28	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
6100514	2	4	22	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90

* : FIDER permit number.

APPENDIX C
WATER USE PERMIT INFORMATION

APPENDIX C

INTRODUCTION

This appendix contains information on individual water use permits issued by the Water Use Division, Regulation Department, South Florida Water Management District. The one exception is the Indian River water use permits which were issued by the St. John's River Water Management District. The information on these spreadsheets was used to compile well withdrawal data used in this model.

Permits issued through January 1991 are included in this appendix. The information is organized into five spreadsheets. The five sections are organized by county. They are listed in the following order: St. Lucie, Martin, Okeechobee, Indian River and Osceola counties.

**APPENDIX C
WATER USE DATA
LIST OF SPREADSHEETS BY COUNTY**

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Martin County	200
Okeechobee County	206
Indian River County	211
Osceola County	241

Key to the Codes

AN.ALL. = Annual Permitted Allocation
 ALL.UNT. = Annual Allocation Units
 01 = MGD
 02 = MGM
 03 = MGY
 04 = AC-FT
 MAXMO = Maximum Monthly Permitted Allocation
 01 = MGD
 02 = MGM
 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, GW, BOTH)
 NO.WLS. = 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 Tamiami
 04 = Sandstone
 05 = mid-Hawthorn
 06 = lower Hawthorn
 07 = Suwannee
 08 = Floridan
 09 = Biscayne
 CROP TYPE = Blaney-Criddle Code
 11 = Alfalfa
 12 = Avacado
 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 = BELLE GLADE
 17 = LOXAHATCHEE
 18 = JUPITER
 21 = TAMiami 4
 22 = HOMESTEAD
 23 = POMPANO BEACH
 24 = INDIANTOWN
 25 = HYPOLOXC
 26 = BIG CYPRESS
 27 = EVERGLADES
 28 = HIALEAH
 29 = LAKE PLACID
 30 = MERRIT ISLAND
 31 = VERO BEACH

Key to the Codes (Continued)

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

FMPINT = 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

**St. Lucie County
Water Use Spreadsheets**

WATER USE SPREADSHEET ST. LUCIE COUNTY FLA.

St. Lucie County

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

PERMIT NO.	AN.	ALL.	UNT.	MAX.	MO.	DATE	USE	SRCNO.	SU	PPMS	OWNER	CO	PERMIT	NO.	DEV	NO.	ACTYPE	TYPE	ST	IRR	IRR
						ISS.	TYPE	WLS.												ACRES	EFF

LINE 2+ HEADINGS (Table 1 - Existing Water Use - facilities information for Each Permit)

PERMIT NO.	FACILITY	QUAD.	WELL	DEPTH	PTH	CD	INT	TY	CAP.	MTR?	XPLNR	YPLNR	SRC	AG	COMMENTS
	NO.	SYS/DIA.													

Surface water pumps assigned aquifer code 5 for convenience of programming

5600001	615	03	171	02	56	12/74	REC.	BOT	5	3	SAVANNAH RECREATION AREA	56							02	15	.4	11	640	0.50
5600001-1		073	01	2.00	02	7	7	02	75	N	723910	1110607	GM	02	Cap. estimated									
5600001-2		073	01	2.00	02	7	7	02	75	N	723816	1111212	GM	02	"									
5600001-3		073	01	2.00	02	7	7	02	75	N	723042	1111617	GM	02	"									
5600001-4		073	04	6.00	02	7	7	FLO	250	M	723635	1111413	GM	08	PLUGGED, WAS POT. RUN WELL									
5600001-5		073	04	6.00	02	7	7	FLO	250	M	723038	1112425	GM	08	PLUGGED									
5600001-1P		073	02	14.00	01		2.7	01	7500	N	705100	1139994	SM	5	THREE SU PUMPS ROUTE WATER									
5600001-2P		073	01	24.00	01		10.50	01	17000	N	703922	1123629	SM	5	FROM C-25 THROUGH FEEDER									
5600001-3P		073	01	24.00	01		10.50	01	17000	N	719794	1121390	SM	5	CANALS TO REC. AREA									
5600004	156.38	03	57.56	02	56	9/87	AG	BOT	1	2	Alberta Hayes	56							8	13	1.5	11	200	0.50
5600004-1		083	01	6.00	02	1000	6	non	250	M	672409	1088025	GM	08	Cap estim.									
5600004-A		083	01	36.00	01	SURF.	C-2403	10,000	10,000	M	673940	1090321	SM	5	C-24									
5600004-B		083	01	24.00	01	SURF.	C-2403	10,000	10,000	M	675909	1087043	SM	5	C-24 CANAL SOURCE									
5600005	40	03	0.65	01	56	2/85	IND.	BOT	4	1	TROPICANA PRODUCTS, INC.	56	5600005						2					
5600005-W1		072	01	6.00	02	87	78	65	100	Y	697616	1106731	GM	02	FRUIT PROCESSING PLANT									
5600005-W2		072	01	6.00	02	87	78	65	100	Y	697485	1106946	GM	02										
5600005-W3		072	01	6.00	02	87	78	65	100	Y	697429	1107258	GM	02										
5600005-W4		072	01	6.00	02	76	46	65	150	Y	696650	1107081	GM	02										
5600005-C		072	04	36.00	01	SURF	POND			N	698074	1106925	SM	5	S.U. emrg. fire ONSITE PONDS									
5600006	846.82	03	311.68	02	56	2/88	AG	BOT	2	3	UNITED GROVES, INC.	56							08	13	1.5	11	1083	.5
5600006-1		071	01	12.00	02	1100	180		1835	N	651692	1143232	GM	08										
5600006-2		071	01	10.00	02	1100	180		1700	N	651759	1147303	GM	08	CASING DEPTH APPROX. 180' S.W.									
5600006-1		071	01	24.00	02				18,000		653656	1140568	SM	5	FROM C-25 CANAL									
5600006-2		071	01	24.00	02				16,000		653656	1140568	SM	5	C-25									
5600006-3		071	01	24.00	02				8,000		656022	1146298	SM	5	C-25									
5600008	69.45	03	25.56	02	56	12/87	AG	BOT	3	1	GEORGE HAMMER, SR.	56							08	13	.8	11	151	.85
5600008-1		072	01	6.00	02	845	400		310	M	674379	1139227	GM	08	SURF. WATER FROM C-44 N-ST. LUCIE RIVER									
5600008-2		072	01	6.00	02	812	400		316	M	674304	1137926	GM	08	WATER CONTROL DIST.									

5600008-3	072 01	6.00 02	800	400	01	350 M	674187. 1135105 GM	08					
5600008-1	061 01	24.00				5,000 M	665233 1140294 SW	5	C-44				
5600015	265.85	03	97.85 02	56 11/87	AG BOT	3 1	BRAD-RICH GROVE, INC.						
5600015-1	082 01	12.00 02	1285	360		1100 N	638491. 1099979 GM	08	C-23:SW BODY, Cap. estimated				
5600015-2	082 01	6.00 02	800	200		250 M	636957. 1100027 GM	08	Cap. est.				
5600015-3	082 01	6.00 02	800	200		250 M	639510. 1099987 GM	08	"				
5600015-1	082 01	30.00				5000 M	636792. 1102801 SW	5	" C-23				
5600016	432	03	159 02	56 11/88	AG BOT	6 1	MCARTINAR FARMS, INC.						
5600016-1	082 01	8.00 02	1320	318		600 M	638988. 1091684 GM	8	C-23 SW. BODY WITHDRAWING FROM				
5600016-2	082 01	6.00 02	600	280		250 M	639042. 1090430 GM	8					
5600016-3	082 01	8.00 02	1246	331		600 M	639340. 1089808 GM	8					
5600016-4	082 01	10.00 02	1286	323		500 M	638983. 1087779 GM	8					
5600016-5	082 02	12.00 02	1400	400		2,000 M	636717. 1091584 GM	8					
5600016-6	082 02	12.00 02	1400	400		2,000 M	636670. 1088966 GM	8					
5600016-1	082 01					15000	639184. 1092159 SW	5	Cap estimated, C-25				
5600017	430.06	03	158.28 02	56 3/88	AG BOT	1 1	BECKER HOLDING CORP						
5600017-1	071 01	8.00 02				800 M	659945. 1149604 GM	8	C-25 M.D. WATER SUPPLY				
5600017-1	071 01	24.00				12,000 M	656410. 1148427 SW	5	VIA MAN MADE CANAL, C-25				
5600018	344.04	03	126.63 02	56 3/88	AG BOT	1 2	BECKER HOLDING CORP.						
5600018-1	082 01	6.00 02				300 M	639063. 1064170 GM	8	C-23				
5600018-1	082 01	30.00				25,000 M	636683. 1067753 SW	5	C23				
5600018-2	082 01	28.00				15,000 M	636758. 1064106 SW	5	C23				
5600020	180.3	03	66.36 02	56 11/87	AG BOT	2 1	SALAH GOLDA, M.D.						
5600020-1	071 01	8.00 02				575	647864. 1120202 GU	8	C-24 SURFACE BODY, Cap est.				
5600020-2	071 01	8.00 02				575	649983. 1120370 GM	8	Cap. est.				
5600020-1	071 01	18.00				6,000 M	647235. 1120202 SW	5	C-24				
5600021	131.6	03	48.40 02	56 5/88	AG BOT	4 2	EVANS PROPERTIES, INC.						
5600021-1	082 01	6.00 02	900	360		200 M	634414. 1081509 GM	8	C-23 CANAL SOURCE				
5600021-2	082 01	6.00 02	900	360		250 M	632413. 1081477 GM	8					
5600021-3	082 01	8.00 02	1000	360		550 M	632780. 1080249 GM	8					
5600021-4	082 01	5.00 02	700	360		60 M	631513. 1078994 GM	8					
5600021-1	082 01	30.00				15,000 M	636460. 1080298 SW	5					
5600021-2	082 01	16.00				6,000 M	636267. 1080291 SW	5					
5600022	132.5	03	48.80 02	56 5/88	AG BOT	1 1	EVANS PROPERTIES, INC.						
5600022-1	082 01	10.00 02	1000	360		720 M	632591. 1091089 GM	8	C-23 CANAL SOURCE				
5600022-2	082 01	30.00				20,000 M	636309. 1099982 SW	5					
5600023	246.3	03	90.65 02	56 3/88	AG SW	0 1	BECKER HOLDING CORP.						
5600023-1	01	36.00				15,000 M	677471. 1086074 SW	5	C-24 CANAL				
5600024	82.79	03	30.47 02	56 10/88	AG BOT	1 2	COLEMAN DAVIS PROJECT.						
5600024-1	071 01	8.00 02	1100	250		900 M	641733. 1142556 GM	08					
5600024-1	071 01	23.00				10,000 M	641756. 1145203 SW	5	S.W. BODY C-25				
5600024-2	071 01	18.00				4,000 M	641756. 1145203 SW	5					

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

PERMIT NO.	AN.	ALL.	MAX MO.	DATE	USE	SRCNO.	SW	UNT MO.	UTS	CD	ISS.	TYPE	MLS.	PHPS	OWNER	CD	PERMIT NO.	DEV NO.	AO	TYPE	ST	ACRES	IRR	EFF
------------	-----	------	---------	------	-----	--------	----	---------	-----	----	------	------	------	------	-------	----	------------	---------	----	------	----	-------	-----	-----

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL	DPTH	PHS	PUM	PUMP	NO.	STSDIA.	COO	ID	CD	INT	TYP	CAP.	MTR?	XPLNR	YPLNR	SRC	AO	COMMENTS
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5600025	376.39	03	138.53	02	56	1/88	AG	80T	11	1	EVANS PROPERTIES, INC.	8	50	M	50	56	C-24	CANAL	56	08	13	.8	12	816.3	.85
5600025-1	082 01	4.00	02	840	225				50	M	656171	1090575	GW	8											
5600025-2	082 02	12 02	800	320					1200	M	656141	1089135	GW	8											
5600025-3	082 02	12 02	800	320					1200	M	656190	1087216	GW	8											
5600025-4	082 02	12 02	800	320					1200	M	656170	1086144	GW	8											
5600025-5	082 02	12 02	800	320					1200	M	656159	1084849	GW	8											
5600025-6	082 02	12 02	800	320					1200	M	656211	1003451	GW	8											
5600025-7	082 02	12 02	800	320					1200	M	656099	1082109	GW	8											
5600025-8	082 02	12 02	800	320					1200	M	653708	1086180	GW	8											
5600025-9	082 02	12 02	800	320					1200	M	653766	1084691	GW	8											
5600025-10	082 02	12 02	800	320					1200	M	653824	1083401	GW	8											
5600025-11	082 02	12 02	800	320					1200	M	653804	1082108	GW	8											
5600025-P	082 01								30,000	M	657474	1091959	SW	8											

5600026	231.8	03	85.32	02	56	11/87	AG	80T	2	6	ORANGE-CO OF FLA., INC.	8	1100	N	1100	56	C-23	CANAL & INTERNAL DITCHES	56	08	13	.8	11	504	.85
5600026-1	094 01	10 02	1300	360					1100	N	648309	1047283	GW	8											
5600026-2	094 01	10 02	1300	360					1100	N	647948	1050891	GW	8											
5600026-3	094 01	30							20,000	M	647258	1044499	SW	5											
5600026-4	094 01	4.00							2,000	M	647569	1044722	SW	5											
5600026-5	094 01	4.00							800	M	649278	1046822	SW	5											
5600026-6	094 01	25							1,000	M	649145	1049335	SW	5											
5600026-7	094 01	25							800	M	649110	1052275	SW	5											
5600026-8	094 01	25							800	M	649060	1054624	SW	5											

5600027	10,972	03	2671	02	56	2/89	AG		37	6	ADAMS RANCH, INC.	8	1200	M	1200	56	C-24	CANAL MAULERSOM & PUMPKIN HAMMOCK CANALS	56	08	20	1.5	11	14432	.5
5600027-1	071 01	12 02	1000						1200	M	645061	1129567	GW	8											
5600027-2	071 01	12 02							200	M	644775	1127662	GW	8											
5600027-3	070 01	8.00	02						200	M	619097	1130903	GW	8											
5600027-4	071 01	8.00	02						200	M	624971	1120485	GW	8											
5600027-5	071 01	6.00	02						150	M	624971	1129685	GW	8											
5600027-6	071 01	6.00	02	1100					200	M	631771	1131445	GW	8											
5600027-7	071 01	6.00	02						1900	M	631728	1130159	GW	8											
5600027-8	071 01	6.00	02						200	M	629186	1131097	GW	8											
5600027-9	071 01	8.00	02						300	M	634396	1130694	GW	8											
5600027-10	071 01	8.00	02						300	M	635520	1139789	GW	8											
5600027-11	071 01	10 02							1900	M	634962	1127903	GW	8											

Account	Code	Rate	Unit	Quantity	Material	Notes	Estimate	Unit	Quantity	Material	Notes	Estimate	Unit	Quantity	Material	Notes	Estimate	
5600027-12	071 01	8.00	02	1200	250 M	628200 1125069 GW	0											
5600027-13	071 01	8.00	02	800	250 M	623967 1127747 GW	0											
5600027-14	070 01	12	02	800	2500 M	623631 1125779 GW	0											
5600027-15	071 01	8.00	02		250 M	619623 1123850 GW	0											
5600027-16	071 01	6.00	02		250 M	622932 1118925 GW	0											
5600027-17	071 01	6.00	02		150 M	625422 1118068 GW	0											
5600027-18	071 01	8.00	02		150 M	631512 1120495 GW	0											
5600027-19	071 01	8.00	02		325 M	636680 1121497 GW	0											
5600027-20	071 01	6.00	02		250 M	643577 1120235 GW	0											
5600027-21	071 01	10	02		1900 M	636941 1117291 GW	0											
5600027-22	071 01	8.00	02		300 M	637003 1115735 GW	0											
5600027-23	071 01	8.00	02		300 M	625841 1114719 GW	0											
5600027-24	071 01	10	02		1900 M	625919 1115897 GW	0											
5600027-25	070 01	6.00	02		200 M	626197 1114525 GW	0											
5600027-26	070 01	6.00	02	800	40 M	625759 1112359 GW	0											
5600027-27	070 01	6.00	02	800	40 M	630701 1110795 GW	0											
5600027-28	070 01	6.00	02	800	90 M	634842 1113460 GW	0											
5600027-29	070 01	6.00	02	800	40 M	635633 1108594 GW	0											
5600027-30	070 01	6.00	02	800	40 M	637464 1110710 GW	0											
5600027-31	070 01	6.00	02	800	40 M	640310 1111645 GW	0											
5600027-32	070 01	6.00	02	800	40 M	643230 1113309 GW	0											
5600027-33	071 01	6.00	02	800	150 M	641603 1113457 GW	0											
5600027-34	071 01	6.00	02		250 M	643155 1109756 GW	0											
5600027-35	071 01	6.00	02		200 M	639703 1106766 GW	0											
5600027-36	071 01	6.00	02		150 M	614156 1116204 GW	0											
5600027-37	071 01	8.00	02		300 M	646779 1129308 SW	5											
5600027-P2	071 01				02 12,000 M	642995 1113645 SW	5											
5600027-P3	071 01				02 30,000	641647. 1113664 SW	5											
5600027-P4	071 01				02 20,000	640676. 1120424 SW	5											
5600027-P5	071 01	36			02 30,000	635193. 1119996 SW	5											
5600027-P6	071 02	36			C-2402 12,000	635193. 1119996 SW	5											
5600030	59.3	51.8	02	56	10/87	AG SW	0 1											
5600030-P		24.00																
5600031	439	47	02	56	10/78	AG BOT	2 1											
5600031-1	072 01	6.00	02		200 M	EARNEST DUMH												
5600031-2	072 01	8.00	02		712 M	672906. 1139426 GW	8											
5600031-3	072 01	12.00			3,000 M	671444. 1137851 GW	8											
5600032	33.5	6.00	02	56	10/78	AG BOT	1 1											
5600032-1	071 01	6.00	02	900	100 M	MARCEL GAGNON												
5600032-15	071 01	36.30	02	56	1/88	AG GW	3 0											
5600033	435.6	6.00	02	800	M	653183 1124616 GW	8											
5600033-1	070 01	8.00	02	1100	M	653634 1124617 SW	5											
5600033-2	070 01	10.00	02	100	80	80 02												
5600033-3	070 01	6.00	02	800	M	599399. 1129064 GW	08											
		8.00	02	1100	M	604614. 1127160 GW	08											
		10.00	02	100	80	80 02												
		6.00	02	800	M	607415. 1128808 GW	02											

5 CAMAL, PUMP P-6 LOC. IS GUESS

5 BODY C-23 CANAL S.M. ONLY

5 C-25 CANAL SURFACE WATER BODY

8 PERMIT SAYS 400GPM APPLIC. HAS 75+- GPM

5 MSLWD CANAL, VACHON FILED APPL.

BERNARD EGAN

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

PERMIT NO.	AM. ALL.	ALL UNIT	MAX NO.	NO. UTS	CO	DATE	USE	SRC	SW	PHPS	OWNER	CD	PERMIT NO.	DEV NO.	AGTYPE	TYPE	ST	IRR	IRR
						ISS.		NO.									ACRES		EFF

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	DEPTH	CD	TD	AG BOT	AG	GM	3 0	JOHN T. MOOSE	08	Cap. Estimated.

5600034	25.76	03	083 01	8.00	02	56	12/87	300	M	250 M	686398. 1078432	GW	08
			083 01	6.00	02	1300	300	M		250 M	687906. 1080110	GW	08
			083 01	6.00	02	1260	300	M		400 M	687287. 1078741	GW	02

5600035	901.97	02	060 01	901.97	02	56	7/87	AG BOT	15 10	GREEN WATER MANAGEMENT, INC.			
			060 01	8.00	02	920	230	M	920 M	634600	1155200	GW	08
			060 01	8.00	02	900	230	M	900 M	634000	1156800	GW	08
			060 01	8.00	02	900	230	M	900 M	632400	1158200	GW	08
			060 01	8.00	02	880	240	M	950 M	630700	1159600	GW	08
			060 01	8.00	02	900	230	M	900 M	629800	1162600	GW	08
			060 01	8.00	02	960	230	M	900 M	634600	1159200	GW	08
			060 01	8.00	02	920	230	M	500 M	632400	1162400	GW	08
			060 01	8.00	02	960	250	M	950 M	631600	1164600	GW	08
			060 01	8.00	02	900	230	M	950 M	635000	1164000	GW	08
			060 01	8.00	02	900	230	M	400 M	633800	1166800	GW	08
			060 01	8.00	02	900	230	M	900 M	629800	1166800	GW	08
			060 01	8.00	02	940	230	M	850 M	632400	1170000	GW	08
			060 01	8.00	02	960	230	M	950 M	632200	1172000	GW	08
			060 01	8.00	02	940	230	M	900 Y	634000	1161400	GW	08
			060 01	36.00					25000 M	636000	1151400	SW	5
			060 01	20.00					02 10000 M	631200	1157600	SW	5
			060 01	24.00					02 15000 M	630600	1158000	SW	5
			060 01	20.00					02 10000 M	630800	1159200	SW	5
			060 01	36.00					02 25000 M	627800	1172000	SW	5
			060 01	24.00					02 15000 M	627800	1172000	SW	5
			060 02	16.00					02 7200 M	632750	1159250	SW	5
			060 02	16.00					02 7200 M	629625	1157750	SW	5
			060 02	12.00					02 5200 M	632750	1161500	SW	5
			060 02	12.00					02 5200 M	630875	1163750	SW	5

5600036	508.25	3	095 01	187	02	56	5/88	AG BOT	2	3	MABEL CORP		
			095 01	12.00	02	1280	365	FLOW.01	1100 M	665915.	1046855	GW	08
			095 01	12.00	02	1220	327	FLOW01	1100 M	665847.	1052110	GW	08
			095 01	36.00				FLOW02	28000 M	665946.	1044714	SW	5

5600036-A	095 01	36.00	02	28000 N	665946. 1044714 SW 5	08	13	1.5	11	69	.5
5600036-A	095 01	24.00	02	10000 N	665946. 1044714 SW 5						
5600037	53.95 03	53.95 02	56	6/87	AG BOT	02					
5600037-1	083 01	5.00 02	56	6/87	AG BOT	02					
5600037-2	083 01	5.00 02	250 M		ERNEST DUNN	08					
5600037-3	083 01	5.00 02	250 M		667102. 1094162 GW 08	08					
5600037-4	083 01	22.00	250 M		667118. 1093546 GW 08	08					
			250 M		667081. 1092941 GW 08	08					
			10000 N		670330. 1092183 SW 5	08					
5600038	134 03	-528 01	56	4/86	bot	02					
	04		2		GENERAL DEVLPT. CORP						
5600039	82.79 03	30.47 02	56	7/87	AG BOT	08					
5600039-1	071 01	10.00 02	920	250	BARNETT GREEN, JR.	08					
5600039-A	071 01	24.00	C-2302	10,000 N	641889. 1134440 GW 08	08				180	.85
					642466. 1132408 SW 5						
5600040	1401.98 03	516 02	56	9/87	AG BOT	08					
5600040-1	082 01	12.00 02	1240	340	FLOW	08					
5600040-2	082 01	12.00 02	1240	340	FLOW	08					
5600040-3	082 01	12.00 02	1240	340	FLOW	08					
5600040-4	082 01	12.00 02	1240	340	FLOW	08					
5600040-5	082 01	12.00 02	1240	340	FLOW	08					
5600040-6	082 01	12.00 02	1240	340	FLOW	08					
5600040-1	082 02	12.00 02	1300	400	FLOW	08					
5600040-2	082 02	12.00 02	1300	400	FLOW	08					
5600040-3	082 02	12.00 02	1300	400	FLOW	08					
5600040-4	082 02	12.00 02	1300	400	FLOW	08					
5600040-1	082 01	12.00 02	1300	400	FLOW	08					
5600040-2	082 01	12.00 02	1300	400	FLOW	08					
5600040-3	082 01	12.00 02	1300	400	FLOW	08					
5600040-4	082 01	12.00 02	1300	400	FLOW	08					
5600040-5	082 01	12.00 02	1300	400	FLOW	08					
5600040-6	082 01	12.00 02	1300	400	FLOW	08					
5600040-7	082 01	12.00 02	1300	400	FLOW	08					
5600040-8	082 01	12.00 02	1300	400	FLOW	08					
5600040-9	082 01	36.00	GERMANY	HYDRA							
5600040-5	082 01	28.00	CANAL	FLOW							
5600041	450.22 03	138.77 02	56	11/87	AG BOT	08					
5600041-1	094 01	8.00 02	1030	374	FLOW	08					
5600041-P	094 01	46.00	C-2302	28000 N	RU-MAR, INC.	08					
					646426. 1048431 GW 08	08				320	.5
					636624. 1059980 SW 5						
5600042	342.81 03	59.02 02	56	9/87	AG GW	08					
5600042-1	082 01	6.00 02	900	200	FLOW	08					
5600043	1091 03	244.45 02	56	9/76	AG GW	08					
5600043-1	70 01	8.00 02	1200	400	FLOW	08					
5600043-2	71 01	8.00 02	1200	400	FLOW	08					
5600043-3	70 01	8.00 02	1200	400	FLOW	08					
5600043-4	70 01	6.00 02	800	300	FLOW	08					
5600043-5	70 01	6.00 02	800	300	FLOW	08					
5600043-6	70 01	6.00 02	800	300	FLOW	08					
5600043-7	70 01	6.00 02	800	300	FLOW	08					
5600043-8	70 01	6.00 02	800	300	FLOW	08					
5600043-9	70 01	8.00 02	1200	400	FLOW	08					
5600043-10	71 01	8.00 02	1200	400	FLOW	08					

DEWATERING-MINING OP.

C-23

ALLAPATAN OPERATING CO.
GERMANY
CANAL SOURCE
FOR SURFACE WATER

C-23

JACQUELYN CARLTON
08 MELL USED ONLY TO WATER 32 HEAD CATTLE

EMERALD RANCH, INC.

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

PERMIT NO.	AM.	ALL.	UNT	MAX	MO.	DATE	USE	SRC	SU	CO	PERMIT	DEV	MO.	AG	TYPE	ST	IRR	IRR	

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

PERMIT NO.	FACILITY	QUAD.	WELL	OPT#	PMP	QTY	CD	INT	TYP	CAP.	MTR?	XPLNR	YPLNR	SRC	AG	COMMENTS
5600043-11		70 01		8.00	02	1200	400	FLOW		575 Y		620716	1134603	GM	08	
5600043-12		71 01		6.00	02	800	300	FLOW		250 Y		622506	1137638	GM	08	
5600043-13		70 01		8.00	02	1200	400	FLOW		575 Y		616121	1134085	GM	08	
5600043-14		70 01		8.00	02	1200	400	FLOW		575 Y		618015	1133283	GM	08	
5600043-15		70 01		8.00	02	1200	400	FLOW		575 Y		620537	1133492	GM	08	
5600043-16		71 01		8.00	02	800	300	FLOW		575 Y		623568	1143902	GM	08	
5600043-17		70 01		8.00	02	800	300	FLOW		575 Y		615913	1143778	GM	08	
5600043-18		70 01		6.00	02	800	300	FLOW		250 Y		615713	1141528	GM	08	
5600044		116.9	03	26.19	02	56	12/87	AG	GM	1 0		JOANNE C. HUMPHRIES				
5600044-1		082 01		6.00	02	900	200	FLOW		250 M		636862.	1084910	GM	08	Cap est.
5600045		249.3	03	55.87	02	56	12/87	AG		2 0		JOANNE C. HUMPHRIES				
5600045-2		082 01		6.00	02	900	200	FLOW		250 M		630379.	1087688	GM	08	Cap. est.
5600045-3		082 01		6.00	02	900	200	FLOW		250 M		629475.	1090053	GM	08	"
5600047		238.72	03	87.86	02	56	7/88	AG	BOT	1 2		BLUE GOOSE GROWERS, INC.				
5600047-1		095 01		10.00	02	1100	240	FLOW		1100 M		668759.	1051662	GM	08	
5600047-1		095 01		28.00						6000 M		671092.	1044479	SM	5	C-23 & DM SITE
5600047-2		095 01		28.00						12000 M		671092.	1044479	SM	5	
5600048		536.31	03	197.39	02	56	7/88	AG	BOT	1 2		BLUE GOOSE GROWERS, INC.				
5600048-1		095 01		10.00	02	1100	260	FLOW		1100 M		677112.	1051928	GM	08	C-23, DM SITE
5600048-1		095 01		28.00						15000 M		676501.	1044508	SM	5	
5600048-2		095 01		28.00						15000 M		676501.	1044508	SM	5	
5600053		2740	04	314	02	56	10/77	AG	BOT	2 1		R. E. TEAGUE				
5600053-1		082 01		8.00	02	1000	320	FLOW		150 M		642495.	1098844	GM	08	C-24
5600053-2		082 01		4.00	02	1000				35 M		642768.	1099129	GM	08	VIA PC-34
5600053-PC34		082 01								10000 M		646640.	1102080	SM	5	C-24
5600055		758.3	03	238.7	02	56	4/88	AG	BOT	2 1		DAVIS, J.L. & DAVIS, C.T.				
5600055		16.9	02													
5600055-1		083 01		4.00	02	90	84	02		90 M		673443.	1082906	GM	02	
5600055-2		083 01		6.00	02	90	84	02		90 M		673201.	1083342	GM	02	
5600055-PUMP		083 01		24.00						10000 M		677442.	1086110	SM	5	

5600075-C	060 01	8.00 02 1000	300 FLOW	575	658978. 1160144 GM	08 4 PUMPS FOR DRAINAGE ONLY (ONEWAY),	02 13	.8	11	288 .5
5600076	375.3	225.19 02	56 11/88	AG BOT	6 2	McAUTHER FARMS, INC.(GROVE #3)	02 13	.8	11	288 .75
5600076		150.13 02	55	N/A	01					
5600076-1	082 01	6.00 02	55	N/A	01	659320. 1082197 GM				
5600076-2	082 01	6.00 02	55	N/A	01	659292. 1083533 GM				
5600076-3	082 01	6.00 02	55	N/A	01	659290. 1084905 GM				
5600076-4	082 01	6.00 02	55	N/A	01	659260. 1086172 GM				
5600076-5	082 01	6.00 02	55	N/A	01	659175. 1088785 GM				
5600076-6	082 02	12.00 02	1400	400		658986. 1081626 GM				
5600076-1	082 01	36.00				658824. 1092032 SU				
5600076-2	082 01	36.00				660277. 1092046 SU				
5600077	1282.35	471.98 02	56 4/77	AG BOT	2 9	ALLAPATTAN WATER MANAGEMENT	08 13	.8	12	1640 .5
5600077-1	082 01	8.00 02	1500	340 FLOW	575 M	651256 1062096 GM				
5600077-12	082 01	5.00 02	7	7 FLOW	250 M	642504 1040762 GM				
5600077-38	082 01				14 01	651080 1060487 SU				
5600077-55	082 01				16 01	649004 1060479 SU				
5600077-68	082 01				14 01	648643 1060478 SU				
5600077-85	082 01				14 01	647199 1060473 SU				
5600077-108	082 01				14 01	644582 1060463 SU				
5600077-138	082 01				14 01	641964 1060454 SU				
5600077-158	082 01				14 01	639076 1060444 SU				
5600077-168	082 01				14 01	636820 1060437 SU				
5600077-178	082 01				14 01	636808 1063971 SU				
5600078	250.21	92.09 02	56 5/87	AG BOT	2 1	S.M. KNIGHT & SONS, INC.(JO-GROVE)	08 13	1.5	11	320 .5
5600078-1	082 01	12.00 02	1330	300 FLOW	1600 M	649304. 1079067 GM				
5600078-2	082 01	10.00 02	1330	300 FLOW	1200 M	647474. 1079121 GM				
5600078-1	082 01	24.00			18000 M	649792. 1076671 SU				
5600079	758.5	279.02 02	56 7/87	AG BOT	5 5	BRAD-RICH GROVES, INC.	08 13	.8	11	970 .5
5600079-1	082 01	5.00 02	800	400 FLOW	250 M	650057. 1065549 GM				
5600079-2	082 01	12.00 02	1285	380	1100 M	652222. 1069442 GM				
5600079-3	082 01	12.00 02	1330	385	1100 M	650138. 1072498 GM				
5600079-4	082 01	12.00 02	1300	360	1100 M	652332. 1076892 GM				
5600079-5	082 01	5.00 02	800	300	250 M	650191. 1079560 GM				
5600079-1	082 01	23.00			10000 M	652221. 1070228 SU				
5600079-2	082 01	28.00			15500 M	650552. 1070990 SU				
5600079-3	082 01	28.00			15500 M	650360. 1079047 SU				
5600079-4	082 01	23.00			10000 M	650282. 1076174 SU				
5600079-5	082 01	28.00			15500 M	650259. 1078551 SU				
5600080	137.99	50.79 02 3/88	AG BOT	AG BOT	4 1	MYERS GROVES, INC.(CITRUS GROVE)	08 13	3.6	12	300 .85
5600080-1	082 01	8.00 02	1000	300	-- 01	637876. 1077023 GM				
5600080-2	082 01	8.00 02	1000	300	-- 01	636971. 1079221 GM				
5600080-3	082 01	12.00 02	1000	300	-- 01	638196. 1081583 GM				
5600080-4	082 01	12.00 02	1000	300	-- 01	637850. 1079110 GM				
5600080-5	082 01	30.00			-- 02	636872. 1079073 SU				
5600082	1591.9	270.52 02	56 2/88	AG BOT	13 0	D.L. SCOTT/MESCOTT GROVES, INC.	08 13	1.5	11	940 .5
5600082		192.06 02					08 20	1.5	11	1100 .5

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

PERMIT NO.	AN.	ALL.	MAX.	NO.	DATE	USE	SRCNO.	SW	OWNER	CO	PERMIT NO.	DEV NO.	ACTYPE	TYPE	ST	RAIN	IRR	IRR
					ISS.	TYPE	MLS.	PMP									ACRES	EFF

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

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	DEPTH	PMP	PUM	PUMP	CD	INT	TYP	CAP.	MTR7	MPLNR	YPLNR	SRC	AG	COMMENTS
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5600082-1	070 01	6.00	02	N/A	N/A	FLOW	121 M	609822.	1128749	GM	08									
5600082-2	070 01	6.00	02	N/A	N/A	FLOW	121 M	612271.	1120658	GM	08									
5600082-3	070 01	6.00	02	N/A	N/A	FLOW	121 M	614194.	1118795	GM	08									
5600082-4	070 01	4.00	02	N/A	N/A	FLOW	53 M	616815.	1118793	GM	08									
5600082-5	070 01	4.00	02	N/A	N/A	FLOW	121 M	615946.	1121142	GM	08									
5600082-6	070 01	4.00	02	N/A	N/A	FLOW	121 M	616127.	1129552	GM	08									
5600082-7	070 01	4.00	02	N/A	N/A	FLOW	53 M	616541.	1123761	GM	08									
5600082-8	070 01	4.00	02	N/A	N/A	FLOW	53 M	612470.	1126198	GM	08									
5600082-9	070 01	4.00	02	N/A	N/A	FLOW	121 M	616390.	1120149	GM	08									
5600082-10	070 01	4.00	02	N/A	N/A	FLOW	121 M	614084.	1120872	GM	08									
5600082-11	070 01	6.00	02	N/A	N/A	FLOW	121 M	612689.	1123363	GM	08									
5600082-12	070 01	4.00	02	N/A	N/A	FLOW	53 M	614762.	1126445	GM	08									
5600082-13	070 01	12.00	02	N/A	N/A	FLOW	53 M	612749.	1122639	GM	08									
5600083	638.45	122.23	02	56	..	AG GM	4 0	B.E. ALDERMAN RANCH, INC												
5600083-1	070 01	6.00	02	UNK.	UNK.	FLOW	250 M	602108.	1144557	GM	08	Cap. est.								
5600083-2	070 01	6.00	02	UNK.	UNK.	FLOW	250 M	599219.	1150113	GM	08	"								
5600083-3	059 01	6.00	02	UNK.	UNK.	FLOW	250 M	599887.	1153764	GM	08	"								
5600083-4	059 01	6.00	02	UNK.	UNK.	FLOW	250 M	595727.	1154275	GM	08	"								
5600084	943.5	169.3	02	56	6/77	AG BOT	16 6	STRAZULLA BROTHERS, INC.												
5600084		174.78																		
5600084		612.66																		
5600084-2	061 01	6.00	02	740	440	FLOW	100 M	670754.	1167199	GM	08									
5600084-3	061 01	4.00	02	750	450	FLOW	60 M	671298.	1166394	GM	08									
5600084-4	061 01	6.00	02	750	450	FLOW	60 M	671219.	1163667	GM	08									
5600084-5	061 01	6.00	02	800	440	0.01	140 M	671057.	1159627	GM	08									
5600084-7	072 01	6.00	02	800	440	FLOW	200 M	666750.	1149463	GM	08									
5600084-8	061 01	6.00	02	800	440	FLOW	200 M	666756.	1154661	GM	08									
5600084-9	061 03	5.00	02	700	500	FLOW	100 M	665032.	1157885	GM	08									
5600084-10	061 01	6.00	02	700	500	FLOW	90 M	667272.	1160520	GM	08									
5600084-11	061 03	8.00	02	900	900	FLOW	200 M	667431.	1165368	GM	08									
5600084-12	061 03	8.00	02	900	900	FLOW	150 M	666889.	1165870	GM	08									
5600084-13	061 01	5.00	02	700	500	FLOW	60 M	662650.	1167872	GM	08									
5600084-14	060 01	6.00	02	700	500	FLOW	200 M	660935.	1171978	GM	08									
5600084-PW1	7 02	12.00	02	850	500	FLOW	1100 M	660935.	1171978	GM	08									

FROM HERE DOWN PLANAR, Cap & Loc. estimated

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

PERMIT NO.	AN. ALL.	ALL MAX. UNIT NO.	NO. ST/DIA.	DATE	USE SRC/NO.	SV	UTS CO	ISS. TYPE	WLS.	PMP'S	OWNER	CD	PERMIT NO.	DEV NO.	MO.	AO	TYPE	ST	RAIN	IRR	IRR	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY	QUAD.	WELL	DEPTH	PMP	PUM	PLUM	SRC	AO	COMMENTS
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5600085-14	073 01	10.00	02	105	70	50	02	350	Y	709599.	1130155	GM	02											
5600085-F81	073 02	10.00	02	700	600	N/A	02	350	Y	709838.	1130246	GM	08	Cap. estimated										
5600086	179.84	03	64.19	02	56	7/88	AG	SV	0 1	HESTER, ROBERT, J.1111														
5600086-1	071 01	28.00	---	---	---	---	N/A	15000	N	647356.	1141874	SV	5	C-25										
5600087	165.77	03	61.01	02	56	7/88	AG	SV	0 1	CHAPLIN, FRANKLIN M.														
5600087-1	071 01	3.00	---	---	---	---	N/A	15000	N	856128.	1150569	SV	5	C-25										
5600088	441.28	03	149.44	02	56	7/87	AG	BOT	4 2	TREASURE COAST GROVES														
5600088-1	71 01	6.00	02	1000	300	---	FLO	170	M	645913.	1115130	GM	08											
5600088-12	71 01	8.00	02	1000	300	---	FLO	600	M	646323.	1118797	GM	08											
5600088-3	71 01	12.00	02	1000	300	---	FLO	1300	M	640851.	1117535	GM	08											
5600088-4	71 01	12.00	02	1000	300	---	FLO	1500	M	643226.	1117763	GM	08											
5600088-1	71 01	36.00	---	---	---	---	---	25000	M	642068.	1113843	SV	5	C-24										
5600088-2	71 01	36.00	---	---	---	---	---	25000	M	645455.	1113861	SV	5	C-24										
5600089	1421.29	03	447.61	02	56	9/77	AG	SV	0 13	FLORIDA MAID CITRUS CORP														
5600089			75.5																					
5600089-P1	71 01	24.00																						
5600089-IP1	71 01	8.00																						
5600089-IP2	60 01	8.00																						
5600089-IP3	60 01	8.00																						
5600089-IP4	60 01	8.00																						
5600089-IP5	60 01	8.00																						
5600089-IP6	60 01	8.00																						
5600089-IP7	60 01	8.00																						
5600089-IP8	71 01	6.00																						
5600089-IP9	60 01	8.00																						
5600089-IP10	60 01	8.00																						
5600089-IP11	60 01	8.00																						
5600089-IP12	60 01	8.00																						
5600089-IP13	60 01	8.00																						
5600090	815.54	03	300.16	02	56	7/87	AG	BOT	13 1	CHARLES CAMPBELL														

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

PERMIT NO.	AN.	ALL	MAX	NO.	DATE	USE	SICRO.	SV	CO	PERMIT	DEV	NO.	ACTYPE	ST	IRR	ACRES	EFF
	UNIT	NO.	NO.	ISS.	TYPE	MLS.	PHPS	OWNER									

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

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	STEDIA.	CD	TD	CD	INT	TYP	PUM	PUMP	SRC	AG	COMMENTS

5600093-9	61 01	6.00	02	N/A	N/A	400 N	680105.	1155535	GM	08				
5600093-1	61 01	6.00				35000 N	680485.	1155535	SN	5	C-25,	PUMP	SHARED	BY 3 PROPERTIES, LOC. IS GUESS
5600096	1573.2	579.03	02	56	7/87	21 6	ORANGE-CO. OF FLORIDA, INC.							
5600096-1	72 01	8.00	02	1000	400	FLO	669618.	1141525	GM	08	Capacities	estimated		
5600096-2	72 01	8.00	02	1000	400	FLO	668896.	1143009	GM	08	"	"		
5600096-3	72 01	8.00	02	1000	400	FLO	668056.	1144573	GM	08	"	"		
5600096-4	72 01	8.00	02	1000	400	FLO	669312.	1146423	GM	08	"	"		
5600096-5	72 01	10.00	02	1000	660	FLO	667057.	1146451	GM	08	"	"		
5600096-6	72 01	10.00	02	1000	660	FLO	667060.	1144605	GM	08	"	"		
5600096-7	72 01	10.00	02	1000	660	FLO	667113.	1143067	GM	08	"	"		
5600096-8	72 01	10.00	02	1000	660	FLO	667153.	1141516	GM	08	"	"		
5600096-9	72 01	10.00	02	1000	660	FLO	664528.	1141569	GM	08	"	"		
5600096-10	72 01	10.00	02	1000	660	FLO	664599.	1143099	GM	08	"	"		
5600096-11	72 01	10.00	02	1000	660	FLO	664583.	1144446	GM	08	"	"		
5600096-12	72 01	10.00	02	1000	660	FLO	660387.	1146376	GM	08	"	"		
5600096-13	71 01	10.00	02	1000	660	FLO	660459.	1144534	GM	08	"	"		
5600096-14	71 01	10.00	02	1000	660	FLO	660529.	1143006	GM	08	"	"		
5600096-15	71 01	10.00	02	1000	660	FLO	660567.	1141366	GM	08	"	"		
5600096-16	71 01	10.00	02	1000	660	FLO	666934.	1141336	GM	08	"	"		
5600096-17	71 01	10.00	02	1000	660	FLO	656978.	1143014	GM	08	"	"		
5600096-18	71 01	10.00	02	1000	660	FLO	656859.	1144551	GM	08	"	"		
5600096-19	71 01	10.00	02	1000	660	FLO	656928.	1146394	GM	08	"	"		
5600096-20	71 01	10.00	02	1000	660	FLO	669784.	1145329	GM	08	"	"		
5600096-21	72 01	42.00	---	---	---	02 25,000	670539.	1140691	SN	5	C-25			
5600096-1	72 01	20.00	---	---	---	02 8,000	670543.	1140698	SN	5	C-25			
5600096-2	72 01	42.00	---	---	---	02 25,000	662849.	1140767	SN	5	C-25			
5600096-3	72 01	24.00	---	---	---	02 10,000	656323.	1140703	SN	5	C-25			
5600096-4	71 01	42.00	---	---	---	02 25,000	658869.	1140719	SN	5	C-25			
5600096-5	71 01	20.00	---	---	---	02 8,000	658869.	1140719	SN	5	C-25			
5600096-6	72 01	0.50	01	56	10/77	PMS	SPANISH LAKES MOBILE HOME PARK							
5600097	142.0	8.00	02	80	60	02	723941.	1084664	GM	02				
5600097-1	84 01	8.00	02	80	60	02	723969.	1085831	GM	02				
5600097-2	84 01	8.00	02	80	60	02	724460.	1084436	GM	02				
5600097-3	84 01	8.00	02	80	60	02								

ORIGINAL WELL PLUGGED, REPLACED BY:R-2 WELL

5600116-3	082 01 8	02 1200	360 FLOWFLO	1000	MO 633702. 1070960	GM 08
5600116-4	082 01 6	W/AN/A	N/A FLOWFLO	180	MO 631422. 1073021	GM 08
5600116-5	082 01 6	N/AN/A	N/A FLOWFLO	75	MO 634648. 1070060	GM 08
5600116-6A	082 01 10	02 800	367 FLOWFLO	1500	MO 632948. 1067715	GM 08
5600116-7	094 01 6	W/AN/A	N/A FLOWFLO	700	MO 633513. 1065212	GM 08
5600116-8	094 01 8	02 1250	395 FLOWFLO	1000	MO 635329. 1062743	GM 08
5600116-9	094 01 6	W/AN/A	N/A FLOWFLO	180	MO 628107. 1063558	GM 08
5600116-10	094 01 12	02 960	620 FLOWFLO	1100	MO 621762. 1069376	GM 08
5600116-11	094 01 12	02 920	611 FLOWFLO	1100	MO 636010. 1045177	GM 08
5600116-12	082 01 6	W/AN/A	N/A FLOWFLO	180	MO 630692. 1071769	GM 08
5600116-13	082 01 16	02 1430	406 FLOWFLO	1500	MO 637425. 1034644	GM 08
5600116-14	082 01 10	02 1114	370 FLOWFLO	800	MO 626902. 1066754	GM 08
5600116-15	082 01 10	02 1114	370 FLOWFLO	800	MO 629950. 1066687	GM 08
5600116-16	082 01 10	02 1120	380 FLOWFLO	700	MO 628920. 1060815	GM 08
5600116-17	094 01 10	02 1135	380 FLOWFLO	800	MO 633761. 1056287	GM 08
5600116-18	094 01 10	02 1100	395 FLOWFLO	800	MO 629935. 1058559	GM 08
5600116-19	094 01 10	02 1100	360 FLOWFLO	800	MO 633875. 1058449	GM 08
5600116-20	094 01 10	02 1050	480 FLOWFLO	800	MO 634201. 1051266	GM 08
5600116-21	094 01 10	02 1100	350 FLOWFLO	800	MO 635370. 1042719	GM 08
5600116-22	082 01 10	02 1100	350 FLOWFLO	800	MO 624671. 1066219	GM 08
5600116-23	082 01 10	02 1100	350 FLOWFLO	800	MO 629784. 1064726	GM 08
5600116-24	082 01 10	02 1100	350 FLOWFLO	800	MO 632487. 1061719	GM 08
5600116-25	082 02 10	02 1100	350 FLOWFLO	800	MO 634843. 1034751	GM 08
5600116-26	082 02 10	02 1100	350 FLOWFLO	800	MO 635801. 1033867	GM 08
5600116-27	082 02 10	02 1100	350 FLOWFLO	800	MO 634847. 1032281	GM 08
5600116-28	082 02 10	02 1100	350 FLOWFLO	800	MO 634904. 1031357	GM 08
5600116-29	082 02 10	02 1100	350 FLOWFLO	800	MO 631922. 1048305	GM 08
5600116-P1	082 01 ---	---	---	5000	MO 636427. 1073943	SN 99 C-23, Cap is GUESS, 2-WAY
5600116-P2	082 01 ---	---	---	5000	MO 636467. 1061873	SN 99 C-23, Cap is GUESS, 2-WAY
1028.32	03	299.99 02	3/89 AG BOT	19	4 E.C. LUMSFORD	56 5600118S/H
5600118-1	083 01	8.00 02	250 FLOWFLO	305	MO 679433. 1093533	GM 08
5600118-2	083 01	8.00 02	250 FLOWFLO	305	MO 682910. 1094667	GM 08
5600118-4	083 01	8.00 02	250 FLOWFLO	305	MO 685131. 1103913	GM 08
5600118-6	083 01	8.00 02	--- FLOWFLO	300	MO 685639. 1102536	GM 02
5600118-7	083 01	8.00 02	--- FLOWFLO	300	MO 684690. 1097725	GM 02
5600118-9	083 01 10.00	02 100	90 FLOWFLO	300	MO 684198. 1097638	GM 02
5600118-10	083 01	4.00 02	57 FLOWFLO	350	MO 680566. 1097051	GM 02
5600118-5	083 01	8.00 02	--- FLOWFLO	120	MO 681976. 1099896	GM 08
5600118-8	083 01	4.00 02	300 FLOWFLO	305	MO 684105. 1101854	GM 08
5600118-16	083 01	8.00 02	300 FLOWFLO	150	MO 693973. 1103510	GM 08
5600118-17	083 01	4.00 02	300 FLOWFLO	305	MO 684078. 1104956	GM 08
5600118-11A	083 01	4.00 02	---	150	MO 684100. 1102575	GM 02
5600118-11B	083 01	4.00 02	---	220	MO 684271. 1102611	GM 02
5600118-12A	083 01	4.00 02	---	220	MO 684271. 1102611	GM 02
5600118-12B	083 01	4.00 02	---	220	MO 681939. 1099415	GM 02
5600118-13A	083 01	4.00 02	---	140	MO 682116. 1099422	GM 02
5600118-13B	083 01	4.00 02	---	550	MO 690996. 1100023	GM 02
5600118-14	083 01	8.00 02	---	200	MO 682026. 1098163	GM 02
5600118-15	083 01	8.00 02	---	10000	MO 691496. 1100355	SN 99
5600118-18	083 01	---	---	10000	MO 681940. 1098885	SN 99
5600118-20	083 01	---	---	10000	MO 681940. 1098885	SN 99

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

PERMIT NO.	AN.	ALL.	UNT.	MAX.	NO.	DATE	USE	SRC.	NO.	WLS.	PMP.	OWNER	CD	PERMIT	NO.	DEV.	NO.	AGTYPE	TYPE	ST	RAIN	IRR	ACRES	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY	QUAD.	WELL	DPTN	PMP	PUM	PUMP	NO.	STSDIA.	COO	TD	CD	INT	TYP	CAP.	MTR?	NPLNR	YPLNR	SRC	AQ	COMMENTS
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5600104-1	61 01	4.00	02	N/A	N/A	FLOWING	80	688161.	1153044	GM	08														
5600105W	26.59	03	9.78	02	56	12/77	AG BOT	1	1	HARNER GROVES, INC.															
5600105-1	61 01	5.00	02	800	300	FLOW	200	M	688651.	1151526	GM	08													
5600105-P1	61 01	24.00	01				7.75	1	6000	M	689278.	1152236	SM	99	CANAL #1	TAYLOR	CRK.								
5600106W	1288	03	4.74	02	56	3/89	AG GW	1	0	SENIOROLE GROVES															
5600106-6	72 01	6.00	02	800	300	---	01	500	M	690041.	1141796	GM	08												
5600107W	61.48	03	10.16	02	56	--	AG GW	4	0	MCIVER, LARRY L.															
5600107-1	72 01	4.00	02	7	7	01		80	M	692623.	1149626	GM	08												
5600107-2	72 01	5.00	02				FLOW	150	M	692807.	1148718	GM	08												
5600107-3	72 01	6.00	02				FLOW	200	M	693434.	1149529	GM	08												
5600107-4	72 01	6.00	02				FLOW	200	M	694154.	1149533	GM	08												
5600111W	2921	03	23.02	02	56	7/87	AG BOT	1	1	COCA-COLA FOODS (CLOUD GROVE)															
5600111W	60 01	10.00	02	785	285	FLOWING	850	M	645871.	1159199	GM	08	Cap.	1s	guess										
5600111W	71 01	23.00	---	---	---	---	---	1000	M	641566.	1146515	SM	99												
5600112W	72	04	6.92	02	56	2/78	AG GW	1	0	CLEORA & LINN NELSON															
5600112-1	61 01	4.00	N/A	N/A	N/A	FLOWING	200	M	687057.	1155080	GM	08													
5600113W	32.84	03	12.09	02	56	12/78	AG BOT	1	1	MARNEZ GROVES															
5600113-1	61 01	5.00	02	800	300	FLOW	300	M	687555.	1154954	GM	08													
5600113-2	61 01	24.00	01				10.201	10000	M	687559.	1153945	SM	99												
5600114W	4.6	02	4.60	02	56	3/89	AG GW	2	0	CHRIST M. RUSSOS															
5600114-1	61 01	4.00	02	800	150	---	01	100	M	689331.	1166777	GM	08												
5600114-2	61 01	4.00	02	800	150	---	01	100	M	688828.	1166461	GM	08												
5600116W	3524.16	03	1297.09	02	56	6/89	AG BOT	29	2	EVANS PROPERTIES (BLUEJ															
5600116-1	082 01	6	02	1200	N/A	FLOWFLO	200	MO	629865.	1075448	GM	08													
5600116-2	082 01	8	02	1200	340	FLOWFLO	1100	MO	628394.	1070721	GM	08													

5600116-3	082 01 8	02 1200	360 FLOWFLO	1000	MO 633702.	1070960	GM 08
5600116-4	082 01 6	N/A/N/A	N/A FLOWFLO	180	MO 631422.	1073021	GM 08
5600116-5	082 01 6	N/A/N/A	N/A FLOWFLO	75	MO 634648.	1070060	GM 08
5600116-6A	082 01 10	02 800	367 FLOWFLO	1500	MO 632948.	1067715	GM 08
5600116-7	094 01 6	N/A/N/A	N/A FLOWFLO	700	MO 633513.	1065212	GM 08
5600116-8	094 01 8	02 1250	395 FLOWFLO	1000	MO 635329.	1062743	GM 08
5600116-9	094 01 6	N/A/N/A	N/A FLOWFLO	180	MO 628107.	1063558	GM 08
5600116-10	094 01 12	02 960	620 FLOWFLO	1100	MO 621762.	1069374	GM 08
5600116-11	094 01 12	02 920	611 FLOWFLO	1100	MO 636010.	1045177	GM 08
5600116-12	082 01 6	N/A/N/A	N/A FLOWFLO	180	MO 630692.	1071769	GM 08
5600116-13	082 01 16	02 1430	406 FLOWFLO	1500	MO 637425.	1034666	GM 08
5600116-14	082 01 10	02 1114	370 FLOWFLO	800	MO 626902.	1066754	GM 08
5600116-15	082 01 10	02 1114	380 FLOWFLO	800	MO 629950.	1066957	GM 08
5600116-16	082 01 10	02 1120	300 FLOWFLO	700	MO 628920.	1060815	GM 08
5600116-17	094 01 10	02 1135	380 FLOWFLO	800	MO 633761.	1056207	GM 08
5600116-18	094 01 10	02 1100	395 FLOWFLO	800	MO 629935.	1058559	GM 08
5600116-19	094 01 10	02 1100	360 FLOWFLO	800	MO 633875.	1058449	GM 08
5600116-20	094 01 10	02 1050	480 FLOWFLO	800	MO 634201.	1051266	GM 08
5600116-21	094 01 10	02 1100	350 FLOWFLO	800	MO 635370.	1042719	GM 08
5600116-22	082 01 10	02 1100	350 FLOWFLO	800	MO 624671.	1066219	GM 08
5600116-23	082 01 10	02 1100	350 FLOWFLO	800	MO 629784.	1064726	GM 08
5600116-24	082 01 10	02 1100	350 FLOWFLO	800	MO 632487.	1061719	GM 08
5600116-25	082 02 10	02 1100	350 FLOWFLO	800	MO 634843.	1034751	GM 08
5600116-26	082 02 10	02 1100	350 FLOWFLO	800	MO 635801.	1033067	GM 08
5600116-27	082 02 10	02 1100	350 FLOWFLO	800	MO 634847.	1032881	GM 08
5600116-28	082 02 10	02 1100	350 FLOWFLO	800	MO 634904.	1031357	GM 08
5600116-29	082 02 10	02 1100	350 FLOWFLO	800	MO 631922.	1068385	GM 08
5600116-P1	082 01 ---	---	---	5000	MO 636427.	1073943	SU 99
5600116-P2	082 01 ---	---	---	5000	MO 636467.	1061873	SU 99
5600118A	1028.32	03 299.99 02 56	3/89 AG BOT	19	4 E.C. LUMSFORD	56 5600118S/U	56
5600118-1	083 01	8.00 02 900	250 FLOWFLO	305	MO 679433.	10993533	GM 08
5600118-2	083 01	8.00 02 900	250 FLOWFLO	305	MO 682910.	1094667	GM 08
5600118-4	083 01	8.00 02 900	250 FLOWFLO	305	MO 685131.	1103913	GM 08
5600118-6	083 01	8.00 02 100	---	300	MO 685639.	1102536	GM 02
5600118-7	083 01	8.00 02 100	---	300	MO 684690.	1097725	GM 02
5600118-9	083 01 10.00	4.00 02 80	90 FLOWFLO	300	MO 684198.	1097638	GM 02
5600118-10	083 01	4.00 02 80	57 FLOWFLO	350	MO 680566.	1097051	GM 02
5600118-5	083 01	8.00 02 900	---	120	MO 681978.	1099896	GM 08
5600118-8	083 01	4.00 02 900	300 FLOWFLO	305	MO 684105.	1101854	GM 08
5600118-16	083 01	8.00 02 900	300 FLOWFLO	150	MO 693973.	1103510	GM 08
5600118-17	083 01	4.00 02 900	300 FLOWFLO	305	MO 684078.	1104956	GM 08
5600118-11A	083 01	4.00 02 57	---	150	MO 684100.	1102575	GM 02
5600118-11B	083 01	4.00 02 57	---	220	MO 684271.	1102611	GM 02
5600118-12A	083 01	4.00 02 57	---	220	MO 684271.	1102611	GM 02
5600118-12B	083 01	4.00 02 57	---	220	MO 684271.	1102611	GM 02
5600118-13A	083 01	4.00 02 57	---	140	MO 681939.	1099415	GM 02
5600118-13B	083 01	4.00 02 57	---	140	MO 682116.	1099422	GM 02
5600118-14	083 01	8.00 02 80	---	550	MO 690996.	1100023	GM 02
5600118-15	083 01	8.00 02 80	---	200	MO 682026.	1098163	GM 02
5600118-18	083 01	---	---	10000	MO 691496.	1100355	SU 99
5600118-20	083 01	---	---	10000	MO 681940.	1098885	SU 99

Cap is estimate

C-23, Cap is GUESS, 2-WAY
C-23, Cap is GUESS, 2-WAY

5600124W	50.2	03	14.8 02	56	4/78	AG GW	2 1 LILLIAN DUGAN	56	08	13	.8	11	75	.50
	5600124-1	061 01	6.00 02	900	---	FLOWFLO	352 MO 689016, 1156054 GM 08							
	5600124-2	061 01	4.00	---	---	FLOWFLO	60 MO 689999, 1153654 GM 08							
	5600124-P1	061 01	---	---	---	FLOW---	6000 MO 689183, 1154121 SW 99 DISCHARGE ONLY							
5600125W	31.28	03	11.51 02	56	6/89	AG GW	3 0 JIM G. RUSSAKIS (GROVES)	56	08	13	.8	11	40	.50
	5600125-1	061 01	5.00 02	700	---	FLOWFLO	300 MO 687487, 1166606 GM 08							
	5600125-2	061 01	4.00 02	700	---	FLOWFLO	400 MO 688073, 1166393 GM 08							
	5600125-3	061 01	6.00 02	700	---	FLOWFLO	600 MO 688048, 1165921 GM 08							
5600126W	26.8	03	7.91 02	56	4/78	AG GW	1 0 LUKEN-SHAU GROVES	56	08	13	.8	11	40	.50
	5600126-1	072 01	6.00 02	800	---	FLOWFLO	450 MO 694124, 1110105 GM 08							
5600127W	52.3	03	15.4 02	56	4/78	AG GW	3 0 LEVERETT-SHAU GROVES	56	08	13	.8	11	78	.50
	5600127-1	072 01	4.00 02	800	---	FLOWFLO	150 MO 694704, 1112937 GM 08							
	5600127-2	072 01	5.00 02	800	---	FLOWFLO	250 MO 694571, 1112279 GM 08							
	5600127-3	072 01	3.00 02	800	---	FLOWFLO	75 MO 694238, 1113441 GM 08							
5600128W	17.7	03	3.39 02	56	2/89	AG SW	0 1 BENSON O. YOUNT	56	99	20	.8	11	17.7	.50
	5600128-P1	061 01	---	---	---	POB	600 MO 692082, 1157126 SW 99 FT. PIERCE FMS. D.D. CANAL							
5600129W	89.14	03	32.81 02	56	10/87	AG GW	5 0 W.C. GARVES JR. (PINK & WATSON GRVS.)	56	08	13	1.5	11	114	.50
	5600129-1	071 01	4.00 02	580	210	FLOWFLO	100 --- 662039, 1126264 GM 08 Cap. estimated							
	5600129-2	071 01	5.00 02	610	225	FLOWFLO	250 --- 662186, 1125633 GM 08 "							
	5600129-3	071 01	5.00 02	610	230	FLOWFLO	250 --- 660465, 1124878 GM 08 "							
	5600129-4	071 01	4.00 02	590	215	FLOWFLO	100 --- 657911, 1114982 GM 08 "							
	5600129-5	071 01	6.00 02	685	245	FLOWFLO	250 --- 662053, 1124808 GM 08 "							
5600130W	683.4	03	251.53 02	56	10/87	AG BOT	35 1 W.C. GRAVES JR. (MC CARTY GROVES)	56	08	13	1.5	11	874	.50
	5600130-1	071 01	5.00 02	650	290	FLOWFLO	250 --- 656478, 1115649 GM 08 Capacity Estimated							
	5600130-2	071 01	5.00 02	600	295	FLOWFLO	250 --- 657008, 1115609 GM 08 "							
	5600130-3	071 01	5.00 02	610	295	FLOWFLO	250 --- 657882, 1115594 GM 08 "							
	5600130-4	071 01	5.00 02	675	290	FLOWFLO	250 --- 657911, 1114982 GM 08 "							
	5600130-5	071 01	5.00 02	550	290	FLOWFLO	250 --- 656909, 1113910 GM 08 "							
	5600130-6	071 01	5.00 02	625	300	FLOWFLO	250 --- 656083, 1112852 GM 08 "							
	5600130-7	071 01	5.00 02	685	310	FLOWFLO	250 --- 655115, 1113374 GM 08 "							
	5600130-8	071 01	8.00 02	960	350	FLOWFLO	575 --- 652969, 1113261 GM 08 "							
	5600130-9	071 01	5.00 02	710	305	FLOWFLO	250 --- 652969, 1113261 GM 08 LOC. IS GUESS, "							
	5600130-10	071 01	6.00 02	690	295	FLOWFLO	250 --- 652479, 1112296 GM 08 "							
	5600130-11	071 01	5.00 02	685	310	FLOWFLO	250 --- 653569, 1112273 GM 08 "							
	5600130-12	071 01	5.00 02	590	285	FLOWFLO	250 --- 652405, 1111465 GM 08 "							
	5600130-13	071 01	6.00 02	700	315	FLOWFLO	250 --- 653740, 1111534 GM 08 "							
	5600130-14	071 01	5.00 02	675	295	FLOWFLO	250 --- 655105, 1111561 GM 08 "							
	5600130-15	071 01	5.00 02	625	310	FLOWFLO	250 --- 656067, 1112079 GM 08 "							
	5600130-16	071 01	5.00 02	635	310	FLOWFLO	250 --- 656954, 1112110 GM 08 "							
	5600130-17	071 01	5.00 02	650	325	FLOWFLO	250 --- 657618, 1112136 GM 08 "							
	5600130-18	071 01	6.00 02	720	350	FLOWFLO	250 --- 656875, 1111527 GM 08 "							
	5600130-19	071 01	6.00 02	725	330	FLOWFLO	250 --- 659127, 1110279 GM 08 "							
	5600130-20	071 01	4.00 02	525	300	FLOWFLO	100 --- 658404, 1110128 GM 08 "							
	5600130-21	071 01	4.00 02	530	300	FLOWFLO	100 --- 660197, 1109558 GM 08 "							
	5600130-22	071 01	5.00 02	610	325	FLOWFLO	250 --- 658974, 1109375 GM 08 "							
	5600130-23	071 01	5.00 02	560	295	FLOWFLO	250 --- 657802, 1108907 GM 08 "							

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

PERMIT NO.	AN. ALL.	ALL UNIT NO.	MAX. CO. NO.	NO. UTS	DATE	USE	SRC	NO.	SM	OWNER	CD	PERMIT NO.	DEV NO.	AGTYPE	TYPE	ST	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD NO.	WELL NO.	DPTH	CD	INT	YPLR	SRC	AO	COMMENTS	56	1.5	11	10	.50			
5600131W	6.7	03	072 01	3.00	02	56	11/78	AG	GM	2 0 MILDRED W. ROCK	56	08	13	1.5	11	10	.50	
5600131-1			072 01	5.00	02	1025	400	FLOWFLO	GM	125 NO 692183. 1136930								
5600131-2			072 01	4.00	02	920	300	FLOWFLO	GM	75 NO 692203. 1136691								
5600132W	59.43	03	083 01	21.87	02	56	10/87	AG	ROT	4 1 W.C. GRAVES, JR. (STEIN 3)	56	08	13	1.5	11	76	.50	
5600132-1			083 01	5.00	02	705	295	FLOWFLO	GM	100 NO 665877. 1094360								
5600132-2			083 01	4.00	02	625	275	FLOWFLO	GM	250 NO 666346. 1094368								
5600132-3			083 01	5.00	02	725	265	FLOWFLO	GM	250 NO 666667. 1093439								
5600132-4			083 01	5.00	02	725	265	FLOWFLO	GM	250 NO 665895. 1092686								
5600132-P1			083 01	---	---	---	---	---	---	10000 NO 668315. 1093484								
5600133W	118.85	03	083 01	43.74	02	56	10/87	AG	GV	6 0 W.C. GRAVES, (SLOTT GROVE)	56	08	13	1.5	11	152	.50	
5600133-1			083 01	6.00	02	785	290	FLOW---	GM	250 NO 670673. 1103684								
5600133-2			083 01	5.00	02	770	290	FLOW---	GM	250 NO 669681. 1103694								
5600133-3			083 01	6.00	02	610	285	FLOW---	GM	250 NO 668951. 1103693								
5600133-4			083 01	4.00	02	500	275	FLOW---	GM	100 NO 668935. 1102930								
5600133-5			083 01	6.00	02	625	290	FLOW---	GM	250 NO 668521. 1102613								
5600133-6			083 01	6.00	02	625	290	FLOW---	GM	250 NO 669635. 1102116								
5600134W	50.2	03	072 01	14.8	02	56	6/78	AG	GM	5 0 W.C. GRAVES, JR.	56	08	13	1.5	11	75	.50	
5600134-1			072 01	4.00	---	---	---	---	---	100 NO 669741. 1123983								
5600134-2			072 01	5.00	---	---	---	---	---	165 NO 669513. 1123608								

5600134-3	072 01	3.00	---	N/A	N/A FLOWFLO	75	NO 669131, 1123141	GU 08						
5600134-4	072 01	5.00	---	N/A	N/A FLOWFLO	300	NO 669692, 1122715	GU 08						
5600134-5	072 03	4.00	---	N/A	N/A	---	NO 669516, 1124071	GU 08						
5600135W	13.2	03												
5600135-1	072 01	6.13	02	56	6/78 AG BOT	3	1 NATHAN JOHANSON	GU 08						
5600135-2	072 01	4.00	02	700	N/A FLOWFLO	70	NO 702279, 1125279	GU 08						
5600135-3	073 01	3.00	02	700	N/A FLOWFLO	70	NO 702224, 1124847	GU 08						
5600135-P1	072 01	3.00	02	700	N/A FLOWFLO	70	NO 703082, 1124410	GU 08						
5600136W	59.43	03												
5600136-1	083 01	21.87	02	56	10/87 AG BOT	2	1 W.C. GRAVES JR. (STEIN 2)	GU 08						
5600136-2	083 01	5.00	02	800	305 FLOWFLO	250	NO 665590, 1099519	GU 08						
5600136-P1	083 01	6.00	02	785	295 FLOWFLO	250	NO 664542, 1099484	GU 08						
5600137W	207.99	03												
5600137-1	083 01	76.55	02	56	10/87 AG GU	7	0 BERNARD EGAN	GU 08						
5600137-2	083 01	8.00	02	975	280 FLOWFLO	575	NO 678377, 1094193	GU 08						
5600137-3	083 01	5.00	02	610	275 FLOWFLO	250	NO 675452, 1093751	GU 08						
5600137-4	083 01	6.00	02	610	275 FLOWFLO	250	NO 675240, 1093440	GU 08						
5600137-5	083 01	5.00	02	715	290 FLOWFLO	250	NO 677856, 1093376	GU 08						
5600137-6	083 01	6.00	02	760	295 FLOWFLO	250	NO 678895, 1093434	GU 08						
5600137-7	083 01	5.00	02	760	295 FLOWFLO	250	NO 674860, 1092451	GU 08						
5600138W	207.99	03												
5600138-1	072 01	76.55	02	56	10/87 AG BOT	7	2 W.C. GRAVES JR. (STEIN 1)	GU 08						
5600138-2	072 01	6.00	02	730	285 FLOWFLO	250	NO 669918, 1109497	GU 08						
5600138-3	072 01	6.00	02	765	290 FLOWFLO	250	NO 649723, 1108815	GU 08						
5600138-4	072 01	8.00	02	910	275 FLOWFLO	250	NO 668149, 1108199	GU 08						
5600138-5	072 01	5.00	02	830	295 FLOWFLO	250	NO 666694, 1108008	GU 08						
5600138-6	072 01	5.00	02	725	280 FLOWFLO	250	NO 666648, 1108286	GU 08						
5600138-7	072 01	6.00	02	810	295 FLOWFLO	250	NO 664252, 1108339	GU 08						
5600138-P1	072 01	5.00	02	785	275 FLOWFLO	250	NO 663580, 1108816	GU 08						
5600138-P2	072 01	---	---	---	12 PTO	6000	N 669575, 1110620	SW 99						
5600139W	118.85	03												
5600139-1	071 01	43.74	02	56	10/87 AG GU	5	0 W.C. GRAVES (MANGER GROVE)	GU 08						
5600139-2	071 01	5.00	02	675	205 FLOWFLO	250	NO 653546, 1118621	GU 08						
5600139-3	071 01	5.00	02	680	210 FLOWFLO	250	NO 654750, 1118235	GU 08						
5600139-4	071 01	6.00	02	695	200 FLOWFLO	250	NO 653648, 1117427	GU 08						
5600139-5	071 01	5.00	02	585	213 FLOWFLO	250	NO 653621, 1116315	GU 08						
5600140W	118.85	03												
5600140-1	082 01	43.74	02	56	10/87 AG BOT	5	1 W.C. GRAVES, JR. (STEIN #40	GU 08						
5600140-2	082 01	4.02	560	195	FLOW	100	N 660617, 1094674	GU 08						
5600140-3	082 01	6.02	635	205	FLOW	250	N 661832, 1094672	GU 08						
5600140-4	082 01	6.02	710	220	FLOW	250	N 660529, 1093462	GU 08						
5600140-5	082 01	6.02	725	240	FLOW	250	N 661773, 1093560	GU 08						
5600140-P1	082 01	6.02	705	235	FLOW	250	N 662403, 1092424	GU 08						
5600141W	4.15	03												
5600141-1	083 01	9.82	02	56	6/78 AG GU	1	0 R. & M. BOURIAS	GU 02						
		3.02	80	50-60	N/A	250	N 702410, 1101605	GU 02						

CAPPED

56
PRIVATE W. SUPPLY ONLY

56

Cap. estimated

INOPERABLE

56

estimated

56

56

estimated

56

C-78 SOURCE

56

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

PERMIT NO. AN. ALL. ALL MAX MO. DATE USE SRCNO. SV. PMP'S OWNER. CO PERMIT NO. DEV NO. AQTYPE TYPE ST IRR ACRES EFF

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

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	DPTH	CD	INT	TYP	CAP.	NTR	XPLNR	YPLNR	SRC	AG	COMMENTS	GENERAL DEV.	UTIL.	(PORT ST. LUCIE)	56	02	08	13	.0	11	19	.50
5600142W	1555	03	01	56	3/88	PMS	GM	21	0	GENERAL	DEV.	UTIL.	(PORT ST. LUCIE)	56	02	08	13	.0	11	19	.50				
5600142-1	084	01	8.00	02	95	60	N/A	02	600	Y	713106.	1081354	GM	02											
5600142-2	084	01	8.00	02	103	45	N/A	02	200	Y	713813.	1082268	GM	02											
5600142-3	084	01	8.00	02	90	45	N/A	02	400	Y	713071.	1082096	GM	02											
5600142-4	084	03	8.00	02	114	79	N/A	02	125	Y	710737.	1083830	GM	02											
5600142-6	084	01	8.00	02	111	76	N/A	02	275	Y	709995.	1085133	GM	02											
5600142-7	084	01	8.00	02	111	69.5	68	02	265	Y	709500.	1086889	GM	02											
5600142-8	084	01	8.00	02	111	75	68	02	200	Y	709570.	1087756	GM	02											
5600142-9	084	01	8.00	02	110	65	65	02	320	Y	710903.	1085147	GM	02											
5600142-10	084	01	8.00	02	110	70	63	02	320	Y	710855.	1085866	GM	02											
5600142-11	084	01	8.00	02	111	70	70	02	180	Y	710814.	1086900	GM	02											
5600142-12	084	01	8.00	02	111	71	69	02	255	Y	710598.	1087728	GM	02											
5600142-13	084	01	8.00	02	95.5	71	N/A	02	190	Y	708517.	1085159	GM	02											
5600142-14	084	01	8.00	02	100	54.5	N/A	02	300	Y	710046.	1080336	GM	02											
5600142-15	084	01	8.00	02	99.5	60	N/A	02	300	Y	709116.	1079166	GM	02											
5600142-16	084	01	8.00	02	90	64.5	N/A	02	300	Y	709718.	1078168	GM	02											
5600142-17	084	01	8.00	02	110	55	N/A	02	300	Y	714658.	1079946	GM	02											
5600142-18	084	03	8.00	02	95	50	N/A	02	100	Y	713893.	1078676	GM	02											
5600142-19	084	01	8.00	02	95	60	N/A	02	275	Y	703634.	1084638	GM	02											
5600142-20	084	01	8.00	02	105	57	N/A	02	350	Y	703319.	1085331	GM	02											
5600142-21	084	02	8.00	02	90	45	N/A	02	200	Y	706154.	1088953	GM	02											
5600142-22	084	02	8.00	02	90	41.5	N/A	02	200	Y	710191.	1086882	GM	02											
5600144W	10.4	03	3.29	02	56	6/78	AG	GM	2	0	P. S. L. BRUNO														
5600144-1	072	01	4.00	02	800	---	FLOWFLO		150	M	663536.	1135880	GM	08											
5600144-2	072	01	6.00	02	1000	---	FLOWFLO		400	M	664156.	1135892	GM	08											
5600146W	15	03	4.78	02	56	6/78	AG	GM	2	1	CLEMENZI GROVE														
5600146-1	072	01	4.00	02	---	---	FLOWFLO		125	M	696433.	1136029	GM	08											
5600146-2	072	01	6.00	02	---	---	FLOWFLO		400	M	696106.	1135308	GM	08											
5600146-P1	072	01	---	---	---	---	---	---	6,000	M	695174.	1134926	SV	99											
5600147W	181.68	03	66.87	02	56	7/87	AG	BOT	4	1	ORANGE CO. OF FLORIDA														
5600147-1	072	01	8	02	700	300	FLOWFLO		575	M	666777.	1138918	GM	08											
5600147-2	072	01	8	02	700	300	FLOWFLO		575	M	666824.	1137439	GM	08											
5600147-3	072	01	8	02	700	300	FLOWFLO		575	M	666808.	1136164	GM	08											

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

PERMIT NO.	AN.	ALL.	UNT	MAX	MO.	DATE	USE	SRCNO.	SW	CO	PERMIT	NO.	DEV	MO.	AGTYPE	TYPE	ST	IRR	IRR
						ISS.												ACRES	EFF

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

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	DPTH	CD	TD	CD	INT	TYP	CAP.	MTR7	XPLNR	YPLNR	SRC	AG	COMMENTS
5600165-11	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-12	072 04	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-13	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-14	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-15	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-16	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-17	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-18	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-19	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-20	072 03	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-21	072 01	3.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-22	072 03	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-23	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-24	072 03	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-25	072 03	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-26	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-27	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-28	072 01	5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-29	072 01	5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-30	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-31	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-32	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-33	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-34	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-35	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-36	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-37	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-38	072 03	5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-39	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-40	072 03	5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-41	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-42	072 01	4.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-43	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-44	072 01	6.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5600165-P1	072 01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

5600165W	59.43	03	21.87 02	56	7/87	AG BOT	1	LYNCH, KUMP & STATTLE (CASSEN'S GROVE)	56	08	13	.8	11	76	.50
5600166-1		072 01	8.00 02	800	100	FLOMFLO	700	672209, 1130767 GM 08							
5600166-2		072 01					10000	673408, 1130772 SW 99 C-54, Cap est.							
5600167W	14.07	03	5.18 02	56	1/89	AG GW	1	W. STATTLE (CASSEN'S GROVE)	56	08	13	08	11	18	.50
5600168W	179.38	03	66.02 02	56	4/89	AG BOT	3	W.E. REUTER (SHAMROCK GROVES)	56	08	13	.8	11	390	.85
5600168-1		072 01	8.00 02	300	250	FLOMFLO	780	680290, 1121626 GM 08							
5600168-2		072 03	5.00 02	300	250		250	679564, 1119353 GM 08 Cap est.							
5600168-3		072 01	8.00 02	300	250	FLOMFLO	780	680973, 1118546 GM 08							
5600168-P1		072 01	...	01	...		18000	678931, 1121511 SW 99							
5600169W	49.67	03	18.28 02	56	3/89	AG BOT	2	EDSALL GROVE #6	56	08	13	1.5	11	80	.85
5600169-1		061 01	6.00 02	750	294	FLOMFLO	300	682334, 1168945 GM 08							
5600169-2		061 01	6.00 02	750	294	FLOMFLO	400	683444, 1168912 GM 08							
5600169-P1		061 01	...	01	...		7000	684184, 1168342 SW 99							
5600170W	32.6	03	16.00 02	56	3/78	AG BOT	1	W.K. GROVES	56	08	13	.8	11	81	.50
5600170-1		061 01	12.00			FLOMFLO	900	693576, 1156095 GM 08							
5600170-P1		061 01	...				6000	692316, 1157414 SW 99							
5600170-P2		061 01	...				6000	694756, 1156699 SW 99							
5600171W	6.03	03	3.00 02	56	3/78	AG BOT	1	C.D. HOWARD	56	08	13	.8	11	9	.50
5600171-1		072 01	5.00 02	850	140	FLOMFLO	100	699786, 1141006 GM 08							
5600171-P1		072 01	...				700	698832, 1140959 SW 99							
5600172W	48.3	03	27.8 02	56	3/78	ag bot	4	C. FANSETT JR.	56	08	13	1.5	11	160	.50
5600172-1		061 01	6.00 02	1000	250	FLOMFLO	300	681767, 1161503 GM 08							
5600172-2		061 01	6.00 02	1000	250	FLOMFLO	300	681814, 1160388 GM 08							
5600172-3		061 01	6.00 02	1000	250	FLOMFLO	300	682941, 1161497 GM 08							
5600172-4		061 01	6.00 02	1000	250	FLOMFLO	300	683601, 1160368 GM 08							
5600172-P1		061 01	...				10000	684076, 1160261 SW 99							
5600172-P2		061 01	...				8000	681711, 1160214 SW 99							
5600173W	20.7	03	7.62 02	56	4/89	AG GW	2	GATES & GATES	56	08	13	1.5	11	45	.85
5600173-1		072 01	4.00 02	800	150		100	692749, 1146315 GM 08 Cap est.							
5600173-2		072 01	4.00 02	800	150		100	692630, 1144956 GM 08 Cap est.							
5600174W	18.4	03	6.77 02	56	5/89	AG BOT	1	ESTATE OF PIPPERMITE GROVE	56	08	13	1.5	11	40	.85
5600174-1		061 01	6.00 02	800	300	FLOMFLO	250	681194, 1166109 GM 08							
5600174-P1		061 01	...				10000	680959, 1166863 SW 99							
5600175W	13.8	03	5.08 02	56	3/89	AG GW	1	EDSALL GROVE #1	56	08	13	1.5	11	30	.85
5600175-1		061 01	6.00 02	1200	268	FLOMFLO	800	686629, 1167300 GM 08							
5600176W	91.9	03	33.8 02	56	3/78	AGR bot	8	SEXTON, CHARLES R SR	56	08	13	.8	11	200	.85
5600176-1		61 1	6.02	750	250		400	689057, 1167810 GM 08							
5600176-2		61 1	5.02	650	250		400	689566, 1168165 GM 08							
5600176-3		61 1	4.02	650	250		400	689023, 1169995 GM 08							
5600176-4		61 1	5.02	700	260		400	688319, 1170675 GM 08							
5600176-5		61 1	5.02	700	260		400	688250, 1170948 GM 08							

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

PERMIT NO.	AN.	ALL.	UNT.	MAX.	MO.	DATE	USE	SRCNO.	SW	PHPS	OWNER	CD	PERMIT NO.	DEV NO.	AGTYPE	TYPE	ST	ACRES	IRR	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY	QUAD.	WELL	DPTH	PHS	PUM	INT	TYP	CAP.	MTR?	MPLNR	YPLNR	SRC	AG	COMMENTS
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5600176-6	61	1	6	02	750	260	4	400			688025	1170779	GM	08						
5600176-7	61	1	5	02	700	260	4	250			687716	1170863	GM	08						
5600176-8	61	1	5	02	700	260	4	250			687400	1170400	GM	08						
5600177W	19.2	03	8.6	02	31678	AGR	GM	1	1		DOMAINE, COLMEL V				08	13	0.8	11	47	.50
5600177-1	61	1	5	02			4	200			680156	1162017	GM	08	EXPIRED/SOLD					
5600177-P1	61	1		02			1	3000			678223	1161735	SM	99						
5600178W	15.6	03	5.7	02	31678	AGR	bot	1	1		CENTRAL GROVE CORP				08	13	0.8	11	20	.50
5600178-1	61	1	4	02	1000	350	4	100			694317	1153416	GM	08						
5600178-1S	61	1		02			3	2500			694859	1153459	SM	99	FPFD-Portable					
5600179W	29.7	03	10.9	02	31678	AGR	GM	1	0		STONE, CHARLES JR				08	13	1.5	11	38	.50
5600179-1	61	1	10	02	900	375	4	600			685066	1167567	GM	08						
5600180W	26.2	03	9.6	02	31678	AGR	GM	3	0		PIPPIN, ESTATE OF O.F.				08	13	0.8	11	57	.65
5600180-1	61	1	8	02	1000	300	4	500			678150	1164365	GM	08						
5600180-2	61	1	4	02	850	300	4	100			678482	1164964	GM	08						
5600180-3	61	1	6	02	850	300	4	250			678806	1165527	GM	08						
5600181W	25.3	03	9.3	02	31678	AGR	bot	2	1		CASSENS GROVE SERVICE, INC				08	13	0.8	11	55	.85
5600181-1	61	1	10	02	140	80	1	800			683671	1164692	GM	08	May be only 1 well					
5600181-2	61	1	10	02	140	80	1	800			683471	1164692	GM	08	LOC. IS GUESS					
5600181-1S	61	1		02			3	10000			684166	1164384	SM	99	FPFD					
5600182W	28.9	03	6.9	02	31678	AGR	GM	1	0		RUSSAKIS, JIM				08	13	1.5	11	37	.50
5600182-1	61	1	4	02			4	160			686180	1155655	GM	08						
5600183W	68.9	03	25.3	02	31678	AGR	GM	8	0		MCALLISTER, DONALD H				08	13	1.5	11	150	.85
5600183-1	61	1	4	02	550	225	4	100			684235	1170750	GM	08						
5600183-2	61	1	6	02	750	250	4	400			683086	1170879	GM	08						
5600183-3	61	1	8	02	800	250	4	750			682885	1170746	GM	08						
5600183-4	61	1	4	02	550	225	4	100			682032	1171435	GM	08						
5600183-5	61	1	6	02	750	250	4	400			681902	1170635	GM	08						
5600183-6	61	1	5	02	700	250	4	250			682362	1169693	GM	08						
5600183-7	61	1	5	02	700	250	4	250			683719	1169680	GM	08						

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

PERMIT NO.	AN.	ALL.	MAX.	MO.	DATE	USE	SRC	NO.	SW	CD	PERMIT NO.	DEV NO.	ACTYPE	TYPE	ST	IRR	ACRES	EFF
NO.	UNT	NO.	UTS	CO	ISS.	TYPE	VLS.	PMPs	OWNER									

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	DPTH	CD	INT	TYP	CAP.	NTR?	XPLNR	YPLNR	SRC	AQ	COMMENTS
NO.		NO.	STSDIA.											

5600207-1	72	1	5	02	680	280	4	150	697055	1144876	GM	08		
5600207-1s	72	1	5	02	680	280	10	10000	697486	1144514	SM	99	C-3	

5600208M 83 03 52.1 02 31678 AGR GW 6 0 HAMILTON, LARRY

5600208-1	61	1	6	02	790	140	4	150	680420	1170664	GM	08		
5600208-2	61	1	6	02	790	140	4	150	681230	1169389	GM	08		
5600208-3	61	1	6	02	900	240	4	300	680214	1170844	GM	08		
5600208-4	61	1	5	02	800	140	4	150	680253	1172997	GM	08		
5600208-5	61	1	5	02	800	140	4	150	681592	1172385	GM	08		
5600208-6	61	1	5	02	950	140	4	300	682342	1172656	GM	08		

5600209M 7.8 03 2.8 02 31678 AGR bot 1 1 HELSETH, HAROLD & BETTY
5600209-1 72 1 5 02 940 280 4 150 696521 1145446 GM 08
5600209-1s 72 1 5 02 940 280 10 1 10000 696021 1145446 SM 99 C-3 /also listed, LOC. IS GUESS

5600210M 301 03 110.8 02 31678 AGR bot 13 3 UNITED GROVES
5600210-1 61 1 4 02 5 100 685285 1166760 GM 08 Cap estimated
5600210-2 61 1 4 02 4 100 686349 1166791 GM 08
5600210-3 61 1 8 02 4 575 685972 1164855 GM 08
5600210-4 61 1 4 02 4 100 686364 1163932 GM 08
5600210-5 61 1 4 02 4 100 685090 1162636 GM 08
5600210-6 61 1 4 02 4 100 686730 1162234 GM 08
5600210-7 61 1 4 02 4 100 686768 1165977 GM 08
5600210-8 61 1 4 02 4 100 685648 1161304 GM 08
5600210-9 61 1 4 02 4 100 686547 1159776 GM 08
5600210-10 61 1 4 02 4 100 684585 1160562 GM 08
5600210-11 61 1 4 02 4 100 685766 1159127 GM 08
5600210-12 61 1 4 02 4 100 684817 1166052 GM 08
5600210-13 61 1 4 02 4 100 686465 1165141 GM 08
5600210-14 61 1 4 02 1 8000 684634 1165269 SM 99 Ft.Pierce Farms DO
5600210-15 61 1 02 1 8000 684625 1162185 SM 99 Ft.Pierce Farms DO
5600210-25 61 1 02 1 12000 684668 1161321 SM 99 Ft.Pierce Farms DO
5600210-35 61 1 02 1 12000 684668 1161321 SM 99 Ft.Pierce Farms DO

5600211M 30.2 03 17.4 02 31678 AGR GW 3 1 CASSINS GROVE SERVIC
5600211-1 61 1 6 02 3 410 690350 1151929 GM 08 for Spray Tanks

5600211-2	61	1	5 02			3	175	690032 1151576 GM	08 for Spray Tanks	08	13	0.8	11	75	.50
5600211-3	61	1	4 02			3	160	691760 1151595 GM	08	08	13	0.8	11	35	.85
5600211-1S	61	1	24 02			1	5000	691560 1151895 SW	99 24", 2 WAY PUMP MAIN CANAL #1						
5600212W	58.6	03	21.5 02			6	1	GATES, PHILIP C							
5600212W	16.1	03	5.9 02			31678	AGR bot								
5600212-1	72	1	4 02	800	150	4	150	696555 1141758 GM	08						
5600212-2	72	1	4 02	800	150	4	150	697301 1141916 GM	08						
5600212-3	72	1	5 02	800	250	4	250	697666 1142464 GM	08						
5600212-4	72	1	4 02	800	150	4	150	698604 1142042 GM	08						
5600212-5	72	1	5 02	800	200	4	250	698477 1141382 GM	08						
5600212-6	72	1	6 02	900	200	4	385	697682 1141356 GM	08						
5600212-S	72	2	02			3	8000	698242 1142794 SW							
5600213W	26.7	03	7.9 02			31678	AGR 9W								
5600213-1	72	1	5 02			4	170	CASSINS GROVE SERVICE							
5600213-2	72	1	4 02			4	100	699836 1144804 GM	08	08	13	0.8	11	40	.50
5600213-3	72	1	5 02			4	170	689901 1145275 GM	08						
5600214W	55.1	03	20.3 02			31678	AGR bot								
5600214-1	61	1	5 02	800	150	4	150	GATES, P.C. & C.B., JR.							
5600214-2	72	1	5 02	800	150	4	275	696558 1151810 GM	08 Check permit boundaries	08	13	0.8	11	225	.85
5600214-3	72	1	4 02	800	150	4	200	697277 1151037 GM	08 on overleys-they						
5600214-4	72	1	4 02	800	150	4	181	695400 1150726 GM	08 added 80 acres-sec 25						
5600214-5	72	1	5 02	800	150	4	295	696512 1150662 GM	08						
5600214-6	72	1	4 02	800	150	4	160	697203 1150631 GM	08						
5600214-7	72	1	5 02	800	150	4	250	696089 1150366 GM	08						
5600214-8	72	1	4 02	800	150	4	181	695324 1150108 GM	08						
5600214-9	72	1	5 02	800	150	4	160	695673 1150094 GM	08						
5600214-10	72	1	5 02	800	150	4	295	696597 1150113 GM	08						
5600214-11	72	1	5 02	800	150	4	250	697167 1150056 GM	08						
5600214-12	72	1	5 02	800	150	4	250	696373 1148830 GM	08						
5600214-1S	72	2	02			3	8000	697023 1148807 GM	08						
5600215W	60.8	03	22.3 02			31678	AGR 9W								
5600215-1	61	1	8 02	1200	200	4	610	CASSENS GROVE SERVICE, INC.							
5600215-2	61	1	8 02	1200	200	4	610	679559 1160068 GM	08	08	13	1.5	11	77.8	.50
5600215-3	61	1	6 02	1200	200	4	250	678330 1160105 GM	08						
5600215-4	61	1	4 02	1200	200	4	100	679300 1161200 GM	08 for Spray Tanks, LOC IS GUESS						
5600216W	20.2	03	7.45 02			31678	AGR 9W								
5600216-1	61	1	4 02	700	340	4	75	RUSSAKIS, JIM G							
5600216-2	61	1	4 02	700	340	4	75	690050 1156438 GM	08 J.L. PLOTTED	08	13	0.8	11	44	.85
5600216-3	61	1	4 02	700	340	4	75	689791 1157138 GM	08 acreage sold						
5600217W	7.6	03	2.7 02			31678	AGR 9W								
5600217-1	72	1	4 02	960	300	4	75	HELSEIN, HAROLD & BETTY							
5600217-2	72	1	6 02	960	250	4	150	693256 1145005 GM	08	08	13	1.5	11	16	.85
5600218W	36.4	03	11.6 02			31678	AGR 9W								
5600218-1	61	1	6 02			4	150	HARDWICK GROVES							
5600218-2	61	1	6 02			4	200	695832 1158129 GM	08 Well broken open	08	13	1.5	11	67	.50

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

PERMIT NO.	AN.	ALL.	ALL MO.	MAX MO.	DATE USE	SRCNO.	SV	CO	PERMIT NO.	DEV NO.	AQTYPE	TYPE	ST	IRR ACRES	IRR EFF	
5600219W	5600219-1	61	1	61	3.3	02	31678	AGR	GM	2	0	HARDWICK GROVES	683084	1152338	GM	08
5600219W	5600219-2	61	1	61	6.02	275	31678	AGR	GM	4	275	HARDWICK GROVES	683084	1152338	GM	08
5600220W	5600220-1	72	1	72	3.02	100	31678	AGR	GM	4	100	CASSIUS GROVE SERVIC	690871	1146109	GM	08

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	STSDIA.	CD	TO	CD	INT	YTP	CAP.	WTR?	XPLWR	YPLWR	SRC	AQ	COMMENTS
5600221W	5600221-1	61	1	61	03	729.5	03	268.5	02	21	10	TRIPLE N & INDIANOLA GROVES, IN	683084	1156639	GM	08
5600221W	5600221-2	61	1	61	03	729.5	03	268.5	02	158	4	TRIPLE N & INDIANOLA GROVES, IN	683084	1156639	GM	08
5600221W	5600221-3	61	1	61	03	729.5	03	268.5	02	122	4	TRIPLE N & INDIANOLA GROVES, IN	683084	1156639	GM	08
5600221W	5600221-4	61	1	61	03	729.5	03	268.5	02	100	4	TRIPLE N & INDIANOLA GROVES, IN	683019	1157574	GM	08
5600221W	5600221-5	61	3	61	03	729.5	03	268.5	02	810	4	TRIPLE N & INDIANOLA GROVES, IN	683301	1157045	GM	08
5600221W	5600221-6	61	3	61	03	729.5	03	268.5	02	100	4	TRIPLE N & INDIANOLA GROVES, IN	685832	1158336	GM	08
5600221W	5600221-7	61	3	61	03	729.5	03	268.5	02	159	4	TRIPLE N & INDIANOLA GROVES, IN	684385	1155674	GM	08
5600221W	5600221-8	61	1	61	03	729.5	03	268.5	02	150	4	TRIPLE N & INDIANOLA GROVES, IN	684500	1154578	GM	08
5600221W	5600221-9	61	1	61	03	729.5	03	268.5	02	352	4	TRIPLE N & INDIANOLA GROVES, IN	685096	1153809	GM	08
5600221W	5600221-10	61	1	61	03	729.5	03	268.5	02	250	4	TRIPLE N & INDIANOLA GROVES, IN	686114	1153181	GM	08
5600221W	5600221-11	61	1	61	03	729.5	03	268.5	02	410	4	TRIPLE N & INDIANOLA GROVES, IN	687424	1152807	GM	08
5600221W	5600221-12	61	1	61	03	729.5	03	268.5	02	150	4	TRIPLE N & INDIANOLA GROVES, IN	687964	1151836	GM	08
5600221W	5600221-13	61	1	61	03	729.5	03	268.5	02	200	4	TRIPLE N & INDIANOLA GROVES, IN	687154	1151629	GM	08
5600221W	5600221-14	61	1	61	03	729.5	03	268.5	02	350	4	TRIPLE N & INDIANOLA GROVES, IN	687154	1151629	GM	08
5600221W	5600221-15	72	1	72	03	729.5	03	268.5	02	150	4	TRIPLE N & INDIANOLA GROVES, IN	686811	1150762	GM	08
5600221W	5600221-16	72	1	72	03	729.5	03	268.5	02	352	4	TRIPLE N & INDIANOLA GROVES, IN	685767	1150750	GM	08
5600221W	5600221-17	72	1	72	03	729.5	03	268.5	02	150	4	TRIPLE N & INDIANOLA GROVES, IN	687781	1149841	GM	08
5600221W	5600221-18	72	1	72	03	729.5	03	268.5	02	250	4	TRIPLE N & INDIANOLA GROVES, IN	688331	1149841	GM	08
5600221W	5600221-19	72	1	72	03	729.5	03	268.5	02	150	4	TRIPLE N & INDIANOLA GROVES, IN	687557	1148494	GM	08
5600221W	5600221-20	61	3	61	03	729.5	03	268.5	02	350	4	TRIPLE N & INDIANOLA GROVES, IN	686831	1152323	GM	08
5600221W	5600221-21	72	1	72	03	729.5	03	268.5	02	150	4	TRIPLE N & INDIANOLA GROVES, IN	682862	1148746	GM	08
5600221W	5600221-1S	61	1	61	02	729.5	02	268.5	02	3	10000	TRIPLE N & INDIANOLA GROVES, IN	683080	1158896	SU	99
5600221W	5600221-2S	61	1	61	02	729.5	02	268.5	02	3	10000	TRIPLE N & INDIANOLA GROVES, IN	684454	1156964	SU	99
5600221W	5600221-3S	72	1	72	02	729.5	02	268.5	02	3	10000	TRIPLE N & INDIANOLA GROVES, IN	686703	1148368	SU	99
5600221W	5600221-4S	61	1	61	02	729.5	02	268.5	02	3	10000	TRIPLE N & INDIANOLA GROVES, IN	689252	1152510	SU	99
5600221W	5600221-5S	61	1	61	02	729.5	02	268.5	02	3	1800	TRIPLE N & INDIANOLA GROVES, IN	689252	1152510	SU	99
5600221W	5600221-6S	61	1	61	02	729.5	02	268.5	02	3	1800	TRIPLE N & INDIANOLA GROVES, IN	689252	1152510	SU	99
5600221W	5600221-7S	61	1	61	02	729.5	02	268.5	02	3	3000	TRIPLE N & INDIANOLA GROVES, IN	689252	1152510	SU	99

CO PERMIT NO. DEV NO. AQTYPE TYPE ST IRR ACRES IRR EFF

08 13 1.5 11 19 .50

08 13 1.5 11 20 .50

08 13 1.5 11 966 .50

LOC. MELL 14 IS GUESS

Cap estimated

Cap est.

C-1, 24" PUMP

C-1, 24" PUMP

C-18, 24" PUMP

LOC. IS GUESS HERE DOWN.

99 Portable pumps, 10" PORTABLE PUMP

99 withdrawing from, 10" PORTABLE PUMPS

99 on-site take and, 12" PORTABLE

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

PERMIT NO.	AN.	ALL.	UNT NO.	ALL MAX MO.	DATE USE SRCHD.	SN	CO PERMIT NO.	DEV NO.	ADTYPE	ST	IRR	IRR
											ACRES	EFF

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	DPTH	CD	INT TYP	CAP.	WTR?	XPLNR	YPLNR	SRC	AO	COMMENTS
5600237M	5600237-1	72	1	6 02	4	350			698527	1133980	GM	08	
5600238M	5600238-1	72	1	3 02	4	60			698346	1134549	GM	08	
5600239M	5600239-1	72	1	4 02	4	100			698207	1134869	GM	08	
5600240M	5600240-1	72	1	4 02	4	75			697988	1135116	GM	08	
5600241M	5600241-1	72	1	6 02	4	500			ORANGE AVE LAND TRUS				
5600242M	5600242-1	72	1	9 02	4	100			699949	1133684	GM	08	EXPIRED
5600243M	5600243-1	72	1	4 02	4	100			2 1 DUNN, HOWARD M				
5600244M	5600244-1	72	1	4 02	4	140			686042	1117047	GM	08	
5600245M	5600245-1	72	1	4 02	4	500			685454	1116750	GM	08	on site pond
5600246M	5600246-1	72	1	6 02	4	410			685653	1116960	SU	99	
5600247M	5600247-1	72	1	12 02	4	960			DUNN, HOWARD M				
5600248M	5600248-1	72	1	10 02	4	10000			692358	1128343	GM	08	
5600249M	5600249-1	72	1	15 02	4	105			A + B GROVE				
5600250M	5600250-1	72	1	4 02	4	200			647915	1131298	GM	08	EXPIRED
5600251M	5600251-1	72	1	6 02	4	290			648575	1129318	SU	99	BOX PUMP FROM INSURMD CANAL
5600252M	5600252-1	72	1	15 02	4	250			3 1 DUNN, EARNEST R				
5600253M	5600253-1	72	1	4 02	4	148			694014	1128748	GM	08	
5600254M	5600254-1	72	1	4 02	4	200			694241	1127790	GM	08	
5600255M	5600255-1	72	1	6 02	4	400			692855	1127881	GM	08	
5600256M	5600256-1	72	1	4 02	4	350			693978	1127002	SU	99	on site pond
5600257M	5600257-1	72	1	18 02	4	50			CHILDS, RL-SR & WA				
5600258M	5600258-1	72	1	4 02	4	148			706499	1121558	GM	08	
5600259M	5600259-1	72	1	4 02	4	200			707733	1120902	GM	08	
5600260M	5600260-1	72	1	4 02	4	200			707216	1120206	GM	08	
5600261M	5600261-1	72	1	6 02	4	400			705332	1120748	GM	08	
5600262M	5600262-1	72	1	4 02	4	148			704578	1120670	GM	08	
5600263M	5600263-1	72	1	4 02	4	148			JONES, EDDIE M				

PERMIT NO.	CD	PERMIT NO.	DEV NO.	ADTYPE	ST	IRR	IRR
5600237M	08	13	0.8	11	34	.50	
5600238M	08	13	0.8	11	40	.50	
5600239M	08	13	1.5	11	57.0	.85	
5600240M	08	13	0.8	11	37.0	.85	
5600241M	08	13	1.5	11	74.0	.85	
5600242M	08	13	0.8	11	94.0	.85	
5600243M	08	13	0.8	11	20.0	.85	
5600244M	08	13	0.8	11	52.0	.50	
5600245M	08	20	0.8	11	15.0	.50	

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

PERMIT NO.	AN. ALL.	ALL UNIT MO.	MAX MO.	DATE ISS.	USE TYPE	SRCNO.	SW	OWNER	CO	PERMIT NO.	DEV MO.	AGTYPE	TYPE	ST	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	DPTH	COO TD	CD	INT TYP	PUMP	AGR	ROW	YPLNR	SRC	AG	COMMENTS	56	08	13	1.5	11	36	.85
5600254	16.6	03	6.1	02	121478	AGR	both	1	1	HESTER, R.J. & LIMBLOOM, G.	56	08	13	1.5	11	36	.85				
5600255	17.1	1	6.02		128018	GM	08	4	410	657717	1127030	SV	99	C-65							
5600256	18.4	03	6.8	02	11879	AGR	GM	2	0	HESTER, R.J. & LIMBLOOM, G.	56	08	13	1.5	11	40	.85				
5600257	17.2	1	5.02	814	316	4	269	4	664056	1138007	GM	08									
5600258	27.2	1	4.02	800	300	4	75	4	663581	1138746	GM	08									
5600259	33.1	03	12.2	02	121478	AGR	both	3	1	OLDCHESTER CORPORATION	56	08	13	1.5	11	72	.85				
5600259-1	71	1	4.02	850	315	4	75	4	655670	1129356	GM	08									
5600259-2	71	1	4.02	880	294	4	75	4	655565	1128224	GM	08									
5600259-3	71	1	6.02	960	336	4	180	4	655934	1128261	GM	08									
5600259-1S	71	1	1			16	1	10000	655277	1129307	SV	99		C-64							
5600260	35	03	12.9	02	11879	AGR	GM	3	0	ROSSERTHAL, JAMIC	56	08	13	0.8	11	76	.85				
5600260-1	71	1	6.02	800	340	4	100	4	651289	1118407	GM	08		Capacity estimated							
5600260-2	71	1	5.02	700	340	4	100	4	651323	1117805	GM	08									
5600260-3	71	1	6.02	800	340	4	100	4	650114	1117801	GM	08									
5600262	19.5	03	7.2	02	31579	AGR	both	2	1	BRITT, H.V. & W. H.	56	08	13	1.5	11	37	.75				
5600262-1	83	1	4.02	800	4	128	4	667053	1100486	GM	08										
5600262-2	83	1	6.02	800	4	225	4	667506	1101360	GM	08										
5600262-1S	83	2	02			2	10000		668082	1100885	SV	99		C-85							
5600264	27.8	03	10.2	02	11879	AGR	both	8	1	ROSSERTHAL, J.H. & TURVIN, L.A.	56	08	13	1.5	11	36	.50				
5600264-1	71	1	6.02	700	360	4	300	4	658070	1126954	GM	08									
5600264-2	71	1	5.02	650	360	4	250	4	658725	1126928	GM	08									
5600264-3	71	1	5.02	650	360	4	250	4	658441	1126538	GM	08									

5600264-4	71	1	5	02	650	360	4	250	659809	1126799	GM	08							
5600264-5	71	1	5	02	650	360	4	250	660658	1126271	GM	08							
5600264-6	71	1	5	02	650	360	4	250	658444	1125390	GM	08							
5600264-7	71	1	4	02	500	320	4	150	659098	1125395	GM	08							
5600264-8	71	1	8	02	1000	360	4	300	658644	1124374	GM	08							
5600264-1S	71	1		02			3	8000	658903	1129285	SU	99							
5600265W	46.9	03	17.3	02	11879	AGRboth	1	1	1	EDSALL-DURRETT GROVES									
5600265-1	71	1	6	02	900	300	4	270	661540	1132288	GM	08							
5600265-1S	72	1		1		15	1	10000	662680	1132710	SU	99							
5600266W	17.9	03	6.6	02	31579	AGRboth	1	2	1	PLATTS, NORMAN & BARBARA									
5600266-1	71	1	5	02	800	300	4	550	660707	1113331	GM	08							
5600266-1C	71	4		1		18			660694	1113508	SU	99							
5600266-2C	71	4		1		18			660688	1112881	SU	99							
5600267W	40	03	5.6	02	110879	AGRboth	2	2	1	MATBURY MANAGEMENT									
5600267-1	71	3	4	02	1000	4	260	661178	1131795	GM	08								
5600267-2	71	1	6	02	1000	4	261	661178	1131795	GM	08								
5600267-1S	71	3		02			7500	662070	1130877	SU	99								
5600267-2S	71	3		02			7500	662109	1131350	SU	99								
5600269W	18.4	03	6.7	02	21579	AGR	GM	1	0	A-ONE CITRUS, INC.									
5600269-1	71	1	5	02	1000	360	4	150	655933	1138391	GM	08							
5600270W	65.3	03	24	02	21579	AGRboth	1	2	1	FLA CITRUS PROPERTIES									
5600270-1	72	1	5	02	1000	4	315	662993	1117451	GM	08								
5600270-1S	72	1		02			3	12700	663019	1117214	SU	99							
5600270-1C		4		1		14				Header Canal									
5600271W	16.6	03	6.1	02	21579	AGRboth	1	1	1	MORRIS, JR., KENNETH A									
5600271-1	72	1	6	02	800	160	4	350	663596	1120046	GM	08							
5600271-1S	72	2		02		3	4000	663047	1119441	SU	99								
5600272W	129.2	03	47.6	02	21579	AGR	GM	1	0	EVANS PROPERTIES, INC.									
5600272-1	71	1	8	02	881	287	4	575	660354	1120135	GM	08							
5600276W	61.4	03	22.6	02	31579	AGR	2	2	1	MONTIYA, ALBERTO & JOEAN									
5600276-1	82	1	8	1	1000	360	4	500	647419	1099046	GM	08							
5600276-2	82	1	8	1	1000	360	1	500	649397	1100770	GM	08							
5600276-3S	82	1		1		10	2	12000	652283	1100377	SU	99							
5600276-4S	82	1		1		10	2	12000	647415	1100157	SU	99							
5600277W	128.3	03	47.2	02	31579	AGRboth	7	1	1	ROSENTHAL, J.M. & NEWMAN, L.H.									
5600277-1	71	1	6	1	850	360	1	300	647062	1122775	GM	08							
5600277-2	71	1	6	1	850	360	4	275	647333	1122675	GM	08							
5600277-3	71	1	6	1	850	360	4	275	648145	1122577	GM	08							
5600277-4	71	1	6	1	850	360	4	300	648595	1122579	GM	08							
5600277-5	71	1	6	1	850	360	4	300	649226	1122581	GM	08							
5600277-6	71	1	8	1	1000	400	4	600	649947	1122584	GM	08							
5600277-7	71	1	4	1	550	200	4	120	651207	1122891	GM	08							
5600277-1S	71	1		1		3	8000	651385	1123498	SU	99								

5600313M	170.2	03	62.6 02	101179	AGRboth	5 6	GATES, SR., PHILIP C. &	56	08	13	0.8	11	218	.50
5600313-1	71	1	6 02 1100	150	4	400	655384 1121281 GM 08		08	13	0.8	11	218	.50
5600313-2	71	1	6 02 1100	150	4	350	656746 1121076 GM 08							
5600313-3	71	1	8 02 1250	150	4	670	656551 1119088 GM 08							
5600313-4	71	1	8 02 1000	150	4	450	654513 1119713 GM 08							
5600313-5	71	1	6 02 1000	150	4	175	653116 1119693 GM 08							
5600313-1S	71	1	02			5000	655917 1121540 SM 99	C-67&68						
5600313-2S	71	1	02			8000	656149 1119083 SM 99	C-67&68						
5600313-1C	71	4	02				656149 1119083 SM 99	Screw gate, Location is guess.						
5600313-2C	71	4	02				656600 1121638 SM 99	Screw gate						
5600313-3C	71	4	02				657343 1121624 SM 99	Screw gate						
5600313-4C	71	4	02				657343 1121624 SM 99	Screw gate, Location is guess.						
5600314M	62.1	03	22.8 02	101179	AGRboth	1	1 HESTER, III, R.J. & LIMBLOOM	56	08	13	1.5	11	135	.85
5600314-1	72	1	5 02 745	270	4	161	664813 1135984 GM 08							
5600314-1S	72	1	1	13	1	12000	664116 1134911 SM 99	C-62						
5600315M	18.88	03	6.95 02	101179	AGR GW	1 0	C + W GROVES	56	08	13	1.5	11	40	.50
5600315-1	72	1	6 02			250	664278 1123389 GM 08	EXPIRED, CAP IS ESTIM.						
5600316M	193.2	03	71.1 02	11080	AGRboth	2 1	HESTER, ROBERT J.	56	08	13	0.8	11	420	.85
5600316-1	83	1	6 02			175	675356 1090337 GM 08							
5600316-2	83	1	6 02			350	679075 1090807 GM 08							
5600316-1S	83	1	02			12000	674741 1089796 SM 99	C-24						
5600317M	42.93	03	15.8 02	110879	AGR GW	1 1	STONE, JR., C	56	08	13	0.8	11	80	.50
5600317-1	71	1	4 02			100	653194 1121687 GM 08	EXPIRED						
5600317-1S	71	1	24 02			15000	654549 1120885 SM 99	AS OF 10/87						
5600318M	34.3	03	12.6 02	41688	AGR GW	1 0	FIVE STAR GROVES, INC.	56	08	13	0.8	11	75	.85
5600318-1	71	1	6 02 1100	250	4	225	651290 1133347 GM 08							
5600319M	117.3	03	43.2 02	110879	AGRboth	2 2	HATFIELD, MILTON H. - TRUSTEE	56	08	13	1.5	11	150	.50
5600319-1	71	1	4 02 600	100	4	50	658048 1134607 GM 08							
5600319-2	71	1	4 02 600	100	4	100	659281 1134639 GM 08							
5600319-1S	71	1	02			3 5000	658014 1132391 SM 99	C-63						
5600319-2S	71	1	02			3 10000	659789 1132404 SM 99	30HP, 24" diam						
5600320M	118.19	03	43.5 02	110879	AGR GW	2 0	SIPPICAN GROVES, INC	56	08	13	0.8	11	220	.50
5600320-1	71	1	6 02 900	150	4	250	653841 1128641 GM 08	EXPIRED						
5600320-2	71	1	6 02 900	150	4	250	653832 1127629 GM 08							
5600321M	17.5	03	6.4 02	110879	AGR GW	1 0	SIMON, F.A.; SIMON, R.L. &	56	08	13	1.5	11	38	.85
5600321-1	71	1	4 02 600	100	4	200	654957 1137300 GM 08							
5600322M	73.2	03	26.9 02	110879	AGRboth	1 2	STRIETER GROVES	56	08	13	1.5	11	94	.50
5600322-1	71	1	6 02 1000	300	4	225	661778 1131795 GM 08							
5600322-1S	71	1	1	13	3	7500	662070 1130877 SM 99	C-59						
5600322-2S	71	1	1	9	3	5000	662109 1131350 SM 99	C-59						
5600323M	289.3	03	106.5 02	110879	AGRboth	11 3	SCOTTO & CO. INC., D L	56	08	13	1.5	11	370	.50
5600323-1	72	1	8 02 1000	200	4	600	664124 1124262 GM 08							

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

PERMIT NO.	AN.	ALL.	ALL MAX UNT MO.	DATE USE SRCNO.	SW	UTS CD	ISS.	TYPE	WLS.	PWPS	OWNER	CD	PERMIT NO.	DEV NO.	AGTYPE	TYPE	ST	ACRES	IRR	IRR	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	STSDIA.	COD	TD	CD	INT	TYP	CAP.	MTR7	YPLNR	YPLNR	SRC	AG	COMMENTS						
5600323-3	72	1	5	02	1000	200	4	145	662966	1126186	GM	08										
5600323-4	72	1	5	02	1000	200	4	145	665418	1126060	GM	08										
5600323-5	72	1	8	02	1000	200	4	600	664179	1126472	GM	08										
5600323-6	72	3	5	02	1000	200	4	145	664346	1127212	GM	08										
5600323-7	72	1	8	02	1000	200	4	600	664027	1129159	GM	08										
5600323-8	72	3	6	02	1000	200	4	250	664324	1129093	GM	08				Cap is estim.						
5600323-9	72	3	6	02	1000	200	4	250	666851	1129048	GM	08				Cap is estim.						
5600323-10	72	1	8	02	1000	200	4	600	667131	1129258	GM	08				Cap is estim.						
5600323-11	72	3	4	02	1000	200	4	100	667712	1128709	GM	08				Cap is estim.						
5600323-12	72	3	5	02	1000	200	4	145	664108	1127406	GM	08										
5600323-20S72		1					12	3	10000	663046	1126738	SU	99			Header canal						
5600323-21S72		1					12	3	10000	665389	1126730	SU	99			C-57						
5600323-30S72		1					12	3	10000	665647	1128241	SU	99			C-57						
5600324W	50.8	03	18.7	02	110879	AGRboth	2	1	SPYKE, PETER D.				56				08	13	1.5	11	65	.50
5600324-1	72	1	6	02	1050	4	250	667665	1112247	GM	08					Cap. is estim.						
5600324-2	72	1	6	02		4	250	666349	1112201	GM	08					Cap. is estim.						
5600324-1S	72	1	6	02		2	20000	666947	1113282	SU	99					C-71						
5600325W	214.9	03	79.1	02	110879	AGR	9	0	SHAWKEY, DR.				56				08	13	0.8	11	400	.85
5600325-1	71	1	6	02	500	4	300	657198	1117348	GM	08						EXPIRED					
5600325-2	71	1	6	02	500	4	300	656568	1117250	GM	08											
5600325-3	71	1	6	02	500	4	350	655375	1117407	GM	08											
5600325-4	71	1	6	02	600	4	350	656354	1114884	GM	08											
5600325-5	71	1	6	02	600	4	400	655290	1114853	GM	08											
5600325-6	71	1	6	02	900	4	400	654026	1114809	GM	08											
5600325-7	71	1	6	02	900	4	400	653267	1116060	GM	08											
5600325-8	71	1	6	02	900	4	400	653390	1113904	GM	08											
5600325-9	71	1	6	02	900	4	400	652749	1114918	GM	08											
5600326W	60.2	03	22.2	02	110879	AGRboth	3	1	WEAVER, MONTIE M				56				08	13	1.5	11	77	.50
5600326-1	72	1	6	02	900	4	528	665402	1111484	GM	08											
5600326-2	72	1	6	02	800	226	4	352	664248	1111147	GM	08										
5600326-3	72	3	6	02	900		4	352	664246	1111958	GM	08										
5600326-1S	72	1	6	02		2	8000	663125	1111528	SU	99						Header canal					

5600327W	46	03	16.9 02	110879	AGR	2 1	08R, SR., DR. ALVA, D. 648536 1116448 GM 08 Cap. is estim. 647966 1115033 GM 08 Cap. is estim. 648439 1116748 SW 99 USLRWD, Culvert	56	08	13	0.8	11	100	.85
5600328W	6.95	03	6.9 02	110879	AGR	2 0	ROBINSON, JR., H K 663613 1123809 GM 08 EXPIRED 664741 1123745 GM 08	56	08	13	1.5	11	40	.50
5600329W	7.04	03	2.6 02	110879	AGR	0 1	DUM, JR. W 666807 1116039 SW 99 C-71	56	08	13	1.5	11	9	.50
5600331W	1596.1	03	305.6 02	110879	AGR	3 4	CARLTON, MARY E 648342 1093503 GM 08 652811 1095147 GM 08 655101 1096013 GM 08 647377 1097367 SW 99 C-24 651462 1092501 SW 99 C-24 651462 1092501 SW 99 C-24, Location is guess., culvert 651462 1092501 SW 99 C-24, Location is guess., culvert	56	08	20	0.8	11	1600	.50
5600333W	62.5	03	23 02	31380	AGR	1 2	SCHUMANN GROVES, INC. 657429 1137677 GM 08 Cap is estim. 657093 1140069 SW 99 C-61 656678 1137675 SW 99 C-61	56	08	13	1.5	11	80	.50
5600335W	28.9	03	10.6 02	31380	AGR	1 1	SCHUMANN GROVES, INC. 656561 1129600 GM 08 Cap. is estim. 656966 1129609 SW 99 C-64	56	08	13	1.5	11	37	.50
5600336W	62.5	03	23 02	31380	AGR	1 3	SCHUMANN GROVES, INC. 653084 1138022 GM 08 Cap is estim. 652571 1137719 SW 99 C-61 653603 1137594 SW 99 C-61 653154 1140062 SW 99 NSLRWD	56	08	13	1.5	11	80	.50
5600337W	31.3	03	11.5 02	31380	AGR	2 1	SCHUMANN GROVES, INC. 655368 1139550 GM 08 Cap. is estim. 655554 1137704 GM 08 Cap. is estim. 655754 1137704 SW 99 NSLRWD, Loc. is guess	56	08	13	1.5	11	40	.50
5600340W	115	03	42.3 02	41080	AGR	3 1	PALM HOLLOW, INC 677600 1111659 GM 08 Cap. is est. 677613 1110346 GM 08 * 677646 1109057 GM 08 * 677628 1112727 SW 99 10miCreek	56	08	13	1.5	11	250	.85
5600342W	39	03	02	41080	PMS	2 0	BRYN MAWR CAMP RESORTS, INC. 722002 1162199 GM 08 PROPOSED IN 1980 721921 1163441 GM 08 4" PVC LINER	54						
5600343W	466.4	03	171.7 02	50880	AGR	22 5	BIRDSELL, JOHN	56	08	13	1.5	11	1014	.85

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

PERMIT NO.	AN.	ALL UNIT	MAX NO.	DATE	USE	STROM.	SV	CO	ISS.	TYPE	U.S.	PMPS	OWNER	CO	PERMIT NO.	DEV NO.	ACTYPE	TYPE	ST	ACRES	IRR	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL	DPTH	PMP	PUM	PUMP	CD	INT	TYP	CAP.	MTR?	YPLMR	SRC	AR	COMMENTS
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5600343-1	71	3	6	02	900	4	270	660190	1115923	GM	08											
5600343-2	71	1	6	02	900	4	270	660237	1116935	GM	08											
5600343-3	71	3	6	02	900	4	270	661929	1116274	GM	08											
5600343-4	71	1	6	02	900	4	270	659923	1113634	GM	08											
5600343-5	71	3	6	02	900	4	270	662194	1112917	GM	08											
5600343-6	71	3	6	02	900	4	270	661953	1111367	GM	08											
5600343-7	71	3	4	02	900	4	110	661271	1111389	GM	08											
5600343-8	71	3	6	02	900	4	270	659285	1112014	GM	08											
5600343-9	71	3	6	02	900	4	270	658425	1112429	GM	08											
5600343-10	71	3	6	02	900	4	270	658378	1112007	GM	08											
5600343-11	71	3	8	02	900	4	450	658180	1111063	GM	08											
5600343-12	71	3	5	02	900	4	185	662053	1110050	GM	08											
5600343-13	71	3	5	02	900	4	185	660817	1110087	GM	08											
5600343-14	71	3	4	02	900	4	110	661973	1108777	GM	08											
5600343-15	71	1	5	02	900	4	185	661193	1108972	GM	08											
5600343-16	71	1	5	02	900	4	185	662007	1106677	GM	08											
5600343-17	71	1	6	02	900	4	270	657683	1110656	GM	08											
5600343-18	71	3	6	02	900	4	270	655386	1110702	GM	08											
5600343-19	71	3	6	02	900	4	270	654965	1110664	GM	08											
5600343-20	71	3	6	02	900	4	270	656478	1109424	GM	08											
5600343-21	71	1	6	02	900	4	270	653031	1109814	GM	08											
5600343-22	71	1	10	02	900	4	1200	653297	1108409	GM	08											
5600343-15	71	1	02				8000	662322	1107397	SM	99											
5600343-28	71	1	02				6000	662324	1108051	SM	99											
5600343-38	71	1	02				8000	660369	1113491	SM	99											
5600343-48	71	1	02				9000	659804	1116042	SM	99											
5600343-58	71	1	02				6000	653877	1109228	SM	99											
5600344W	38.2	03	6	08	02	50880	AGRboth	2	0	AMERICAN BELTEX, INC												
5600344-1	72	1	4	02		150				663084	1133897	GM	08									
5600344-2	72	1	02			10000				662939	1134565	GM	08									
5600345W	29.7	03	10	02		50000	AGRboth	2	1	CASSENS GROVE SERVICE												
5600345-1	72	1	5	02	700	100	4	300	664576	1122577	GM	08										
5600345-2	72	1	4	02	700	100	4	250	663819	1122423	GM	08										
5600345-18	72	1	4	02	700	100	3	4000	665549	1122283	SM	99										

5600344W	38.2	03	6	08	02	50880	AGRboth	2	0	AMERICAN BELTEX, INC												
5600344-1	72	1	4	02		150				663084	1133897	GM	08									
5600344-2	72	1	02			10000				662939	1134565	GM	08									
5600345W	29.7	03	10	02		50000	AGRboth	2	1	CASSENS GROVE SERVICE												
5600345-1	72	1	5	02	700	100	4	300	664576	1122577	GM	08										
5600345-2	72	1	4	02	700	100	4	250	663819	1122423	GM	08										
5600345-18	72	1	4	02	700	100	3	4000	665549	1122283	SM	99										

5600346W	21.9	03	3.48 02	50880	AGR GW	4	250	1	0	DILLIN BROTHERS CITR	56	08	13	1.5	11	20	.50
5600346-1	72	1	5 02	900						666191 1122247 GW 08	EXP. IRED						
5600347W	34.5	03	12.7 02	50880	AGR GW	4	250	1	0	SLOWIM, RALPH & ROBERTA	56	08	13	0.8	11	75	.85
5600347-1	71	1	6 02	600						650459 1134657 GW 08	Cap. is est.						
5600348W	39.6	03	14.6 02	50880	AGRboth	4	850	1	1	WINGFIELD, INC	56	08	13	0.8	11	86	.85
5600348-1	72	1	8 02	980						674319 1126108 GW 08							
5600348-1S	72	1	1		6.	2	6500	1		673750 1124972 SW 99	C-54						
5600348-1C		04	1		6.		6500	1		673750 1124972 SW 99	Ditch-54, Location is guess, cap. is guess						
5600349W	218.2	03	30.2 02	50880	AGR GW	4	5	0	0	EVANS PROPERTIES, INC.	56	08	13	1.5	11	279	.50
5600349-1	71	1	6 02	860						662068 1122979 GW 08							
5600349-2	71	1	4 02	860						640964 1122944 GW 08							
5600349-3	71	1	4 02	860						659080 1122111 GW 08							
5600349-4	71	1	5 02	860						658667 1123073 GW 08							
5600349-5	71	1	5 02	860						658055 1122514 GW 08							
5600350W	33.1	03	12.2 02	50880	AGRboth	4	4	1	1	KIRCHHOFF, WILLIAM - TRUSTEE	56	08	13	0.8	11	72	.85
5600350-1	72	1	5 02	900						670706 1106474 GW 08	Cap. is est.						
5600350-2	72	1	6 02	900						669312 1106027 GW 08 "							
5600350-3	72	1	4 02	900						668995 1106502 GW 08 "							
5600350-4		1	5 02	900						668400 1106000 GW 08 "							
5600350-1S	72	1	02							667425 1105977 SW 99	C-85						
5600351W	13.9	2	13.9 2	50880	AGRboth	3	1	0	0	CARE, R F & HARVEST	56	08	13	0.8	11	40	0.5
5600351-1	71	1	6 2	850						650074 1134822 GW 08	EXP. IRED						
5600351-2	71	1	8 2	850						650076 1134818 GW 08	NEW PERMIT NOT IN FILE						
5600351-3	71	1	8 2	850						650079 1135611 GW 08	WORKED OFF PLD PERMIT 1980						
5600351-4S	71	1	2		1	10000				650072 1137428 SW 99	CANAL 61, 2 WAY PUMP						
5600352W	40.6	3	14.9 2	50880	AGR GW	4	650	1	0	CASSENS GROVE SERVICE	56	08	13	1.5	11	52	0.5
5600352-1	72	1	10 2	1000						679673 1114794 GW 08							
5600353W	113.4	3	41.7 2		AGR GW	3	10000	1	1	TRUST, "J"	56	08	13	0.8	11	160	0.5
5600353-S	72	1	2							670212 1134953 SW 99	C-62						
5600354W	258.9	3	95.3 2	50880	AGRboth	3	3	0	0	DL SCOTTO & CO., INC.	56	08	13	1.5	11	360	0.5
5600354-1	83	1	8 2	876						680166 1101594 GW 08							
5600354-2	83	1	7 2	392						680400 1102919 GW 08							
5600354-3	83	1	8 2	412						678247 1103453 GW 08							
5600354-1S	83	1	2		3	12000				679085 1102743 SW 99	C-90						
5600354-2S	83	1	2		3	3000				681315 1104135 SW 99	C-91						
5600354-3S	83	1	2		3	6000				676983 1103514 SW 99	11miCreek						
5600354-4S	83	1	2		3	3000				677672 1104384 SW 99	C-91						
5600354-5S	83	1	2		3	3000				678787 1103022 SW 99	C-91						
5600354-6S	83	1	2		3	3000				678834 1104547 SW 99	C-91						
5600355W	95.6	3	35.2 2	50880	AGRboth	4	4	2	2	HAMILTON, INEZ	56	08	13	1.5	11	122	0.5
5600355-1	72	1	10 2	980						664275 1139814 GW 08	Cap. is est.						
5600355-2	72	1	6 2	800						644983 1139503 GW 08 "							
5600355-3	72	1	6 2	800						663602 1139685 GW 08 "							

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

PERMIT NO. AN. ALL. UNIT NO. MAX. MO. DATE USE SRCNO. SM PMP OWNER CO PERMIT NO. DEV NO. AQTYPE TYPE ST IRR ACRES EFF

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

PERMIT NO. FACILITY QUAD. WELL DPTH COO TO CO INT TYP CAP. MTR? XPLNR YPLNR SRC AQ COMMENTS

PERMIT NO.	FACILITY	QUAD.	WELL	DPTH	COO TO	CO	INT TYP	CAP.	MTR?	XPLNR	YPLNR	SRC	AQ	COMMENTS	CO	PERMIT NO.	DEV NO.	AQTYPE	TYPE	ST	IRR	ACRES	EFF		
5600357M	382.7				6	2	1000																		
	5600357-1	71	1	8	2	61280	AGR	both	3	3	EVANS PROPERTIES, INC	3	GM	08	56			08	13	1.5	11		832	0.85	
	5600357-2	71	1	6	2	4	1100		4	1100	646112	1109185	GM	08											
	5600357-3	71	1	10	2	4	225		4	225	644971	1106801	GM	08											
	5600357-1S	71	1	2	2	4	1200		4	1200	643438	1109182	GM	08											
	5600357-2S	71	1	2	2	3	25000		3	25000	643510	1113333	SM	99											
	5600357-2S	71	1	2	2	3	6000		3	6000	645767	1113424	SM	99											
	5600357-3S	71	1	2	2	3	25000		3	25000	646703	1110440	SM	99											
5600358M	33.3				12.26	2	61280	AGR	SM	0	2	BROWN, R.L.	2	SM	99	56		08	13	1.5	11		52	0.75	
	5600358-1	72	1	2	2	3	3000		3	3000	685695	1131373	SM	99											
	5600358-2	72	1	2	2	3	3000		3	3000	665765	1130078	SM	99											
5600359M	17				6.26	2	61280	AGR	SM	2	0	BRONSON GROVES, INC	2	GM	08	56		08	13	1.5	11		36	0.5	
	5600359-1	72	3	5	2	1000			100	100	682511	1106438	GM	08											
	5600359-2	83	1	6	2	1000			150	150	682555	1105652	GM	08											
5600360M	25.9				9.56	2	61280	AGR	both	2	0	JOHNSON, A	2	GM	08	56		08	13	1.5	11		55	0.5	
	5600360-1	72	1	4	2	700			160	4	697092	1136431	GM	08											
	5600360-2	72	1	4	2	500			100	4	696564	1137226	GM	08											
5600363M	125.1				46	2	71080	AGR	both	0	1	CHICAGO CITRUS INVESTORS	0	SM	99	56		08	13	0.8	11		160	0.5	
	5600363-1S	82	1	1	1	15	3	15000		3	659164	1095068	SM	99											
5600365M	9.2				3.39	2	71080	AGR	SM	2	0	BAILLET, CODY LEE	2	GM	02	56	5600365M	08,1	13	1.5	11		20	0.85	
	5600365-1	83	1	4	1	26			23	15	2	350	677465	1097596	GM										
	5600365-2	83	1	4	2	600			240	4	150	677282	1098141	GM	08										
5600366M	150.3				55.3	2	71080	AGR	both	8	2	MINTO GROVES	8	GM	08	56		08	13	1.5	11		192	0.5	
	5600366-1	72	1	5	2	500			300	4	250	676945	1106005	GM	08										
	5600366-2	72	1	5	2	500			300	3	250	677592	1106547	GM	08										

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

PERMIT NO.	AN. ALL.	ALL UNIT	MAX MO.	DATE CO	USE ISS.	SRCNO. TYPE	SW PMP'S OWNER	CO PERMIT NO.	DEV NO.	ARTYPE	RAIN ST	IRR ACRES	IRR EFF
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LINE 2< HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	DPTH	CD	INT TYP	AGR CAP.	MTR?	YPLNR	SRC	AG COMMENTS	08	13	0.8	11	18	0.85
5600378W	8.28	1	3	2	71080	AGR	300	1	0	NAVAJO GROVES, INC							
	5600378-1	72	1	6	2	800				685565	1107817	GM	08				
5600380W	333.8	3	122.8	2	81480	AGRboth	3	3	5	EVANS PROPERTIES, INC.	08 Used to fill sprayers						
	5600380-1	72	1	4	2		100			666154	1120269	GM	08				
	5600380-2	72	1	4	2		100			666460	1115250	GM	08				
	5600380-3	72	1	4	2		100			666289	1114454	GM	08				
	5600380-1S	72	1	4	2		4000			665748	1120828	SM	99	C-58871, HeaderC			
	5600380-2S	72	1	2	2		4000			667071	1116258	SM	99	C-58871, HeaderC			
	5600380-3S	72	1	2	2		10000			665584	1115906	SM	99	C-58871, HeaderC			
	5600380-4S	72	1	2	2		10000			663142	1114769	SM	99	C-58871, HeaderC			
	5600380-5S	72	1	2	2		10000			665675	1113739	SM	99	C-58871, HeaderC			
5600381W	111	3	40.8	2	81480	AGRboth	5	2	2	EVANS PROPERTIES, INC.							
	5600381-1	83	3	4	2	700	225	4	100	668485	1094707	GM	08				
	5600381-2	83	3	4	2	700	225	4	100	669528	1094656	GM	08				
	5600381-3	83	3	4	2	700	225	4	100	669494	1094440	GM	08				
	5600381-4	83	3	4	2	700	225	4	100	669492	1093942	GM	08				
	5600381-5	83	3	4	2	700	225	4	100	669486	1093722	GM	08				
	5600381-1S	83	1	4	2		10000			670491	1094678	SM	99	C-85			
	5600381-2S	83	1	2	2		8000			668515	1093668	SM	99	C-107			
5600383W	110.1	3	40.5	2	91180	AGRboth	5	2	2	EVANS PROPERTIES, INC.							
	5600383-1	82	4	4	2	700	225	4	100	658939	1094775	GM	08	Cap. is estimated			
	5600383-2	82	1	4	2	700	225	4	100	659216	1094675	GM	08	Cap. is estimated			
	5600383-3	82	1	6	2	700	225	4	250	659224	1092359	GM	08	Cap. is estimated			
	5600383-4	82	4	4	2	700	225	4	100	658959	1092319	GM	08	Cap. is estimated			
	5600383-5	82	2	10	2	1000	400		850	658959	1092319	GM	08	Location is guess.			
	5600383-1S	82	4	2	2		10000			659746	1092376	SM	99	Removed/C-24			
	5600383-2S	82	1	2	2		10000			659987	1094728	SM	99	C-78			
5600386W	390.94	3	143.9	2	11581	AGRboth	3	2	2	PIKE, R./GERMANY HAMMOCK GROVES							
	5600386-1	82	1	8	2	1200	400	4	800	644694	1079447	GM	08				
	5600386-2	82	1	12	2	1200	400	4	1200	642614	1080954	GM	08				
	5600386-3	82	1	12	2	1200	400	4	1200	642257	1079761	GM	08				
	5600386-4	82	2	12	2	1200	400	4	1200	644783	1079851	GM	08				

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

PERMIT NO.	AW. ALL.	ALL MAX. UMT NO.	MO. UTS CD	DATE ISS.	USE SRCNO.	SU. WALS.	PHPS	OWNER	CD	PERMIT NO.	DEV NO.	ADTYPE	SOIL TYPE	RAIN ST	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NO.	QUAD. NO.	WELL STSDIA.	DPTH	CD	TO	CD	INT	YIP	CAP.	MTR?	XPLNR	YPLNR	SRC	AD	COMMENTS
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5600417-7	72	1	2.00	2	90	90	2	12	2	12		691454	1124438	GM	02	
5600417-8	72	1	2.00	2	90	90	2	12	2	12		691190	1124368	GM	02	
5600417-9	72	1	2.00	2	90	90	2	12	2	12		691139	1124709	GM	02	
5600417-10	72	1	2.00	2	90	90	2	12	2	12		689303	1124535	GM	02	
5600417-15	72	1	2.00	2	90	90	2	12	2	12		691147	1124187	SM	99	ResearchCtr. Rd. Canal
5600417-25	72	1	2.00	2	90	90	2	1700	1	1700		694157	1124702	SM	99	PicosRd. Canal
5600417-35	72	1	2.00	2	90	90	2	2000	1	2000		692868	1126721	SM	99	PicosRd. Canal

5600418	76.10	3	12.60	2	10782	AGRbot	5	1	BURNAC	PRODUCE, INC		56	5600418M		02	20	1.5	11	86	0.75
5600418-1	83	1	6.00	2	70	35	40	2	80			666855	1100068	GM	02					
5600418-2	83	1	6.00	2	70	35	3	100				666801	1099643	GM	02					
5600418-3	83	5	6.00	2	760	300	4	100				665456	1101193	GM	08					
5600418-4	83	5	6.00	2	760	300	4	100				666573	1099843	GM	08					
5600418-5	83	5	6.00	2	760	300	4	100				667972	1099891	GM	08					
5600418-15	83	1	6.00	2	760	300	3	2000				667972	1099891	SM	99					

5600421	13.90	3	5.16	2	21182	AGRbot	1	1	KLASSEN, VIC			56	5600421M		02	61	0.8	11	5	0.5
5600421-1	84	1	2.00	2	84	3	100					722159	1099038	GM	02					
5600421-15	84	1	2.00	2	84	3	500					722132	1091135	SM	99					

5600428	2305.30	3	848.50	2	31182	AGRbot	10	4	DUDA, A. & SONS, INC.			56	5600428M		08	13	0.8	24	5012	0.85
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5600428-16	95	1	16.00	2	373	363	4	1500				690122	1057809	GM	08					
5600428-19	83	1	16.00	2	935	480	4	1500				684808	1069603	GM	08					
5600428-21	83	1	4.00	2	365	352	4	100				681155	1071728	GM	08					
5600428-22	83	1	5.00	2	695	350	4	250				681632	1071814	GM	08					
5600428-23	83	1	4.00	2	733	355	4	100				672053	1074978	GM	08					
5600428-24	83	5	4.00	2	395	367	4	250				679152	1074929	GM	08					
5600428-25	83	1	5.00	2	557	469	4	250				679424	1078713	GM	08					
5600428-26	83	5	5.00	2	557	469	4	250				679615	1079040	GM	08					
5600428-27	83	5	5.00	2	557	469	4	250				684666	1060754	GM	08					
5600428-75	83	2	4.00	2	557	469	14	3	30000			683240	1075441	SM	99					
5600428-75	83	2	4.00	2	557	469	14	3	30000			683248	1077117	SM	99					

Capacities estimated.

C-24

5600428-PC14	83	2	1	14	3	18000	685248	1077117	SV	99	C-23	Loc. guess
5600428-PC16	83	2	1	14	3	18000	685248	1077117	SV	99	C-23	Loc. guess
5600428-PC13	83	1	1	8	18000	693890	1044686	SV	99	C-24	Loc. estim., cap. estim.	
5600428-14AC	83	1	1	14	18000	693890	1044686	SV	99	C-24	cap. est.	
5600428-16C	83	4	1	12	18000	690054	1044625	SV	99	C-24	cap. est.	
5600429	625.50	3	230.20	2	41582	AGROW	5	0	MAYACA LAND CORPORATION	56	5600429U	
5600429-1	93	1	8.00	2	185	2	180	605958	1058627	GM	02	PERMITTED FLORIDAN : WRONG
5600429-2	93	1	8.00	2	220	2	180	606046	1059637	GM	02	PROB. SURFICIAL WELLS
5600429-3	93	1	8.00	2	130	2	180	608304	1058734	GM	02	THIS PERMIT ALL WRONG, FAC. CAP. TOO HIGH.
5600429-4	93	1	8.00	2	130	2	180	608302	1059643	GM	02	NOT FLORIDAN, MID-NAUTHORN, MAX MO. TOO HIGH
5600429-5	93	3	10.00	2	130	2	?	607491	1059237	GM	02	CAPPED, USE IN FUTURE
5600430	42.10	3	16.00	2	41582	AGROW	3	0	ROADEN, R K	56	5600430U	
5600430-1	59	1	10.00	2	250	4	1000	616100	1165099	GM	08	EXPIRED
5600430-2	59	1	8.00	2	90	3	350	615100	1166995	GM	02	
5600430-3	59	1	8.00	2	90	3	350	615053	1169378	GM	02	
5600432	63.40	3	23.40	2	41582	AGROW	9	0	SCOTT, L.W.	56	5600432U	
5600432-1	59	2	10.00	2	250	4	1000	616246	1158069	GM	08	EXPIRED
5600432-2	59	2	10.00	2	250	4	1000	616252	1155645	GM	08	
5600432-3	59	2	8.00	2	90	3	350	616148	1161915	GM	02	
5600432-4	59	2	8.00	2	90	3	350	616339	1160506	GM	02	
5600432-5	59	2	8.00	2	90	3	350	616221	1159283	GM	02	
5600432-6	59	2	8.00	2	90	3	350	616140	1157243	GM	02	
5600432-7	59	2	8.00	2	90	3	350	616255	1154772	GM	02	
5600432-8	59	2	8.00	2	90	3	350	616268	1153614	GM	02	
5600432-9	59	2	8.00	2	90	3	350	616244	1151987	GM	02	
5600433	16.26	3	6.00	2	41582	AGR	3	0	MODERNID, H C	56	5600433U	
5600433-1	59	2	10.00	2	250	4	1000	616263	1164151	GM	08	EXPIRED
5600433-2	59	2	8.00	2	90	3	350	615170	1162532	GM	02	
5600433-3	59	2	8.00	2	90	3	350	616959	1162750	GM	02	
5600437	143.70	3	52.90	2	61082	AGROW	1	1	TRIPLE C RANCH	56	5600437U	
5600437-1	82	1	8.00	2	4	4	300	633074	1003665	GM	08	
5600437-1S	82	1	1	17	3	4000	636196	1082056	SV	99	C-23	
5600437-2C	82	4	1	17	17	636028	1082088	SV	99	Culvert		
5600437-5C	82	4	1	17	17	635855	1081839	SV	99	Culvert		
5600437-PC51C	82	4	2	17	17	636398	1081800	SV	99	Culvert		
5600439	91.90	3	33.80	2	61082	AGROW	2	1	HELSETH GROVE SERVICE, INC.	56	5600439U	
5600439-1	94	1	8.00	2	300	4	750	649500	1048162	GM	08	
5600439-2	94	1	8.00	2	300	4	750	649509	1045637	GM	08	
5600439-4S	94	1	8.00	2	17	1	16000	651229	1044533	SV	99	C-23
5600440	117.30	3	43.20	2	61082	AGROW	2	1	PLATTIS GROVES, INC	56	5600440U	
5600440-1	94	1	8.00	2	400	4	600	649486	1051898	GM	08	Cap. estim.
5600440-2	94	1	8.00	2	400	4	600	649493	1050181	GM	08	
5600440-1S	94	1	8.00	2	10	3	10000	651204	1051197	SV	99	C-23-McCarthyC
5600440-1C	94	4	1	1	1	1	1	651206	1050793	SV	99	C-23-McCarthyC

Account	70	1	6.00	2	1000	300	4	400	612792.	1132662	GM	08	Pumpage reports required.
5600472-1	70	1	6.00	2	1000	300	4	400	614765.	1135596	GM	08	"
5600472-2	70	1	6.00	2	1000	300	4	400	614747.	1141957	GM	08	"
5600472-3	70	1	6.00	2	1000	300	4	400	612604.	1135186	SM	99	"
5600472-1S	70	1		1				2200	612589.	1140840	SM	99	
5600472-2S	70	1		1				2200					
5600473	4304.40	3	1584.20	2		20964	AGRbot	31	1	ORANGE AVE CITRUS GROWERS ASSN	56	5600473W	
5600473-1	59	1	10.00	2	1020	240	4	850	616221	1164439	GM	08	Cap. estimated
5600473-3	59	1	10.00	2	1020	240	4	850	616206	1159147	GM	08	"
5600473-4	59	1	10.00	2	1020	240	4	850	618934	1160718	GM	08	"
5600473-5	59	1	10.00	2	1140	244	4	850	618729	1154514	GM	08	"
5600473-6	60	1	10.00	2	1080	246	4	850	621916	1155257	GM	08	"
5600473-7	59	1	10.00	2	1050	270	4	850	616284	1154163	GM	08	"
5600473-8	60	1	10.00	2	1050	450	4	850	629343	1152465	GM	08	"
5600473-9	60	1	10.00	2	1040	240	4	850	629373	1155723	GM	08	"
5600473-10	71	1	10.00	2	1040	250	4	850	626838	1144487	GM	08	"
5600473-11	71	1	10.00	2	1040	260	4	850	626863	1141480	GM	08	"
5600473-12	71	1	10.00	2	1030	230	4	850	632312	1141258	GM	08	"
5600473-13	60	1	10.00	2	1020	255	4	850	632516	1153345	GM	08	"
5600473-14	71	1	10.00	2	1030	245	4	850	631785	1134805	GM	08	"
5600473-16	71	1	10.00	2	1100	280	4	850	636164	1135187	GM	08	"
5600473-17	71	1	8.00	2	907	407	4	575	635081	1146104	GM	08	"
5600473-18	71	1	10.00	2	907	407	4	850	638224	1139268	GM	08	"
5600473-19	71	1	10.00	2	950	204	4	575	629727	1135662	GM	08	"
5600473-20	71	1	10.00	2	1020	240	4	850	639380	1135328	GM	08	"
5600473-21	71	1	6.00	2	950	230	4	250	629013	1138029	GM	08	"
5600473-22	71	1	6.00	2	950	230	4	250	629100	1136969	GM	08	"
5600473-23	71	1	6.00	2	950	230	4	250	629035	1135873	GM	08	"
5600473-24	59	1	12.00	2	1020	240	4	1100	616896	1151704	GM	08	"
5600473-25	59	1	10.00	2	1020	270	4	850	617027	1153432	GM	08	"
5600473-26	59	1	10.00	2	1020	260	4	850	616165	1156610	GM	08	"
5600473-27	59	1	10.00	2	1020	240	4	850	616333	1161888	GM	08	"
5600473-28	60	1	8.00	2	1040	270	4	575	624101	1152766	GM	08	"
5600473-29	71	1	10.00	2	1020	250	4	850	629197	1132661	GM	08	"
5600473-30	71	1	10.00	2	1020	250	4	850	629229	1134323	GM	08	"
5600473-31	71	1	10.00	2	1020	240	4	850	632033	1137909	GM	08	"
5600473-32	71	1	10.00	2	1020	240	4	850	631808	1146404	GM	08	"
5600473-33	71	1	10.00	2	1030	250	4	850	632753	1149952	GM	08	"
5600473-1S	60	1		1			16	20000	635237	1151432	SM	99	Turnpike Canal, C-25
5600475	312.70	3	115.10	2		20964	AGR	2	2	OKEECHOBEE LAND CORP.	56	5600475W	
5600475-1	72	1	6.00	2	7	7	4	240	680699.	1137655	GM	08	
5600475-2	72	1	4.00	2	7	7	4	55	678356.	1137847	GM	08	
5600475-1S	72	1		1			5	20000	678796.	1140070	SM	99	PERMIT BY HSLUCD, C-25
5600475-1S	72	1		1			11	20000	678279.	1134918	SM	99	USED FOR DRAINAGE
5600477	12.10	3	6.00	2		31584	LANgm	1	0	WALTON COURT PROPERTY OWNERS	56	5600477M	
5600477-1	84	2	6.00	1	100	80	12	200	733542	1078946	GM	02	
5600482	8.90	3	3.30	2		61484	AGRgm	1	0	ROSE, FRIEDRIELM	56	5600482M	
5600482-1	72	1	6.00	2	1230	640	4	425	696452	1125244	GM	08	

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

PERMIT NO.	AN.	ALL.	UNT.	MAX.	MO.	DATE	USE	SRCNO.	SV	OWNER	CD	PERMIT NO.	DEV NO.	ADTYPE	TYPE	ST	IRR	ACRES	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD NO.	WELL NO.	STSDJA.	COD	TO	CD	INT	TYP	CAP.	MTR?	XPLMR	YPLMR	SRC	AG	COMMENTS	02	13				
5600487	7.30	3	2	110	95	1	84	91384	PMSW	2	0	EASTUINO DEVELOPERS, INC.	721099	1107822	GM	02						
5600487-2	73	2	2	110	95	1	84										02	15	.8	11	146	.85
5600489	28.31	02	2	110	105	2	3	101184	LAMBOT	3	3	G.B.F. RESERVE DEV CORP	685413	1091831	GM	02	56	5600487M				
5600489-1	83	2	2	110	105	2	300										02					
5600489-2	83	2	2	110	105	2	300										02					
5600489-3	83	2	2	110	105	2	300										02					
5600489-1S	83	2	2	110	18	2	2500										99					
5600489-2S	83	2	2	110	18	2	7500										99					
5600489-3S	83	2	2	110	18	2	7500										99					
5600526	28.10	3	2	900	150	4	575	110884	AGRBOT	1	3	COONEY TWO GROVE COMBO ASSN	671618	1114331	GM	08	56	5600526M				
5600526-1	72	1	2	900	150	3	1250										08	13	0.8	11	36	0.5
5600526-1S	72	1	1	900	150	3	1250										08	13	0.8	11	52	0.85
5600526-2S	72	1	1	900	150	3	1100										08	13	0.8	11		
5600526-3S	72	1	1	900	150	3	1100										08	13	0.8	11		
5600536	16.93	2	2	1000	250	7	1000	11085	AGRBOT	2	1	HANCOCK, JR., V.R. - TRUSTEE	637066	1146992	GM	08	56	5600536M				
5600536-1	71	2	2	1000	250	7	1000										2,8	13	1.5	11	100	0.85
5600536-2	71	1	1	1000	250	7	1000										2,8	13	1.5	11		
5600536-P1	71	1	1	1000	250	7	1000										2,8	13	1.5	11		
5600552	74.30	3	2	800	55	3	800	80885	PMSW	6	0	RESERVE UTILITY CORPORATION	685953	1092137	GM	02	56	5600552M				
5600552-1	83	1	2	800	55	3	800										08	13	1.5	11	37	0.85
5600552-2	83	1	2	800	55	3	800										08	13	1.5	11		
5600552-3	83	1	2	800	55	3	800										08	13	1.5	11		
5600552-4	83	1	2	800	55	3	800										08	13	1.5	11		
5600552-5	83	1	2	800	55	3	800										08	13	1.5	11		
5600552-6	83	1	2	800	55	3	800										08	13	1.5	11		
5600553	17.00	3	2	1040	350	4	728	91285	AGRBOT	1	1	VERO PRODUCERS, INC.	649110	1136055	GM	08	56	5600553M				
5600553-1	71	1	2	1040	350	4	728										08	13	1.5	11		
5600553-1S	71	1	1	1040	350	4	728										08	13	1.5	11		

5600554	92.00	3	33.90	2	91285	10	D IGLEHART, P.C. + BYRD, U.R.	56	5600554U	02	13	0.8	12	200	0.85
5600554-1		93	10.00	2	80	3	GM 02 From surficial aquifer	GM	02	08	13	0.8	12	200	0.85
5600554-2		93	10.00	2	80	3	GM 02 Grove not built as of 2/89	GM	02	08	13	0.8	12	200	0.85
5600554-3		93	10.00	2	80	3	GM 02 Well locations to be determined.	GM	02	08	13	0.8	12	200	0.85
5600554-4		93	10.00	2	80	3		GM	02	08	13	0.8	12	200	0.85
5600554-5		93	10.00	2	80	3		GM	02	08	13	0.8	12	200	0.85
5600554-6		93	10.00	2	80	3		GM	02	08	13	0.8	12	200	0.85
5600554-7		93	10.00	2	80	3		GM	02	08	13	0.8	12	200	0.85
5600554-8		93	10.00	2	80	3		GM	02	08	13	0.8	12	200	0.85
5600554-9		93	10.00	2	80	3		GM	02	08	13	0.8	12	200	0.85
5600554-10		93	10.00	2	80	3		GM	02	08	13	0.8	12	200	0.85
5600558	1320.50	3	486.00	2	111485	2	1 METROPOLITAN LIFE INSURANCE CO	56	5600558U	08	13	0.8	4	2871	0.85
5600558-17		95	5.00	2	7	4	679332 1050143 GM 08 Formerly covered under, Cap. est.	GM	08	08	13	0.8	4	2871	0.85
5600558-20		83	5.00	2	7	4	668761 1061784 GM 08 permit 5600428U, Cap. estimated.	GM	08	08	13	0.8	4	2871	0.85
5600558-PC20		95	5.00	2	7	4	683629 1044559 SM 99 C-23	SM	99	08	13	0.8	4	2871	0.85
5600560	74.52	3	27.50	2	111485	0	2 BERNARD A. EGAN	56	5600560W	13	13	0.8	4	194	0.85
5600560-63-P1		83	18.2	15000	18.2	15000	675300. 1073812 SU 99 PEACOCK CANAL	SU	99	13	13	0.8	4	194	0.85
5600560-63-P2		83	17.2	15000	17.2	15000	677553. 1074428 SU 99 "	SU	99	13	13	0.8	4	194	0.85
5600561	128.30	3	47.34	2	111485	0	2 BERNARD A. EGAN	56	5600561W	13	13	1.5	11	279	0.85
5600561-62-P1		83	12.2	15000	12.2	15000	682046. 1078487 SU 99 C-24, LINE SHAFT PUMPS	SU	99	13	13	1.5	11	279	0.85
5600561-62-P2		83	11.2	15000	11.2	15000	684201. 1080819 SU 99 "	SU	99	13	13	1.5	11	279	0.85
5600562	132.00	3	48.70	2	111485	0	3 BERNARD A. EGAN	56	5600562W	13	13	0.8	11	287	0.85
5600562-61-P1		83	14.2	15000	14.2	15000	677505. 1085434 SU 99 C-24, LINE SHAFT PUMPS	SU	99	13	13	0.8	11	287	0.85
5600562-61-P2		83	14.2	15000	14.2	15000	678592. 1084328 SU 99 "	SU	99	13	13	0.8	11	287	0.85
5600562-61-P3		83	N/A	2	15000	15000	679045. 1083825 SU 99 "	SU	99	13	13	0.8	11	287	0.85
5600563	1260.00	3	111485	0	MINSM	0	3 FLA AGGREGATES INTERGROUP, INC.	56	5600563W	270					
5600563-1S		95	44.00	1	44.00	44.00	666716 1045984 SU 99 Sec. 36 on permit	SU	99	270					
5600563-2S		95	25.00	1	25.00	25.00	666937 1045951 SU 99	SU	99	270					
5600563-3S		95	3	5000	3	5000	666937 1045951 SU 99 Loc. guess	SU	99	270					
5600563-1C		95	14	1	14	1	C-23			270					
5600564	197.00	3	121285	2	DEMGM	0	1 GENERAL DEVELOPMENT CORPORATIO	56	5600564W	135					
5600564-1S		1	1	1	1800	1800	Construction dewatering			135					
5600568	74.50	3	27.40	2	121285	20	2 EVANS PROPERTIES, INC.	56	5600568W	162	13	1.5	11	162	0.85
5600568-1		82	4.00	2	200	4	654308 1103007 GM 08	GM	08	06	13	1.5	11	162	0.85
5600568-2		82	5.00	2	980	4	651258 1102915 GM 08	GM	08	06	13	1.5	11	368	0.85
5600568-3		82	4.00	2	270	4	654238 1104143 GM 08	GM	08	06	13	1.5	11	368	0.85
5600568-4		82	5.00	2	270	4	652832 1105180 GM 08	GM	08	06	13	1.5	11	118	0.5
5600568-5		82	4.00	2	270	4	653198 1105093 GM 08	GM	08	06	13	1.5	11	697	0.75
5600568-6		82	5.00	2	1025	4	651110 1105278 GM 08	GM	08	06	13	1.5	11	697	0.75
5600568-7		71	5.00	2	860	4	650747 1105978 GM 08	GM	08	06	13	1.5	11	697	0.75
5600568-8		71	5.00	2	860	4	649494 1106039 GM 08	GM	08	06	13	1.5	11	697	0.75
5600568-9		71	5.00	2	860	4	648953 1106041 GM 08	GM	08	06	13	1.5	11	697	0.75

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

PERMIT NO.	AN.	ALL.	UNT.	NO.	MAX.	NO.	DATE	USE	SRCNO.	SW	CO	PERMIT	NO.	DEV	NO.	AGTYPE	TYPE	ST	IRR	ACRES	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	STSDIA.	COD	TD	CD	INT	TYP	CAP.	HTR?	XPLNR	YPLNR	SRC	AQ	COMMENTS
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5600568-10	71	1	5.00	2	860	270	4	100	650021	1106984	GM	08									
5600568-11	71	1	5.00	2	860	270	4	90	651804	1106921	GM	08									
5600568-12	71	1	5.00	2	860	270	4	90	653904	1106678	GM	08									
5600568-13	71	1	4.00	2	860	270	4	90	657299	1106658	GM	08									
5600568-14	71	1	4.00	2	860	280	4	90	655548	1106040	GM	08									
5600568-15	71	1	4.00	2	860	280	4	90	654642	1106977	GM	08									
5600568-16	82	1	4.00	2	930	385	4	85	648476	1103304	GM	08									
5600568-17	82	1	5.00	2	972	365	4	125	648903	1105151	GM	08									
5600568-18	82	1	4.00	2	1050	292	4	100	656422	1103733	GM	08									
5600568-19	82	1	5.00	2	930	280	4	150	656548	1105290	GM	08									
5600568-20	71	1	5.00	2	800	280	4	100	640937	1106104	GM	08									
5600568-18	71	1	5.00	1	1	14	1	30000	647799	1105990	SW	99									
5600568-1C	71	4						10	647615	1105765	SW	99									
5600572	16.60	3	6.10	2	10986	AGRBN	2	0	MCALLISTER, DONALD H												
5600572-1	61	1	5.00	2	700	180	4	210	680516	1167447	GM	08									
5600572-2	61	1	10.00	2	1000	363	4	1000	681564	1167414	GM	08									
5600574	64.80	3	23.80	2	21386	AGRbot	4	2	EDENTON CO. NY & MT JERKINS												
5600574-1	71	1	6.00	2	900	250	4	300	655860	1121801	GM	08									
5600574-2	71	1	6.00	2	900	250	4	400	655438	1122193	GM	08									
5600574-3	71	1	4.00	2	900	250	4	75	652772	1122197	GM	08									
5600574-4	71	1	8.00	2	1080	259	4	900	653837	1121827	GM	08									
5600574-1S	71	1		1		15	1	1800	654102	1121824	SW	99									
5600574-2S	71	1		1		15	1	1800	656057	1121745	SW	99									
5600579	244.00	3		2	61286	1MDGW	4	0	TREEMET PRODUCTS COMPANY, IN												
5600579-1	73	1	10.00	1	70	60	50	2	712295	1114725	GM	02									
5600579-2	73	1	10.00	1	70	60	55	2	712520	1114621	GM	02									
5600579-3	73	1	6.00	1	70	60	55	2	712601	1114260	GM	02									
5600579-4	73	1	10.00	1	70	60	40	2	712224	1114167	GM	02									
5600580	1280.00	3		2	61286	MTRGW	0	1	ADAMS RANCH, INC.												
5600580-1		2		2		UMD	3	7000													
5600581	130.70	3	4.8.10	2	71086	AGRbot	2	1	CAMPBELL, JR., CHARLES M.												

5600581-1	72	1	5.00	2	1000	260	4	200	671129 1107401 GW 08										
5600581-2	72	1	5.00	2	1000	260	4	200	671149 1106212 GW 08										
5600581-1S	72	1		1		13	1	22000	672691 1107994 SW 99										
5600582	56.30	3	20.70	2	71086	AGRbot	2		1 CAMPBELL, JR., CHAS H										
5600582-1	72	1	5.00	2	900	250	4	200	664293 1113291 GW 08										
5600582-2	72	1	4.00	2	900	250	4	100	664330 1112677 GW 08										
5600582-1S	72	1		1		10	1	4000	664542 1113329 SW 99										
5600583	56.30	3	20.70	2	71086	AGRbot	1		1 CAMPBELL, JOHN										
5600583-1	72	1	5.00	2	1050	250	4	200	664531 1110378 GW 08										
5600583-1S	72	1		1		13	1	10000	663127 1110167 SW 99										
5600584	29.70	3	10.90	2	71086	AGRbot	1		1 B & L GROVES										
5600584-1	72	1	5.00	2	900	202	4	217	662337 1115488 GW 08										
5600584-1S	72	1		1		13	1	10000	662453 1116031 SW 99										
5600585	79.00	3	29.10	2	71086	AGRbot	3		1 EGAN, BERNARD A										
5600585-1	72	1	4.00	2	950	200	4	125	668363 1117016 GW 08										
5600585-2	72	1	5.00	2	1000	250	4	200	668414 1116158 GW 08										
5600585-3	72	1	5.00	2	1000	250	4	200	670395 1116148 GW 08										
5600585-1S	72	1		1		13	1	16000	670756 1116688 SW 99										
5600586	451.60	3	166.20	2	71086	AGRbot	11		6 EGAN, BERNARD A.										
5600586-1	72	1	5.00	2	1000	250	4	125	664332 1111067 GW 08										
5600586-2	72	1	6.00	2	1100	250	4	320	665784 1109676 GW 08										
5600586-3	72	1	5.00	2	1000	250	4	200	672377 1109831 GW 08										
5600586-4	72	1	5.00	2	1000	250	4	180	670316 1111029 GW 08										
5600586-5	72	1	5.00	2	1000	250	4	310	672361 1110815 GW 08										
5600586-6	72	1	5.00	2	1000	250	4	180	670292 1112101 GW 08										
5600586-7	72	1	5.00	2	1000	250	4	60	671415 1112286 GW 08										
5600586-8	72	1	3.00	2	900	220	4	200	673052 1113096 GW 08										
5600586-9	72	1	5.00	2	1000	250	4	200	674848 1108407 GW 08										
5600586-10	72	1	5.00	2	1000	250	4	200	669710 1113233 GW 08										
5600586-11	72	1	5.00	2	1000	250	4	200	671146 1107871 SW 99										
5600586-1S	72	1		1		13	1	12000	672376 1113361 SW 99										
5600586-2S	72	1		1		13	1	10000	669593 1111056 SW 99										
5600586-3S	72	1		1		13	1	16000	668562 1113277 SW 99										
5600586-4S	72	1		1		13	1	10000	669593 1111056 SW 99										
5600586-5S	72	1		1		13	1	8000	673258 1108424 SW 99										
5600586-6S	72	1		1		13	1	10000											
5600587	111.80	3	41.10	2	71086	AGRbot	4		1 CAMPBELL, JOHN D.										
5600587-1	72	1	5.00	2	1100	250	4	200	668897 1115821 GW 08										
5600587-2	72	1	6.00	2	1000	230	4	325	670739 1114839 GW 08										
5600587-3	72	1	5.00	2	1050	230	4	200	668529 1113839 GW 08										
5600587-4	72	1	5.00	2	1100	250	4	200	669382 1113661 GW 08										
5600587-1S	72	1		1		13	1	10000	668896 1113621 SW 99										
5600588	31.30	3	11.50	2	71086	AGRbot	1		1 BEALE JR., JOSEPH E.										
5600588-1	72	1	5.00	2	900	240	4	180	670080 1110736 GW 08										
5600588-1S	72	1		1		13	1	10000	669784 1110740 SW 99										

C-83

C-80

C-71

C-69

C-55

C-83

C-71

C-82, Loc. est.

C-71

C-82

C-83

C-58

MSLRAND Canal

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

PERMIT NO. ALL. AM. ALL. MAX. MO. DATE USE SRC. NO. SU PMP OWNER CO PERMIT NO. DEV MO. ACTYPE TYPE ST IRR ACRES EFF

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

PERMIT NO. FACILITY QUAD. WELL DPTH PMP PUMP CAP. MTR7 XPLNR YPLNR SRC AQ COMMENTS

5600589	233.00	3	85.80	2	71086	AGRbot	4	2	O.L.C., INC.	56	5600589W	08	13	1.5	11	298	0.5
5600589-1	71	1	6.00	2	900	4	170		658479 1118777 GW 08								
5600589-2	71	1	6.00	2	900	4	170		658459 1117516 GW 08								
5600589-3	71	1	6.00	2	900	4	170		661415 1118295 GW 08								
5600589-4	71	1	6.00	2	900	4	170		661955 1117827 GW 08								
5600589-1S	71	1	1	1	10000	13.1	10000		658038 1118719 SW 99								
5600589-2S	71	1	1	1	10000	13.1	10000		661864 1118746 SW 99								
5600590	179.80	3	66.20	2	71086	AGRbot	7	1	EGAN, FICKETT & COMPANY	56	5600590W	08	13	1.5	11	230	0.5
5600590-1	83	1	5.00	2	1000	4	200		668115 1097087 GW 08								
5600590-2	83	1	5.00	2	1000	4	200		665966 1096205 GW 08								
5600590-3	83	1	4.00	2	900	4	125		666900 1096362 GW 08								
5600590-4	83	1	5.00	2	1000	4	175		665849 1094953 GW 08								
5600590-5	83	1	4.00	2	950	4	125		666354 1094908 GW 08								
5600590-6	83	1	4.00	2	900	4	125		666912 1094963 GW 08								
5600590-7	83	1	4.00	2	950	4	125		667578 1097786 GW 08								
5600590-1S	83	1	1	1	25000	14	1		668097 1097412 SW 99								
5600591	174.40	3	64.20	2	71086	AGRbot	5	1	CAMPBELL, JR., CHARLES M &	56	5600591W	08	13	1.5	11	223	0.5
5600591-1	83	1	4.00	2	900	4	100		663517 1098120 GW 08								
5600591-2	83	1	5.00	2	1000	4	200		665154 1097355 GW 08								
5600591-3	83	1	5.00	2	1000	4	200		663048 1096008 GW 08								
5600591-4	83	1	6.00	2	1100	4	200		665117 1096040 GW 08								
5600591-5	83	1	4.00	2	900	4	125		663715 1094953 GW 08								
5600591-1S	83	1	1	1	25000	13	1		663098 1098555 SW 99								
5600596	391.00	3	143.90	2	91186	AGRbot	4	6	GREENE, JR., B.E.	56	5600596W	08	13	1.5	11	850	0.85
5600596-1	60	2	10.00	2	900	4	1000		GW 08 NOT INSTALLED YET								
5600596-2	60	2	10.00	2	900	4	1000		GW 08 AS OF 1-90								
5600596-3	60	2	10.00	2	900	4	1000		GW 08								
5600596-4	60	2	10.00	2	900	4	1000		GW 08								
5600596-1S	60	2	1	1	600	18	1		SV 99 On site ditch								
5600596-2S	60	2	1	1	600	18	1		SV 99 NOT INSTALLED YET								
5600596-3S	60	2	1	1	600	18	1		SV 99 AS OF 1-90								
5600596-4S	60	2	1	1	600	18	1		SV 99								
5600596-5S	60	2	1	1	600	18	1		SV 99								

Well ID	Acres	Start Date	Days	Rate	Area	Notes	Company	Area	Rate	Days	Notes
5600596-6S	60	2	1	18	1	600	SU 99 **				
5600613	68.50	3	11.20	2	31287	LANSM	0	2	THOMAS J WHITE DEV CORPORATION	56	5600613M
5600613-1S	83	1	11.60	1	15	1	250	690127, 1086703 SU 99	1-95 Borrow C	15	0.8 11
5600613-2S	83	1		16	1	250	693822, 1087427 SW 99	On-site lake		20	0.8 11
5600614	289.00	3	1.20	1	31287	PMSGW	12	0	ST LUCIE WEST UTILITIES, INC	56	5600614M
5600614-1	83	1	8.00	2	75	42	45	2	175	Y 698262, 1083208 GW 02	Wells 1-6 have
5600614-2	83	1	8.00	2	65	46	45	2	175	Y 698622, 1083310 GW 02	well completion reports
5600614-3	83	1	8.00	2	70	41	45	2	175	Y 698982, 1083514 GW 02	in file.
5600614-4	83	1	8.00	2	68	42	45	2	175	Y 699342, 1083718 GW 02	
5600614-5	83	1	8.00	2	65	40	45	2	175	Y 698624, 1083008 GW 02	
5600614-6	83	1	8.00	2	60	40	45	2	175	Y 698594, 1083110 GW 02	
5600614-7	83	2	8.00	2	70	30	45	2	175	Y 699714, 1081397 GW 02	The rest of wells have
5600614-8	83	2	8.00	2	70	30	45	2	175	Y 700533, 1079988 GW 02	no completion reports
5600614-9	83	2	8.00	2	70	30	45	2	175	Y 701613, 1080397 GW 02	and are assumed here
5600614-10	83	2	8.00	2	70	30	45	2	175	Y 701981, 1078985 GW 02	non existing.
5600614-11	83	2	8.00	2	70	30	45	2	175	Y 701887, 1079792 GW 02	
5600614-12	83	2	8.00	2	70	30	45	2	175	Y 702868, 1082120 GW 02	Well 12 not on site mmp
5600620	22.30	3	3.80	2	51487	LANSM	3	0	MAX AMBACH & SONS & COMPANY	56	5600620M
5600620-1	73	1	8.00	1	100	70	3	2	200	714426 1126164 GW 02	
5600620-2	73	1	8.00	1	90	60	3	2	200	713514 1126367 GW 02	
5600620-3	73	2	8.00	1	100	70	3	2	200	713983 1126910 GW 02	
5600621	67.40	3	0.00	2	51487	GOLSM	3	1300	SAVANNA CLUB CORP.	56	5600621M
5600621-P1	84	1		1						730320 1085000 SU 99	ON SITE LAKES, 3 PUMPS IN SERIES.
5600622	17.10	3	6.30	2	51487	AGRGW	2	1	LINDSEY, RALPH J - PARTNER	56	5600622M
5600622-1	83	4	6.00	2	800	340	4	4	250	675005 1098589 GW 08	Emp. estim.
5600622-2	83	4	5.00	2	800	340	4	4	250	676176 1098584 GW 08	
5600622-1S	83	2		1	14	3	758			676176 1098584 SU 99	Loc. estimated.
5600624	6.21	3	4.00	2	61187	PMSGW	5	0	LAKE MANOR PROPERTIES, INC.	56	5600624M
5600624-1	85	2	4.00	2	110	105	2	100	747142 1066651 GW 02		
5600624-2	85	2	4.00	2	110	105	2	100	747259 1066436 GW 02		
5600624-1E	85	1	2.00	2	27	27	2	50	747442 1066651 GW 02	Exleting wells will be abandoned, Cap. estim.	
5600624-2E	85	1	2.00	2	27	27	2	50	747462 1066651 GW 02	upon completion of	
5600624-3E	85	1	2.00	2	27	27	2	50	747482 1066651 GW 02	proposed wells	
5600627	92.20	3	2	2	70987	PMSGW	5	0	LYNNE BUILDING CORPORATION	56	5600627M
5600627-1	61	1	8.00	2	95	68	2	150	673428 1165715 GW 02		
5600627-2	61	1	8.00	2	83	75	2	150	670644 1169599 GW 02		
5600627-3	61	1	8.00	2	80	65	2	150	673444 1166000 GW 02		
5600627-4	61	1	8.00	2	80	65	2	150	672337 1168471 GW 02		
5600628	34.50	3	12.70	2	70987	AGRGW	1	1	SUN COAST GROVE, INC.	56	5600628M
5600628-1	72	4	6.00	2	840	300	4	220	677610 1116437 GW 08		
5600630	13.80	3	5.10	2	81387	AGRGW	1	0	SPYKE, PETER D	56	5600630M
5600630-1	72	4	5.00	2	800	250	1	300	674040 1112481 GW 08		

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

PERMIT NO. AN. ALL. UNIT NO. MAX NO. UTS CO ISS. TYPE ULS. PMS OWNER SW DATE USE SRCNO. MTR? XPLNR YPLNR SRC AQ COMMENTS CROP SOIL RAIN IRR IAR

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

PERMIT NO.	FACILITY	QUAD.	WELL	DPN	PMP	PUM	PUMP	CD	INT	TYP	CAP.	MTR?	XPLNR	YPLNR	SRC	AQ	COMMENTS	2	3	13	15	0.8	11	294	0.5	
5600633	46.00	3	7.20	2	60	25	3	91087	AGR	14	0	0	MICIVER, L.L. & WELLS, R.V.	56	5600633M			2.8	13	.8	11	100	0.85			
5600633-1	82	1	6.00	2	1100	400	4	1100					658309. 1081214	GM	02	TO BE REPLACED BY 8' WELL, CAP EST.										
5600633-2	82	1	12.00	2	1100	400	4	1100					657679. 1080008	GM	08	FOR FREEZE PROTECTION ONLY, **										
5600633-3	82	1	12.00	2	1100	400	4	1100					657592. 1080000	GM	08	FOR FREEZE PROTECTION ONLY, **										
5600633-4	82	2	8.00	2	75	45	3	200					659031. 1081217	GM	02	TO REPLACE EXISTING 6' WELL, **										
5600637	432.70	3	75.60	2	91087	60LGM	14	0	ST LUCIE WEST UTILITIES, INC.	56	5600637M							02	15	0.8	11	379	0.75			
5600637-1	83	2	8.00	1	70	30	-45	698371	1082937	GM	02	Proposed wells														
5600637-2	83	2	8.00	1	70	30	-45	697587	1082628	GM	02	to be replaced by														
5600637-3	83	2	8.00	1	70	30	-45	696263	1082709	GM	02	by reclaimed water system														
5600637-4	83	2	8.00	1	70	30	-45	699769	1081890	GM	02															
5600637-5	83	2	8.00	1	70	30	-45	700583	1081879	GM	02															
5600637-6	83	2	8.00	1	70	30	-45	701786	1082632	GM	02															
5600637-7	83	2	8.00	1	70	30	-45	696871	1080118	GM	02															
5600637-8	83	2	8.00	1	70	30	-45	696760	1079134	GM	02															
5600637-9	83	2	8.00	1	70	30	-45	697559	1078898	GM	02															
5600637-10	83	2	8.00	1	70	30	-45	700238	1082519	GM	02															
5600637-11	83	2	8.00	1	70	30	-45	701386	1083155	GM	02															
5600637-12	83	2	8.00	1	70	30	-45	701025	1083807	GM	02															
5600637-13	83	2	8.00	1	70	30	-45	695087	1079518	GM	02															
5600637-14	83	2	8.00	1	70	30	-45	696552	1078311	GM	02															
5600639	25.20	3	4.20	2	100887	AGR	0W	1	2	PIKE, RICHARD S	56	5600639M						08	13	0.8	11	88	0.5			
5600639-1	71	1	12.00	1	900	400	4	640660	1136339	GM	08	Frost Protection NEW well														
5600639-1S	71	1						640567	1134973	SM	99	Internal														
5600639-1C	71	4						640516	1136073	SM	99	C-62, culvert														
5600640	229.90	3	84.60	2	100887	AGR	bot	1	2	BROTHERS FOUR	56	5600640M						08	13	1.5	11	294	0.5			
5600640-1	71	1	8.00	2	700	400	4	643720	1120148	GM	08															
5600640-1S	71	1						646832	1119771	SM	99	C-24														
5600640-1C	71	4								SM	99	C-24, Culvert														
5600641	570.80	3	210.10	2	100887	AGR	bot	3	2	CAMPBELL, CHARLES	56	5600641M						08	13	0.8	11	730	0.5			
5600641-1	82	1	10.00	2	1000	600	4	850	638863	1095958	GM	08	Cap. est.													
5600641-2	82	1	8.00	2	900	340	4	375	639062	1100060	GM	08	"													
5600641-3	82	1	4.00	2	760	200	4	100	640181	1097693	GM	08	"													

5600641-1S	82	1	1	14	3	25000	638889	1092394	SU	99	C-23									
5600641-2S	82	1	1	14	3	25000	638900	1092591	SU	99	C-23									
5600644	56.30	3	0.15	111287	LIVGW	2	0	RAY MELEAT, INC				56	5600644W	02				700		
5600644-1	81	1	4.00	2	70	50	1	605706	1078716	GM	02	Dairy farm								
5600644-2	81	1	4.00	2	70	50	2	605486	1078665	GM	02									
5600646	20.20	3	7.40	2	121087	AGRW	1	0	COMTOUR LAND CORPORATION				56	5600646W	08	13	0.8	11	44	0.85
5600646-1	82	2	10.00	2	1000	400	4	850	655118	1100914	GM	08	Cap. est.							
5600647	25.00	3	9.20	2	121087	AGRW	0	2	LIER GROVES, INC.				56	5600647W	13	1.5	1.5	11	32	0.5
5600647-1S	71	1	1	14	1	12000	14	1	656308	1129659	SU	99	C-64							
5600647-1C	71	4	1	14									C-64, Culvert							
5600649	56.30	3	20.70	2	10788	AGRBOT	1	1	DUNN BROTHERS, INC.				56	5600649W	08	13	1.5	11	72	0.5
5600649-1	83	1	6.00	2	900	270	4	669337	1098786	GM	08									
5600649-1S	83	1	1	13	3	7500	13	3	668413	1098408	SU	99	C-85							
5600650	13.30	3	4.90	2	10788	AGRW	1	0	DUNN BROTHERS, INC.				56	5600650W	08	13	1.5	12	17	0.5
5600650-1	72	1	8.00	2	800	240	4	575	678146	1106025	GM	08	Cap. est.							
5600651	26.60	3	9.80	2	10788	AGRBOT	1	1	DUNN BROTHERS, INC.				56	5600651W	08	13	1.5	12	34	0.5
5600651-1	71	1	6.00	2	940	300	4	649273	1129603	GM	08									
5600651-1S	71	1	1	11	3	8000	11	3	649675	1129548	SU	99	C-64							
5600652	88.80	3	32.70	2	10788	AGRW	1	0	BELAIR GROVES JOINT VENTURE				56	5600652W	08	13	0.8	11	193	0.85
5600652-1	71	1	10.00	2	1026	298	4	850	647600	1139182	GM	08	Cap. est.							
5600658	144.00	3	2	2	10788	AGRW	0	1	N ST LUCIE RIVER V.C. DISTRICT				56	5600658W					42900	
5600658-1	71	1	1	1	50000				673306	1140526	SU	99	Freeze protection use only. Alloc.estim.2 events/yr							
5600662	105.60	3	38.80	2	31088	AGRBOT	3	1	ST. LUCIE CORPORATION				56	5600662W	08	13	1.5	11	135	0.5
5600662-1	71	1	6.00	2	800	260	4	250	657973	1129889	GM	08	Cap. estim.							
5600662-2	71	1	4.00	2	800	260	4	100	658974	1129595	GM	08	"							
5600662-3	71	1	6.00	2	870	260	4	250	659014	1130996	GM	08	"							
5600662-1S	71	1	1	11	3	10000	11	3	661009	1129878	SU	99	C-64							
5600663	8.30	3	3.00	2	31088	AGRW	1	0	DUNN, EARNEST				56	5600663W	08	13	1.5	11	18	0.85
5600663-1W	83	1	4.00	2	800	260	4	182	677362	1098899	GM	08								
5600665	39.10	3	14.40	2	31088	AGRBOT	1	1	REBS, INC.				56	5600665W	08	13	1.5	11	50	0.5
5600665-1	83	1	5.00	2	800	240	4	250	682853	1104037	GM	08	Cap. est.							
5600665-1S	83	1	1	10	3	5000	10	3	681391	1103830	SU	99	C-85							
5600666	25.00	3	9.20	2	31088	AGRBOT	1	1	GYP 87 LIMITED				56	5600666W	08	13	0.8	11	32	0.5
5600666-1	83	1	4.00	2	815	300	4	230	681122	1143817	GM	08								
5600666-1S	83	1	1	10000					680581	1143814	SU	99	CANAL 14, 2WAY PUMP							
5600667	28.90	3	10.70	2	31088	AGRBOT	1	1	GOTTARDO, VIRGIL				56	5600667W	08	13	1.5	11	37	0.5
5600667-1	83	1	6.00	2	820	240	4	250	689672	1099871	GM	08	Cap. est.							
5600667-1S	83	1	1	11	3	8000	11	3	668320	1099860	SU	99	C-85							

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

PERMIT NO.	AM.	ALL.	ALL MAX	UNIT	NO.	DATE	USE	SRCNO.	SU	CD	PERMIT NO.	DEV NO.	AQTYPE	TYPE	ST	IRR	ACRES	EFF

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

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	OPTN	CD	TD	CD	INT	TYP	CAP.	MTR?	XPLNR	YPLNR	SRC	AQ	COMMENTS	
5600668	185.40	3	68.20	2	2	600	31088	AGRbot	10	5 M LINE CITRUS GROWERS ASSN							
5600668-1	70 1	5.00	2	600	300	4	50	607400	1143803	GM	08						
5600668-2	70 2	12.00	2	900	350	4	1200	607446	1144755	GM	08						
5600668-3	70 2	10.00	2	100	50	2	200	607175	1144565	GM	02						
5600668-4	70 2	10.00	2	100	50	2	200	608499	1144532	GM	02						
5600668-5	70 2	10.00	2	100	50	2	200	607108	1142140	GM	02						
5600668-6	70 2	10.00	2	100	50	2	200	608666	1142124	GM	02						
5600668-7	70 2	10.00	2	100	50	2	200	607225	1139884	GM	02						
5600668-8	70 2	10.00	2	100	50	2	200	608582	1139840	GM	02						
5600668-9	70 2	10.00	2	100	50	2	200	607140	1137993	GM	02						
5600668-10	70 2	10.00	2	100	50	2	200	608938	1138095	GM	02						
5600668-1S	70 2		1		20	1	600	607343	1142450	SU	99					On site canal	
5600668-2S	70 2		1		20	1	600	608785	1142426	SU	99					On site canal	
5600668-3S	70 2		1		20	1	600	607336	1140190	SU	99					On site canal	
5600668-4S	70 2		1		20	1	600	608910	1140131	SU	99					On site canal	
5600668-5S	70 2		1		20	1	600	608373	1144828	SU	99					On site canal	
5600669	19.80	3	7.30	2	31088	AGRbot	3	1	NAYNES, CHRISTINE								
5600669-1	72 1	5.00	2	920	300	4	325	695996	1145398	GM	08						
5600669-2	72 1	6.00	2	960	320	4	520	695158	1145143	GM	08						
5600669-3	72 1	3.00	2	840	280	4	105	695135	1144521	GM	08						
5600669-5	72 1		1		10	1	10000	695135	1144521	SU	99					C-3, Loc. estim.	
5600676	118.70	3	43.70	2	61688	AGRow	0	1	POPPELL, L. RALPH								
5600676-1S	72 1		1		648352	1140082	SU	99									C-25
5600676-C	72 4		1														C-25
5600682	10.50	3	1.60	2	100588	LAMBot	1	1	K. NOVANIYAN AT THE PARK ST								
5600682-1	84 2	8.00	1	126	107	45	250	721290	1066195	GM	02						
5600682-1S	84 2		1		-2	-2	200	721391	1066192	SU	99						On site lake
5600683	1343.50	3	49.50	2	100688	AGRbot	13	9	CRITTENDEN, E.M. LARGLEY, A.E.								
5600683-1	70 1	8.00	2	1200	400	4	900	617906	1146477	GM	08						
5600683-2	70 1	8.00	2	1200	400	4	900	617606	1146677	GM	08						Loc. guessed
5600683-3	71 1	8.00	2	1200	400	4	900	622356	1150456	GM	08						
5600683-4	70 1	6.00	2	800	300	4	400	617746	1145657	GM	08						

5600683-5	70	1	6.00	2	800	300	4	400	620575	1133345	GM	08								
5600683-6	70	1	8.00	2	1200	400	4	900	620612	1140852	GM	08								
5600683-7	70	1	6.00	2	800	300	4	400	617467	1138361	GM	08								
5600683-8	70	1	6.00	2	800	300	4	400	615534	1137310	GM	08								
5600683-13	70	1	8.00	2	1200	400	4	900	616187	1134074	GM	08								
5600683-14	70	1	8.00	2	1200	400	4	900	618010	1133161	GM	08								
5600683-15	71	1	8.00	2	800	300	4	600	623626	1143743	GM	08								
5600683-16	70	1	8.00	2	800	300	4	600	615919	1143707	GM	08								
5600683-17	70	1	6.00	2	800	300	4	400	615498	1141553	GM	08								
5600683-18	70	2	1	1			19	2	620832	1134671	SW	99								
5600683-2S	71	2	1	1			19	2	622575	1137468	SW	99								
5600683-3S	70	2	1	1			19	2	620732	1148050	SW	99								
5600683-4S	71	2	1	1			19	2	620732	1148050	SW	99								
5600683-5S	71	2	1	1			19	2	622244	114963	SW	99								
5600683-6S	70	2	1	1			19	2	621225	1139001	SW	99								
5600683-7S	71	2	1	1			19	2	623506	1138695	SW	99								
5600683-8S	71	2	1	1			19	2	623506	1138695	SW	99								
5600683-9S	71	2	1	1			19	2	623506	1138695	SW	99								
5600685	378.80	2	358.80	2	100x88	AGRbot	6	7	GAZAYERLI, DR. M. M.											
5600685-1	70	1	5.00	2	1000	300	4	300	611673	1146291	GM	08								
5600685-2	70	2	12.00	2	1500	350	4	800	610969	1140129	GM	08								
5600685-3	70	1	5.00	2	1000	300	4	300	610342	1138916	GM	08								
5600685-4	70	1	6.00	2	1000	300	4	400	610179	1132654	GM	08								
5600685-5	70	2	12.00	2	1500	350	4	800	610969	1140331	GM	08								
5600685-6	70	2	12.00	2	1500	350	4	800	611075	1134374	GM	08								
5600685-AS	70	2	1	1			20	1	611075	1134374	SW	99								
5600685-BS	70	1	1	1			20	1	611075	1134374	SW	99								
5600685-CS	70	2	1	1			20	1	611075	1134374	SW	99								
5600685-DS	70	2	1	1			20	1	611075	1134374	SW	99								
5600685-PS	70	1	1	1			16	1	609872	1146185	SW	99								
5600685-P2S	70	2	1	1			16	1	609872	1146185	SW	99								
5600685-1E	70	2	1	1			16	1	609872	1146185	SW	99								
5600685-2C	70	2	1	1			22	22			SW	99								
5600690	55.60	3	20.40	2	12088	AGR	6	3	INTERSTATE CITRUS PART, LTD											
5600690-1	72	2	12.00	2	1000	500	4	1000	680244	1142335	GM	08								
5600690-2	72	2	12.00	2	1000	500	4	1000	687432	1142634	GM	08								
5600690-3	72	2	12.00	2	1000	500	4	1000	687436	1141826	GM	08								
5600690-4	72	2	12.00	2	1000	500	4	1000	686719	1141015	GM	08								
5600690-5	72	1	4.00	2	900	450	4	350	686895	1141824	GM	08								
5600690-A	72	2	1	1			1	1	686893	1142227	SW	99								
5600690-B	72	2	1	1			1	1	686900	1140814	SW	99								
5600690-C	72	2	1	1			1	1	686332	1142840	SW	99								
5600719	105.50	3	38.80	3	30989	AGRbot	1	1	BECKER HOLDING CORPORATION											
5600719-1	72	1	6.00	4	300	4	300	664659	1105089	GM	08									
5600719-1S	72	1	6.00	1	10000	1	10000	663156	1107212	SW										
5600721	0.30	83	2	2.00	60	50	3	25	NEW LIGHT ELECTRIC											
5600721-1	83	2	2.00	60	50	50	3	25	691766	1064394	GM	02								

5600685

08 13 .8 11 780 0.85

5600690

08 15 0.8 11 121 0.85

5600719

08 13 1.5 11 135 0.5

5600721

02

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

PERMIT NO.	AN.	ALL UNIT	MAX NO.	MO.	DATE	USE	SRCMO.	SN	CO	PERMIT NO.	DEV NO.	ANTYPE	SOIL TYPE	RAIN ST	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	DPTH	CD	INT TYP	CAP.	MTR?	XPLNR	YPLMR	SRC	AC	COMMENTS	CO	PERMIT NO.	DEV NO.	ANTYPE	SOIL TYPE	RAIN ST	IRR ACRES	IRR EFF		
5600722	5600722-1	84	2	4.00	60	50	3	21489	PMSGM	1	0	MIDWAY MANORS, INC.	706481 1103819	GM	02	56	5600722U	02					
5600723	5600723-1	72	1	6.00	75	75	45	21489	AGRGW	-1	0	KUTA, GEORGE S.	693200 1150683	GM	02	56	5600723M	02	13	1.5	11	7	0.85
5600727	5600727-1	84	2	2.00	66	32	1	22489	PMSGM	1	0	MERCEDES HOMES, INC.	719027 1069079	GM	02	56	5600727N	02	15				
5600731	5600731-1	83	1	6.00	25	5	24	41389	IMRGW	2	0	EXXON COMPANY USA	724493 1064273	GM	02	56	5600731U	02					2
5600738	5600738-1	61	1	5.00	750	210	4	40689	PMSGM	1	0	ROCHESTER, HERRERT	699714 1152131	GM	08	56	5600738M	08	60	1.5	11	15	0.5
5600739	5600739-1	83	2	2.00	60	50	3	40689	PMSGM	1	0	M.A. FERRITER CONSTRUCTION	691766 1064394	GM	02	56	5600739M	02					
5600740	5600740-1	84	2	2.00	60	50	3	40689	PMSGM	1	0	ANDIE DORAMA, PETE SCHULTZ	704407 1080916	GM	02	56	5600740M	02					
5600747	5600747-1	61	1	4.00	800	300	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	679402 1163119	GM	08	56	5600747M	08	13	1.5	11	20	0.85
5600748	5600748-1	59	1	6.00	800	300	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	679384 1164127	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-2	5600748-2	59	1	6.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	605445 1170539	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-3	5600748-3	59	1	8.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	607751 1170801	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-4	5600748-4	59	1	8.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	604945 1167750	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-5	5600748-5	59	1	6.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	608550 1167902	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-6	5600748-6	59	1	6.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	606069 1166465	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-7	5600748-7	59	1	8.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	604066 1163256	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-8	5600748-8	59	1	8.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	605153 1162604	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-9	5600748-9	59	1	8.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	604703 1159106	GM	08	56	5600748M	08	13	1.5	11	1998	0.85
5600748-20	5600748-20	59	1	6.00	1200	400	4	51189	AGRGW	2	0	PIPPIN HUBERT PIPPIN, ESTATE	604339 1156920	GM	08	56	5600748M	08	13	1.5	11	1998	0.85

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

PERMIT NO.	AW. ALL.	ALL UNIT NO.	MAX NO.	MO.	DATE	USE	SICNO.	SM	OWNER	CD	PERMIT NO.	DEV NO.	AGTYPE	TYPE	ST	RAIN	IRR	IRR	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	DEPTH	CD	TD	YPLNR	SRC	AG	COMMENTS	56	5600758	02	15	7	1800	0	0	0.85
5600758	5600758-1	4.60	1	2.00	80	70	50989 PMSW	1	75	0 INDIAN RIVER ACADEMY 699326. 1123403 GM 02 Temporary PMS, GP	56	5600758	02						
5600759	5600759-1	0.21	84	2.00	90	80	50989 PMSW	1	10	0 JAMES, GERALD 711497. 1105188 GM 02	56	5600759	02						
5600760	5600760-1	0.04	73	2.00	60	50	51089 PMSW	1	50	0 YOUNGDANIEL DICKSON CONSTRUCT. 709476. 1129918 GM 02 G.P.	56	5600760	02						
5600763	5600763-1S	1.10	84	2.00	75	25	52689 LANSH	3	25	0 DAILY, THOMAS V., AS BISHOP 734612. 1068153 SM 99 On site Lake, G.P.	56	5600763	02						
5600765	5600765-1S	525.60	3	2.00	110	90	61589 MFMW	2	2000	0 STRAZZULA BROTHER COMPANY, INC SU 99 On site pit, G.P.	56	5600765	02						
5600768	5600768-1	13.80	72	6.00	110	90	60789 PMSW	2	150	0 J.C. STANLEY & ASSOC., INC. 684557 1141282 GM 02	56	5600768	02						
5600768	5600768-2	0.60	72	6.00	110	90	60789 PMSW	2	150	684351 1141501 GM 02	56	5600768	02						
5600770	5600770-1	0.50	61	2.00	80	80	61489 PMSW	1	40	0 EVANS, GARY 698774. 1107446 GM 02 G.P.	56	5600770	02						
5600771	5600771-1	99.30	3	31.70	75	70	71389 AGRW	3	9	0 LAKEMOOD PARK UNITED METHODIST 697701 1163070 GM 02	56	5600771	2,8	13	0.8	11	80	0.85	

5600771

5600771-21	61	1	5.00	750	250	4	120	681840	1163282	GM	08	13	0.8	11	80	0.5
5600771-22	61	1	5.00	735	250	4	120	682231	1164050	GM	08					
5600771-23	61	1	5.00	735	250	4	120	681881	1164230	GM	08					
5600771-24	61	1	5.00	800	250	4	120	682342	1163275	GM	08					
5600771-25	61	1	5.00	750	250	4	120	682832	1163317	GM	08					
5600771-26	61	1	8.00	1200	250	4	375	682802	1163811	GM	08					
5600771-27	61	1	5.00	800	250	4	120	682484	1164312	GM	08					
5600771-28	61	1	5.00	800	250	4	120	682829	1164341	GM	08					
5600771-29	61	1	5.00	700	250	4	90	680904	1163131	GM	08					

Cap. estimated

0 0

5600777

5600777-1	83	2	2.00	60	70789	PMSgm	1	0	CARTWRIGHT, JOHN & OLGA		02	02				
					50	LAN 3	25	690018	1064750	GM	02					

5600779

5600779-1	84	2	6.00	90	70789	LANgm	1	0	CITY OF PORT ST. LUCIE		02	02	15		5	
					60		120	704741	1082712	GM	02					

5600783

5600783-1	72	2	2.00	66	72189	PMSgm	1	0	L.H. DUNN SONS, INC.		02	02				
					60		10	664773	1130785	GM	02					

5600784

5600784-1	73	2	2.00	53	72489	LANgm	1	0	GEM ELECTRIC MFG. CO. INC.		02	02	15		2	
					48	5.	40	709927	1147807	GM	02					

5600785

5600785-1	81	2	12.00	1200	91089	AGRbot	7	3	INGLEHART, STEWART & PHILLIP		08	08			201	
5600785-2	81	2	12.00	1200	650	4	800	615772	1074743	GM	08					
5600785-3	81	2	12.00	1200	650	4	800	616366	1075278	GM	08					
5600785-4	81	2	12.00	1200	650	4	800	615359	1074070	GM	08					
5600785-5	81	2	12.00	1200	650	4	800	616036	1074352	GM	08					
5600785-6	81	2	12.00	1200	650	4	800	616429	1074387	GM	08					
5600785-7	81	2	12.00	1200	650	4	800	616720	1074626	GM	08					
5600785-18	81	2	12.00	1200	650	4	800	615332	1073496	GM	08					
5600785-25	81	2	2000			2	2000	615766	1074924	SM	99					
5600785-28	81	2	2000			2	2000	616092	1075356	SM	99					
5600785-38	81	2	2000			2	2000	615346	1074295	SM	99					

On site canals

0 0

5600788

5600788-1	72	1	39.30	800	91089	AGRbot	4	1	COCA-COLA FOODS		08	08	13	1.5	11	205	0.75
5600788-2	71	1	5.00	800		4	250	662555	1137563	GM	08						
5600788-3	71	1	5.00	800		4	300	661774	1130990	GM	08						
5600788-4	71	2	8.00	800	350	4	125	659406	1138522	GM	08						
5600788-18	72	1	1	800	350	4	400	659695	1138543	GM	08						
					20	1	8200	662662	1138795	SM	99						

Header Canal

0 0

5600789

5600789-1	72	1	6.50	550	91089	AGROW	2	0	COCA-COLA FOODS		08	08	13	1.5	11	34	0.75
5600789-2	72	1	5.00	550		4	160	698322	1136179	GM	08						
						4	220	698607	1136707	GM	08						

5600794

5600794-1	84	1	2.00	63	91189	PMSgm	2	0	SUM COAST BUILDERS, G.C.		02	02					
5600794-2	84	1	2.00	65	63	20	14	718587	1094622	GM	02						
					65	20	14	718405	1094823	GM	02						

G.P.

0 0

5600795

5600795-1	84	2	2.00	60	81689	PMSgm	1	0	REVELS, PAUL		02	02					
					50	3	15	704320	1080309	GM	02						

G.P.

0 0

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

PERMIT AN. ALL. ALL. MAX. MO. DATE USE SRCNO. SW. PMP# OWNER. CO. PERMIT NO. DEV. NO. AQTYPE TYPE ST. ACRES. IRR. IRR. EFF.

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

PERMIT FACILITY QUAD. WELL DPTH PMP PUM PUMP. NO. STSDIA. COD TO CD INT TYP CAP. MTR? YPLNR SRC AQ COMMENTS

PERMIT NO.	FACILITY	QUAD.	WELL	DPTH	PMP	PUM	PUMP	NO.	STSDIA.	COD TO	CD	INT TYP	CAP.	MTR?	YPLNR	SRC	AQ	COMMENTS	
5600796	5600796-1	72 1	4.00	120	80	1	50	2	0	ORANGE-CO OF FLORIDA, INC.	2	0	ORANGE-CO OF FLORIDA, INC.	56	5600796U	02	02	56 5600796U 668803 1134044 GW 02 existing well to be plugged 669056 1134046 GW 02	
5600797	5600797-1	84 2	4.00	105	85	1	30	2	100	0	CITY OF PORT ST. LUCIE	1	0	CITY OF PORT ST. LUCIE	56	5600797U	02	02	56 5600797U 706072. 1072846 GW 02 705691. 1073047 GW 02
5600798	5600798-1	84 1	2.00	95	85	1	30	2	100	0	CITY OF PORT ST. LUCIE	1	0	CITY OF PORT ST. LUCIE	56	5600798U	02	02	56 5600798U 706095 1072713 GW 02
5600804	5600804-1	84 1	2.00	53.5	48	5	3	40	718362	0	SUNRISE FORD COMPANY	1	0	SUNRISE FORD COMPANY	56	5600804U	02	02	56 5600804U 718362. 1102800 GW 02
5600805	5600805-1	73 2	2.00	90	80	80	1	10	705515	0	HIGH TIDE SALES, DON WOOD	1	0	HIGH TIDE SALES, DON WOOD	56	5600805U	02	02	56 5600805U 705515. 111519 GW 02
5600806	5600806-1	84 1	2.00	60	50	20	1	100	706794	0	AMERICAN TIRE & MUFFLER, INC.	1	0	AMERICAN TIRE & MUFFLER, INC.	56	5600806U	02	02	56 5600806U 706794. 1072849 GW 02
5600814	5600814-1	61 2	2.00	90	80	LAW	1	15	695182	0	CROSS, MAX	1	0	CROSS, MAX	56	5600814U	02	02	56 5600814U 695182. 1160444 GW 02
5600815	5600815-1	73 2	2.00	70	63	3	10	1	705769	0	HCV, INC.	1	0	HCV, INC.	56	5600815U	02	02	56 5600815U 705769 1109993 GW 02
5600816	5600816-1	83 2	2.00	70	60	3	20	20	701342	0	SCHOOL BOARD/ST. LUCIE COUNTY	1	0	SCHOOL BOARD/ST. LUCIE COUNTY	56	5600816U	02	02	56 5600816U 701342. 1080496 GW 02 WELL COORDS. ARE APPROX. 701338. 1081304 GW 02 NOT DRILLED YET
5600829	5600829-1	73 2	2.00	69	59	2	18	1	707071	0	MOVY RADIO STATION	1	0	MOVY RADIO STATION	56	5600829U	02	02	56 5600829U 707071 1127971 GW 02

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

PERMIT NO.	AM. ALL.	ALL UNIT	MAX NO.	DATE	USE	SRCNO.	SW	PPPS	OWNER	CD	PERMIT NO.	DEV NO.	AGTYPE	SOIL TYPE	ST	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD NO.	WELL NO.	STSDIA.	CD	TO	CD	INT	TYP	CAP.	MTR?	XPLNR	YPLNR	SRC	AG	COMMENTS					
5600753	45	82	2	1	1	17	2	2000				622273	1090062	SM	99						
5600753	55	82	2	1	1	17	2	2000				623343	1088679	SM	99						
5600753	65	82	2	1	1	17	2	2000				623345	1084518	SM	99						
5600753	75	82	2	1	1	17	2	2000				623108	1082029	SM	99						
5600753	85	82	2	1	1	17	2	2000				623080	1084577	SM	99						
5600753	95	82	2	1	1	17	2	2000				623431	1083145	SM	99						
5600753	105	82	2	1	1	17	2	2000				623330	1086223	SM	99						
5600753	115	82	2	1	1	17	2	2000				623397	1081985	SM	99						
5600753	125	82	2	1	1	17	2	2000				622513	1087723	SM	99						
5600753	135	82	2	1	1	17	2	2000				623073	1086255	SM	99						
5600758	4.60	1	2.00	80	80	50989	PMS9W	1	75		0	INDIAN RIVER ACADEMY				56 5600758					
												699326.	1123403	GM	02	Temporary PMS, GP					
5600759	0.21	84	1	2.00	90	50989	PMS9W	1	10		0	JAMES, GERALD				56 5600759W					
												711497.	1105188	GM	02						
5600760	0.04	73	1	2.00	60	51089	PMS9W	1	50		0	YOUNGDANIEL DICKSON CONSTRUC.				56 5600760W					
												709476.	1129918	GM	02	G.P.					
5600763	1.10	84	1	2.00	60	52689	LANSW	3	25		0	DAILY, THOMAS V., AS BISHOP				56 5600763W					
												734612.	1068153	SM	99	On site lake, G.P.					
5600765	525.60	3	2	2.00	1	61589	MINGW	-16	2000		0	STRAZZOLA BROTHER COMPANY, INC				56 5600765W					
												SW	99	On site pit, G.P.		1800					
5600768	13.80	72	1	6.00	110	60789	PMS9W	2	150		0	J.C. STANLEY & ASSOC., INC.				56 5600768W					
												684557	1141282	GM	02						
												684351	1141501	GM	02						
5600768	0.60	72	1	2.00	75	60789	LANSW	1	30		0	EVANS, GARY				56 5600769W					
												698774.	1107446	GM	02	G.P.					
5600770	0.50	61	1	2.00	80	61489	PMS9W	1	40		0	LAKEMOOD PARK UNITED METHODIST				56 5600770W					
												697701	1163070	GM	02						
5600771	99.30	3	31.70			71389	AG9W	9	0		0	LYKES BROTHERS, INC.				56 5600771W					
																2.8	13	0.8	11	80	0.85

5600771 13 0.8 11 80 0.5

Account No.	Quantity	Unit	Rate	Amount	Description	Material	Quantity	Unit	Rate	Amount	Description	Material	Quantity	Unit	Rate	Amount	Description
5600771-21	61	1	5.00	750	681840 1163282 GW 08		6	120									
5600771-22	61	1	5.00	735	682231 1164050 GW 08	Cap. estimated	4	120									
5600771-23	61	1	5.00	735	681081 1164230 GW 08	"	4	120									
5600771-24	61	1	5.00	800	682342 1163275 GW 08	"	4	120									
5600771-25	61	1	5.00	750	682832 1163317 GW 08	"	4	120									
5600771-26	61	1	8.00	1200	682802 1163811 GW 08	"	4	375									
5600771-27	61	1	5.00	800	682484 1164312 GW 08	"	4	120									
5600771-28	61	1	5.00	800	682829 1164341 GW 08	"	4	120									
5600771-29	61	1	5.00	700	680904 1163131 GW 08	"	4	90									
5600777	0.40		2.00	60	0 CARTURIGHT, JOHN & OLGA		1	0									
5600777-1	83	2	2.00	60	690018 1064750 GW 02		25										
5600779	5.70		6.00	90	0 CITY OF PORT ST. LUCIE		1	0									
5600779-1	84	2	6.00	90	704741 1082712 GW 02	Old well to be abandoned	2	120									
5600783	0.20		2.00	66	0 L.N. DUNN SONS, INC.		1	0									
5600783-1	72	2	2.00	66	664773 1130785 GW 02		10										
5600784	0.80		2.00	53	0 GEN ELECTRIC MFG. CO. INC.		1	0									
5600784-1	73	2	2.00	53	709927 1147807 GW 02	Old well to be abandoned	40										
5600785	92.20		33.90	1200	3 INGLENART STEWART & PHILLIP		7	3									
5600785-1	81	2	12.00	1200	615772 1074743 GW 08		4	800									
5600785-2	81	2	12.00	1200	616366 1075278 GW 08		4	800									
5600785-3	81	2	12.00	1200	615359 1074070 GW 08		4	800									
5600785-4	81	2	12.00	1200	616036 1074352 GW 08		4	800									
5600785-5	81	2	12.00	1200	616429 1074387 GW 08		4	800									
5600785-6	81	2	12.00	1200	616720 1074626 GW 08		4	800									
5600785-7	81	2	12.00	1200	615332 1073496 GW 08		4	800									
5600785-1S	81	2			615766 1074924 SW 99	On site canals	2	2000									
5600785-2S	81	2			616092 1075356 SW 99	On site canals	2	2000									
5600785-3S	81	2			615346 1074295 SW 99	On site canals	2	2000									
5600788	133.50		39.30	800	1 COCA-COLA FOODS		4	1									
5600788-1	72	1	5.00	800	662555 1137563 GW 08		4	250									
5600788-2	71	1	5.00	800	661774 1130990 GW 08		4	300									
5600788-3	71	1	5.00	800	659406 1138522 GW 08		4	125									
5600788-4	71	2	8.00	800	659695 1138543 GW 08		4	400									
5600788-1S	72	1			662662 1138795 SW 99	Header Canal	20	1									
5600789	22.10		6.50	550	0 COCA-COLA FOODS		2	0									
5600789-1	72	1	5.00	550	698322 1136179 GW 08		4	160									
5600789-2	72	1	5.00	550	698607 1136707 GW 08		4	220									
5600794	1.40		2.00	63	0 SW CONST BUILDERS, G.C.		2	0									
5600794-1	84	1	2.00	63	718587. 1094622 GW 02	G.P.	20	2									
5600794-2	84	1	2.00	65	718405. 1094823 GW 02		20	2									
5600795	0.20		2.00	60	0 REVELS, PAUL		1	0									
5600795-1	84	2	2.00	60	704320. 1080309 GW 02		3	15									

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

PERMIT NO.	AN.	ALL.	ALL MAX. UNITS	MAX. CO. ISS.	DATE USE SRCMO.	SV	CD	PERMIT NO.	DEV NO.	AGTYPE	SOIL TYPE	RAIN ST	IRR ACRES	IRR EFF			
5600796-1	72	1	4.00	120	80	1	2	0	ORANGE-CO OF FLORIDA, INC.	56	5600796W	02					
5600796-2	72	2	8.00	95	95	2	100	668803	1134044 GW	02	existing well to be plugged						
5600797-1	84	2	4.00	105	85	1	30	669056	1134046 GW	02							
5600797-2	84	2	2.00	95	85	1	30	0	CITY OF PORT ST. LUCIE	56	5600797W	02	15	9			
5600798-1	84	1	2.00	95	85	1	30	706072	1072846 GW	02	G.P.						
5600804-1	84	1	2.00	53.5	48	3	40	705891	1073047 GW	02							
5600805-1	73	2	2.00	90	80	1	10	0	CITY OF PORT ST. LUCIE	56	5600798W	02					
5600806-1	84	1	2.00	60	50	2	100	0	SUNRISE FORD COMPANY	56	5600804W	02	15	1			
5600814-1	61	2	2.00	90	80	1	15	0	HIGH TIDE SALES, -DON WOOD	56	5600805W	02	15	0			
5600815-1	73	2	2.00	70	63	3	10	0	AMERICAN TIRE & RUFFLER, INC.	56	5600806W	02	15	0			
5600816-1	83	2	2.00	70	60	3	20	0	CROSS, MAX	56	5600814W	02	15	1			
5600816-2	83	2	2.00	70	60	3	20	695182	1160444 GW	02	G.P.						
5600829-1	73	2	2.00	69	59	2	18	0	MCV, INC.	56	5600815W	02					
5600816	83	2	2.00	70	60	3	20	0	SCHOOL BOARD/ST. LUCIE COUNTY	56	5600816W	02	15	0.8	4	9	.75
5600829	73	2	2.00	69	59	2	18	0	MOVW RADIO STATION	56	5600829W	02					

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

PERMIT NO.	FACILITY	QUAND.	WELL	OPTH	PHS	PUM	PLNR	SRC	AO	COMMENTS
5600796	81889	PWSGW	2	0	ORANGE-CO OF FLORIDA, INC.					
5600797	81889	LANGW	1	0	CITY OF PORT ST. LUCIE					
5600798	81889	PWSGW	1	0	CITY OF PORT ST. LUCIE					
5600804	82489	LANGW	1	0	SUNRISE FORD COMPANY					
5600805	82589	PWSGW	1	0	HIGH TIDE SALES, -DON WOOD					
5600806	82689	PWSGW	1	0	AMERICAN TIRE & RUFFLER, INC.					
5600814	91889	PWSGW	1	0	CROSS, MAX					
5600815	92089	PWSGW	1	0	MCV, INC.					
5600816	101289	LANGW	1	0	SCHOOL BOARD/ST. LUCIE COUNTY					
5600829	101989	PWSGW	1	0	MOVW RADIO STATION					

**Martin County
Water Use Spreadsheets**

Martin County

Martin County Water Use Spreadsheets

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

PERMIT NO.	AN.	ALL.	MAX	NO.	DATE	USE	SRC.	NO.	SV	CO	PERMIT	NO.	DEV	NO.	AD	TYP	ST	IRR	ACRES	EFF
NO.	ALL.	UNT.	NO.	UTS.	CO	ISS.	TYPE	M.S.	OWNER											

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

PERMIT NO.	FACILITY NUMBER	QUAD NO.	WELL STA DIA.	DEPTH CODE	TO CD	INT	TYPE	CAP.	MTR7	YPLMR	SRC	AG.	COMMENTS
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Surface water pumps given equifer code of 5
Floridan Aquifer System Wells ONLY

4300028	28.52	03	107 01	10.00	02	1300	280	43	5/87	AG	GM	1	0	BYRON GRANT/GRANT CITRUS GROVE	43	28	00	13	0.8	24	62	0.85	
4300030	577.8	03	97 01	10.00	02	1500		43	10/88	LSC	GM	4	0	SAILFISH POINT, INC.	43	30	08	15	0.4	4	458	.85	
4300030-1		97 01	10.00	02	1000							95	Y	770772 1035672 GM	08								
4300030-2		97 01	10.00	02	1000							640	Y	769798 1033166 GM	08								
4300030-3		97 01	6.00	02	912	300						250	Y	769998 1033166 GM	08								
4300030-4		97 01	6.00	02	1140	315						110	Y	770972 1035672 GM	08								
4300030-5		97 01	10.00	02	985							1200	Y	769866 1034058 GM	08								
4300030-6		97 01	10.00	02	1150							740	Y	769866 1034258 GM	08								
4300030-7		97 01	10.00	02	1150	500						850	Y	772310 1031856 GM	08								
4300030-8		97 01	10.00	02	1150							200	Y	772510 1031856 GM	08								
4300030-9		97 01	10.00	02	1200	750						850	Y	770147 1033360 GM	08								
4300031	229.85	03	97 01	6.00	02	115	107 14 01	43	8/87	GLF	BOTH	5	1	MARTIN CO. GOLF & C.C.	43	31	02	15	0.4	4	182	0.75	
4300031-1		97 01	6.00	02	125	117 16 01						20	Y	754382 1036460 GM	02								
4300031-2		97 01	6.00	02	90							20	Y	755081 1035097 GM	02								
4300031-3		97 01	6.00	02	60							400	Y	757376 1035414 GM	02								
4300031-4		97 01	4.00	02	40							200	Y	757275 1034150 GM	02								
4300031-5		97 01	3.00	02	40							200	Y	757757 1034527 GM	02								
4300031-6		97 01	3.00	02	40							200	Y	757759 1034298 GM	02								
4300031-7		97 01	8.00	02	1025	610						640	Y	755039 1033110 GM	08								
4300031-SW1		97 02										1000		755000 1033000 SW	5								
4300062	5432.01	03	94 01	6.00	02	960	220	43	11/87	AG	BOTH	2	1	R. W. CARLTON	43	62	08	13	1.5	24	680	0.50	
4300062-1		94 01	6.00	02	960	220						250		649821 1032868 GM	08								
4300062-2		94 01	6.00	02	960	220						250		657544 1033336 GM	08								
4300062-SW3		94 01	30.00									10000		642000 1044300 SW	5								
4300062-SW4		94 01	42.00									30000		647600 1044300 SW	5								
4300062-SW5		94 01	24.00									10000		657700 1044300 SW	5								

Flow well locked closed 4/90 high salt. 15 days/mo. prev.
Location estimated

C-23
Locations estimated

4300159	49.21	03	43 11/87	AG	GM	1	0	SULLIVAN & HUFFMAN	43	159	08	13	0.8	24	107	0.85
4300159-1	107 01		10.00 02	1496	400	720		654648 991489	GM	08						
4300172	73.59	03	43 4/87	AG	GM	1	0	T & T ENTERPRISES	43	172	08	13	0.8	24	160	0.85
4300172-1	107 01		8.00 02	1210	393	800		647291 983206	GM	08						
4300190	47.34	03	43 5/89	AG	BOTH	11	1	NEIL E. MACHILLAN	43	190	08	13	1.5	24	102	0.85
4300190-1	94 01		2.00 02	154	149	40		634365 1021516	GM	02						
4300190-2	94 01		2.00 02	94	89	40		633875 1020722	GM	02						
4300190-3	94 01		2.00 02	18	13	40		633625 1018770	GM	02						
4300190-4	94 01		2.00 02	30	27	10		634465 1017940	GM	02						
4300190-5	94 01		2.00 02	30	25	10		634017 1015819	GM	02						
4300190-7	94 01		2.00 02	70	65	40		635099 1018576	GM	02						
4300190-9	94 01		8.00 02	1200	400	300		633356 1019746	GM	08						
4300190-10	94 01		8.00 02	1100	400	250		634997 1022210	GM	08						
4300190-6	107 01		2.00 02	125	120	50		633793 1013707	GM	02						
4300190-8	107 01		2.00 02	86	81	03		633425 1013170	GM	02						
4300190-11	107 01		10.00 02	1170	400	500		634673 1013575	GM	08						
4300190-12	107 02		10.00 02	1150	450	500		634513 1011903	GM	08						
4300190-SW1	107 01					1000		634673 1013575	SV	5						
4300190-SW2	107 02					1225		634513 1011903	SV	5						
4300217	12	03	43 8/87	AG	GM	1	0	CAULKINS INDIANTOWN CITRUS(WASTEWATER)	43	217	08	13	0.8	24	148	0.85
4300217-1	107 03		10.00 02	1400	451	200	M	661857 991852	GM	08						
4300260	89.84	03	43 4/89	GLF	BOTH	1	3	INDIANWOOD ASSOC., INC.	43	260	08	15	0.8	24	86	0.75
4300260-1	108 01		8.00 02	1300	400	500	Y	671400 982900	GM	08						
4300260-SW1	108 01					400	Y	671600 982900	SV	5						
4300260-SW2	108 01					400	Y	671600 982900	SV	5						
4300260-SW3	108 01					200	Y	671600 982900	SV	5						
4300321	50.46	03	43 11/87	AG	SN	0	2	KARST, INC.	43	321	08	13	3.6	24	110	0.85
4300321-SW1	108 02					286			SV	5						
4300321-SW2	108 02					286			SV	5						
4300329	35.51	03	43 2/89	GLF	GM	1	0	RADNOR PLANTATION	43	329	08	15	0.4	4	70	0.75
4300329-IR2	97 03		8.00 02	1025	590	420	Y	763343 1047272	GM	08						
4300329-PW3	97 01		8.00 02	1025	315	124	01	765520 1046870	GM	08						
4300360	1487.49	03	43 4/87	AG	BOTH	4	2	INDIAN RIVER CITRUS INV.	43	360	08	13	0.8	24	3234	0.85
4300360-W4	109 01		10.00 02	1250	393	1020	Y	708054 1000956	GM	08						
4300360-W3	109 01		10.00 02	1150	380	980	Y	708075 997055	GM	08						
4300360-W1	109 01		10.00 02	1100	420	950	Y	708114 990408	GM	08						
4300360-W2	109 03		10.00 02	1200	400	1000	Y	708152 994456	GM	08						
4300360-SW1	109 01		30.00 02			20000		708054 1000956	SV	5						
4300360-SW2	109 01		36.00 02			25000		708152 994456	SV	5						

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

PERMIT NO.	AN.	ALL.	MAX.	NO.	DATE	USE	SRC.	NO.	SW	CD	PERMIT NO.	DEV NO.	AG	TYPETYPE	ST	IRR	IRR
		UNT.	NO.	UTS.	CD	ISS.	TYPE	U.S.	PMP5	OWNER					ACRES	EFF	

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

PERMIT NO.	FACILITY NUMBER	QUAD NO.	WELL STS DIA.	DPTH	CODE	TD	CD	INT	TYPE	CAP.	MTR?	XPLMR	YPLMR	SRC	AG.	COMMENTS		
4300362	50	03	43 12/86	1MD	GW	2	0	CAULKINS	INDIANTOWN	CITRUS CO.	43	362	06	13	0.0	24	86	0.85
4300362-1	107 01		8.00 02	175	129	90	02	60	Y	659016	986105	GW	02	WATER REUSED ON ADJ GROVE (43-00217)				
4300362-2	107 01		8.00 02	175	129	90	02	60	Y	659142	985920	GW	02					
4300362-3	107 01		10.00 02	1000	400			300		650307	985614	GW	08	EST. FLOW 300 GPM This well just came on line recently.				
4300485	88.31	03	43 2/89	LAM	GW	2	0	RADNOR/PLANT (INDIAN RIV. PLANT.)			43	485	08	15	0.4	4	70	0.75
4300485-IR-1	97 01		8.00 02	1010	590	01		420	Y	766436	1047258	GW	08	CAP. EST.				
4300485-IR-4	97 01		8.00 02	1025	590	01		420	Y	765365	1046494	GW	08	CAP. EST.				
4300501	15.27	03	43 5/89	AG	GW	1	0	FENNEL 43 ACRE GROVE			43	501	08	13	0.8	24	33	0.85
4300501-1	107 02		6.00 02	1000	400			310		652093	992717	GW	08	EST. FLOW 310 GPM				
4300503	11.29	03	43 5/89	AG	GW	1	0	FENNEL 35 ACRE GROVE			43	503	08	13	0.8	24	35	0.85
4300503-1	107 02		6.00 02	1000	400			230		655658	997137	GW	08	EST. FLOW 310 GPM				

**Okeechobee County
Water Use Spreadsheets**

Okeechobee County

Okeechobee County Water Use Spreadsheets

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

PERMIT NO.	AM.	ALL.	MAX.	NO.	DATE USE SRC. NO.	SV	ISS.	CO.	UTS.	CO.	U.S.	PPMS.	OWNER.	CD.	PERMIT NO.	DEV NO.	AQ.	TYPE	ST.	IRR.	ACRES.	EFF.
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD. NO.	WELL NO.	DPTH.	CD.	INT.	TYPE.	CAP.	MTR7.	XPLNR.	YPLNR.	SRC.	AQ.	COMMENTS.
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Only FAS wells Included here.

4700005	482.08	03	83.17	02	47	3/76	AG	GM	4	0	M	CROSS RANCH, INC.	8	NO NATURAL FLOW HERE				
4700005-1	80 03	8 02	1200	160	02	600	MO	568057.	1105192	GM	8	NO NATURAL FLOW HERE	08	20	.8	12	450	.5
4700005-2	80 03	8 02	1200	160	02	600	MO	570037.	1102517	GM	8		08	20	.8	12	450	.5
4700005-3	80 03	8 02	1200	160	02	600	MO	571711.	1100309	GM	8		08	20	.8	12	450	.5
4700005-4	80 03	8 02	1200	160	02	600	MO	570010.	1098631	GM	8		08	20	.8	12	450	.5
4700014	1780	04	13.5	02	47	9/76	AG	GM	1	M	MURPHY WHITE DAI	08						
4700014-1	92 01	8 02	1000		GM	312	M	574724.	1054479	GM	08							
4700022	276.1	03	102.74	02	47	12/76	AG	BOTH	1	2	M.J. RANCH	47						
4700022-1	59 01	10.00	02	1000	260	850	M	581339.	1154522	GM	8	2	CULVERTS ALSO, exp. est im.					
4700023	1668.45	03	257.1	02	47	12/76	AG	GM	9	4	CHARLES T. SCOTT RANCH, INC.	08						
4700023-1	59 01	8 02	1000	60	580	M	580522.	1155926	GM	8	TOP LINE BROKEN INTO TWO LINES							
4700023-2	59 01	8 02	1000	60	580	M	580479.	1154341	GM	8	TWO CROP TYPES, 2 SOURCES WATER							
4700023-3	59 01	8 02	1000	60	580	M	580751.	1153974	GM	8	WITH 2 MONTHLY ALLOCATIONS							
4700023-4	59 01	8 02	1000	60	580	M	590064.	1152170	GM	8								
4700023-5	70 01	8 02	1000	60	580	M	590036.	1149273	GM	8								
4700023-6	70 01	8 02	1000	60	580	M	589965.	1147406	GM	8								
4700023-7	70 01	8 02	1000	60	580	M	592440.	1139925	GM	8								
4700023-8	70 01	8 02	1000	60	580	M	592452.	1135743	GM	8								
4700023-9	70 01	8 02	1000	60	580	M	593213.	1134288	GM	8								
4700023-10	70 01	8 02	1000		600	M	583747.	1147695	GM	8								
4700023-11	70 02	8 02	1000		600	M	586618.	1146769	GM	8								
4700036	171.23	03	24.67	02	47	4/77	AG	GM	1	0	G BAR E RANCH	08	EXPIRES 1993					
4700036-1	80 01	6.00	02	1000	200	600	M											
4700039	241.04	03	41.58	02	47	1/77	AG	GM	4	0	EMILCO DAIRY, INC	08						
4700039-1	93 01	8.00	02	1300	700	514	M	596959.	1044633	GM	08							
4700039-2	93 01	8.00	02	1300	700	514	M	595544.	1039808	GM	08							
4700039-3	93 01	8.00	02	1300	700	514	M	589665.	1040455	GM	08							
4700039-8	93 01	6.00	02	150	100	100	M	595909.	1035573	GM	02							

4700044	642.77	03	110.89	02	47	7/77	AG	GM	02	3000	M	0	COOK INTERNATIONAL, INC.	568487.	113221	GM	08	(REMILU RANCH)	08	20	0.8	12	600	0.50	
4700047	7850	04	33.70	02	47	1/78	AG	GM	02	12	M	0	CHARLES MCARTHUR CALF ENTERPRISES	47	0	CHARLES MCARTHUR CALF ENTERPRISES	47	0	CHARLES MCARTHUR CALF ENTERPRISES	47	0	0	0	0	0
4700047-1		81	01	02	800					65	M	0	596093.	1090927	GM	08	08	USE WASHING WATERING CATTLE							
4700047-2		81	01	02	800					65	M	0	592901.	1091092	GM	08	08								
4700047-3		81	01	02	800					65	M	0	591134.	1090198	GM	08	08								
4700047-4		81	01	02	800					65	M	0	587551.	1090676	GM	08	08								
4700047-5		81	01	02	800					65	M	0	587500.	1089180	GM	08	08								
4700047-6		81	01	02	800					65	M	0	587596.	1087204	GM	08	08								
4700047-7		81	01	02	800					65	M	0	587376.	1084545	GM	08	08								
4700047-8		81	01	02	800					65	M	0	587412.	1083192	GM	08	08								
4700047-9		81	01	02	800					65	M	0	588129.	1083046	GM	08	08								
4700047-10		81	01	02	800					65	M	0	587461.	1079438	GM	08	08								
4700047-11		81	01	02	800					65	M	0	587146.	1076138	GM	08	08								
4700047-12		81	01	02	800					65	M	0	587131.	1074738	GM	08	08								

4700051	2357.3	03	445.6	02	47	7/78	AG	GM	79	0	EVANS PROPERTIES, INC	08	08	OLD WELLS EVANS CLAIMS	08	08	08	08	08	08	13	0.8	12	5125	0.85
4700051-1		59	01	02	1000					575	Y	599777.	1171875	GM	08	08	08	08	08	08					
4700051-2		59	01	02	1000					575	Y	601648.	1168793	GM	08	08	08	08	08	08					
4700051-3		59	01	02	1000					575	Y	593819.	1169424	GM	08	08	08	08	08	08					
4700051-4		59	01	02	1000					575	Y	591241.	1168179	GM	08	08	08	08	08	08					
4700051-5		59	01	02	1000					575	Y	591745.	1163714	GM	08	08	08	08	08	08					
4700051-6		59	01	02	1000					575	Y	591751.	1160454	GM	08	08	08	08	08	08					
4700051-7		59	01	02	1000					575	Y	588270.	1159046	GM	08	08	08	08	08	08					
4700051-8		59	01	02	1000					575	Y	602349.	1164343	GM	08	08	08	08	08	08					
4700051-9		59	01	02	1000					575	Y	603172.	1160703	GM	08	08	08	08	08	08					
4700051-10		59	01	02	1000					575	Y	602504.	1159783	GM	08	08	08	08	08	08					
4700051-11		59	01	02	1000					575	Y	598592.	1166837	GM	08	08	08	08	08	08					
4700051-12		59	01	02	1000					575	Y	594655.	1159964	GM	08	08	08	08	08	08					
4700051-13		59	01	02	1000					575	Y	597147.	1160120	GM	08	08	08	08	08	08					
4700051-14		59	01	02	1000					575	Y	593443.	1166959	GM	08	08	08	08	08	08					
4700051-15		59	01	02	1000					575	Y	592446.	1165405	GM	08	08	08	08	08	08					
4700051-16		59	01	02	1000					575	Y	595993.	1164528	GM	08	08	08	08	08	08					
4700051-17		59	01	02	1000					575	Y	597154.	1166799	GM	08	08	08	08	08	08					
4700051-18FW		59	01	02	1021		210			575	Y	590278.	1169585	GM	08	08	08	08	08	08					
4700051-23FW		59	01	02	1000		227			575	Y	590379.	1166705	GM	08	08	08	08	08	08					
4700051-31FW		59	01	02	1060		257			575	Y	590356.	1161687	GM	08	08	08	08	08	08					
4700051-35FW		59	01	02	1080		265			575	Y	590397.	1159104	GM	08	08	08	08	08	08					
4700051-170W		59	01	02	1000					575	Y	595745.	1170970	GM	08	08	08	08	08	08					
4700051-190W		59	01	02	1000					575	Y	595734.	1169979	GM	08	08	08	08	08	08					
4700051-230W		59	01	02	1000					575	Y	596141.	1167317	GM	08	08	08	08	08	08					
4700051-270W		59	01	02	1000					575	Y	595662.	1163766	GM	08	08	08	08	08	08					
4700051-310W		59	01	02	1000		116			575	Y	595677.	1161360	GM	08	08	08	08	08	08					
4700051-350W		59	01	02	1020		252			575	Y	595619.	1158754	GM	08	08	08	08	08	08					
4700051-198W		59	01	02	1000		218			575	Y	601175.	1169562	GM	08	08	08	08	08	08					
4700051-238W		59	01	02	1000		200			575	Y	601085.	1166576	GM	08	08	08	08	08	08					
4700051-278W		59	01	02	1000					575	Y	600952.	1164096	GM	08	08	08	08	08	08					
4700051-318W		59	01	02	1000					575	Y	600978.	1161338	GM	08	08	08	08	08	08					
4700051-358W		59	01	02	1000		250			575	Y	590233.	1170796	GM	08	08	08	08	08	08					
4700051-16FW		59	02	02	1000		250			575	Y	590259.	1169237	GM	08	08	08	08	08	08					
4700051-19FW		59	02	02	1000		250			575	Y			GM	08	08	08	08	08	08					

**Indian River County
Water Use Spreadsheets**

Indian River County

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

PERMIT NO.	AM.	ALL UNIT	MAX NO.	MO.	DATE USE	SRC. NO.	SM	UTS.	CD	ISS.	TYPE	MLS.	PMP'S	OWNER	CD	PERMIT NO.	DEV MO.	AG TYPE	SOIL TYPE	RAIN ST	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NO.	QUAD.	WELL NO.	DPTH	CD	INT TYPE	CAP.	MTR7	ROW	COLUMN	SRC	AG.	COMMENTS	S	T	R
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Appendix G

Indian River Water Use Spreadsheets

6100004	93.0	03	01	10.00	02	1100	61	5/77	AG	GW	03	1800	4	0	FRED W. TUERK TRUST								
6100006	39.6	03	60	8.00	02	61	5/77	AG	GW	GW	1	800	4	1	WILLIAM AKINS								
6100007	312.0	03	01	10.00	02	1000	61	6/81	AG	GW	3	750	4	3	ADAMS RANCH INC.								
6100007-2		01	01	10.00	02	1000					4	750	6	2	GW	08							
6100007-3		01	01	10.00	02	1000					5	750	5	1	GW	08							
6100008	5.1	03	61	4.00	02	700	61	5/77	AG	GW	2	160	5	2	WILLIAM E. HARRIS								
6100008-2		61	01	4.00	02						5	160	5	2	GW	08							
6100009	11.8	03	61	6.00	02	61	5/77	AG	GW	GW	1	360	5	2	JACKSON BROTHERS GROVES								
6100011	13.3	03	61	5.00	02	61	5/77	AG	GW	GW	3	250	7	3	RUTH HALLSTROM								
6100011-2		61	01	5.00	02						7	250	7	3	GW	08							
6100011-3		61	01	5.00	02						8	250	8	3	GW	08							
6100021		0	61	12.00	03	61	2/88	AG			1	1100	7	1	SIDNEY M. RAMACK JR.								
6100021-1											7	16	7	16	GW	08							
6100024	11.9	03	61	10.00	02	1000	61	5/77	AG	GW	1	480	7	2	J. L. MULLIS								
6100024-1		01	01								7	24	7	24	GW	08							
6100025	11.9	03	61	6.00	02	900	61	5/77	AG	GW	5	250	6	5	PERCY M. OR RUBY THORNTON								
6100025-1		01	01								6	27	6	27	GW	08							

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

PERMIT NO.	AN.	ALL.	ALL MAX. UNT.	NO.	DATE USE	SRC. NO.	SN	CO	ISS. TYPE	U.S.	PHPS	OWNER	CD	PERMIT NO.	DEV NO.	AO	TYPE	ST	IRR	ACRES	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NO.	QUAD.	WELL NO.	DPTH	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AG.	COMMENTS	S	T	R			
6100047	3.2	03	61 01	6.00	02	800	61 6/77	AG	GW	1	OWEN & EDNA JOHNSON	26	GW	08	08	13	0.8	31	9	0.50
6100051	25.7	03	61 01	4.00	02	1000	61 6/77	AG	GW	6	KENNEDY GROVES INC.	23	GW	08	08	13	0.8	31	90	0.50
6100052	01	01	61 01	4.00	02	1000	61 6/77	AG	GW	100	3	23	GW	08	08	01/33/38				
6100053	01	01	61 01	4.00	02	1000	61 6/77	AG	GW	100	3	23	GW	08	08	01/33/38				
6100054	01	01	61 01	4.00	02	1000	61 6/77	AG	GW	100	3	23	GW	08	08	01/33/38				
6100055	20.7	03	61 01	8.00	02	575	61 2/85	AG	GW	1	ROBERT LANGDALE	21	GW	08	08	22	33	38	80	0.50
6100056	23.7	03	61 01	5.00	02	600	61 6/77	AG	GW	2	THOMAS & MARY BARNES	20	GW	08	08	09/33/38				
6100057	28.2	03	61 01	4.00	02	400	61 6/77	AG	GW	4	CHEMAGO	25	GW	08	08	09/33/38				
6100068	7.1	03	61 01	5.00	02	700	61 6/77	AG	GW	3	VICTORIS CALDWELL	27	GW	08	08	05, 08/33/39				
6100069	12.8	03	61 01	5.00	02	700	61 6/77	AG	GW	1	TOM & PENNY CLARK	24	GW	08	08	05, 08/33/39				

6100073	479.7	03	61 6/77	AG	GM	2	900	10.00	02	968	61 6/77	AG	GM	2	900	10.00	02	1050	11, 12, 13, 14/33/37 11, 12, 13, 14/33/37	1280	0.50
	6100073-1	60 01					900	10.00	02	1050					900						
	6100073-2	60 01					900	10.00	02	1050					900						
6100076	7.1	03	61 6/77	AG	GM	1	300	5.00	02		61 6/77	AG	GM	1	300	5.00	02		16/33/38	18	0.50
	6100076-1	60 01					300	5.00	02						300						
6100077	42.1	03	11/85	AG	GM	3	200	10.00	02	1000	11/85	AG	GM	3	200	10.00	02	1000	31/33/39	190	0.50
	6100077-1	61 01					200	10.00	02	1000					200						
	6100077-2	61 01					200	10.00	02	1000					200						
	6100077-3	61 01					200	10.00	02	1000					200						
6100078	41.0	03	61 6/77	AG	GM	3	750	10.00	02	1000	61 6/77	AG	GM	3	750	10.00	02	1000	04, 05/33/38 04, 05/33/38	120	0.50
	6100078-1	01 01					750	10.00	02	1000					750						
	6100078-2	01 01					300	10.00	02	1000					300						
	6100078-3	01 01					400	10.00	02	1000					400						
6100079	15.0	03	61 6/77	AG	GM	3	125	4.00	02		61 6/77	AG	GM	3	125	4.00	02		12/33/38 12/33/38	40	0.50
	6100079-1	61 01					125	4.00	02						125						
	6100079-2	61 01					100	4.00	02						100						
	6100079-3	61 01					100	4.00	02						100						
6100082	13.1	03	61 6/77	AG	GM	4	230	5.00	02	400	61 6/77	AG	GM	4	230	5.00	02	400	05, 06/33/39 05, 08/33/39 05, 08/33/39	35	0.50
	6100082-1	01 01					230	5.00	02	400					230						
	6100082-2	01 01					135	5.00	02	400					135						
	6100082-3	01 01					135	5.00	02	400					135						
	6100082-4	01 01					135	5.00	02	400					135						
6100083	95.7	03	61 5/88	AG	GM	5	250	6.00	02	300	61 5/88	AG	GM	5	250	6.00	02	300	23 33 38	185	0.85
	6100083-A	60 01					250	6.00	02	300					250						
	6100083-B	60 01					100	4.00	02	300					100						
	6100083-C	60 01					250	6.00	02	300					250						
	6100083-D	60 01					100	4.00	02	300					100						
	6100083-E	60 02					400	10.00	02	750					400						
	6100083-F	60 02					400	8.00	02	750					400						
6100085	45.8	03	61 6/77	AG	GM	2	75	4.00	02	300	61 6/77	AG	GM	2	75	4.00	02	300	09/33/37 09/33/37	100	0.50
	6100085-1	59 01					75	4.00	02	300					75						
	6100085-2	59 01					305	4.00	02	300					305						
6100086	29.2	03	61 7/78	AG	GM	2	360	6.00	02	500	61 7/78	AG	GM	2	360	6.00	02	500	26, 27/33/37 26, 27/33/37	200	0.50
	6100086-1	60 01					360	6.00	02	500					360						
	6100086-2	60 01					360	6.00	02	500					360						
6100089	3980.0	03	6/89	PMS	GM	01	500	12.00	02	112	6/89	PMS	GM	01	500	12.00	02	112		185	
	6100089-A	01 01					500	12.00	02	112					500						
	6100089-B	01 01					200	10.00	02	80					200						
	6100089-C	01 01					250	10.00	02	80					250						
	6100089-D	01 01					290	10.00	02	80					290						
	6100089-E	01 01					1200	10.00	02	570					1200						
	6100089-F	01 01					450	10.00	02	82					450						
	6100089-G	01 01					400	12.00	02	112					400						

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

PERMIT NO.	AM.	ALL.	ALL UMT NO.	MAX MO.	DATE USE SRC. NO.	SW	UITS.	CD	ISS.	TYPE	M/S.	PNPS	OWNER	CD	PERMIT NO.	DEV NO.	AG	TYPE	ST	IRR	ACRES	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	DPTH	CODE	TD	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AG.	COMMENTS	S	T	R
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6100109	119.9	03	01	02	61	2/87	AG	GW	2	500		FRED TUERK											
6100109-1										16 GW		08 EST. CAP				11/33/37							
6100109-2										500		4	16 GW			11/33/37							
6100110	45.0	03	01	02	61	12/86	AG	GW	1	900		STEWART B. IGENHART											
6100110-1												1990 TRUST				27/33/38							
6100111	33.1	03	01	02	61	6/86	AG	GW	2	250		OTTHAR M. ZIGRANG											
6100111-1										250		7	25 GW			29/33/39							
6100111-2										250		7	25 GW			29/33/39							
6100112	46.6	03	01	02	61	1/86	AG	GW	1	889		RANDY SEXTON SR.											
6100112-1												7	26 GW			28/33/39							
6100113	67.2	03	01	02	61	11/85	AG	GW	3	558		RANDY SEXTON SR.											
6100113-1										343		6	22 GW			23/33/38							
6100113-2										558		6	22 GW			23/33/38							
6100113-3												6	22 GW			23/33/38							
6100114	11.6	03	01	02	61	11/86	AG	GW	1	575		CAMELA GROVES INC											
6100114-1												6	22 GW			23/33/38							
6100115	11.5	03	01	02	61	11/85	AG	GW	3	250		ISABELE M. BEUTTELL											
6100115-1										250		3	26 GW			04/33/39							
6100115-2										250		3	26 GW			04/33/39							
6100115-3										250		3	26 GW			04/33/39							
6100120	83.0	03	01	02	61	11/81	AG	GW	4	150		VALERIA HEARNON											
6100120-1										45		4	23 GW			12/33/38							
6100120-2										85		4	23 GW			12/33/38							
6100120-3										40		4	23 GW			12/33/38							
6100120-4												4	23 GW			12/33/38							
6100122	48.4	03	01	02	61	11/81	AG	GW	1	250		JOHN R. & BARBARA TRIPSON											
6100122-1												3	26 GW			34/33/39							

Account No.	Amount	Code	Date	Category	Quantity	Unit	Rate	Balance	Code	Date	Category	Quantity	Unit	Rate	Balance
6100123	142.4	03	61 12/88	VERO BEACH COUNTRY CLUB	4	AG BOTH			08	15	0.4	31		130	0.75
6100123-1		01		29 GW	500										
6100123-2		01		29 GW	500										
6100123-3		01		29 GW	500										
6100123-4		01		29 GW	500										
6100123-5		01		29 SW	10000										
6100124			61 11/81	AQUATIC FISHERIES											
6100125	40.0	03	61 2/86	INTERNATIONAL CITRUS CORP.	4	AG GW			08	13	0.8	31		320	0.85
6100125-1		61 01		6 15 GW	800										
6100125-2		61 01		6 15 GW	800										
6100125-3		61 01		6 15 GW	800										
6100125-4		61 01		6 15 GW	800										
6100127	182.5	03	5/87	HERCULES INC.	1	IMD GW			08					50	
6100127-1		61					42.00	02							
6100128	121.0	03	61 6/85	GENERAL DEVELOPMENT UTILITIES	3	PWS GW			02					962	
6100128-1		61 01		6 125	150										
6100128-2		61 01		6 125	125										
6100128-3		61 01		6 125	350										
6100129	28.8	03	61 12/81	CITY OF VERO BEACH POWER PLANT	4	IMD GW			08						
6100129-1		01		3 28 GW	500										
6100129-2		01		3 28 GW	500										
6100129-3		01		3 28 GW	500										
6100129-4		01		3 28 GW	500										
6100131	42.4	03	61 12/81	H. M. WOLCK	2	AG BOTH			08	13	0.8	31		40	0.50
6100131-1		61 01			100		4.00	02							
6100131-2		61 01			100		4.00	02							
6100132	36.0	03	61 2/86	CARMEN O. RUBIO	4	AG GW			08	13	0.8	31		70	0.85
6100132-1		61 01		8 25 GW	310		10.00	02							
6100132-2		61 01		8 25 GW	310		10.00	02							
6100132-3		61 01		8 25 GW	310		10.00	02							
6100132-4		61 01		8 25 GW	310		10.00	02							
6100137	56768.0	03	61 1/82	CITY OF VERO BEACH POWER PLANT	2	IMD BOTH			99						
6100137-1		01			1500		10.00	02							
6100137-2		01			1500		10.00	02							
6100137	20.0	03	61 8/89	CITY OF VERO BEACH	2	IMD BOTH			08	13					
6100137-1		01			22000			02							
6100137-2		01			30000			02							
6100137-3		01			60000			02							
6100138	38.9	03	61 6/86	VIRLYN GROVES INC.	3	AG GW			08	20	0.4	31		240	0.50
6100138-1		01		8 28 GW	500			02							
6100138-1		01		8 28 GW	500			02							
6100138-1		01		8 28 GW	500			02							

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

PERMIT NO.	AN.	ALL.	MAX NO.	DATE USE SRC. MO.	SW	UNIT NO.	UTS. CO	ISS. TYPE	WLS. PMPs	DAMER	CD	PERMIT NO.	DEV NO.	AG TYPE	SOIL RAIN	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	DEPTH	PMP PUMP	CD	INT TYPE	CAP.	MTR?	ROW COLUMN	SRC	AG.	COMMENTS	S	T	R
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6100139	32.4	03	61 2/85	AG	GW	1	EDWIN PRANGE	4	14	GW	08	09/33/37	08	13	0.8	31	47	0.50
6100140	42.0	03	61 12/85	AG	GW	1	AMAPA CORPORATION	4	14	GW	08	09/33/37	08	13	0.8	31	125	0.85
6100143	74.5	03	61 3/87	AG	GW	1	BERNARD EDER	3	14	GW	08	04/33/37	08	13	0.8	31	144	0.85
6100144	41.5	03	61 6/85	AG	GW	1	CHRISTFRIED PROCHNOW	4	14	GW	08	11/33/38	08	13	0.8	31	133	0.50
6100146	37.9	03	61 5/86	PMS	GW	2	CHAMPION HOME COMMUNITIES	4	22	GW	02	11/33/38	08					
6100147	82.0	03	61 5/82	AG	GW	2	THOMAS F. BATES	6	27	GW	08	22/33/39	08	13	0.8	31	53	0.50
6100148		01	61 8/85	AG	GW	2	FRANK BATES GROVES INC.	4	17	GW	08	12/33/37	08	13	0.8	31	80	0.50
6100150	33.1	03	61 7/85	AG	GW	4	BYRON H. BEATY	4	24	GW	08	07/33/39	08	13	0.8	31	40	0.50
6100151	1194.0	03	61 8/85	AG	GW	8	EVANS PROPERTIES INC. ET AL	7	11	GW	08	25,36,30,31/33/36,37	08	13	0.8	31	2105	0.50

6100151-14A	59 01	12.00	61 6/82	AG	GM	3	N. ROSENTHAL/R. NEWMAN	1100	7	11	GM	08	"	25,36,30,31/33/36,37	08	13	0.8	31	160	0.50
6100151-14B	59 01	12.00	8.00	02	900	550	6	21	GM	08	6	11	GM	08	22/33/38					
6100151-14J	59 01	12.00	8.00	02	850	300	6	21	GM	08	6	11	GM	08	22/33/38					
6100151-15A	59 01	12.00	8.00	02	850	300	6	21	GM	08	6	11	GM	08	22/33/38					
6100151-15B	59 01	12.00	61 4/85	AG	GM	5	NORMAN ROSENTHAL /ROBERT NEWMAN	1100	7	12	GM	08	"	25,36,30,31/33/36,37	08	13	0.8	31	240	0.50
6100151-15U	59 01	12.00	6.00	02	800	411	7	22	GM	08	7	12	GM	08	26/33/38					
6100151-2AE	59 01	12.00	6.00	02	800	411	7	22	GM	08	7	12	GM	08	26/33/38					
6100151-2AM	59 01	12.00	6.00	02	366	366	7	22	GM	08	7	12	GM	08	26/33/38					
6100151-2BE	59 01	12.00	6.00	02	900	366	7	22	GM	08	7	12	GM	08	26/33/38					
6100151-4AE	59 01	12.00	61 4/85	AG	GM	3	WILLIAM L. NICHOLAS	1100	7	12	GM	08	"	25,36,30,31/33/36,37	08	13	0.8	31	120	0.50
6100151-4AM	59 01	12.00	5.00	02	800	387	7	21	GM	08	7	12	GM	08	27/33/38					
6100151-4BE	59 01	12.00	5.00	02	700	323	7	21	GM	08	7	12	GM	08	27/33/38					
6100151-6AE	59 01	12.00	5.00	02	800	1098	7	21	GM	08	7	12	GM	08	27/33/38					
6100151-6AM	59 01	12.00	6.00	02	366	366	7	22	GM	08	7	12	GM	08	26/33/38					
6100151-6BE	59 01	12.00	6.00	02	900	366	7	22	GM	08	7	12	GM	08	26/33/38					
6100151-8AE	59 01	12.00	61 6/82	AG	GM	1	M. CASTELLI	1100	7	12	GM	08	"	25,36,30,31/33/36,37	08	13	0.8	31	60	0.50
6100151-8AM	59 01	12.00	6.00	02	240	320	7	25	GM	08	7	12	GM	08	29/33/39					
6100161-8BE	59 01	12.00	6.00	02	950	714	8	21	GM	08	8	12	GM	08	34/33/38					
6100154	161.8	03	61 7/87	AG	GM	1	MEDI CITRUS INC.	1100	8	21	GM	08	"	25,36,30,31/33/36,37	08	13	0.8	31	40	0.50
6100154-1	60 01	8.00	61 2/87	AG	GM	4	JAMICE NEWMAN ROSENTHAL	1100	8	21	GM	08	"	25,36,30,31/33/36,37	08	13	0.8	31	240	0.85
6100154-2	60 01	8.00	6.00	02	800	300	8	21	GM	08	8	12	GM	08	34/33/38					
6100154-3	60 01	8.00	6.00	02	800	300	8	21	GM	08	8	12	GM	08	34/33/38					
6100155	151.0	03	6.00	02	900	600	8	21	GM	08	8	12	GM	08	34/33/38					
6100155-1	60 01	6.00	61 9/86	AG	GM	2	L.O. GROVES	1100	2	21	GM	08	"	25,36,30,31/33/36,37	08	13	0.8	31	60	0.50
6100155-2	60 01	6.00	8.00	02	800	575	3	21	GM	08	3	12	GM	08	03/33/38					
6100155-3	60 01	6.00	8.00	02	800	575	3	21	GM	08	3	12	GM	08	03/33/38					
6100155-4	60 01	6.00	6.00	02	366	366	7	22	GM	08	7	12	GM	08	26/33/38					
6100155-5	60 01	6.00	6.00	02	900	366	7	22	GM	08	7	12	GM	08	26/33/38					
6100157	82.8	03	6.00	02	240	320	7	25	GM	08	7	12	GM	08	29/33/39					
6100157-1	60 01	5.00	6.00	02	800	387	7	21	GM	08	7	12	GM	08	27/33/38					
6100157-2	60 01	5.00	6.00	02	700	323	7	21	GM	08	7	12	GM	08	27/33/38					
6100157-3	60 01	5.00	6.00	02	800	1098	7	21	GM	08	7	12	GM	08	27/33/38					
6100158	28.9	03	6.00	02	240	320	7	25	GM	08	7	12	GM	08	29/33/39					
6100158-1	61 01	6.00	6.00	02	950	714	8	21	GM	08	8	12	GM	08	34/33/38					
6100162	13.5	03	6.00	02	800	300	8	21	GM	08	8	12	GM	08	34/33/38					
6100162-1	60 01	8.00	6.00	02	800	300	8	21	GM	08	8	12	GM	08	34/33/38					
6100163	60.5	03	6.00	02	900	600	8	21	GM	08	8	12	GM	08	34/33/38					
6100163-1	60 01	6.00	6.00	02	900	600	8	21	GM	08	8	12	GM	08	34/33/38					
6100163-2	60 01	6.00	6.00	02	800	300	8	21	GM	08	8	12	GM	08	34/33/38					
6100163-3	60 01	6.00	6.00	02	800	300	8	21	GM	08	8	12	GM	08	34/33/38					
6100163-4	60 01	6.00	6.00	02	900	600	8	21	GM	08	8	12	GM	08	34/33/38					
6100164	42.2	03	6.00	02	240	320	7	25	GM	08	7	12	GM	08	29/33/39					
6100164-1	60 01	8.00	6.00	02	800	387	7	21	GM	08	7	12	GM	08	27/33/38					
6100164-2	60 01	8.00	6.00	02	800	387	7	21	GM	08	7	12	GM	08	27/33/38					

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

PERMIT NO.	AM.	ALL.	MAX.	NO.	DATE USE SRC. NO.	SW	UTS.	CD	ISS.	TYPE	WLS.	PMP5	OWNER	CD	PERMIT NO.	DEV NO.	AG	TYPE	ST	RAIN	JRR	IRR	ACRES	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	DEPTH	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AG.	COMMENTS	S	T	R									
6100165	114.9	03	61	4/85	AG	GW	3	WILLIAM L. NICHOLAS																		
6100165-1	8.00	02	900	627				3	20	GW	08			04,09/33/38				08	13	0.8	31			210	0.50	
6100165-2	8.00	02	900	339				4	20	GW	08			04,09/33/38												
6100165-3	8.00	02	900	393				4	20	GW	08			04,09/33/38												
6100166	11.8	03	61	8/86	AG	08	1	JOHN LINDSEY																		
6100166-1	6.00	02	850	600				8	22	GW	08			35/33/30				08	13	0.8	31			40	0.85	
6100169	66.2	03	61	12/86	AG	GW	1	RANGE RIME GROVES INC.																		
6100169-1	12.00	02	830	1100				3	23	GW	08			01/33/30				08	13	0.8	31			80	0.50	
6100180	34.6	03	61	7/82	AG	GW	2	C. REED KNIGHT																		
6100180-1	6.00	02	412	412				4	23	GW	08			12/33/38				08	13	0.8	31			80	0.85	
6100180-2	6.00	02	441	441				4	23	GW	08			12/33/30												
6100181	15.9	03	61	10/85	AG	GW	7	HENRY SCHNACHT																		
6100181-1	6.00	02	250	250				5	24	GW	08			18/33/39				08	13	0.8	31			66	0.50	
6100181-2	6.00	02	250	250				5	24	GW	08			18/33/39												
6100181-3	6.00	02	250	250				5	24	GW	08			18/33/39												
6100181-4	6.00	02	250	250				5	24	GW	08			18/33/39												
6100181-5	6.00	02	250	250				5	24	GW	08			18/33/39												
6100181-6	6.00	02	250	250				5	24	GW	08			18/33/39												
6100181-7	6.00	02	250	250				5	24	GW	08			18/33/39												
6100182	16.6	03	61	10/85	AG	GW	2	HENRY SCHNACHT																		
6100182-1	6.00	02	250	250				6	25	GW	08			20/33/39				08	13	0.8	31			20	0.50	
6100182-2	6.00	02	250	250				6	25	GW	08			20/33/39												
6100184	49.6	03	61	7/82	AG	GW	4	PHILLIP R. HELSETH																		
6100184-1	5.00	02	800	286				6	26	GW	08			21/33/39				08	13	0.8	31			80	0.50	
6100184-2	5.00	02	171	171				6	26	GW	08			21/33/39												
6100184-3	5.00	02	157	157				6	26	GW	08			21/33/39												
6100184-4	5.00	02	105	105				6	26	GW	08			21/33/39												
6100188	21.6	03	61	10/85	AG	GW	2	A-1 CITRUS INC/OLOW F. PIPPIN																		
6100188-1	6.00	02	250	250				2	25	GW	08							08	13	0.8	31			40	0.50	

6100188-1	60 01	14.00 02	61 7/82	AG	GM	2	5	20	GM	08	08	13	0.8	31	16/33/38	320 0.85
6100188-2	60 01	14.00 02				1500	5	20	GM	08						
6100189	139.2	03	61 7/82	AG	GM	2	C. REED KNIGHT								15/33/37	
6100189-1	59 01	12.00 02				1100	5	15	GM	08					15/33/37	
6100189-2	59 01	12.00 02				1100	5	15	GM	08						
6100193	21.5	03	61 8/82	AG	GM	2	MONROE GROVES								05/33/39	20 0.50
6100193-1	01	4.00 02				60	3	25	GM	08					05/33/39	
6100193-2	01	4.00 02				350	3	25	GM	08					05/33/39	
6100194	46.1	03	61 8/82	AG	GM	2	MONROE GROVES								26/33/39	40 0.50
6100194-1	61 01	6.00 02				320	7	26	GM	08					26/33/39	
6100194-2	61 01	6.00 02				100	7	26	GM	08					26/33/39	
6100197	73.5	03	61 5/86	AG	GM	5	D. VICTOR KNIGHT JR.								09/33/38	160 0.85
6100197-1	01	6.00 02				358	4	20	GM	08					09/33/38	
6100197-2	01	6.00 02				358	4	20	GM	08					09/33/38	
6100197-3	01	6.00 02				358	4	20	GM	08					09/33/38	
6100197-4	01	6.00 02				358	4	20	GM	08					09/33/38	
6100197-5	02	6.00 02				3000	4	20	GM	08					09/33/38	
6100199	27.6	03	61 3/83	AG	GM	3	R. W. GRAVES INC.								27/33/38	80 0.85
6100199-1	60 01	8.00 02				674	7	21	GM	08					27/33/38	
6100199-2	60 01	8.00 02				479	7	21	GM	08					27/33/38	
6100199-3	60 01	8.00 02				200	7	21	GM	08					27/33/38	
6100200	55.3	03	61 9/82	AG	GM	1	RANDY SEXTON JR.								35/33/38	80 0.85
6100200-1	60 01	8.00				575	8	22	GM	08					35/33/38	
6100201	16.6	03	61 9/82	AG	GM	3	J. MARK WELLS								33/33/39	20 0.50
6100201-1	61 01	5.00 02				306	8	26	GM	08					33/33/39	
6100201-2	61 01	5.00 02				286	8	26	GM	08					33/33/39	
6100201-3	61 01	5.00 02				127	8	26	GM	08					33/33/39	
6100203	70.6	03	61 12/85	AG	GM	2	C & G GROVES								30/33/39	160 0.50
6100203-1	61 01	6.00 02				239	7	24	GM	08					30/33/39	
6100203-2	61 01	6.00 02				501	7	24	GM	08					30/33/39	
6100205	28.0	03	61 8/85	AG	GM	1	ELLIOTT & JOHNSON VERO BEACH								32/33/39	70 0.85
6100205-1	61 02	10.00 02				1725	8	25	GM	08					32/33/39	
6100205-2	61 01	10.00 02 700				1725	8	25	GM	08					32/33/39	
6100206	54.1	03	61 9/82	AG	GM	1	ELLIOTT & JOHNSON								03/33/39	40 0.50
6100206-1	61 01	10.00 02				1429	3	27	GM	08					03/33/39	
6100207	37.7	03	61 3/87	AG	GM	3	VERO GROVE DEV. CORP.								30/33/40	40 0.50
6100207-1	01	4.00 02				100	7	30	GM	08					30/33/40	
6100207-2	01	4.00 02				100	7	30	GM	08					30/33/40	
6100207-3	01	4.00 02				100	7	30	GM	08					30/33/40	
6100209	44.5	03	61 5/85	AG	GM	1	EVANS PROPERTIES SA GROVES								08 13 0.8 31	223 0.50

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

PERMIT NO.	AW ALL.	ALL MAX. UNT.	MO. NO.	DATE USE	SRC. NO.	SU	CO	ISS. TYPE	M.L.S.	P.M.P.S.	OWNER	CO PERMIT NO.	DEV NO.	AG TYPE	SOIL TYPE	RAIN ST	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NO.	STADIA.	WELL NO.	DEPTH	P.M.P. PUMP	CD	INT TYPE	CAP.	MTR7	ROM	COLUMN	SRC	AG.	COMMENTS	S / T / R
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6100209-1	60 01	8.00	02	575	0	16	GM	08	CAP. EST.					31/33/38						
6100211	13.8	03	61 5/85	AG	GM	2	WILLIAM & FRANCES GRAVES III													
6100211-1	61 01	5.00	02	250	7	25	GM	08	CAP. EST.					29/33/39	08	13	0.8	31	20	0.50
6100211-2	61 01	5.00	02	250	7	25	GM	08						29/33/39						
6100214	204.6	03	61 12/85	AG	GM	5	ESTATE OF C. RAY HOGAN													
6100214-1	61 01	8.00	02	681	7	25	GM	08						29,31,32/33/39	08	13	0.8	31	310	0.50
6100214-2	61 01	8.00	02	471	7	25	GM	08						29,31,32/33/39						
6100214-3	61 01	8.00	02	383	8	24	GM	08						29,31,32/33/39						
6100214-4	61 01	8.00	02	1201	8	25	GM	08						29,31,32/33/39						
6100214-5	61 01	8.00	02	225	8	24	GM	08						29,31,32/33/39						
6100215	9.6	03	61 10/82	AG	GM	1	ESTATE OF C. RAY HOGAN													
6100215-1	61 01	3.00	02	250	7	23	GM	08	CAP. EST.					25/33/38	08	13	0.8	31	40	0.85
6100216	325.3	03	3/87	AG	GM	1	DESIRE AND JOHANNA KROMHOUT													
6100216-1	61 01	3.00	02	100	2	17	GM	08	CAP. EST.					36,01/32/33/37	08	13	0.8	31	200	0.50
6100230	144.9	03	61 4/85	AG	GM	14	M.C. GRAVES JR.													
6100230-1	61 01	4.00	02	38	5	24	GM	08						18/33/39	08	13	0.8	31	210	0.50
6100230-10	61 01	4.00	02	125	5	24	GM	08						18/33/39						
6100230-11	61 01	8.00	02	305	5	24	GM	08						18/33/39						
6100230-12	61 01	8.00	02	125	5	24	GM	08						18/33/39						
6100230-13	61 01	8.00	02	75	5	24	GM	08						18/33/39						
6100230-14	61 01	4.00	02	125	5	24	GM	08						18/33/39						
6100230-2	61 01	4.00	02	176	5	24	GM	08						18/33/39						
6100230-3	61 01	4.00	02	38	5	24	GM	08						18/33/39						
6100230-4	61 01	4.00	02	38	5	24	GM	08						18/33/39						
6100230-5	61 01	4.00	02	176	5	24	GM	08						18/33/39						
6100230-6	61 01	4.00	02	375	5	24	GM	08						18/33/39						
6100230-7	61 01	4.00	02	625	5	24	GM	08						18/33/39						
6100230-8	61 01	4.00	02	176	5	24	GM	08						18/33/39						
6100230-9	61 01	4.00	02	125	5	24	GM	08						18/33/39						

6100231	132.5	03	61 6/86	AG	GM	5	FIRST VERO GROVE LTD.	21/33/39	08 13	0.8	31	187	0.50
	6100231-1	61 01	4.00	02	6	26	GM	08					
	6100231-2	61 01	4.00	02	100	26	GM	08 "					
	6100231-3	61 01	4.00	02	100	26	GM	08 "					
	6100231-4	61 01	4.00	02	100	26	GM	08 "					
	6100231-5	61 01	4.00	02	100	26	GM	08 "					
6100232	56.3	03	61 7/87	AG	GM	6	DAROLD H. MCALLISTER	32/33/39	08 13	0.8	31	110	0.85
	6100232-1	61 01	6.00	02	1000	8	25	GM	08				
	6100232-2	61 01	6.00	02	1000	8	25	GM	08 "				
	6100232-3	61 01	6.00	02	1000	8	25	GM	08 "				
	6100232-4	61 01	6.00	02	1000	8	25	GM	08 "				
	6100232-5	61 01	6.00	02	1000	8	25	GM	08 "				
	6100232-6	61 01	6.00	02	1000	8	25	GM	08 "				
	6100232-7	61 02	6.00	02	1500	8	25	GM	08				
6100233	10.2	03	61 12/87	AG	GM	5	VERO BEACH, INC.	31/33/39	08 13	0.8	31	80	0.85
	6100233-1	61 01	4.00	02	100	8	24	GM	08				
	6100233-2	61 01	4.00	02	100	8	24	GM	08 "				
	6100233-3	61 01	4.00	02	100	8	24	GM	08 "				
	6100233-4	61 01	4.00	02	100	8	24	GM	08 "				
	6100233-5	61 01	4.00	02	100	8	24	GM	08 "				
	6100233-6	61 01	4.00	02	2000	8	24	GM	08				
6100235	41.4	03	61 2/85	AG	GM	2	EDWIN PRANGE	31/33/35	08 13	0.8	31	60	0.50
	6100235-1	61 01	8.00	02	575	8	GM	08					
	6100235-2	61 01	8.00	02	575	8	GM	08 "					
6100237	13.8	03	61 3/83	AG	GM	1	R.W. GRAVES	35/33/38	08 13	0.8	31	40	0.85
	6100237-1	60 01	8.00	02	674	8	22	GM	08				
6100238	33.1	03	61 3/83	AG	GM	2	SIDNEY M. BANACK JR.	32/33/39	08 13	0.8	31	40	0.50
	6100238-1	61 01	6.00	02	250	8	25	GM	08				
	6100238-2	61 01	6.00	02	250	8	25	GM	08 "				
6100242	33.1	03	61 3/87	AG	GM	2	THOMAS & MARY SUE BARNES	29,32/33/39	08 13	0.8	31	40	0.50
	6100242-1	61 01	6.00	02	250	7	25	GM	08				
	6100242-2	61 01	6.00	02	250	8	25	GM	08 "				
6100244	13.0	03	61 12/88	AG	GM	1	PERRY LLOYD	34/33/38	08 13	0.8	31	80	0.75
	6100244-A	60 01	6.00	02	920	8	21	GM	08				
6100245	23.0	03	61 12/82	AG	GM	4	ROCKMONT GROVES	15/33/38	08 13	0.8	31	160	0.85
	6100245-1	60 01	8.00	02	300	5	21	GM	08				
	6100245-2	60 01	8.00	02	150	5	21	GM	08				
	6100245-3	60 01	8.00	02	150	5	21	GM	08				
	6100245-4	60 01	8.00	02	20	5	21	GM	08				
6100246	23.0	03	61 12/82	AG	GM	1	ROCKMONT GROVES	80/0.50	08 13	0.8	31	80	0.50
	6100246-1	01	10.00	02	1100	4	21	GM	08				
6100248	0.4	01	2/89	AG	GM	2	CLIFFORD W. BALL	110/0.50	08 13	0.8	31	110	0.50

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

PERMIT NO.	AM.	ALL.	ALL UNIT NO.	MAX UNIT NO.	NO.	DATE USE	SRC. NO.	SV	WLS.	PMP'S	OWNER	CD	PERMIT NO.	DEV NO.	AG TYPE	SOIL TYPE	RAIN ST	IRR ACRES	IRR EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

PERMIT NO.	FACILITY NO.	STSDIA.	WELL NO.	DEPTH	PMP PUMP	CD	INT TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AG.	COMMENTS	S / T / R
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6100249	6100249-A	60 01	02 450	250	6	22	GW	08	CAP.EST.					23/33/38	
		100.0			1					CLIFFORD W. BALL					
		61 01	02 800	305	6	24	GW	08						19/33/39	08 13 0.8 31 100 0.50
6100251	6100251-1	60 03	61 3/83	GW	1					DR. E. W. AKINS				12/33/37	08 13 0.8 31 124 0.85
		57.1			4	17	SW	08							
6100253	6100253-1	60 01	61 12/85	AG	1					WILLIAM G. ROE				24/33/37	08 13 0.8 31 277 0.85
		143.9			6	17	GW	08							
6100255	6100255-1	61 01	61 8/85	AG	1					ALEX MACWILLIAMS JR.				36/33/38	08 13 0.8 31 76 0.85
		26.3			50	8	23	GW	08						
6100262	6100262-1	60 01	61 2/83	AG	2					R. W. GRAVES				10/33/38	08 13 0.8 31 40 0.50
		10.8			429	4	21	GW	08						
	6100262-2	60 01	61 5/86	AG	5					CENTRAL GROVES INC.				10/33/38	08 13 0.8 31 23 0.50
		19.0			75	3	26	GW	08						
6100263	6100263-1	61 01	61 8/85	AG	4					HENSICK GROVES INC.				04/33/39	08 13 0.8 31 40 0.50
		33.1			442	7	25	GW	08						
6100266	6100266-1	61 01	61 10/85	AG	1					WALLACE A. MOORE JR.				39/33/39	08 13 0.8 31 77 0.50
		36.4			575	7	22	GW	08						
6100269	6100269	60 01	61 11/85	AG	7					M. H. PENNEY				26/33/38	08 13 0.8 31 60 0.85
		12.8			7										

6100269-1	61 01	8.00	02	300	7	26 GW	08	28/33/39
6100269-2	61 01	8.00		310	7	26 GW	08	28/33/39
6100269-3	61 01	8.00		326	7	26 GW	08	28/33/39
6100269-4	61 01	8.00		309	7	26 GW	08	28/33/39
6100269-5	61 01	8.00		312	7	26 GW	08	28/33/39
6100269-6	61 01	8.00		171	7	26 GW	08	28/33/39
6100269-7	61 01	8.00		165	7	26 GW	08	28/33/39

6100275	37.6	03	61 10/85	AG	GW	6	GEORGE S. LAMBETH	08	13	0.8	31	134	0.50
6100275-1	61 01	5.00	02	324	8	26 GW	08	33/33/39					
6100275-2	61 01	5.00	02	324	8	26 GW	08	33/33/39					
6100275-3	61 01	5.00	02	159	8	26 GW	08	33/33/39					
6100275-4	61 01	5.00	02	159	8	26 GW	08	33/33/39					
6100275-5	61 01	5.00	02	159	8	26 GW	08	33/33/39					
6100275-6	61 01	5.00	02	422	8	26 GW	08	33/33/39					

6100276	157.7	03	61 2/89	AG	GW	3	1 GEORGE & LADONICE LAMBETH	08	13	0.8	31	120	0.85
6100276-1	61 01	02	02	250	6	18 GW	08	19/33/38					
6100276-2	61 01	02	02	250	6	18 GW	08	19/33/38					
6100276-3	61 01	02	02	250	6	18 GW	08	19/33/38					

6100277	144.9	03	61 2/89	AG	GW	5	GEORGE LAMBETH JR.	08	13	0.8	31	280	0.85
6100277-A	01	8.00	02	850	3	19 GW	08	04 05/33/38					
6100277-B	01	8.00	02	850	3	19 GW	08	04 05/33/38					
6100277-C	01	4.00	02	850	3	19 GW	08	04 05/33/38					
6100277-D	01	8.00	02	850	3	20 GW	08	04 05/33/38					
6100277-E	02	12.00	02	900	3	20 GW	08	04 05/33/38					
6100277-A	01	---	---	12700	3	20 SM	99	PUMP					

6100278	31.0	03	61 7/85	AG	GW	3	THE PACKERS OF INDIAN RIVER	08	13	0.8	31	60	0.85
6100278-1	61 01	6.00	02	850	7	26 GW	08	28/33/39					
6100278-2	61 01	6.00	02	850	7	26 GW	08	28/33/39					
6100278-3	61 01	6.00	02	1200	7	26 GW	08	28/33/39					

6100280	3.7	03	61 11/85	AG	GW	1	MURRY CAPAZZO	08	13	0.8	31	20	0.50
6100280-1	61 01	6.00	02	900	5	24 GW	08	18/33/39					

6100281	51.8	03	61 5/85	AG	GW	2	MRS. LLOYD KNIGHT	08	13	0.8	31	80	0.50
6100281-1	60 01	6.00		250	8	21 GW	08	34/33/38					
6100281-2	60 01	6.00		250	8	21 GW	08	34/33/38					

6100283	21.1	03	61 7/85	AG	GW	1	ROSALIE HEARST	08	13	0.8	31	40	0.50
6100283-1	60 01	8.00	02	1000	8	16 GW	08	35/33/37					

6100284	49.6	03	61 7/85	AG	GW	1	DUMEYSTEIN CORP.	08	13	0.8	31	80	0.50
6100284-1	60 01	10.00	02	1000	8	17 GW	08	36/33/37					

6100285	32.4	03	61 10/85	AG	GW	1	WAYNE L. TITZEL	08	13	0.8	31	80	0.50
6100285-1	60 01	10.00	02	1000	7	17 GW	08	25/33/37					

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

PERMIT AN. ALL MAX NO. DATE USE SRC. NO. SW CROP SOIL IRR IRR
 NO. ALL. UNT NO. UTS. CO ISS. TYPE WLS. PMP'S OWNER CD PERMIT NO. DEV NO. AQ TYPE TYPE ST ACRES EFF

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

PERMIT FACILITY QUAD. WELL DPTH PMP PUMP PUMP
 NO. NUMBER NO. STSDIA. CODE TD CD INT TYPE CAP. MTR? ROW COLUMN SRC AG. COMMENTS S / T / R

6100287	46.2	03	61 12/85	AG	GW	2	DUNEYSTEIN; GLAZER & CURTIS	32/33/38	08	13	0.8	31	77	0.50
6100287-1	60 01	10.00	02 1000			850	8 19 GW 08 CAP-EST.							
6100298	44.6	03	61 3/86	AG	GW	1	LLOYD KNIGHT (MRS.)	09/33/38	08	13	0.8	31	95	0.85
6100298-1	60 01	6.00				314	4 20 GW 08							
6100299	66.2	03	61 4/87	AG	GW	1	WILLIAM COBB	27/33/38	08	13	0.8	31	80	0.50
6100299-1	60 01	8.00	02			650	7 21 GW 08							
6100300	13.3	03	61 1/84	AG	GW	1	BARNETT GREEN JR.	24/33/38	08	13	0.8	31	80	.85
6100300-1	61 01	6.00				173	6 23 GW 08							
6100301	16.4	03	61 1/84	AG	GW	1	GRIFFIN GREENE	31/33/39	08	13	0.8	31	40	.85
6100301-1	60 01	6.00				250	8 24 GW 08							
6100307	276.1	03	61 4/84	AG	GW	1	PHILLIP R. HELSETH	30/33/40	08	13	0.4	31	40	.50
6100307-1	01	6.00	02 800			200	7 30 GW 08							
6100309	4.44	03	61 2/84	AG	GW	1	ELTON E. RYALL	04/33/38	08	13	0.8	31	29	.85
6100309-1	01	6.00	02 960			125	3 20 GW 08							
6100311	25.1	03	61 4/86	AG	GW	2	CHARLES SEXTON	28/33/39	08	13	0.8	31	75	.50
6100311-1	61 01	6.00				235	7 26 GW 08							
6100311-2	61 01	6.00				200	7 26 GW 08	28/33/39						
6100312	16.1	03	61 4/86	AG	GW	1	R.W. GRAVES INC.	27/33/38	08	13	0.8	31	40	.85
6100312-1	60 01	8.00				400	7 21 GW 08							
6100315	33.8	03	61 4/84	AG	GW	1	COONEY MILES B.	04/33/38	08	13	0.8	31	49	.50
6100315-1	60 01	8.00	02 600			750	3 20 GW 08							
6100316	19.5	03	61 8/86	AG	GW	1	ALOGEN CORP.	09/33/37	08	13	0.8	31	75	.85
6100316-1	59 01	12.00				2000	4 14 GW 08							
6100317	20.64	03	61 5/84	AG	GW	1	WILLIAM L. NICHOLAS		08	13	0.8	31	40	.85

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

PERMIT NO.	AM.	ALL	MAX	MO.	DATE	USE	SRC.	NO.	SU	CO	ISS.	TYPE	WLS.	PMPs	OWNER	CO	PERMIT	NO.	DEV	NO.	AO	TYPE	ST	CROP	SOIL	RAIN	IRR	ACRES	EFF
NO.	UNT	NO.	UTS.	CD	ISS.	TYPE	WLS.	PMPs	OWNER	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AO.	COMMENTS	S	T	R							

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

PERMIT NO.	FACILITY	QUAD.	WELL	DPTH	PMP	PUMP	TYPE	NO.	STSDIA.	CODE	TD	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AO.	COMMENTS	S	T	R						
6100337	15.8	03	61	2/87	AG	GW	1	366	1	WILLIAM T. BRADY	8	16	GW	08							35/33/37	08	13	0.8	31	40	.50			
6100340	37.2	03	61	12/86	AG	GW	1	575	1	DICK SIMONETT	5	21	GW	08	CAP. EST.						15/33/38	08	13	0.8	31	72	.85			
6100341	27.1	03	61	3/87	AG	GW	1	785	1	W.E. ORTH	8	21	GW	08							34/33/38	08	13	0.8	31	35	.50			
6100344	21.4	03	61	3/87	AG	GW	2	250	2	F.G. BARATTA	3	24	GW	08	CAP. EST.						06/33/39	08	13	0.8	31	47	.85			
6100347	2.6	03	61	3/87	AG	GW	2	250	2	JOHN AMOS	7	24	GW	08	CAP. EST.						06/33/39	08	13	0.8	31	40	.50			
6100351	5.8	03	61	3/87	AG	GW	2	100	2	THOMAS BARNES	4	27	GW	08	CAP. EST.						10/33/39	08	13	0.4	31	7	.50			
6100358	10.1	03	61	8/85	AG	GW	1	250	1	J.E. WASHBURN	5	20	GW	08	CAP. EST.						16/33/38	08	13	0.8	31	54	.50			
6100365	14.7	03	61	4/85	AG	GW	2	20	2	PRISCILLA AMERIKANOS	6	25	GW	08							20/33/39	08	13	0.8	31	30	.50			
6100367	253	03	61	5/85	AG	GW	1	600	1	EVANS PROPERTIES INC.	8	13	GW	08							32 33/33/37	08	13	0.8	31	550	.85			
6100368	243.8	03	61	3/85	AG	GW	1	800	1	EVANS PROPERTIES INC.	7	13	GW	08							29/33/37	08	13	0.8	31	530	.85			
6100369	210.7	03	61	3/85	AG	GW	1		1	E.B. GROVES INC.												08	13	0.8	31	458	.85			

Account No.	Balance	Code	Date	Amount	Code	Description	Code	Amount	Date	Code	Amount	
6100369-1	60.01		12.00	02	995		4300		08	18	GM 08	31/33/38
6100374	20.5	03	61	3/85	AG	GM	1					
6100374-1	61.01		6.00	02	800	JOHN SHERRY	250		08	25	GM 08	20/33/39
6100375	16.6	03	61	7/85	AG	GM	2					
6100375-1	61.01		6.00	02		L. RALPH POPPELL	250		08	25	GM 08	29/33/39
6100375-2	61.01		6.00	02		L. RALPH POPPELL	250		08	25	GM 08	29/33/39
6100376	39.7	03	61	7/85	AG	GM	4					
6100376-1	61.01		6.00	02		L. RALPH POPPELL	353		08	27	GM 08	22/33/39
6100376-2	61.01		6.00	02		L. RALPH POPPELL	196		08	27	GM 08	22/33/39
6100376-3	61.01		6.00	02		L. RALPH POPPELL	172		08	27	GM 08	22/33/39
6100376-4	61.01		6.00	02		L. RALPH POPPELL	200		08	27	GM 08	22/33/39
6100377	2.8	03	61	4/85	AG	GM	2					
6100377-1	61.01		6.00	02		MURLEY ROUNDTREE	250		08	27	GM 08	22/33/39
6100377-2	61.01		6.00	02		MURLEY ROUNDTREE	250		08	27	GM 08	22/33/39
6100378	3.9	03	61	4/85	AG	GM	1					
6100378-1	60.01		6.00	02		MURLEY ROUNDTREE	250		08	21	GM 08	22/33/38
6100382	2.71	03	61	8/85	AG	GM	1					
6100382-1	60.01		6.00	02		MURLEY ROUNDTREE	250		08	21	GM 08	22/33/38
6100383	12.1	03	61	7/85	AG	GM	2					
6100383-1	61.01		4.00	02		WM. HENSTICK & SONS INC.	100		08	26	GM 08	16/33/39
6100383-2	61.01		4.00	02		WM. HENSTICK & SONS INC.	100		08	26	GM 08	16/33/39
6100384	5.1	03	61	8/85	AG	GM	1					
6100384-1	60.01		8.00	02		HOWARD MILLER-PRICE	575		08	21	GM 08	22/33/38
6100386	7.06	03	61	5/85	AG	GM	1					
6100386-1	61.01		6.00	02		OMEN C. JOHNSON	250		08	26	GM 08	16/33/39
6100387	6.95	03	61	5/85	AG	GM	1					
6100387-1	61.01		6.00	02		ED & RUTH ELLIOTT & J. JOHNSON	250		08	25	GM 08	20/33/39
6100388	7.17	03	61	5/85	AG	GM	1					
6100388-1	61.01		6.00	02	790	ED & RUTH ELLIOTT & J. JOHNSON	150		08	24	GM 08	18/33/39
6100389	7.04	03	61	5/85	AG	GM	1					
6100389-1	61.01		8.00	02		ELLIOTT JOHNSON GROVES INC.	575		08	24	GM 08	18/33/39
6100390	52.6	03	61	6/85	AG	GM	17					
6100390-1	61.01		2.00	02	18	RIDMAR COUNTRY CLUB	60		08	31	GM 02	05/33/40
6100390-10	61.01		2.00	02	22	RIDMAR COUNTRY CLUB	60		08	31	GM 02	05/33/40
6100390-11	61.01		2.00	02	22	RIDMAR COUNTRY CLUB	60		08	31	GM 02	05/33/40
6100390-12	61.01		2.00	02	18	RIDMAR COUNTRY CLUB	40		08	31	GM 02	05/33/40
6100390-13	61.01		2.00	02	16	RIDMAR COUNTRY CLUB	40		08	31	GM 02	05/33/40
6100390-14	61.01		2.00	02	18	RIDMAR COUNTRY CLUB	40		08	31	GM 02	05/33/40
6100390-15	61.01		2.00	02	18	RIDMAR COUNTRY CLUB	40		08	31	GM 02	05/33/40

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

PERMIT NO.	AN.	ALL.	ALL MAX	NO.	DATE USE	SAC.	NO.	SW	CO	ISS.	TYPE	WLS.	PHPS	OWNER	CO	PERMIT NO.	DEV NO.	AG TYPE	SOIL	RAIN	IRR	IRR	
NO.	UNT	NO.	UNT	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	STSDIA.	CODE	TD	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AG.	COMMENTS	\$/T/R					
6100390-16	01	2.00	02	18	40	3	31	GW	02	05/33/40												
6100390-17	01	2.00	02	800	75	3	31	GW	08	05/33/40												
6100390-2	01	2.00	02	19	60	3	31	GW	02	05/33/40												
6100390-3	01	2.00	02	18	60	3	31	GW	02	05/33/40												
6100390-4	01	2.00	02	20	60	3	31	GW	02	05/33/40												
6100390-5	01	2.00	02	21	60	3	31	GW	02	05/33/40												
6100390-6	01	2.00	02	20	60	3	31	GW	02	05/33/40												
6100390-7	01	2.00	02	22	60	3	31	GW	02	05/33/40												
6100390-8	01	2.00	02	20	60	3	31	GW	02	05/33/40												
6100390-9	01	2.00	02	22	60	3	31	GW	02	05/33/40												
6100391	10.3	03	61	5/85	AG	GW	1	WILLIAM & FRANCES GRAVES III										20	.85			
6100391-1	60	01	6.00	02	250	6	22	GW	08	CAP.	EST.							23/33/38				
6100392	23.9	03	61	5/85	AG	GW	1	WILLIAM & FRANCES GRAVES III										72	.50			
6100392-1	01	6.00	02	250	6	21	GW	08	CAP.	EST.								22/33/38				
6100393	20.7	03	61	5/85	AG	GW	1	WILLIAM & FRANCES GRAVES III										40	.85			
6100393-1	01	8.00	02	575	7	24	GW	08	CAP.	EST.								30/33/39				
6100394	13.8	03	61	5/85	AG	GW	2	WILLIAM & FRANCES GRAVES III										20	.50			
6100394-1	60	01	4.00	02	100	5	21	GW	08	CAP.	EST.							15/33/38				
6100394-2	60	01	4.00	02	100	5	21	GW	08	CAP.	EST.							15/33/38				
6100395	26.6	03	61	5/85	AG	GW	1	WILLIAM GRAVES IV										40	.50			
6100395-1	60	01	6.00	02	250	5	20	GW	08	CAP.	EST.							16/33/38				
6100396	5.2	03	61	6/85	AG	BOTH	3	DELTA FARMS WATER CONTROL DIST										25	.85			
6100396-1	01	6.00	02	750	314	3	16	GW	08	2,4, 33/37												
6100396-2	01	6.00	02	750	1200	3	14	GW	08	MOSTLY PROPOSED WELLS												
6100396-3	01	12.00	02	750	1296	3	16	GW	08	APPARENTLY THIER APPLYING												
6100396-4	01	6.00	02	750	1200	3	14	GW	08	FOR EXPANSION TO 2657 ACRES												
6100396-5	01	6.00	02	750	530	3	14	GW	08	26 PROP. WELLS												
6100396-6	02	6.00	02	750	1200	3	14	GW	08													
6100396-7	02	6.00	02	750	1200	3	14	GW	08													

6100431-15	02	10.00	02	800	1000	1	3	GW	08	03, 22, 27, 34/32, 33/35	20	.85					
6100431-16	02	10.00	02	800	1000	1	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-17	02	10.00	02	800	1000	1	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-18	02	10.00	02	800	1000	1	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-19	02	10.00	02	800	1000	3	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-2	02	10.00	02	800	1000	3	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-20	02	10.00	02	800	1000	3	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-3	02	10.00	02	800	1000	3	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-4	02	10.00	02	800	1000	3	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-5	02	10.00	02	800	1000	3	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-6	02	10.00	02	800	1000	2	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-7	02	10.00	02	800	1000	2	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-8	02	10.00	02	800	1000	2	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-9	02	10.00	02	800	1000	2	3	GW	08	03, 22, 27, 34/32, 33/35							
6100431-1	02	10.00	02	800	1000	2	3	GW	08	03, 22, 27, 34/32, 33/35							
6100433	03	3.8	01	61 10/85 AG	1	MICHAEL BARATTA	3	23	GW	08	01/33/38	08	13	0.8	31	20	.85
6100433-1	01	6.00	02	147													
6100435	03	10.8	01	11/85 AG	2	ANNE G. KEEN	5	26	GW	08	16/33/39	08	13	0.8	31	13	.50
6100435-1	01	6.00	02	250													
6100435-2	01	6.00	02	250													
6100436	03	9.2	03	61 11/85 AG	5	ROBERT M. DEACON	5	27	GW	08	10, 15/33/39	08	13	0.4	31	25	.50
6100436-1	61 01	2.00	02	75													
6100436-2	61 01	2.00	02	75													
6100436-3	61 01	2.00	02	75													
6100436-4	61 01	2.00	02	75													
6100436-5	61 01	2.00	02	75													
6100437	03	10.2	03	61 11/85 AG	1	BUENA VISTA GROVES	6	26	GW	08	21/33/39	08	13	0.8	31	30	.85
6100437-1	61 01	6.00	02	1070	145												
6100438	03	16.6	01	61 11/85 AG	2	HOOSHANG HOOSHANG	6	26	GW	08	21/33/39	08	13	0.8	31	20	.50
6100438-1	01	6.00	02	250													
6100438-2	01	6.00	02	250													
6100439	03	9.3	01	61 11/85 AG	1	IRAJ HOOSHANG	6	26	GW	08	21/33/39	08	13	0.8	31	20	.50
6100439-1	01	6.00	02	325													
6100440	03	16.6	01	61 11/85 AG	1	NEUROLOGICAL ASSOCIATION	6	26	GW	08	21/33/39	08	13	0.8	31	20	.50
6100440-1	01	6.00	02	442													
6100441	03	2200	03	61 11/85 AG	2	ST. JOHN'S WATER CONTROL DIST.											
6100441																	
6100446	03	6.24	01	61 11/85 AG	1	ESTATE OF C. BAY HOGAN	7	23	GW	08	25/33/38	08	35	0.8	31	35	.85
6100446-1	61 01	6.00	02	330													
6100447	03	12.7	03	61 11/85 AG	2	C & G GROVES	7	23	GW	08	25/33/38	08	13	0.8	31	70	.50
6100447-1	61 01	6.00	02	239													

SW 99 ADOT'L SECTIONS 11-36

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

PERMIT NO.	AN.	ALL.	ALL	MAX	NO.	DATE	USE	SRC.	NO.	SU	CO	ISS.	CO	ISS.	TYPE	WLS.	PMP	GUMER	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AO.	COMMENTS	S	T	R	CROP	SOIL	RAIN	IRR	ACRES	EFF		
6100447-2	61 01	03	01	6.00	02	61 11/85	AG	GW	1	501	7	23	GW	08	25/33/38	08	13	0.8	31	40	.50																		
6100448	17.2	03	01	6.00		61 11/85	AG	GW	1	250	7	23	GW	08	25/33/38	08	13	0.8	31	40	.50																		
6100449	12.2	03	01	4.00	02	10/85	AG	GW	2		VIRGINIA RUSSELL	8	1	GW	08	32/33/35	08	13	0.8	31	40	.50																	
6100449-1	01	01	01	4.00	02				179	450					32/33/35																								
6100449-2	01	01	01	4.00	02				450						32/33/35																								
6100452	4.14	03	01	6.00	01	61 11/85	AG	GW	1	442	3	25	GW	08	05/33/39	08	13	0.8	31	2	.50																		
6100452-1	01	01	01	6.00	01				442						05/33/39																								
6100453	7900	03	03			61 11/85	AG	SU			1	INDIAN RIVER FARM	WTR	CONT	DIST.	99	99	13																					
6100454	3740	03	03			61 11/85	AG	SU			1	SEBASTIAN RVR	WTR	CONT	DIST.	99	99	13																					
6100457	6.1	03	01	6.00	02	61 11/85	AG	GW	1	530	4	26	GW	08	09/33/39	08	13	0.8	31	40	.50																		
6100457-1	01	01	01	6.00	02				530						09/33/39																								
6100460	18.5	03	01	8.00	02	61 12/85	AG	GW	1	600	7	22	GW	08	26/33/38	08	13	0.8	31	75	.85																		
6100460-1	01	01	01	8.00	02				600						26/33/38																								
6100461	67.8	03	01	8.00	02	61 1/86	AG	GW	1	623	7	22	GW	08	27/33/38	08	13	0.8	31	131	.85																		
6100461-1	59 01	03	01	8.00	02				623						27/33/38																								
6100462	8.6	03	01	8.00	02	61 1/86	AG	GW	1	575	7	15	GW	08	27/33/37	08	13	0.8	31	69	.85																		
6100462-1	60 01	03	01	8.00	02				575						27/33/37																								
6100463	97.0	03	01	8.00	02	61 1/86	AG	GW	2		7	22	GW	08	26/33/38	08	13	0.8	31	145	.50																		
6100463-1	60 01	03	01	8.00	02				575						26/33/38																								
6100463-2	60 01	03	01	8.00	02				575						26/33/38																								
6100465	11/85	03	03			61 11/85	AG	GW	2		2	BOYLE HOGAN			26/33/38	08	13	0.8	31	133	.50																		

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	DPTH	PMP	PUMP	CODE	TD	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AO.	COMMENTS	S	T	R	
6100447-2	61 01	03	01	6.00	02	61 11/85	AG	GW	1	501	7	23	GW	08	25/33/38	08	13	0.8	31	40	.50	
6100448	17.2	03	01	6.00		61 11/85	AG	GW	1	250	7	23	GW	08	25/33/38	08	13	0.8	31	40	.50	
6100449	12.2	03	01	4.00	02	10/85	AG	GW	2		VIRGINIA RUSSELL	8	1	GW	08	32/33/35	08	13	0.8	31	40	.50
6100449-1	01	01	01	4.00	02				179	450					32/33/35							
6100449-2	01	01	01	4.00	02				450						32/33/35							
6100452	4.14	03	01	6.00	01	61 11/85	AG	GW	1	442	3	25	GW	08	05/33/39	08	13	0.8	31	2	.50	
6100452-1	01	01	01	6.00	01				442						05/33/39							
6100453	7900	03	03			61 11/85	AG	SU			1	INDIAN RIVER FARM	WTR	CONT	DIST.	99	99	13				
6100454	3740	03	03			61 11/85	AG	SU			1	SEBASTIAN RVR	WTR	CONT	DIST.	99	99	13				
6100457	6.1	03	01	6.00	02	61 11/85	AG	GW	1	530	4	26	GW	08	09/33/39	08	13	0.8	31	40	.50	
6100457-1	01	01	01	6.00	02				530						09/33/39							
6100460	18.5	03	01	8.00	02	61 12/85	AG	GW	1	600	7	22	GW	08	26/33/38	08	13	0.8	31	75	.85	
6100460-1	01	01	01	8.00	02				600						26/33/38							
6100461	67.8	03	01	8.00	02	61 1/86	AG	GW	1	623	7	22	GW	08	27/33/38	08	13	0.8	31	131	.85	
6100461-1	59 01	03	01	8.00	02				623						27/33/38							
6100462	8.6	03	01	8.00	02	61 1/86	AG	GW	1	575	7	15	GW	08	27/33/37	08	13	0.8	31	69	.85	
6100462-1	60 01	03	01	8.00	02				575						27/33/37							
6100463	97.0	03	01	8.00	02	61 1/86	AG	GW	2		7	22	GW	08	26/33/38	08	13	0.8	31	145	.50	
6100463-1	60 01	03	01	8.00	02				575						26/33/38							
6100463-2	60 01	03	01	8.00	02				575						26/33/38							
6100465	11/85	03	03			61 11/85	AG	GW	2		2	BOYLE HOGAN			26/33/38	08	13	0.8	31	133	.50	

6100465-1	61 01	6.00 02	236	8	24 GW 08	31,32/33/39	08	20
6100465-2	61 01	6.00 02	681	8	25 GW 08	31,32/33/39		
6100466	7.67							
6100466-A	03	6.00 02	150	3	22 GW 08	02/33/38		
6100466-B	01	8.00 02	95	3	22 GW 08	02/33/38		
6100466-C	02	6.00 02	150	3	22 GW 08	02/33/38		
6100467	45.1							
6100467-1	03	10.00 02	1043	8	17 GW 08	36/33/37	08	60 .50
6100468	49.7							
6100468-1	03	10.00 02	1227	8	19 GW 08	32/33/38	08	60 .50
6100469	60.4							
6100469-1	01	8.00 02	670	8	19 GW 08	32/33/38	08	90 .50
6100469-2	01	8.00 02	534	8	19 GW 08	32/33/38		
6100469-3	01	8.00 02	660	8	19 GW 08	32/33/38		
6100470	13.8							
6100470-1	61 01	6.00 02	249	5	24 GW 08	18/33/39	08	40 .50
6100473	23							
6100473-1	03	10.00 02	850	8	19 GW 08 CAP. EST.	32/33/38	08	38 .50
6100473-2	01	10.00 02	850	8	19 GW 08 "	32/33/38		
6100473-3	01	10.00 02	850	8	19 GW 08 "	32/33/38		
6100473-4	01	10.00 02	850	8	19 GW 08 "	32/33/38		
6100474	46.3							
6100474-3	03	8.00 02	575	8	19 GW 08 CAP. EST.	32/33/38	08	77 .50
6100474-4	01	8.00 02	575	8	19 GW 08 "	32/33/38		
6100475	16.6							
6100475-G	61 01	6.00 02	250	8	26 GW 08 CAP. EST.	33/33/39	08	20 .50
6100476	10.1							
6100476-1	60 01	8.00 02	575	5	15 GW 08 CAP. EST.	15/33/37	08	320 .50
6100479	10.51							
6100479-1	03	12.00 02	20	3	29 GW 02	01/33/39	02	
6100486	16.5							
6100486-1	03	2.00 02	75	3	26 GW 08	04/33/39	08	20 .50
6100486-2	01	2.00 02	75	3	26 GW 08	04/33/39		
6100486-3	01	2.00 02	75	3	26 GW 08	04/33/39		
6100486-4	01	2.00 02	75	3	26 GW 08	04/33/39		
6100486-5	01	2.00 02	75	3	26 GW 08	04/33/39		
6100486-6	01	2.00 02	75	3	26 GW 08	04/33/39		
6100487	36.4							
6100487-1	03	6.00 02	3	4	22 GW 02	11/33/38	02	
6100487-2	01	6.00 02		6	22 GW 02	11/33/38		

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

PERMIT NO.	AW.	ALL.	UNT. MO.	MAX. MO.	UTS. CO.	ISS. TYPE	W.S.	PMPs	OWNER	CD	PERMIT NO.	DEV. NO.	AO TYPE	ST	IRR	ACRES	EFF

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL NO.	STSDIA.	DPTH	CODE	ID	CD	INT TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AO.	COMMENTS	S / T / R
6100488	6100488-1	20.7	03	61	6/86	AG	GM	1	1	TRIPSON TRAIL GROVE							
6100490	6100490-A	28.6	03	61	12/88	AG	GM	3		MOORING DEVELOPMENT COMPANY							
6100491	6100491-1	8.43	03	61	7/86	COM	SW	1		CITY OF VERO BEACH							
6100493	124.2	03	61	1/88	AG	SU	4			20 MILE BEND GROVE INC.							
6100498	68	03	61	11/86	AG	SW				CHARLIE PRICE							
6100500	6100500-A	18.11	03	61	1/89	AG	GM	4		BEN BAILY III							
6100503	6100503-A	9.79	03	61	1/89	AG	GM	1		BALMAR ASSOCIATES, INC.							
6100504	1.6	03	61	12/86	AG	GM	4			RANGE LIME GROVES INC.							

PERMIT NO.	AW.	ALL.	UNT. MO.	MAX. MO.	UTS. CO.	ISS. TYPE	W.S.	PMPs	OWNER	CD	PERMIT NO.	DEV. NO.	AO TYPE	ST	IRR	ACRES	EFF
6100487-3			01	6.00	02					4	22	GM	02				11/33/38
6100488			03	20.7	03	61	6/86	AG	GM	1	1	TRIPSON TRAIL GROVE					
6100488-1			61	01	4.00	02				8	24	GM	08				31/33/39
6100488-2			02	4.00	02					8	24	GM	08				31/33/39
6100490			03	28.6	03	61	12/88	AG	GM	3		MOORING DEVELOPMENT COMPANY					
6100490-A			62	01	02	456				6	32	GM	08				21/33/40
6100490-B			62	01	02	843				6	32	GM	08				21/33/40
6100490-C			62	01	02	436				6	32	GM	08				21/33/40
6100491			03	8.43	03	61	7/86	COM	SW	1		CITY OF VERO BEACH					11/33/39
6100491-1			02	6.00	02	85				SU	99						240
6100493			03	124.2	03	61	1/88	AG	SU	4		20 MILE BEND GROVE INC.					99
6100498			03	68	03	61	11/86	AG	SW			CHARLIE PRICE					99
6100500			03	18.11	03	61	1/89	AG	GM	4		BEN BAILY III					99
6100500-A			60	01	2.00	02	80			3	19	GM	02				05/33/38
6100500-B			60	01	2.00	02	80			3	19	GM	02				05/33/38
6100500-C			60	01	2.00	02	80			3	19	GM	02				05/33/38
6100500-D			60	01	2.00	02	80			3	19	GM	02				05/33/38
6100500-E			60	02	8.00	02	800			3	19	GM	08				05/33/38
6100500-A			60	01	8.00	02	800			3	19	GM	08				05/33/38
6100502			03	28.38	03	61	1/89	COM	SW			1	JOHN & BARBARA TRIPSON				99
6100502-A			61	02	6000					SU	99						
6100503			03	9.79	03	61	1/89	AG	GM	1		BALMAR ASSOCIATES, INC.					99
6100503-A			02	6.00	02	80				3	23	GM	08				01/33/38
6100504			03	1.6	03	61	12/86	AG	GM	4		RANGE LIME GROVES INC.					99

6100504-1	01	6.00	02	250	4	24 GM	06 CAP. EST.	07/33/39	08	13	0.8	31	28	.50
6100504-2	01	6.00	02	250	4	24 GM	06 "	07/33/39	08	13	0.8	31	20	.85
6100504-3	01	6.00	02	250	4	24 GM	06 "	07/33/39	08	13	0.8	31	35	.85
6100504-4	01	6.00	02	250	4	24 GM	06 "	07/33/39	08	13	0.8	31	35	.85
6100505	03	23.1	02	1	1	THOMAS JONES		15/33/38	02					
6100505-1	60 01	6.00	02	250	5	21 GM	06 CAP. EST.		08	13	0.8	31	20	.85
6100506	03	10.3	02	1	1	THOMAS JONES		33/33/39	08	13	0.8	31	35	.85
6100506-1	61 01	6.00	02	250	8	26 GM	06 CAP. EST.		08	13	0.8	31	35	.85
6100510	03	13.6	02	1	1	THE PACKERS OF INDIAN R. INC.		27/33/38	08	13	0.8	31	35	.85
6100510-1	60 02	8.00	02	575	7	21 GM	06 CAP. EST.		02					
6100512	03	14.24	02	2	2	STATE OF FLORIDA	GM 02	36/33/38	08	13	0.8	31	75	.85
6100513	03	38.8	02	1	1	FRANK G. BARATTA		24/33/38	08	13	0.8	31	75	.85
6100513-1	61 02	8.00	02	600	6	23 GM	06		08	13	0.8	31	75	.85
6100514	03	35.8	02	1	1	ANGELES CORP.		11/33/38	08	13	0.8	31	30	.85
6100514-1	61 01	6.00	02	200	4	22 GM	06	.1 MGD	08	13	0.8	31	30	.85
6100514-2	61 02	6.00	02	200	4	22 GM	06		08	13	0.8	31	30	.85
6100516	03	2.1	02	1	1	MORRAN HENSICK JR.		30/33/39	08	13	0.8	31	30	.85
6100516-1	61 02	4.00	02	100	7	30 GM	06 CAP. EST.		02	COM				
6100516-2	61 01	4.00	02	100	7	30 GM	06 "	30/33/39	08	13	0.8	31	115	.85
6100517	03	5.5	02	1	1	RINKER MATERIALS CORP.		12/33/39	08	13	0.8	31	115	.85
6100517-1	61 01	6.00	02	400	4	29 GM	02	12/33/39	08	13	0.8	31	115	.85
6100517-2	61 01	6.00	02	400	4	29 GM	02		08	13	0.8	31	115	.85
6100518	03	52	02	3	3	LIER GROVES INC.		35/33/38	08	13	0.8	31	300	.85
6100518-1	60 01	8.00	02	828	8	22 GM	06	35/33/38	08	13	0.8	31	300	.85
6100518-2	60 01	8.00	02	321	8	22 GM	06	35/33/38	08	13	0.8	31	300	.85
6100518-3	60 02	8.00	02	828	8	22 GM	06		08	13	0.8	31	300	.85
6100521	03	74.5	02	3	3	GEORGE LAMBETH JR.		02/33/37	08	13	0.8	31	173	.50
6100521-1	01	3.00	02	75	6	15 GM	06 CAP. EST.	02/33/37	08	13	0.8	31	173	.50
6100521-2	02	3.00	02	75	6	15 GM	06 "	02/33/37	08	13	0.8	31	173	.50
6100521-3	02	3.00	02	75	6	15 GM	06 "	02/33/37	08	13	0.8	31	173	.50
6100522	03	109.9	02	3	3	DELLERMAN GROVES INC.		01,12/33/37	08	13	0.8	31	31	.85
6100522-1	01	8.00	02	900	3	17 GM	06	01,12/33/37	08	13	0.8	31	31	.85
6100522-2	01	8.00	02	75	3	17 GM	06	01,12/33/37	08	13	0.8	31	31	.85
6100522-3	01	8.00	02	1100	4	17 GM	06	01,12/33/37	08	13	0.8	31	31	.85
6100522-4	02	8.00	02	900	4	17 GM	06	01,12/33/37	08	13	0.8	31	31	.85
6100528	03	16.04	02	1	1	LOUIS PERKINS		34/33/38	08	13	0.8	31	264	.85
6100528-A	60 01	02	920	200	8	21 GM	06		08	13	0.8	31	264	.85
6100531	03	136.6	02	2	2	GEORGE LAMBETH			08	13	0.8	31	264	.85

22
23
24

=====

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

=====

PERMIT NO.	AN.	ALL.	ALL MAX	NO.	DATE USE SRC.	NO.	SU	CD	ISS.	TYPE	WLS.	PMP'S	OWNER	CD	PERMIT NO.	DEV NO.	AQ	TYPE	ST	IRR	IRR	ACRES	EFF
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LINE 2+ HEADINGS (Table 1 - Existing Water Use - Facilities Information for Each Permit)

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PERMIT NO.	FACILITY NUMBER	QUAD.	WELL	DPTH	CODE	TO	CD	INT	TYPE	CAP.	MTR?	ROW	COLUMN	SRC	AQ.	COMMENTS	S	T	R
------------	-----------------	-------	------	------	------	----	----	-----	------	------	------	-----	--------	-----	-----	----------	---	---	---

6100531-A	59 02	12.00	02	990						3000		5	13	GM	08									
6100531-B	59 02	12.00	02	990						3000				GM	08									
6100536	5.2	03	02		61 7/89	COM	GM	1																
6100536-A		12.00	02							10		3	21	GM	02									

Osceola River County
Water Use Spreadsheets

Osceola County

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

PERMIT NO.	AN.	ALL.	UNT.	MAX.	MO.	DATE	USE	SRC.	NO.	SU.	CO	ISS.	TYPE	M.S.	PMP'S	OWNER	CO	PERMIT	NO.	DEV	NO.	AD	TYPE	ST	IRR	ACRES	IRR	EFF
------------	-----	------	------	------	-----	------	-----	------	-----	-----	----	------	------	------	-------	-------	----	--------	-----	-----	-----	----	------	----	-----	-------	-----	-----

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

PERMIT NO.	FACILITY NUMBER	QUAD.	WELL	DPTH	PHP	PUMP	CD	TO	CD	INT	TYPE	CAP.	NTR?	ROW	COLUMN	SRC	AG.	COMMENTS	S	V	T	R
------------	-----------------	-------	------	------	-----	------	----	----	----	-----	------	------	------	-----	--------	-----	-----	----------	---	---	---	---

9300003	65	03	58	01	8.00	02	85	61	6/87	COM	GW	65	6	5	FL. DEPT. OF TRANSPORTATION	3	GW	02	15/33/35	08	13	0.8	31	100	.75	
	9300003-10	58	01	8.00	02	80	70	70	5	3	GW	02	15/33/35													
	9300003-5	58	01	8.00	02	80	70	70	5	3	GW	02	15/33/35													
	9300003-6	58	01	8.00	02	80	70	70	5	3	GW	02	15/33/35													
	9300003-7	58	01	8.00	02	80	70	70	5	3	GW	02	15/33/35													
	9300003-8	58	02	8.00	02	80	70	70	5	3	GW	02	15/33/35													
	9300003-9	58	02	8.00	02	85	65	65	5	3	GW	02	15/33/35													
9300005	1-44	01	58	01	02	93	8/85	AG	GW	1	250	1	COOK & SONS ENT. INC. B. C.	7	2	GW	08	CAP. EST	28/33/35							
	9300005-1	58	01	02																						
9300018	20	03	58	02	10.00	02	750	93	8/87	AG	GW	1	JOHN M. MCCULLERS	8	2	GW	08	CAP. EST								
	9300018-1	58	02	10.00	02	750	850	850	8	2	GW	08	CAP. EST													

APPENDIX D

**OBSERVED WATER LEVELS IN THE
UPPER FLORIDAN AQUIFER SYSTEM
USED IN MODEL CALIBRATION
MAY 1989 THROUGH MARCH 1991**

**APPENDIX D
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TABLE D-1: 1989 Observed Water Levels from Monitor Well Network

MODEL COORDS			WELL NO.	STATE PLANARS (FEET)		1989 OBSERVED WATER LEVEL							
						WATER LEVELS IN FEET OF HEAD/NGVD							
LAY	ROW	COL		EAST	NORTH	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2	36	22	MF-2	661770	1027509	48.1	48.82				49.08	49.46	48.54
2	32	42	MF-3	766873	1047651	42.54	42.44	42.94	43.94	44.24	44.94	45.79	44.69
2	35	24	MF-9	673406	1031495	47.93	48.54	49.35			49.57	50.18	49.11
2	42	19	MF-23	642188	996134	48.05	47.12	47.76	48.03	48.66	48.85	49.28	48.49
2	36	43	MF-31	768744	1024135	41.75	39.55	41.6	44.75		45.05	44	
2	38	17	MF-33	634439	1016100	46.36	46.78	47.03			47.64	45.87	45.47
2	47	23	MF-35	668237	970484	48.8	49.34	49.64	47.15	47.94	48.74	50.04	49.14
2	42	29	MF-51	699609	992233	49.67	51.02				50.89	50.28	50.04
2	41	29	MF-52	699928	1001121	49.17	49.49				50.05	49.7	48.55
2	34	43	MF-53	770566	1035356	44.01					20.1	44.71	44.46
2	35	43	MF-54	769853	1034038	42.86					42.36	44.86	44.06
2	30	41	MF-55	762663	1056410	41.15	40.65				41.45	31.35	42.05
2	33	10	OKF-3	595533	1039922	43.16	42.63	42.91	43.57		44.12	44.58	43.65
2	22	5	OKF-7	569511	1102271	43.55	44.09	45			45.41	46.11	45.2
2	29	1	OKF-23	547290	1061446	41.2	43.43	42.2			45.43	43.15	42.3
2	31	1	OKF-31	550550	1052261	43.98	43.55	44.86	46.72		45.81	46.47	44.91
2	11	7	OKF-71	583728	1159048	40.47	41.23				41.89	42.66	41.73
2	12	8	OKF-72	585990	1154003	39.65	40.82				40.97	41.7	39.77
2	25	4	OKF-73	562777	1084287	38.82	40.55				41.26	41.88	40.97
2	26	5	OKF-74	569100	1079147	42.61					43.37	43.87	42.86
2	49	48	PBF-1	797130	959197	45.25	44.9	44.9	46	46.9	46.9	48.05	47.35
2	12	26	SLF-3	682529	1151296	37.03	37.34	36.16	38.26		38.33	39.29	37.72
2	14	23	SLF-4	667172	1141333	36.73	37.87				38.46	39.13	38.19
2	10	17	SLF-11	635027	1164842	38.33	39.77				39.94	41.06	39.72
2	24	18	SLF-17	639345	1087204	41.56	42.29				43.37	43.92	41.94
2	17	28	SLF-21	693824	1124690	35	30.69	34.29	33.24	35.88	36.36	36.77	35.81
2	32	24	SLF-23	672337	1049363	47.19	48.38	47.55	48.88		49.07	49.59	48.6
2	20	34	SLF-26	723181	1111916	36.34	36.81				37.13	37.88	
2	20	22	SLF-27	657924	1110699	38.61	35.48	35.14	37.84		39.34	39.7	37.62

TABLE D-1: 1989 Observed Water Levels from Monitor Well Network (Continued)

MODEL COORDS			WELL NO.	STATE PLANARS (FEET)		1989 OBSERVED WATER LEVEL							
LAY	ROW	COL		EAST	NORTE	WATER LEVELS IN FEET OF HEAD/NGVD							
					MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
2	15	21	SLF-36	657278	1137759	39.03	36.29	37.26	38.45		38.72	39.62	38.42
2	18	22	SLF-40	662479	1121219	37.69	38.1	39.29	38.89	38.71	39.17	40.03	38.77
2	12	34	SLF-46	724567	1154337	25.91	26.41				29.21	26.36	31.91
2	24	39	SLF-47	749646	1088844	34.01	33.86	33.66	32.66	34.66	36.16	37.11	36.26
2	24	22	SLF-50	662956	1092240	39.8	38.54	39.57	39.63	40.62	41.08	41.6	40.47
2	28	26	SLF-61	682099	1066875	46.9	46.73				48.15	46.65	45.52
2	27	24	SLF-62	672318	1075011	41.96	43.64				42.13	45.4	43.4
2	14	16	SLF-63	627530	1144319	37.99	39.27				39.72	40.4	39.32
2	12	15	SLF-64	621462	1155509	38.98	39.97				40.55	41.32	40.06
2	10	14	SLF-65	616214	1164480	38.31	39.2				38.68	40.12	39.62
2	17	19	SLF-66	644611	1127917	36.25	38.32				39.61	40.27	38.5
2	21	13	SLF-67	611696	1105597	41.17	43.06				44.99	44.24	43.02
2	17	10	SLF-68	598300	1127575	41.21	42.53				42.77	43.23	42.81
2	22	26	SLF-69	680591	1101403	43.5	40.57				41.15	41.53	40.38
2	10	28	SLF-70	693278	1163162	25.11	29.05				29.03	30.94	31.85
2	23	33	SLF-71	719118	1096443	38.15	38.92				38.92	39.92	38.86
2	27	16	SLF-60	629924	1071824						44	44.24	43.64
2	7	33	IR-10	716602	1178731	33.13					31.93	32.88	33.13
2	6	28	IR-40	694162	1185281	34.8					33.29	33.92	32.69
2	7	27	IR-312	684383	1179075	35.13					35.23	36.71	35.49
2	2	27	IR-313	684626	1204423	35.03					36.57	37.01	35.85
2	1	1	IR-365	545220	1216241	49.2					50.28	49.79	50.08
2	8	30	IR-368	705010	1175338	34.07					33.68	34.13	33.18
2	7	19	IR-370	643803	1177697						38.01	38.67	36.83
2	3	14	IR-373	620153	1201754	40.73					42.07	42.09	40.83

TABLE D-2: 1990 Observed Water Levels from Monitor Well Network

WELL NAME	1990 OBSERVED WATER LEVELS IN FEET OF HEAD/NGVD											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
MF-2	48.41	48.38	48.69	48.05	46.73	47.58	48.22	None	49.01	48.99	None	48.53
MF-3	44.84	44.64	45.04	44.19	43.86	44.69	45.29	Taken	45.29		Taken	44.89
MF-9	48.94	49.38	48.63		47.45	48.09	48.78		49.38	49.24		48.71
MF-23	47.93	48.17	48.53	48.02	46.73	47.31	48.8		48.76			48.33
MF-31					43.6	44.25	44.85		45.75	45.6		45.35
MF-33	46.87	45.66			45.54	46.67	46.82		46.74			
MF-35	47.49	48.69	48.99	48.34	46.68	47.14	48.61		49.54	49.49		48.99
MF-51	50.1	49.85	50.84	49.55	48.54	49.42	50.29					
MF-52	47.33	49.66			50.22	50.22						49.67
MF-53												44.76
MF-54	43.73	43.56			42.36	43.11	43.86		44.76			43.41
MF-55	40.1	42.05	40.35		37.2	40.7	41		39.7			37.15
OKF-3	43.12	43.41	44	42.81	41.03	41.9	43.22		44.33	44.17		43.72
OKF-7	44.72	45.02	45.54	44.08	41.66	43.43	44.75		45.55	45.76		44.88
OKF-23	42.08	40.88	42.28	40.68	39.97	40.56	41.59		41.5			
OKF-31	44.48	43.94			42.15	43.4	45.7		46.92	46.82		45.2
OKF-71	41.05	41.4	41.84	40.39	37.59	39.35	40.99		42.32	41.57		40.79
OKF-72	41.65	41.91	40.48		37.82	39.56	40.98		42.01	42.01		40.29
OKF-73	40.46	40.65	41.32	40.01	38.25	39.34	40.88		42.1	42.14		41.49
OKF-74	43.27	42.58	43.22	41.66	39.89	41.2	42.98		43.7	43.48		42.83
PBF-1	46.9	47.1	47.15		46.4	46.65	47.35		48	47.7		47.8
SLF-3	37.14	37.65	37.86	36.16	32.6	36.31	37.1		39.05	38.85		36.76
SLF-4	37.56	37.95	38.4	36.93	33.86	36.23	37.4		38.44	38.56		37.59
SLF-11	39.22	39.45	40.03	38.43	34.65	37.5	39.16					39.06
SLF-17	40.87	42.47	42.39	40.94	36.07	41.1	42.4		43.45	43.41		42.65
SLF-21	35.63	35.28	36.09	34.62	28.97	34.45	36.21		37.26	37.52		34.78
SLF-23	48.19	48.2	48.22	47.77	43.46	46.01	46.62					
SLF-26												
SLF-27	38.18	38.25	38.75	37.49	33.3	36.89	38.45		38.97	39.21		37.4

TABLE D-2: 1990 Observed Water Levels from Monitor Well Network (Continued)

WELL NAME	1990 OBSERVED WATER LEVELS IN FEET OF HEAD/NGVD											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SLF-36	38.02	38.20	38.86	37.52	35.45	36.6	38.11		39.13	39.14		37.67
SLF-40	38.61	38.69	39.29	37.88	34.83	37.07	38.47		39.56	39.87		38.44
SLF-46	29.21	31.31	25.46	30.11	28.26	30.11						30.91
SLF-47	32.46	32.41	32.81	29.76	31.51	34.16	33.51		34.71	33.31		36.91
SLF-50	40.34	40.48	40.77	39.78	37.28	39.09	40.19		41.17	41.15		40.19
SLF-61	45.47	45.49	45.8	44.97	42.7	44.25	45.02		46.1	46.03		45.4
SLF-62	43.37	43.40	43.56	42.89	40.91	42.29	43.53		44.06	44.16		43.86
SLF-63	38.71	38.92	27.69	37.91	35.7	36.82	38.82		40.06	40		38.47
SLF-64	39.68	40	40.38	39.05	36.71	37.93	40.1		41	41.22		39.48
SLF-65	39.04	39.26	39.77	38.42	31.68	37.29	39.35		40.08	39.99		38.94
SLF-66	38.51	38.39	39.23	37.13	35.25	36.53	38.58		39.73	39.57		37.72
SLF-67	42.94	42.88	43.23	42.06	39.57	41.44	42.73		43.64	43.44		42.19
SLF-68	42.72	42.84	43.12	42.19	39.26	41.22	42.56		43.64			42.55
SLF-69	40.34	40.37	40.66	39.8	36.92	39.09	40.19		41.11	41.15		39.68
SLF-70	31.48	31.78	32.54	30.38	26.01	30.21	32		33.86	33.66		30.63
SLF-71	37.86	38.81	39.31	38.11	37.01	37.91	39.11		40.36	40.21		39.51
SLF-60	43.65	43.44			42.53	43.08	43.85		43.95			
IR-10												
IR-40	32.24	32.48	33.08	31.54	28.95	30.5	31.78		33.35	33.29		32.29
IR-312	33.69	34.23	35.62	33.41	29.04	33.74	34.32		36.11	37.15		33.52
IR-313	34.98	35.75	35.99	34.72	31.74	33.24	34.64		36.42	36.26		35.41
IR-365	49.85	50.29	49.63		48.14	48.69	49.6		51.31	51.37		50.81
IR-368	32.73	33.78	34.53	32.83	29.88	31.23	32.13		33.48	33.53		32.48
IR-370	37.25	37.46	36.29		31.92	35.41	36.71		38.13	38.01		36.6
IR-373	40.23	40.7	41.18	39.68	35.95	37.52	40.13		41.45	41.57		40.55

TABLE D-3: 1991 Observed Water Levels from Monitor Well Network

1991 OBSERVED WATER LEVELS IN FEET OF HEAD/NGVD							
WELL#	JAN	FEB	MAR	WELL#	JAN	FEB	MAR
MF-2	47.86	48.89	48.75	SLF-26			
MF-3	44.24	45.24	45.19	SLF-27	36.12	39.37	38.97
MF-9	48.42	49.83	49.27	SLF-36	36.75	38.94	38.76
MF-23	47.69	48.43	48.45	SLF-40	37.21	39.29	39.17
MF-31	44.7	45.4	45.45	SLF-46	28.56	28.31	31.81
MF-33				SLF-47	32.16	34.21	35.36
MF-35	46.96	47.94	48.49	SLF-50	39.38	40.98	40.72
MF-51				SLF-61	44.65	45.86	
MF-52	47.48	49.94	49.8	SLF-62	43.01	44.23	44.35
MF-53				SLF-63	37.61	39.83	40.10
MF-54	43.41	43.96	44.96	SLF-64	38.52	41.04	40.81
MF-55	40.50	43.6	40.05	SLF-65	37.91	39.79	39.67
OKF-3	42.76	43.94	43.92	SLF-66	36.06	38.93	38.74
OKF-7	44.3	45.46	45.29	SLF-67	41.47	43.60	43.37
OKF-23				SLF-68	42.12	44.46	44.22
OKF-31	43.62	45.38	45.07	SLF-69	39.34	41.23	40.67
OKF-71	39.88	41.88	43.36	SLF-70	29.68	33.82	33.46
OKF-72	42.27	41.97		SLF-71	38.46	40.06	39.56
OKF-73	40.74	42.2	41.91	SLF-60			
OKF-74	42.74	43.98	43.83	IR-10			
PBF-1	46.9	47.75	48.2	IR-40	31.10	33.36	32.98
SLF-3	35.67	38.82	38.4	IR-312	32.60	36.69	35.89
SLF-4	36.52	38.74	38.36	IR-313	34.06	36.30	36.77
SLF-11	37.87			IR-365	50.57	51.02	50.84
SLF-17	39.45	43.43	43.88	IR-368	31.53	33.38	33.13
SLF-21	33.11	36.86	36.9	IR-370	35.71		
SLF-23				IR-373	38.86	41.72	41.38

APPENDIX E

**COMPUTED AND OBSERVED HYDROGRAPHS
REPRESENTING MONITOR WELLS
MAY 1989 THROUGH MARCH 1991**

APPENDIX E

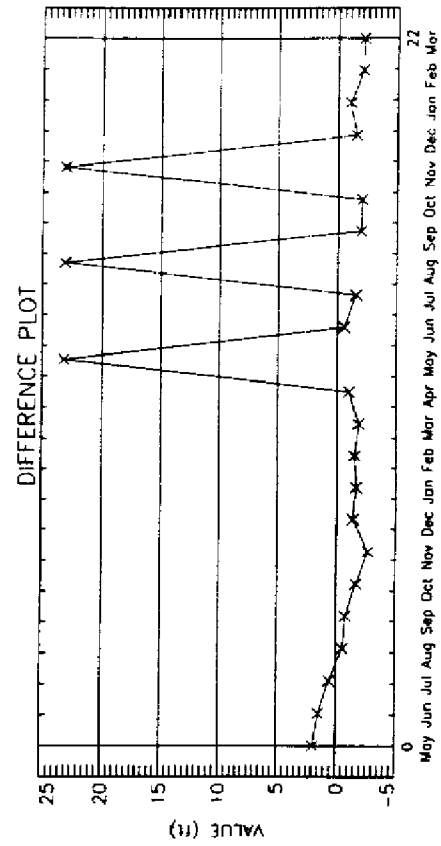
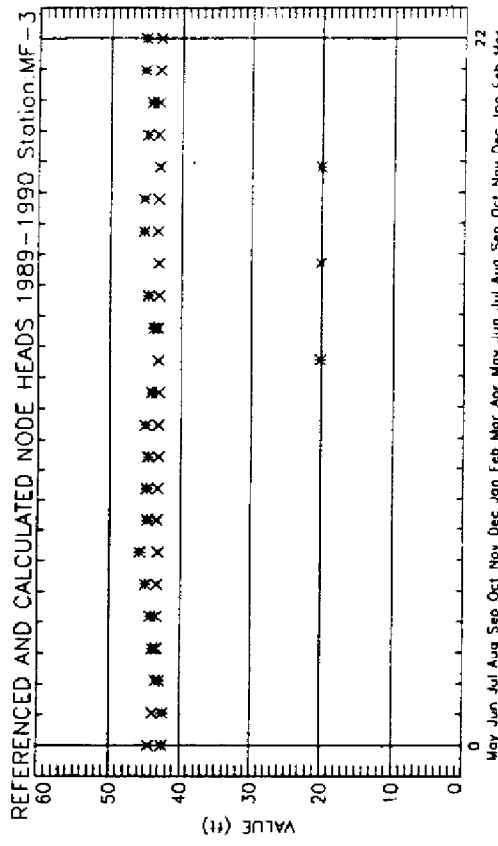
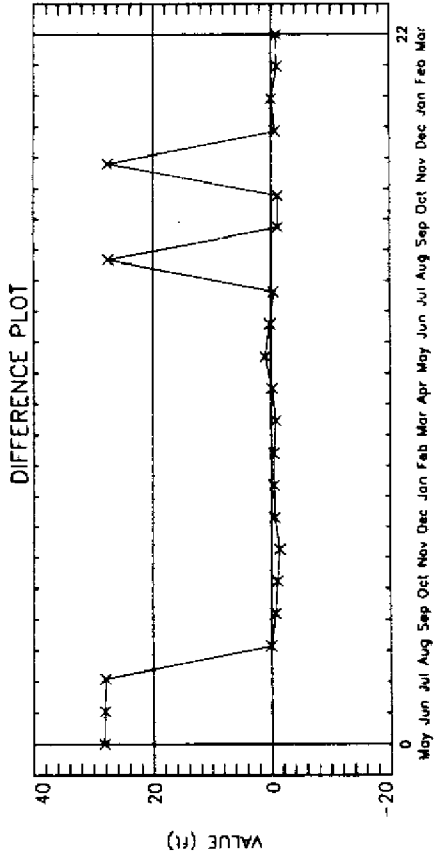
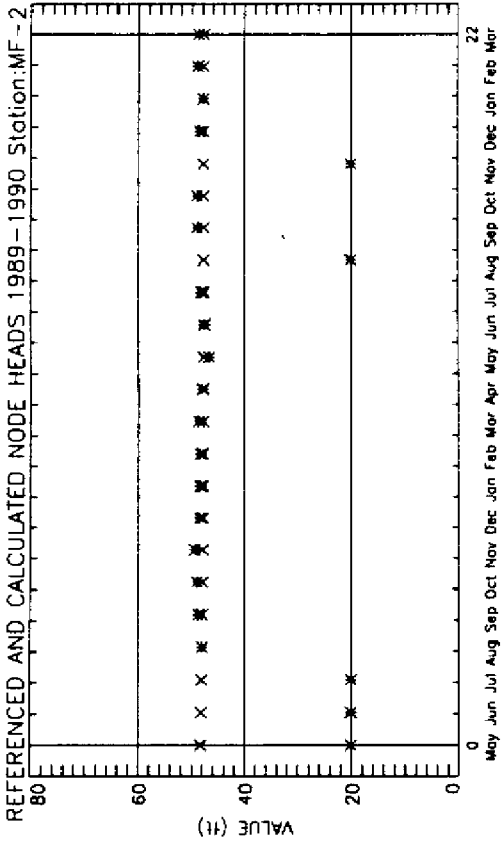
INTRODUCTION

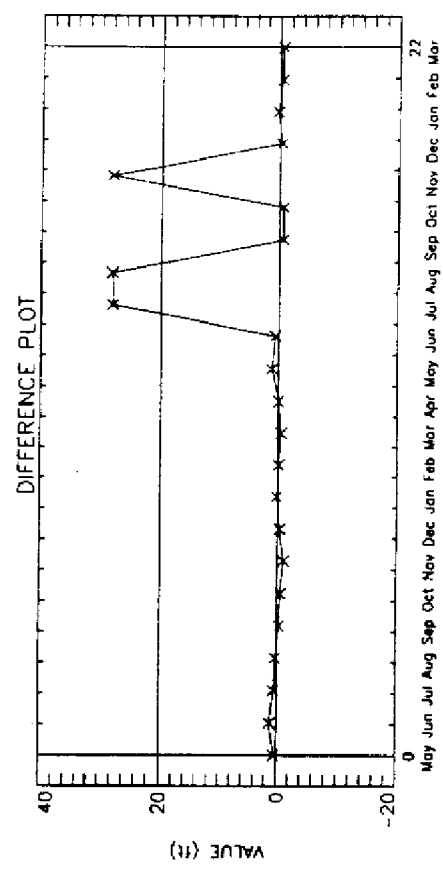
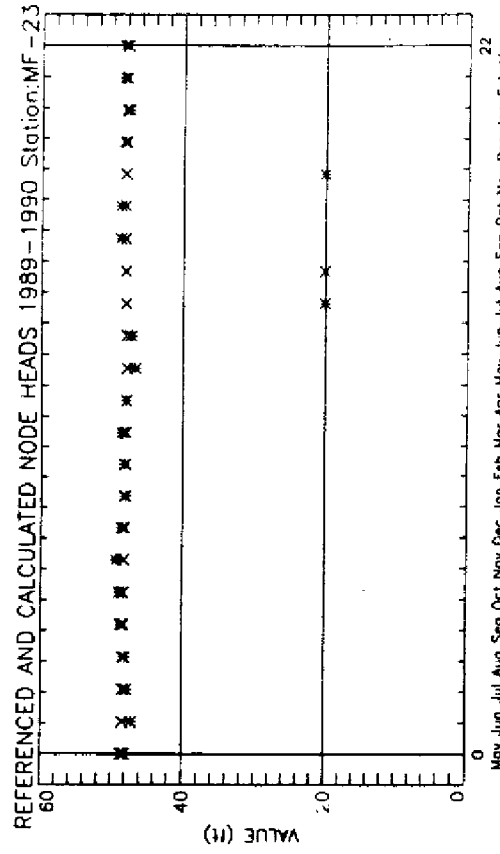
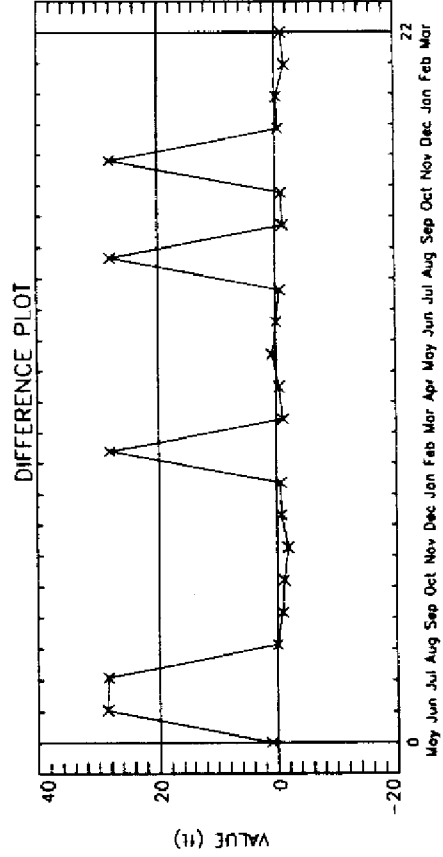
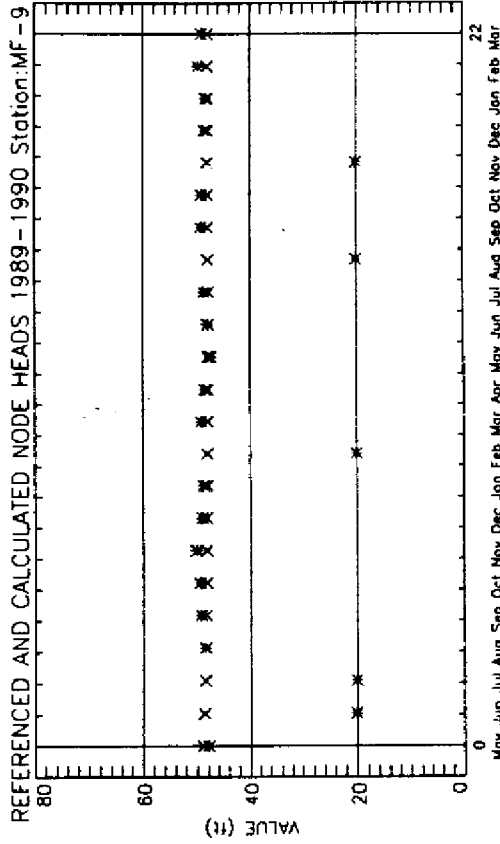
Comparative hydrographs were developed to compare computed and observed monthly water levels. The period of record graphed was May 1989 to March 1991. Some wells did not have a complete record of 23 observed water levels. In these cases, a standard value of +20 feet was assigned the missing month. Therefore, when reading the hydrographs, ignore all observed levels with this value.

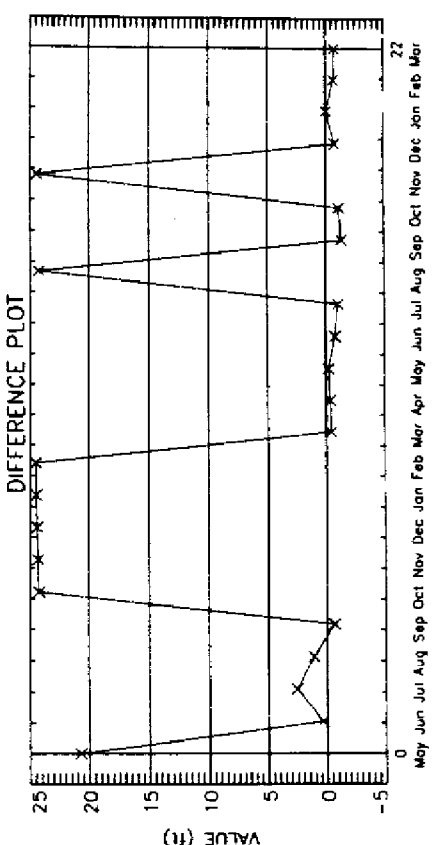
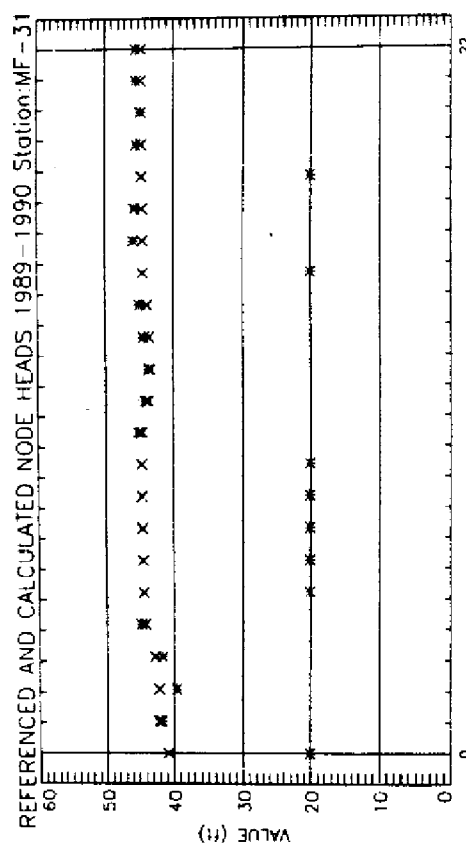
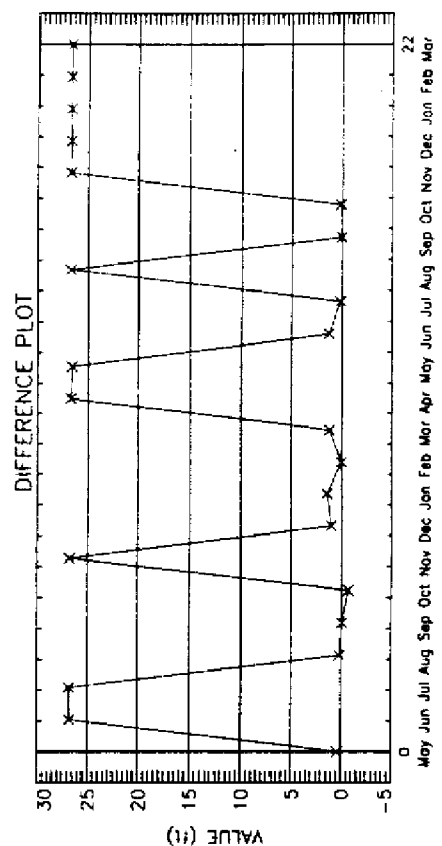
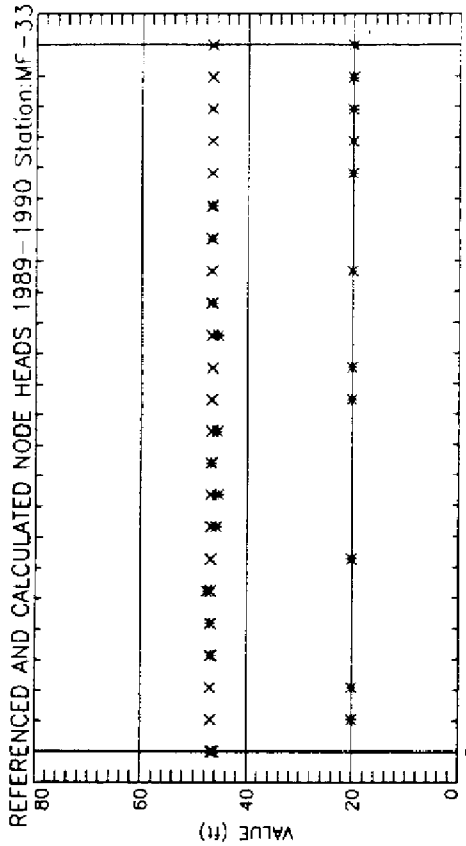
The codes used were:

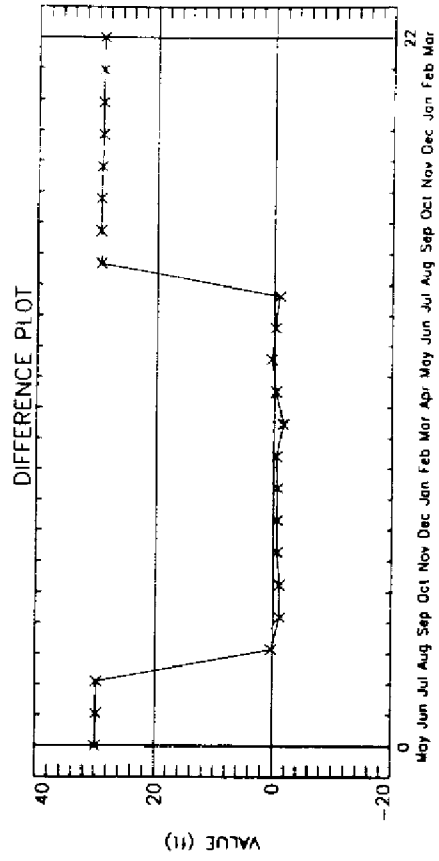
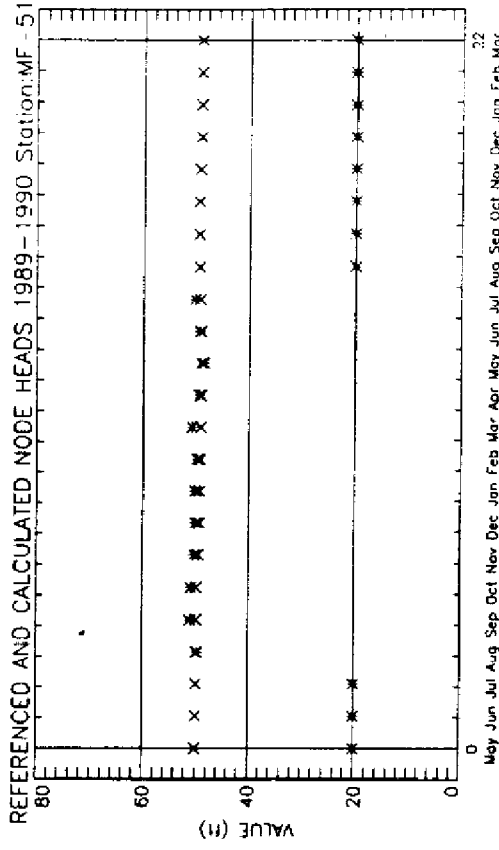
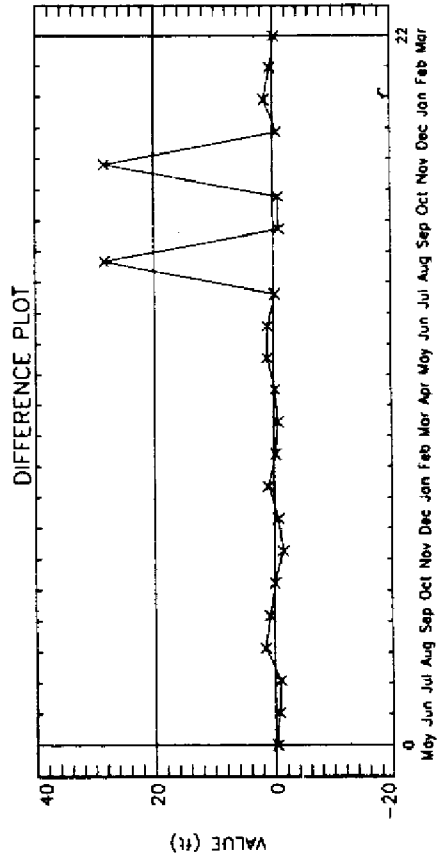
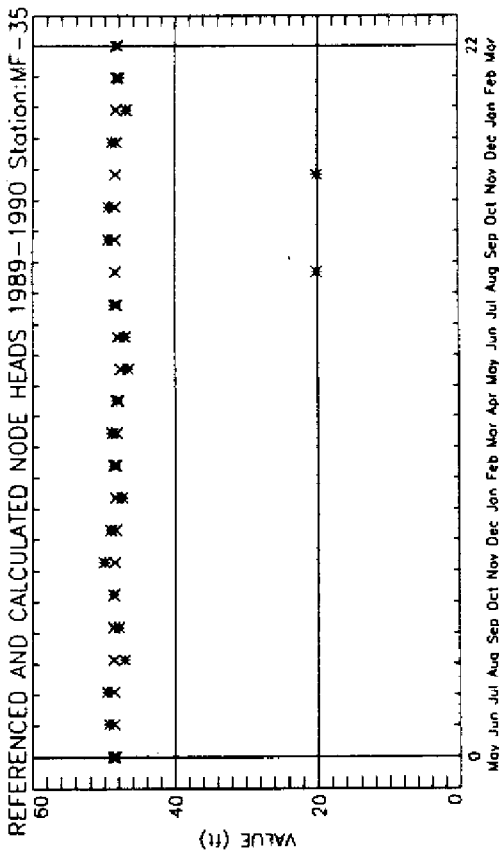
* = Observed water level

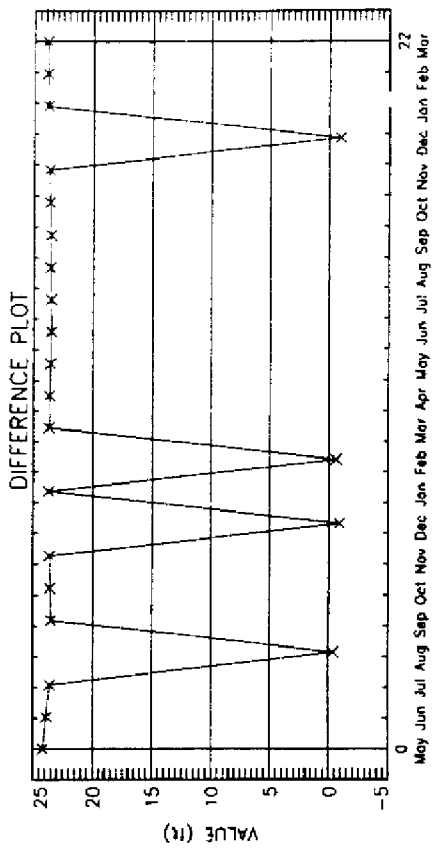
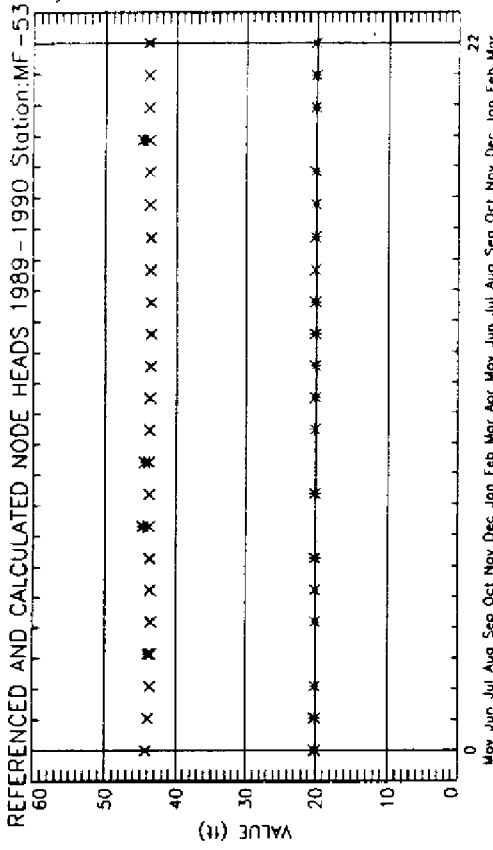
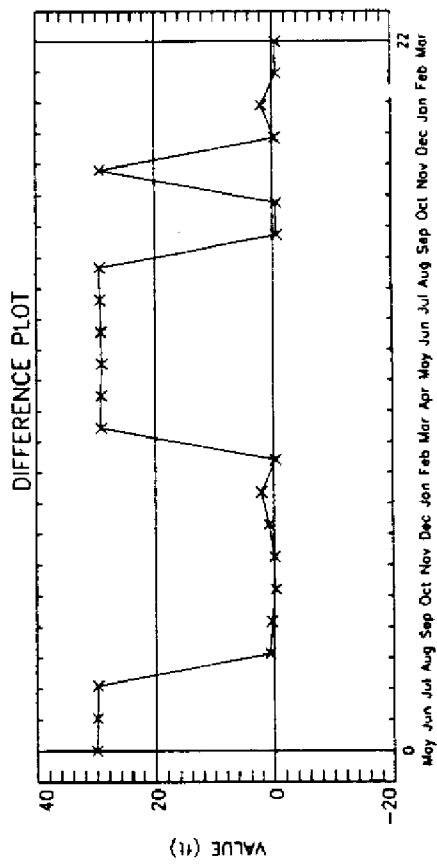
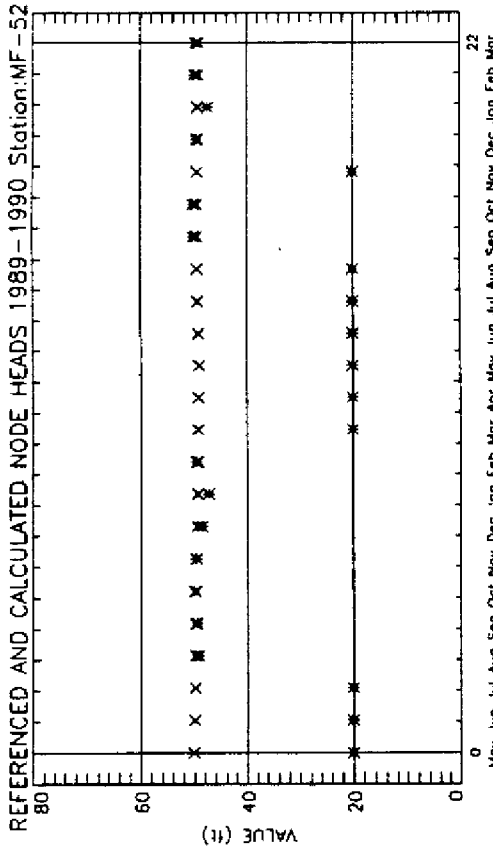
X = Computed water level



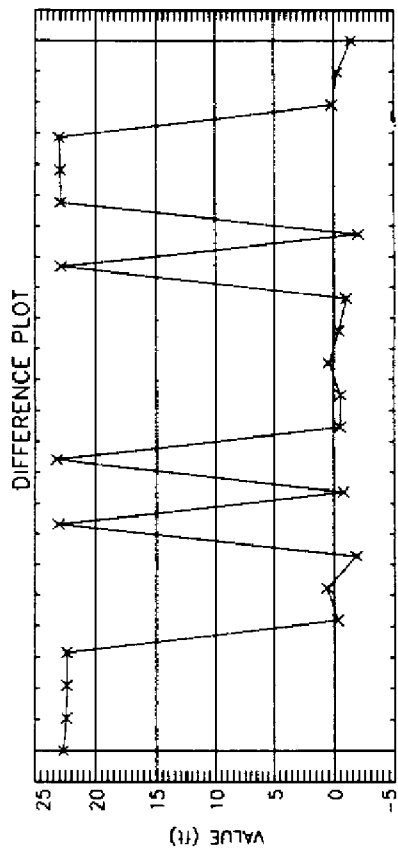
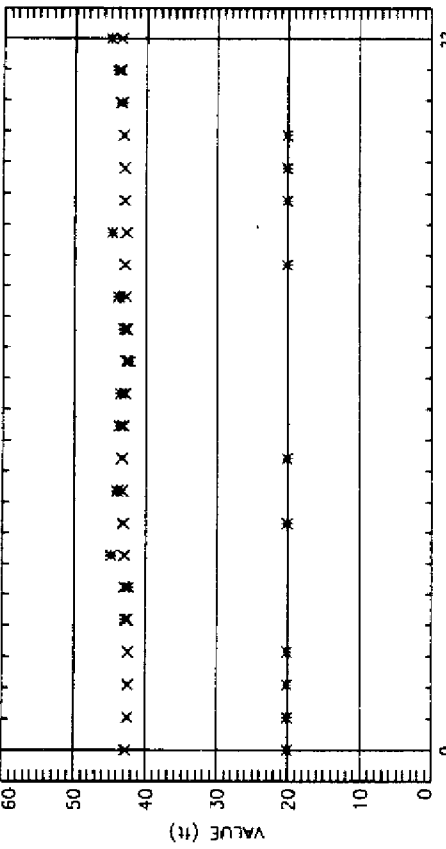




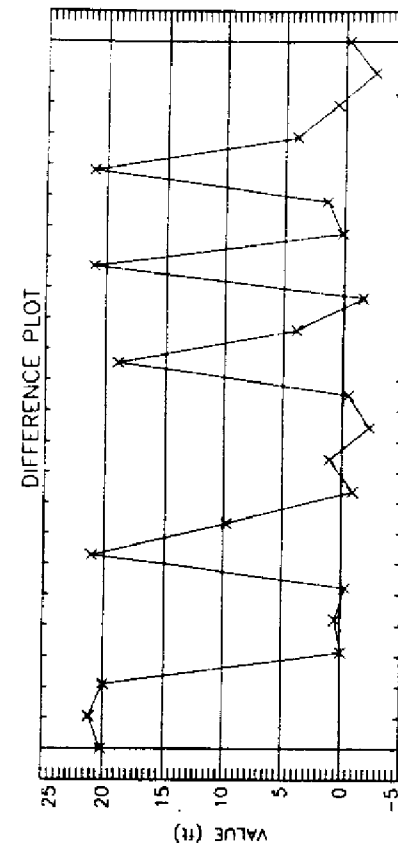
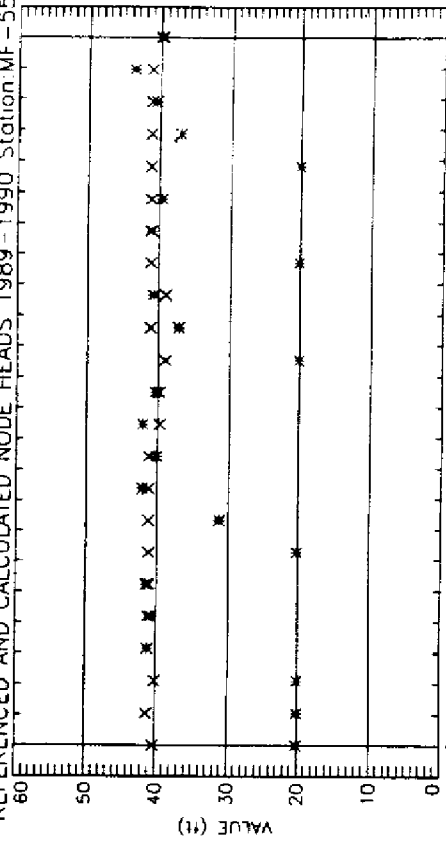


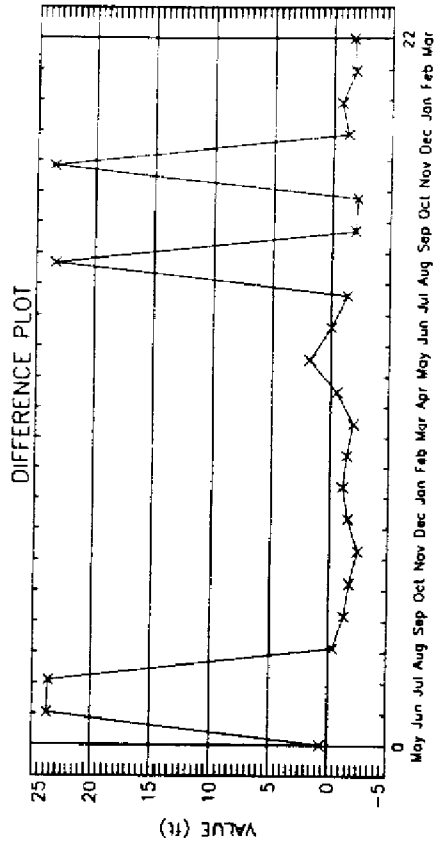
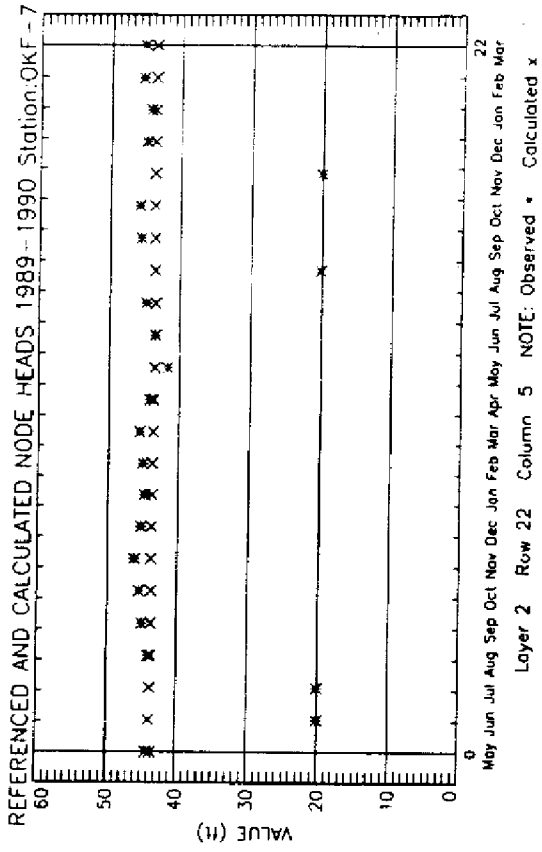
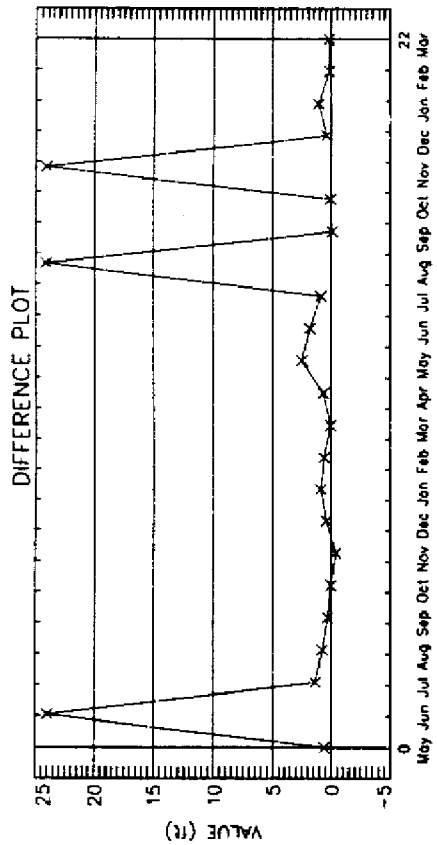
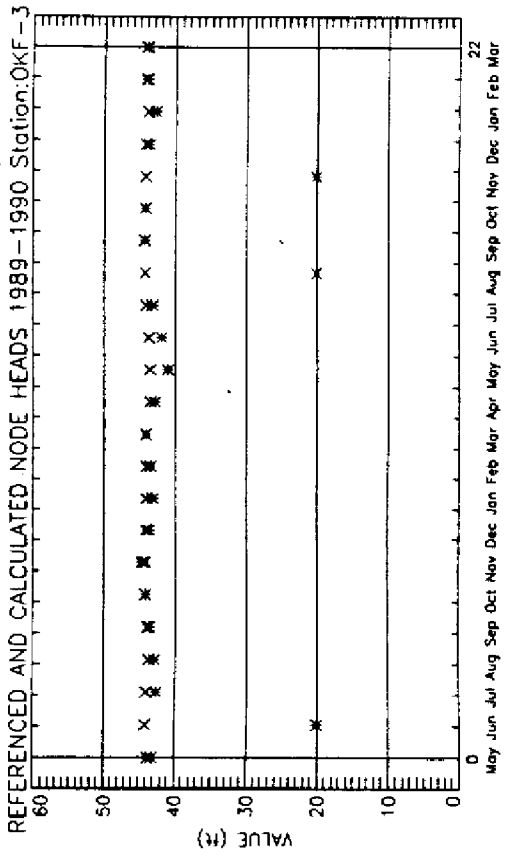


REFERENCED AND CALCULATED NODE HEADS 1989-1990 Station: MF-54

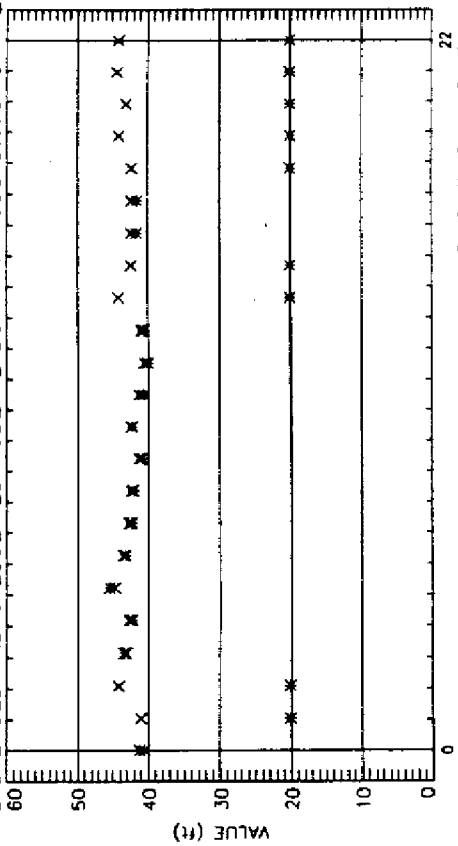


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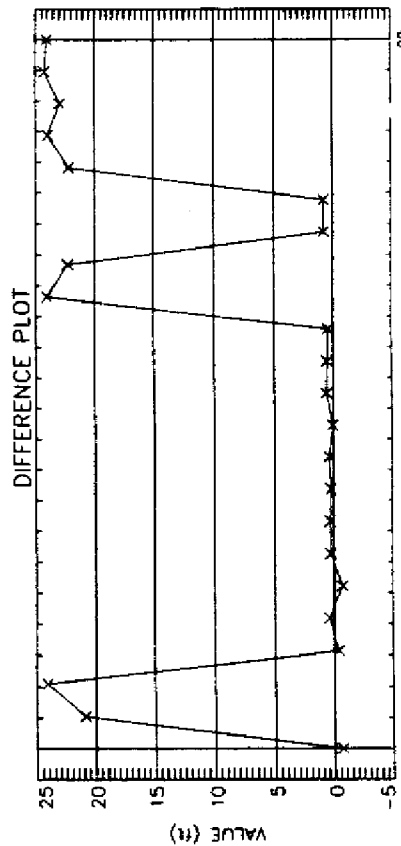




REFERENCED AND CALCULATED NODE HEADS 1989-1990 Station:OKF-23

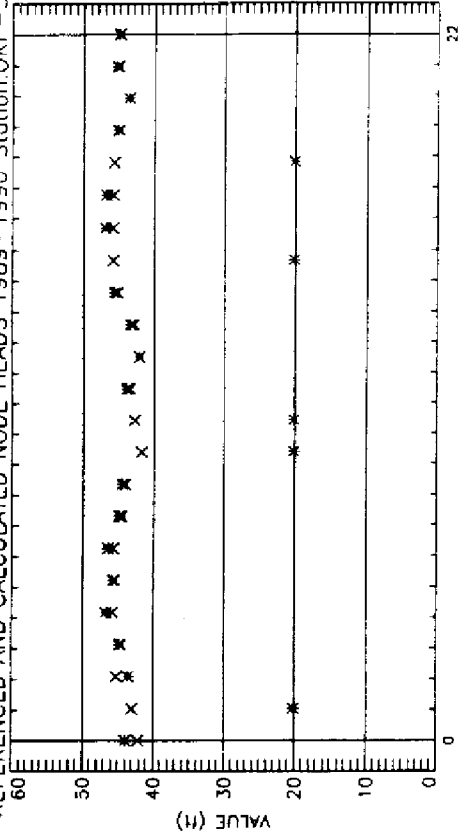


Layer 2 Row 29 Column 1 NOTE: Observed * Calculated x

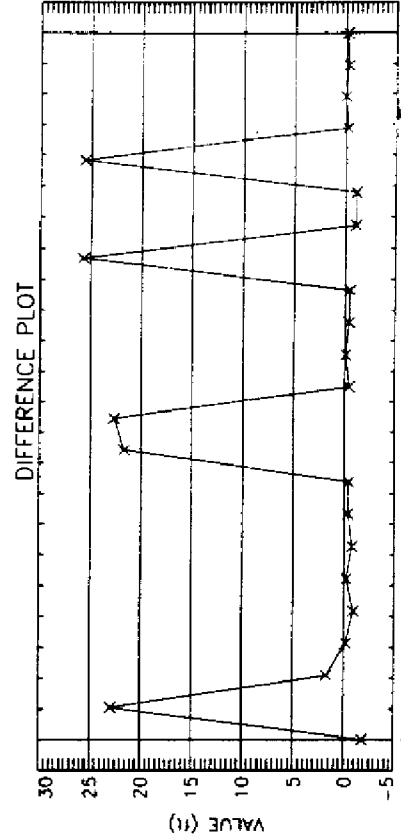


Layer 2 Row 29 Column 1 NOTE: Observed * Calculated x

REFERENCED AND CALCULATED NODE HEADS 1989-1990 Station:OKF-31

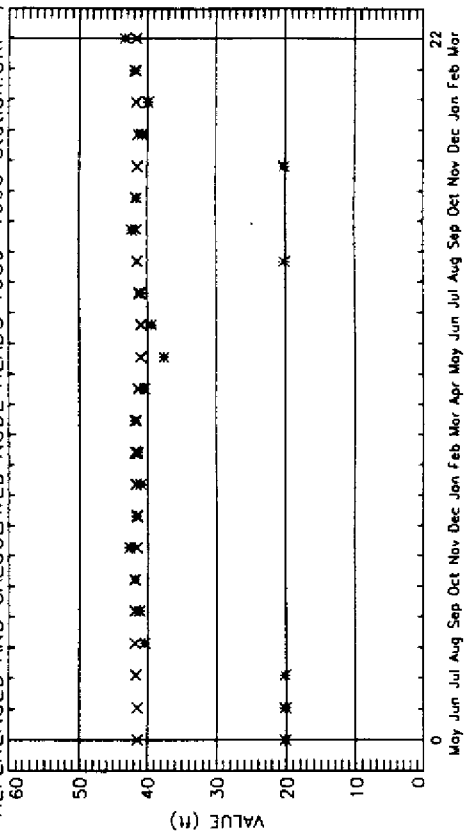


Layer 2 Row 31 Column 1 NOTE: Observed * Calculated x

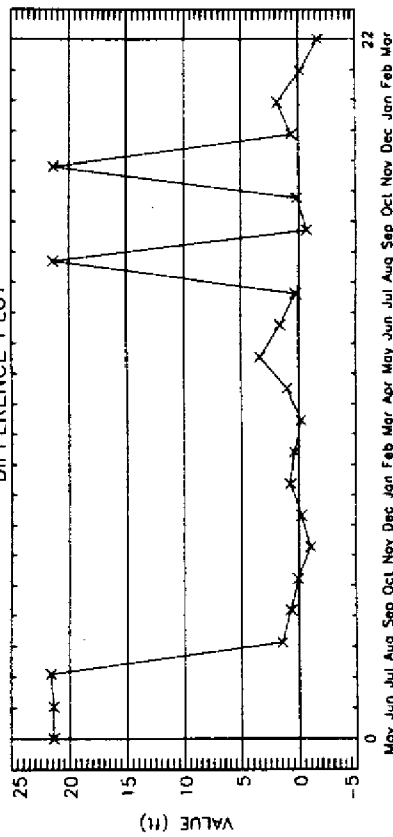


Layer 2 Row 31 Column 1 NOTE: Observed * Calculated x

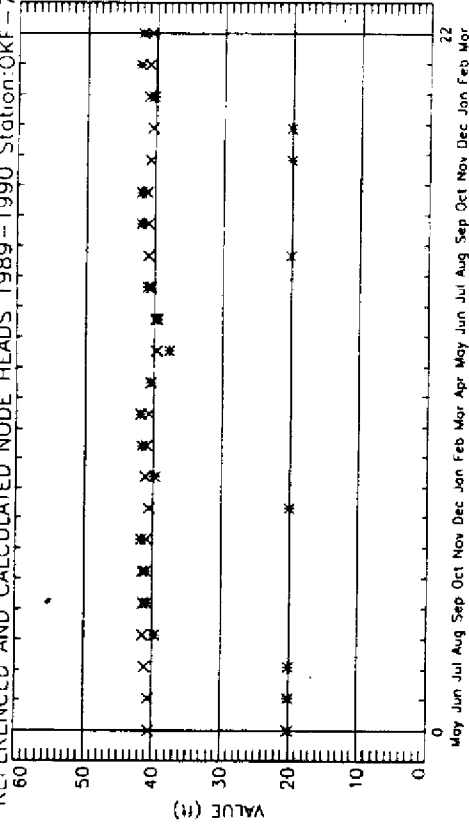
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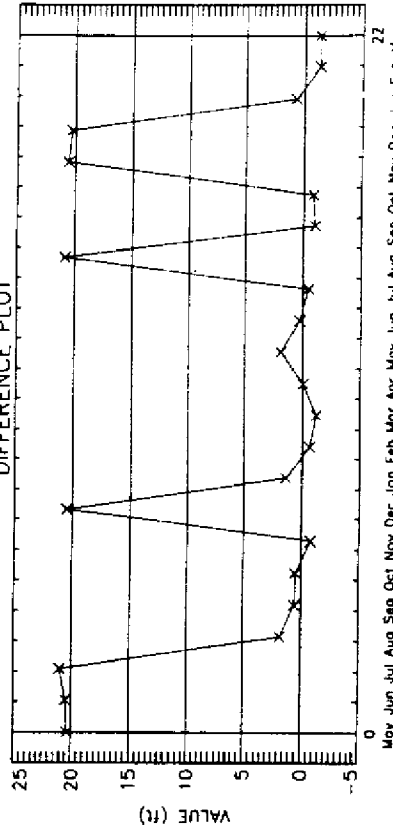
DIFFERENCE PLOT



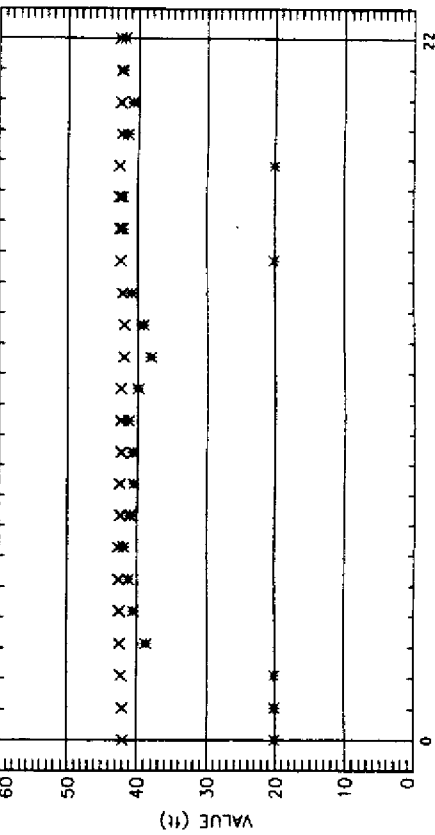
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DIFFERENCE PLOT

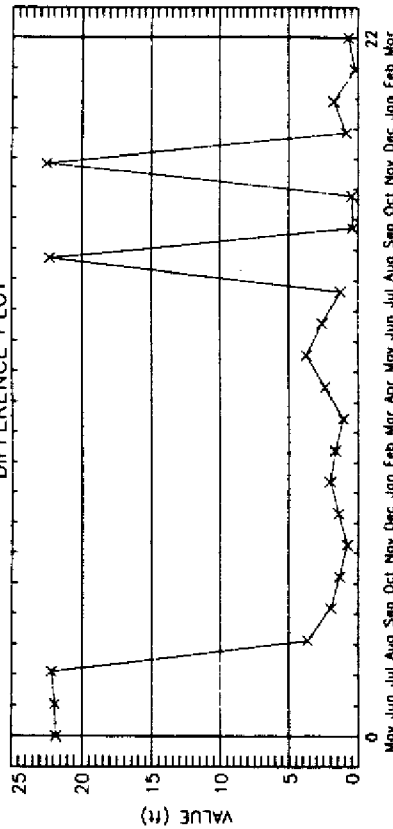


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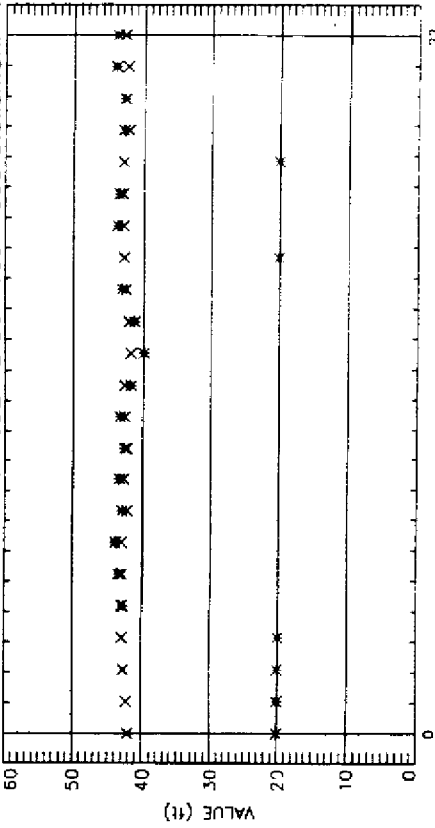
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar
 Layer 2 Row 25 Column 4 NOTE: Observed * Calculated x

DIFFERENCE PLOT



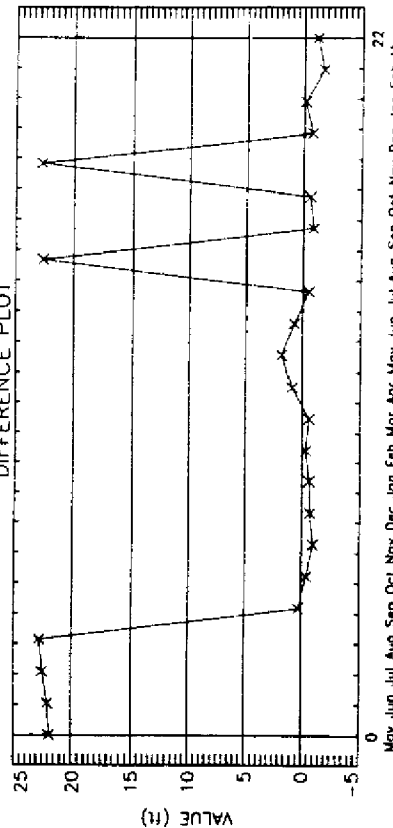
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REFERENCED AND CALCULATED NODE HEADS 1989-1990 Station:OKF-74

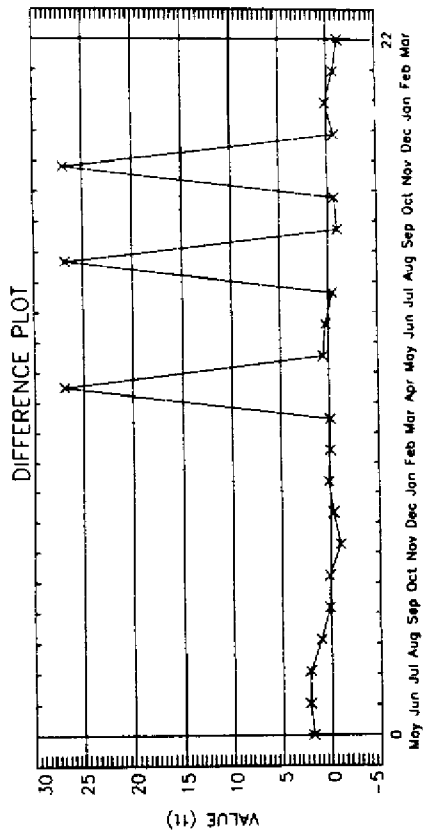
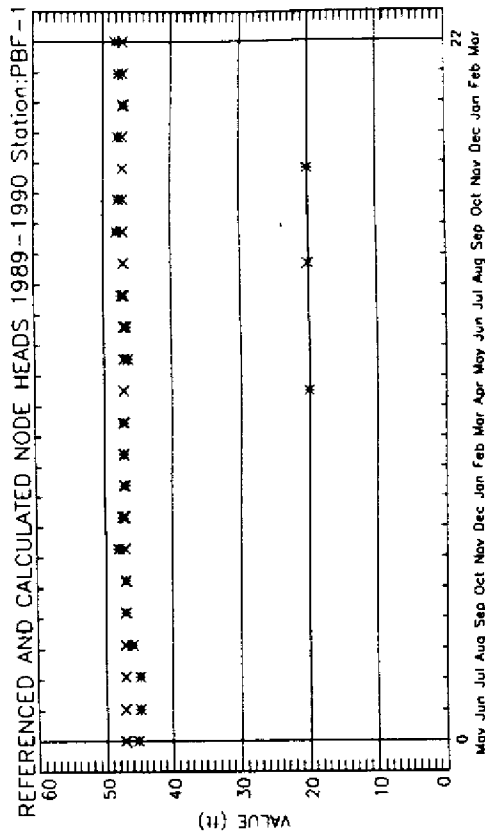


May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar
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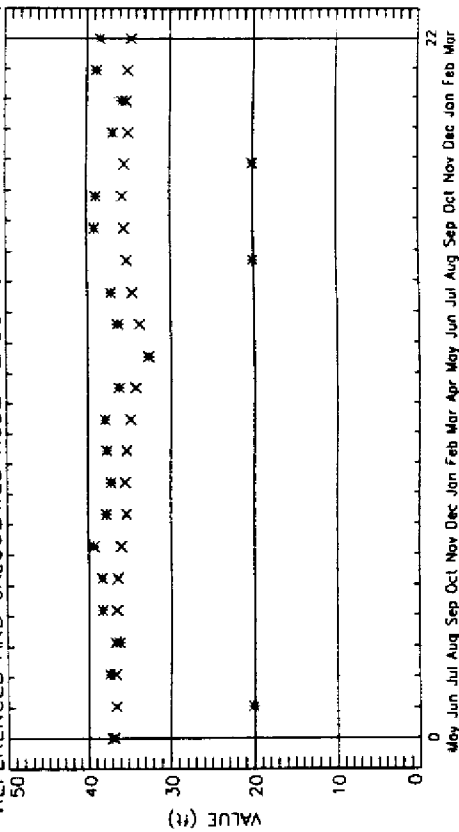
DIFFERENCE PLOT



May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar

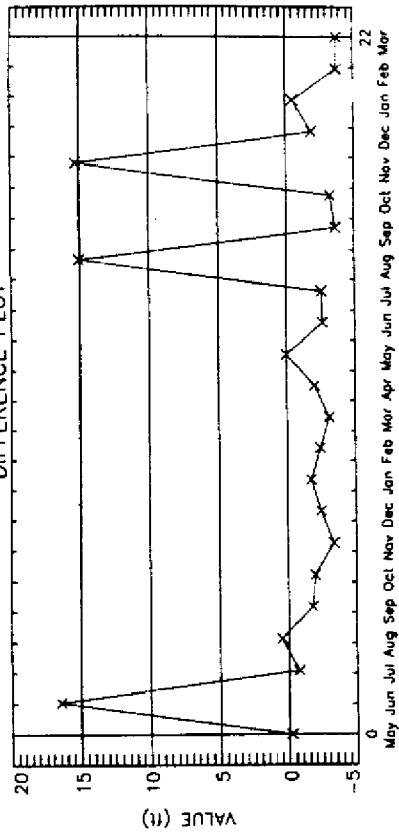


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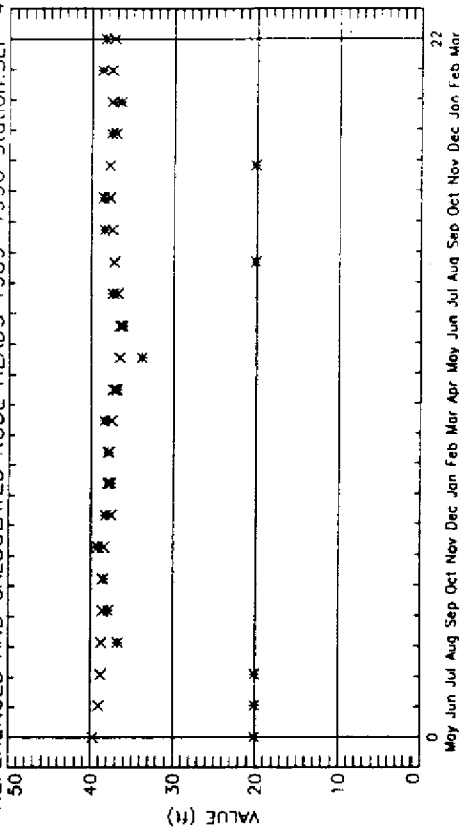


Layer 2 Row 12 Column 26 NOTE: Observed * Calculated x

DIFFERENCE PLOT

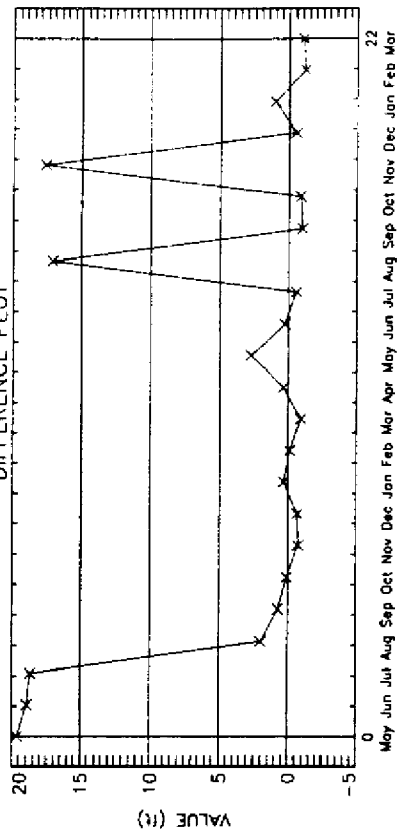


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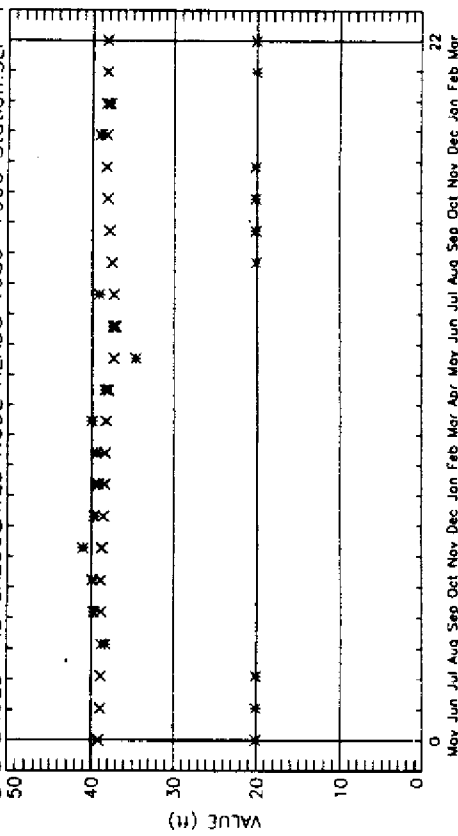


Layer 2 Row 14 Column 23 NOTE: Observed * Calculated x

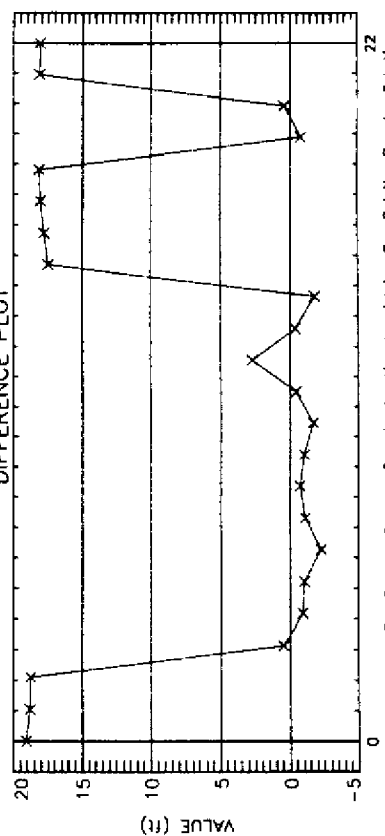
DIFFERENCE PLOT



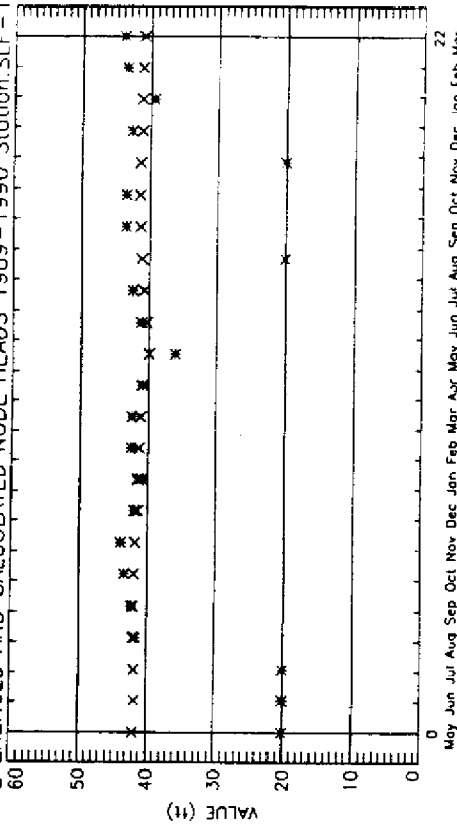
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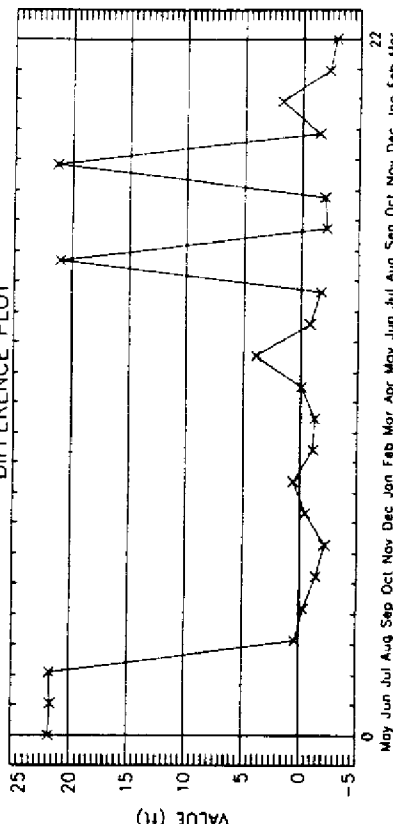
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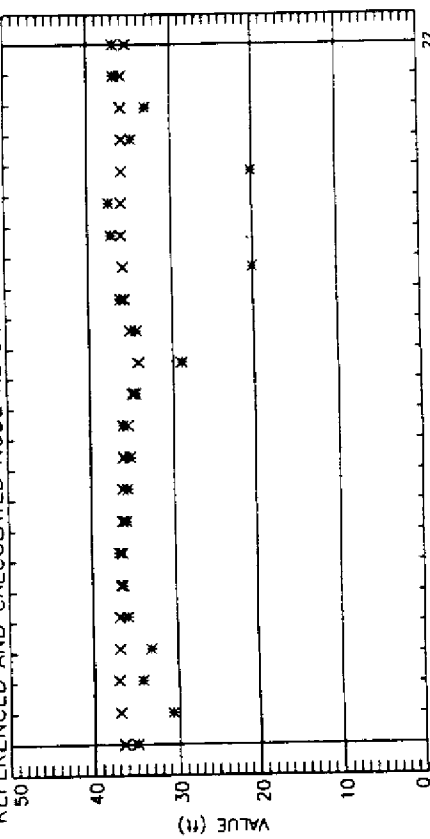
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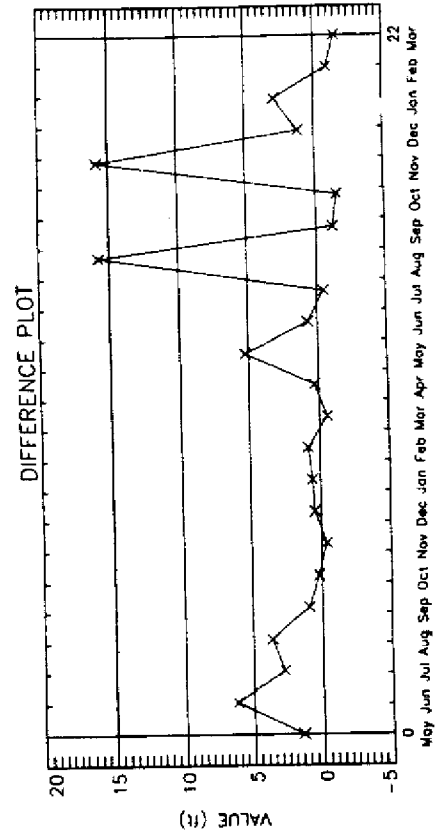
DIFFERENCE PLOT



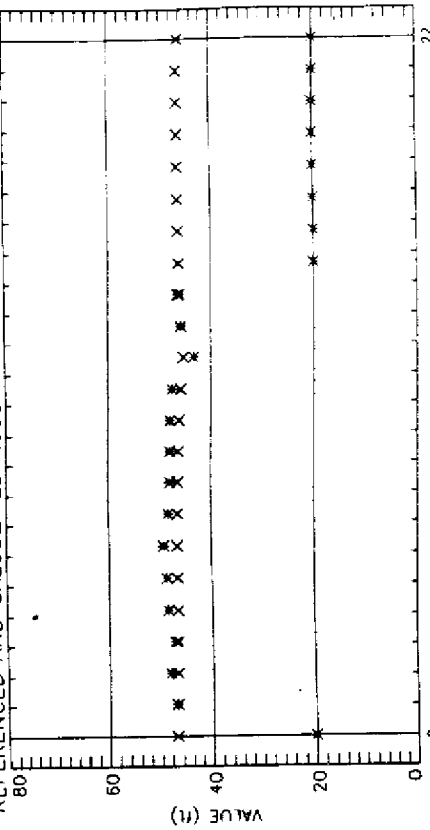
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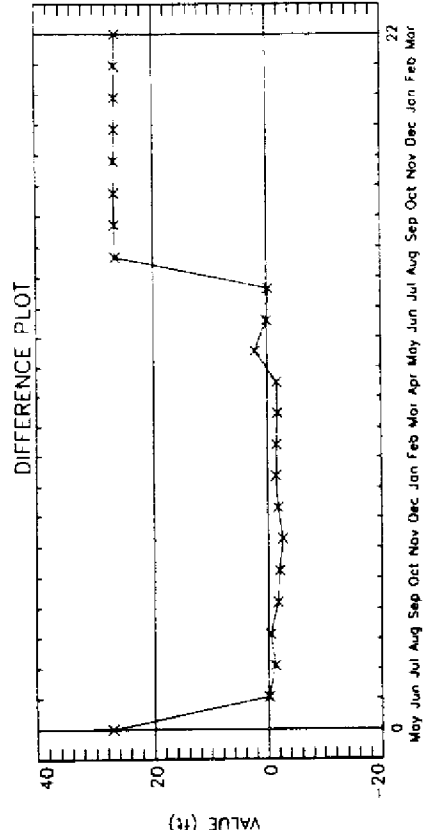
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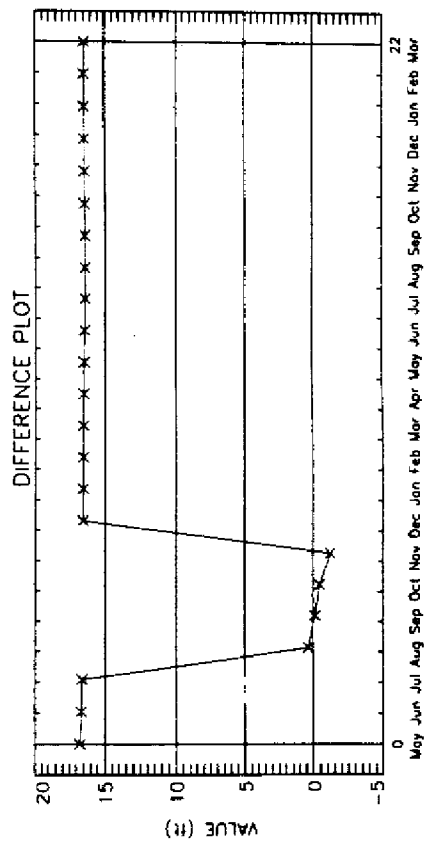
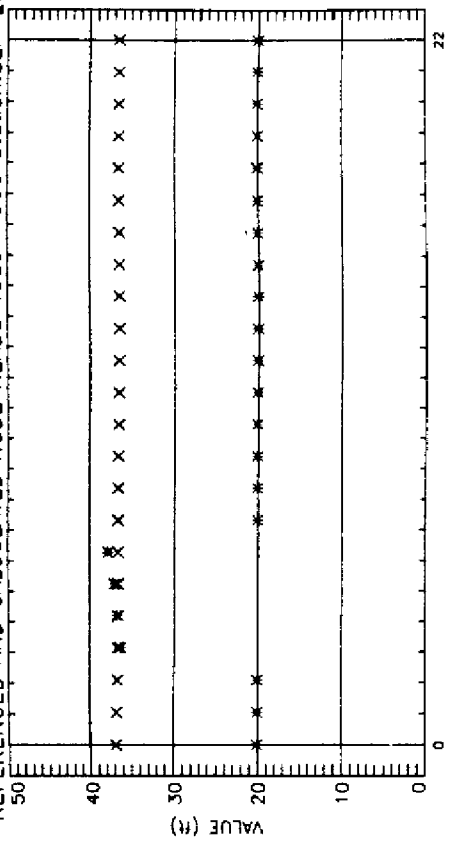
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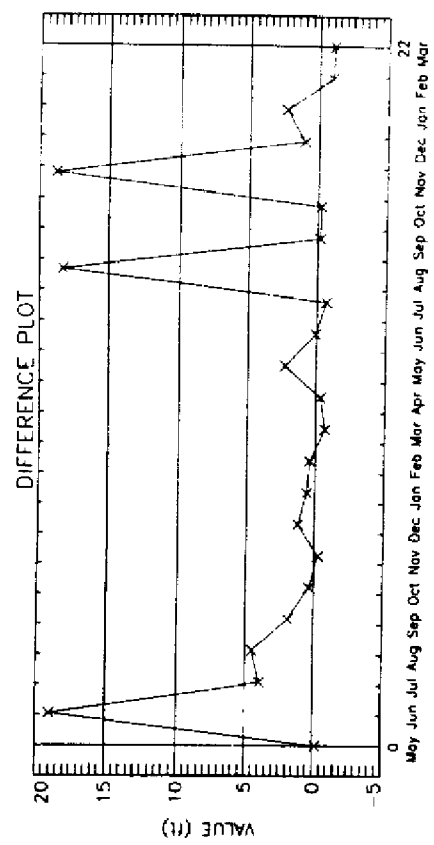
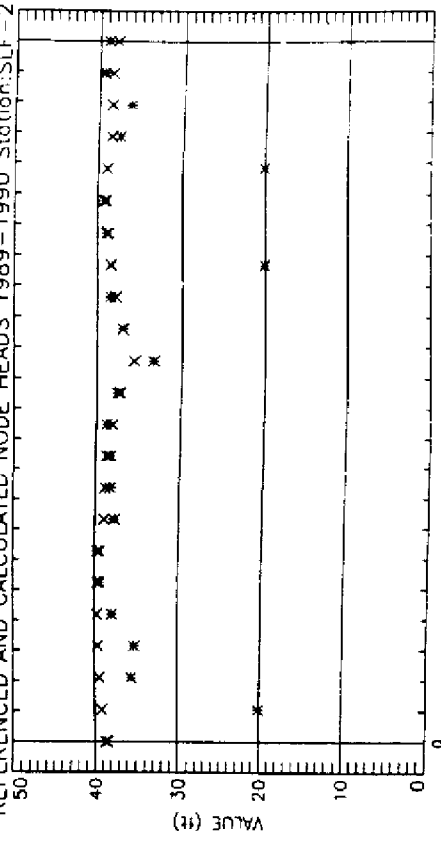
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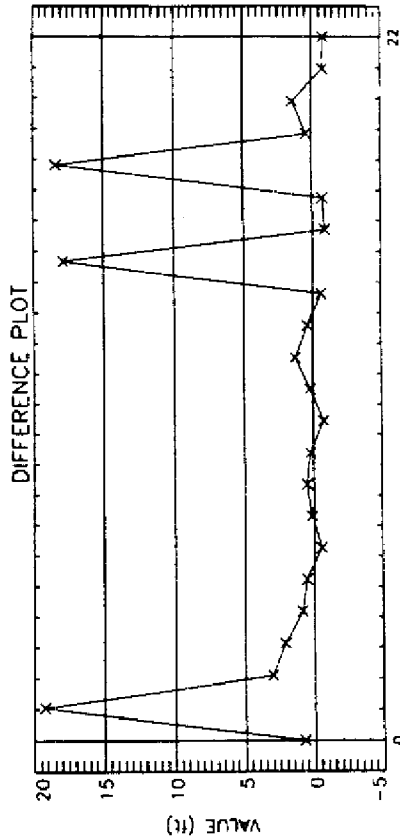
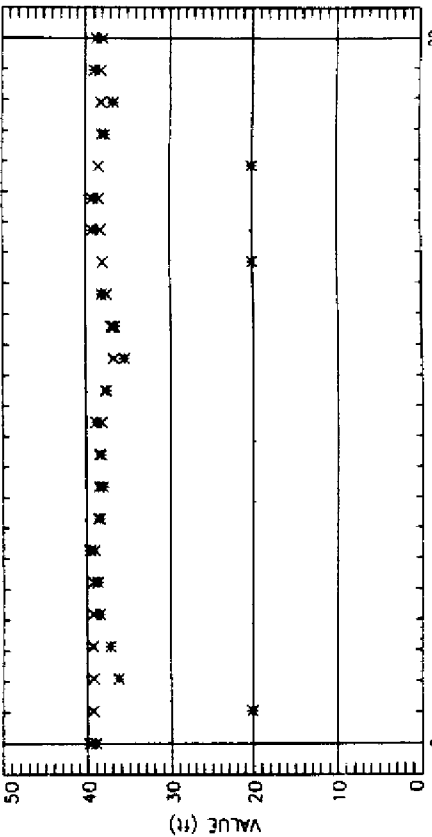
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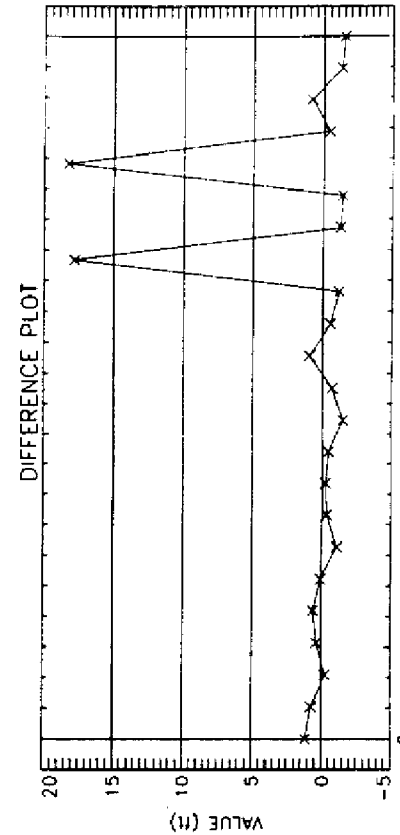
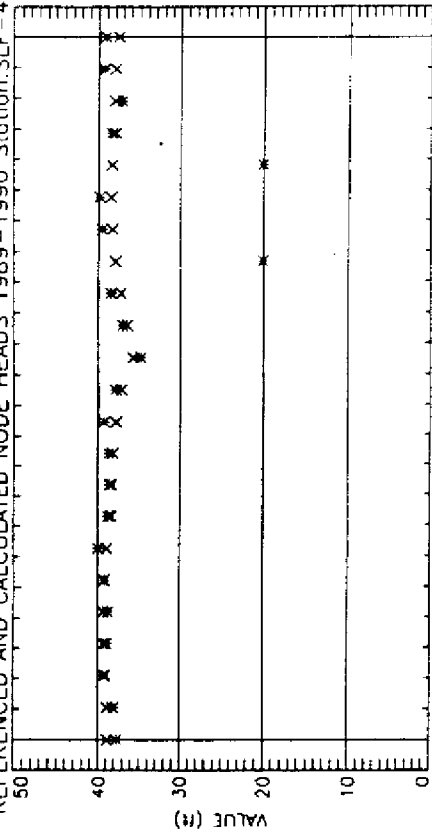
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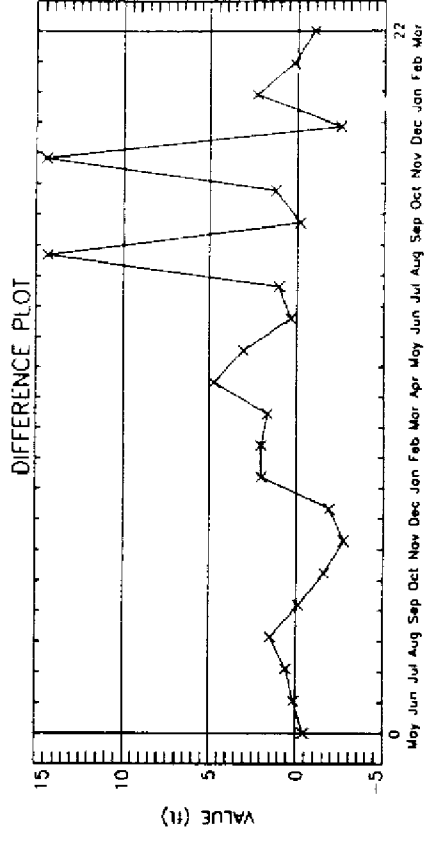
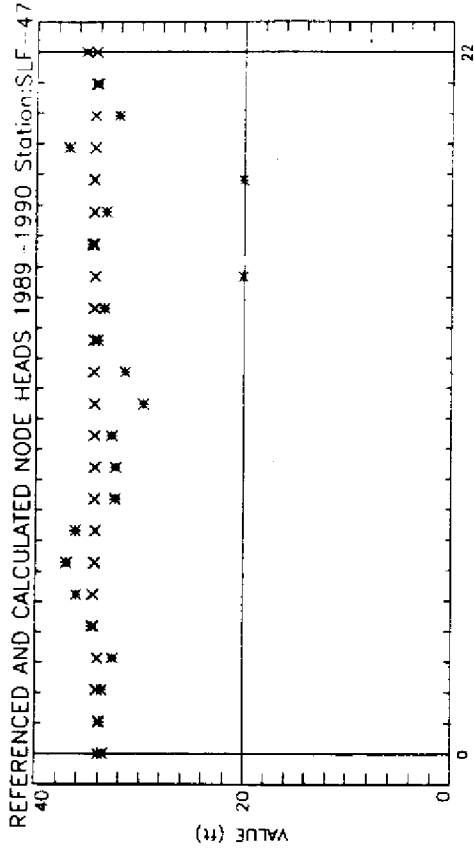
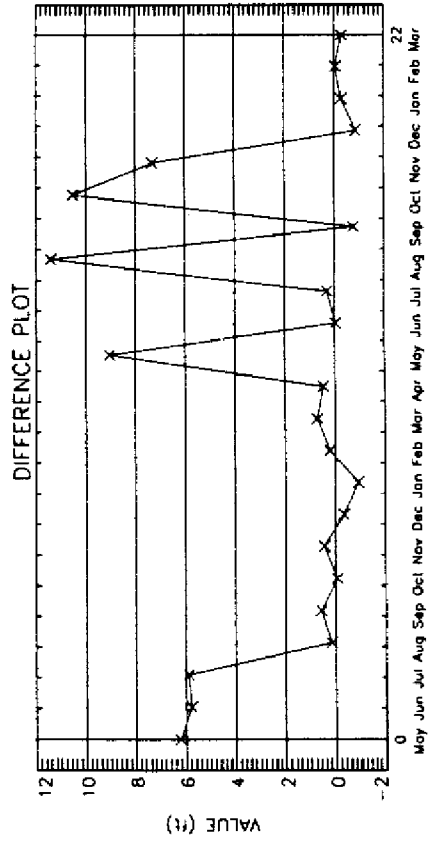
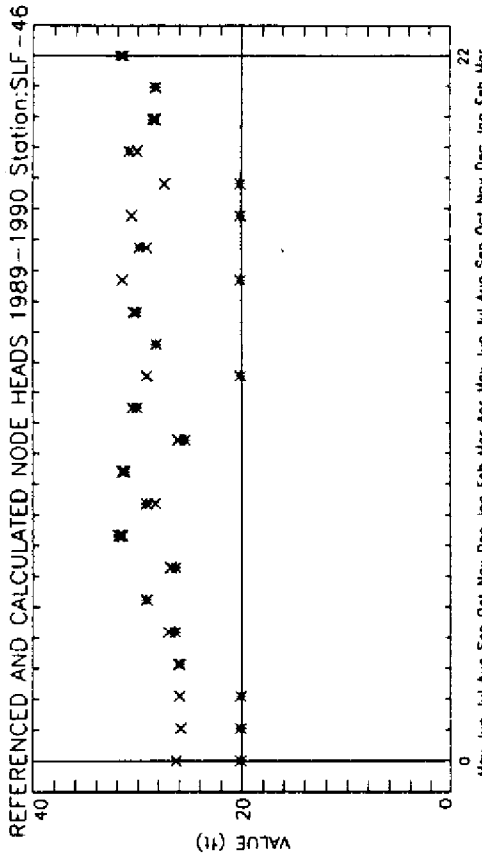


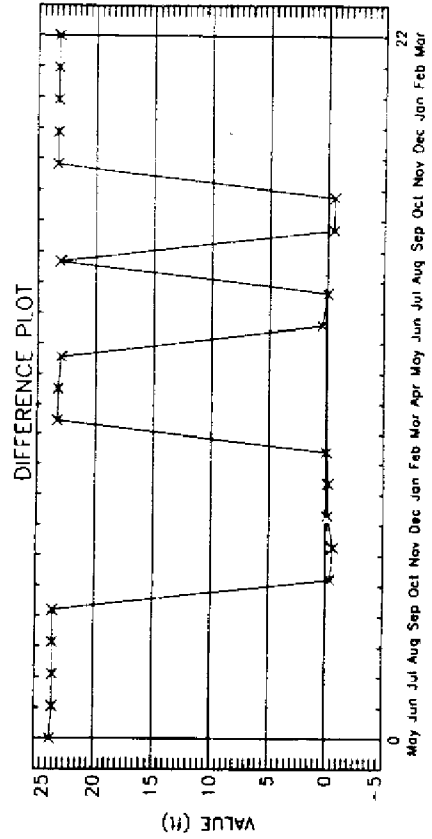
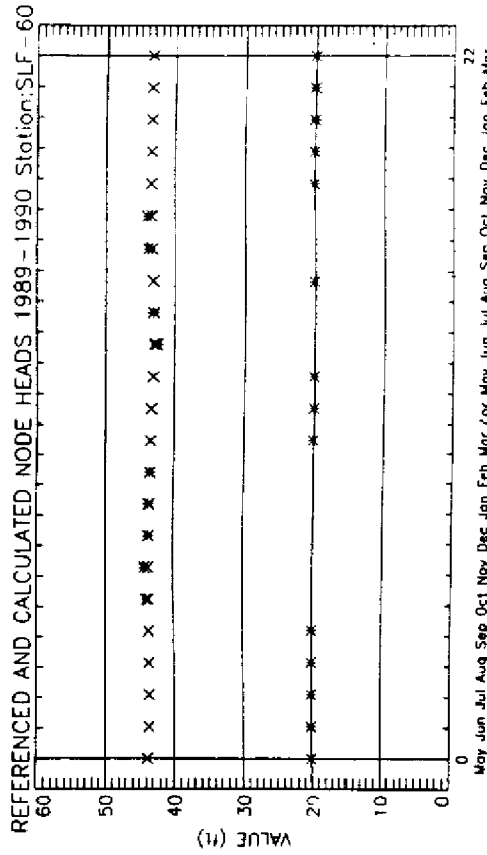
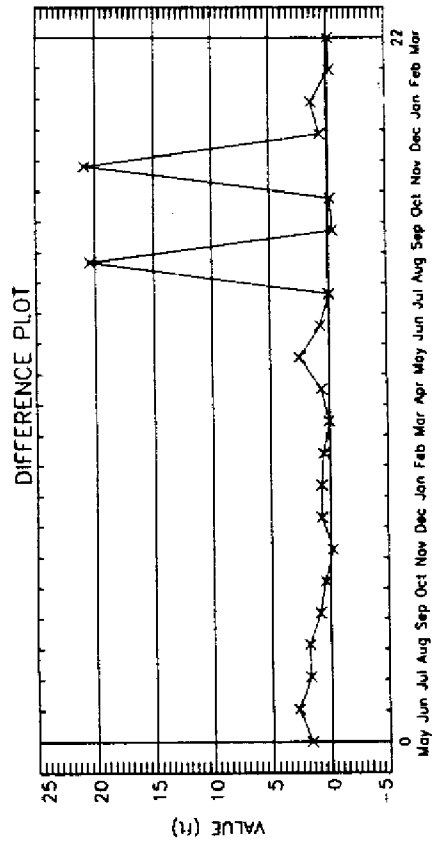
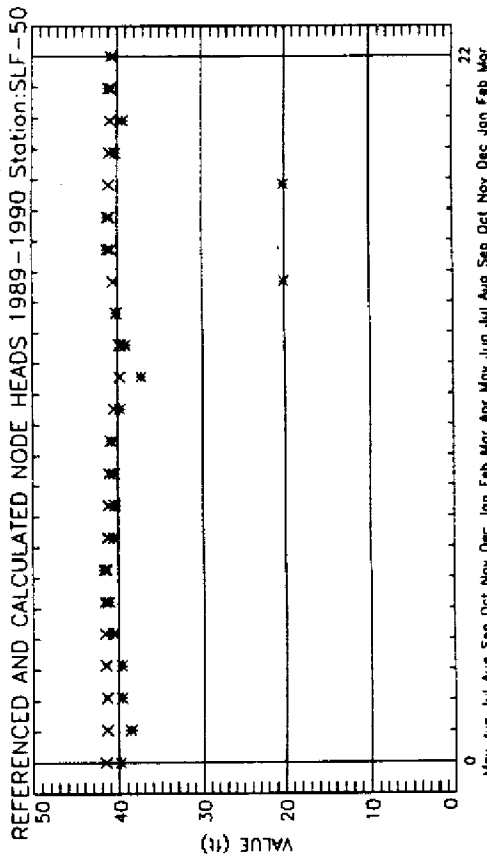
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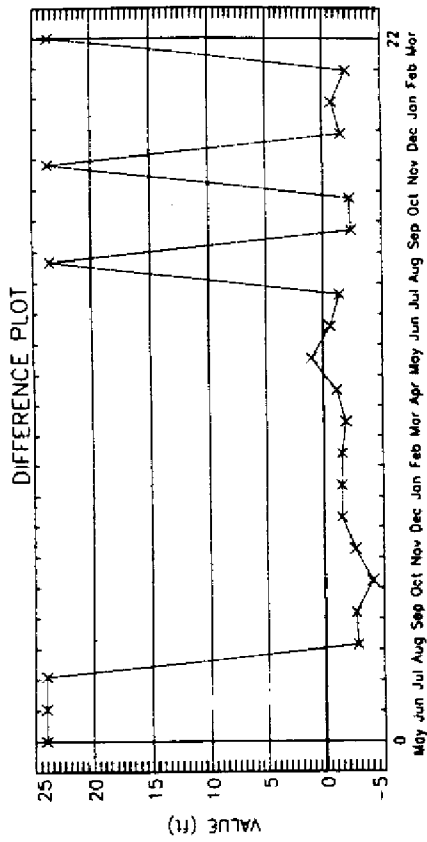
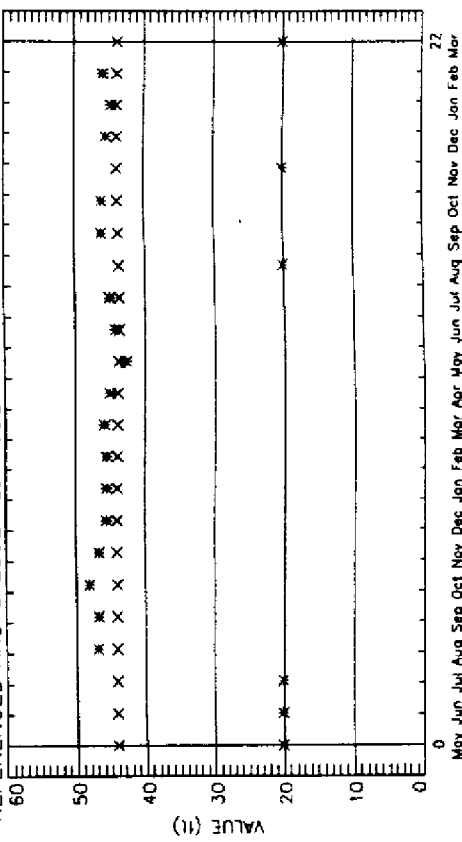
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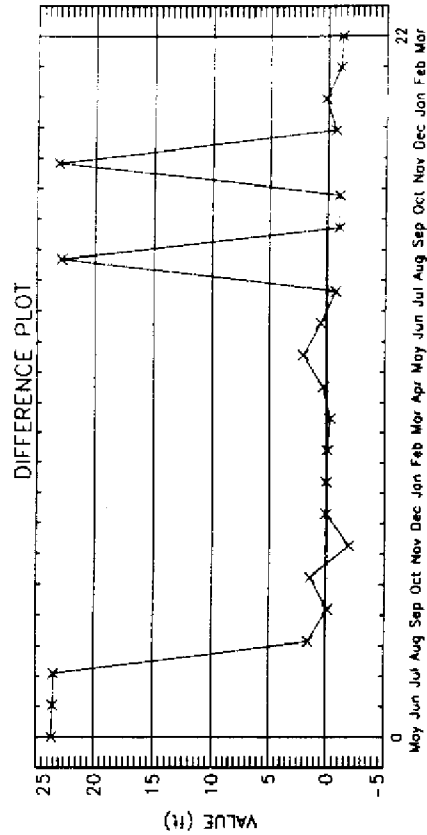
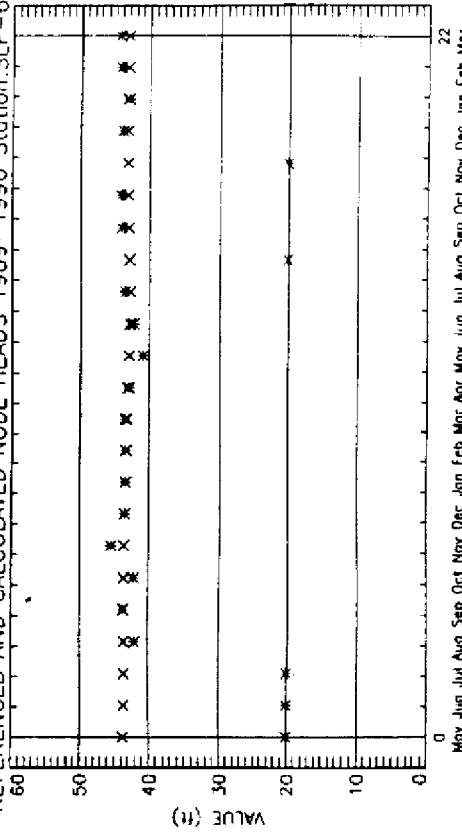


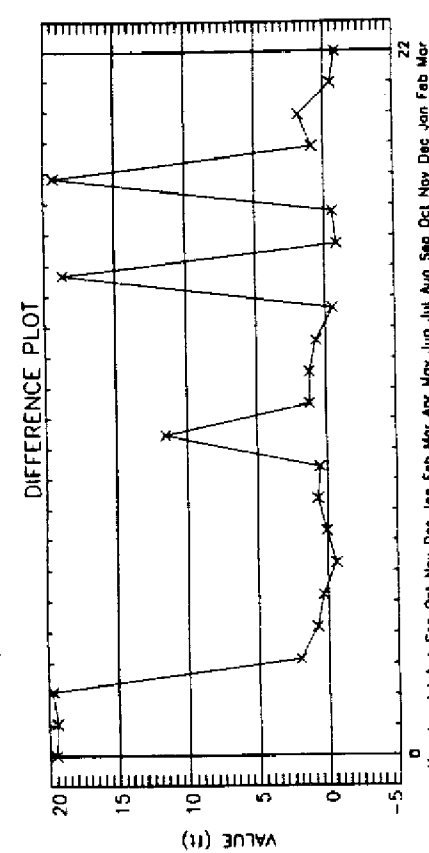
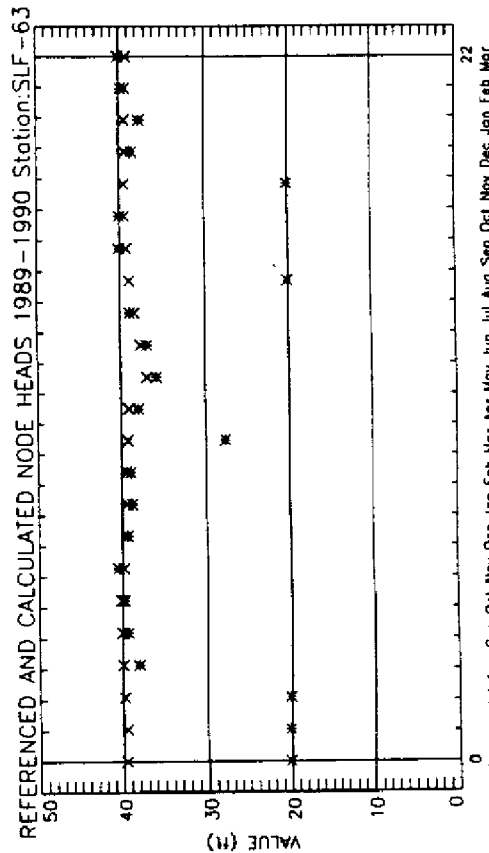
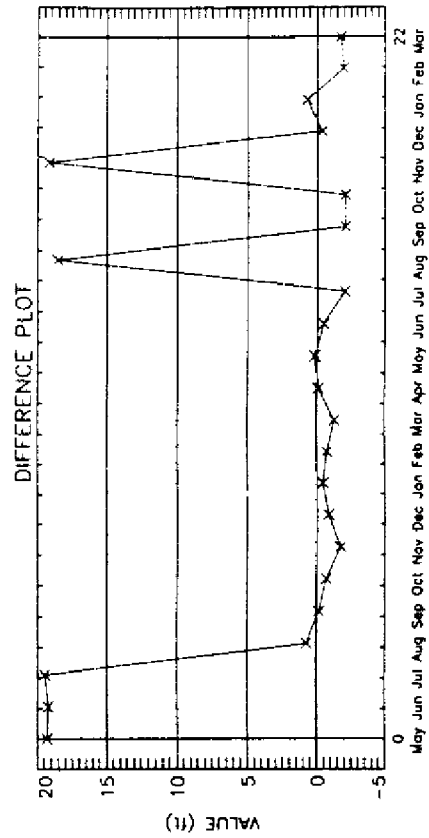
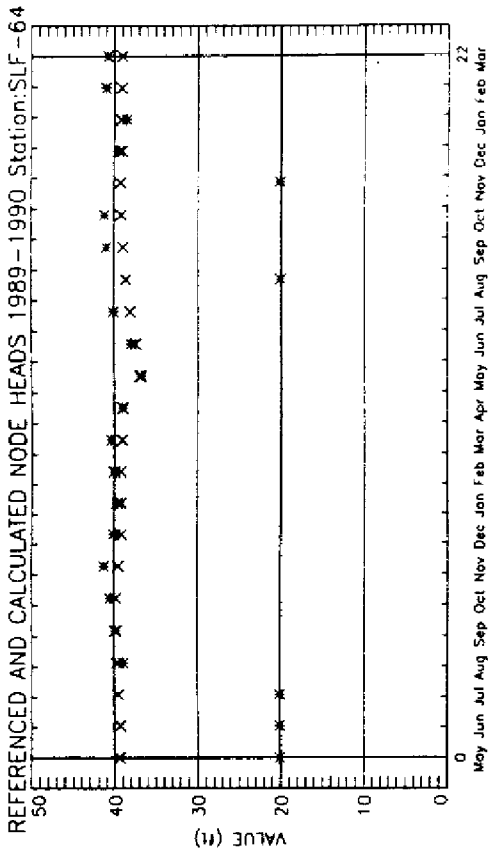


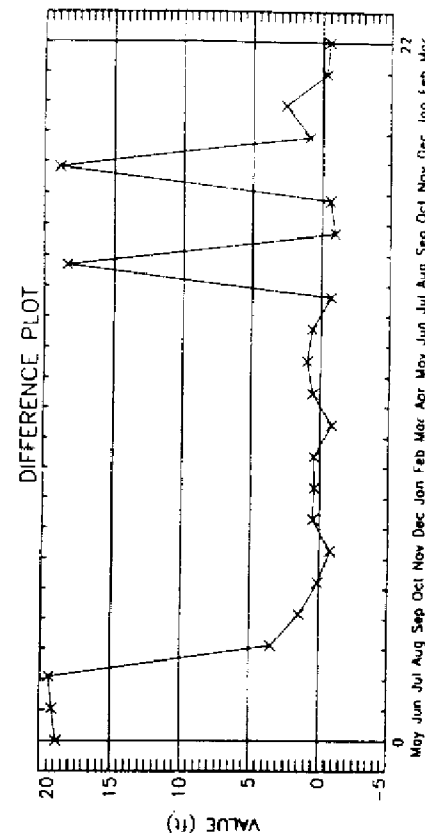
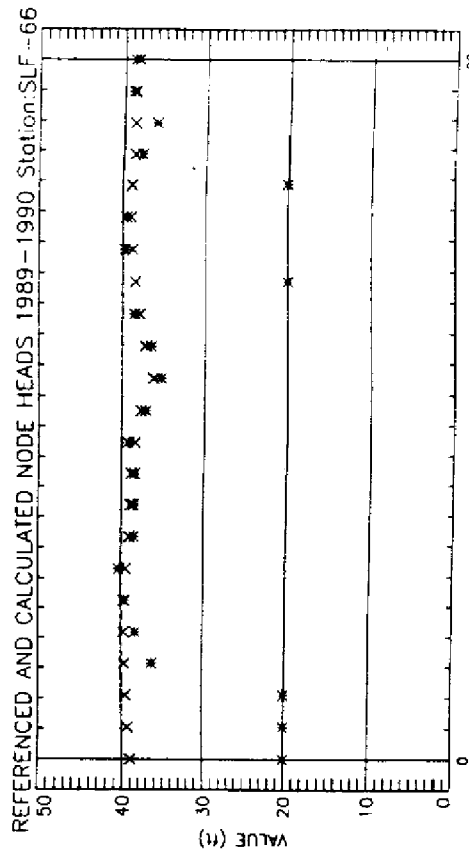
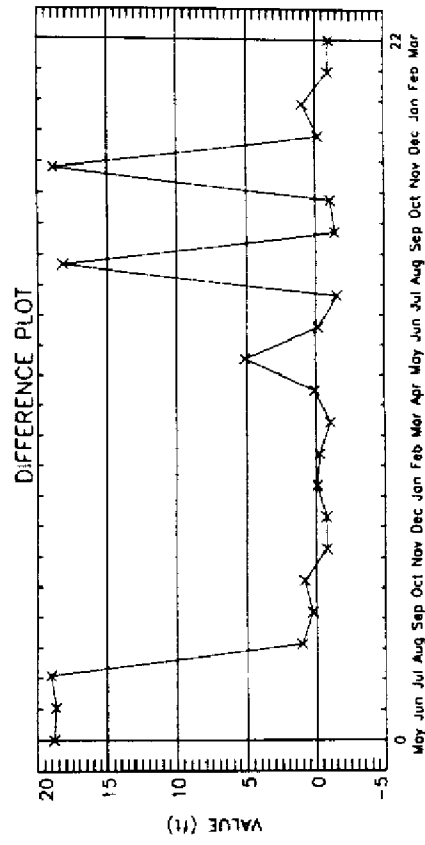
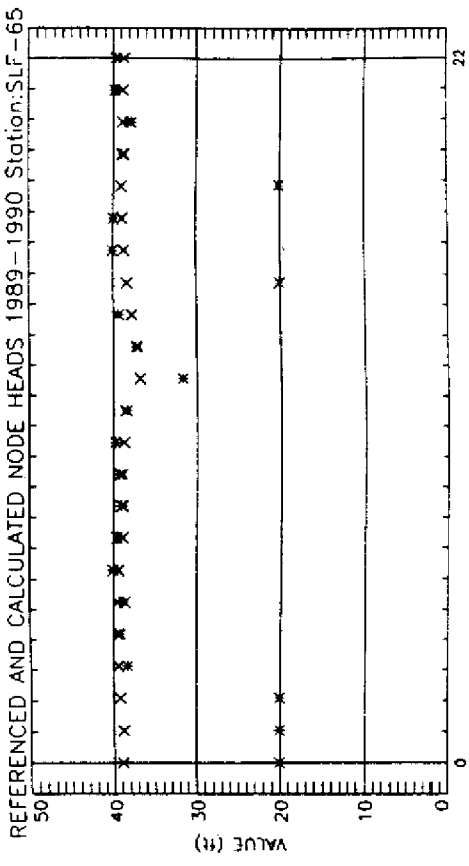
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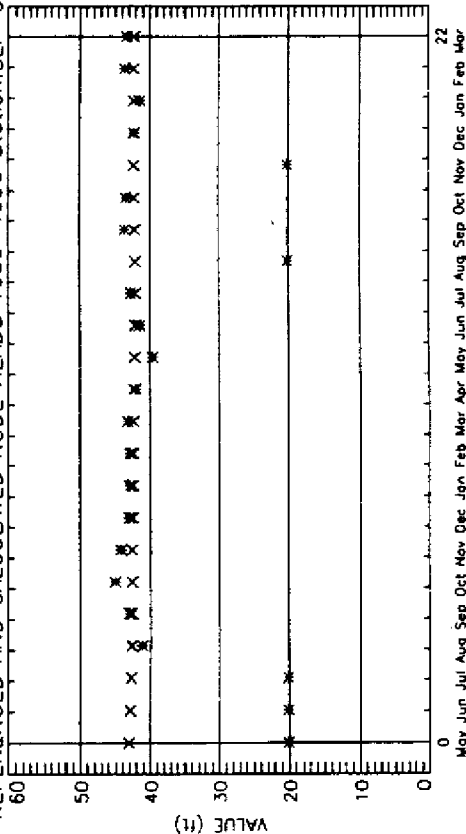
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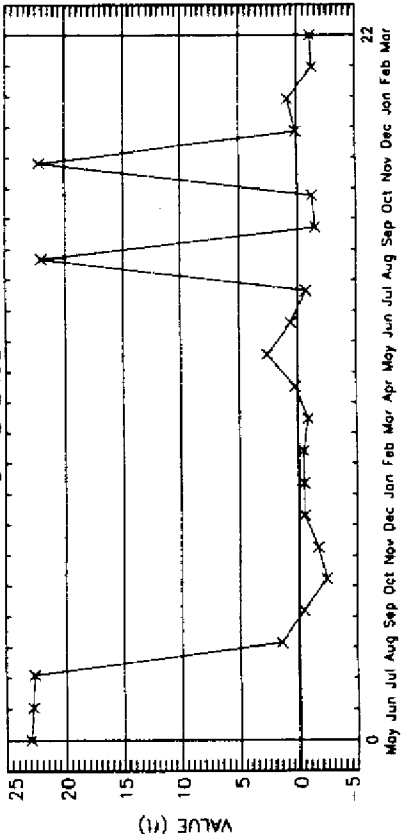




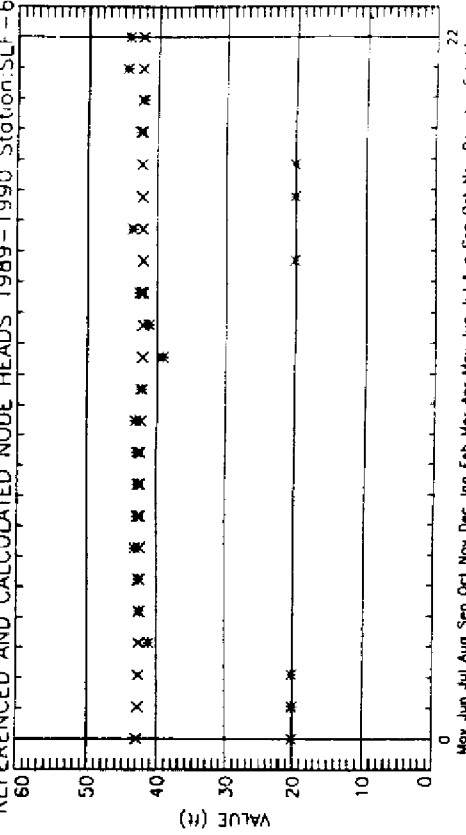
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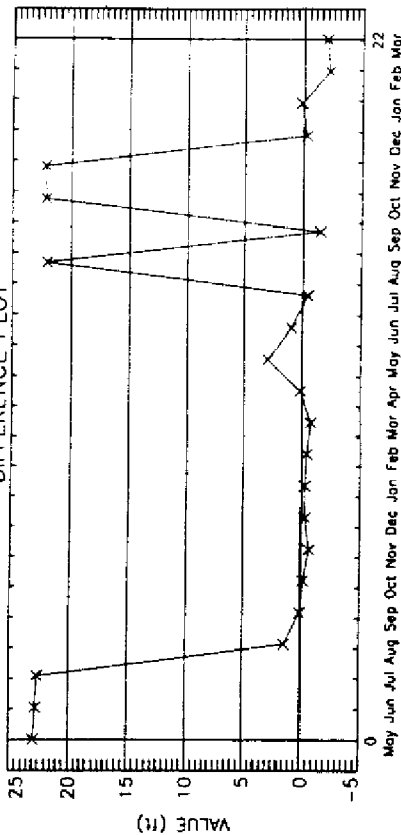
DIFFERENCE PLOT



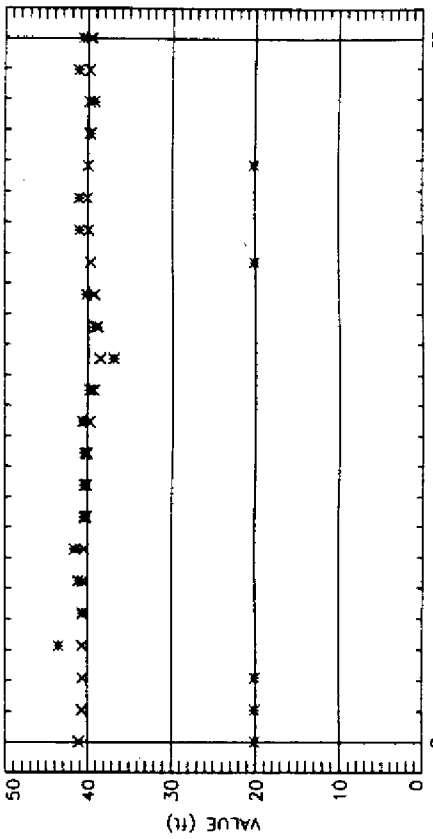
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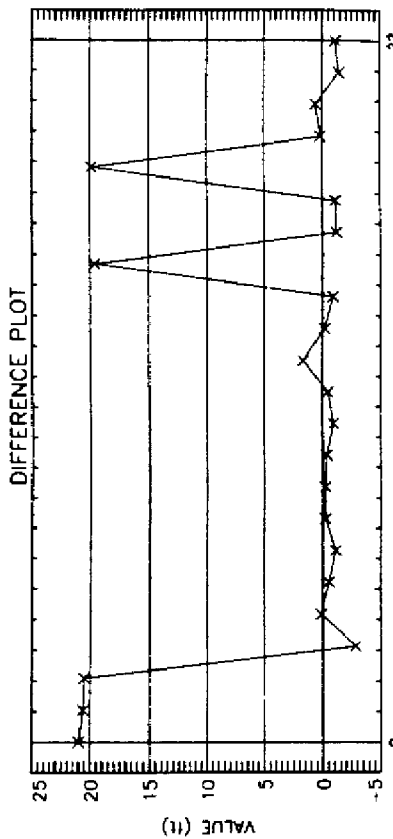
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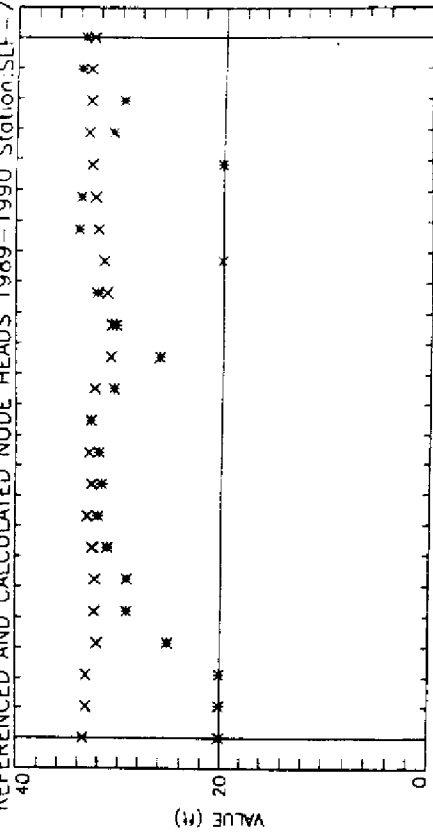
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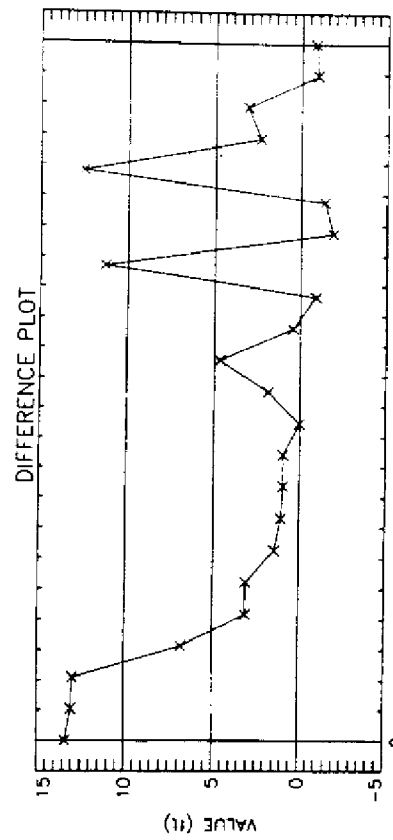
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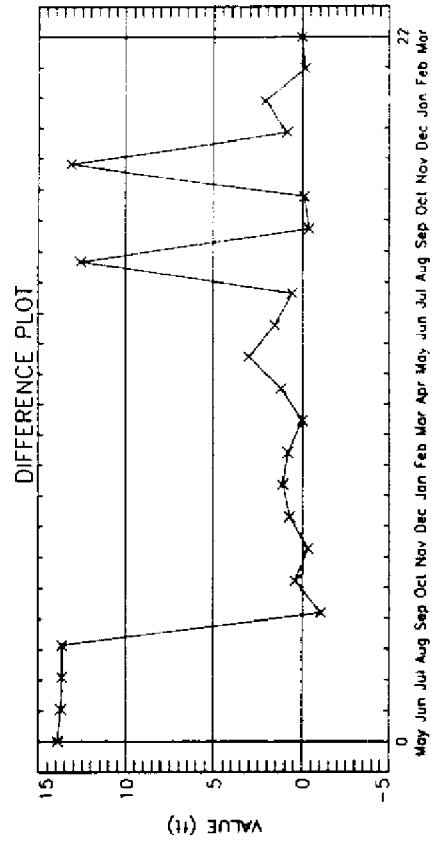
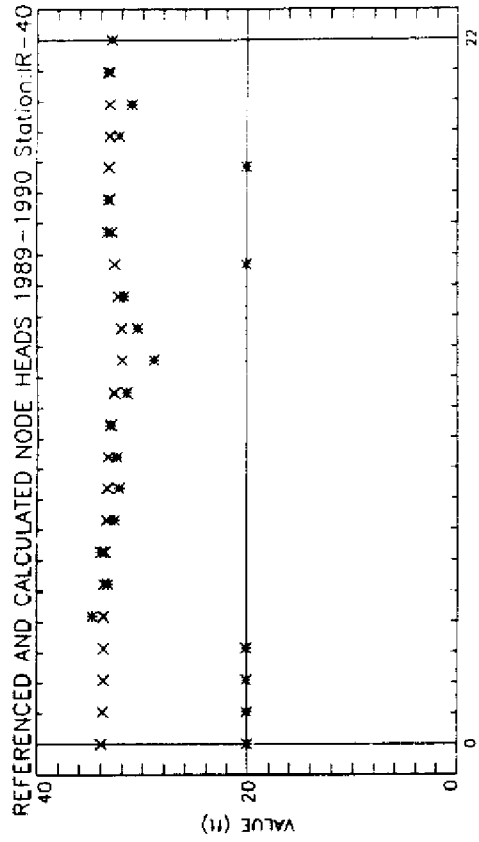
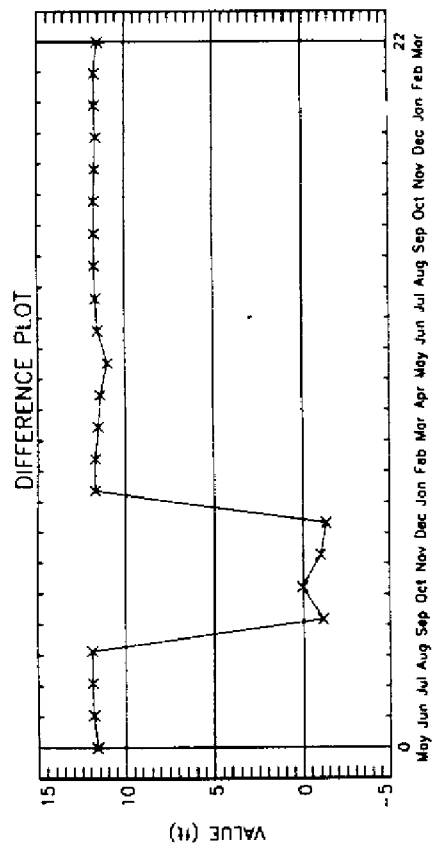
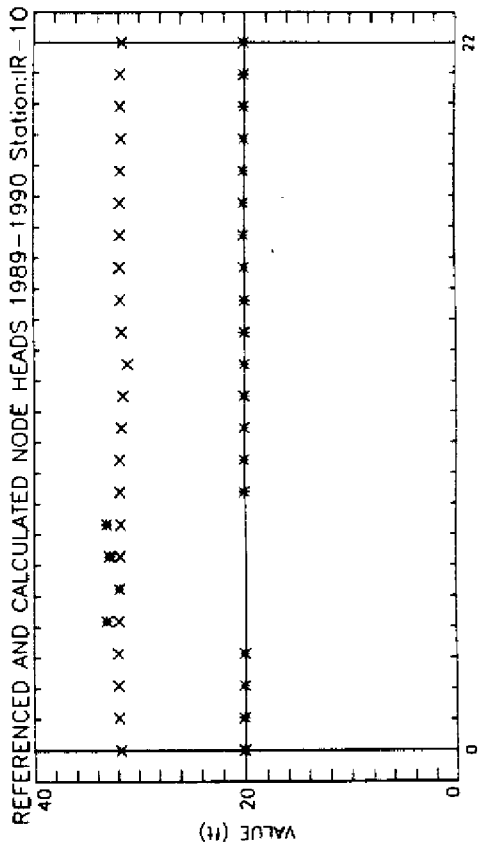


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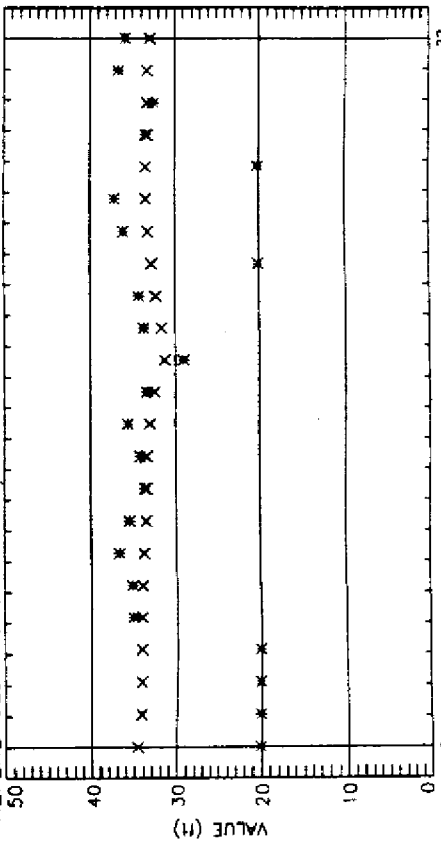


DIFFERENCE PLOT

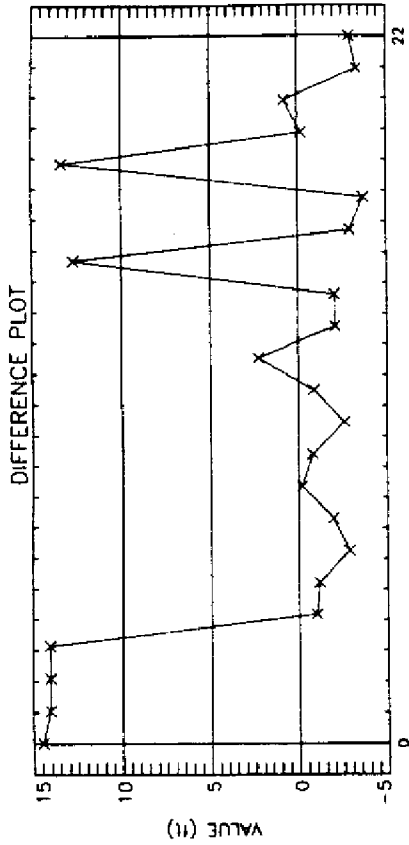




REFERENCED AND CALCULATED NODE HEADS 1989-1990 Station:IR-312

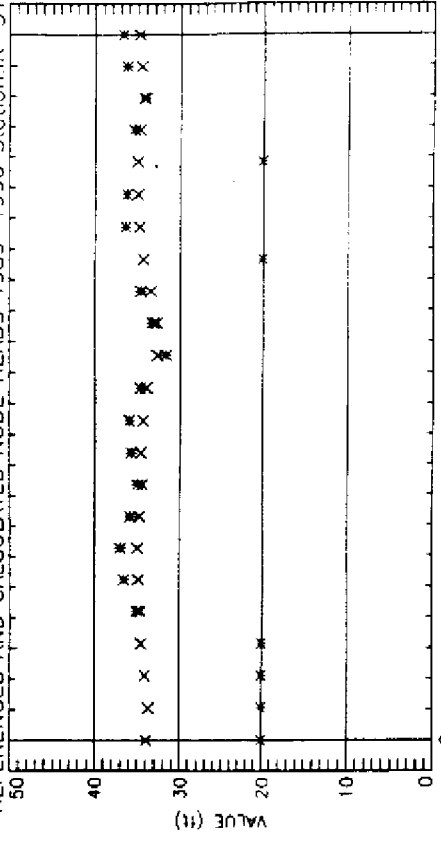


Layer 2 Row 7 Column 27 NOTE: Observed * Calculated x

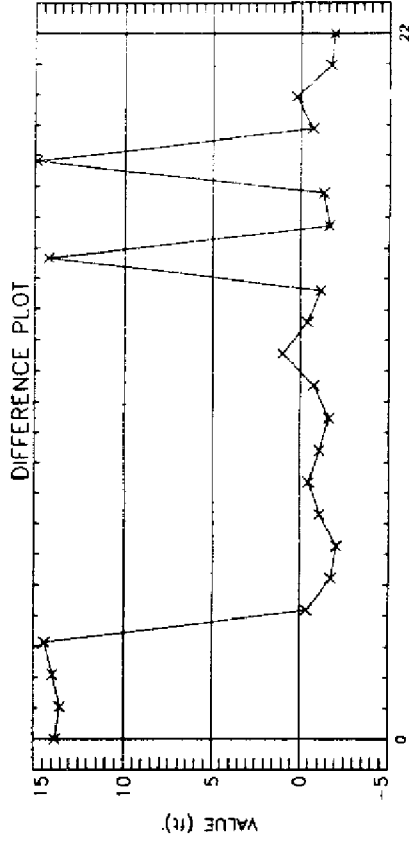


Layer 2 Row 7 Column 27 NOTE: Observed * Calculated x

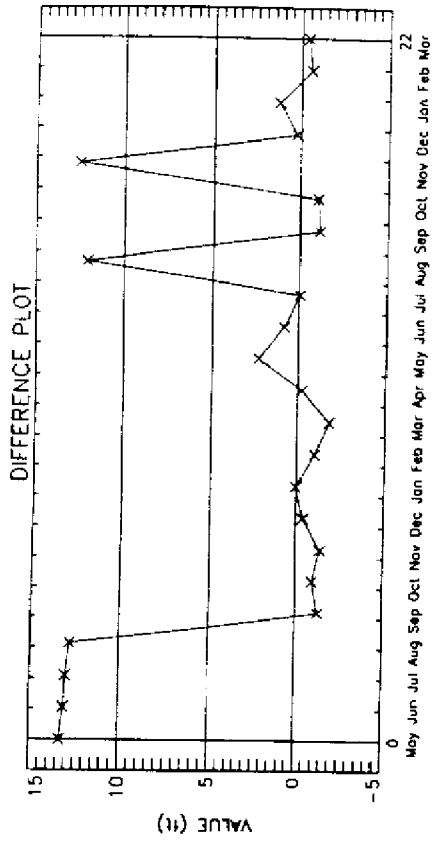
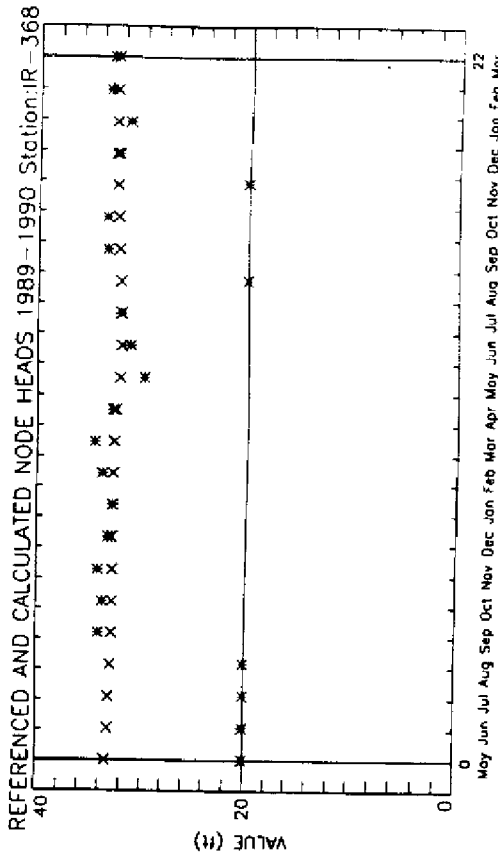
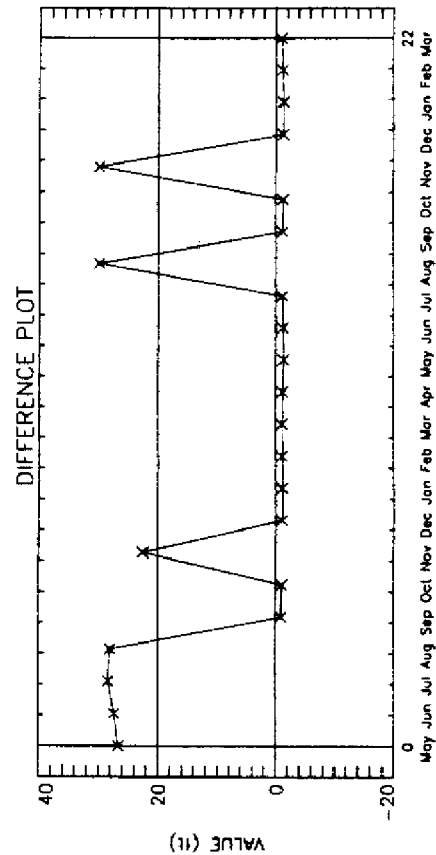
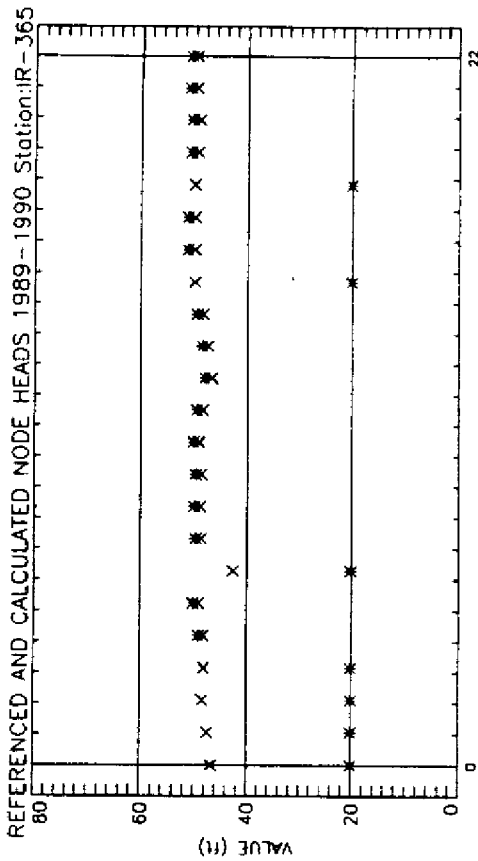
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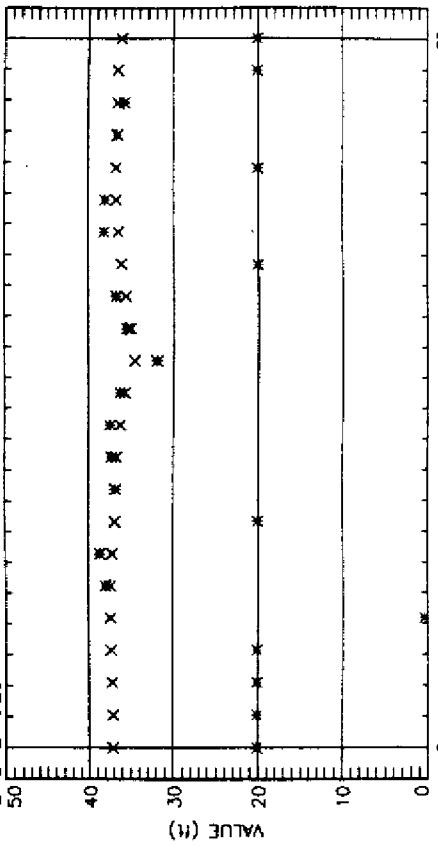
Layer 2 Row 2 Column 27 NOTE: Observed * Calculated x



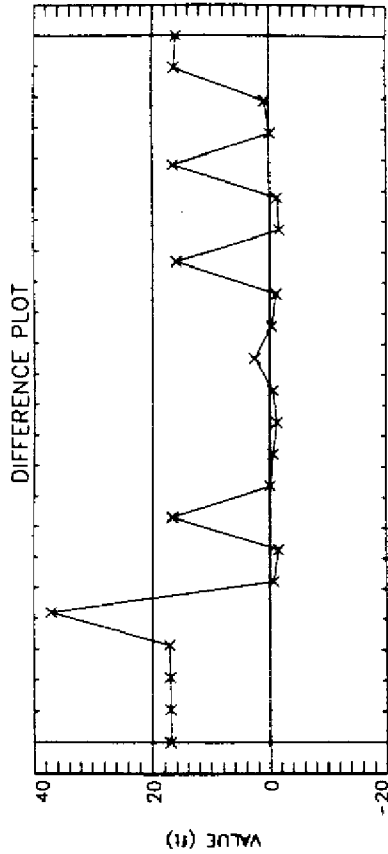
Layer 2 Row 2 Column 27 NOTE: Observed * Calculated x



REFERENCED AND CALCULATED NODE HEADS 1989-1990 Station:IR-370

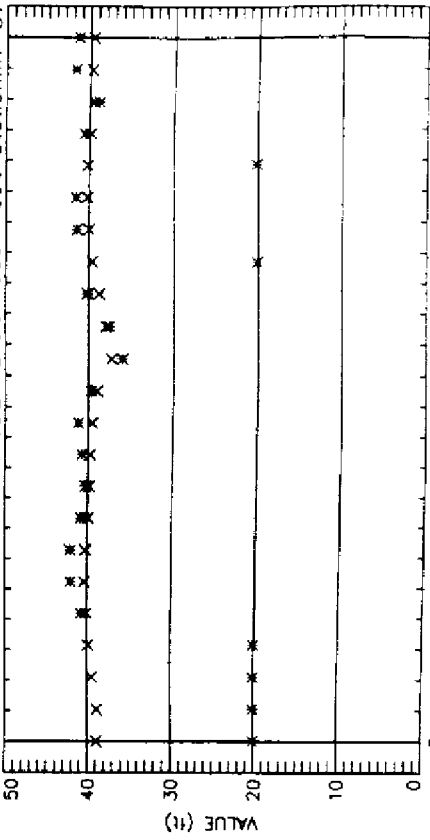


Layer 2 Row 7 Column 19 NOTE: Observed * Calculated x

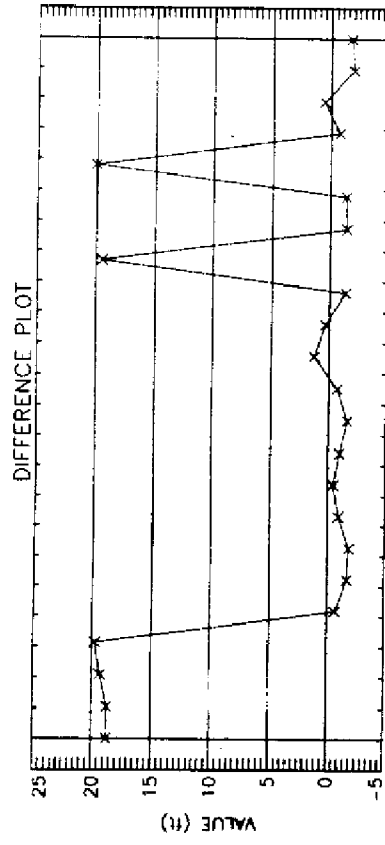


Layer 2 Row 7 Column 19 NOTE: Observed * Calculated x

REFERENCED AND CALCULATED NODE HEADS 1989-1990 Station:IR-373



Layer 2 Row 3 Column 14 NOTE: Observed * Calculated x



Layer 2 Row 3 Column 14 NOTE: Observed * Calculated x

APPENDIX F
QUESTIONNAIRE RESULTS

APPENDIX F
INTRODUCTION

The following questionnaire was mailed in May 1990 to 360 FAS permittees in the UECPA. The amount returned was 130, a 36 percent return rate. The answers to each question were entered into a software database program named DBASE and the percentage of each type answer was calculated. Answers to Section 2 were used to compute an average number of hours wells were allowed to flow freely for each month in 1989 and 1990. The results are listed in Table 4 of the main report.

QUESTIONNAIRE

SECTION 2 WATER USE HABITS

- 1) Check each water source used routinely for irrigation.

19% : Surface
31% : Flowing wells
02% : Water Table wells
50% : Combination of Surface and Flowing wells
00% : Other. Please explain below.

- 2) Check the water source used for frost protection.

14% : Surface
24% : Flowing wells
02% : Water Table wells
60% : Combination of Surface and Flowing wells
00% : Other. Please explain below.

- 3) Indicate your PRESENT reliance on each of the water sources listed below in percentage during normal yearly irrigation practices (eg. 70% Flowing Wells, 20% Surface Water, 10% Water Table from pumps).

PERCENT	Water Source
<u>44%</u>	FLOWING WELLS (FLORIDAN AQUIFER SYSTEM)
<u>54%</u>	SURFACE WATER BODIES (EG. CANALS, RESERVOIR, ETC.)
<u>02%</u>	WATER TABLE AQUIFER (SHALLOW WELLS LESS THAN 200', PUMPED NOT FLOWING NATURALLY)
<u>00%</u>	OTHER. PLEASE EXPLAIN OTHER WATER SOURCE BELOW.

- 4) Would you say the purpose of the Floridan wells on your property can be summed up as simply insurance water supply in the event of a drought or a freeze ?

55% Yes 45% No

The following Section 2 was used to estimate the average hours a Floridan Aquifer System well was allowed to flow freely in each month of the calibration period.

SECTION 2 (continued)

3) During an average, typical year for your Flowing wells ONLY (Floridan Aquifer Wells), please check the months they are used. Indicate number of days used in each month, number of hours in each day and the volume of water per month. We are looking for approximate use and seasonal patterns, not exact figures.

<u>CHECK MONTH</u>	<u># DAYS/ MONTH</u>	<u>Average # HOURS each DAY</u>	<u>VOLUME (Gallons) Applied for MONTH</u>
_____ January	_____ Days	_____ Hrs.	Jan. _____
_____ February	_____	_____	Feb. _____
_____ March	_____	_____	March _____
_____ April	_____	_____	April _____
_____ May	_____	_____	May _____
_____ June	_____	_____	June _____
_____ July	_____	_____	July _____
_____ August	_____	_____	Aug. _____
_____ September	_____	_____	Sept. _____
_____ October	_____	_____	Oct. _____
_____ November	_____	_____	Nov. _____
_____ December	_____	_____	Dec. _____

4) During the course of 1989-90, for your Flowing wells only Please check the months they were used. Fill in Days and Hours as above. Here we are asking for 1989 water use, conversely in #2 above we are asking for an average, typical year. The purpose of this question is to compare our water levels from our monitor wells this year with exact water use patterns for the year 1989.

<u>CHECK MONTH</u>	<u># DAYS/ MONTH</u>	<u>Average # HOURS each DAY</u>	<u>VOLUME (Gallons) Applied for MONTH</u>
1989 _____ January	_____ Days	_____ Hrs.	Jan. _____
_____ February	_____	_____	Feb. _____
_____ March	_____	_____	March _____
_____ April	_____	_____	April _____
_____ May	_____	_____	May _____
_____ June	_____	_____	June _____
_____ July	_____	_____	July _____
_____ August	_____	_____	Aug. _____
_____ September	_____	_____	Sept. _____
_____ October	_____	_____	Oct. _____
_____ November	_____	_____	Nov. _____
_____ December	_____	_____	Dec. _____

1990

_____	January	_____	Days	_____	Hrs.	Jan.	_____
_____	February	_____		_____		Feb.	_____
_____	March	_____		_____		March	_____

Briefly describe how the flowing wells are used for freeze protection. Are the wells opened continuously and for how long before and after a frost warning?

Typical year: _____

The average response was:

57 Hours before a freeze

10 Hours after a freeze

1989: December 24, 1989 and Feb 2, 1990.

SECTION 3
WATER QUALITY AND QUANTITY

1) Over the course of time has the quality (saltiness) of water from your flowing wells :

- 02% IMPROVED
- 13% DETERIORATED
- 85% REMAINED THE SAME

How many years have the wells been in use ?

25.5 years

2) Since you have been using the FLOWING WELLS, what have you observed about the flow pressure (water quantity) ?

24% The amount of water naturally flowing now is less than the flow I used to get.

0% I now get more flow than before.

76% I have not observed any change in the amount of flow.

If you checked the first choice above, in your opinion is the decrease of flow attributed to the aging well condition OR is it due to less water pressure currently available in the aquifer.

54% : less pressure in the aquifer system.

46% : Aging, corroded pipe and possible cavings downhole.

3) Over the course of the last few years has your reliance on flowing wells :

- 12% Increased
- 43% Decreased
- 45% Remained the same