**Technical Publication 90-02** 

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# APPLICATION OF DRASTIC GROUND WATER POLLUTION MAPPING METHODOLOGY TO THE SFWMD

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# **Technical Publication 90-02**

# Application of Drastic Ground Water Pollution Mapping Methodology to the SFWMD

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by

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#### ABSTRACT

The South Florida Water Management District (SFWMD) applied the DRASTIC methodology for determining ground water pollution potential to the two most extensive aquifer systems present within the SFWMD: the Surficial Aquifer System (including the Biscayne Aquifer) and the Floridan Aquifer System. This application of the DRASTIC process involved three major procedures: 1) a detailed literature search, 2) the designation of mappable units, termed hydrogeologic settings, and 3) the superposition of a relative rating system termed DRASTIC. This publication documents and presents the results of the specific procedures used to map pollution potential within the SFWMD. A brief explanation of the DRASTIC methodology is also included to aid the user in interpreting and applying the DRASTIC pollution potential maps.

The primary products of DRASTIC are county-wide color maps that are divided into polygons denoting ground water pollution potential. These polygons are labeled with hydrogeologic setting codes and assigned DRASTIC indices and colors based on the potential for ground water pollution. Twenty-two DRASTIC maps have been generated for the two aquifer systems.

DRASTIC maps generated for the Surficial Aquifer System show that the pollution potential throughout the SFWMD is high. The greatest pollution potential (highest DRASTIC indices) was present in the southern portion of the SFWMD in Dade, Broward, Monroe and Collier counties. Pollution potential is high throughout the SFWMD due to shallow depth to water, high recharge, aquifer media that are not conducive to degrading contaminants, and flat topography.

Maps generated for the Floridan Aquifer System show that the DRASTIC indices are significantly lower than the indices for the Surficial Aquifer System. The greatest pollution potential for the Floridan Aquifer System is present in the ridge areas of Polk, Osceola and Orange counties. These areas of increased pollution potential correspond with areas of high recharge.

**Keywords.** DRASTIC, water quality, pollution potential, depth to water, net recharge, aquifer media, soil media, topography, impact of the vadose (unsaturated) zone media, and hydraulic conductivity.

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The author also expresses thanks to Mrs. Tracey Slater who contributed valuable assistance to the preparation of the DRASTIC Plates. Mrs. Slater and Mr. Edward Arnold assisted in the actual DRASTIC mapping. The SFWMD's Geographic Sciences Division manipulated the individual DRASTIC layers to produce the DRASTIC polygons and indices. The SFWMD's Graphic Communications Division produced the multi-colored DRASTIC maps shown on Plates 1-22.

#### EXECUTIVE SUMMARY

DRASTIC is a methodology developed by the National Water Well Association (NWWA) for the U. S. Environmental Protection Agency in order to systematically evaluate the ground water pollution potential throughout the country. Within the state of Florida, the five Water Management Districts were delegated the responsibility of mapping the ground water pollution potential. This publication accomplishes two major objectives related to the DRASTIC ground water pollution potential mapping. The first major objective was to provide a fundamental knowledge of the development, application and interpretation of the DRASTIC mapping methodology. The second major objective was to present the results and specific methodologies used to map the DRASTIC pollution potential within the South Florida Water Management District (SFWMD).

The methodology has been incorporated into a standardized system that can be readily displayed on maps using existing information. Seven factors that affect the ground water pollution potential are utilized to delineate areas of common pollution potential into "DRASTIC polygons". These factors are: Depth to water, net Recharge, Aquifer media, Soil media, Topography or slope, Impact of the vadose (unsaturated) zone media, and hydraulic Conductivity of the aquifer.

A ranking system of ranges, ratings, and weights is used to assign a numerical index to each DRASTIC polygon. When mapping an area, the appropriate range for each individual parameter is determined. The corresponding ratings for these individual parameters are then determined, and multiplied by the weight to arrive at a value for that parameter. The products are then summed to determine the DRASTIC index. The higher the DRASTIC index, the more susceptible an area is to ground water contamination. Therefore, the DRASTIC index provides a relative value for the pollution potential for ground water contamination. This value is useful for comparison from one area to another, but is not designed to provide absolute answers as to whether or not ground water contamination will occur.

The methodology is designed to evaluate ground water pollution potential from a regional perspective and should be applied only to areas 100 acres in size or larger. It is neither designed nor intended to replace site specific studies, or on-site inspections. DRASTIC does not evaluate surface water pollution potential, and should not be compared with the surface water evaluations such as Surface Water Improvement and Management Plans. DRASTIC was developed using four major assumptions:

- 1) The contaminant is introduced at land surface.
- 2) The contaminant is flushed into the ground water by precipitation.
- 3) The contaminant has the mobility of water.
- 4) The area to be evaluated by DRASTIC is 100 acres in size or larger.

These assumptions limit the ability of DRASTIC to accurately estimate the ground water pollution potential in all situations. For instance DRASTIC was not intended to take into account the pollution potential from surface water/ground water interactions. Surface water features such as rock pits, sinkholes, and canals can offer direct conduits for contaminants to enter an aquifer without any attenuation occurring. Underground storage tanks and septic tanks are widespread potential sources of contamination. DRASTIC is not designed to assess the contamination potential from these sources. DRASTIC evaluates the pollution potential only from a hydrogeologic perspective: it does not consider land use or the existence of a contaminant source.

The DRASTIC mapping procedure involved using <u>existing</u> <u>information</u> to map the ranges of the seven DRASTIC parameters individually. The sixteen counties within the SFWMD were mapped for the Surficial Aquifer System (includes the Biscayne Aquifer). The pollution potential for the Floridan Aquifer System was mapped only in Glades, Highlands, Okeechobee, Orange, Osceola and Polk counties. The Floridan Aquifer System was not mapped throughout the rest of the SFWMD due to the relatively poor quality water that naturally occurs within the aquifer system, and the presence of an extremely thick sequence of confining layers above the aquifer system.

Twenty-two color coded DRASTIC maps were produced utilizing the National DRASTIC color code scheme suggested by the NWWA. In this color code scheme, the hottest colors correspond with the highest indices; therefore, the "hotter" the color the higher the pollution potential. The maps are also labeled with the hydrogeologic setting code that is suggested by the NWWA.

The hydrogeologic setting code is attached to all polygons and identifies the ground water region and subdivision where the polygon is located, as well as the DRASTIC index and the polygon number. The polygon number (the two or three digit code in the middle of the hydrogeologic setting code) allows for correlation with the DRASTIC Index Charts located in the appendices. These charts provide the values for each individual parameter that was used to arrive at the DRASTIC index for the polygon. The reader is able to determine the depth to water range, the net recharge value, etc., for every polygon that has been mapped. The DRASTIC mapping indicates that the pollution potential for the Surficial Aquifer System within the SFWMD is high compared with the pollution potential throughout the nation. The pollution potential within the SFWMD is especially high in the southernmost counties; Dade, Broward, Collier, and southern Palm Beach counties. The high pollution potential is the result of a shallow depth to water, high recharge, aquifer and soil media that do not attenuate contaminants readily, a flat topography, and high hydraulic conductivity.

Pollution potential for the Floridan Aquifer System is substantially lower than for the Surficial Aquifer System. The ridge areas have the highest pollution potential for the Floridan Aquifer System. These areas are the major recharge areas for the Floridan Aquifer System within the SFWMD.

An example of the possible uses of DRASTIC is illustrated by the combination of DRASTIC information and land use database information to identify areas which have a high potential for ground water contamination from both land use and hydrogeologic perspectives. The SFWMD used this approach to select sites that will be studied to determine the impact of land use upon ground water quality. More detailed surveys will be necessary to verify the ground water pollution potential at these sites.

Other potential uses where DRASTIC can provide assistance are as follows:

1. To assist SFWMD and local government planners, managers and administrators in evaluating the relative vulnerability of areas to ground water contamination from various sources of pollution.

2. To prioritize the allocation of resources to current and future land use activities, including the siting of wellfields, to appropriate areas.

3. To prioritize protection, monitoring, and/or ground water clean-up efforts.

4. To catalog existing information that has been collected for the individual DRASTIC parameters (e.g., depth to water), and assist in the location and verification of information that is required for permits.

5. To assist in the development, review, and/or modification of land use plans.

Conditions within south Florida limit the usefulness of the DRASTIC maps. Throughout large areas of south Florida there is little or no variation in the DRASTIC parameters. These areas are characterized by large DRASTIC polygons, and little variation in indices between adjacent polygons. This lack of variation (especially for topography, depth to water, net recharge, and aquifer media) reduces the value of the DRASTIC maps. It is difficult to use DRASTIC indices and ratings to prioritize resources when there is so little variation in the DRASTIC parameters within a region.

The accuracy of the DRASTIC information is also dependant upon the quality of the existing data for each of the seven parameters. Anthropogenic influences such as modifying the depth to water, removing soils, depositing fill material, modifying the slope, and/or influencing recharge can all change the potential for contamination.

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#### INTRODUCTION

DRASTIC is a methodology developed by the National Water Well Association (NWWA) under the management of the U.S. Environmental Protection Agency (EPA) Office of Research and Development (Aller et al., 1987). It permits the systematic evaluation of the ground water pollution potential throughout the United States utilizing existing information. Pollution potential is determined from a combination of hydrogeologic factors, anthropogenic influences, and contamination sources within a given area. The DRASTIC methodology addresses only the hydrogeologic factors influencing ground water pollution potential. It does not take into account the effect that land use has on pollution potential.

The acronym "DRASTIC" is composed of the first letters of the names of seven mappable hydrogeologic parameters which affect ground water pollution potential. These parameters are: Depth to water, net Recharge, Aquifer media, Soil media, Topography or slope, Impact of the vadose (unsaturated) zone media, and <u>Conductivity</u> (hydraulic) of the aquifer. The parameters are rated and mathematically combined in order to produce a relative index which is used to generate color coded maps delineating ground water pollution potential.

The concepts inherent in the methodology were developed assuming a contaminant with the mobility of water, introduced at land surface, and flushed into the ground water by precipitation. The methodology is designed to evaluate ground water pollution potential from a regional perspective and should be applied only to areas 100 acres in size or larger. It is neither designed nor intended to replace site specific studies, or on-site inspections.

Information for DRASTIC parameters is generally available from a variety of sources. The procedures used to map DRASTIC within the SFWMD involved using existing published information, whenever possible, to map each of the seven individual DRASTIC parameters. A detailed literature search was conducted during the DRASTIC mapping process (Table 1). The specific information that was used to generate the DRASTIC maps has been documented and is listed in the attached bibliography. The bibliography is arranged so that the reader can determine the source of information for every parameter county mapped. within each For locations where published information was not available, knowledgeable experts were contacted and estimates of the DRASTIC parameters were determined.

TABLE 1. SOURCES OF DRASTIC INFORMATION

#### PARAMETER SOURCES OF INFORMATION

DEPTH TO WATER SURFICIAL AQUIFER SYSTEM - PUBLISHED WATER TABLE ELEVATION MAPS, WATER LEVEL INFORMATION AT INDIVIDUAL WELLS, ESTIMATION OF WATER LEVEL BASED ON SOIL TYPES. FLORIDAN AQUIFER SYSTEM - DEPTH TO THE TOP OF THE AQUIFER WAS USED (DETERMINED FROM PUBLISHED U.S. GEOLOGICAL SURVEY INFORMATION)

- NET RECHARGE SURFICIAL AQUIFER SYSTEM 10+ INCHES OF RECHARGE PER YEAR WAS USED FOR ALL COUNTIES. VALUE WAS ESTIMATED AFTER CONSULTATION WITH AUTHORS OF DRASTIC AND CONSIDERATION OF RAINFALL, DEPTH TO WATER, AND PERMEABILITY OF SOILS/AQUIFER. FLORIDAN AQUIFER SYSTEM - PUBLISHED U.S GEOLOGICAL SURVEY INFORMATION
- AQUIFER MEDIA PUBLISHED INFORMATION FROM THE FLORIDA DEPARTMENT OF NATURAL RESOURCES; BUREAU OF GEOLOGY.
- SOIL MEDIA PUBLISHED INFORMATION FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.

TOPOGRAPHY U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAPS

IMPACT OF THE DETERMINED FROM DEPTH TO WATER, SOIL MEDIA, VADOSE ZONE AND AQUIFER MEDIA.

HYDRAULICPUBLISHEDINFORMATIONFROMTHEU.S.CONDUCTIVITYGEOLOGICAL SURVEY AND THE SOUTH FLORIDA WATER<br/>MANAGEMENT DISTRICT, ORAL COMMUNICATIONS WITH<br/>SOUTH FLORIDA WATER MANAGEMENT DISTRICT<br/>PERSONNEL.

#### PURPOSE AND SCOPE

Population growth and increased agricultural production within the state of Florida have increased the demand for ground water resources. At the same time the potential for contamination of these ground water resources has increased for the same reasons. The DRASTIC methodology developed by the NWWA provides a method of evaluating the susceptibility of ground water to contaminants introduced at the land surface.

This technical publication documents the development and interpretation of DRASTIC pollution potential maps in order to enhance ground water resource protection strategies within the SFWMD. It also documents the methodology and source material used to generate these maps. Sections of this technical publication, out of necessity, borrow heavily from Aller et al., 1987. The DRASTIC technical publication will be distributed internally within the SFWMD, to other state agencies, and, under the local government assistance umbrella, to all counties located within the SFWMD.

The SFWMD has been working in cooperation with the Florida Department of Environmental Regulation (FDER), under the Water Quality Assurance Act (WQAA) program. The WQAA was passed in 1983 by the State of Florida and the FDER was given the responsibility for its implementation. The state-wide DRASTIC ground water pollution potential mapping is one example of the cooperative work conducted by the FDER and the Water Management Districts as part of the WQAA.

#### DEVELOPMENT OF THE DRASTIC METHODOLOGY

The DRASTIC methodology was developed to map the ground water pollution potential of any area of the United States. The system has two major components: 1) the designation of mappable units termed hydrogeologic settings and, 2) the application of a relative ranking system termed DRASTIC, which evaluates the relative ground water pollution potential of any hydrogeologic setting (Aller et al., 1987).

#### HYDROGEOLOGIC SETTINGS

DRASTIC was developed using the concept of hydrogeologic settings. A hydrogeologic setting is a composite description of major geologic and hydrologic factors which affect and control ground water movement into, through, and out of an area. It is mappable unit with common hydrogeologic defined as а characteristics, and as a consequence, common vulnerability to pollutants. contamination by introduced From these common it possible to make hydrogeologic characteristics is generalizations regarding both ground water availability and pollution potential.

In order to assist in the classification of hydrogeologic settings, the DRASTIC methodology has been developed within the framework of an existing classification system of ground water regions within the United states. Heath (1984) divided the United States into 15 ground water regions based on the features in these regions affecting the occurrence and availability of ground water.

The state of Florida falls in the region designated by Heath (1984) as Region 11, the Southeast Coastal Plain. Within the Southeast Coastal Plain there are four major subdivisions which include:

- 11A) Solution Limestone,
- 11B) Coastal Deposits,
- 11C) Swamp, and a
- 11D) Beaches and Bars.

The following descriptions of the four major subdivisions of the Southeast Coastal Plain are taken from Heath, 1984:

Hydrogeologic setting 11A, Solution Limestone, is characterized by low to moderate topographic relief and deposits of limestone that have been partially dissolved to form a network of solution cavities and caves. Surficial deposits, where present, typically consist of sands which may serve as localized aquifers. However, the underlying limestone typically serves as the predominant aquifer due to the high yields. Precipitation in this region is abundant and the overlying surficial sands often serve as an important recharge source to the limestone aquifer.

Hydrogeologic setting 11B, Coastal Deposits, is characterized by flat topography and unconsolidated deposits of carbonate, sand, gravel, clay and shell beds which overlie semi-consolidated carbonate rocks. The surficial deposits serve as direct sources of ground water and also serve as recharge for the underlying carbonate rocks where the hydraulic gradient is downward. The carbonates serve as a source of ground water but may contain saline water in some areas. Precipitation is abundant and recharge is high. Water levels are typically close to the land surface.

Hydrogeologic setting 11C, Swamp, is characterized by flat topographic relief, very high water levels and deposits of limestone that have been partially dissolved to form a network of solution cavities. Soils are typically sandy and recharge is usually high due to abundant precipitation. The limestone commonly serves as the major regional aquifer. In some areas these swamps serve as discharge areas. Water levels are characteristically at or above land surface during most of the year. Hydrogeologic setting 11D, Beaches and Bars, is characterized by moderate to flat topographic relief and unconsolidated deposits of water-washed sands. These sands are well sorted and very permeable, and may serve as localized sources of ground water. They also serve as a source of recharge to the underlying unconsolidated coastal deposits. Precipitation is abundant and recharge is high. Water levels may vary but are typically close to land surface.

#### DRASTIC

Inherent in each hydrogeologic setting are the physical characteristics that affect the ground water pollution potential. While developing DRASTIC, the NWWA gathered a panel of 37 "Prominent individuals with ground water expertise" (Aller et al., 1987) that provided guidance and direction for selecting the DRASTIC methodology. This panel considered a wide range of technical characteristics that affect the ground water pollution potential (Aller et al., 1987). They determined that the most important mappable characteristics that affect pollution potential were:

- D Depth to water
- R (Net) <u>R</u>echarge
- A <u>A</u>quifer Media
- S <u>S</u>oil Media
- $T \overline{T}$ opography
- I Impact of the Vadose (Unsaturated) Zone Media
- C Conductivity (Hydraulic) of the Aquifer

The DRASTIC parameters represent mappable attributes for which data is generally available from a variety of sources.

A numerical ranking system to assess ground water pollution potential within hydrogeologic settings has been devised using the DRASTIC parameters. This system contains three significant parts: weights, ranges and ratings. A detailed description of the technique used for weights and ratings can be found in Dee et al., (1973).

Weights. In developing DRASTIC the NWWA panel evaluated each DRASTIC parameter with respect to the other six parameters in order to determine relative importance, and then assigned a weight ranging from one to five. The most significant factors were assigned a weight of five and the least significant were assigned a weight of one. These weights are constant throughout the nation and may not be changed. The assigned weights for DRASTIC parameters are shown in Table 2.

FEATURE	WEIGHT
DEPTH TO WATER	5
NET RECHARGE	4
AQUIFER MEDIA	3
SOIL MEDIA	2
TOPOGRAPHY	1
IMPACT OF THE VADOSE ZONE MEDIA	5
HYDRAULIC CONDUCTIVITY	3
	•

Ranges. The NWWA panel divided each DRASTIC parameter into either ranges or significant media types that relate the influence of the specific parameter. For example, depth to water and net recharge are described in units of feet and inches, respectively. Other parameters such as soil media and aquifer media are described in geologic terms such as sandy loam and karst limestone, respectively. The ranges and media types utilized by each parameter are shown in Tables 3 through 9.

Ratings. The NWWA panel evaluated the range or media type for each DRASTIC parameter with respect to all other ranges or media types for that parameter. The relative significance of each range or media type, with respect to pollution potential, was determined from the evaluation. The range or media type for each DRASTIC parameter was than assigned a rating which varies from 1-10 (Tables 3 through 9). Parameters D, R, S, T, and C were assigned one value per range. Parameters A and I were assigned variable ratings along with a typical rating. The variable ratings allowed for the adjustment of the value(s) based on more detailed information. DRASTIC Index. DRASTIC allows for the determination of a numerical value for any hydrogeologic setting using an additive model. This value is termed the DRASTIC index. The equation for determining the DRASTIC index is:

DRASTIC Index = DrDw+RrRw+ArAw+SrSw+TrTw+IrIw+CrCw = Pollution Potential

Where: r = rating w = weight

- D Depth to water
- R (Net) Recharge
- A Aquifer Media
- S <u>S</u>oil Media
- T Topography
- I Impact of the Vadose (Unsaturated) Zone Media
- C Conductivity (Hydraulic) of the Aquifer

The mapping of the seven DRASTIC parameters involves subdividing the hydrogeologic settings into "DRASTIC polygons" of one hundred acres in size or greater. A hydrogeologic setting, such as coastal deposits, may cover an extremely large area that is relatively homogeneous. However, there may be variations within this large area. For example, the depth to water may range from 0-5 ft. in the north to 5-15 in the middle to 15-30 in the south. There may be variations within the other DRASTIC variables which further subdivide the hydrogeologic setting. For ease of reference these smaller subdivisions have been labeled DRASTIC polygons.

DRASTIC polygons were formed by overlaying the information for each of the seven DRASTIC layers. The intersections of the lines, delineating the various ratings for these individual parameters, forms the outline of the DRASTIC polygon. All polygons are labeled with a code, termed a hydrogeologic setting code. This code can be used to locate the DRASTIC Index Chart, listed in the attached appendices, that corresponds with the polygon. From the DRASTIC Index chart the reader is able to determine detailed information regarding the polygon. This information includes the ranges, media types, ratings and weights for all seven DRASTIC parameters within the polygon.

The DRASTIC index (the last set of numbers in the hydrogeologic setting code) identifies those polygons which are more likely to be susceptible to ground water contamination relative to other areas. The higher the DRASTIC index the greater the potential for ground water contamination.

#### ASSUMPTIONS OF DRASTIC

The DRASTIC methodology was developed by utilizing four major assumptions:

- 1) the contaminant is introduced at land surface;
- the contaminant is flushed to the ground water by precipitation;
- 3) the contaminant has the mobility of water; and
- 4) the area to be evaluated by DRASTIC is 100 acres in size or larger.

When deviations from these assumptions occur, there may be special conditions which would need to be more fully evaluated. For example, the methodology assumes that the contaminant will be introduced at the land surface, enter the soil, travel through the vadose (unsaturated) zone and enter the aquifer much like water. However, in the case where a contaminant is less mobile than water, or a contaminant is injected directly into the ground water, DRASTIC may overestimate or underestimate the pollution potential and not provide an accurate assessment.

The user of DRASTIC needs to exercise caution and consider special conditions when deviations from these assumptions occur. In addition DRASTIC was not designed to address several other factors that can have major influences on the susceptibility of ground water to contamination. Below are some of the factors that are not evaluated by DRASTIC:

- the ground water/surface water interface, including features such as sinkholes and rockpits;
- land use is not considered, although it is an important controlling factor that influences the probability that ground water may become contaminated;
- 3) some man-made changes are not considered, including the replacement of native soil with fill material;
- 4) management practices, especially in agricultural areas, are not taken into consideration. The alternate flooding and draining of fields can affect the potential for contamination of ground water. In some instances these management practices can mobilize and concentrate naturally occurring compounds to levels that are unsafe, i.e., selenium contamination in California.

#### DRASTIC: A DESCRIPTION OF THE PARAMETERS

Users of this publication will be able to properly utilize DRASTIC if they have a thorough knowledge of the criteria used to generate the DRASTIC data. To assist the reader in understanding these criteria, a description of each DRASTIC parameter is contained below. For a more detailed description of these parameters see Aller et al., (1987).

#### DEPTH TO WATER

Depth to water has a weight of five, and is important primarily because it determines the depth of unsaturated material through which a contaminant must travel before reaching the aquifer. Additionally, it may help to determine the contact time with the surrounding media (Aller et al., 1987). In general, there is a greater chance for attenuation to occur as the depth to water increases because the greater depth to water implies a longer time of travel prior to the contaminant reaching the aquifer.

Depth to water in unconfined aquifers is measured as the depth to the water table. The water table is the uppermost elevation where the openings within the soil or rock material are completely filled with water. For confined aquifers, as defined in this report, the depth to water was the depth from land surface to the top of the aquifer (base of the confining layer). Table 3 lists the ranges and corresponding ratings for the various depths to water.

TABLE 3.	RANGES	AND	RATINGS	FOR	DEPTH	TO	WATER
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#### DEPTH TO WATER (FEET)

RANGE	RATING
0-5	10
5-15	9
15-30	7
30-50	5
50-75	3
75-100	2
100+	1

#### WEIGHT 5

In this report, depth to water for the Surficial Aquifer System was determined by taking the difference of the land surface elevation and the elevation of the <u>wet</u> season water table. In counties where water table elevation maps were not available, the depth to water at existing control points (monitor wells) was used. Lake and canal stage information as well as topographic relief were also used to estimate the depth to water in areas with little or no data. The depth to water for the confined portion of the Floridan Aquifer System was determined by taking the difference of the land surface elevation and the elevation of the top of the aquifer.

The depth to water within the Surficial Aquifer System was close to land surface throughout the majority of the areas mapped (i.e., within five feet of land surface in the wet season), and was particularly high in the southern portion of the SFWMD. The ridge areas in the northern portion of the SFWMD were the only regions where the depth to water of the Surficial Aquifer System exceeded 15 feet in the wet season.

The depth to water (top of aquifer) for the Floridan Aquifer System was within 100 feet of land surface only in the extreme northern portion of the SFWMD, predominantly in the ridge areas of Orange, Osceola and Polk counties. In the southern portion of the SFWMD the Floridan Aquifer System is confined by a thick sequence of low permeability sediments, and therefore not mapped for pollution potential.

#### NET RECHARGE

Net recharge has a weight of four and represents the amount of water which infiltrates through the land surface and reaches the water table. The primary source of ground water recharge is precipitation, a percentage of which infiltrates through the land surface and percolates to the water table. This recharge water is available to serve as a mode of contaminant transport; both vertically to the water table and horizontally through the aquifer. The greater the recharge, the greater the potential for ground water contamination. The ranges and corresponding ratings for net recharge can be found in Table 4. TABLE 4. RANGES AND RATINGS FOR NET RECHARGE

NET RECHARGE (INCHES)

RANGE 0-2	RATING
2-4	3
4-7 7-10	6 8
10+	9
WEIG	HT.4

Detailed recharge information was not available for the Surficial Aquifer System within the SFWMD. It was agreed under the state-wide mapping effort (Meeting with FDER, Tallahassee, Florida, 19 August 1987.) to assign a recharge value for the Surficial Aquifer System of 10+ inches per year throughout the SFWMD. This assumption was agreed upon after considering the high rainfall within the SFWMD coupled with the shallow depth to water. The average annual rainfall within the SFWMD varies from nearly 48 inches per year in the north central portion, to more than 60 inches per year in the southeastern region (MacVicar, 1983).

Recharge information for the Floridan Aquifer System was estimated from published information from Phelps (1984) and Stewart (1980). Ratings were assigned according to the degree of recharge (e.g., no recharge - rating of 1; very low recharge - rating of 3; low to moderate recharge - ratings of 6 or 8; and high recharge ratings of 9).

#### AQUIFER MEDIA

"Aquifer media refers to the consolidated or unconsolidated material which serves as an aquifer (such as sand and gravel or limestone). An aquifer is defined as a subsurface stratum or zone which will yield sufficient quantities of water for use. Water is contained in aquifers within the pore spaces of granular and clastic rock and in the fractures and solution openings of nonclastic and non-granular rock" (Aller et al., 1987). The movement of water, and hence contaminants within the aquifer, is affected by the aquifer medium. The path a contaminant must travel is governed by the flow system within the aquifer. The path length, hydraulic conductivity and gradient are important in determining the retardation (delaying ability of the aquifer media) of the contaminant, and consequently the time available for attenuation to occur. The aquifer media determines the physical and chemical characteristics of the material which the contaminant is likely to come in contact with within the aquifer. The chemical composition (e.g., organic carbon content) of the aquifer media can have a significant affect on the attenuating capacity.

The route a contaminant will follow is strongly influenced by fracturing or by the interconnection of a series of solution openings which provide pathways of preferential flow. In general, aquifer media with larger grain size and/or increased fracture and/or solution opening density will yield higher permeabilities with correspondingly lower retarding/attenuating capacities.

For DRASTIC mapping purposes, the aquifer media have been designated by descriptive names (ranges). A complete list of these names can be found in Table 5, which also contains the ratings assigned to each media. Published information and personal communications listed in the attached bibliography were used to provide detailed descriptions of the aquifer media and to determine the ranges and subsequent ratings.

TABLE 5. RANGES AND RATINGS FOR AQUIFER MEDIA

#### AQUIFER MEDIA

RANGE	RATING	TYPICAL RATING
Massive Shale	1-3	2
Metamorphic/Igneous	2-5	3
Weathered Metamorphic/Igneous	3-5	4
Glacial Till	4-6	5
Bedded Sandstone, Limestone and		
Shale Sequences	5-9	6
Massive Sandstone	4-9	6
Massive Limestone	4-9	6
Sand and Gravel	4-9	8
Basalt	2-10	9
Karst Limestone	9-10	10

WEIGHT 3

Within Dade, Broward, and Palm Beach Counties, karst limestone was used to categorize the aquifer media of the Biscayne Aquifer, and most of the Surficial Aquifer System south and east of Lake Okeechobee. Sand and gravel was used to characterize the majority of the Surficial Aquifer System aquifer media north and west of Lake Okeechobee. Karst limestone was used to categorize the Floridan Aquifer System in all of the areas that were mapped. Variable ratings were used for these aquifer media types.

#### SOIL MEDIA

Soil media has a weight of two and refers to the uppermost portion of the vadose (unsaturated) zone that is characterized by increased biological activity. For purposes of this DRASTIC mapping, soil is considered the upper weathered zone of the earth which averages a depth of three feet or less from the ground surface. Soil has a significant impact on the amount of recharge that can infiltrate into the ground and hence on the ability of a contaminant to move vertically through the vadose zone. Attenuation processes such as filtration, biodegradation, sorption and volatilization that occur in the soil zone may be significant in affecting pollution potential.

In general the pollution potential of a soil is determined by the amount and type of clay present, the shrink/swell potential for that clay, and the grain size of the soil. Typically the less the clay shrinks and swells and the smaller the grain size, the less the pollution potential. The quantity of organic material present in the soil may also be an important factor. Soil media are best described by referring to the basic soil types as classified by the Soil Conservation Service. A list of the soil types, ranges and their ratings can be found in Table 6. For the confined portion of the Floridan Aquifer System soil media was assigned a rating of 1.

#### SOIL MEDIA

RANGE	RATING
Thin or Absent	10
Gravel	10
Sand	9
Peat	8
Shrinking and/or Aggregated Clay	7
Sandy Loam	6
Loam	5
Silty Loam	4
Clay Loam	3
Muck	2
Nonshrinking and Nonaggregated Clay	y 1

#### WEIGHT 2

Publications from the Soil Conservation Service of the U.S. Department of Agriculture (see bibliography) provided the information used to map soil media. Detailed descriptions from these publications were used to categorize the soil types into the appropriate DRASTIC soil media ranges. The DRASTIC soil media ranges were then outlined in the form of polygons and labeled on the General Soil Maps. The boundaries of these polygons match the soil type boundaries that had been mapped by the Soil Conservation Service. The DRASTIC soil media boundaries do not contain the same level of definition as the Soil Conservation Service publications. For instance, DRASTIC only maps the boundary of where fine sand occurs; it does not differentiate between a Myakka Fine Sand and an Immokalee Fine Sand.

Soil media is the most variable of all of the DRASTIC parameters mapped within the SFWMD, both in terms of overall ratings as well as areal changes. Thin or absent, sand, muck, and sandy loam were the most common soil media types that were found within the SFWMD.

#### TOPOGRAPHY

Topography has a weight of one and refers to the slope and slope variability of the land surface. Topography helps control the likelihood that a contaminant will run off or remain on the surface long enough to infiltrate. Table 7 contains the slope ranges and topography ratings that are considered significant relative to ground water pollution potential. The lower the slope, the greater the opportunity for infiltration to occur. This increases the potential for ground water contamination and results in a higher rating.

TABLE 7. RANGES AND RATINGS FOR TOPOGRAPHY

#### TOPOGRAPHY (PERCENT SLOPE)

RANGE	RATING
0-2	10
2-6	9
6-12	5
12-18	3
18+	1
61	<b>TTCUM 1</b>

WEIGHT 1

The ranges for topography were determined directly from the USGS topographic maps. South Florida has very little topographic relief, and approximately 95 percent of the SFWMD has a slope of less than 2 percent. The majority of the areas where the slope is greater than 2 percent were located in the ridge areas in the northern portion of the SFWMD. Some relict beach dunes in the southeast coast of the SFWMD also had slopes of greater than 2 percent. For the confined portion of the Floridan Aquifer System topography was assigned a rating of 1.

#### IMPACT OF THE VADOSE (UNSATURATED) ZONE MEDIA

Impact of the vadose (unsaturated) zone media has a weight of five. The vadose zone is defined as that zone above the water table which is unsaturated or is discontinuously saturated. The type of vadose zone media determines the attenuation and retardation characteristics of the material below the soil horizon and above the water table. Biodegradation, neutralization, mechanical filtration, chemical reaction, volatilization and dispersion are all processes which may occur in the vadose zone. The vadose zone media have been designated by descriptive names. These names and the ranges for impact of the vadose zone media are listed in Table 8 along with the corresponding ratings.

TABLE 8. RANGES AND RATINGS FOR IMPACT OF THE VADOSE ZONE MEDIA

RANGE	RATING	TYPICAL RATING
Confining Layer	1	1
Silt/Clay	2-6	-
Shale	2-5	3
Limestone	2-7	6
Sandstone	4-8	6
Bedded Limestone, Sandstone, Shale	4-8	6
Sand and Gravel with		-
Significant Silt and Clay	4-8	6
Metamorphic/Igneous	2-8	4
Sand and Gravel	6-9	8
Basalt	2-10	9
Karst Limestone	8-10	10
WEIGHT 5		

#### IMPACT OF THE VADOSE ZONE MEDIA

Impact of the vadose zone media was determined from a combination of several other DRASTIC parameters. Where the depth to water was less than five feet below land surface, soil media was used to determine the impact of the vadose zone media. Where the depth to water was greater than five feet below the land surface, soil media and aquifer media were both used to determine impact of the vadose zone media.

The three most commonly occurring vadose zone media for the Surficial Aquifer System within the SFWMD were: 1) sand and gravel, 2) sand and gravel with significant silt and clay, and 3) karst limestone. Karst limestone was the predominant vadose zone media encountered in Palm Beach, Broward, Dade, and Collier counties. In the everglades areas of these counties it was decided by SFWMD staff that karst limestone would be used for areas where the soil type was muck, the aquifer media was karst limestone, and the water table was at or above land surface during the wet season. Karst limestone was used in these areas because there was no vadose zone, and consequently there was no attenuating capacity. Karst limestone allowed for a rating of 10, implying little or no attenuating capacity for the impact of the vadose zone layer. The everglades regions of the Surficial Aquifer System in Palm Beach, Broward, Dade, and Collier counties had no change in impact of the vadose zone over large areas. Impact of the vadose zone for the Surficial Aquifer System in other areas of the SFWMD is variable over significantly shorter distances.

Impact of the vadose zone for the Floridan Aquifer System was determined primarily from the degree of confinement that existed above the aquifer system. Throughout most of the SFWMD the Hawthorn Formation above the Floridan Aquifer System forms a competent confining unit, resulting in a rating of one for the Floridan Aquifer System.

The national DRASTIC rating scale was modified slightly to accommodate conditions that occur above the Floridan Aquifer System in some areas of the SFWMD. In the ridge areas where the confining layer is much thinner and is composed of more permeable sediments, the aquifer is semi-confined. The impact of the vadose zone range in these areas was considered to be sand and gravel with significant silt and clay, resulting in a rating of five (5). A rating of five (5) was also assigned to areas where sinkholes have breached the overlying confining beds.

### HYDRAULIC CONDUCTIVITY OF THE AQUIFER

Hydraulic conductivity has a weight of three, and refers to the ability of the aquifer materials to transmit water, which in turn controls the rate at which ground water will flow under a given hydraulic gradient. The rate at which ground water flows also controls the rate at which a contaminant moves through the aquifer. Hydraulic conductivity is influenced by the amount and interconnection of void spaces within the aquifer which may occur as a consequence of intergranular porosity, fracturing, bedding planes and solution.

For the purposes of DRASTIC mapping, hydraulic conductivity has been divided into ranges where high hydraulic conductivities are associated with high pollution potential (Table 9).

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HYDRAULIC	CONDUCTIVITY (GPD/FT <sup>2</sup> )	
RANGE	RATING	
1-100	1	
100-300	2	
300-700	4	
700-1000	6	
1000-2000	8	
2000+	10	
	WEIGHT 3	

TABLE 9. RANGES AND RATINGS FOR HYDRAULIC CONDUCTIVITY

Hydraulic conductivity values for the Surficial Aquifer System in Dade, Broward, Palm Beach, Martin, and southern St. Lucie counties were calculated from transmissivity and aquifer thickness data. It was assumed that K=T/D (K = Hydraulic Conductivity, T = Transmissivity, and D = Saturated Thickness of the Aquifer). To err on the conservative side (from a pollution potential standpoint), the thickness of the aquifer that was penetrated was used rather than the total thickness of the aquifer, resulting in a higher conductivity value.

Throughout the remainder of the SFWMD, pump test data and consultation with geologists familiar with local hydrogeologic conditions (see bibliography) were used to estimate the hydraulic conductivity of the Surficial Aquifer System in a given area.

Hydraulic conductivity values for the Floridan Aquifer System were calculated from published information listing both the transmissivity and the thickness of aquifer penetrated. These values were used to contour hydraulic conductivity within the six counties in the SFWMD where the Floridan Aquifer System is mapped for DRASTIC.

The hydraulic conductivity of the Surficial Aquifer System within the SFWMD is highest (greater than 2000  $gpd/ft^2$ ) in the Biscayne Aquifer of Dade, Broward, and Palm Beach counties, and in the surficial aquifers of Collier and southern Lee counties. The hydraulic conductivity of the surficial aquifer system is lowest (less than 100  $gpd/ft^2$ ) in the low lying areas of Glades, Highlands, Okeechobee, Osceola, Polk and Orange counties.

The hydraulic conductivity of the Floridan Aquifer System within the SFWMD is highest  $(1000-2000 \text{ gpd/ft}^2)$  to the north, in Orange, Osceola, and northern Polk counties. The hydraulic conductivity of the Floridan Aquifer System generally decreases to the southwest with the lowest values (less than 100 gpd/ft<sup>2</sup>) located in Glades, Highlands, southern Polk and southeastern Okeechobee counties. Hydraulic conductivity values of the Floridan Aquifer System tend to increase to the north and east within the northern portion of the SFWMD.

#### DRASTIC MAPPING PROCEDURES

#### COMBINING OF INDIVIDUAL PARAMETER LAYERS

Five of the DRASTIC parameters (Depth to Water, Net Recharge, Aquifer Media, Topography, and Hydraulic Conductivity) were individually mapped on U.S. Geological Survey (USGS) 1:100,000 scale metric topographic maps. Polygons outlining areas of constant ranges and ratings were drawn on the USGS maps and then digitized to electronic media using Computer-Aided Design (CAD) software on personal computers. A sixth parameter, soil media, was digitized directly from U.S. Soil Conservation Service maps. The seventh parameter, impact of the vadose zone, was derived from other DRASTIC layers and then digitized.

The seven individual layers were then overlain to form "composite" polygons, and the scores for each of the seven individual layers were summed. All composite polygons under 100 acres in size were combined with the most closely matching adjacent polygon. The polygons were then labeled and color coded.

#### FINAL MAP PRODUCTION

The format for the presentation of the DRASTIC ground water pollution potential maps has been standardized nationally to facilitate comparison between regions (Aller et al., 1987). All five Water Management Districts, in cooperation with the FDER, used similar mapping procedures to produce maps that are consistent with the national DRASTIC scheme. During the initial mapping process frequent communication was maintained between the Water Management Districts to minimize "border faults" along the boundaries of the districts.

The NWWA provided a national color code for DRASTIC index ranges (Table 10), which was followed as closely as possible for this publication. The "hotter" the color the greater the pollution potential. The NWWA specified the use of a hydrogeologic setting code that includes the DRASTIC index. This code has been included in the attached DRASTIC plates.

COLOR CODE				
DRASTIC INDEX <79 80-90 100-119 120-139 140-159 160-179 180-199 >200	RANGE	COLOR Violet Indigo Blue Dark Green Light Green Yellow Orange Red		

TABLE 10. NATIONAL COLOR CODE FOR DRASTIC INDEX RANGES

All sixteen counties within the SFWMD were mapped for the Surficial Aquifer System (see Plates 1-16). In addition, six counties were also mapped for the Floridan Aquifer System (see Plates 17-22). The Floridan Aquifer System was not mapped in the counties where its water quality is poor and the aquifer is not used significantly. These areas also correspond with the areas where the aquifer system is overlain by a thick confining layer of extremely low permeability sediments.

#### HOW TO READ THE PLATES

All DRASTIC polygons on the 22 attached plates are labeled with a hydrogeologic setting code. This code provides information regarding the ground water region and hydrogeologic setting where the polygon is located. It also provides a polygon number that can be looked up in the attached appendices, and the DRASTIC Index that provides the pollution potential for the polygon. The arrangement of the various information within the hydrogeologic setting code is shown below.

11A-022 210 = Hydrogeologic Setting Code

11 = Ground water Region = Southeast Coastal Plain A = Hydrogeologic Setting = Solution Limestone 022 = Polygon Number = Unique Combination of DRASTIC Parameters 210 = DRASTIC Index = Relative Pollution Potential The first set of characters in the hydrogeologic setting code identifies the ground water region and the hydrogeologic setting. The next set of numbers in the hydrogeologic setting code identifies the polygon number. This polygon number can be referred to in the appendices and the range and rating for each of the DRASTIC parameters can be determined for the polygon. The final three digit code at the end of the label indicates the DRASTIC index (pollution potential) for the polygon. The higher the index the greater the pollution potential.

All polygons with the same polygon number are identical with respect to the ranges and ratings for the seven DRASTIC parameters. For example, all polygons that are labeled 022 have all seven DRASTIC parameters exactly identical to all other polygons that are labeled 022. However, polygon number <u>022</u> is not identical to polygon 22. Two digit codes apply to the Floridan Aquifer System, while three digit codes refer to the Surficial Aquifer System.

#### GROUND WATER CONTAMINATION AND DRASTIC

Ground water contamination can be caused by a variety of substances originating from many different activities. In general, anthropogenic contaminants enter ground water through four pathways: 1) the placing or spreading of liquids or water soluble products on the land surface, 2) the burial of substances in the ground above the water table, 3) the emplacement or injection of materials in the ground below the water table (Lehr et al., 1976), or 4) leakance from surface water bodies.

Contaminants released at land surface may percolate downward through the soil, and vadose (unsaturated) zone into the saturated zone. If the volume of contaminant is not great, the contaminant may be retained in the soil or vadose zone. If the contaminant is not completely attenuated, it may later be flushed toward the water table by infiltrating precipitation or additional amounts of contaminant.

Once within the aquifer the contaminant may: 1) travel at the velocity of and in the direction of ground water, 2) travel slower than the ground water, 3) float on the surface of the water table, 4) "sink" through the aquifer to the bottom, or 5) under some conditions, may actually move in a direction opposite to the direction of ground water flow. Generally, the majority of contaminants (i.e., aqueous phase liquids) travel in the direction of ground water flow at a velocity somewhat less than that of the water (Aller et al., 1987).

As the contaminant travels through the system, attenuation of the contaminant may take place. Attenuation includes mechanisms which reduce the concentration and velocity of contaminants through processes such as dilution, dispersion, mechanical filtration, volatilization, biological assimilation and decomposition, precipitation, sorption, ion exchange, oxidation and reduction, buffering and neutralization (Pye and Kelly, 1984; Fetter, 1980).

The degree of attenuation which can occur for a given concentration of a given contaminant is a function of 1) the time that the contaminant is in contact with the material through which it passes, 2) the grain size and chemical and physical characteristics of the material through which it passes, and 3) the distance which the contaminant has traveled. In general for any given material, the longer the contact time and the greater the distance travelled, the greater the effects of attenuation. In a similar manner, the greater the surface area of the material through which a contaminant travels, the greater the potential for sorption of the contaminant. The greater the reactivity of the material through which a contaminant travels, the greater the potential for attenuation. Any combination of these processes may be active depending on the hydrogeologic conditions and the contaminant.

The effectiveness of an attenuation process is largely determined by 1) the rate and loading of the applied contaminant, 2) the physical and chemical characteristics of the applied contaminant and 3) the physical and chemical matrix characteristics of the area. These factors control the ground water pollution potential of an area. The physical and chemical properties characterized by the hydrogeologic setting determine the extent to which attenuation has the potential to be active.

While it is neither practical nor feasible to obtain quantitative evaluations of these intrinsic mechanisms from a regional perspective, it is necessary to look at the broader physical parameters which incorporate the many processes. DRASTIC accomplishes this through evaluating the seven parameters that were selected.

#### SUMMARY AND CONCLUSIONS

#### LIMITATIONS

- 1. Predicting the potential for ground water contamination is a very complicated and difficult task. In order to predict contamination potential, hydrogeologic conditions, land use, contaminant properties, and the interaction among these variables must be considered. DRASTIC is designed to address only the hydrogeologic factors that influence the ground water contamination potential, and assumes that the contaminant has the mobility of water. It does not address or consider land use. However, DRASTIC can be easily combined with land use data. The current DRASTIC maps are based on existing data. The accuracy of the DRASTIC maps is controlled by the quality and quantity of data that is available, and may not be uniform.
- 2. Some conditions that commonly occur within the South Florida Water Management District (SFWMD) are outside of the DRASTIC ranges. For instance DRASTIC does not specify what rating should be applied for depth to water in areas where the water table is above land surface for part of the year, a condition that commonly occurs in many areas of south Florida. DRASTIC also does not specify how to rate a confined aquifer where the confining layer is breached by sinkholes. DRASTIC does not allow for variable ratings if the amount of recharge is above 10+ inches per year; consequently the rating applied to net recharge for the Surficial Aquifer System is constant throughout the SFWMD.
- 3. DRASTIC does not consider the interactions between surface water and ground water that occur when surface water bodies such as canals and borrow pits deeply penetrate aquifers. These conditions are commonplace in the Biscayne Aquifer of Dade and Broward counties.
- 4. The DRASTIC methodology was developed to map the ground water pollution potential nationwide, and does not focus on the unique conditions present in south Florida. The broad scope of the methodology reduces the ability to portray local variability. The lack of variability of the DRASTIC parameters for the Surficial Aquifer System within Dade, Broward, Monroe, Hendry, Palm Beach, eastern Collier and eastern Lee counties limits the ability of DRASTIC to emphasize differences in the pollution potential within these areas.

#### FINDINGS

- 1. The DRASTIC indices for the Surficial Aquifer System within the SFWMD range from a low of approximately 139, to a high of 226, with most of the indices concentrated near the higher end of the scale. Possible DRASTIC indices throughout the United States for unconfined aquifers range from a low of 26 to a high of 226. The high indices present within SFWMD indicate that the Surficial Aquifer System is extremely susceptible to contamination from contaminants introduced at the land surface.
- 2. The pollution potential within the Surficial Aquifer System is highest in the southern portion of the SFWMD: within Dade, Broward, Collier, and southern Palm Beach counties. DRASTIC indices within these counties are in the upper range of values for the SFWMD, with many polygons having indices of 226, the highest score possible. The high pollution potential in this area is due to a shallow depth to water, high recharge, aquifer and soil media that do not attenuate contaminants readily, a flat topography, and high hydraulic conductivity. The pollution potential of the Surficial Aquifer System decreases to the north within the SFWMD, as the attenuating capacities of the soils increase and the hydraulic conductivity of the aquifer decreases.
- 3. The DRASTIC mapping of the SFWMD shows that the ground water pollution potential within the Floridan Aquifer System is in the middle of the pollution potential range for confined aquifers. Possible DRASTIC indices for confined aquifers throughout the United States range from a low of approximately 26 to a high of approximately 154. Indices for the confined Floridan Aquifer System within the SFWMD vary from a low of 50 to a high of 133.
- 4. DRASTIC scores within the Floridan Aquifer System were in general considerably lower than in the Surficial Aquifer System. These lower scores suggest that, within the SFWMD, the confined Floridan Aquifer System is considerably less susceptible to contamination than the unconfined Surficial Aquifer System. This lower susceptibility to contamination is primarily due to the confined nature of the Floridan Aquifer System.
- 5. The greatest pollution potential within the Floridan Aquifer System occurs in the ridge areas of Orange, Osceola, and Polk counties. These are the recharge areas to the Floridan Aquifer System and the scores for net recharge and impact of the vadose zone are correspondingly higher here than in other areas.

6. The ridge areas of Orange, Osceola, Polk, and Highlands counties are the only large areas within the SFWMD where significant topographic relief exists. These ridge areas have much greater variation in DRASTIC parameters over short distances than is present elsewhere in the SFWMD.

#### IMPLICATIONS

- 1. DRASTIC evaluates the relative vulnerability, from a hydrogeologic perspective, of areas to ground water contamination from various sources of pollution. The DRASTIC maps can be used to:
  - A. assist in the development, review, and/or modification of land use plans,
  - B. prioritize the allocation of resources to current and future land use activities,
  - C. prioritize protection, monitoring, and/or ground water clean-up efforts.

In addition, the DRASTIC index charts located in the appendices can be used to:

- A. assist in the location and verification of information that is required for permits,
- B. catalog existing information that has been collected for the individual DRASTIC parameters (e.g., depth to water).

#### GLOSSARY

Aquifer Media. Refers to the consolidated or unconsolidated medium which serves as an aquifer (such as sand and gravel or limestone). An aquifer is defined as a medium which will yield sufficient quantities of water for use.

Depth to Water. For an unconfined aquifer this refers to the depth from land surface to the water table. For a confined aquifer this refers to the depth from land surface to the top of the aquifer (base of the confining zone).

DRASTIC. An acronym of seven parameters that affect ground water pollution potential. These parameters are Depth to water, net Recharge, Aquifer media, Soil media, Topography, Impact of the vadose (unsaturated) zone, and hydraulic Conductivity.

DRASTIC Index. A numeric value that provides a relative indication of the pollution potential for ground water contamination. The higher the value, the greater the potential for ground water contamination. Possible values range from a low of 36 to a high of 226.

DRASTIC Methodology. A methodology developed for the U.S. Environmental Protection Agency by the National Water Well Association. It uses a system of weights and rankings to evaluate ground water pollution potential based upon the seven parameters that form the acronym DRASTIC.

DRASTIC Polygon. A mapped area with relatively uniform pollution potential based upon the DRASTIC evaluation procedures.

DRASTIC Polygon Number. A number that is assigned to every polygon that was mapped. This number allows for correlation with the DRASTIC Index Charts located in the appendices. These charts provide the information for each individual parameter that was used to arrive at the DRASTIC index for the polygon.

Hydraulic Conductivity. Hydraulic conductivity refers to the ability of the aquifer materials to transmit water, which in turn controls the rate at which ground water will flow under a given hydraulic gradient.

Hydrogeologic Setting. A composite description of all of the major geologic and hydrologic factors which affect and control ground water movement into, through, and out of an area. It is defined as a mappable unit with common hydrogeologic characteristics, and as a consequence, common vulnerability to contamination by introduced pollutants. Hydrogeologic Setting Code. A code that is attached to all polygons and identifies the ground water region and subdivision where the polygon is located, as well as the DRASTIC index and the polygon number. This code allows the reader to locate detailed information regarding the polygon by referencing the corresponding DRASTIC Index Charts in the appendices.

Net Recharge. Indicates the amount of water per unit area of land that penetrates the ground surface and reaches the water table. Recharge water is thus able to transport a contaminant vertically to the water table and then horizontally within the aquifer.

NWWA. National Water Well Association.

Soil Media. Refers to the uppermost portion of the vadose zone that is characterized by significant biological activity. For purposes of DRASTIC mapping, soil is commonly considered the upper weathered zone of the earth.

**Topography.** For purposes of DRASTIC mapping, topography refers to the slope and slope variability of the land surface.

Vadose (Unsaturated) Zone. The zone above the water table that is unsaturated with water. However, for DRASTIC mapping purposes, the vadose zone for a confined aquifer is expanded to include both the vadose zone and any saturated zones which overlie the aquifer.

Water Table. The plane which forms the upper surface of the zone of ground water saturation.

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- Haire, W.J., Warren, J.D., Miller, T. and Price, C. 1984. Water Resources Data, Florida, Water Year 1982; Vol. 2B, South FL. Ground Water. U.S. Geological Survey, Data Report FL.-82-2B.
- Henderson, W.G. JR. 1984. Soil Survey of Lee County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service.
- Waltz, D.P. and Allen, J.A. 1982. Hydrogeologic Reconnaissance of Lee County, Florida; Part 2: Atlas (Plate 22-Water Level in the Surficial Aquifer). South FL. Water Management District, Technical Publication 82-1.

NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT

AQUIFER MEDIA

- Knapp, M.S. 1980. Tampa, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 97.
- Lane, E. 1980. West Palm Beach, FL. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 100.

SOIL MEDIA

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts IX & X. FL. Dept. of Administration, Division of State Planning. Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1. Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1. Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 85-1. Henderson, W.G. JR. 1984. Soil Survey for Lee County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service. Leighty, R.G., et al. 1960. Soil Survey for Orange Co., FL. USDA, Soil Cons. Service. McCollum, S.H. and Pendleton, R.F. 1971. Soil Survey for Okeechobee Co., FL. USDA, Soil Cons. Service. Watts, F.C. and Stankey, D.L. 1980. Soil Survey of St. Lucie Co., FL. USDA, Soil Cons. Service.

#### TOPOGRAPHY

Anon. 1981. Charlotte Harbor, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Survey. Anon. 1981. Ft. Myers. FL. Metric Topo. Map (1:100000 Scale). USGS. Anon. 1985. Naples, FL. Metric Topo. Map (1:100000 Scale). USGS. Anon. 1981. Sanibel, FL. Metric Topo. Map (1:100000 Scale). USGS.

IMPACT OF THE VADOSE ZONE

\* DETERMINED FROM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

HYDRAULIC CONDUCTIVITY

Knapp, M.S., Burns, W.S. and Sharp, T.S. 1986. Preliminary Assessment of the Groundwater Resources of Western Collier County, Florida. South FL. Water Management District; Technical Publication 86-1, Parts 1 & 2.

# 9. MARTIN COUNTY SURFICIAL AQUIFER SYSTEM INFORMATION SOURCES

#### DEPTH TO WATER

Anon. 1976. Water Table Contours in Palm Beach and Martin Counties, Florida. U.S. Geological Survey; Provisional Data, Subject to Revision.
Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts IX & X. FL. Dept. of Administration, Division of State Planning.
Haire, W.J., Warren, J.D., Miller, T. and Price, C. 1984. Water Resources Data, Florida, Water Year 1982; Vol. 2B, South FL. Ground Water. U.S. Geological Survey, Water Data Report FL.-82-2B.

#### NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT AQUIFER MEDIA

Lane, E., et al. 1980. Ft. Pierce, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 80. Lane, E. 1980. West Palm Beach, FL. Environmental

Geology Series. FL. Dept. of Natural Resources, Map Series 100.

# SOIL MEDIA

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts IX & X. FL. Dept. of Administration, Division of State Planning.

Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1.

Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1.

Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 85-1.

Henderson, W.G. JR. 1984. Soil Survey of Lee County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service.

Leighty, R.G., et al. 1960. Soil Survey of Orange Co., FL. USDA, Soil Cons. Service. McCollum, S.H. and Pendleton, R.F. 1971. Soil Survey of Okeechobee Co., FL. USDA, Soil Cons. Service. McCollum, S.H., et al. 1978. Soil Survey of Palm Beach Co., FL. USDA, Soil Cons. Service.

#### TOPOGRAPHY

Anon. 1981. Ft. Pierce, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Survey. Anon. 1985. West Palm Beach, FL. Metric Topo. Map (1:100000 Scale). USGS.

# IMPACT OF THE VADOSE ZONE

\* DETERMINED FROM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

### HYDRAULIC CONDUCTIVITY

Nealon, D., et al. 1986. Martin County Water Resource Assessment (Draft). South Florida Water Management District Special Publication. Miller, W.L. 1980. Geologic Aspects of the Surficial Aquifer in the Upper East Coast Planning Area, Southeast Florida. U.S. Geological Survey; Water Resources Investigations, Open-File Report 80-586.

# 10. MONROE COUNTY SURFICIAL AQUIFER SYSTEM INFORMATION SOURCES

DEPTH TO WATER

Atta, E.V. 1975. Florida General Soils Atlas for Regional Planning Districts IX & X. FL. Dept. of Administration, Division of State Planning.

## NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT

AQUIFER MEDIA

Lane, E. 1981. Miami, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 101 (Except Florida Keys).

#### SOIL MEDIA

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts IX & X. FL. Dept. of Administration, Division of State Planning. Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1.

Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1.

Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of

Food and Agri. Sciences, Report Number 85-1. Hyde, A.G. and Huckle, H.F. 1983. Soil Survey of

Manatee County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service.

McCollum, S.H., et al. 1978. Soil Survey for Palm Beach Co., FL. USDA, Soil Cons. Service.

### TOPOGRAPHY

Anon. 1981. Cape Sable, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Survey.
Anon. 1982. Everglades City, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1982. Homestead, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1983. Islamorada, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1983. Key West, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1983. Key West, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1983. Key West, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1981. Miami, FL. Metric Topo. Map (1:100000 Scale). USGS.

IMPACT OF THE VADOSE ZONE

\* DETERMINED FROM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

# HYDRAULIC CONDUCTIVITY

Franks, B.J. 1982. Principal Aquifers in Florida. U.S. Geological Survey; Water Resource Investigation, Open-File Report 82-855 (Sheet 3 OF 4).

# 11. OKEECHOBEE COUNTY SURFICIAL AQUIFER SYSTEM INFORMATION SOURCES

DEPTH TO WATER

Atta, E.V., 1975. Florida General Soils Atlas for Regional Planning Districts VII & VIII. FL. Dept. of Administration, Division of State Planning. Haire, W.J., Warren, J.D., Miller, T. and Price, C. 1984.
Water Resources Data, Florida, Water Year 1982; Vol. 2B, South FL. Ground Water. U.S. Geological Survey, Water Data Report FL.-82-2B.
McCollum, S.H. and Pendleton, R.F. 1971. Soil Survey of Oka.

Okeechobee County, Florida. U.S. Department of Agriculture, Soil Conservation Service.

# NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT

AQUIFER MEDIA

Lane, E., et al. 1980. Ft. Pierce, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 80.

#### SOIL MEDIA

Atta, E.V., 1975. Florida General Soils Atlas for Regional Planning Districts VII & VIII. FL. Dept. of Administration, Division of State Planning.

- Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1.
- Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1.
- Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 85-1.
- Leighty, R.G., et al. 1960. Soil Survey of Orange County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service.
- McCollum, S.H. and Pendleton, R.F. 1971. Soil Survey of Okeechobee Co., FL. USDA, Soil Cons. Service. McCollum, S.H., et al. 1978. Soil Survey of Palm Beach Co., FL. USDA, Soil Cons. Service.

#### TOPOGRAPHY

Anon. 1978. Arcadia, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Survey.
Anon. 1978. Bartow, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1981. Ft. Pierce, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1985. Vero Beach, FL. Metric Topo. Map (1:100000 SCALE). USGS.

# IMPACT OF THE VADOSE ZONE

\* DETERMINED FROM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

HYDRAULIC CONDUCTIVITY

Lane, E., et al. 1980. Ft. Pierce, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 80.

# 12. ORANGE COUNTY SURFICIAL AQUIFER SYSTEM INFORMATION SOURCES

# DEPTH TO WATER

Atta, E.V., 1975. Florida General Soils Atlas for Regional Planning Districts V & VI. FL. Dept. of Administration, Division of State Planning.
Haire, W.J., Warren, J.D., Miller, T. and Price, C. 1984. Water Resources Data, Florida, Water Year 1982; Vol. 2B, South FL. Ground Water. U.S. Geological Survey, Water Data Report FL.-82-2B.
Leighty, R.G. 1960. Soil Survey of Orange County, Florida. U.S. Department of Agriculture, Soil Conservation Service.

# NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT

Lichtler, W.F., et al. 1968. Water Resources of Orange County, Florida. U.S. Geological Survey, Report of Investigations No. 50.

# AQUIFER MEDIA

Scott, T.M. 1978. Orlando, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 85.

# SOIL MEDIA

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts V & VI. FL. Dept. of Administration, Division of State Planning.
Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1. Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1.
Carlisle, V.W. et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 85-1.
Leighty, R.G., et al. 1960. Soil Survey of Orange County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service.
McCollum, S.H. et al. 1978. Soil Survey of Palm Beach Co., FL. USDA, Soil Cons. Service.

TOPOGRAPHY

Anon. 1979. Kissimmee, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Survey. Anon. 1979. Orlando, FL. Metric Topo. Map (1:100000 Scale). USGS.

IMPACT OF THE VADOSE ZONE

\* DETERMINED FROM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

HYDRAULIC CONDUCTIVITY

Lichtler, W.F., et al. 1968. Water Resources of Orange County, Florida. U.S. Geological Survey, Report of Investigations No. 50.

13. OSCEOLA COUNTY SURFICIAL AQUIFER SYSTEM INFORMATION SOURCES

DEPTH TO WATER

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts V & VI. FL. Dept. of Administration, Division of State Planning.
Haire, W.J., et al. 1984. Water Resources Data, Florida, Water Year 1982; Vol. 2B, South Florida Ground Water. U.S. Geological Survey, Water Data Report FL.-82-2B.

NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT AQUIFER MEDIA

Lane, E., et al. 1980. Ft. Pierce, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 80. Scott, T.M. 1978. Orlando, FL. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 85.

## SOIL MEDIA

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts V & VI. FL. Dept. of Administration, Division of State Planning. Baldwin, R., et al. 1980. Soil Survey of Volusia County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service. Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1. Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1. Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 85-1. Huckle, H.F., et al. 1974. Soil Survey of Brevard Co., FL. USDA, Soil Cons. Service. Hyde, A.G., et al. 1983. Soil Survey of Manatee Co., FL. USDA, Soil Cons. Service. Leighty, R.G., et al. 1960. Soil Survey of Orange Co., FL. USDA, Soil Cons. Service. McCollum, S.H., et al. 1978. Soil Survey of Palm Beach Co., FL. USDA, Soil Cons. Service. TOPOGRAPHY

Anon. 1978. Bartow, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Survey.
Anon. 1979. Kissimmee, FL. Metric Topo. Map (1:100000 Scale). USGS.
Anon. 1985. Vero Beach, FL. Metric Topo. Map (1:100000 Scale). USGS. IMPACT OF THE VADOSE ZONE

\* DETERMINED FORM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

HYDRAULIC CONDUCTIVITY

Frazee, J.M. 1980. Ground Water in Osceola County, Florida. U.S. Geological Survey; Water Resource Investigations, Open-File Report 79-1595.

# 14. PALM BEACH COUNTY SURFICIAL AQUIFER SYSTEM INFORMATION SOURCES

DEPTH TO WATER

Atta, E.V., 1975. Florida General Soils Atlas for Regional Planning Areas IX & X. FL. Dept. of Administration, Division of State Planning.
Haire, W.J. 1984. Water Resources Data, Florida, Water Year 1982; Vol. 2B, South Florida Ground Water. U.S. Geological Survey, Water Data Report FL.-82-2B.
McCollum, S.H., et al. 1978. Soil Survey of Palm Beach County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service.
Miller, W.L. 1984. Altitude of Water Table Surficial Aquifer System, Palm Beach County, Florida. U.S. Geological Survey Open-File Report 84-XXX; Provisional Data, Subject to Revision.

NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT

AQUIFER MEDIA

Lane, E. 1980. West Palm Beach, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 100.

### SOIL MEDIA

Atta, E.V. 1975. Florida General Soils Atlas for Regional Planning Districts IX & X. Florida Dept. of Administration, Division of State Planning.
Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1.
Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1. Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 85-1. Leighty, R.G., et al. 1960. Soil Survey of Orange

County Florida. U.S. Dept. of Agriculture, Soil Conservation Service.

McCollum, S.H. and Pendleton, R.F. 1971. Soil Survey of Okeechobee Co., FL. USDA, Soil Cons. Service.
McCollum, S.H., et al. 1978. Soil Survey of Palm Beach Co., FL. USDA, Soil Cons. Service.

TOPOGRAPHY

Anon. 1981. Ft. Lauderdale, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Service. Anon. 1985. West Palm Beach, FL. Metric Topo. Map (1:100000 Scale). USGS.

IMPACT OF THE VADOSE ZONE

\* DETERMINED FROM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

HYDRAULIC CONDUCTIVITY

Franks, B.J. 1982. Principal Aquifers in Florida. U.S. Geological Survey; Water Resource Investigation, Open-File Report 82-855 (Sheet 3 of 4).

# 15. POLK COUNTY SURFICIAL AQUIFER SYSTEM INFORMATION SOURCES

DEPTH TO WATER

Atta, E.V. 1975. Florida General Soils Atlas for Regional Planning Districts VII & VIII. FL. Department of Administration, Division of State Planning.
Haire, W.J. et al. 1984. Water Resources Data, Florida, Water Year 1982; Vol 2B, South Florida Ground Water.
U.S. Geological Survey, Water Data Report FL.-82-2B.

# NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT

Stewart, H.G. 1966. Ground-Water Resources of Polk County, Florida. U.S. Geological Survey, Report of Investigations No. 44.

# AQUIFER MEDIA

Lane, E., et al. 1980. Ft. Pierce, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 80. Scott, T.M. 1978. Orlando, FL. Environmental Geology

Series. FL. Dept. of Natural Resources, Map Series 85.

# SOIL MEDIA

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts VII & VIII. FL. Dept. of Administration, Division of State Planning.
Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1.
Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1.
Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1.
Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 85-1.
Leighty, R.G. et al. 1960. Soil Survey of Orange County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service.
McCollum, S.H., et al. 1978. Soil Survey of Palm Beach County, FL. USDA, Soil Cons. Service.

#### TOPOGRAPHY

Anon. 1978. Bartow, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Survey. Anon. 1979. Kissimmee, FL. Metric Topo. Map (1:100000 Scale). USGS.

# IMPACT OF THE VADOSE ZONE

\* DETERMINED FROM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

# HYDRAULIC CONDUCTIVITY

Lane, E., et al. 1980. Ft. Pierce, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 80. Scott, T.M. 1978. Orlando, FL. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 85.

# 16. ST. LUCIE COUNTY SURFICIAL AQUIFER SYSTEM INFORMATION SOURCES

# DEPTH TO WATER

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts IX & X. FL. Dept. of Administration, Division of State Planning. Bower, Richard. 1976-77. Water Levels in the Surficial Aquifer System of St. Lucie County, Florida. South Florida Water Management District, Unpublished Map.

Haire, W.J., et al. 1984. Water Resources Data, Florida, Water Year 1982; Vol. 2B, South FL. Ground Water. U.S. Geological Survey, Water Data Report FL.-82-2B.

# NET RECHARGE

\* 10+ INCHES PER YEAR OF RECHARGE USED FOR ENTIRE DISTRICT AQUIFER MEDIA

Lane, E., et al. 1980. Ft. Pierce, Florida. Environmental Geology Series. FL. Dept. of Natural Resources, Map Series 80.

## SOIL MEDIA

Atta, E.V., et al. 1975. Florida General Soils Atlas for Regional Planning Districts IX & X. FL. Dept. of Administration, Division of State Planning. Calhoun, F.G., et al. 1974. Characterization Data for Selected Florida Soils. University of Florida, Institute of Food and Agricultural Sciences, Report Number 74-1. Carlisle, V.W., et al. 1978. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 78-1. Carlisle, V.W., et al. 1985. Characterization Data for Selected Florida Soils. Univ. of FL., Inst. of Food and Agri. Sciences, Report Number 85-1. Leighty, R.G. 1960. Soil Survey of Orange County, Florida. U.S. Dept. of Agriculture, Soil Conservation Service. McCollum, S.H. and Pendleton, R.F. 1971. Soil Survey of Okeechobee Co., FL. USDA, Soil Cons. Service. McCollum, S.H., et al. 1978. Soil Survey of Palm Beach Co., FL. USDA, Soil Cons. Service. Watts, F.C. and Stankey, D.L. 1980. Soil Survey of St. Lucie Co., FL. USDA, Soil Cons. Service.

#### TOPOGRAPHY

Anon. 1981. Ft. Pierce, Florida. Metric Topographic Map (1:100000 Scale). U.S. Geological Survey. Anon. 1985. Vero Beach, FL. Metric Topo. Map

(1:100000 Scale). USGS.

IMPACT OF THE VADOSE ZONE

\* DETERMINED FROM DEPTH TO WATER, SOIL MEDIA AND AQUIFER MEDIA

# HYDRAULIC CONDUCTIVITY

- Bearden, H.W. 1972. Water Available in Canals and Shallow Sediments in St. Lucie County, Florida. U.S. Geological Survey, Report of Investigations No. 62.
- Nealon, D., et al. 1986. Martin County Water Resource Assessment (Draft). South Florida Water Management District Special Publication.
- Miller, W.L. 1980. Geologic Aspects of the Surficial Aquifer in the Upper East Coast Planning Area, Southeast Florida. U.S. Geologic Survey Resources Investigations, Open-File Report 80-586.

# 17. GLADES COUNTY FLORIDAN AQUIFER SYSTEM INFORMATION SOURCES

DEPTH TO WATER

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

### NET RECHARGE

Stewart, J .W. 1980. Areas of Natural Recharge to the Floridan Aquifer in Florida. U.S. Geological Survey, Map Series 98.

## AQUIFER MEDIA

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S.Geological Survey, Open-File Report 81-1178.

# SOIL MEDIA

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

## TOPOGRAPHY

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

IMPACT OF THE VADOSE ZONE

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S.Geological Survey, Open-File Report 81-1178.

HYDRAULIC CONDUCTIVITY

Shaw, J.E. and Trost, S.M. 1984. Hydrogeology of the Kissimmee Planning Area. South Florida Water Management District; Technical Publication 84-1, Parts 1 & 2.

# 18. HIGHLANDS COUNTY FLORIDAN AQUIFER SYSTEM INFORMATION SOURCES

DEPTH TO WATER

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

NET RECHARGE

Stewart, J.W. 1980. Areas of Natural Recharge to the Floridan Aquifer in Florida. U.S. Geological Survey, Map Series 98.

AQUIFER MEDIA

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

SOIL MEDIA

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

TOPOGRAPHY

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDA AQUIFER SYSTEM

IMPACT OF THE VADOSE ZONE

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

HYDRAULIC CONDUCTIVITY

Shaw, J.E. and Trost, S.M. 1984. Hydrogeology of the Kissimmee Planning Area. South Florida Water Management District; Technical Publication 84-1, Parts 1 & 2.

# 19. OKEECHOBEE COUNTY FLORIDAN AQUIFER SYSTEM INFORMATION SOURCES

DEPTH TO WATER

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

NET RECHARGE

Stewart, J.W. 1980. Areas of Natural Recharge to the Floridan Aquifer in Florida. U.S. Geological Survey, Map Series 98.

# AQUIFER MEDIA

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

SOIL MEDIA

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

TOPOGRAPHY

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

IMPACT OF THE VADOSE ZONE

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

Shaw, J.E. and Trost, S.M. 1984. Hydrogeology of the Kissimmee Planning Area. South Florida Water Management District; Technical Publication 84-1, Parts 1 & 2.

# 20. ORANGE COUNTY FLORIDAN AQUIFER SYSTEM INFORMATION SOURCES

## DEPTH TO WATER

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178. Shaw, J.E. and Trost, S.M. 1984. Hydrogeology of the Kissimmee Planning Area. South Florida Water Management District; Technical Publication 84-1, Part 1, 86 pp.

# NET RECHARGE

Stewart, J.W. 1980. Areas of Natural Recharge to the Floridan Aquifer in Florida. U.S. Geological Survey, Map Series 98.

# AQUIFER MEDIA

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

# SOIL MEDIA

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

# TOPOGRAPHY

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

IMPACT OF THE VADOSE ZONE

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178. Shaw, J.E. and Trost, S.M. 1984. Hydrogeology of the Kissimmee Planning Area. South Florida Water Management District; Technical Publication 84-1, Part 1, 86 pp.

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- AQUIFER MEDIA
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SOIL MEDIA

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TOPOGRAPHY

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

IMPACT OF THE VADOSE ZONE

Miller, J.A. 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178. Shaw, J.E. and Trost, S.M. 1984. Hydrogeology of the Kissimmee Planning Area. South Florida Water Management District; Technical Publication 84-1, Part 1, 86 pp.

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# AQUIFER MEDIA

Miller, J.A., 1982. Geology and Configuration of the Top of the Tertiary Limestone Aquifer System, S.E.U.S. U.S. Geological Survey, Open-File Report 81-1178.

# SOIL MEDIA

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

#### TOPOGRAPHY

\* A CONSTANT RATING WAS USED FOR THIS PARAMETER FOR THE FLORIDAN AQUIFER SYSTEM

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# APPENDICES I

# DRASTIC INDEX CHARTS FOR THE SURFICIAL AQUIFER SYSTEM WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

60

еттно 001	ettino 001		۹L		
PEATURE	RANGE WEIGHT RATING N			NUMBER	
DEPTH TO WATER	04	5	10	50	
NET NECHARGE	10+	4	9	36	
AQUIPER MEDIA	KARST LINESTONE	3	9	27	
soil media	MUCK	2	2	4	
TOPOGRAPHY	0.2%	1	10	10	
IMPACT VADOBE ZONE	KARST LINESTONE	5	10	50	
HYDRAULIC CONDUCTIVITY	<b>200</b> 0 +	3	10	30	
		Oranito Inde	×	207	

аеттна 002		GENERA	LÁL.		
PEATURE	RANGE	WEIGHT	RATING	HUNDER	
DEPTH TO WATER	0-6	5	10	50	
NET RECHARGE	110+	4	9	36	
ACUMER MEDIA	SAND & GRAVEL	3	4	12	
sch media	SAND	2	9	18	
TOPOGRAPHY	02 %	1	10	10	
MPACT VADOBE ZONE	SAND & GRAVEL WISILTICLAY	5	7	35	
HYDRAULIC CONDUCTIVITY	1-100	3	1	3	
		Crashie inde	RX	164	

еттыс 003		GENERA	÷		
PEATURE	RANGE	WEIGHT	WEIGHT PATING		
DEPTH TO WATER	0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
Aquiter Media	KARST LINESTONE	3	9	27	
SOIL MEDIA	THIN OR ABSENT	2	10	20	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	KARSTLIMESTONE	5	10	50	
HYDRAULIC CONDUCTIVITY	2000+	3	10	30	
		Cognito inte		223	

еттна 004		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	WEIGHT RATING		
DEPTH TO WATER	0-6	5	10	50	
NET RECHANCE	10+	4	9	36	
	KARST LIMESTONE	3	9	27	
BOIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
MPACT VADORE ZONE	SAND & GRAVEL	5	8	40	
	1000 - 2000	3	8	24	
		Drastio inde	ĸ	205	

SETTING 006		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	WEIGHT BATTING		
DEPTH TO WATER	0-5	5	10	50	
HET RECHARGE	10+	4	9	36	
AQUITER MEDIA	KARET LINESTONE	3	9	27	
ROIL MEDIA	SANC	2	9	18	
TOPOGRAPHY	02%	1	10	10	
MPACT VADORE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1-100	з	1	3	
		Drastio (ad	*	184	

еттна 005		GENERA	L	
PEATURE	RANGE	WEIGHT	RATING	HUMBER
DEPTH TO WATER	04	5	10	50
NET RECHARGE	10+	. 4	9	36
AQUITER MEDIA	SAND & GRAVEL -	3	4	12
SOL MEDIA	MUCK	2	2	4
TOPOBLAPHY	24%	1	9	9
IMPACT VADOBE ZONE	SAND & GRAVEL WELTICLAY	5	4	20
HYDRAULIC CONDUCTIVITY	1-100	3	1	3
		Dramitic Inde	x	134

61

.

еттна 007		GENERA	ENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
	0.6	5	10	50	
NET NECHANOLE	110+	4	9	36	
AQUIPER MEDIA	KARST LIMESTONE	3	10	30	
SOR MEDIA	THIN OR ABSENT	2	10	20	
тородяарну	0.2%	1	10	10	
IMPACT VADOBE 20NE	KARST LIMESTONE	5	10	50	
HYDRAULIC CONDUCTIVITY	2000 +	3	. 10	30	
		Drinkito Insig	ĸ	226	

SETTING 008		GENERA	AL.		
PEATURE	RANGE	WEIGHT	RATING	NUMBE	
	<b>5</b> -10	5	9	45	
NET RECHARGE	10+	4	9	36	
ACUIPER MEDIA	KARSTLIMESTONE	3	10	30	
BOIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	24%	1	9	9	
MPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
	<b>2000</b> +	3	10	30	
		Draatio Inde	×.	208	

serming 009	аеттика 009		GENERAL		
FEATURE	Randle	WEIGHT	RATING	NUMBER	
	0-8	5	10	50	
NET RECHARGE	10+	4	9	36	
Aquiter Media	KARSTLINESTONE	3	9	27	
SCIL MEDIA	MUCK	2	2	4	
Торошкарну	0.2 %	1	10	10	
IMPACT VADORE 20NE	KARST LIMESTONE	5	10	50	
HYDRAUUS CONDUCTIVITY	1 -100	з	6	18	
•		Drasto ins		195	

SETTING 010	SETTING 010		GENERAL		
MEATURE	RANGE	WEIGHT	RATING	NUMBE	
DEPTH TO WATER	i <b>5-1</b> 0	5	9	45	
NET RECHARGE	10+	4	9	36	
AOUNER MEDIA	KARSTLINESTONE	3	10	30	
SOL MEDIA	SAND	2	9	18	
TOPOGRAPHY	0-2%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	2000 +	3	10		
		Drastic Inde	×	209	

SETTING 014		-	GIENERAL		
PEATURE	RANGE	WEIGHT	RATING	HULDET	
	04	5	10	50	
NET RECHARGE	10+	4	9	36	
	BAND & GRAVEL	3	9	27	
FOL MEDIA	THEN OF ABORNT	2	10	20	
TOPOGRAPHY	02%	1	10	10	
MPACT VADOGE ZONE	RAND & GRAVEL	5	9	45	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
		Crustic and		218	

013		GENERA	L.	•		
PEATURE	RANGE	WEIGHT	RATING	NUMBER		
	04	5	10	50		
NET RECHARGE	10+	. 4	9	36		
AQUITER MEDIA	SAND & GRAVEL	- 3	9	27		
BOIL MEDIA	BAND	2	9	18		
TOPOSILAPHY	02%	1	10	10		
MPACT VADOBE ZONE	SAND & GRAVEL	5	8	40		
	2000-	3	10	30		
		Drustio Ind		211		

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аеттиа 015		GENERA	ENERAL			
PEATURE	RANGE	WEIGHT	RATING	NUMBER		
DEPTH TO WATER	0-6	5	10	50		
NET RECHARGE	10+	4	9	36		
AQUIPER MEDIA	KARSTLIMESTONE	3	10	30		
SOIL MEDIA	SAND	2	9	18		
TOPOGRAPHY	0-2%	1	10	10		
IMPACT VADORE ZONE	SAND & GRAVEL	5	8	40		
	2000 +	3	10	30		
	Drasto Index.			214		

еттик 016		GENERA	INERIAL		
PEATURE	RANGE	WEIGHT	PATING	NUMBER	
DEPTH TO WATER	\$-10	5	9	45	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	9	27	
FOL MEDIA	SAND	2	9	18	
TOPOGRAPHY	0.2 %	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
Drastic Index		206			

set TING 018		GENERA	ERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHANCE	10+	4	9	36	
	KARSTLIMESTONE	3	9	27	
SCIL MEDIA	THIN OR ABSENT	2	10	20	
TOPOGRAPHY	0.2%	1	10	10	
IMPACT VADORE ZONE	KARSTLINESTONE	5	10	50	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
		Drustic ledex			

setting 019		GENERA	ENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEFTH TO WATER	0-8	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUITER NEDIA	SAND & GRAVEL	3	8	24	
SCIL MEDIA	AND	2	8	18	
TOPOGRAPHY	02%	1	10	10	
MPAGT VADORE ZONE	SAND & GRAVEL WISLTICLAY	5	8	40	
HYDRAUUC CONDUCTIVITY	2000 +	3	10	30	
		Drigito (adi		208	

аеттика 021		OWNERA	÷.	
PEATURE	RANGE	WEIGHT	RATING	MUMBER
DEPTH TO WATER	10.8	5	10	50
NET RECHARGE	10+	4	9	36
ACUIPER MEDIA	SAND & GRAVEL	3	8	24
SCIL MEDIA	THEN OR ABBIENT	2	10	20
TOPOGRAPHY	02%	1	10	10
MPAGT VADORE 20NE	SAND & GRAVEL WELT/CLAY	5	8	40
	2000 +	3	10	30
		Dramin test	*	210

еттика 020		OENER/	<u>.</u>		
FEATURE	RANGE	WENGHIT	WEIGHT RATING		
	0.6	5	10	50	
	10+	. 4	9	36	
AQUIFER MEDIA	SAND & GRAVEL .	3	8	24	
SOL MEDIA	THIN OR ABORNT	2	10	20	
TOPOGRAPHY	02N .	1	10	10	
NPACT VADORE ZONE	SAND & GRAVEL	5	8	40	
HYDRAUUC CONDUCTIVITY	2000 +	з	10	30	
		Drastic test	<b>e</b> k	210	

аеттика 022		GENERA	GENERAL		
PEATURE	PANDE	WEIGHT	PATING		
	0-6 <sup>1</sup>	5	10	50	
HET RECHARGE	10+	4	9	36	
Aquifer Media	sand & gravel	3	8	24	
Soil Media	MUCK	2	2	4	
TOPOGRAPHY	0-2 %	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
	Driado Index		194		

ееттна 023			L.		
PEATURE	RANGE	WEXAHT	RATING	NUMBER	
DEPTH TO WATER	0.5	5	10	50	
NET PECHARGE	10+	4	9	36	
AQUIPER MEDIA	KARST LIMESTONE	3	9	27	
SOK MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
INPACT VADOBE ZONE	KARSTLIMESTONE	5	10	50	
HYDRAUUC CONDUCTIVITY	2000 +	3	10	30	
		Drantio Ind		207	

аеттна 025		I GIENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEFTH TO WATER	ō-10	5	9	45
NET RECHARGE	10+	4	9	36
aquimer Media		3	10	30
SOL MEDIA	SANDY LOAN	2	6	12
TOPOGRAPHY	0-2%	1	10	10
IMPACT VADOGE 20NE	SAND & GRAVEL WELTICLAY	5	6	30
HYDRAULIC CONDUCTIVITY	2000 -	3	10	30
Drunits Index			193	

SETTING 026		GENERAL		
PEATURE	RANGE	WEIGHT	PATING	NUMBER
	9-5	5	10	50
NET RECHARGE	10+	4	9	36
AQUIPER MEDIA	KARST LINESTONE	3	10	30
BOL MEDIA	BAND	2	9	18
TOPOGRAPHY	0-2%	1	10	10
MPACT VADOBE 20NE	SAND & GRAVEL WELT/CLAY	5	8	40
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30
Draatie Index.			214	

	ееттика 028			GENERAL		
	Plature	RANGE	WEIGHT	RATING	NUMBER	
	DEPTH TO WATER	0-8	5	10	50	
	INET RECHARGE	10-+	4	9	36	
		Sand & Gravel	3	8	24	
]	BOL MEDIA	MUCK	2	2	4	
]	TOPOGRAPHY	02%	1	10	10	
]	MPACT VADORE ZONE	KARSTLIMESTONE	5	10	50	
]		2000 +	З	10	30	
			Drastio M		204	

9817784G 027			CENERAL			
PEATURE	RANGE	THORE	RATING			
DEPTH TO WATER	0-8	5	10	50		
NET RECHARGE	10+	. 4	9	36		
AQUIPER MEDIA	KARET LIMESTONE -	3	10	30		
SCIL MEDIA	THIN OR ABUENT	2	10	20		
TOPOGRAPHY	02%	1	10	10		
IMPACT VADOBE ZONE	SAND & GRAVEL WIELTICLAY	5	8	40		
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30		
		Draatile 144	<b>.</b>	216		

авттика 029		GENERA	AL.		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIFER MEDIA	KARIET LIMESTONE	3	10	30	
SOL MEDIA	MUCK	2	2	4	
TOPOBRAPHY	10-2%	1	10	10	
IMPACT VADORE 20NE	KARST LINESTONE	5	10	<b>5</b> 0	
HYDRAULIC CONDUCTIVITY	2000 +	3.	10	<b>3</b> 0.	
	Drawtic Index		210		

аеттика 030		CARNER	MAL.		
PEATURE	RANGE	WENCHT	WEIGHT PATING NU		
DEPTH TO WATER	0.5	5	10	50	
NET PECHAMOR	10+	4	9	36	
AQUIFER MEDIA	BAND & GRAVEL	3	8	24	
BOIL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	BAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
		Dvalto (nde	EX.	189	

SETTING 032		GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	D-B	5	10	50
NET RECHARGE	10+	4	9	36
	BAND & GRAVEL	3	8	24
SOL MEDIA	THIN OR ABSENT	2	10	20
TOPOGRAPHY	0.2%	1	10	10
IMPACT VADOGE ZONE	SAND & GRAVEL	5	9	45
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30
		Dramite unde		215

неттно 033		GENERA	L		
TEATURE	RANGE	WEQHT	PATING	NUMBER	
DEPTH TO WATER	Q.5	5	10	50	
NET RECHARGE	10+	4	9	36	
AGUIPTER MEDIA	SAND'E GRAVEL	3	6	18	
BOIL MIIDA	SANDY LOAM	2	6	12	
торошкирну	02%	1	10	10	
MPACT VADORE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18	
		Drastic indi		179	

иеттна 035	035 GENERAL			
FEATURE	ANIDE	WEIGHT	RATING	NUMBER
	0-5	5	10	50
NET RECHARGE	16+	4	9	36
ADUNTER MEDIA	SAND & GRAVEL	3	6	18
SOL MEDIA	\$4HD	2	9	18
TOPOGRAPHY	02%	1	10	10
MPACT VADORE ZONE	SAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18
		Drastio ins		190

аеттика 034			IRAL		
PEATURE	Rande	WEIGHT	RATING	HUMBER	
DEPTH TO WATER	0-8	5	10	50	
NET RECHARGE	10+	. 4	9	36	
AGUITER MEDIA	SAND & GRAVEL	3	6	18	
BOIL MEDIA	SANDY LOAM	2	6	12	
TOPOGRAPHY	0.2%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
		Draulio Ins		191	

аеттика 036			4.		
PEATURE	RANGE	WEIGHT	WEIGHT RATING NUM		
DEPTH TO WATER	0-6	5	10	50	
NETRECHARGE	10+	4	8	36	
AQUIPER MEDIA	SAND & GRAVEL	3	6	18	
BOIL MEDIA	EAHD	2	9	18	
TOPOGRAPHY	0-2%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Drastic inde	ĸ	<b>19</b> 6	

setting 037		GENERA	νL		
PEATURE	RANGE	WEIGHT	PATING	NUMBER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
ADUFER MEDIA	SAND & GRAVEL	3	6	18	
I SOL MEDIA	SAND	2	9	18	
TOPOGRAPHY	0.2%	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
	Dramito Index		202		

setting 038		amen	GINERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
	0-5	5	10	50	
NET RECHARGE	10-	4	9	36	
	SAND & GRAVEL	3	6	18	
SOL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02 %	1	10	10	
IMPACT VADOBE ZONE	BAND & GRAVEL	5	6	30	
	1 -100	3	6	18	
		Dreatile inst		166	

SETTING 039 GENERAL		<u>.</u>		
PEATURE	RANGE	WEXHIT	PATING	NUMBER
DEPTH TO WATER	0-5	5	10	50
NET RECHARGE	10+	4	9	36
AGUIPER MEDIA	BAND & GRAVEL	3	6	18
SOIL MEDIA	миск	2	2	4
TOPOGRAPHY	02%	1	10	10
MPACT VADOBE ZONE	BAND & GRAVEL	5	6	30
HYDRAULIC CONDUCTIVITY	1900 - 2000	3	8	24
		Drastic ind		172

аеттика 043			GENERAL		
PEATURE	Rauche	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-8	5	10	50	
NET RECHARGE	10+	4	9	36	
Acumer Neck	SAND & GRAVEL	3	8	24	
SOL MEDIA	BANDY LOAM	2	6	12	
TOPOGRAPHY	02%	1	10	10	
MPACT VADORE 20NE	SAND & GRAVEL	5	7	35	
	1 -160	3	6	18	
		Drugtio and		185	

аеттнік 040			NERAL		
PEATURE	PANGE	THERE	RATING	NUMBER	
	0-8	5	10	50	
NET RECHARGE	16+	4	9	36	
	SAND & GRAVEL	з	6	18	
SOL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02× _	1	10	10	
INPACT VADOBE 20NE	BAND & GRAVEL	5	6	30	
HYDRAUUC CONDUCTIVITY	2000 +	Э	10	30	
		Densile test		178	

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setting 044		GENERAL			
PEATURE	RANGE	WEIGHT	WEISHT PATING		
DEPTH TO WATER	0.6	5	10	50	
NETRECHARGE	10+	4	9	36	
Aquifter Media	SAND & GRAVEL	3	8	24	
SOIL MEDIA	BANDY LOAM	2	6	12	
TOPOGRAPHY	02%	1	10	10	
IMPAGT VADOBE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	1000 + 2000	З	8	24	
Dreatio index			191		

setting 045		GENERAL				
FEATURE	PANGE	WEIGHT	WEIGHT PATING NUM			
IDEPTH TO WATER	0-5	5	10	50		
NET RECHARGE	10+	4	9	36		
Aquirer Media	SAND & GRAVEL	3	8	24		
SOIL MEDIA	SAND	2	9	18		
TOPOGRAPHY	0-2%	1	10	10		
IMPACT VADOSE ZONE	BAND & GRAVEL	5	8	40		
HYDRAUUS CONDUCTIVITY	3 -100	З	6	18		
		Drastic Index.				

BETTING 046 DEMERAL			بد د	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
	0-8	5	10	50
NET RECHARGE	10+	4	9	36
AQUIPER MEDIA	SAND & GRAVEL	3	8	24
SOL MEDIA	84HD	2	9	18
TOPOGRAPHY	0-2%	1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	1920 - 2000	3	8	24
- Drawto Males			202	

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BETTING 047 DENERAL				
PEATURE	RANGE	WEIGHT	PATING	NUMBER
DEPTH TO WATER	0-6	5	10	50
NETRECHARGE	10+	4	9	36
AQUIPER MEDIA	BAND & GRAVEL	3	8	24
Sol Media	EVID	2	9	18
TOPOGRAPHY	02%	1	10	10
IMPACT VADOLE ZONE	SAND & GRAVEL	5	8	40
HYDRAUUC CONDUCTIVITY	2000+	3	10	30
	Drastio Index.			208

метліка 048	аетлиа 048		GENERAL		
PEATURE	RANGE		WEIGHT	RATING	HUMBER
DEPTH TO WATER	04		5	10	50
NET RECHARGE	10+		4	9	36
	SAND & GRAVEL	-	3	8	24
Sol, Media	IMUCK		2	2	4
тородварну	0.2%		1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL		5	6	30
HYDRAULIC CONDUCTIVITY	1 -100		3	6	18
			Dreatic inde		172

аеттна 049		GENERA	-	
PEATURE	RANGE	WENHIT	PATING	NUMBER
	0-8	5	10	50
NET RECHARGE	10+	4	9	36
ADUITER MEDIA	ENIO & GRAVEL	3	8	24
SOL MEDIA	NUCK	2	2	4
TOPOGRAPHY	02×	1	10	10
MPACT VADORE ZONE	SAND & GRAVEL	5	6	30
	1000 - 2000	3	8	24
Dreatio index			178	

еттна 050		GENERA	GENERAL			
PEATURE	RANGE	WEIGHT	WEIGHT PATING			
DEPTH TO WATER	9-5	5	10	50		
	10+	4	9	36		
AQUIPER MEDIA	BAND & GRAVEL	3	8	24		
SCIL MEDIA	MUCK	2	2	4		
тородилну	0.2 %	1	10	10		
IMPACT VADOBE ZONE	SAND & GRAVEL	5	6	30		
HYDRAULIC CONDUCTIVITY	2000 -	- 3	10	30		
Drasto index			184			

веттика 051		GENERA	GENERAL			
MEATURE	RANGE	WEIGHT	WEIGHT RATING NUMB			
DEPTH TO WATER	0-6	5	10	50		
NET RECHARGE	10+	4	9	36		
AQUIPER MEDIA	KARST LINESTONE	3	9	27		
Soll Media		2	6	12		
TOPOGRAPHY	02%	1	10	10		
IMPACT VADOBE ZOME	SAND & GRAVEL	5	8	40		
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30		
		Drastic Inde	205			

яеттика 053		GENERAL			
FEATURE	RANGE	THEREW	RATING	HUMBER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
Aquimer Media	KARST LIMESTONE	3	9	27	
sol, media	SANC	2	9	18	
тородяляни	0.2%	1	10	10	
IMPACT VADGIE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18	
		Drastie Index			

аеттиц 054		GIENERA	GENERAL			
PEATURE	RANDE	WEIGHT	WEIGHT RATING NUMBE			
DEPTH TO WATER	0-5	5	10	50		
NET RECHARGE	10+	4	9	36		
	KARET LIMESTONE	3	9	27		
SOL MEDIA	SAND	2	9	18		
TOPOGRAPHY	02%	1	10	10		
MPACT VADOBE ZONE	ISAND & GRAVEL	5	8	40		
	12000 +	3	10	30		
		Drustic Index				

яеттика 059		GENERAL			
MEATURE	RANGE		WEIGHT	RATING	MUMBE
	10-5		5	10	50
NET RECHARGE	10+		4	9	36
ACUTER MEDIA	SAND & GRAVEL		3	6	18
SOL MECHA	MUCK		2	2	4
TOPOGRAPHY	02%		1	10	10
MPACT VADOBE ZONE	BAND & GRAVEL		5	8	40
HYDRAULIC CONDUCTIVITY	1 -1400		3	6	18
			Creatio Insi	•	176

меттика 057		GENERA	GENERAL			
PRATURE	RANGE	WEIGHT	RATING	NUMBER		
	0-6	5	10	50		
HET RECHURGE	10+	. 4	9	36		
		3	9	27		
BOK. MEDIA	THIN OR ABOUNT	2	10	20		
TOPOGRAPHY	02% -	1	10	10		
IMPACT VADORE ZONE	KARST LIMESTONE	5	10	50		
HYDRAULIC CONDUCTIVITY	1) -100	з	6	18		
		Cirganio insi		211		

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аеттна 060		GENERA	BRAL			
PEATURE	RANGE	WEIGHT	WEIGHT RATING NUM			
DEPTH TO WATER	0-8	5	10	50		
NET RECHARGE	10+	4	9	36		
	KARST LIMESTONE	3	9	27		
BOE MEDIA	MUCK	2	2	4		
TOPOGRAPHY	0-2 %	1	10	10		
IMPACT VADOBE ZONE	KARST LIMESTONE	5	10	50		
HYDRAUUC CONDUCTIVITY	1000 - 2000	3	8	24		
	Drastio Index			201		

зеттна 061		GENERA	L		
PEATURE	RANGE	WEIGHT	WEIGHT RATING NUMB		
DEPTH TO WATER	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIFER MEDIA	KARSTLIMESTONE	3	9	27	
BOL MEDIA	THIN OR ABSENT	2	10	20	
TOPOGRAPHY	02X	1	10	10	
IMPACT VADOBE ZONE	KARST LINESTONE	5	10	50	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Drastio (nde	ĸ	217	

неттика 064		GENERA	NERAL		
PEATURE	PANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-5	5	10	50	
HET RECHARGE	10+	4	9	36	
	BAND & GRAVEL	3	8	24	
BOL MEDIA	MUCK	2	2	4	
TOPOBRATHY	02%	1	10	10	
MPACT VADOBE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Oraniio Inde	ĸ	183	

SETTING 065		GENERA	RAL .		
PEATURE	RANGE	WEIGHT	PATING	NUMBER	
DEFTH TO WATER	0-5	5	10	50	
NET PECHARQE	10+	4	9	36	
AQUIFER MEDIA	SAND & GRAVEL	3	8	24	
SOL MEDIA	SAND	2	9	18	
тороднарну	02 X	1	10	10	
MPACT VADOBE 20HE	KARITLIMESTONE	5	7	35	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
		Circuito Hud		203	

яеттна 066	na 066		GEHERAL		
FEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	10-6	5	10	50	
NET RECHARGE	10+	4	9	36	
AGUIFER MEDIA		3	9	27	
scil Neda	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
NIPACT VADORE ZONE	BAND & GRAVEL	5	8	40	
HYDRALLIC CONDUCTIVITY	2000 +	3	10	30	
		Crastie Ind		197	

веттна 067		GENERA	ieneral,		
PEATURE	RANGE	WEIGHT PATING NUM			
	04	5	10	50	
NET RECHARGE	10.	4	9	36	
Aquimer Media	SAND & GRAVEL	3	9	27	
BOIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
		Drankis insi	•	211	

аеттика 068		GENERA	L		
PEATURE	RANGE	WEIGHT	PATING		
	0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUITER MEDIA	SAND & GRAVEL	З	9	27	
SOIL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02X	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	2000+	3	10	30	
		Drastic Inde		197	

аеттика 069		GENERA	<u>u</u>		
PEATURE	RANGE	WEIGHT	WEIGHT RATING NUM		
DEPTH TO WATER	0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	BAND & GRAVEL	3	6	18	
BOU, MEDIA	BAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
MPACT VADOGE ZONE	SAND & GRAVEL	5	8	40	
	9000 +	3	10	30	
	Drastic index		202		

аеттика 070		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	B-10-	5	9	45	
NËT RECHARGE	10+	4	9	36	
		3	9	27	
Soil Media	awp	2	9	18	
тородварну	02%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL	5	8	40	
	2000 +	3	10	30	
		Draatio teda	-	206	

SETTING 072		GENERAL		
MEATURE	RANGE	WEIGHT	RATING	NUMBER
	Q.5	5	10	50
NET RECHARGE	10+	4	9	36
AQUIPER MEDIA	SAND & GRAVEL	3	4	12
SOL MEDIA	SAND	2	9	18
	0.8 %	1	10	10
MPACT VADOBE ZONE	SAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY		3	1	3
	Drastin index.			169

еттика 075		GRINERA	BAL		
PEATURE	PANGE	WERHT	WEIGHT RATING		
DEPTH TO WATER	04	5	10	50	
NET RECHARGE	10+	4	9	36	
ADUNER MEDIA	KARSTLINESTONE	3	9	27	
	HUCK	2	2	4	
TOPOGRAPHY	0-2 %	1	10	10	
IMPACT VADORE ZONE		5	8	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18	
		Crimito Ha		185	

аетлиа 074		GENERA	AL			
PEATURE	RANGE	WERSHIT	WEIGHT RATING HUN			
	0-5	5	10	<b>5</b> 0		
HET RECHARGE	10+	4	9	36		
AQUITER MEDIA		3	9	27		
şör, Media	MUCK	2	2	4		
TOPOGRAPHY	02%	1	10	10		
IMPACT VADOBE ZONE	KARIFT LINESTONE	5	8	40		
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12		
		Constantio (and	*	179		

есттика 076		GENERA	GENERAL			
PEATURE	RANGE	WEIGHT	RATING	NUMBER		
DEPTH TO WATER	0.6	5	10	50		
NET RECHARGE	10+	4	9	36		
AQUIPER MEDIA	SAND & GRAVEL	3	8	24		
SOIL MEDIA	SAND	2	9	18		
TOPOGRAPHY	0.2%	1	10	10		
IMPACT VADORE 20NE	SAND & GRAVEL	5	8	40		
HYDRAULIC CONDUCTIVITY	1 -100	3	4	. 12		
		Drastic inde		190		

ветлика 077			GENERAL			
PEATURE	RANGE	WEIGHT	RATING	NUMBER		
DEPTH TO WATER	0.5	5	10	50		
NET RECHARGE	110+	4	9	36		
AQUIPER MEDIA	SAND & GRAVEL	3	6	18		
SOL MEDIA	SAND	2	9	18		
тороалирну	02%	1	10	10		
IMPACT VADOSE ZONE	SAND & GRAVEL	5	8	40		
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12		
		Drastic Inde	ec .	184		

зеттика 078		GENERA	GENERAL			
PEATURE	RANGE	WEIGHT	WEIGHT RATING NU			
DEPTH TO WATER	0-6	5	10	50		
HET NECHARGE	10+	4	9	36		
AQUIPER MEDIA	KARST LINESTONE	3	3 10			
SCH, MEDIA	MUCK	2	2	4		
TOPOGRAPHY	02%	1	10	10		
INPACT VADORE ZONE	KARST LINESTONE	5	10	50		
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12		
		Drastic Ind	<b>K</b>	192		

аеттика 079		GENERA	GENERAL			
MIATURE	Range	WENGHT	PATING	NUMBER		
DEPTH TO WATER	0-5	5	10	50		
NET PISCHARDE	10+	4	9	36		
Aquifier Media	KARSTLIMESTONE	3	10	30		
SKOR. MEDIA	MUCK	2	2	4		
TOPOGRAPHY	02%	1	10	10		
IMPACT VADOBE ZONE	KARSTLIMESTONE	5	10	50		
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18		
		Crastic inst	<b>.</b>	198		

		<b>BETTING 081</b>		athetu	L	
		REATURE	RANGE	WEIGHT	PATING	NUMBER
i0		DEPTH TO WATER	0.5	5	10	50
16		INET RECHARGE	10-	4	9	36
:7		aquitter media	SAND & GRAVEL	3	6	18
4			SAND	2	9	18
0		TOPOGRAPHY	34%	1	9	9
ю	:	IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40
10		HYDRAULIC CONDUCTIVITY	2000 +	3	10	30
17				Creatio ind	-	201

8811784G 080		GENERA	OBHERAL		
PEATURE	RANGE	WEIGHT	RATING	HARER	
	0-8	5	10	50	
NÊT RECHARGE	10+	. 4	9	36	
Aquifter Media	KARET LINESTONE -	3	9	27	
SOL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADORE ZONE	KARSTLIMESTONE	5	8	40	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
		<b>Cristic</b> Inte		197	

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яетлиа 082		aner	GENERAL		
	RANGE	WEIGHT	RATING	NUMBER	
	0.5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	8	24	
SOL MEDIA	BAND)	2	9	18	
TOPOGRAMMY	26%	1	9	9	
IMPACT VADOSE ZONE	BAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Drauks ind	1 <b>8</b> 9		

иеттика 083		GENERAL			
FEATURE	RANGE	WEIGHT RATING NUM			
DEPTH TO WATER	<b>0.5</b>	5	10	50	
NET RECKARGE	10+	4	9	36	
AQUIPTER MEDIA	SAND & GRAVEL	3	9	27	
	SAND	2	9	18	
торовнарну	2-6 %	1	9	9	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
an •		Drastic Inde		210	

еттиа 086		GENERA	GENERAL			
PEATURE	RANGE	WEXANT	RATING	NUMBER		
	<b>5-1</b> 0	5	9	45		
NET RECHARGE	10+	4	9	36		
AQUIPER MEDIA	BAND & GRAVEL	3	9	27		
scil media	BAND	2	9	18		
TOPOGRAPHY	02%	1	10	10		
IMPACT VADORE ZONE	SAND & GRAVEL	5	8	40		
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12		
Drasto inter			188			

<del>аеттика</del> 088		GIÈ NË RAL				
PEATURE	RANGE	THOREW	WEIGHT MATING NU			
DEPTH TO WATER	0.6	5	10	50		
NETRECHARGE	10+	4	9	36		
ACUIPTIN MEDIA	SAND & GRAVEL	Э	8	24		
sol media		2	6	12		
TOPOGRAPHY	02%	1	10	10		
IMPACT VADOBE ZONE	SAND & GRAVEL	5	, 7	35		
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30		
		Dvinitio Ind	<b>.</b>	1 <del>9</del> 7		

автлика 089			GENERAL			
PEATURE	RANGE	WEIGHT	RATING	NUMBER		
	0-5	5	10	50		
NET RECHARGE	10+	_4	9	36		
Aguipter Media	SAND & GRAVEL	3	9	27		
BCIL MEDIA	SAND	2	9	18		
TOPOGRAPHY	02%	1	10	10		
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40		
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12		
		Drasito ind	193			

автлыа 090		GENERAL		
PEATURE	RANGE	WEIGHT PATING NUM		
DEPTH TO WATER	0-8	5	10	50
NET RECHARGE	10-	4	9	36
ACUMER MEDIA	SAND & GRAVEL	3	9	27
sol neda	5410	2	9	18
TOPOGRAPHY	0-2 %	1	10	10
SAPACT VADOGE ZONE	SAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18
		Dramito ten	-	199

зетлиа 091		GENERA	ieneral		
FEATURE	RANGE	WENGHT	RATING	HUNDER	
DEPTH TO WATER	6-10	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUIFER MEDIA	SAND & GRAVEL	3	9	27	
SOL MEDIA	SAND	2	9	18	
TOPOGRAPHY	0.2%	1	10	10	
IIMPACT VADOBE ZONE	SAND & GRAVEL	5	ß	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	6	. 18	
		Drimite inne		194	

BETTING 093		GENERA	vL		
PEATURE	RANGE	WEKAHT	WEIGHT RATING NUM		
DEPTH TO WATER	1 0-8	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIFER MEDIA	SAND & GRAVEL	3	<del>9</del>	27	
OIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	34%	1	9	9	
IMPACT VADOSE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY .	1 -100	Э	6	18	
		Driptic Hol	px.	198	

аеттика 094		ORMERA	tai.		
PEATURE	RANGE	WEIGHT	PATING	NUMBER	
DEFTH TO WATER	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
aquifen Media	SAND & GRAVEL	3	9	27	
Soil Media	MUCK	2	2	4	
	02%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	† -1 <b>0</b> 0	3	4	12	
		Drustie Huis		174	

яеттна 096

DEPTH TO WATER

PEATURE

SETTING 095		GENERA	ENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	B-10	5	9	45	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	9	27	
Soil Media	SAND	2	9	18	
TOPOGRAPHY	24%	1	9	9	
MPACT VADOBE ZONE	SAND & GRAVEL	5	. 8	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18	
		<b>Draatic ins</b>		193	

GENERA	<b>v</b> .		ееттика 098	
WEIGHT	RATING	HUMBER	PEATURE	RANGE
5	10	50	DEPTH TO WATER	<b>\$</b> -10
. 4	9	36	NET RECHARGE	10+
3	9	27	AOUPER MEDIA	BAND & GRAVEL
2	9	18	SOR. MEDIA	SAMC
1	10	10	TOPOGRAPHY	0-2%
5	8	40	MPACT VADORE ZONE	BAND & GRAVEL WA
3	1	3		
Drastic ind		184		

TURE	RANGE	WEIGHT	AATING	NUMBE
TH TO WATER	<del>5.</del> 10	5	9	45
RECHARGE	10+	4	9	36
Per Media	BAND & GRAVEL	3	4	12
MEDIA	ame	2	9	18
CORAFINY	02%	1	10	10
CT VADOME ZONE	RAND & GRAVEL WOLTCLAY	5	5	25
		3	1	3
		Drasils lad	<b>e</b> ak	149

GENERAL

		Drastic index			
HYDRAULIC CONDUCTIVITY		3	1	3	
IMPACT VADORE ZONE	BAND & GRAVEL	5	8	40	
TOPOBRAPHY	02% <u>.</u>	1	10	10	
BON, MEDIA	BAND	2	9	18	
AQUIPPIN MEDIA	BAND & GRAVEL	- 3	8	27	
NET RECHARGE	10-	. 4	9	36	

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аеттика 099			ter .		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEFTH TO WATER	<b>5</b> -10	5	9	45	
NET RECHARGE	10-	4	9	36	
AQUITER MEDIA	SANC & GRAVEL	3	4	12	
Soil Media	SANEC	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL WISHLTICLAY	5	5	25	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		žnusio mie	×	158	

SETTING 099		GENERA	RAL		
PEATURE	RANGE	WEIGHT	RATING	NMBER	
DEPTH TO WATER	6-10	5	9	45	
NET RECHARGE	10+	4	9	36	
Aquiper Media	SAND & GRAVEL	З	4	12	
BOIL MEDIA	BAND	2	9	18	
Тородалену	02%	1	10	10	
	BAND & GRAVEL WOLLT/CLAY	5	5	25	
	1 -100	3	4	12	
	<u> </u>	Draatio texts	W.	158	

зеттна 100					
PEATURE	RANGE	THOREW	AATING	NUMBER	
	Q.6	5	10	50	
NET RECHARGE	10+	4	9	36	
Aquiter Media	SAND & GRAVEL	3	9	27	
SCAL MEDIA	SAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	BAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	100 - 500	3	2	6	
		Cruste ine		187	

аетлю 101		GENERAL		
PEATURE	PANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	04	5	10	50
NET RECHARGE	10+	4	9	36
	SAND & GRAVEL	3	9	27
SOL MEDIA	MUCK	2	2	4
TOPOGRAPHY	02%	1	10	10
IMPACT VADORE 20HE	SAND & GRAVEL WELTICLAY	5	4	20
	100 - <b>30</b> 0	3	2	6
		Creatio des		153

*#TTHA 103	103 GENERAL			
PEATURE	RANGE	WEIGHT	PATING	INUMBER
DEPTH TO WATER	B-10	5	9	45
NET RECHARGE	10+	4	÷	36
Acumer Media	BAND & GRAVEL	3	9	27
SCIL MEDIA	SAND	2	9	18
TOPOGRAPHY	0.2%	1	10	10
MPACT VADOBE ZONE	SAND & GRAVEL	5	8	40
	100 - 300	3	2	6
		Dreatic insi	er i	182

аеттно 102		-	<b>.</b>	
PEATURE	RANGE	WEIGHT	PATING	NUMBER
	<b>5-10</b>	5	9	45
NET RECHARDE	10+	. 4	9	36
	SAND & GRAVEL	3	9	27
SOL MEDIA	SAND	2	9	18
TOPOGRAPHY	02%	1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40
		3	1	3
		Denniko uni	ŧĸ	179

иетлиа 104		GENERA	<u>v</u>		
PEATURE	Ravelle	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	8-10	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUITER MEDIA	BAND & GRAVEL	3	4	12	
SCIL MIEDIA	SAND	2	9	18	
TOPOGRAPHY	26%	1	9	9	
INPACT VADOUS ZONE	SAND & GRAVEL WISH TICLAY	5	5	25	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Drastio Inde	×	157	

SETTING 105		GENERA	WL.		
PEATURE	RANGE	WEIGHT	PATING	NUMBER	
DEPTH TO WATER	0-8	5	10	50	
NETRECHARGE	10-	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	9	27	
SOIL MEDIA	миск	2	2	4	
TOPOGRAPHY	02%	1	10	10	
MPACT VADOSE ZONE	SAND & GRAVEL WIRLTICLAY	5	4	20	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		(Denuitto inde	<b>x</b>	1 <b>59</b>	

SETTING 106					
PEATURE	RANGE	WERNHT	RATING	HUMBER	
DEPTH TO WATER	0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	4	12	
BOL MEDIA	SAND	2	9	18	
TOPOBRAPHY	02%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Drastic Inde		178	

зетлиа 108		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	MATING	NUMBER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	4	12	
SOL MEDIA	MUCK	2	2	4	
тородилину	02%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL WISE TICLAY	5	4	20	
HYDRAULIC CONDUCTIVITY		3	1	3	
		Dramile inde		135	

астлыз 111		GENERA	IAL .		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	8-10	5	9	45	
NET RECHARGE	10-	4	9	36	
	SAND & GRAVEL	3	4	12	
SCIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
MPAGT VADOBE ZONE	SAND & GRAVEL WELTICLAY	5	4	20	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Drustic ind	ex 🗌	153	

SETTING 110		GENERA	L	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	18-30	5	7	35
NET RECHANGE	10+	4	9	36
AQUIFER MEDIA	SAND & GRAVEL	3	4	12
SOL MEDIA	544D	2	9	18
TOPOGRAPHY	0.2%	1	10	10
HIPACT VADOBE ZONE	SAND & GRAVEL WEET/CLAY	5	4	20
	1 -100	Э	4	12
		Drastic Ind	<b>K</b>	143

аетны 114		GENERA	RAL		
Platuke	RANGE	WENGHT	RATING	NAME	
	-0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
Aquifer Media	SAND & GRAVEL	з	4	12	
SCIL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL WISILTICLAY	5	4	20	
HYDRAULIC CONDUCTIVITY	1 -100	Э	4	12	
		Drantis Inde	*	144	

аеттика 119		GENERA	<u>.</u>		
PEATURE	RANGE	WEKHIT	RATING	NUMBER	
DEPTH TO WATER	0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
AGUITER MEDIA	SAND & GRAVEL	3	9	<b>2</b> 7	
SOIL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL WILLTICLAY	5	7	35	
HYDRAULIC CONDUCTIVITY	2000 -	3	10	30	
Dynatic Indus			R.	192	

\$еттініς 120		GENERA	GENERAL		
FRATURE	RANGE	WEXAHIT	RATING	NUMBER	
	0-8	5	10	50	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	3	27	
Sol Media	MUCK	2	2	4	
TOPOGRAPHY	0-2 %	1	10	10	
IMPACT VADCIDE ZONE	SAND & GRAVEL WISILTICLAY	5	7	35	
HYDRAULIC CONDUCTIVITY	1 -100	Э	4	12	
		Dvastio vado	k.	174	

аеттика 121		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	PATING	NUMBER	
DEPTH TO WATER	a.	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	9	27	
sor, Media	MUCK	2	2	4	
торовыену	0-2 %	1	10	10	
MPACT VADOBE ZONE	SAND & GRAVEL WORLTCLAY	5	4	20	
HYDRAULC CONDUCTIVITY		3	1	3	
		Dramito (na)		150	

**************************************	неттно 123		AL.		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
	0.6	5	10	50	
NET NECHANGE	10+	4	9	36	
ACUMER MEDIA	SANC & GRAVEL	3	9	27	
PCIL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	0-2%	1	10	10	
APAGT VADORE 20NE		5	7	35	
HYDRAULIC CONDUCTIVITY	1-100	3	6	18	
		Orașile Inc		180	

еттна 122			L	
PEATURE	RANGE	WEIGHT	PATING	NUMBER
DEPTH TO WATER	04	5	10	50
NET RECHARGE	10.	4	9	36
AQUIPER MEDIA		3	6	18
SOIL MEDIA	MUCK	2	2	4
TOPOGRAPHY	02%	1	10	10
IMPACY VADOBE ZONE	SAND & GRAVEL WIRLTICLAY	5	4	20
HYDRAULIC CONDUCTIVITY		3	1	3
		Companies Andre	in a state of the	141

serma 124		GENERA	£	
PEATURE	Range	WEIGHT	RATING	NUMBER
DEPTH TO WATER	0-8	5	10	50
	10+	4	9	36
AQUITER MEDIA	KARST LIMESTONE	3	9	27
	BANDY LOAM	2	6	12
TOPOGRAPHY	0.2 N	1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL	5	7	35
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12
		D <b>raatio</b> Inde	<b>I</b> X	182

<del>зетп</del> иа 125		GENERA	<b>L</b>	
PEATURE	RANGE	WEIGHT	RATING	HUMBER
DEPTH TO WATER	0-8	5	10	50
NET RECHARGE	110+	4	9	36
	KARST LINESTONE	3	10	30
SOIL MEDIA	MUCK	2	2	4
TOPOGRAPHY	02%	1	10	10
IMPACT VADOBE ZONE	KARST LINESTONE	5	10	50
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24
		Dreatic ind		204

яеттика 126		GENERA	L	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	0-8	5	10	50
NET RECHARGE	10+	4	9	36
	SAND & GRAVEL	3	8	24
Soil Media	MUCK	2	2	4
TOPOGRAPHY	02%	1	10	10
INFACT VADOBE ZONE	SAND & GRAVEL WINLTICLAY	5	7	35
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12
		Draafile   nde		171

аеттика 127		GENERA	٤.	
PEATURE	Ruide	WEIGHT	RATING	NUMBER
DEPTH TO WATER	0-5 5		10	50
NET RECHARGE	10+	4	9	36
AQUIPER MEDIA	KARSTLIMESTONE	3	9	27
SOIL MEDIA	SAND	2	9	18
TOPOGRAPHY	02%	1	10	10
MPACT VADOSE ZONE	SAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	1-100	3	4	12
		Drastic ins		193

еттна 129		GENERA	L	
PEATURE	RANGE	WEIGHT	RATING	NUMBE
DEMTH TO WATER	0.6	5	10	50
NET RECHARGE	10+	4	9	36
ACUTER MEDIA	SAND & GRAVEL	3	8	24
SCHL MEDIA	-	2	9	18
TOPOGRAPHY	02%	1	10	10
MPACT VADOBE ZONE	SAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY		3	1	3
		(Despile las		181

serrous 128		GENERA	L	
PEATURE	RANDE	WILIGHT	RATING	NUMBER
DEPTH TO WATER	0-5	5	10	50
NET RECHARGE	10+	. 4	9	36
Agupter Media	KARET LINERTONE -	3	10	30
POL MEDIA	844Q	2	9	18
TOPOGRAPHY	02%	1	10	10
HIPACT VADORE ZONE	BAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24
		Drastic inst		208

##1TING 130		GENERA	4	
PEATURE	PANGE	WEIGHT	RATING	NUMBER
	5-10	5	9	45
NET RECHARGE	10+	4	9	36
Aguifer Media	SAND & GRAVEL	3	8	24
SOIL MEDIA	SAND	2	9	18
тородварну	0-2 %	1	10	10
IMPACT VADOSE ZONE	BAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	,	3	1	3
		Crastic Inde		176

аеттис 131		GENERA	r	
PEATURE	RANGE	WEIGHT	MATING	NUMBER
DEPTH TO WATER	IG-5	5	10	50
NET RECHARGE	10+	4	9	36
ACUTER MEDIA	SAND & GRAVEL	3	8	24
SOIL MEDIA	844D	2	9	18
тороаналну	02%	1	10	10
IMPACT VADOBE ZONE	HAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6
		Draulio (nde		184

SETTING 132		GEHERA	L	
PEATURE	RANGE	WEIGHT	PATING	NAMBER
	0-8	5	10	50
NET RECHARGE	10+	4	9	36
	SAND & GRAVEL	3	8	24
SOL MEDIA	SANDY LOAM	2	6	12
TOPOGRAPHY	0-2%	1	10	10
INPACT VADORE ZONE		5	7	35
HYDRAULIC CONDUCTIVITY	1 -190	3	4	12
		Oriatio Ind		179

яеттна 133		GENER	<u>بل</u>	
FEATURE	AANGE	WEIGHT	PATING	NUMBER
	18-10	5	9	45
NET RECHARGE	10-	4	9	36
Aquimer Media	SAND & GRAVEL	3	8	24
SOL MEDIA	salat	2	9	18
TOPOGRAPHY	02 X	1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40
	1 -100	3	4	12
	,	Crantic 199	<b>.</b>	185

GENERAL

Drastin insta

MEIGHT PATING

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		<u>.</u>	
	WEIGHT	RATING	HUMBER
	5	10	50
	. 4	9	36
GRAVEL -	3	9	27
LOAM	2	6	12
	1	10	10
GRAVEL	5	7	35
	3	4	12
	Drastio Inst		182

PEATURE	RANGE	WEIGHT	RATING	HUMBER
DEPTH TO WATER	IQ4	5	10	50
NET PICKARGE	10+	4	9	36
	INNE & GRAVEL -	3	9	27
sol media	SANDY LOAM	2	6	12
TOPOGRAPHY	02%	1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL	5	7	35
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12
			•	100

SETTING

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аеттика 136			L.		
PEATURE	RANDE	WERE	WEERT RATING N		
DEPTH TO WATER	6-10	5	9	45	
NETRECHARGE	10+	4	9	36	
Aguiper Media	SAND & GRAVEL	3	8	24	
ISOIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOSE ZONIE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Drawin we		179	

<del>аетты</del> а 137		GENERA	£	
PEATURE	RANGE	WEIGHT	NUMBER	
DEPTH TO WATER	18-10	5	9	45
NET RECHARGE	10+	4	9	36
AQUIPER MEDIA	BAND & GRAVEL	3	8	24
SOIL MEDIA	MUCK	2	2	4
TOPOGRAPHY	02%	1	10	10
IMPACT VADOBE ZONE	MAND & GRAVEL	5	6	30
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12
		Drastic Indi	×	161

асттика 138		GENERA	HERAL		
PEATURE	RANGE	WEIGHT	RATING	MIMBER	
	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	8	24	
ISON. MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE 20NE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Dravite test		165	

меттиц 139		GEOREMA	INDRAL		
PRATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHARGE	10-	4	9	36	
ACUPER MEDIA	SAND & GRAVEL	3	8	24	
BOIL MEDIA	ulučk	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	7	35	
	1 -100	3	4	12	
		Oranito (ndi		171	

аеттяна 140		-	<b>27</b> 41,		
PEATURE	RANGE	ищант	RATING	NUMBER	
DEPTH TO WATER	8-10	5	9	45	
NET RECHARGE	10+	. 4	9	36	
AQUIPER MEDIA	BAND & GRAVEL	3	8	24	
SCI, MEDIA		2	6	12	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	BAND & GRAVEL	5	6	30	
HYDRAULIC CONDUCTIVITY	100 - 900	3	2	6	
		Dreatile test		163	

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аеттика 141			ML		
PRATURE	RANGE	WEIGHT	WEIGHT MATING N		
DEPTH TO WATER	5-10	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	EAND & GRAVEL	3	8	24	
SOL MEDIA	SANDY LOAM	2	6	12	
TOPOGRAPHY	02%	1	10	10	
MPACT VADORE 20HE	EAND & GRAVEL	5	6	30	
HYDRAULC CONDUCTIVITY	1 -100	з	4	12	
		Drusiie ida		169	

<del>зеттн</del> а 143		GEHERA	<b>u</b>		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	610	5	9	45	
NET RECHARGE	10-	4	9	36	
Aquiper Media	SAND & GRAVEL	3	8	24	
SOIL MEDIA	SAND	2	9	18	
	34 %	1	9	9	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1 -100	з	. 4	12	
		Drugtic (pd	<b>a</b> k	184	

зеттиз 144		GENERA	4	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	<b>5-</b> 10	5	9	45
NET RECHARGE	10+	4	9	36
AQUIPER MEDIA	SAND & GRAVEL	3	8	24
soil Media	SAND	2	9	18
TOPOGRAPHY	26%	1	9	9
MPACT VADOBE ZONE	SAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	100 - 200	3	2	6
		Draatio (ná		178

setting 145		GENERA	INERAL		
PEATURE	Runge	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	18-30	5	7	35	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	з	9	27	
SOL MEDIA	SAND	2	Ş	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	1-100	3	4	12	
		Drastic Ind		173	

serлиа 146		GENERA	u.		
PEATURE	RANDE	WEIGHT	PATING	NUMBER	
DEPTH TO WATER	5-10	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	8	24	
sok. Media	SAND	2	9	18	
TOPOGRAPHY	2-6 %	1	9	9	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Drastio kili	-	187	

зеттия 148		GENERA	uL.		
PEATURE	PANGE	WEIGHT	RATING	NUMBE	
DEPTH TO WATER	B-10	5	9	45	
NET RECHARGE	10+	4	9	36	
ADDINER MEDIA	SAND & GRAVEL	3	9	27	
BOR, MEDIA	SAND	2	9	18	
TOPOBRAPHY	24%	1	9	9	
MPAGT VADOBE ZONE	SAND & GRAVEL	5	8	40	
NYDRAULIC CONDUCTIVITY	100 - 900	3	2	6	
	-	Drustin ini		181	

яеттика 147		-			
PEATURE	RANGE	WEXHIT	RATING	INUMBER	
DEPTH TO WATER	C-8	5	10	50	
NETRECHARGE	10+	. 4	9	36	
	SAND & GRAVEL	3	8	24	
SOIL MEDIA	MUCK	2	2	4	
торошкарну	34% -	1	9	9	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	11-100	з	4	12	
		Driatio Hui		170	

еттна 149		GENERA	ENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-6	5	10	50	
INET RECHARGE	10+	4	9	36	
Aquiter Media	Sand & Gravel	3	9	27	
SOIL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	T	10	10	
IMPACT VADOBE 20NE	SAND & GRAVEL	5	7.	35	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Draelio Inde	ĸ	168	

ееттика 150		GENERA	RAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0.6	5	10	50	
NET RECHARGE	10+	4	9	36	
AGUIPER MEDIA	SAND & GRAVEL	3	9	27	
BOL MEDIA	BAND	2	9	18	
TOPOGRAPHY	26%	t	9	9	
MPACT VADOSE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	190 - 300	3	2	6	
		Drastio Hode	×	186	

аетлис 151	аётниц 151		GENERAL		
FEATURE	Rande	WEIGHT	RATING	NUMBER	
	15-10	5	9	45	
NET RECHARGE	10-	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	4	12	
Soll Media	SAND	2	9	18	
TOPOGRAPHY	34%	1	9	9	
IMPACT VADOBE ZONE	SAND & GRAVEL WISELTICLAY	5	5	25	
HYDRAUUC CONDUCTIVITY		3	1	з	
		Dvastie Inde	ĸ	148	

setting 152		GARINERIA	GENERAL		
PEATURE	RANGE	тнаят	PATING	NUMBER	
	16-30	5	7	35	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	4	12	
SCIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	<del>6</del> -12%	1	5	5	
IMPACT VADOBE ZONE	SAND & GRAVEL WESTICLAY	5	4	20	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Drastis Ind		138	

аеттика 153			WL		
PLATURE	RANGE	WEIGHT	PATING	NUMBER	
	-10	5	9	45	
NET RECHARGE	10+	4	9	36	
Acuiper Media	BAND & GRAVEL	3	Ş	27	
sol Media	SAND	2	9	18	
TOPOGRAPHY	264	1	9	9	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1 -160	3	4	12	
		Drawto inst		187	

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авттия. 154			ual.		
PEATURE	RANGE	WEXANT	RATING	NUMBER	
DEMTH TO WATER	18-10	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	4	12	
sol media	5440	2	9	18	
TOPOGRAPHY	0.2 K	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY		3	1	3	
		Desailo ind	•	164	

жеттна 155			L.	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEFTH TO WATER	0-6	5	10	50
NET RECHARGE	10+	4	9	36
Aquipter Media	SAND & GRAVEL	3	9	27
SOL MEDIA	SANDY LOAM	2	6	12
тородварну	0-2 %	1	10	10
IMPACT VADORE ZONE	SAND & GRAVEL	5	7	35
HYDRAULIC CONDUCTIVITY	2000+	3	10	30
		Dramite inde	BK .	200

аеттика 156		GENERA	<u>د</u>		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUITER MEDIA	SAND & GRAVEL	3	9	27	
SOL MEDIA	SAND	2	9	18	
TOPOGRAPHY	0-2%	1	10	10	
IMPACT VADOGE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Drautic Hyde	×	205	

setting 157		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	Q-5	5	10	50	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	9	27	
Soil Media	MUCK	2	2	4	
тородварну	02%	1	10	10	
INPACT VADORE ZONE	EAND & GRAVEL	5	6	30	
	2000 +	3	10	30	
		Drasile and	ĸ	187	

естлыа 158		GENERA	ч. 	
PEATURE	RANCE	WEIGHT	RATING	NUMBER
	10-5	5	10	50
NET RECHARGE	10+	4	9	36
AQUITER MEDIA	SAND & GRAVEL	3	9	27
SOL MEDIA	MUCK	2	2	4
TOPOBRAPHY	02%	1	10	10
MPACT VADOBE ZONE	SAND & GRAVEL	5	7	35
HYDRAULIC CONDUCTINITY	1000-2000	з	8	24
		Crewlin lead		186

		-			
PEATURE	RANGE	WEIGHT	PATING	HAMBE	
DEPTH TO WATER	9-5	5	10	50	
NET RECHARGE	10	4	9	36	
ACUIPER MEDIA	SAND & GRAVEL	3	6	18	
SOL MEDIA	BANDY LOAM	2	6	12	
TOPOGRAPHY	02%	1	10	10	
MPACT VADOBĖ ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
·····		Drastis Ind		185	

ветлиа 159			GENERAL			
PEATURE	Ronge	WEIGHT	RATING	NUMBER		
DEPTH TO WATER	0-5	5	10	50		
INET RECHARGE	10+	4	9	36		
AQUIPER MEDIA	SAND & GRAVEL	_ 3	9	27		
SCIL MEDIA	MUCK	2	2	4		
TOPOGRAPHY	02%	1	10	10		
HIPACT VADOBE ZONE	SAND & GRAVEL	5	6	30		
HYDRAULIC CONDUCTIVITY	1900 - 2000	3	8	24		
		Drights (min		181		

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яеттика 162		GENERA	GENERAL			
PEATURE	RANGE	WEIGHT	RATING	HUMBER		
DEPTH TO WATER	0-6	5	10	50		
NET RECHARGE	10+	4	9	36		
	SAND & GRAVEL	3	8	24		
Soil Media	MUCK	2	2	4		
тородкарну	02%	1	10	10		
IMPACT VADOSE ZONE	SAND & GRAVEL	Б	7	35		
HYDRAULIC CONDUCTIVITY		. 3.	. 1	3		
Draatile index			162			

аеттика 163			GENERAL			
PEATURE	RANGE	WEIGHT	PATING	NUMBER		
DEPTH TO WATER	0-6	5	10	50		
NET RECHARGE	10+	4	9	36		
Aquifter Media	SAND & GRAVEL	3	6	18		
Soil Media	SAND	2	9	18		
ТОРОВНАРНУ	02%	1	10	10		
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40		
HYDRAULIC CONDUCTIVITY		3	1	з		
Drasto index			175			

<b>зеттіна</b> 165			GENERAL			
PEATURE	RANGE	WEIGHT	RATING	NUMBER		
DEPTH TO WATER	0-6	5	10	50		
NET RECHARGE	10+	4	9	36		
	BAND & GRAVEL	3	6	18		
SOL MEDIA	BAND	2	9	18		
TOPOGRAPHY	025	1	10	10		
INPACT VADORE ZONE	BAND & GRAVEL	5	8	40		
HYDRAUUC CONDUCTIVITY	105 - 300	3	2	6		
		Cristic Ind		178		

зеттна 166			GENERAL			
PEATURE	RANGE	WEIGHT	RATING	NUMBER		
DEPTH TO WATER	£-10	5	9	45		
NËT RECHARGE	10.	4	9	36		
Aquipter Media	SAND & GRAVEL	3	6	18		
SCIL MEDIA	BAND	2	9	18		
тородяарну	02%	1	10	10		
MPACT VADOGE ZDHE	SAND & GRAVEL	5	7	35		
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6		
		Drastic Ind		168		

еетна 168		GENERA	GIENERAL		
Plature	ANNOE	WEIGHT	AATING	NUMBER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHNINGE	104	4	9	36	
aquiter Media	KARST LIMESTONE	з	9	27	
BOIL MEDIA	BANDYLCAM	2	6	12	
TOPOSRAPHY	02%	1	10	10	
MPACT VADOGE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Drastic ind		176	

аеттна 167			GENERAL		
PEATURE	RANGE	WEIGHT	BATING	NUMBER	
	04	5	10	50	
NET RECHARGE	10+	. 4	9	36	
AQUITER MEDIA		з	6	18	
əcil media	MUCK	2	2	4	
TOPOGRAPHY	08% _	1	10	10	
MPACT VADOBE ZONE	BAND & GRAVEL	5	6	30	
HYDRAULIC CONDUCTIVITY		3	1	3	
	Dreatin Atom			151	

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зетлиа 170		GENERA	GENERAL			
PEATURE	AANGE	WEIGHT	RATING	NUMBER		
DEPTH TO WATER	6-10	5	9	45		
NET RECHARGE	10+	4	9	36		
AQUIFER MEDIA	BAND & GRAVEL	3	6	18		
SOIL MEDIA	SAND	2	9	18		
TOPOGRAPHY	02%	1	10	10		
IMPACT VADOSE 20NE	BAND & GRAVEL	5	7	35		
HYDRAULIC CONDUCTIVITY		3	1	3		
Drastio Index				165		

зетлид 171		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	<del>5</del> -10	5	9	45	
NET RECHARGE	10-	4	9	36	
AQUIPER MEDIA	BAND & GRAVEL	3	6	18	
BOIL MEDIA	SAND	2	9	18	
торовнани	02X	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
-		Drustio inde	174		

зетлика 172			GENERAL			
PEATURE	PANGE	WEIGHT	RATING	NUMBER		
	10-8	5	10	50		
NET RECHARGE	10+	4	9	36		
AQUIPER MEDIA	SAND & GRAVEL	3	6	18		
SCIL MEDIA		2	6	12		
TOPOGRAPHY	0-2%	1	10	10		
IMPACT VADOSE ZONE		5	7	35		
HYDRAULIC CONDUCTIVITY		3	1	3		
		Crasilo Inde	ĸ	164		

веттна 173		GENER	GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0.8	5	10	50	
NET ROCHARGE	T0	4	9	36	
AQUIPER MEDIA	KARST LINESTONE	3	9	27	
NOIL MEDIA	BANDY LOAM	2	6	12	
TOPOGRAPHY	02X	1	10	10	
MPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTINITY	1 -100	3	6	18	
		Corpusito insti		193	

	SETTING	аттиа 175			general		
	PEATURE	E	RANGE	WEIGHT	FATING	NUMBER	
0		WATER	0-\$	5	10	50	
16	NET RECK	HARGE	10	4	9	36	
:7	AOUPER	MEDIA	SAND & GRAVEL	3	9	27	
0	SOL MED	*	SANDY LOAM	2	6	12	
0	TOPOGA	NPHY	02%	1	10	10	
io I	MPACT V	ADORE ZONE	SAND & GRAVEL	5	8	40	
2	HYDRAUL			3	1	3	
5				Draslic Ind		178	

ееттика 174		GENERA	L.	
PEATURE	RANGE	WEGHT	RATING	HUMBER
	104	5	10	50
NETRECHARGE	10+	. 4	9	36
AGUNTER MEDIA	KARETLEMENTONE	3	9	27
Sol Media	THIN OR ADDRAT	2	10	20
TOPOGRAPHY	02%	1	10	10
IMPACT VADOBE ZONE	KARST LINESTONE	5	10	50
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12
		Dragilio Hist		205

еттна 176		GENERA	vL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
	10.6	5	10	50	
NET RECHARGE	10+	4	9	36	
AGUIFER MEDIA	SAND & GRAVEL	з	8	24	
SOL MEDIA	BANDY LOAM	2	6	12	
TOPOGRAPHY	0-2 %	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Crantic inde	×	173	

аеттика 177		GENERA	ERAL		
PEATURE	RANGE	WEXHIT	RATING	NUMBER	
DEPTH TO WATER	10-6	5	10	50	
NET RECHARGE	10.	4	9	36	
ACUITER MEDIA	KARST LIMESTONE	3	9	27	
Soil Media	MUCK	2	2	4	
TOPOGRAPHY	0-2 %	1	10	10	
SAPACT VADOGE ZONE	KARST LIMESTONE	5	10	50	
HYDRAULIC CONDUCTIVITY		3	1	3	
		Drastic Inde	i.	180	

зетлю 178		<b>GENER</b> A	ial.		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-8	5	10	50	
NET RECHARGE	10+	4	9	36	
	KARST LEARSTONE	З	9	27	
SOL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02 %	٩	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	6	30	
		3	1	3	
		Draello Inde		160	

зеттика 179		GENER			
FEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
aquifer Media	SAND & GRAVEL	3	8	24	
SOL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	0-2%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	6	30	
HYDRAULIC CONDUCTIVITY		3	1	3	
		Drastio (nd		157	

еттна 181		dither/		
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	0-6	5	10	50
NET RECHARGE	10+	4	9	36
AQUITER MEDIA	BAND & GRAVEL	3	6	18
BOIL MECHA	SAND	2	9	18
TOPOGRAPHY	D2%	1	10	10
MPACT VADOBE ZONE	BAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY		3	1	3
<b>.</b>		Creatio Inc		175

авттика 180			ial		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	BAND & GRAVEL	. 3	6	18	
SOL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	0.2%	1	10	10	
IMPACT VADOGE ZONE	SAND & GRAVEL	5	6	30	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Creatile Ind	in	160	

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аеттно 182		GENERA	HERAL		
PEATURE	RANGE	WEIGHT	RATING	HUNDER	
	0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	8	24	
SOL MEDIA	NUCK	2	2	4	
TOPOBRAPHY	02%	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL WISILTICLAY	5	7	35	
HYDRAULIC CONDUCTIVITY	1 -100	3	6.	18	
		Drastic Inde	jik -	177	

яеттна 183		GENERA	HERAL		
PEATURE	RANGE	WEIGHT	NUMBER		
DEPTH TO WATER	0.5	5	10	50	
NET RECHARGE	10+	4	9	36	
AGURAR MEDIA	SAND & GRAVEL	3	8	24	
BOIL MEDIA	SANDY LOAM	2	6	12	
тородварну	0.2 %	1	10	10	
MPACT VADOSE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY		З	1	3	
		Drautte Inde		170	

зетлюз 184		GIENERA	Gieneral		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0.6	5	10	<b>5</b> 0	
NET RECHARGE	10+	4	9	36	
Aquimer Media	SAND & GRAVEL	3	8	24	
SOIL MEDIA	SANDY LOAM	2	6	12	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL WISH TICLAY	5	6	30	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Deantic incl		174	

<del>зеттн</del> а 185		GENERA	ERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	16-90	5	7	35	
NET PECHANGE	10+	4	9	36	
AGUIFER MEDIA	BAND & GRAVEL	3	9	27	
ISOL MEDIA	1944D	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
		Dreatio ind		178	

еттия 187		GENERA			
PEATURE	hande.	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-8	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUITER MEDIA	SAND & GRAVEL	3	8	24	
OCL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
MPACT VADOBE ZONE	SAND & GRAVEL WIRLTICLAY	5	7	35	
HYDRAULIC CONDUCTIVITY	100-200	3	2	6	
	-	Dennilo Ind		165	

зеттна 186		GENERA	GENERAL		
PEATURS	RANGE	THOREW	RATING	N.M.	
	<b>64</b>	5	10	50	
MET RECHARGE	: 10+	. 4	9	36	
	KARST LINESTONE	3	9	27	
Soil Media	MUCK	2	2	4	
TOPOGRAPHY	02% ,	1	10	10	
IMPACT VADOBE ZONE		5	7	35	
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18	
		Drastin ind		180	

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ееттика 188			¥.		
PEATURE	Auncie	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-6	5	10	50	
NET RECHARGE	10+	4	9	36	
Aquiper Media	SAND & GRAVEL	3	8	24	
SOIL MEDIA		2	6	12	
TOPOGRAPHY	0.2%	1	10	10	
IMPACT VADOBE ZONE	BAND & GRAVEL WISELTICLAY	5	6	30	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
Drasto Index			168		

иеттика 189	189 athenal			
PEATURE	RANGE	WENGHT	RATING	NUMBER
DEPTH TO WATER	0-6	5	10	50
NET RECHARGE	10+	4	9	36
AGUNTER MEDIA	SAND & GRAVEL	3	9	27
BOIL MEDIA		2	9	18
TOPOGRAPHY	24%	1	9	9
MPACT VADOSE ZONE	SAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY	1 -100	з	4	12
		Drastio Inde	ĸ	192

SETTING 190		GENERA	GENERAL		
PEATURE	PANGE	WEIGHT	NATING	NUMBER	
DEPTH TO WATER	<b>5</b> -10	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	6	18	
SQL MEDIA	INIC	2	9	18	
TOPOGRAPHY	0.2%	1	10	10	
IMPACT VADORE 20NE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY		3	1	3	
-		Drastic High	-	170	

аеттяна 191		GENERA	GENERAL		
PEATURE	PANGE	WEIGHT	RATING	MUMBER	
DEPTH TO WATER	0.6	5	10	50	
HET NECHANGE	10+	4	9	36	
	BAND & GRAVEL	3	6	18	
SCIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY		3	1	з	
Draatto index			175		

SETTING 192	aenanal denanal			
PEATURE	Nuise	WEIGHT	PATING	NUMBER
DEPTH TO WATER	0-5	5	10	50
NETRECHARGE	10+	4	9	36
AQUIPER MEDIA		3	6	18
BOIL MEDIA		2	6	12
тородиляну	02%	1	10	10
	BAND & GRAVEL	5	7	35
HYDRAULIC CONDUCTIVITY		3	1	3
		Drastic int		164

ееттна 193			GIENERAL			
PEATURE	PANOE	WEIGHT	WEIGHT PATING			
DEFTH TO WATER	0-6	5	10	50		
HET RECHARGE	10+	4	9	36		
ACUTER MEDIA	BAND & GRAVEL	3	9	27		
Sol Media	SME	2	9	18		
TOPOZRAPHY	26%	1	9	9		
MPAGT VADOBE ZONE	RAND & GRAVEL	5	8	40		
HYDRAULIC CONDUCTIVITY		3	1	3		
		Drastic Ind	-	183		

Getting 194		GENERA	4		
FEATURE	RANGE	WEIGHT	RATING	NUMBER	
	5-10	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	8	24	
SOIL MEDIA	SWD	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18	
		Dranitis inde	R .	191	

аеттика 196		GENERA	RAL		
PEATURE	RANGE	WEIGHT	PATING	NUMBER	
DEPTH TO WATER	B-1Q	5	9	45	
NET RECHARGE	10	4	9	36	
ACUIPER MEDIA	SAND & GRAVEL	3	8	24	
9CH MEDIA		2	6	12	
тородилену	0-2 %	1	10	10	
BAPACT VADOBE ZONE	SAND & GRAVEL WISILT/CLAY	5	6	30	
HYDRAULIC CONDUCTIVITY	1 -100	З	6	18	
Oranto Index				175	

аеттно 197		GENERA	L.	
PEATURE	RANGE	WENSHIT	ATING	NUMBER
DEPTH TO WATER	G-8	5	10	50
NET RECHARGE	10+	4	9	36
AGUIPER MEDIA	SAND & GRAVEL	3	9	27
Boh, Medaa		2	6	12
TOPOGRAPHY	0.2 %	1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL WIELTCLAY	5	6	30
HYDRAULIC CONDUCTIVITY	1 -100	3	6	18
		Detailo Inde		1 <b>8</b> 3

яттика 198	GENERAL			
PEATLINE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	6-10	5	9	45
NET RECHANCE	10+	4	9	36
AQUITER MEDIA	SAND & GRAVEL	3	9	27
SCIL MEDIA	SAND	2	9	18
TOPOGRAPHY	24 %	1	9	9
MPACT VADO&E 20HE	ISAND & GRAVEL	5	8	40
HYDRAULIC CONDUCTIVITY		3	1	3
		Dreatic inte		178

аеттыс 200		GENERA	د	
PEATURE	RANGE	WEIGHT	PATING	
	16-4	5	10	50
NET RECHARGE	10+	4	9	36
AGUITER MEDIA	SAND & GRAVEL	3	8	24
SCIL MEDIA	MJCK	2	2	4
TOPOGRAPHY	02%	1	10	10
MPACT VADOGE ZONE	SAND & GRAVEL WISE, TICLAY	5	7	35
HYDRAULIC CONDUCTIVITY	190 - 300	3	2	6
		Omatio (mi		165

неттна 19 <del>9</del>		GENERA	L.	
PEATURE	RANGE	WEIGHT	RATING	HUMBER
DEFTH TO WATER	9-6	5	10	50
NET RECHARGE	10+	4	9	36
AQUIPER MEDIA	BAND-8 GRAVEL	3	9	27
Sol Media		2	6	12
TOPOGRAPHY	02%	1	10	10
IMPACT VADOBE 20NE	SAND & GRAVEL	5	7	35
HYDRAULIC CONDUCTIVITY		з	1	3
		Dramito Insi		173

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жетлика 202		GENERA	ERAL		
PEATURE	RANGE	WEIGHT	RATING	HUMBER	
DEPTH TO WATER	9-5	5	10	50	
NETRECHARGE	10+	4	9	36	
AQUIFER MEDIA	BAND & GRAVEL	3	9	27	
SOIL MEDIA	IMUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL WISHLTICLAY	5	6	30	
HYDRAULIC CONDUCTIVITY		3	1	. 3	
	-	Draetto Inde	<b>K</b>	160	

serring 203		GENERA	L	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	0-5	5	10	50
NET RECHARGE	10+	4	9	36
ACUITER MEDIA	SAND & GRAVEL	3	9	27
SOIL MEDIA	миск	2	2	4
TOPOGRAPHY	0-2 %	1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL WISILTICLAY	5	6	30
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6
Dynatio Index:			163	

зеттика 204		GENERA	RAL		
PEATURE	RANGE	WEIGHT	ATING	NUMBER	
	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIFER MEDIA	BAND & GRAVEL	3	6	18	
SOIL MEDIA	MUCK	2	2	4	
тородварну	0-2%	1	10	10	
IMPACT VADOSE ZONE		5	1	5	
HYDRAULIC CONDUCTIVITY	2000 +	3	10	30	
		Drastio ind		154	

setting 210		GENERA	ERAL		
PEATURE	RANDE	WEIGHT	RATING	NUMBER	
	0-5	5	10	50	
INET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	8	24	
SCE, MEDIA	SAND	2	9	18	
TOPOGRAPHY	26%	1	9	9	
IMPACT VADOBE ZONE	SAND & GRAVEL	5	8	40	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Orașilo ind		183	

METTING 212		GENERA	<u>ı</u>	
PEATURE	RANGE	WEGHT	RATING	HRMOEF
DIPTH TO WATER	0-5	5	10	50
NET RECHARGE	10+	4	9	36
ADUITER MEDIA	SAND & GRAVEL	3	9	27
SCR. MEDIA	MUCK	2	2	4
TOPOGRAPHY	26%	1	9	9
MPACT VADOSE ZONE	BAND & GRAVEL WELT/CLAY	5	4	20
HYDRAULIC CONDUCTIVITY		3	1	3
		Drugilo ind		149

SETTING 211		GENERA	L	•		
PEATURE	RANGE	WENGHT	RATING	INJAMBER		
DEFTH TO WATER	0-5	5	10	50		
NET RECHAIRDE	10+	. 4	9	36		
Aguiper Media	SAND & GRAVEL -	3	9	27		
BOL MEDIA	MUCK	2	2	4		
TOPOGRAPHY	34% ,	1	9	9		
IMPACT VADORE 20NE	SAND & GRAVEL WELTICLAY	5	4	20		
	190 - 300	3	2	6		
		Disasilio (mis		152		

зеттна 213		GENERA	L	
PEATURE	RANGE	WEIGHT	MATING	HUMBER
	0.8	5	10	50
HET RECHARGE	10+	4	9	36
AQUIPER MEDIA	SAND & GRAVEL	3	8	24
Soil Media	MLICK	2	2	4
TOPOGRAPHY	02%	1	10	10
IMPACT VADOGE ZONE	BAND & GRAVEL WISH TICLAY	5	4	20
HYDRAULIC CONDUCTIVITY		3	1	3
		Draatio Inde		147

веттна 214		GENERA	GENERAL		
PEATURE	ANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-8	5	10	50	
INET PECHARGE	10+	4	9	36	
AGUIPER NEDIA	SAND & GRAVEL	3	9	27	
BOIL MEDIA	ANDY LOAM	2	6	12	
TOPOGRAPHY	0-2%	1	10	10	
IMPACT VADOBE ZONE	SAND & GRAVEL WISH TICLAY	5	6	30	
HYDRAULIC CONDUCTIVITY	160 - 300	3	2	6	
		Drastio Inde		171	

serring 215		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
	B-1C	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUPER MENA	BAND & GRAVEL	3	9	27	
ISOE MEDIA	MUCK	2	2	4	
TOPOGRAPHY	94 X	1	9	9	
IMPACT VADORE ZONE	SAND & GRAVEL WISILTICLAY	5	4	20	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Draffic Inde		147	

меттно 216		GENERA	L	
PRATURE	RANGE	WEXAHT	RATING	HUMBER
	0-5	5	10	50
NET RECHARGE	10+	4	9	36
	SAND & GRAVEL	3	9	27
	MUCK	2	2	4
TOPOGRAPHY	0-2 %	1	10	10
REPACT VADOBE ZONE	SAND & GRAVEL WISILTICLAY	5	7	35
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6
		Drigits ind	gr.	168

аеттна 218 аенениц				
PLATURE	RANGE	WEIGHT	RATING	NUMBER
DEFTH TO WATER	0-8	5	10	50
NETRECHARGE	10+	4	9	36
ACUITER MEDIA	BAND & GRAVEL	3	9	27
SCR. MEDIA		2	6	12
тородрарну	62¥	1	10	10
SAPACT VADORE 20NE	SAND & GRAVEL WELTCLAY	5	6	30
HYDRAULIC CONDUCTIVITY		3	1	3
		Drawlin Ind	¢K.	168

автика 217					
PEATURE	RANGE	WERNIT	AATING	NUMBER	
DEPTH TO WATER	i0-8	5	10	50	
NETRECHARGE	10+	. 4	9	36	
	BAND & GRAVEL -	3	9	27	
SOL MEDIA	BANDY LOAM	2	6	12	
TOPOGRAPHY	02% _	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL WISLTICLAY	5	6	30	
	1 -100	3	4	12	
		Detaille Hel	ér.	177	

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setining 219		aber	AL		
FEATURE	RAVIEE	WEIGHT	NATING	H.MOER	
DEPTH TO WATER	0-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIFER MEDIA		3	9	27	
Soil Media	SANDY LOAM	2	6	12	
TOPOGRAPHY	0-2 %	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL	5	6	30	
HYDRAULIC CONDUCTIVITY		3	1	3	
Drasto Index				168	

аеттика 220		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	B-1Q	5	9	45	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	9	27	
Soil Media	SANC	2	9	18	
TOPOGRAPHY	0-2 %	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY		3	1	3	
Drasto Index			174		

SETTING 222		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	AATING	NUMBER	
DEPTH TO WATER	5-10	5	8	45	
NET RECHARGE	10+	4	9	36	
Aquiper Media		3	8	27	
Sol Media	SAND	2	9	18	
TOPOGRAPHY	0.2%	1	10	10	
IMPACT VADORE ZONE		5	7	35	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Drasilo Ind		177	

SETTING 223		GENERA			
PEATURE	RANGE	WEIGHT	PATING	NUMBER	
DEPTH TO WATER	10-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUITER MEDIA	SAND & GRAVEL	3	6	18	
BOU, MEDIA		2	6	12	
TOPOGRAPHY	0.2 %	1	10	10	
INPACT VADORE ZONE	SAND & GRAVEL WESE, TICLAY	5	6	30	
HYDRAULIC CONDUCTIVITY		3	1	3	
Drusto Indux			159		

аеттика 225		GENERA			
PEATURE	RANGE .	WEIGHT	PATING	MUMBET	
DEFTH TO WATER	10-8	5	10	50	
NET RECHARGE	10+	4	9	36	
ACUMER MEDIA	SAND & GRAVEL	3	4	12	
sch, Mięcia	944D	2	9	18	
TOPOGRAPHY	02%	1	10	10	
MPACT VADOBE ZONE	BAND & GRAVEL WELTICLAY	5	7	35	
HYDRAULIC CONDUCTIVITY	1 -100	з	4	12	
		Draslio (rd		173	

еттна 224		-			
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
	Q-8	5	10	50	
NET RECHARGE	10+	. 4	9	36	
Aquiper Media	SAND & GRAVEL .	3	8	24	
BOIL MEDIA		2	6	12	
тородрарну	0-2%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL WISE TICLAY	5	6	30	
HYDRAUUC CONDUCTIVITY		з	1	3	
		Desaile int		165	

аеттика 226		GENERA	ENIPAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	0-8	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIFER MEDIA	SAND & GRAVEL	3	9	27	
ISOL MEDIA	SAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL WIELT/CLAY	5	4	20	
HYDRAULIC CONDUCTIVITY		3	1	Э	
		Oraștio Inde	ĸ	164	

SETTING 227		GENERA	L	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	0-8	5	10	50
NET RECHARGE	10+	4	9	36
AQUITER MEDIA	GAND & GRAVEL	3	9	27
schi media	SAND	2	9	18
TOPOGRAPHY	0-2%	1	10	10
IMPACT VADOBE ZONE	SAND & GRAVEL WIRLTICLAY	5	4	20
HYDRAULIC CONDUCTIVITY	100 - 300	з	2	6
Drasto Index			167	

эетлиа 229	зеттика 229		чL	
	RANGE	WBOHT	RATING	HUMBER
DEPTH TO WATER	6-10	5	9	45
NET RECHARGE	10+	4	9	36
AGUNTER MEDIA	SAND & GRAVEL	3	9	27
SOIL MIRDIA	SUID	2	9	18
TOPOGRAPHY	02%	1	10	10
IMPACT VADOGE ZONE	SAND & GRAVEL	5	7	35
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12
•		Drastic Inst	•	1 <b>8</b> 3

setting 230		ORIENERA	GIÈNERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	<b>5-10</b>	5	9	45	
HET ABCHARGE	10-	4	9	36	
AQUITER MEDIA	SAND & GRAVEL	3	9	27	
Sol Media	SAND	2	9	18	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADORE ZONE	SAND & GRAVEL WISE TICLAY	5	5	25	
INDRAULIC CONDUCTIVITY		3	1	3	
	•	Dramito Ind		164	

SETTING 232		GENERA	28NERAL		
PEATURE	NANGE	WEIGHT	RATING	NUMBE	
DEPTH TO WATER	<b>15-1</b> 0	5	9	45	
HETRECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	9	27	
	SAND	2	9	18	
TOPOGRAPHY	24%	1	9	8	
MPACT VADOBE ZONE	SAND & GRAVEL	5	7	35	
	1 -100	3	4	12	
		Ovanilo ind	Nex .	182	

иеттика 231		GENERAL			
PEATURE	RANGE	WEIGHT.	PATING	NUMBER	
	6-10	5	9	45	
NET RECHARGE	10+	4	9	36	
AGUITER NEDIA	SAND & GRAVEL	3	9	27	
SCIL MEDIA	SAND	2	9	18	
TOPOGRAPHY	34 X .	1	9	9	
IMPACT VADOBE ZONE	BAND & GRAVEL	5	7	35	
HYDRAULIC CONDUCTIVITY		3	1	3	
		Drasilo ind		173	

.

еттна 234		GENERA	AL .			
MEATURE	RANGE	WEIGHT	WEIGHT RATING			
DEPTH TO WATER	5-10	5	9	45		
NET RECHARDE	10+	4	9	36		
AQUIPER MEDIA	SAND & GRAVEL	3	9	27		
Sol, Media	MUCK	2	2	4		
Тородялену	0.2%	1	10	10		
IMPACT VADOBE ZONE	SAND & GRAVEL	5	7	35		
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12		
		Drawio Index				

аеттика 235		GENERA	AL.		
PEATURE	RANGE	WEIGHT PATING NUMB			
DEPTH TO WATER	i\$-10	5	9	45	
NET RECHARGE	10+	4	9	36	
	SAND & GRAVEL	3	4	12	
SOIL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADOSE ZONE	SAND & GRAVEL WIELTICLAY	5	4	20	
HYDRAULIC CONDUCTIVITY		3	1	3	
Dynatis (redex)			130		

аетпна 236		GENERA	ENERAL			
PEATURE	RANGE	WEIGHT7	WEIGHT RATING NU			
DEPTH TO WATER	8-10	5	9	45		
NET RECHARGE	10+	4	9	36		
AQUITER MEDIA	SAND & GRAVEL	3	4	12		
SOL MEDIA	SAND	2	9	18		
TOPOGRAPHY	\$12%	1	5	5		
IMPACT VADOBE ZONE	SAND & GRAVEL WOLLTICLAY	5	5	25		
HYDRAULIC CONDUCTIVITY		3	1	3		
	···· ···	Draalic inde		144		

setting 237		GENERA	L		
PEATURE	RANGE	WEIGHT	NUMBER		
DEPTH TO WATER	9-5	5	10	50	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	SAND & GRAVEL	3	4	12	
BOIL MEDIA	MUCK	2	2	4	
TOPOGRAPHY	02%	1	10	10	
IMPACT VADORE 20HE		5	5	25	
HYDRAULIC CONDUCTIVITY	1 -100	3	4	12	
· · ·	Drastic Index			149	

# APPENDICES II

# DRASTIC INDEX CHARTS FOR THE FLORIDAN AQUIFER SYSTEM WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

аеттика 01		GENERA	GENERAL			
FEATURE	RANGE	WEIGHT	WEIGHT RATING			
DEPTH TO WATER	100+	5	1	5		
NET RECHARGE	0-2	4	1	4		
AQUITER MEDIA	KARST LIMESTONE	3	10	30		
soil media	HONSHRINGING CLAY	2	1	2		
TOPOGRAPHY	CONFINED	1	1	1		
IMPACT VADOBE ZONE	SETCLAY	5	1	5		
HYDRAUUC CONDUCTIVITY	1-100	Э	1	Э		
		Draatio insex		50		

setting 02		GENERA	INERAL		
PEATURE	RANGE	WEIGHT	WEIGHT RATING		
DEPTH TO WATER	100+	5	1	5	
NET RECHARGE	0-2	4	1	4	
	KARST LIMESTONE	3	10	30	
SOL MEDIA	NONSHRINKING CLAY	2	1	2	
TOPOGRAPHY	CONFINED	1	í	1	
MPACT VADORE ZONE	SILTICLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
	Draatic Index			53	

еттика 03		GENERA	HERAL			
PEATURE	RANGE	WEIGHT	WEIGHT RATING			
DEPTH TO WATER	100+	5	1	5		
NET RECHARGE	2-4	4	3	12		
Aquiper Media	KARST LINESTONE	3	10	30		
Son Media	NONSHRINICING CLAY	2	1	2		
TOPOGRAPHY	CONFINED	1	1	1		
IMPACT VADOBE ZONE	BILTICLAY	5	1	5		
HYDRAULIC CONDUCTIVITY	1 -100	3	1	3		
		Drastic Ind	-	58		

· · · ·

setting 04		GINERA	ıL		
MEATUME	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	100+	5	1	5	
NET RECHARGE	2-4	4	3	12	
AQUITER MEDIA	KARST LINESTONE	3	10	30	
Sol Media	NONINFRINGING CLAY	2	1	2	
TOPOGRAPHY	CONTINED	1	1	1	
IMPACT VADOBE 20NE	BILT/GLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6	
		Drastic Ind	ŧx -	<del>6</del> 1	

еттна 05		ashera	GENERAL	
FEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	100+	5	1	5
NET RECHARGE	2-4	4	3	12
AGUIPER MEDIA		3	10	30
Sol Media	NCHRHRINGING CLAY	2	1	2
TOPOGRAPHY		1	1	1
IMPACT VADORE 20HE	SETICLAY	5	1	5
HYDRAULIC CONDUCTIVITY	<b>3</b> 00 - 700	3	4	12
		Dragilo Ind		67

аеттно 06		GENERA	AL		
PEATURE	RANGE	WEIGHT	WEIGHT RATING		
	190+	5	1	5	
NET RECHARGE	2-4	4	3	12	
AGUIPER MEDIA	KARST LIMESTONE	3	10	30	
BOIL MEDIA	NONSHIPSIGHE CLAY	2	1	2	
TOPOGRAPHY	CONFINED	1	1	1	
MPACY VADORE ZONE	MLTICLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	700 - 1000	3	5	18	
	Drutte Molec			73	

зеттна 07			OEHENAL		
PEATURE	RANGE	WEIGHT	WEIGHT RATING		
	100+	5	1	5	
NET RECHARCE	0.2	4	1	4	
IAQU <b>TER MEDIA</b>	KARST LIMESTONE	3	10	30	
ISOR, MEDIA	NONSHRINIGNG CLAY	2	1	2	
TOPOGRAPHY	CONFINED	1	1	1	
IMPACT VADOGE ZONE	SUTICLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	<b>300 - 700</b>	3	.4	12	
	Drastic lexitor			59	

еттиа 08		GENERAL			
TEATURE	RANGE	WEIGHT	RATING	NUMBER	
	100+	5	1	5	
NET RECHARGE	10+	4	9	36	
ACURPER MEDIA	KARST LIMESTONE	3	10	30	
Sol Media	NCHEHRINGING CLAY	2	1	2	
тородрарну	COMPRED	1	1	1	
IMPACT VADOBE ZONE	EAND & GRAVEL W/SILT/CLAY	5	5	25	
HYDRAULIC CONDUCTIVITY	1 -160	3	1	3	
	Drasto Index			102	

яеттика 09		GENERA	L	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
	100+	5	1	5
NET RECHARGE	10+	4	9	36
	KARST LINESTONE	3	10	30
SCH. MEDIA	NONSHIPSHONG CLAY	2	1	2
TOPOGRAPHY		1	1	1
IMPACT VADOSE ZONE	SAND & GRAVEL WISHTICLAY	5	5	25
HYDRAULIC CONDUCTIVITY	100 - 300	3	2	6
		Dramito ensis	ĸ	105

зеттна 10		GENERAL			
MEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEFTH TO WATER	100+	5	1	5	
HET RECHARGE	10+	4	8	36	
AQUIPER MEDIA	KARST LINESTONE	3	10	30	
Sol Media	NONEHNINGING CLAY	2	1	2	
TOPOGRAPHY		. 1	1	1	
IMPACT VADORE ZONE		5	5	25	
HYDRAULIC CONDUCTIVITY	300 - 700	3	4	12	
		Crustic (ital	ŧĸ	111	

неттина 12	пна 12		GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBE	
DEFTH TO WATER	180+	5	1	5	
NET RECHARGE	10+	4	9	36	
AQUIPER MEDIA	KARSTLINESTONE	3	10	30	
SOL MICH	NONSHIP BRONG CLAY	2	1	2	
TOPOGRAPHY	CONTINED	1	1	1	
NPACT VADOBE ZONE	SAND & GRAVEL WELTICLAY	5	5	25	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
	· · · · · ·	Dreatie insi		123	

аетны 11			L	
PEATURE	RANGE	WEIGHT	RATING	NUMBER
	100+	5	. 1	5
NET RECHARDE	10+	. 4	9	36
	KARIST LINESTONE -	3	10	30
SCIL MEDIA	HONSHIP BROND CLAY	2	1	2
TOPOGRAPHY		1	1	1
MPACT VADORE ZONE	BAND & GRAVEL WIELTICLAY	5	5	25
HYDRAULIC CONDUCTIVITY	700 - 1000	3	6	18
		Drustin Ind		117

аеттис 13	altera.			
MEATURE	A.VIGE	WEIGHT	RATING	NUMBER
	100+	5	1	5
NET RECHARGE	0-2	4	1	4
aguiper Media	KARETLINESTONE	3	10	30
Soll Media		2	1	2
торозварну	CONTINED	1	1	1
IMPACT VADOSE ZONE	BILTICLAY	5	1	5
HYDRAULIC CONDUCTIVITY	<b>3</b> 00 - 700	3	4	12
		Drastic Inde	×	59

аеттыа 14	ng 14 general			
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEFTH TO WATER	190+	5	1	5
NET RECHARGE	0-2	4	1	4
AQUIPER NEDIA	KARST LIMESTONE	3	10	30
BOIL MEDIA	NONSHRINKING CLAY	2	1	2
TOPOGRAPHY	CONFINED	1	1	1
MPACT VADOGE ZONE	SETICLAY	5	1	5
	700 - 1000	3	6	18
		Crastic inde	ik	65

меттика 15		GENERA	L		
FEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	100+	5	1	5	
NET RECHARGE	0-2	4	1	4	
Aquifter Media	KARST LIMESTONE	3	10	30	
SOL MEDIA	HONSHIMINIONG CLAY	2	1	2	
TOPOGRAPHY	CONFINED	1	1	1	
IMPACT VADOSE 20NE		5	1	5	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Drastic Inde		71	

яеттика 16		GENERA	armeral		
MEATURE	RANGE	WEIGHT	RATING	NUMBER	
	75-100	5	2	10	
NET RECHARGE	10-	4	9	36	
	KARST LIMESTONE	3	10	30	
NOL MEDIA		2	1	2	
TOPOGRAPHY	CONFINED	1	1	1	
IMPACT VADORE ZONE	SAND & GRAVEL WISL TICLAY	5	5	25	
HYDRAULIC CONDUCTIVITY	700 - 1000	3	6	18	
		Draatic Ind		122	

аеттиа 18		GENERAL		
PEATURE	hange	WEIGHT	RATING	NUMBER
	100+	5	1	5
NET RECHARGE	10-	4	9	36
	KARET LEVESTONE	3	10	30
ICIL MEDIA	NONSHIPSING CLAY	2	1	2
TOPOGRAPHY		1	1	1
MPACT VADOBE ZONE	SAND & GRAVEL WISLTICLAY	5	5	25
HYDRAULIC CONDUCTIVITY	100 - 200	3	2	6
		Dreating line	*	105

аеттика 17		-	L	
PEATURE	RANGE	WEIGHT	RATING	HUMBER
	78-100	5	2	10
NET RECHARGE	10+	. 4	9	36
		3	10	30
Sol Media	INCHEMBEROND CLAY	2	1	2
TOPOGRAPHY		1	1	1
IMPACT VADORE ZONE	SAND & GRAVEL WISLTICLAY	5	5	25
HYDRAULIC CONDUCTIVITY	300 - 700	3	4	12
		Denativo Senio	R.	116

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аеттика 19		GENERA	IRAL		
PEATURE	RANGE	жеюнт	PATING	NUMBER	
DEPTH TO WATER	176-100	5	2	10	
NET RECHARGE	10+	4	9	36	
Aguiper Media	KARST LINESTONE	3	10	30	
SQL MEDIA		2	1	2	
TOPOGRAPHY	CONFINED	1	1	1	
IMPACT VADOBE ZONE	SAND & GRAVEL WISE TICLAY	5	5	25	
HYDRAULIC CONDUCTIVITY	100 - 300	з	2	6	
	Draatto kuiser			110	

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яеттіка 20	Na 20 GENERAL			
PEATURE	RANGE	WEIGHT	FATING	HUMBER
DEPTH TO WATER	100+	5	1	5
NET RECHARGE	4-7	4	6	24
AGUIPER MEDIA	KARIST LIMESTONE	з	10	30
sor media	NONSHIPHIGNG CLAY	2	1	2
TOPOGRAPHY	CONFINED	1	1	1
MPACT VADOBE ZONE	SILTICLAY	5	1	5
HYDRAULIC CONDUCTIVITY.	700 - 1000	3	6	18
		Draello Ind	in	85

аеттика 21		GENERA	general		
PEATURE	RANGE	WEIGHT	RATING	NAMER	
DEPTH TO WATER	:100+	5	1	5	
NET RECHARGE	7-10	4	8	32	
Aquipen Media	KARIFT LIMESTONE	3	10	30	
Boll Media	HONSHANGING CLAY	2	1	2	
TOPOGRAPHY	GONFINED	1	1	1	
IMPACT VADOBE ZONE	SILTICLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	700-1000	3	6	18	
		Drastic Ind		93	

setting 22		OFFICERA	L	
PEATURE	RANGE	WEIGHT	RATING	
	100	5	1	5
NET RECHARGE	4-7	4	6	24
AQUIPER MEDIA	KARET LIMERTONE	3	10	30
501. MBDW		2	1	2
Тородарич	CONFINED	1	1	1
MPACT VADORE 20NE	SILTICLAY	5	1	5
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24
	Critalle index		91	

<b>1011100</b> 24		GENERA	L	
MATURE	RANDE	WEIGHT	RATING	HUMBE
DEFTH TO WATER	178-100	5	2	10
	7-10	4	8	32
AQUIPER MEDIA	KARIST LIMESTONE	З	10	30
FOIL MEDIA		2	1	2
TOPOGRAPHY	CONFINED	1	1	1
MPACT VADORE ZONE	MUTCLAY	5	1	5
HYDRAULIC CONDUCTIVITY	1ado - 2000	3	8	24
		Crustie (#1	ier:	104

сеттиа 23 обласни				
PEATURE	RANGE	WEIGHT	RATING	HUMBER
	100+	5	1	5
INET RECHARGE	7 - 10	4	8	32
	KARET LEMESTONE -	3	10	30
sol meda	HONSHIPPIGHQ CLAY	2	1	2
TOPOGRAPHY		1	1	1
IMPACT VADORE 20NE		5	1	5
	1000 - 2000	3	8	24
		Densilo ind		99

аеттика 25		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEPTH TO WATER	178-100	5	2	10	
NET RECHARGE	0-2	4	1	4	
AQUIPER MEDIA	KARSTLINESTONE	3	10	30	
soil media		2	1	2	
TOPOGRAPHY	CONFINED	1	1	1	
IMPACT VADOBE ZONE	SILTICLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Drastic inco	lin.	76	

зетник 26		<b>GEHER</b> AL		
TEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	75-100	5	2	10
NET RECHARGE	10+	4	9	36
AQUIPER MEDIA	KARST LIMESTONE	3	10	30
SCIL MEDIA		2	1	2
TOPOGRAPHY	CONTINED	1	1	1
MPACT VADOBE ZONE	SAND & GRAVEL WISE TICLAY	6	5	25
HYDRAULIC CONDUCTIVITY	1000 - 2000	з	8	24
		Draatio Inde	lix	128

яеттна 27		GENERA	GENERAL		
PEATURE	RANGE	WEIGHT	PATING	MUMBER	
DEPTH TO WATER	75-100	5	2	10	
NET RECHARGE	4-7	4	6	24	
AGUIPER MEDIA	KARIST LINESTONE	3	10	30	
Sol Media	NONSHIRDBONG CLAY	2	1	2	
TOPOGRAPHY	CONFINED	1	1	1	
IMPACT VADOILE ZONE	BILTICLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Drastio Inde		96	

NETTING 28		GENERAL			
PEATURE	RANGE	WEIGHT	RATING	NUMBER	
DEFTH TO WATER	100+	5	1	5	
NET RECHARGE	2-4	4	3	12	
AQUITER MEDIA	KARETLIMEETONE	3	10	30	
Soil Media		2	1	2	
Торошкарну	CONTINED	1	1	1	
MPACT VADOBE ZONE	SILT/CLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Drasilio (né		79	

	арттина. 30		GUENGERA	GRINIPAL		
UMBER	PEATURE	RANSE	WEIGHT	PATING	HUMBER	
10	DEFTH TO WATER	80-76	5	3	15	
12	NET RECHARGE	4-7	4	6	24	
30			3	10	30	
2	POIL MEDIA		2	1	2	
1	TOPOGRAPHY	CONFINED	1	1	1	
5	IMPACT VADORE ZONE	BILTICLAY	5	1	5	
24	HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
84			Dennile ind		101	

яттыз 29			u.	
	NANGE	WEIGHT	PATING	NUMBER
	76-100	5	2	10
NET RECHARGE	12-4	4	3	12
AQUIPER MEDIA		З	10	30
BOIL MEDIA	HONSHIPBEGHQ CLAY	2	1	2
тороанарну	CONFINED	1	1	1
NEPACT VADOBE ZONE	SETICLAY	5	1	5
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24
		Drastic test		84

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<b>жетти</b> а 31		GENERA	GIENERAL		
PEATURE	RANGE	WEIGHT	RATING	NAMOER	
DEPTH TO WATER	80-76	5	3	15	
NET RECHARGE	7 - 10	4	8	32	
AQUIPER MEDIA	KARST LIMESTONE	3	10	30	
BOIL MEDIA	HONSHRINIGING CLAY	2	1	2	
TOPOGRAPHY	CONFINED	1	t	1	
IMPACT VADDISE ZONE	SETICLAY	5	1	5	
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24	
		Drawl in Hode	ĸ	109	

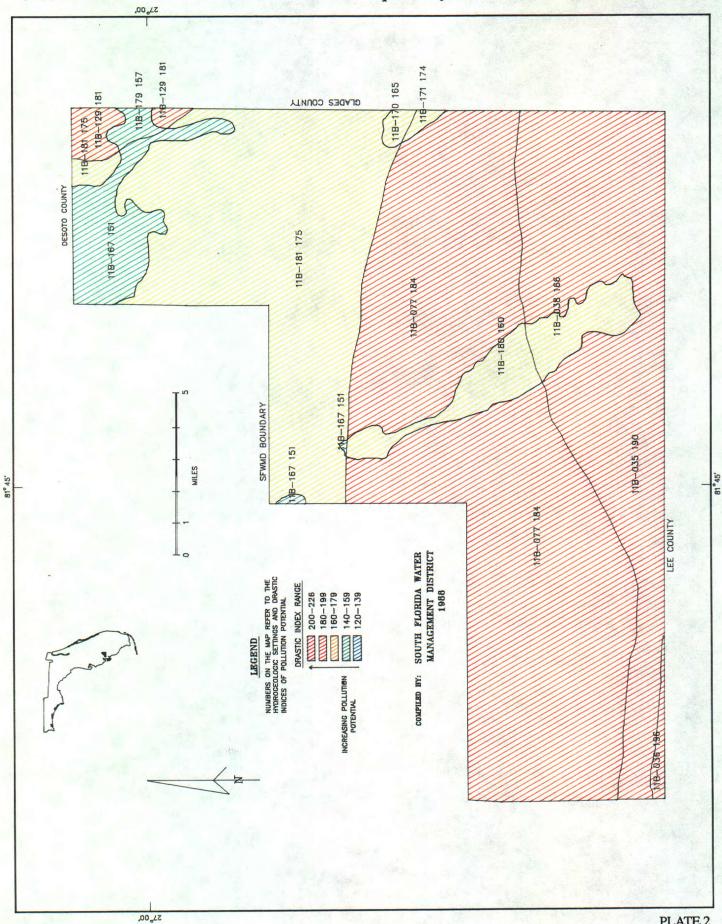
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setting 32		GENERAL		
FEATURE	RANGE	WEIGHT RATING NUMB		
	75-100	5	2	10
NET RECHARGE	10+	4	9	36
AQUIFER MEDIA	KARSTLINESTONE	3	10	30
Soil Media	NONSHRINGING CLAY	2	1	2
TOPOGRAPHY	CONFINED	1	1	1
IMPACT VADORE ZONE	SAND & GRAVEL WIELTICLAY	5	5	25
HYDRAULIC CONDUCTIVITY	1900 - 2000	3	8	24
		Dramilio Inde	*	128

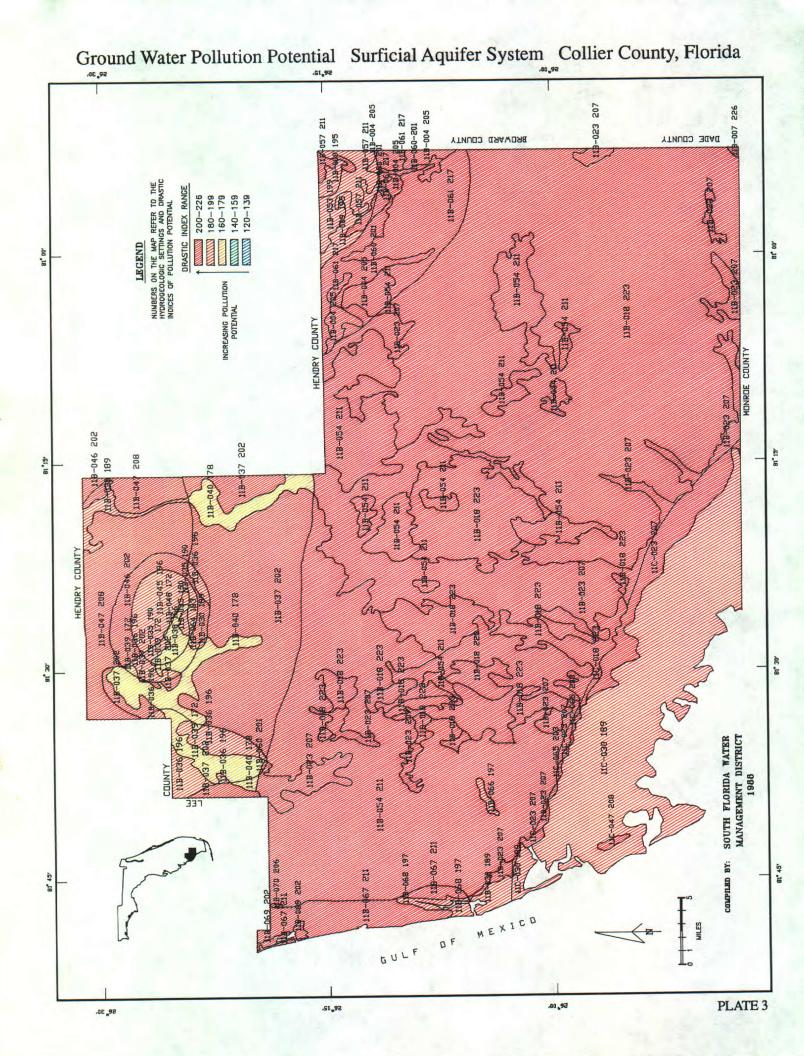
HETTING 33		GRINERAL		
PEATURE	RANGE	WEIGHT	RATING	NUMBER
DEPTH TO WATER	<b>8</b> 0-76	5	3	15
NET RECHARGE	10+	4	9	36
Aquiter Media		3	10	30
SOL MEDIA	HCHINHING CLAY	2	1	2
TOPOGRAPHY	CONTINED	1	1	1
IMPACT VADOBE 20NE	SAND & GRAVEL WISE TICLAY	5	5	25
HYDRAULIC CONDUCTIVITY	1000 - 2000	3	8	24
	··· •	Dranije Inda	E.	133

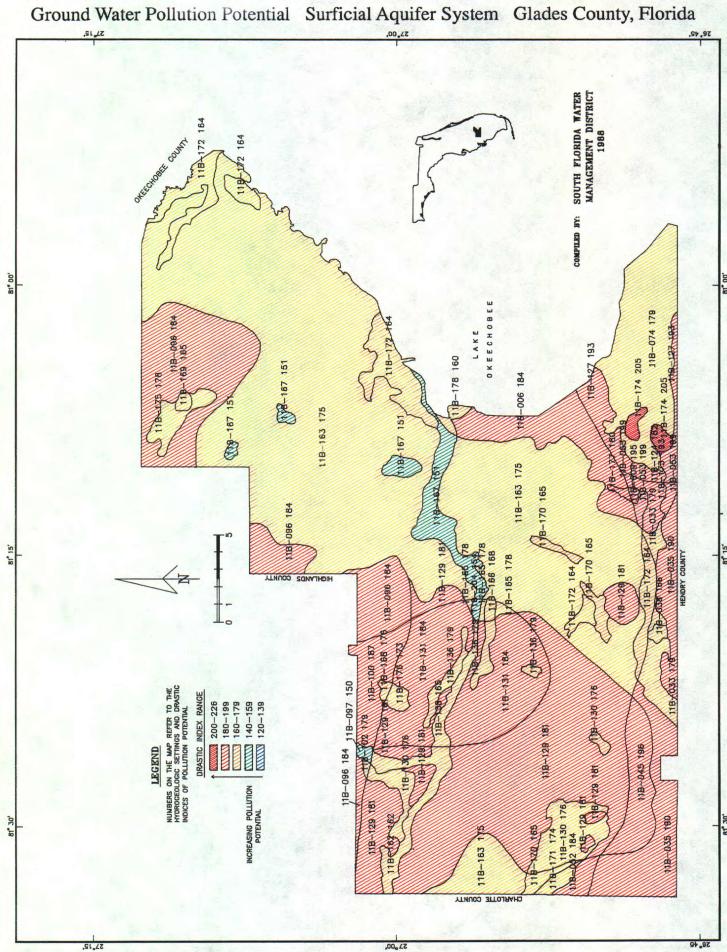
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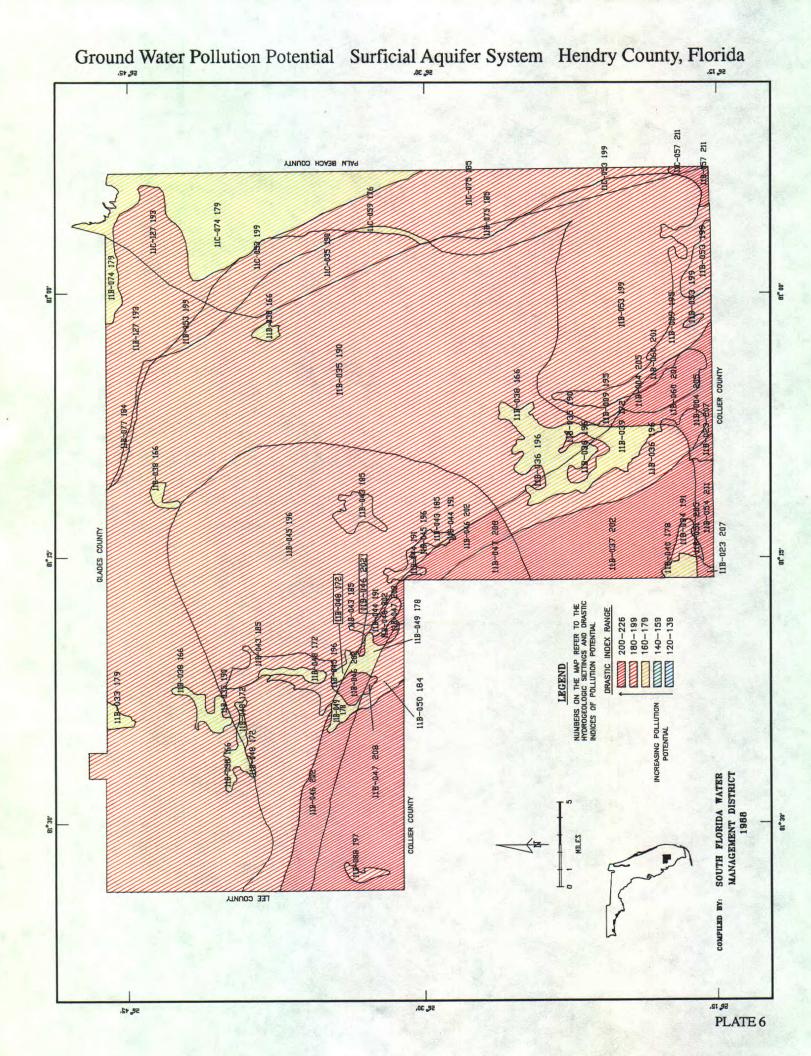
еттна 34		GENERAL		
PEATURE	Awige	WEIGHT	ватна	NUMBER
	78-100	5	2	10
HÊT RECHARGE	7-10	4	8	32
		3	10	30
SCR. MEDIA	NONENTERIONG CLAY	2	1	2
TOPOGRAPHY		1	1	1
MPACT VADOBE ZONE	SAND & GRAVEL WISE TICLAY	5	5	25
HYDRAULIC CONDUCTIVITY	1020 - 2000	3	8	24
		Drastic inde		124

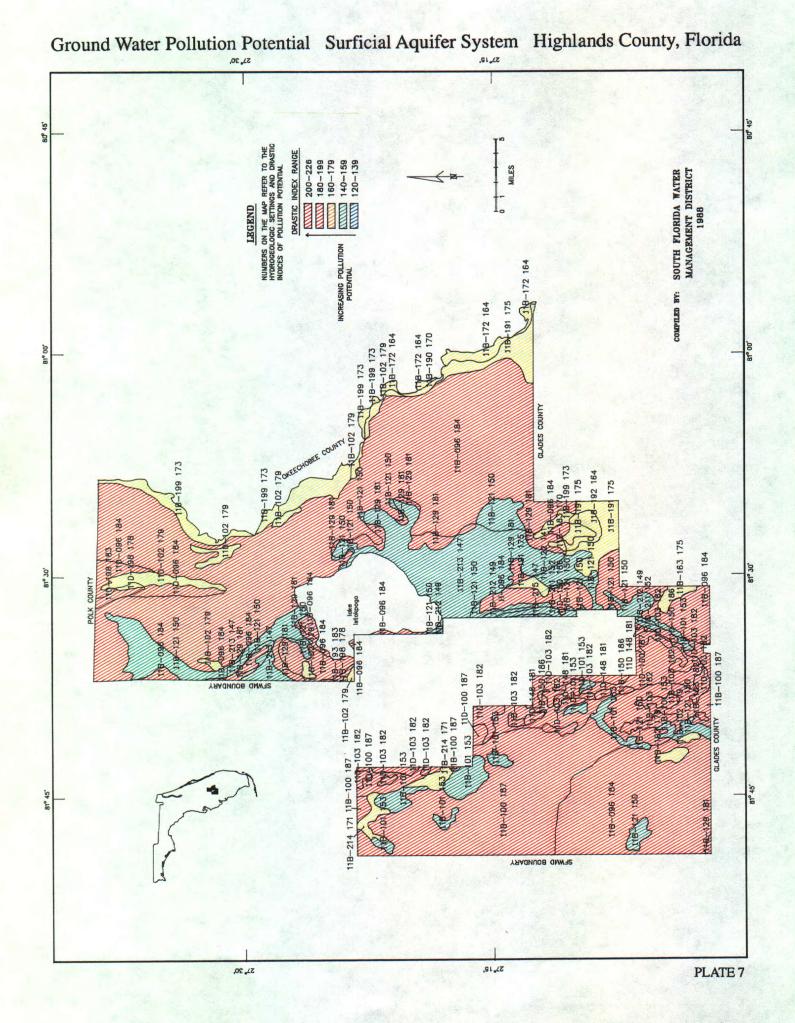


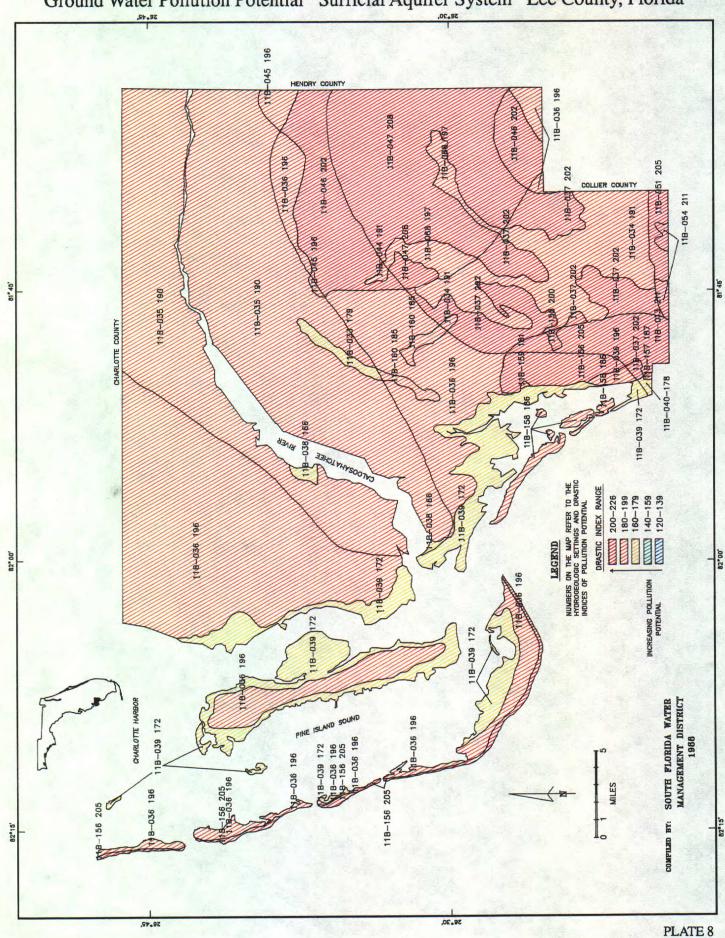
Ground Water Pollution Potential Surficial Aquifer System Charlotte County, Florida



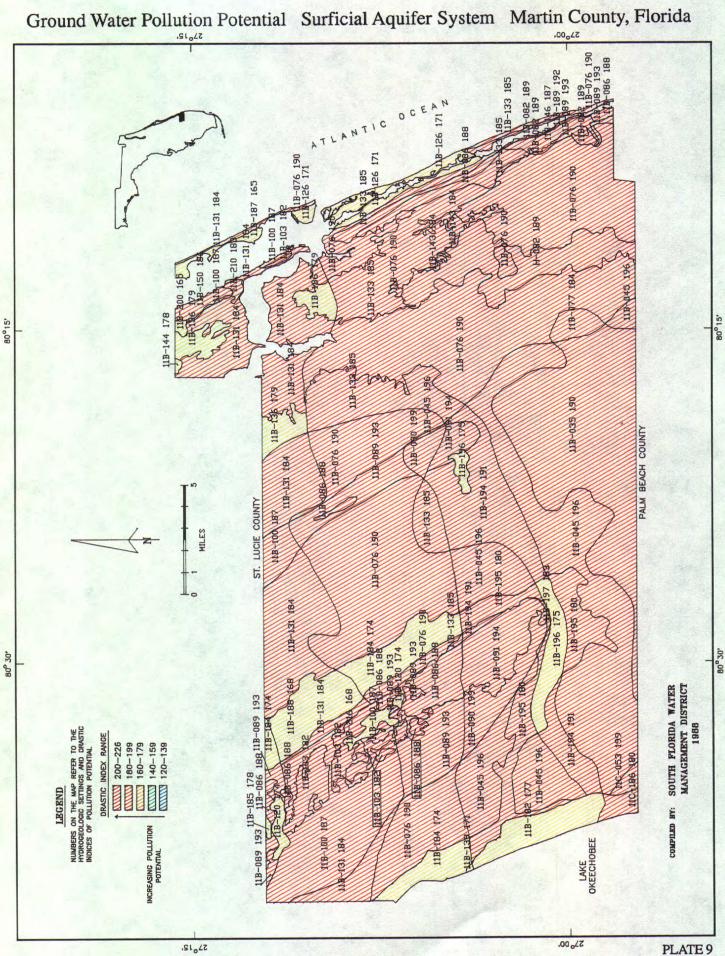


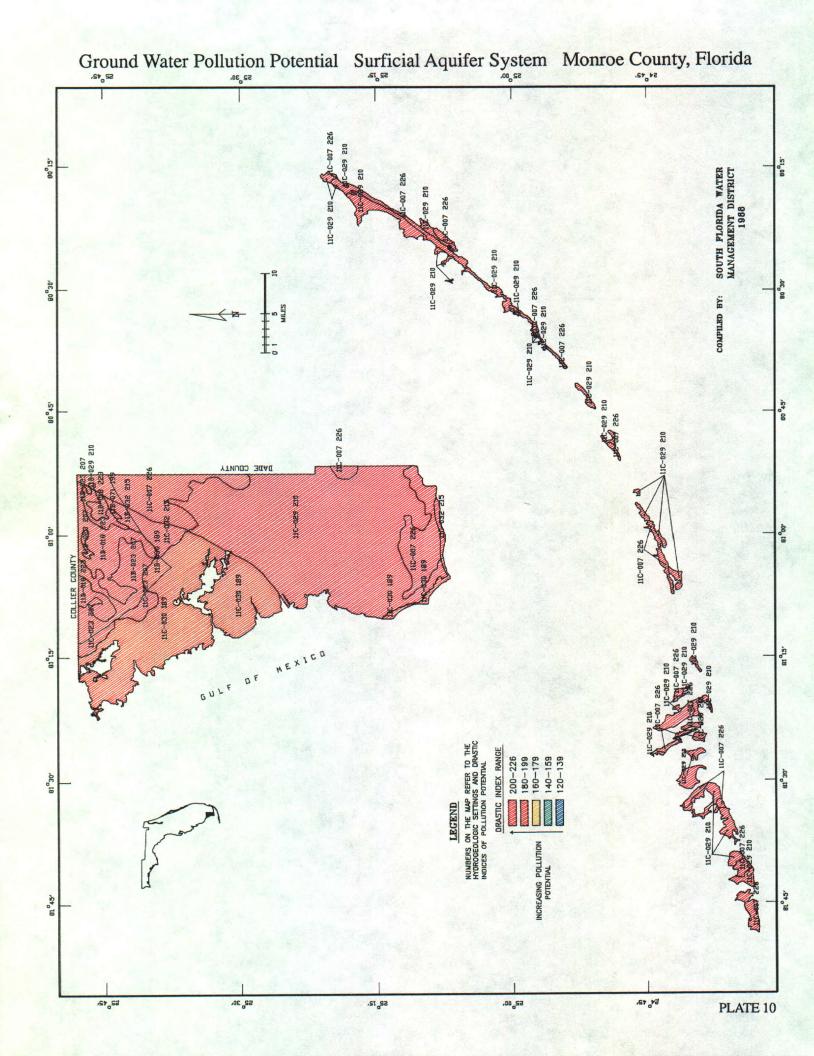


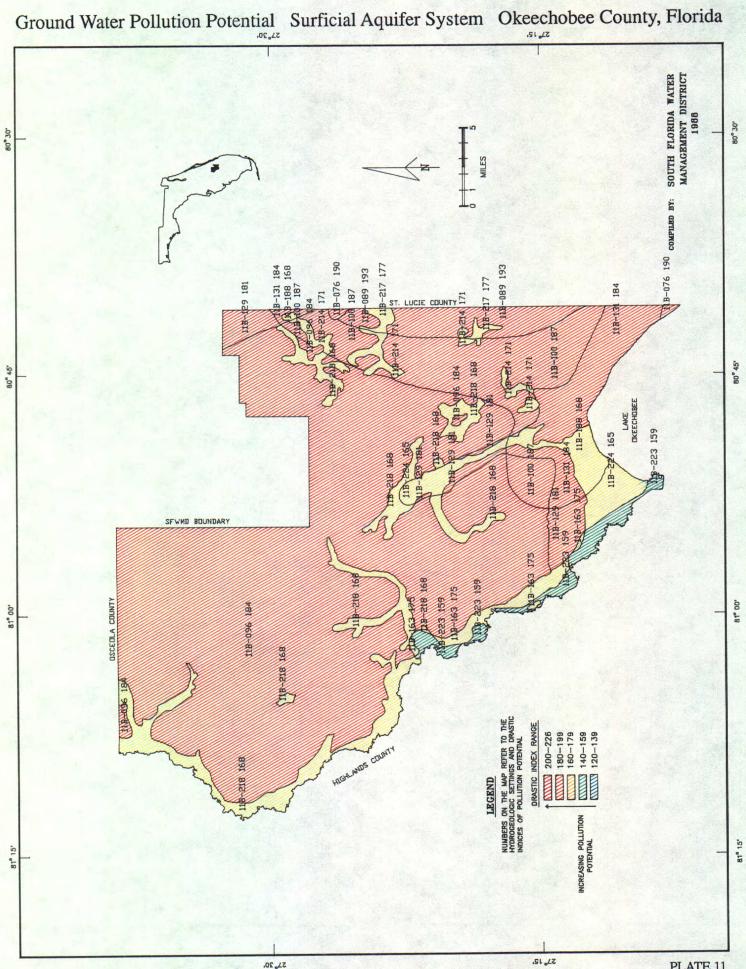


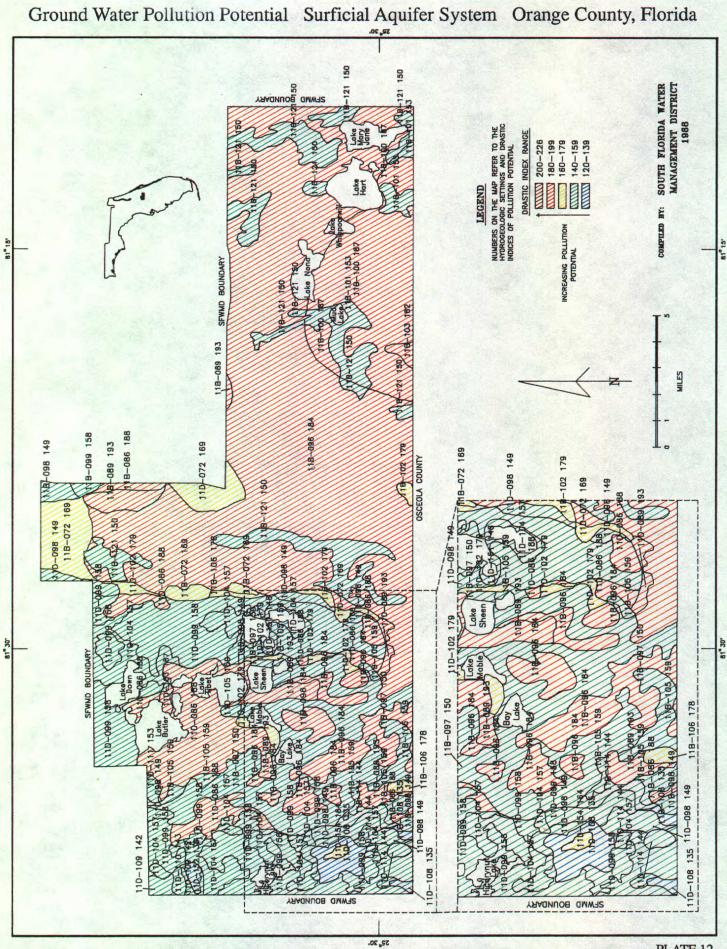


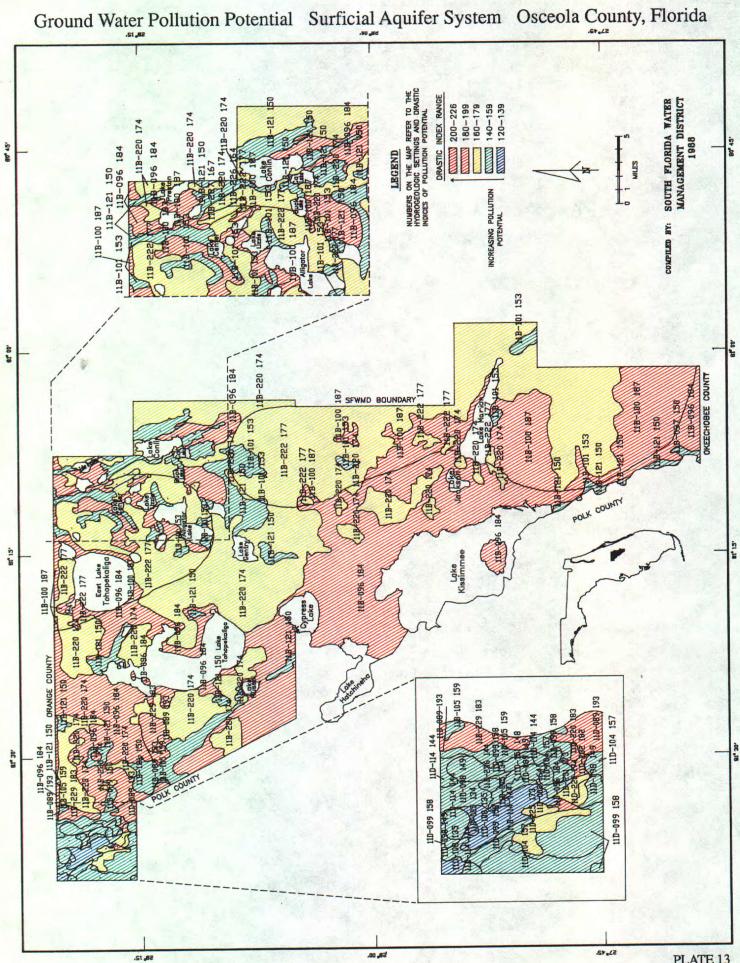
Ground Water Pollution Potential Surficial Aquifer System Lee County, Florida

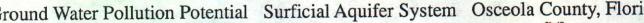


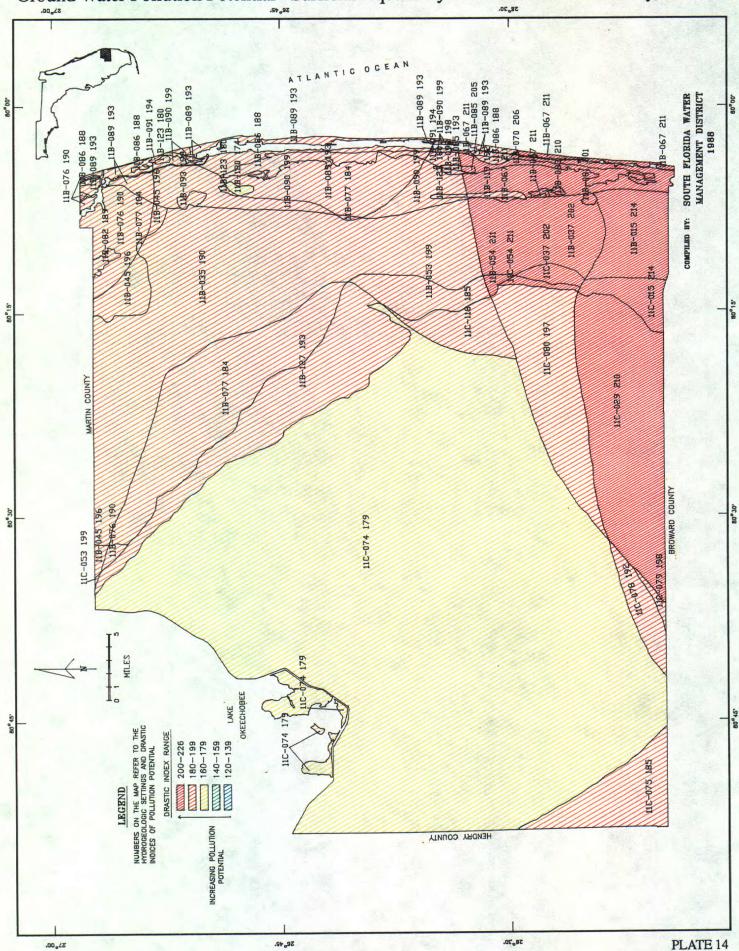












Ground Water Pollution Potential Surficial Aquifer System Palm Beach County, Florida

