



CITRUS COUNTY
PLANNING AND DEVELOPMENT COMMISSION

Thursday April 15, 2021 at 9:00 AM
Lecanto Government Building
3600 W. Sovereign Path
Room 166
Lecanto, Florida 34461

Michael Facemyer, Chair
David Bramblett, 1ST Vice Chair
Robert Bass, 2ND Vice Chair
Richard Barmes
Stacey Worthington

James Roys
Kurt Stone
William Burda (Alternate)
Carole Scragg (Alternate)
Chuck Dixon (School Board)

- A. CALL TO ORDER
- B. INVOCATION
- C. PLEDGE OF ALLEGIANCE
- D. ROLL CALL
- E. CHAIRMAN TO READ THE APPEAL PROCESS AND MEETING PROCEDURES
- F. OPEN TO THE PUBLIC – Receive comments from the public
- G. APPROVE MINUTES -
 - 1. April 15, 2021 PDC Agenda and Directions
- H. STAFF ANNOUNCEMENTS
- I. EX PARTE COMMUNICATION - COUNTY ATTORNEY
- J. APPLICATIONS
 - 1. CU-21-02 AVID Group for Storeright (Leanto I), LLC

Conduct a public hearing on April 15, 2021 and consider CU-21-02 AVID group for Storeright (Lecanto I), LLC.
 - 2. CU-21-03 Jon Groves for Victory Baptist Church

Conduct a public hearing on April 15, 2021 to consider CU-21-03 Jon Groves for Victory Baptist Church.
 - 3. CPA-21-05 – Evaluation and Appraisal Report (EAR) Amendments Chapter 3 and Chapter 4

Conduct a public hearing on April 15, 2021 to consider CPA-21-05- Evaluation and Appraisal Report (EAR) Amendments Chapter 3 and Chapter 4.
- K. ADDITIONAL ITEMS -
- L. PLANNING AND DEVELOPMENT COMMISSION MEMBER COMMENTS
- M. ADJOURN

If any person decides to appeal any decision made by the Commission with respect to any matter considered at this meeting or hearing, he or she will need a record of the proceedings

and, for such purpose, he or she may need to insure that a verbatim record of the proceedings is made, which record includes testimony and evidence upon which the appeal is to be based.

Any person requiring reasonable accommodation at this meeting because of a disability or physical impairment should contact the County Administrator's Office, 3600 W. Sovereign Path, Suite 267, Lecanto, FL 34461, (352) 527-5210, at least two days before the meeting. If you are hearing or speech impaired, dial 7-1-1, 1-800-955-8771 (TTY) or 1-800-955-8770 (v), via Florida Relay Service.

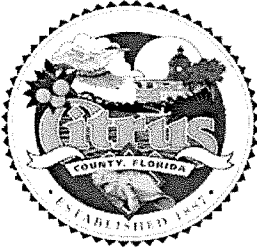
Si necesita un traductor de español por favor haga arreglos con el Condado dentro de dos días de la notificación de la publicación (352-527-5370).



AGENDA MEMORANDUM

FROM:	Michael Sherman,
SUBJECT:	April 15, 2021 PDC Agenda and Directions
AGENDA DATE:	April 15, 2021
<u>BRIEF OVERVIEW:</u>	
<u>BUDGET IMPACT/FUNDING SOURCE:</u>	
<u>RECOMMENDED ACTION:</u>	

**CITRUS COUNTY
PLANNING AND DEVELOPMENT COMMISSION**



Thursday, April 15, 2021 at 9:00 AM
Lecanto Government Building
3600 West Sovereign Path, Room 166
Lecanto, Florida 34461

MICHAEL FACEMYER, CHAIR	KURT STONE
DAVID BRAMBLETT, 1st VICE CHAIR	STACEY WORTHINGTON
ROBERT BASS, 2nd VICE CHAIR	WILLIAM BURDA (Alternate)
RICHARD BARMES	CAROLE SCRAGG (Alternate)
JAMES ROYS	CHUCK DIXON (School Board)

- A. CALL TO ORDER
- B. INVOCATION
- C. PLEDGE OF ALLEGIANCE
- D. ROLL CALL
- E. CHAIRMAN TO READ THE APPEAL PROCESS AND MEETING PROCEDURES
- F. OPEN TO THE PUBLIC – Receive comments from the public
- G. APPROVE MINUTES – Approval of available minutes
- H. STAFF ANNOUNCEMENTS
- I. EX PARTE COMMUNICATION: County Attorney
- J. APPLICATIONS
 - 1. LAND USE APPLICATION
 - a. CU-21-02 AVID Group for Storeright (Lecanto I), LLC

REQUEST: This request is for a conditional use to allow for RV and/or boat trailer parking in the General Commercial District, pursuant to Section 2412, General Commercial District, as specified in the LDC.

LOCATION: Section 9, Township 19 South, Range 20 East; more specifically, Parcel 11200, of an unrecorded tract, also known as Alternate Key Number 1505887, which addresses are 1209 and 1227 S. Lecanto Hwy, Lecanto, Florida. A complete legal description of the property is on file with the Land Development Division.

STAFF CONTACT: Joe Hochadel, Principal Planner, Land Development Division

b. **CU-21-03 Jon Groves for Victory Baptist Church**

REQUEST: This request is for a conditional use to allow for an accessory structure to an existing House of Worship, pursuant to Section 2403, Coastal and Lakes Residential District, as specified in the LDC.

LOCATION: Section 6, Township 19 South, Range 20 East; more specifically, Lot 16 of the Sportsmens Acres Subdivision, Plat Book 2, Page 90, also known as Alternate Key Number 1728975, which address is 5040 E. Shady Acres Dr., Inverness, Florida. A complete legal description of the property is on file with the Land Development Division.

STAFF CONTACT: Miranda Anaya, Senior Planner, Land Development Division

2. **COMPREHENSIVE PLAN AMENDMENT**

a. **CPA-21-05 Evaluation and Appraisal Report (EAR) Amendments**

REQUEST: In accordance with the requirements of Florida Statutes 163.3191(1) and Florida Administrative Code 73C-49, Citrus County must review the Comprehensive Plan and determine if the need exists to amend the Comprehensive Plan to reflect changes in State requirements. The Comprehensive Plan has been reviewed and it has been determined that amendments are necessary to Chapter Three, Conservation Element, and Chapter Four, Coastal, Lakes and Rivers Management Element, of the Citrus County Comprehensive Plan to reflect changes in State requirements.

STAFF CONTACT: Amy Bidwell, Senior Planner, Land Development Division

K. ADDITIONAL ITEMS

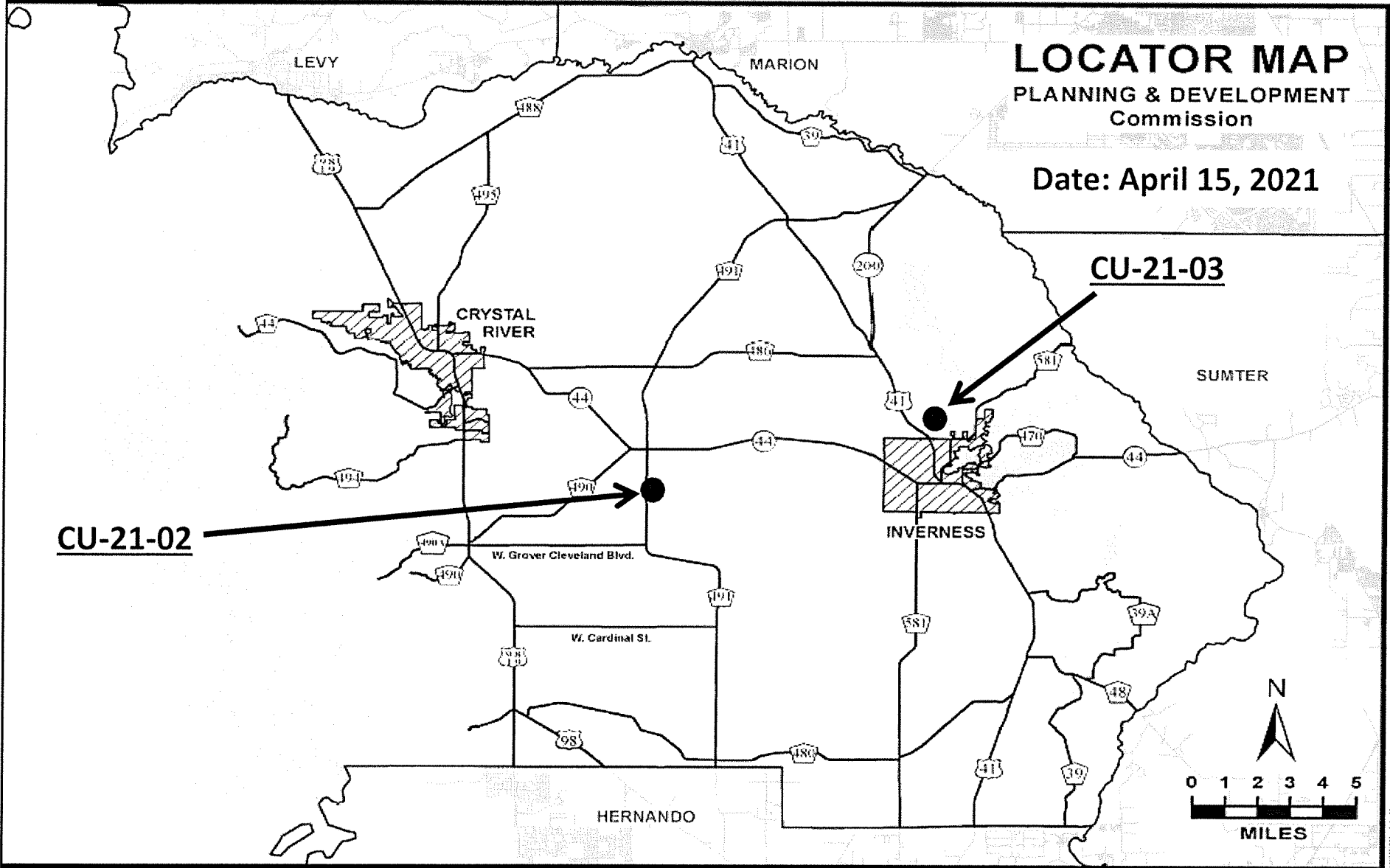
L. PLANNING AND DEVELOPMENT COMMISSION MEMBER COMMENTS

M. ADJOURN

If any person decides to appeal any decision made by the Commission with respect to any matter considered at this meeting or hearing, he or she will need a record of the proceedings and, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes testimony and evidence upon which the appeal is to be based.

Any person requiring reasonable accommodation at this meeting because of a disability or physical impairment should contact the County Administrator's Office, 3600 W. Sovereign Path, Suite 267, Lecanto, FL 34461, (352) 527-5210, at least two days before the meeting. If you are hearing or speech impaired, dial 7-1-1, 1-800-955-8771 (TTY) or 1-800-955-8770 (v), via Florida Relay Service.

Si necesita un traductor de español por favor haga arreglos con el Condado dentro de dos días de la notificación de la publicación (352-527-5370).



Planning and Development Commission

Directions for meeting on April 15, 2021

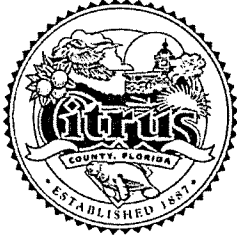
CU-21-02 - From the intersection of Saunders Way and CR-491, turn left onto CR-491. Go **1.53 miles** and the site is on the right at **1209 and 1227 S. Lecanto Hwy.** Lecanto.

CU-21-03- From the intersection of Saunders Way and CR-491, turn left onto CR-491. Go **1.99 miles** and turn right onto W. Gulf to Lake Hwy. Go **6.74 miles** and turn left onto S. Smith Ave. Go **0.54 miles** and turn right onto E. Dawson Dr. Go **0.79 miles** and turn left onto N. Independence Hwy. Go **0.74 miles** and take the third right onto E. Arlington St. Go **0.32 miles** and turn right onto N. Florida Ave. Go **0.71 miles** and turn left onto N. Sportsman Pt. Go **0.11 miles** and take the second right onto E. Shady Acres Dr. Go **0.11 miles** and the site is on the right at **5040 E. Shady Acres Dr.** Inverness.



AGENDA MEMORANDUM

FROM:	Michael Sherman,
SUBJECT:	CU-21-02 AVID Group for Storeright (Leanto I), LLC
AGENDA DATE:	April 15, 2021
<u>BRIEF OVERVIEW:</u> This request is for a Conditional Use to allow for RV and/or boat trailer parking in the General Commercial District, pursuant to Section 2412, <u>General Commercial District</u> , as specified in the LDC	
<u>BUDGET IMPACT/FUNDING SOURCE:</u>	
<u>RECOMMENDED ACTION:</u> Conduct a public hearing on April 15, 2021 and consider CU-21-02 AVID group for Storeright (Lecanto I), LLC.	



PM2-21-16

**DEPARTMENT OF GROWTH MANAGEMENT
LAND DEVELOPMENT DIVISION
STAFF FINDINGS REPORT
TO THE
PLANNING AND DEVELOPMENT COMMISSION**

CONDITIONAL USE APPLICATION NO. - CU-21-02

AVID Group for Storeright (Lecanto I), LLC

DATE: March 18, 2021

PREPARED BY: Joe Hochadel, Principal Planner; Land Development Division *JH*

CONDITIONAL USE REQUESTED	This request is for a Conditional Use to allow for RV and/or boat trailer parking in the General Commercial District, pursuant to Section 2412, <u>General Commercial District</u> , as specified in the LDC. Specifically, the applicant is requesting to allow RV and/or boat parking in the GNC District where there is currently an existing restaurant.
SUBJECT PROPERTY	<u>Section 9, Township 19 South, Range 20 East</u> , more specifically, Parcel 11200, of an unrecorded tract; also known as Alternate Key Number 1505887, which addresses are 1209 and 1227 S. Lecanto Hwy., Lecanto, Florida. A complete legal description of the property is on file with the Land Development Division.
ACREAGE	Approximately 4.7 acres
LDC ATLAS DESIGNATION	GNC, General Commercial District
FLOOD ZONE	According to the Flood Insurance Rate Map (FIRM), the subject property appears to be located in Flood Zone A and X as found on Community Panel Number 12017C0326D.
SURROUNDING LDC ATLAS DESIGNATIONS	North – PSO, Professional Service/Office District; LDR, Low Density Residential District South – PSI, Public/Semi-Public, Institutional District East – LDR, Low Density Residential District West – GNC, General Commercial District
SURROUNDING FLUM DESIGNATIONS	North – PSO, Professional Service/Office District; LDR, Low Density Residential District South – PSI, Public/Semi-Public, Institutional District East – LDR, Low Density Residential District West – GNC, General Commercial District
SURROUNDING EXISTING LAND USE	North – Vacant agricultural South – Lifesouth Community Blood Center East – Drainage Retention Area West – S. Lecanto Hwy., Citrus County Building Alliance

Attachment: Staff Report (12715 : CU-21-02 AVID Group for Storeright (Leanto I), LLC)

CHARACTERISTICS OF THE SURROUNDING AREA	The surrounding area is residential, commercial, and industrial in nature.
--	--

BACKGROUND AND ANALYSIS

The subject property under application is an unrecorded tract and not part of a larger subdivision. The parcel maintains frontage on CR-491 (S. Lecanto Hwy.), a minor arterial roadway, and along W. Woodland Ridge Dr., a local roadway. There are currently two driveway accesses to the subject property from S. Lecanto Hwy. with the southern driveway being shared with the adjacent parcel to the south. The parcel is currently developed with a restaurant and multiple mini-warehouse buildings. The existing restaurant was constructed in 1998 and is approximately 1,185 square feet in size. The five existing mini-warehouse buildings were constructed between 1998 and 2005 and have a total combined square-footage of approximately 58,998 square feet.

The applicant is requesting to allow for an RV and/or boat parking facility in the GNC District on approximately 0.85 acres of a 4.7 acre site. The RV and/or boat parking facility is allowed in the GNC land use district with a Conditional Use. The applicant is proposing to demolish the existing restaurant, close the northern driveway access, and convert the 0.85 acre area to 29 RV and/or boat parking spaces. The proposed RV and boat parking will take access internally from the existing southern driveway and be completely fenced. The fenced area will also incorporate some of the existing parking area for the mini-warehouse office. The existing parking along the front of the western mini-warehouse building will be relocated to outside the proposed fence area and will consist of four parking spaces.

This proposed use is required to meet the appropriate design standards of the LDC. These design standards include paved parking and loading, landscape buffers, parking landscaping, lighting, and cross-access; however, since this is a previously developed site that the applicant is proposing to redevelop, the redevelopment incentives apply. As part of the redevelopment incentives, the applicant is requesting a deviation from providing cross-access to the north. The portion of the property to the north that abuts the subject area is currently used for agriculture; however, it has the Professional Service/Office (PSO) land use designation. Due to the abutting non-residential land use designation, cross-access to the north is required per Section 7110 of the LDC; however, since the current abutting use is agriculture and the proposed use is to be secured with a perimeter fence, the Land Development Director has approved a waiver of the cross-access requirement with the condition that, when the time comes that the proposed RV and boat parking use redevelops or changes, cross-access be provided to the north. The site currently has a shared driveway access with the property to the south, therefore, cross-access is not required.

The proposed request is for an RV and boat parking facility which does not have to meet setback requirements, and there are no additional buildings proposed. The applicant is providing a 10-foot wide Type A buffer along the right-of-way of N. Lecanto Hwy. and a five-foot wide Type A buffer along the north property line where abutting this proposal. The remainder of the site is unchanged from what is existing. The LDC requires one parking space per 300 square feet of gross leasable area for the existing office use. The existing office is approximately 800 square feet in size, which requires three parking spaces. The applicant is proposing four parking spaces to serve the office which will be located outside the fence. The maximum allowable Impervious Surface Ratio (ISR) for the GNC district is 70 percent. While the applicant has not addressed ISR as part of this request, it appears the new parking area will have a

minimal increase in new ISR and the applicant will be required to demonstrate compliance with the ISR requirement at time of permitting.

Staff looked at compatibility issues of the proposed RV and boat parking facility in relation to the surrounding neighborhood. The surrounding area mainly consists of existing commercial uses, vacant non-residential land, and large acreage agricultural uses. The subject property currently has multiple mini-warehouse buildings and has existing security fencing. The properties to the south consist of an office building which shares an access with the subject property and vacant non-residential land. The properties to the east consist of Drainage Retention Areas (DRAs) and correctional facilities. The properties to the north consist of agricultural and residential land, with portions along CR-491 that are non-residentially designated. The properties to the west across CR-491 consist of multiple commercial uses such as an office, a daycare, a veterinary clinic, and the Citrus County Transit building. The proposed RV and boat parking facility is a similar use to the nearby existing non-residential uses and is consistent with the existing developments in the area.

Consistency with the Comprehensive Plan - All development applications shall demonstrate complete compliance with the Comprehensive Plan. The application is consistent with the Comprehensive Plan goals, policies, and objectives including:

Policy 17.2.8 The County shall utilize land use techniques and development standards to achieve a functional and compatible land use framework which reduces incompatible land uses.

Staff Comment: The subject property has the GNC designation. RV and boat parking facility can be allowed in the GNC land use district with a Conditional Use. The proposed development will be required to meet all applicable LDC design requirements with a deviation for cross-access.

Policy 17.15 The County shall encourage the reduction of uses incompatible and/or inconsistent with individual community's character and designated future land uses by requiring performance standards are met in the County LDC which will reduce negative impacts.

Staff Comment: The surrounding area has existing non-residential uses that are similar to the use proposed.

Consistency with the Land Development Code (LDC) - Staff reviewed this application under the standards of Section 2412, General Commercial District, as specified in the LDC, as well as Section 3745, Design Standards for Small Non-Residential Development Projects, as specified in the LDC. This application is consistent with the provisions of the LDC. The proposed use is compatible with the general area. The applicant has requested a deviation from LDC requirement for cross-access as part of the redevelopment incentives. The proposed use will be required to meet all applicable LDC standards at the time of permitting, if approved.

3745.A. *These standards are intended to provide developers with guidelines for creating safer, efficient, pedestrian-friendly projects with human-scale orientation, while discouraging nondescript buildings, "unfriendly" pedestrian design, limited landscaping, and vast, non-shaded parking lots. As a basis for developing such guidelines, Citrus County citizens and*

visitors alike will benefit from enhanced commercial design, which accomplishes the following objectives:

Section 3745 of the LDC contains development standards for small non-residential design such as landscaping, buffering, façade, parking, and lighting. The applicant has not requested any deviations from these standards as part of this application and will need to demonstrate compliance with these standards at time of permitting.

Engineering Division Comments: The Engineering Division has provided the following comments and condition:

The Engineering Division has no objection and recommends approval with one condition:

- Condition of approval: The site will need to be developed in accordance with Chapter 6, Stormwater Management, and Chapter 7, Transportation System Standards, of the LDC.

PROPOSED FINDINGS OF FACT

Pursuant to Section 4500, Conditional Uses, of the Citrus County Land Development Code (LDC), a conditional use application which meets the objective criteria of the LDC for that use shall be presumed entitled to approval. Such presumption may be rebutted by competent, substantial evidence that the applicable LDC criteria have not been met. Following completion of the public hearing, the PDC shall approve, disapprove, amend and approve the proposal, or approve the proposal with conditions. Any action taken shall be accompanied by the findings of the PDC upon which the action was based. Approval of a Conditional Use application shall be granted by the PDC only if all the following are positive:

1. ***The proposed uses and structures would not violate the land uses, densities, or other directives of the adopted Comprehensive Plan or the LDC.*** The proposed RV and boat parking facility use in the GNC District can meet the requirements of the Comprehensive Plan and LDC. The site will be required to meet LDC standards for small non-residential development at time of permitting.
2. ***The proposed uses and structures would not be incompatible with the uses, structures, and activities on adjacent and nearby lands.*** The surrounding area is predominantly non-residential in nature with existing agriculture to the north. The proposed RV and boat parking facility use must meet all required development standards, with the deviation for cross-access as approved through the redevelopment incentives.
3. ***The proposed uses and structures would not violate health, safety, welfare, and/or convenience of those residing, working, or owning land in the vicinity of the proposed use or structure, specifically with respect to:***
 - a. ***The use or structure would not exceed the applicable density or bulk regulations except as specifically authorized, nor shall the use or structure result in overcrowding of land or buildings.*** The proposed RV and boat parking facility use will need to meet allowable density or bulk regulation. The Impervious Surface Ratio (ISR) for the site cannot exceed the maximum allowable ISR of 70 percent in the GNC District.
 - b. ***The use or structure would not impair pedestrian or vehicular movement in adjoining streets so as to violate adopted level of service standards.*** The site is located along CR-

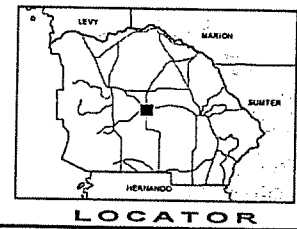
491, a minor arterial classified roadway. The northern driveway access will be closed and the site will take access from the existing shared access from CR-491. A waiver for cross-access to the adjacent lot to the north has been approved through the redevelopment incentives, with the condition that it be provided in the future when the RV and boat parking facility use redevelops or changes use.

- c. ***The use or structure would not create a fire hazard.*** The application as proposed would not create a fire hazard as long as Fire Code requirements are met at the time of permitting.
 - d. ***The use or structure would not result in noise, odor, glare, vibration or other similar characteristic, which is detectable at the property line and which exceeds the level which will result from permitted uses.*** The use as RV and boat parking facility is not anticipated to result in noise, odor, glare, vibration, or other similar characteristic detectable at the property line as long as the development standards of the LDC are adhered to.
 - e. ***The use or structure would not prevent an adjoining landowner from the legal use of his property pursuant to the LDC.*** The use as proposed should not prevent use of adjoining lands.
 - f. ***The use or structure would not violate a requirement or limitation of any applicable state or federal law or regulation.*** The use as proposed should not violate applicable state law or federal regulation.
 - g. ***The use or structure would not result in the inadequacy or inability of any public facility or service to meet adopted standards.*** The proposed RV and boat parking facility will not generate any additional demand on public facilities and will have less of a demand than the existing restaurant that will be removed.
4. ***Termination and/or expiration of Conditional Uses - The PDC may specify a term for the duration of a Conditional Use. A Conditional Use will terminate if no development activity under the Conditional Use is commenced within three years of the date of approval, or if the approved use ceases for a period of three years. The property owner may seek an extension by applying to the PDC.*** The applicant has not requested an extension of the three-year term.

PROPOSED CONDITIONS

1. This conditional use is to allow for RV and boat parking facility, as generally outlined on the conceptual site plan submitted with this application date-stamped February 4, 2021.
2. At the time of permitting, the applicant must demonstrate compliance with all applicable development standards per the LDC Section 3745, Design Standards for Small Non-Residential Development Projects, including, but not limited to, landscaping, buffering, parking, and lighting.
3. Cross-access to the north must be provided when the RV and boat parking facility use redevelops or changes use.
4. The site will need to be developed in accordance with Chapter 6, Stormwater Management, and Chapter 7, Transportation System Standards, of the LDC at time of permitting.
5. A site plan must be submitted to the Land Development Division at the time of permitting indicating compliance with these conditions.

JH/AP/cb





Board of County Commissioners

DEPARTMENT OF GROWTH MANAGEMENT

LAND DEVELOPMENT DIVISION

3600 W. Sovereign Path, Suite 140

Lecanto, FL 34461

Telephone: (352) 527-5239 Fax (352) 527-5428

Toll Free (352) 489-2120 TTY (352) 527-5312

Web Address: www.citrusbocc.com

CITRUS COUNTY LAND DEVELOPMENT CODE CONDITIONAL USE APPLICATION

Application No.: CU-21-02 Date: 02/4/21

* Written Authorization is required if Applicant is different than Owner.

Applicant*

Name: AVID Group (Attn: Peter Pensa, AICP)

Address: 2300 Curlew Road Ste 201

City: Palm Harbor

State: FL Zip: 34683

Home No.: _____ Cell No.: 727-234-8015

Work No.: 727-789-9500 Fax No.: _____

Email: peter.pensa@avidgroup.com

Property Owner

Name: Storeright (Lecanto I), LLC

Address: 100 S. KENTUCKY AVE, STE 290

City: LAKE LAND

State: FL Zip: 33801

Home No.: _____ Cell No.: 813-362-8841

Work No.: 863-216-8000 Fax No.: _____

Email: spuri@storeright.com

Property Description: Section: 9 Township: 19 South Range: 18 East

Legal Description: Please see attached

Subdivision: 003651 - UNREC TRACTS IN 09-19S-18E

Alternate Key #: 1505887

Lot(s): _____ Block/Parcel: _____

Parcel ID: 18E19S09 11200

Acreage: 4.69

Is this hearing being requested as a result of a Code Violation Notice? Yes _____ No X
If "Yes", explain on a separate sheet and attach a copy of the Notice of Violation.

Conditional Use Request: This request is for RV and/or Boat Parking Facilities

Describe how it will/will not affect surrounding development: See attached Conditional Use justification narrative

I am aware that if the property cannot be located using information from the submitted application, this application may be rescheduled to a later hearing date. I also understand that a sign must be placed (and marking flags may be placed) on the property by the Land Development Division at least seven days prior to the scheduled meeting.

I understand that approval for the proposed use shown hereon does not in any way relieve me of the responsibility of observing and complying with any deed restrictions applicable to the subject property.

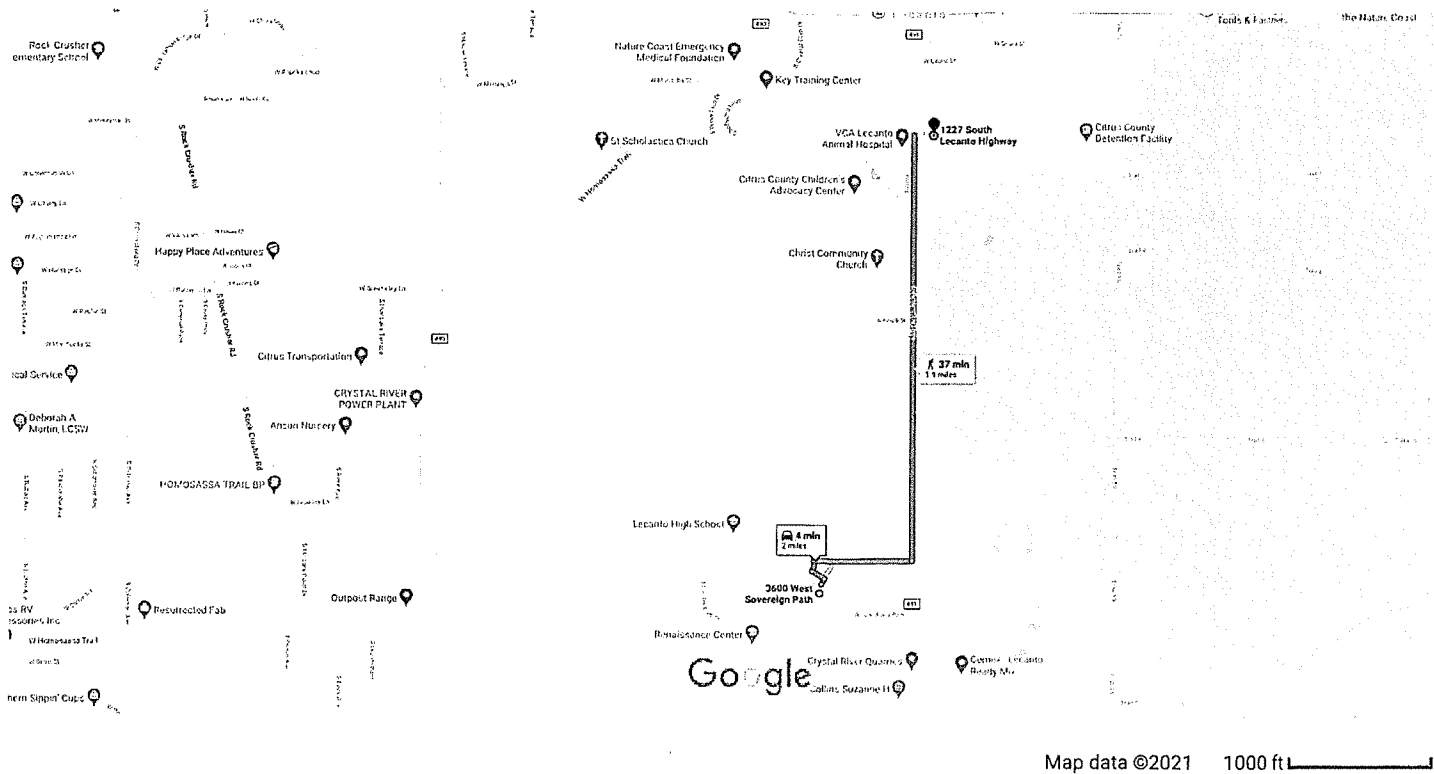
I hereby authorize Citrus County or its agents to enter upon the property, which is the subject of this application and the date of the hearing thereon, at any time between the hours of 8:00 AM and 5:00 PM for the purpose of gathering any information relevant to this application.

101
CU-21-02

Google Maps

3600 W Sovereign Path, Lecanto, FL 34461 to 1227 S
Lecanto Hwy, Lecanto, FL 34461

Drive 2.0 miles, 4 min



3600 W Sovereign Path

Lecanto, FL 34461

- ↑ 1. Head northeast on W Sovereign Path
125 ft
- ↶ 2. Turn left toward Saunders Way
285 ft
- ↷ 3. Turn right toward Saunders Way
210 ft
- ↷ 4. Turn right onto Saunders Way
0.4 mi
- ↶ 5. Turn left onto Co Rd 491
1.5 mi

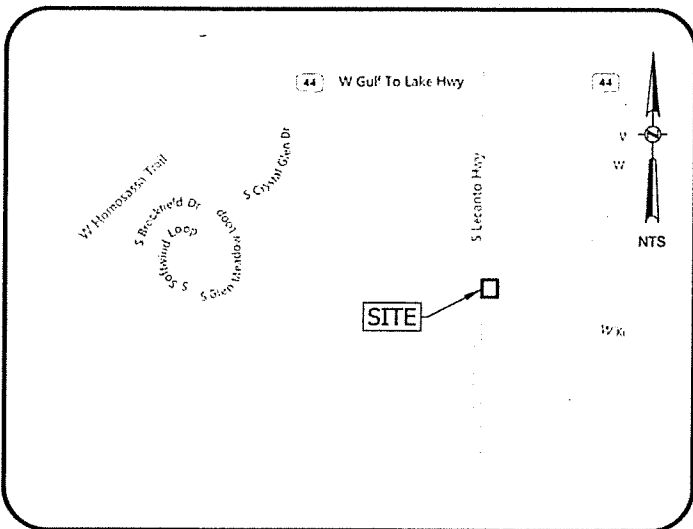
1227 S Lecanto Hwy

Lecanto, FL 34461

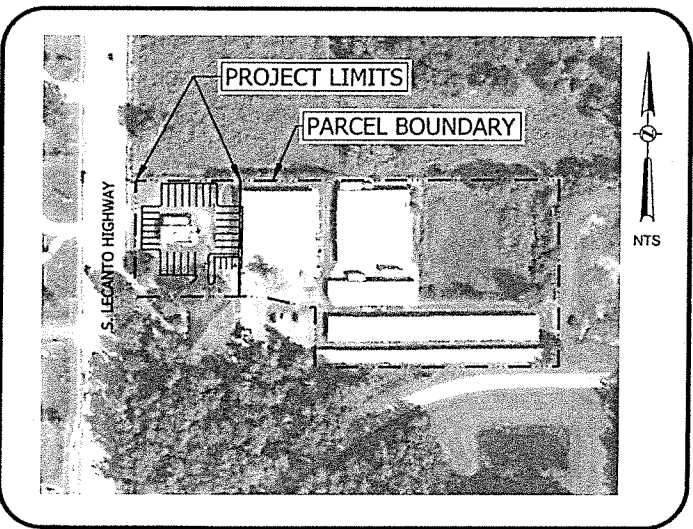
These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

CU-21-02

LOCATION MAP

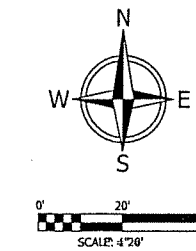


OVERALL SITE MAP



OVERALL LEGAL DESCRIPTION

The South one-half (S 1/2) of the South one-half (S 1/2) of the Northeast one-quarter (NE 1/4) of the Northeast one-quarter (NE 1/4) of Section 9, Township 19 South, Range 18 East, less the right of way of County Road No. 491 (formerly State Road No. 491) and less the East 528.77 feet thereof. Less: Commence at the Southeast corner of the South one-half (S 1/2) of the South one-half (S 1/2) of the Northeast one-quarter (NE 1/4) of the Northeast one-quarter (NE 1/4) of Section 9, Township 19 South, Range 18 East, Citrus County, Florida, thence South 89 degrees, 38 minutes, 11 seconds West along the South line of the South one-half (S 1/2) of the South one-half (S 1/2) of the Northeast one-quarter (NE 1/4) of the Northeast one-quarter (NE 1/4) of said Section 9, a distance of 950.60 feet to the Point of Beginning, thence continue South 89 degrees, 38 minutes, 11 seconds West, along said South line, a distance of 314.00 feet to the Easterly right of way line of County Road No. 491, thence North 0 degrees, 00 minutes, 30 seconds West, along said Easterly right of way line, 126.00 feet, thence North 89 degrees, 38 minutes, 11 seconds East, 209.22 feet to the P.C. of a curve concaved Southwesterly, having a central angle of 13 degrees, 41 minutes, 31 seconds, and a radius of 88.0 feet, thence Southeast along the arc of said curve, a distance of 21.03 feet to the P.T. of said curve (chord bearing and distance between said points being South 83 degrees, 31 minutes, 03 seconds East, 26.70 feet), thence North 89 degrees, 38 minutes, 11 seconds East, 2.00 feet thence South 0 degrees, 21 minutes, 49 seconds East, 107.00 feet to the Point of Beginning. Subject to the following described easement: Commence at the Southeast corner of the South one-half (S 1/2) of the South one-half (S 1/2) of the Northeast one-quarter (NE 1/4) of the Northeast one-quarter (NE 1/4) of Section 9, Township 19 South, Range 18 East, Citrus County, Florida, thence South 89 degrees, 38 minutes, 11 seconds West, along the South line of the South one-half (S 1/2) of the South one-half (S 1/2) of the Northeast one-quarter (NE 1/4) of the Northeast one-quarter (NE 1/4) of said Section 9, a distance of 1264.60 feet to the Easterly right of way line of County Road No. 491, thence North 0 degrees, 00 minutes, 30 seconds West, along said Easterly right of way line, 126.00 feet to the Point of Beginning, thence continue North 00 degrees, 00 minutes, 30 seconds West, along said right of way line a distance of 24.00 feet, thence North 89 degrees, 38 minutes, 11 seconds East, a distance of 209.07 feet to the P.C. of a curve concaved Southwesterly, having a central angle of 13 degrees, 41 minutes, 31 seconds and a radius of 112.00 feet, thence Southeast along the arc of said curve, a distance of 26.76 feet to the P.T. of said curve, (chord bearing and distance between said points being South 83 degrees, 31 minutes, 03 seconds East, 26.70 feet), thence South 13 degrees, 19 minutes, 42 seconds West, a distance of 24.00 feet to the P.C. of a curve concaved Southwesterly, having a central angle of 13 degrees, 41 minutes, 31 seconds and a radius of 88.00 feet, thence Northwesterly along the arc of said curve, a distance of 21.03 feet to the P.T. (chord bearing and distance between said points being North 83 degrees, 31 minutes, 03 seconds West, 20.98 feet), thence South 89 degrees, 38 minutes, 11 seconds West, a distance of 209.22 feet to the Point of Beginning, and subject to an easement across the North 30.00 feet thereof.



LEGEND

- SITE BOUNDARY LINE
- 6' HIGH CHAIN-LINK FENCE
- EDGE OF CRUSHED ROCK
- LANDSCAPE BUFFER
- EASEMENT LINE
- TYP TYPICAL
- S/W SIDEWALK

NOTES:

- LAND USE DISTRICT - GNC.

SITE DATA

PROPERTY OWNER:
STORERRIGHT LECANTO 1, LLC
P.O. BOX 1859
LEKLAND, FL 33815

PROPERTY LOCATION:
1227 S. LECANTO HWY
LEKLAND, FL 34161

PROPERTY PARCEL I.D. NUMBER:
18E19509 11200

GENERALIZED FUTURE LAND USE:
GNC (GENERAL COMMERCIAL DISTRICT)

PROPERTY USE: EXISTING STORAGE FACILITY & RESTAURANT
PROPOSED: STORAGE FACILITY & RV/BOAT PARKING

BUILDING SETBACK REQUIREMENTS:
FRONT: 125 FT TO C/L, 25 FT TO P/L
SIDE: 5 FT
REAR: 5 FT

LANDSCAPE BUFFER REQUIREMENTS:
NORTH: 5 FT (TYPE 'A')
EAST: N/A
WEST: 10 FT (TYPE 'A')
SOUTH: N/A

PARKING (PROPOSED):
STANDARD STALL SIZE = 10' x 20'
HC STALL SIZE = 12' x 20'
STORAGE BAY SIZE = VARIES (12' x 40' & 11' x 30')

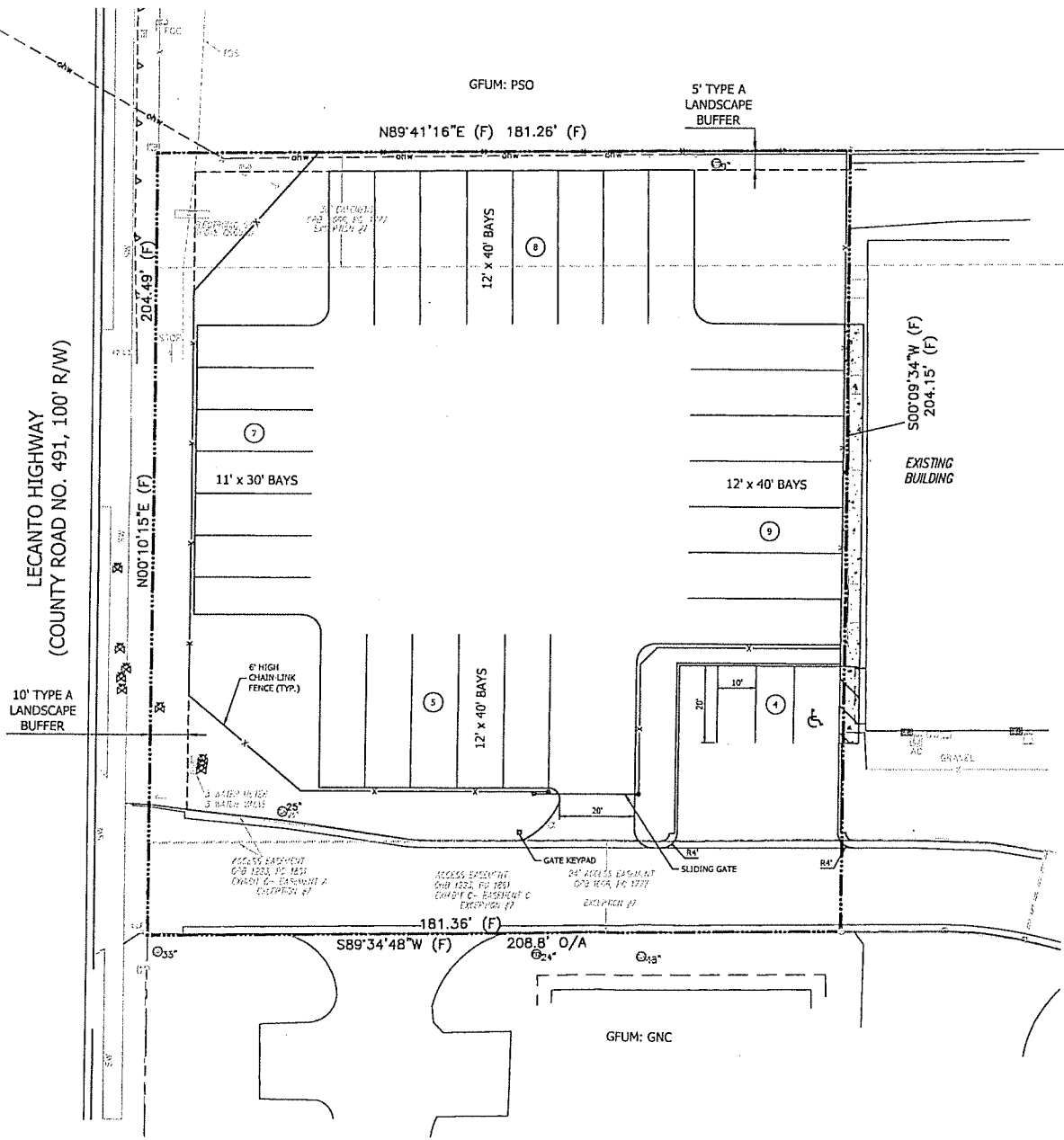
STANDARD PARKING SPACES = 3
HC SPACES = 1
STORAGE BAYS = 29
TOTAL PARKING SPACES = 33

PROJECT LEGAL DESCRIPTION

A PARCEL OF LAND LYING IN A PORTION OF SECTION 9, TOWNSHIP 19 SOUTH, RANGE 18 EAST, CITRUS COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE INTERSECTION OF THE EASTERN RIGHT OF WAY OF LECANTO HIGHWAY (COUNTY ROAD 491) (100 FOOT RIGHT OF WAY) AND THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTH 1/2 OF THE NORTH 1/4 OF THE NORTH 1/4 OF SECTION 9, TOWNSHIP 19 SOUTH, RANGE 18 EAST, CITRUS COUNTY, FLORIDA; THENCE NORTH 89°41'16" EAST ALONG THE SAID NORTH LINE FOR 181.31 FEET; THENCE SOUTH 00°09'34" WEST FOR 204.15 FEET; THENCE SOUTH 89°34'48" WEST FOR 181.36 FEET TO INTERSECT THE AFORESAID EASTERN RIGHT OF WAY; THENCE NORTH 00°10'15" EAST ALONG SAID EASTERN RIGHT OF WAY FOR 204.49 FEET TO THE POINT OF BEGINNING.

CONTAINING 37,047.89 SQUARE FEET OR 0.8505 ACRES, MORE OR LESS.



STORERRIGHT SELF STORAGE, LLC

1227 S. LECANTO HIGHWAY

CITRUS COUNTY, FLORIDA

SITE PLAN



CIVIL ENGINEERING 2300 CURLEW ROAD STE 201
LAND PLANNING PALM HARBOR, FLORIDA 34683
TRANSPORTATION TRAFFIC 34683
SURVEYING PHONE (237) 789-9500
AVIDGROUP.COM

NO.	DATE	DESCRIPTION	BY
1	1/27/2021		

NOT VALID WITHOUT ORIGINAL SURVEYOR'S SEAL
PROFESSIONAL SURVEYOR
C.O.# 1137, L.P. 2745
P. PENSA
PROJ. # 3389002
DATE: 1/27/2021

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

10
9
8
7
6
5
4
3
2
1

SURVEYOR'S REPORT**MAP OF BOUNDARY SURVEY:**

SEE SHEET 2 OF 2 FOR MAP OF SURVEY. THE MAP AND REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHER.

LEGAL DESCRIPTION:
(SEE DATA SOURCE 2)**LEGAL DESCRIPTION: PROJECT LIMITS**

A PARCEL OF LAND LYING IN A PORTION OF SECTION 9, TOWNSHIP 19 SOUTH, RANGE 16 EAST, CITRUS COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE INTERSECTION OF THE EASTERN RIGHT OF WAY OF LECANTO HIGHWAY (COUNTY ROAD 491) (100 FOOT RIGHT OF WAY) AND THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTH 1/2 OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 9, TOWNSHIP 19 SOUTH, RANGE 16 EAST, CITRUS COUNTY, FLORIDA; THENCE NORTH 89°41'16" EAST ALONG THE SAID NORTH LINE FOR 181.31 FEET; THENCE SOUTH 00°09'34" WEST FOR 204.15 FEET; THENCE SOUTH 89°34'48" WEST FOR 181.36 FEET TO INTERSECT THE AFORESAID EASTERN RIGHT OF WAY; THENCE NORTH 00°10'15" EAST ALONG SAID EASTERN RIGHT OF WAY FOR 204.49 FEET TO THE POINT OF BEGINNING.

CONTAINING 37,047.89 SQUARE FEET OR 0.8505 ACRES, MORE OR LESS.

DATA SOURCES:

1. BEARINGS ARE BASED UPON THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTH 1/2 OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 9, TOWNSHIP 19 SOUTH, RANGE 16 EAST, CITRUS COUNTY, FLORIDA, BEING N89°41'16"E AS ESTABLISHED BASED ON STATE PLANE COORDINATES WEST ZONE AND IS SHOWN ON THE MAP OF SURVEY.

2. THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A COMMITMENT FOR TITLE INSURANCE, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NUMBER 35-00083902, OFFICE FILE NUMBER NCS-47491-CLWZ, ISSUED APRIL 22, 2011, EFFECTIVE DATE: JANUARY 25, 2021 AT 1:26 P.M. THE LEGAL DESCRIPTION SHOWN HEREON IS A PORTION OF THE PARCEL DESCRIBED IN SAID COMMITMENT.

3. SOURCE OF EASEMENT INFORMATION BEING SAID COMMITMENT REFERENCED IN DATA SOURCES 2.

4. STATE PLANE COORDINATES ARE BASED FDOT FLORIDA PERMANENT REFERENCE NETWORK THEY WERE ESTABLISHED WITH GPS USING MULTIPLE OBSERVATIONS CONSISTING OF MORE THAN THREE MINUTES AT EACH POINT.

5. THE WARRANTY DEED, AS RECORDED IN PLAT BOOK 1938, PAGE 1937 OF THE PUBLIC RECORDS OF CITRUS COUNTY, FLORIDA, WAS UTILIZED IN THE PREPARATION OF THIS SURVEY.

SURVEYOR'S NOTES:

1. USE OF THIS SURVEY BY ANYONE OTHER THAN THOSE PREPARED FOR/CERTIFIED TO, WILL BE THE RE-USERS SOLE RISK WITHOUT LIABILITY TO THE SURVEYOR.

2. THE SIGNING PROFESSIONAL LAND SURVEYOR IS NOT RESPONSIBLE FOR ADDITIONAL EASEMENTS AND/OR RESTRICTIONS AFFECTING THIS PROPERTY THAT WERE NOT PROVIDED BY THE TITLE COMPANY REFERENCED IN DATA SOURCES 2.

3. THE LOCATIONS OF THE UNDERGROUND UTILITIES AND / OR THEIR APPURTENANCES WERE PERFORMED BY A FIELD SURVEY AND ONLY LOCATED AS SHOWN ON THE FACE OF THE SURVEY. ONLY THE UNDERGROUND UTILITIES AND/OR THEIR APPURTENANCES WHICH WERE VISIBLE FROM GROUND LEVEL TO THE SURVEYOR ON THE ACTUAL DAY OF THE FIELD SURVEY WERE LOCATED. NO EXCAVATIONS OR SUBSURFACE WORK EFFORTS OF ANY KIND WERE PERFORMED BY THE SURVEYOR TO VERIFY THE EXISTENCE OF ANY UNDERGROUND UTILITIES AND/OR THEIR APPURTENANCES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES AND/OR THEIR APPURTENANCES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.

4. PRINTED DIMENSIONS SHOWN ON THE SURVEY SUPERSEDE SCALED DIMENSIONS. THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.

5. UNDERGROUND FOUNDATIONS AND THEIR LOCATIONS HAVE NOT BEEN DETERMINED.

6. IRRIGATION EQUIPMENT AND/OR THEIR APPURTENANCES HAVE NOT BEEN LOCATED UNLESS OTHERWISE SHOWN HEREON.

7. FIELD WORK WAS COMPLETED ON 12/28/2020.

8. NO INFORMATION FOR THE ADJOINING PROPERTY OWNERS WAS PROVIDED TO THE SURVEYOR.

9. CALCULATED (C) GEOMETRY SHOWN HEREON WAS CALCULATED USING FIELD LOCATED POINTS.

10. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

11. ANGULAR AND/OR DIMENSIONAL DISCREPANCIES BETWEEN THE LEGAL DESCRIPTION(S) AND THE FIELD LOCATED OCCUPATION BOUNDARY CORNERS, AND BOUNDARY CORNERS WITH MULTIPLE BOUNDARY MONUMENTS ALONG WITH THEIR CORRESPONDING QUADRANT DIRECTIONAL MISSES, ARE SHOWN ON MAP OF SURVEY.

12. THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X", PER FLOOD INSURANCE RATE MAP, COMMUNITY NUMBER 120063, PANEL NUMBER 0326, SUFFIX D, MAP NUMBER 12017C0326D, EFFECTIVE DATE SEPTEMBER 25, 2014 (NAVD 1988)

EASEMENTS/RIGHT-OF-WAYS:

1. THERE MAY BE EASEMENTS AND/OR RESTRICTIONS AFFECTING THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

THE FOLLOWING ARE PER SCHEDULE B - SECTION 2 OF THE COMMITMENT REFERENCED IN DATA SOURCE 2

1. Rights or claims of parties in possession not shown by the public records.

RESPONSE TO ITEM 1: NON SURVEY ITEM

2. Any adverse claim to any portion of said land which has been created by artificial means or has accreted to any such portion so created and riparian rights, if any.

RESPONSE TO ITEM 2: NON SURVEY ITEM

3. Taxes or special assessments which are not shown as existing liens by the public records.

RESPONSE TO ITEM 3: NON SURVEY ITEM

4. The mortgage, if any, referred to in Item 4 of Schedule A.

RESPONSE TO ITEM 4: NON SURVEY ITEM

5. The lien of the taxes for the year 2011 and all subsequent years, which are not yet due and payable.

RESPONSE TO ITEM 5: NON SURVEY ITEM

6. Declaration of Protective Covenants, Building Standards and Easements of Citrus Oaks Executive Center, which contain provisions for, including but not limited to, a private charge or assessments, recorded in O.R. Book 1174, Page 17, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status or national origin to the extent such covenants, conditions or restrictions violate 42 USC 3604(c).

RESPONSE TO ITEM 6: THIS DOES NOT AFFECT THE SURVEYED PARCEL. EXHIBIT "A" IS SHOWN ON THE MAP OF SURVEY.

7. Easements set forth in Corporate Warranty Deed recorded in O.R. Book 1066, Page 1777, as modified by Joint Use Easement for Access, Ingress and Egress recorded in O.R. Book 1223, Page 1061.

RESPONSE TO ITEM 7: ORB 1066-- 24 FOOT ACCESS EASEMENT AND 30 FOOT EASEMENT ARE SHOWN ON MAP OF SURVEY. ORB 1223-- EXHIBIT "C" THE ACCESS EASEMENTS (A AND C) AFFECT THE SURVEYED PARCEL AND ARE SHOWN ON THE MAP OF SURVEY. ACCESS EASEMENT (D) DOES NOT AFFECT THE SURVEYED PARCEL.

8. Terms and conditions of any existing unrecorded lease(s), and all rights of lease(s) and any parties claiming through the lease(s) under the lease(s).

RESPONSE TO ITEM 8: NON SURVEY ITEM

9. Any facts, rights, interests or claims that may exist or arise by reason of the following matters disclosed by an ALTA/NSPS survey made by ArPoint Surveying & Mapping, LLC on 10/08/10, last revised 01/10/11, designated Job Number 10-067-1: (a) The fence is 0.4' north of the northeast corner boundary line; (b) overhead power lines, power pole and guy wire are across the east side of the subject property without noted benefit of easement.

RESPONSE TO ITEM 9: ENCROACHMENT CALL FOR DO NOT AFFECT SURVEY PARCEL.

10. Assignment of Rents from StoreRight (Leanto I), LLC to CenterState Bank of Florida, N.A., dated January 21, 2011 and recorded January 25, 2011, in Official Records Book 2399, Page 2433.

RESPONSE TO ITEM 10: NON SURVEY ITEM

11. UCC Financing Statement between StoreRight (Leanto I), LLC, as Debtor, and CenterState Bank of Florida, N.A., as Secured Party, recorded January 25, 2011, in Official Records Book 2399, Page 2433.

RESPONSE TO ITEM 11: NON SURVEY ITEM

PREPARED FOR:

StoreRight (Leanto I), LLC

CERTIFIED TO:

StoreRight (Leanto I), LLC
First American Title Insurance Company
Clark, Campbell, Lancaster & Munson, P.A.

SURVEYOR IN RESPONSIBLE CHARGE:

JOHN L. WABY
PROFESSIONAL LAND SURVEYOR
LICENSE NUMBER PLS 4270
STATE OF FLORIDA

Note: All of the recording information contained herein refers to the Public Records of Citrus County, Florida.

SYMBOLS LEGEND

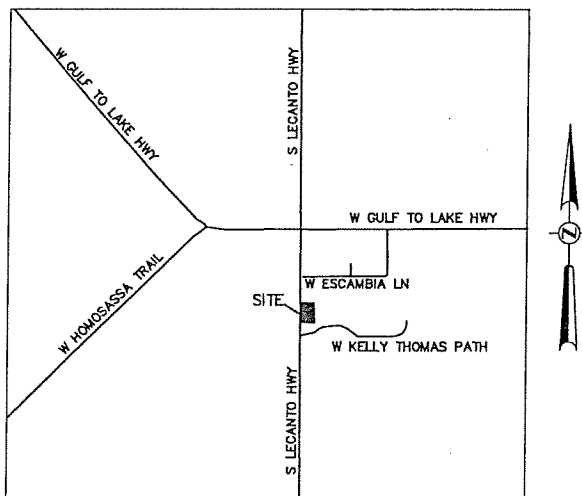
- + = Aerial Target
- ✕ = Air Release Valve
- ✕ = Bench Mark
- ⊠ = Back Flow Preventer
- ⊠ = Cable TV Point Stripe
- ⊠ = Cable TV Box
- ⊠ = Cable TV Pedestal
- ⊠ = Communications Manhole
- ⊠ = Concrete Light Pole
- ⊠ = Concrete Post
- ⊠ = Concrete Utility Pole
- ⊠ = Driveway Manhole
- ⊠ = Electric Box
- ⊠ = Electric Manhole
- ⊠ = Electric Meter
- ⊠ = Electric Transformer
- ⊠ = FPC Pedestal
- ⊠ = Fire Hydrant
- ⊠ = Flag Pole
- ⊠ = Gas Line Marker
- ⊠ = Gas Filler Cap
- ⊠ = Gas Valve
- ⊠ = Gas Meter Box
- ⊠ = Gas Line Point Stripe
- ⊠ = Gas Vent
- ⊠ = Gopher Tortoise Hole
- ⊠ = Gully Inlet
- ⊠ = Guy Wire
- ⊠ = Handicapped
- ⊠ = Light Pole
- ⊠ = Mail Post
- ⊠ = Monitor Well
- ⊠ = Parking Meter
- ⊠ = Power Point Stripe

- ⊠ = Reclaimed Water Point Stripe
- ⊠ = Reclaimed Water Box
- ⊠ = Reclaimed Water Valve
- ⊠ = Sanitary Sewer Manhole
- ⊠ = Sanitary Cleanout
- ⊠ = Sanitary Sewer Point Stripe
- ⊠ = Section Corner
- ⊠ = Storm Sewer Connection
- ⊠ = Sign
- ⊠ = Sprinkler Control Box
- ⊠ = Sprinkler Head
- ⊠ = Steel Transmission Pole
- ⊠ = Storm Water Point Stripe
- ⊠ = Telephone Pedestal
- ⊠ = Telephone Manhole
- ⊠ = Telephone Point Stripe
- ⊠ = Telephone Marker
- ⊠ = Traffic Signal Box
- ⊠ = Traffic Signal Pole
- ⊠ = Underground Cable Marker
- ⊠ = Verizon Box
- ⊠ = Verizon Marker
- ⊠ = Water Blow Off Valve
- ⊠ = Water Line Marker
- ⊠ = Water Line Point Stripe
- ⊠ = Water Meter
- ⊠ = Water Valve
- ⊠ = Well
- ⊠ = Wood Utility Pole
- ⊠ = Wood Light Pole
- ⊠ = Wood Post/Pole
- ⊠ = Wood Transmission Pole

- ⊠ = FOUND 5/8" IRON ROD WITH CAP "AVID LB 7345" (UNLESS OTHERWISE NOTED)
- ⊠ = SR, SET 5/8" IRON ROD WITH CAP "AVID LB 7345" (UNLESS OTHERWISE NOTED)
- ⊠ = FCM, FOUND CONCRETE MONUMENT "4"x4" WITH DISK
- ⊠ = SCW PRM, SET CONCRETE MONUMENT "4"x4" WITH DISK MARKED "PRM LB 7345" (UNLESS OTHERWISE NOTED)
- ⊠ = SHAD PRM, SET NAIL AND DISK "PRM LB 7345" (UNLESS OTHERWISE NOTED)
- ⊠ = POP, SET NAIL AND DISK "POP LB 7345" (UNLESS OTHERWISE NOTED)
- ⊠ = CENTRAL ANGLE

ABBREVIATIONS LEGEND

- AC = Acres
- A/C = Air Conditioner
- ADW = Asphalt Driveway
- ARC = Arc Distance (Length)
- ASPH = Asphalt
- BC = Back of Curb
- BCCM = Board of County Commissioners Wholes Book
- BFPD = Back Flow Prevention Device
- BLDG = Building
- BNDY = Boundary
- BWF = Barb Wire Fence
- (C) = Calculated Data
- C/C = Covered Concrete
- CB = Chord Bearing
- CCCL = Coastal Construction Control Line
- CCR = Certified Corner Record
- CDW = Concrete Driveway
- CI = Curb Inlet
- CL = Center Line
- CH = Chord Length
- CLF = Chain Link Fence
- CLS = Centerline Swale
- CM = Concrete Monument
- CMP = Corrugated Metal Pipe
- CO = Clean out
- CON = Concrete
- COR = Corner
- CPB = Condo Plat Book
- C/S = Concrete Slab
- CS = Concrete Structure
- (D) = Dead
- DB = Dead Book
- DCVA = Double Check Valve Assembly
- DEPT = Department
- DIA = Diameter
- DIP = Ductile Iron Pipe
- DMH = Driveway Manhole
- DS = Down Spout
- DW = Driveway
- E = East
- ECMP = Elliptical Corrugated Metal Pipe
- EL = Elevation
- EDW = Edge of Water
- EP = Edge of Pavement
- ERCP = Elliptical Reinforced Concrete Pipe
- ESMT = Easement
- (F) = Field Data
- FCM = Found Concrete Monument
- FDOT = Florida Department of Transportation
- FH = Fire Hydrant
- FIP = Found Iron Pipe
- FL = Found Iron Rod
- FL = Flow Line
- FND = Found
- FND = Found Nail and Disk
- FNE = Finished Floor Elevation
- FNA&T = Found Nail and Tin Tab
- FOP = Found Open End Iron Pipe
- FPP = Florida Power Corporation Box
- FPC = Florida Power Corporation
- FPP = Found Pinned Iron Pipe
- FRS = Found Railroad Spike
- FT = Feet
- FT = Fence Tie
- FXC = Found X-cut
- GI = Grite Inlet
- GPS = Global Positioning System
- GT = Gopher Tortoise Hole
- GV = Gas Valve
- HC = Handicapped
- IC = Illegible cap
- ID = Identification
- IE = Invert Elevation
- INV = Invert
- JD = Jurisdiction
- (L) = Legal Description
- LB = Licensed Business Number
- LF = Linear Feet
- LP = Light Pole
- LS = Licensed Surveyor
- MAS = Masonry
- MES = Mitered End Section
- MH = Manhole
- MHW = Mean High Water
- MOL = More or Less
- N = North
- N/C = No Cap
- N/F = Not Found
- NAD = North American Datum
- NAVD = North American Vertical Datum
- NGS = National Geodetic Survey
- NGVD = National Geodetic Vertical Datum
- NP = Normal Pool Elevation
- (NR) = Non Radial
- O/A = Overhead Wire(s)
- ORB = Official Record Book
- OSW = Other Surface Water
- (P) = Plat Book XX Page XX
- PB = Plat Book
- PC = Point of Curvature
- PCP = Permanent Control Point
- PQ(S) = Pages
- PI = Point of Intersection
- PLS = Professional Land Surveyor
- POB = Point of Beginning
- POC = Point of Commencement
- POL = Point on Line
- PRM = Permanent Reference Monument
- PSM = Professional Surveyor and Mapper
- PT = Point of Tangency
- PVC = Polyvinyl Chloride Pipe
- PWL = Painted White Line
- PYL = Painted Yellow Line
- (R) = Recorded Data
- R = Radius
- RCP = Reinforced Concrete Pipe
- RD = Road Drain
- RNG = Range
- R/W = Right of Way
- S = South
- SCM = Set Concrete Monument, "4"x4", "PRM LB 7345"
- SEC = Section
- SHW = Seasonal High Water Elevation
- SIR = Set 5/8" Iron Rod and Cap, "AVID LB 7345"
- SR(W) = Set 5/8" Iron Rod and Cap, "WT COR LB 7345"
- SMH = Sanitary Manhole
- SNAD = Set Nail and Disk, "AVID LB 7345"
- SNAD(W) = Set Nail and Disk, "WT COR LB 7345"
- SO = Squares
- SR = State Road
- STR = Story
- SW = Sidewalk
- TBM = Temporary Benchmark
- TOB = Top of Bank
- TOS = Toe of Slope
- TPS = Traffic Point Stripe
- TRANS = Transformer
- TRV = Traverse
- (TYP) = Typical
- TWP = Township
- U/P = Utility Pole
- VCP = Vitrified Clay Pipe
- W = West
- W = With
- WDF = Wood Fence
- WIT = Witness
- W/T = Wall Tie
- WV = Water Valve



VICINITY MAP
-NOT TO SCALE-

TABLE A OPTION ITEMS

ITEM 2: BUILDING ADDRESS
1209 S LECANTO HIGHWAY, LECANTO FL 34461

ITEM 3: FLOOD ZONE

THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X", PER FLOOD INSURANCE RATE MAP, COMMUNITY NUMBER 120063, PANEL NUMBER 0326, SUFFIX D, MAP NUMBER 12017C0326D, EFFECTIVE DATE SEPTEMBER 25, 2014

ITEM 4: AREA

OVERALL 37,048 SQ. FT. or 0.85 ACRES MORE OR LESS

ITEM 7(a): BUILDINGS

THERE IS 1 BUILDINGS ON SITE

ITEM 8: IMPROVEMENTS

SEE MAP OF SURVEY

ITEM 9: PARKING

THERE ARE 17 REGULAR SPACES, 2 HANDICAPPED SPACES.

ITEM 11: OBSERVED UTILITIES

SEE MAP OF SURVEY

ITEM 13: ADJOINERS

SEE MAP OF SURVEY

ALTA/NSPS LAND TITLE CERTIFICATION:

TO:
StoreRight (Leanto I), LLC
First American Title Insurance Company
Clark, Campbell, Lancaster & Munson, P.A.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 7(A), 8, 9, AND 13 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 28, 2020.

JOHN L. WABY
PROFESSIONAL LAND SURVEYOR
LICENSE NUMBER 4270

Printed by: 2021/11/10 10:00 AM
DR: JOHN L. WABY, 051-401-1100/00001177/2021/11/10 10:00 AM
GROUP: Civil
DATE: 2021/11/10 10:00 AM

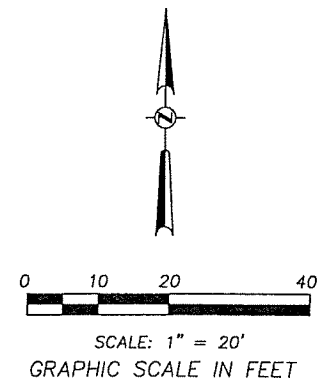
StoreRight (Leanto I), LLC

CIVIL ENGINEERING 3300 CULLEW ROAD
LAND PLANNING STE 201
TRAFFIC/TRANSPORTATION PALM HARBOR, FLORIDA
ENVIRONMENTAL SCIENCES 4483
SURVEYING PHONE (727) 788-9800
FAX (727) 788-9800
AVIDGROUP.COM

AVID
GROUP

STORERIGHT LECANTO
CITRUS COUNTY, FLORIDA

BOUNDARY SURVEY
ALTA/NSPS LAND TITLE SURVEY



THE SURVEY IS NOT FULL AND COMPLETE WITHOUT THE ATTACHED SURVEY REPORT, SEE SHEET 1.

Packet Pg. 20

Project Narrative & Justification Statement
 Boat/RV Storage @ 1227 S Lecanto Highway
 1227 S Lecanto Highway, Lecanto, FL
 (Parcel ID No. 18E19S09 11200)

CU-21-02

The project area comprises the front +/- 0.85-acre portion of the 4.7-acre parcel located at 1227 S Lecanto Highway. The parcel has a generalized future land use designation of GNC (General Commercial District). There is currently a 1,185 sq.ft. freestanding restaurant (last occupied by Havana House Cafe) located within the project area that will be demolished to redevelop that portion of the parcel with the proposed Boat/RV Parking Facility. The remainder of the parcel is developed with five storage buildings (StoreRight Self Storage) which will remain.

Proposed Findings of Fact

Pursuant to Section 4500, Conditional Uses, of the Citrus County Land Development Code (LDC), a Conditional Use application which meets the objective criteria of the LDC for that use shall be presumed entitled to approval. The applicant's land planning and civil engineering consultant offers the following findings in support of this application.

1. The proposed uses and structures would not violate the land uses, densities, or other directives of the adopted Comprehensive Plan or of this code.

FINDING: This proposed Boat/RV Storage Facility use is consistent with the land use standards of the Comprehensive Plan and Land Development Code.

2. The proposed uses and structures would not be incompatible with the uses, structures, and activities on adjacent and nearby lands.

FINDING: The proposed Boat/RV Storage Facility use is accessory to, and compatible with, the existing self-storage facility use located on the remainder of the parcel. The property to the north is vacant non-residential land with a generalized future land use designation of PSO (Professional Services/Office District). The property to the south is a non-residential development (Life South Community Blood Center) with a generalized future land use designation of GNC (General Commercial District). The fenced boat and RV storage yard is less intense than the restaurant use that is will replace.

3. The proposed uses and structures would not violate the health, safety, welfare, and/or convenience of those residing, working, or owning land in the vicinity of the proposed use or structure, specifically with respect to:

a. The use or structure would not exceed the applicable density or bulk regulations except as specifically authorized, nor shall the use or structure result in overcrowding of land or buildings.

FINDING: Demolition of the existing restaurant on the property and converting the existing parking area into a boat and RV storage yard will reduce the density and bulk.

b. The use or structure would not impair pedestrian or vehicular movement in adjoining streets so as to violate adopted level of service standards.

FINDING: There are two existing driveways on S Lecanto Highway. The northern driveway will be closed with the redevelopment. The change of use from Sit-Down Restaurant to Boat/RV Storage Facility will reduce AM/PM/Daily trip generation on the adjacent roadway.

c. The use or structure would not create a fire hazard.

FINDING: The Boat/RV Storage Facility use as proposed will not create a fire hazard. The existing structure will be demolished, and no new structures are proposed.

d. The use or structure would not result in noise, odor, glare, vibration, or other similar characteristic, which is detectable at the property line and which exceeds the level which will result from permitted uses.

FINDING: The Boat/RV Storage Facility use will not result in noise, odor, glare, vibration, or other similar characteristics detectable at the property line. Activity related to this use is less intense than the current restaurant use.

e. The use or structure would not prevent an adjoining landowner from the legal use of his property pursuant to this code.

FINDING: Boat/RV Storage is a low intensity, quiet use that will not prevent adjoining landowners from enjoying legal use of their property.

f. The use or structure would not violate a requirement or limitation of any applicable state or federal law or regulation.

FINDING: The use will comply with the applicable state and federal laws/regulations.

g. The use or structure would not result in the inadequacy or inability of any public facility or service to meet adopted standards.

FINDING: The use will not generate demand on public facilities or services. Since the property is currently developed with a restaurant use, the change of use will reduce traffic, water, sewer, and solid waste demands.

The proposed use is consistent with the County's conditional use review criteria, as detailed in the above findings of fact, and as depicted on the accompanying site plan.

If you have any questions or need further information, please contact me at 727-234-8015, or at peter.pensa@avidgroup.com.

Prepared by:
AVID Group



Peter R. Pensa, AICP
Director of Planning / Associate

CU-21-02



A/P No.: _____

Redevelopment Incentives Form

Request for Waiver or Reduction

Notice to Applicants:

Only non-residential structures and/or non-residential development permitted and functional prior to January 1, 2010 may qualify for this program. Applicants requesting a waiver or reduction of certain site or building upgrade requirements as required by the Citrus County Land Development Code, shall be required to first attend a pre-application meeting with staff prior to submitting their formal request. Requests for waivers or reduction shall then be made through the submittal process for Site Improvement Plan when a change of use has been determined by the Building Official. This form shall be filled out and returned by the applicant for consideration as part of their submittal for Site Improvement Plan. The applicant may attach additional sheets to this form for purposes of describing each request for waiver or reduction.

Please fill out the following information as applicable to your request for waiver or reduction: (Attached additional pages if more space is needed.)

Name of Project: Outdoor Vehicle Storage @ S. Lecanto Hwy

Date of Pre-application Meeting: 10/06/2020

a) ☐ YES ☒ NO – Request for waiver/reduction of Landscape Requirements

Brief description of request: _____

For Staff Use Only: Approved; Approved with conditions (attached); or Denied *
Growth Management Department Director initials: _____

b) ☐ YES ☒ NO – Request for waiver/reduction of Paved Parking**/Loading Area Requirements

Brief description of request: _____

****Note:** Where parking is deficient, additional requested off-street parking spaces may be stabilized by alternative surfaces to be maintained in a safe and non-eroding condition. All dimensional standards shall be required as specified by Code. Alternative surfaces may still need to provide drainage retention.

For Staff Use Only: Approved; Approved with conditions (attached); or Denied *
Growth Management Department Director initials: _____

c) ☐ YES ☒ NO – Request for waiver/reduction of Façade Design

Brief description of request: _____

For Staff Use Only: Approved; Approved with conditions (attached); or Denied *
Growth Management Department Director initials: _____

Attachment: Application Submittal (12715 : CU-21-02 AVID Group for Storeright (Leanto I), LLC)

CU-21-02

A/P No.: _____

d) ☒ YES ☐ NO – Request for waiver of Cross Access Driveway Connection

Waive cross access to the vacant parcel to the north because
 Brief description of request: this requirement would conflict with ability to provide secure, fenced RV/boat storage on subject property.

For Staff Use Only: ☐ Approved; ☐ Approved with conditions (attached); or ☐ Denied *
 Growth Management Department Director initials: _____

e) ☐ YES ☒ NO – Request for waiver of Bicycle Parking

Brief description of request: _____

For Staff Use Only: ☐ Approved; ☐ Approved with conditions (attached); or ☐ Denied *
 Growth Management Department Director initials: _____

f) ☐ YES ☒ NO – Request for waiver of Pedestrian Access requirements for sidewalks on collector or arterial roads

Brief description of request: _____

For Staff Use Only: ☐ Approved; ☐ Approved with conditions (attached); or ☐ Denied *
 Growth Management Department Director initials: _____

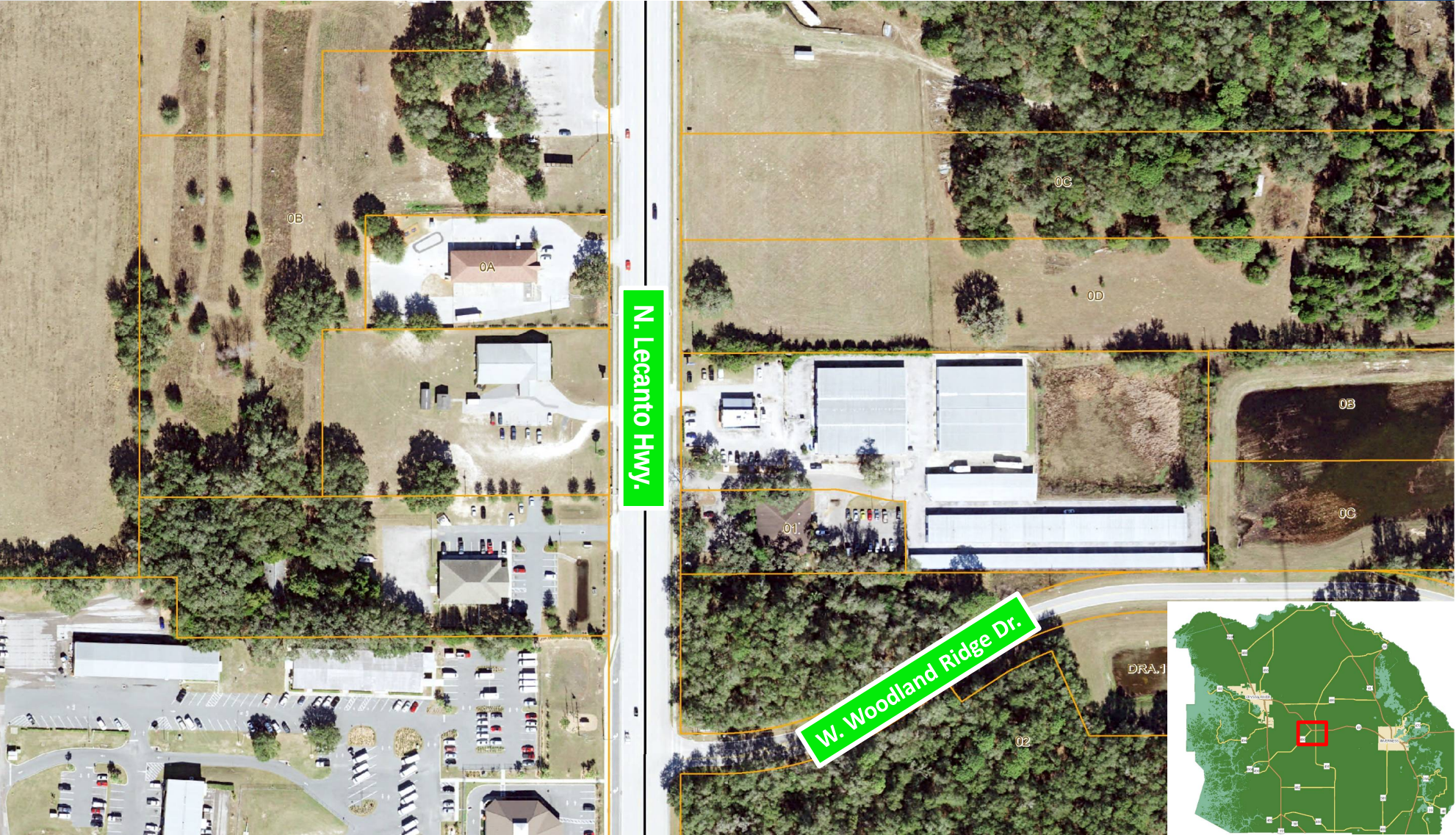
* Note: If further reductions are desired beyond those allowed by the Department of Growth Management, the applicant shall apply for a variance or conditional use review as appropriate.

Attachment: Application Submittal (12715 : CU-21-02 AVID Group for Storerright (Leanto I), LLC)

CU-21-02

CU-21-02

AVID Group for Storeright (Lecanto I), LLC





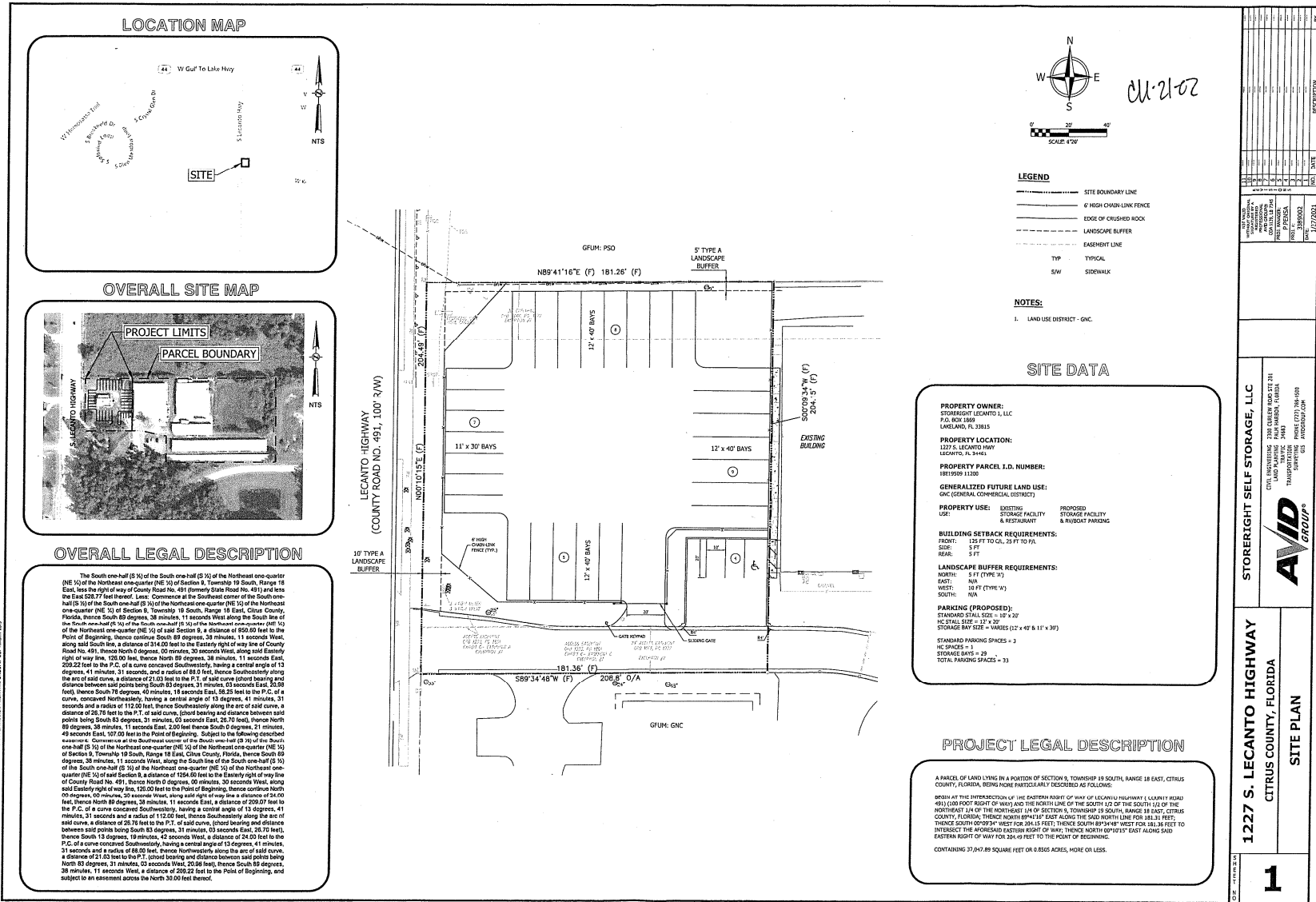






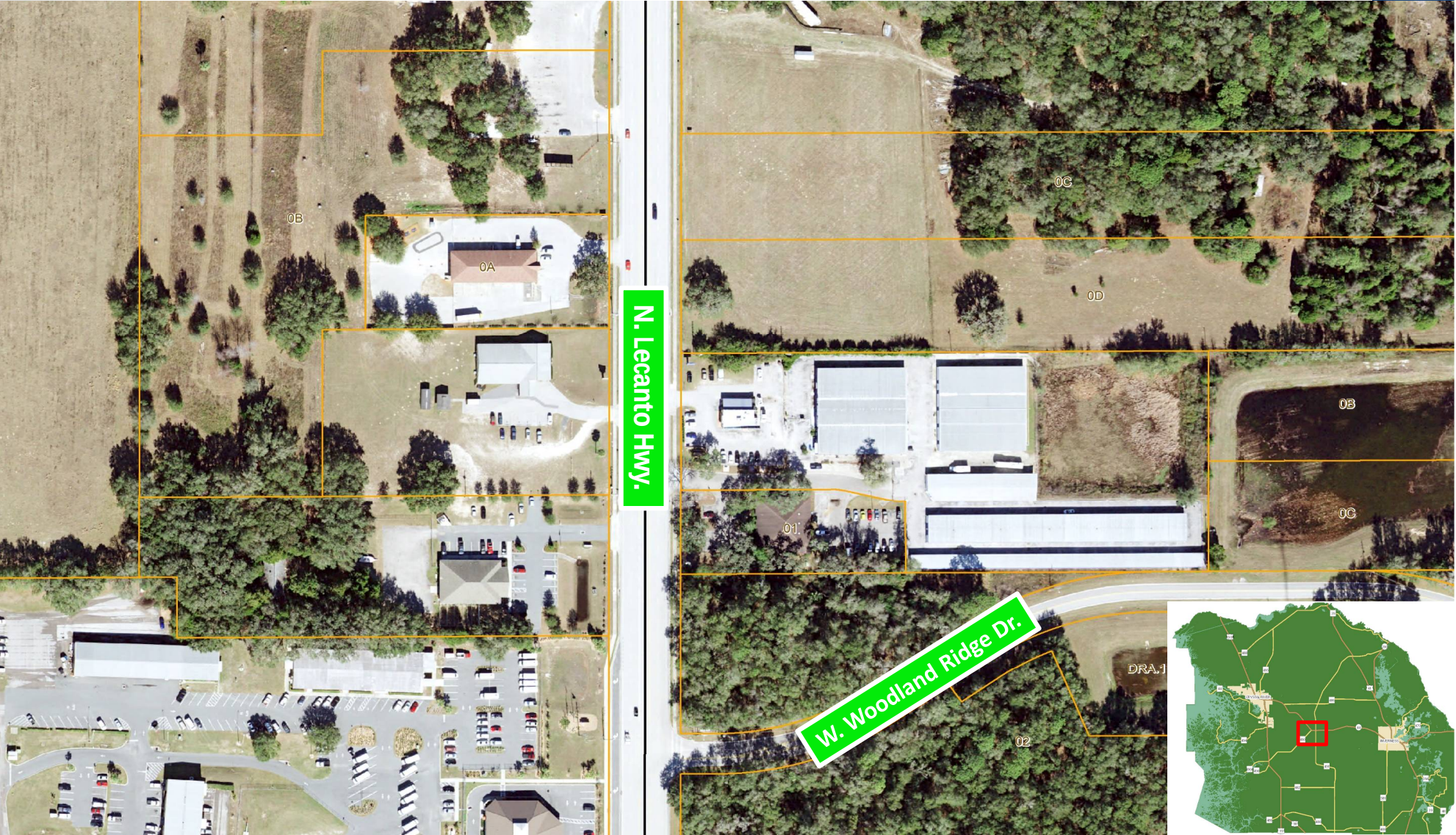
Attachment: CU2102 Coordinator (12715 : CU-21-02 AVID Group for Storeright (Leanto I), LLC)





CU-21-02

AVID Group for Storeright (Lecanto I), LLC



Attachment: CU2102 Planner (12715 : CU-21-02 AVID Group for Storerright (Leanto I), LLC)



Attachment: CU2102 Planner (12715 : CU-21-02 AVID Group for Storeright (Leanto I), LLC)



Attachment: CU2102 Planner (12715 : CU-21-02 AVID Group for Storeright (Leanto I), LLC)



Attachment: CU2102 Planner (12715 : CU-21-02 AVID Group for Storerright (Leanto I), LLC)

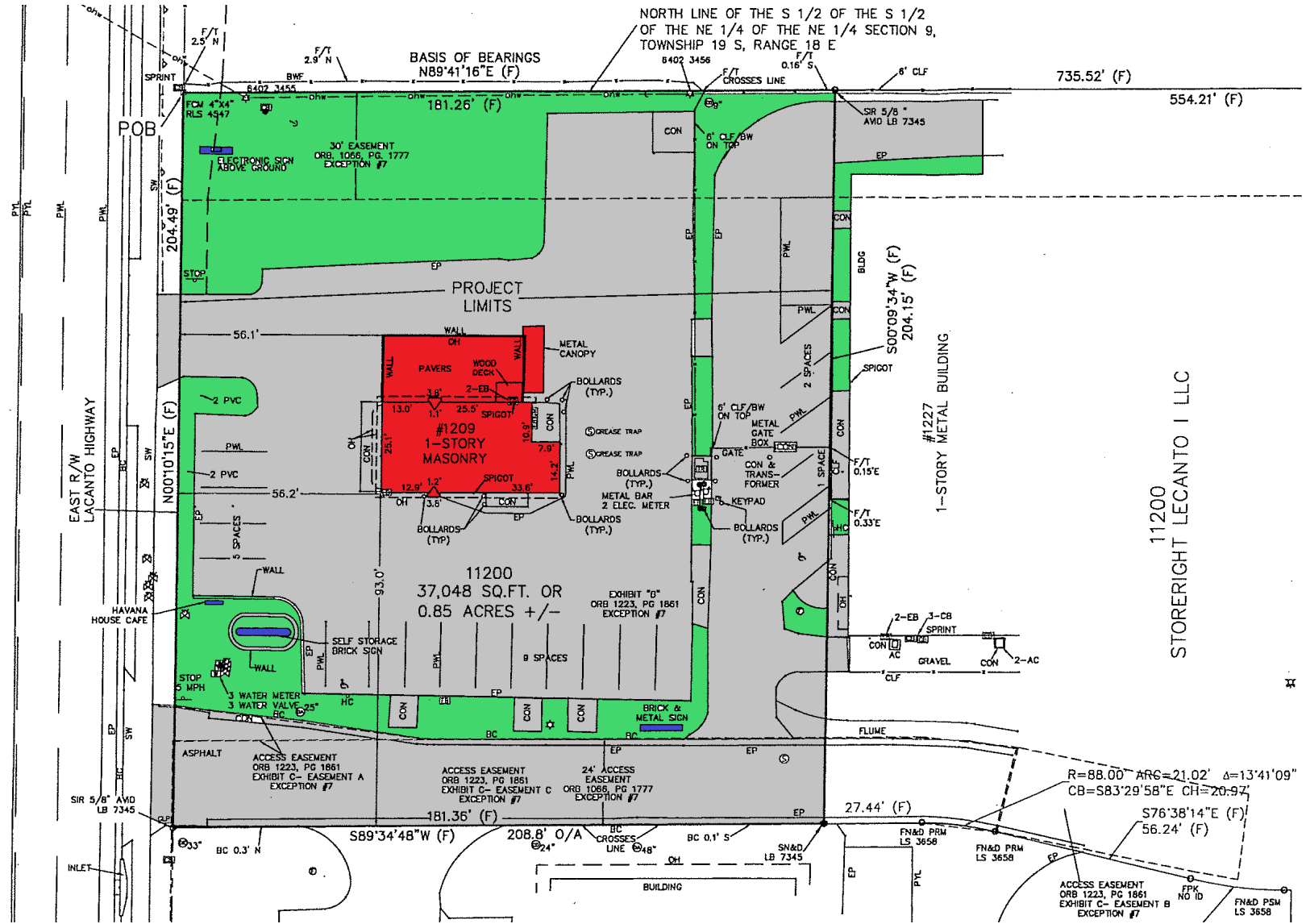


Attachment: CU2102 Planner (12715 : CU-21-02 AVID Group for Storeright (Leanto I), LLC)

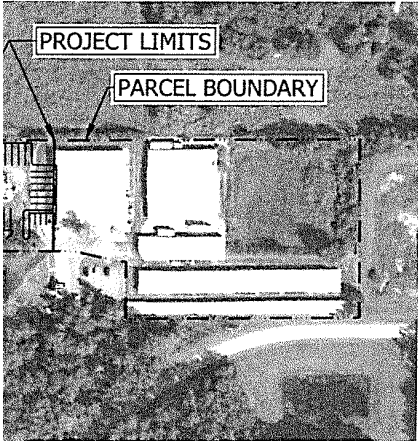


Attachment: CU2102 Planner (12715 : CU-21-02 AVID Group for Storerright (Leanto I), LLC)

LECANTO HIGHWAY
(COUNTY ROAD NO. 491, 100' R/W)



OVERALL SITE MAP



ALL LEGAL DESCRIPTION

one-half (½) of the South one-half (½) of the Northeast one-quarter
 east one-quarter (NE ¼) of Section 9, Township 19 South, Range 16
 of way of County Road No. 491 (formerly State Road No. 491) and less
 & thereof. Less: Commence at the Southeast corner of the South one-
 fourth one-half (½) of the Northeast one-quarter (NE ¼) of the North-
 east ¼ of Section 9, Township 19 South, Range 16 East, Citrus County,
 Florida, and run S 83 degrees, 31 minutes, 03 seconds East, 20.98
 (½) of the South one-half (½) of the Northeast one-quarter (NE ¼)
 one-quarter (NE ¼) of said Section 9, a distance of 950.60 feet to the
 g, thence continue South 89 degrees, 38 minutes, 11 seconds West,
 n, a distance of 314.00 feet to the Easterly right of way line of County
 nce North 0 degrees, 00 minutes, 30 seconds West, along said Easterly
 126.00 feet, thence North 89 degrees, 38 minutes, 11 seconds East,
 P.C. of a curve concaved Southwesterly, having a central angle of 13
 s, 31 seconds, and a radius of 88.0 feet, thence Southeasterly along
 the arc of said curve, a distance of 107.00 feet to the Point of Begin-
 ning, and run S 83 degrees, 31 minutes, 03 seconds East, 20.98
 76 degrees, 40 minutes, 18 seconds East, 56.25 feet to the P.C. of a
 Northerly, having a central angle of 13 degrees, 41 minutes, 31
 lius of 112.00 feet, thence Southeasterly along the arc of said curve,
 to the P.T. of said curve, (chord bearing and distance between said
 h'ed to the Point, 31 minutes, 03 seconds East, 26.70 feet), thence North
 11, 11 seconds East, 2.00 feet thence South 0 degrees, 21 minutes,
 107.00 feet to the Point of Beginning. Subject to the following described
 area at the Southeast corner of the South one-half (½) of the South
 east one-quarter (NE ¼) of Section 9, Township 19 South, Range 16
 ship 19 South, Range 18 East, Citrus County, Florida, thence South 89
 s, 11 seconds West, along the South line of the South one-half (½)
 half (½) of the Northeast one-quarter (NE ¼) of the Northeast one-



NOTES

1. LANI

PROPERTY OWNER:
STORERIGHT LECANTO 1, LLC
P.O. BOX 1869
LAKELAND, FL 33815

PROPERTY LOCATION:
1227 S. LECANTO HWY
LECANTO, FL 34461

PROPERTY PARCEL I.D. NUMBE
18E19509 11200

GENERALIZED FUTURE LAND U
GNC (GENERAL COMMERCIAL DISTRICT)

PROPERTY USE: EXISTING
USE: STORAGE FACIL
& RESTAURANT

BUILDING SETBACK REQUIREMENT
FRONT: 125 FT TO C/L, 25 FT TO P/L
SIDE: 5 FT
REAR: 5 FT

LANDSCAPE BUFFER REQUIREMENT
 NORTH: 5 FT (TYPE 'A')
 EAST: N/A
 WEST: 10 FT (TYPE 'A')
 SOUTH: N/A

PARKING (PROPOSED):
STANDARD STALL SIZE = 10' x 20'
HC STALL SIZE = 12' x 20'
STORAGE BAY SIZE = VARIES (12' x 40' &

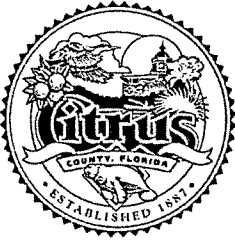
STANDARD PARKING SPACES = 3
HC SPACES = 1
STORAGE BAYS = 29
TOTAL PARKING SPACES = 33

PROJECT LE



AGENDA MEMORANDUM

FROM:	Michael Sherman,
SUBJECT:	CU-21-03 Jon Groves for Victory Baptist Church
AGENDA DATE:	April 15, 2021
<u>BRIEF OVERVIEW:</u> This request is for a Conditional Use to allow for an accessory structure to an existing House of Worship, pursuant to Section 2403, <u>Coastal and Lakes Residential District</u> , as specified in the LDC.	
<u>BUDGET IMPACT/FUNDING SOURCE:</u>	
<u>RECOMMENDED ACTION:</u> Conduct a public hearing on April 15, 2021 to consider CU-21-03 Jon Groves for Victory Baptist Church.	



PM2-21-19

**DEPARTMENT OF GROWTH MANAGEMENT
LAND DEVELOPMENT DIVISION
STAFF FINDINGS REPORT
TO THE
PLANNING AND DEVELOPMENT COMMISSION**

CONDITIONAL USE APPLICATION NO. - CU-21-03

Jon Groves for Victory Baptist Church

DATE: March 19, 2021

PREPARED BY: Miranda Anaya, Senior Planner; Land Development Division

MA

CONDITIONAL USE REQUESTED	This request is for a Conditional Use to allow for an accessory structure to an existing House of Worship, pursuant to Section 2403, <u>Coastal and Lakes Residential District</u> , as specified in the LDC. Specifically, the applicant is requesting a modular building.
SUBJECT PROPERTY	<u>Sections 6, Township 19 South, Range 20 East</u> , more specifically, Lot 16, of the Sportsmens Acres Subdivision, Plat Book 2, Page 90; also known as Alternate Key Number 1728975, which address is 5040 E. Shady Acres Dr., Inverness, Florida. A complete legal description of the property is on file with the Land Development Division.
ACREAGE	Approximately 5.03 acres
LDC ATLAS DESIGNATION	CLR, Coastal and Lakes Residential District
FLOOD ZONE	According to the Flood Insurance Rate Map (FIRM), the subject property appears to be located in primarily Flood Zone X with a portion Flood Zone AE.
SURROUNDING LDC ATLAS DESIGNATIONS	North – CLR, Coastal and Lakes Residential District South – GNC, General Commercial District East – CLR, Coastal and Lakes Residential District West – GNC, General Commercial District; CLR, Coastal and Lakes Residential District
SURROUNDING FLUM DESIGNATIONS	North – CL, Low Intensity Coastal and Lakes District South – GNC, General Commercial District East – CL, Low Intensity Coastal and Lakes District West – GNC, General Commercial District; CL, Low Intensity Coastal and Lakes District
SURROUNDING EXISTING LAND USE	North – E. Shady Acres; then single-family home and vacant residential lots South – Commercial vacant lots; single family residence East – Vacant residential property West – Vacant commercial and residential lots
CHARACTERISTICS OF THE SURROUNDING AREA	The subject property is a residential lot but operating as commercial and is surrounded by residential lots and commercial.

Attachment: Staff Report (12716 : CU-21-03 Jon Groves for Victory Baptist Church)

BACKGROUND AND ANALYSIS

The subject property is approximately 5.0 acres in size located on E. Shady Acres Drive, a local 50-foot-wide public right-of-way. The applicant is requesting a conditional use for a modular building for classroom purposes for the existing house of worship. The site contains a church, grass parking, sheds, and a shipping container. Staff cannot find permits for the sheds.

The House of Worship was built in 1991 and is approximately 4,620 square feet. In 2020, a shipping container permit was issued. A permit for a modular classroom with stairs was applied for, but denied; however, the building permit will be contingent on this application (2020-13330). The site is adjacent to residential and commercial land uses.

The site plan indicates the modular building will be 1,056 square feet. The proposed Impervious Surface Ratio (ISR) of 10.59 percent complies with the current maximum 40 percent ISR for the CLR District. The applicant has provided a narrative describing the proposed modular will be used as a classroom for the Sunday school children, thus, not providing additional parking needs. The church is exempt from Chapter 5 Buffer Requirements because the parking area will not be altered. House of Worships are also exempt from Chapter 3 Additional Non-Residential Standards. The site is located outside of the PSA area and will need to connect to central services when available.

Staff analyzed compatibility issues in the neighborhood. The site is adjacent to residential and commercial land uses. The church has been in operation since the 1990's and an additional classroom addition will be compatible.

Consistency with the Comprehensive Plan – All development applications shall demonstrate complete compliance with the Citrus County Comprehensive Plan. This Conditional Use application is consistent with the Comprehensive Plan with conditions.

Policy 17.2.8 The County shall utilize land use techniques and development standards to achieve a functional and compatible land use framework which reduces incompatible land uses.

Staff Comment: The proposed use is compatible with the surrounding residential and commercial committed land uses. Churches are allowed as a conditional use under the CLR district as an institutional use. Given the surrounding land uses, an institutional use could be considered an intermediate use between the residential and higher intensive commercial uses. The site is also 5 acres and the location of the church and proposed modular are partially wooded providing distance and buffering to residential land uses.

Consistency with the Land Development Code (LDC) – Staff reviewed this application under the standards of Section 3160, Churches, and Section 2403, Coastal and Lakes Residential District (CLR).

3160. Churches

B. General Requirements: All Structures used for Worship, assembly, classrooms, dormitories, and recreation (but not including a parsonage or any utility buildings), and

any outside play areas, must meet the setbacks as prescribed in the land use district in which the church is located.

Staff comment: The applicant has indicated this proposal meets all distance requirements. The site plan shows the modular building will be 58.4 feet to the closest property line.

2406. Medium Density Residential District (MDR)

Staff comment: According to LDC, Section 2403, House of Worship can be allowable as a Conditional Use in this district. The CLR Land Use District allows for a maximum ISR of 40 percent and the applicant has proposed an Impervious Surface Ratio of 10.5 percent. This application will allow for a modular classroom.

PUBLIC COMMENT

No public comment has been received as of the writing of this staff report.

PROPOSED FINDINGS OF FACT

Pursuant to Section 4500, Conditional Uses, of the Citrus County Land Development Code (LDC), a Conditional Use application which meets the objective criteria of the LDC for that use shall be presumed entitled to approval. Such presumption may be rebutted by competent, substantial evidence that the applicable LDC criteria have not been met. Following completion of the public hearing, the PDC shall approve, disapprove, amend and approve the proposal, or approve the proposal with conditions. Any action taken shall be accompanied by the findings of the PDC upon which the action was based. Approval of a Conditional Use application shall be granted by the PDC only if all the following are positive:

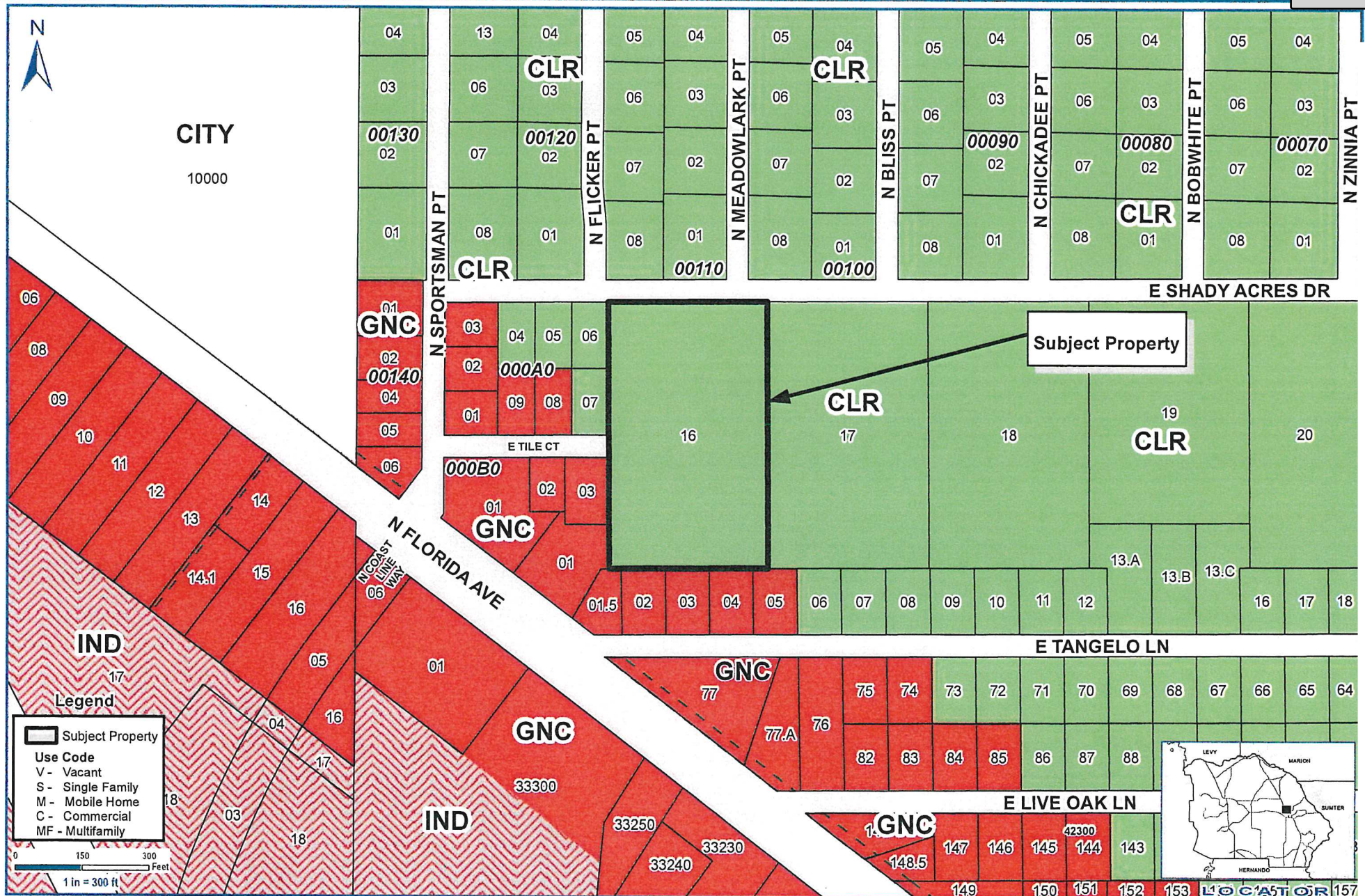
1. ***The proposed uses and structures would not violate the land uses, densities, or other directives of the adopted Comprehensive Plan or the LDC.*** House of Worships are allowed with a conditional use and density has not been violated by this request.
2. ***The proposed uses and structures would not be incompatible with the uses, structures, and activities on adjacent and nearby lands.*** The expansion of the existing House of Worship will be compatible with the surrounding land uses. Any further expansion will require an amendment to this conditional use if approved.
3. ***The proposed uses and structures would not violate health, safety, welfare, and/or convenience of those residing, working, or owning land in the vicinity of the proposed use or structure, specifically with respect to:***
 - a. ***The use or structure would not exceed the applicable density or bulk regulations except as specifically authorized, nor shall the use or structure result in overcrowding of land or buildings;*** The proposed use would not exceed allowable density, bulk regulation, Floor Area Ratio, and Impervious Surface Ratio.
 - b. ***The use or structure would not impair pedestrian or vehicular movement in adjoining streets so as to violate adopted level of service standards;*** The use will not impair pedestrian or vehicular movement.

- c. ***The use or structure would not create a fire hazard;*** The application as proposed would not create a fire hazard as long as Fire Code requirements are met at the time of permitting.
 - d. ***The use or structure would not result in noise, odor, glare, vibration or other similar characteristic, which is detectable at the property line and which exceeds the level which will result from permitted uses;*** The use as proposed will not result in odor, glare, or vibration. The property is five acres in size and does not appear that noise will be an issue but must maintain noise level standards.
 - e. ***The use or structure would not prevent an adjoining landowner from the legal use of his property pursuant to the LDC;*** The use as proposed will not prevent use of adjoining lands.
 - f. ***The use or structure would not violate a requirement or limitation of any applicable state or federal law or regulation;*** The use as proposed will not violate applicable state law or federal regulation.
 - g. ***The use or structure would not result in the inadequacy or inability of any public facility or service to meet adopted standards.*** The proposal does not impact public facilities.
4. ***Termination and/or expiration of Conditional Uses - The PDC may specify a term for the duration of a Conditional Use. A Conditional Use will terminate if no development activity under the Conditional Use is commenced within three years of the date of approval, or if the approved use ceases for a period of three years. The property owner may seek an extension by applying to the PDC.*** The applicant has not requested an extension of the three-year term.

PROPOSED CONDITIONS

1. This Conditional Use is to allow for a modular classroom in the CLR land use district as proposed on the site plan submitted with this application date-stamped February 8, 2021 received by the Land Development Division. Construction shall take place in accordance with the criteria and requirements of the Citrus County Land Development Code, unless as specifically outlined within these conditions.
2. Where standards are not specified herein, the Citrus County Land Development Code standards (or current code standards) will apply.

MA/AP/cb



Application #: CU-21-03

Applicant: Jon Groves for Victory Baptist Church

Proposal: Accessory Structure to Church

Location: 5040 E Shady Acres Dr., Inverness

LDC Atlas: Low Intensity Coastal & Lakes (CL)

S-T-R - 12-19-20 SW

Planner Initials: *ME*

Date: 2/26/21

Geographic Information Systems

Cynthia P. Skelhorn

Prepared By: Susan O'Connell

Date: February 24, 2021

Source: Enterprise Geodatabase

Map Number: S0001124

This information is to be used for general reference only. The Citrus County Geographic Information Systems Division makes every effort to provide current data to its users, and complies with the data it is provided. However, all information provided must be independently verified by the user.

Citrus County shall not be liable for any delays, damages, or losses of any kind resulting from the use of this information, including but not limited to, damages or losses caused by reliance upon the accuracy or timeliness of this information and the resulting mapping or planning of these materials.





Board of County Commissioners

DEPARTMENT OF GROWTH MANAGEMENT

LAND DEVELOPMENT DIVISION

3600 W. Sovereign Path, Suite 140

Lecanto, FL 34461

Telephone: (352) 527-5239 TTY Dial 711

Web Address: www.citrusbocc.com

CITRUS COUNTY LAND DEVELOPMENT CODE CONDITIONAL USE APPLICATION

Application No.: CU-21-03

Date: _____

* Written Authorization is required if Applicant is different than Owner.

Applicant*

Name: Jon Groves

Address: 8040 E Shady Acres Dr

City: Inverness

State: Florida

Zip: 34453

Home No.: _____ Cell No.: _____

Work No.: 352-726-9719

Fax No.: _____

Email: _____

Property Owner

Name: Victory Baptist Church

Address: 5040 E. SHADY ACRES DR

City: Inverness

State: FL

Zip: 34453

Home No.: _____ Cell No.: _____

Work No.: 352-726-9719

Fax No.: _____

Email: _____

Property Description: Section: _____ Township: _____ South Range: _____ East

Legal Description: Sportsmens Acres PB 2 Pg 90 Lot 16 Desc in OR BK 768 Pg 16 96

Subdivision: 001736 Sportsmens Acres

Lot(s): _____

Block/Parcel: _____

Alternate Key #: 1728975

Parcel ID: 20E195060020 0160

Acreage: 5.03

Is this hearing being requested as a result of a Code Violation Notice? Yes _____ No ☒

If "Yes", explain on a separate sheet and attach a copy of the Notice of Violation.

Conditional Use Request: Necessary Building to existing Church.

Describe how it will/will not affect surrounding development: _____

I am aware that if the property cannot be located using information from the submitted application, this application may be rescheduled to a later hearing date. I also understand that a sign must be placed (and marking flags may be placed) on the property by the Land Development Division at least seven days prior to the scheduled meeting.

I understand that approval for the proposed use shown hereon does not in any way relieve me of the responsibility of observing and complying with any deed restrictions applicable to the subject property.

I hereby authorize Citrus County or its agents to enter upon the property, which is the subject of this application and the date of the hearing thereon, at any time between the hours of 8:00 AM and 5:00 PM for the purpose of gathering any information relevant to this application.

Attachment: Application Submittal (12716 : CU-21-03 Jon Groves for Victory Baptist Church)

RECEIVED

FEB 08 2021

From: Victory Baptist Church Inverness FL
Sent: Tuesday, March 2, 2021 11:06 AM
To: Miranda P. Anaya
Subject: [EXTERNAL]PL2-21-48 Application CU-21-03 Victory Baptist Church

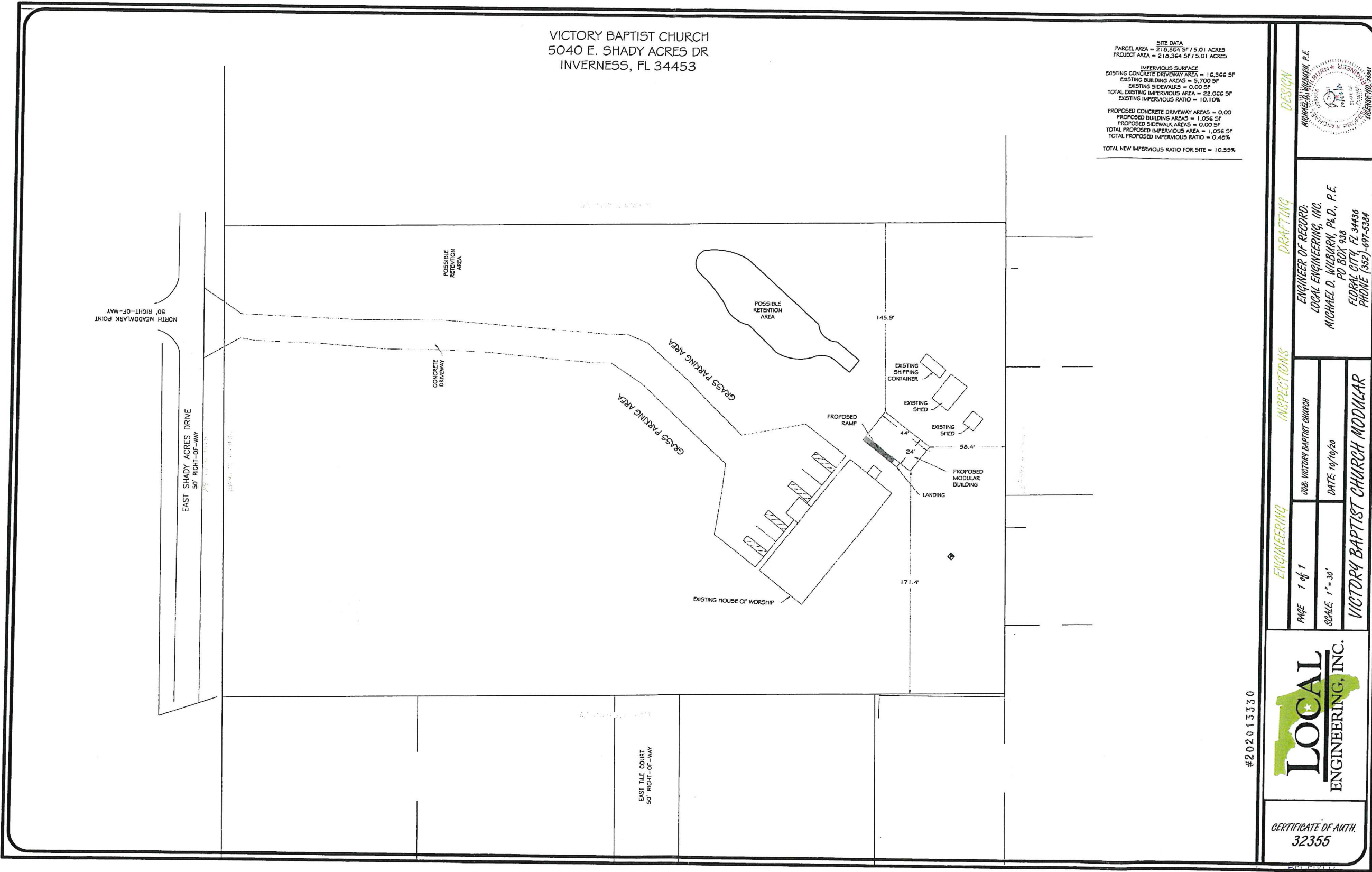
WARNING: This email originated from an external Domain DO NOT CLICK unless you recognize the sender and know the content is safe.

Please add this letter as a completion to our application for the conditional use request.

The use of the modular building we are requesting a permit for will be for classroom space for our sunday school children.
It does not encroach upon any setbacks or surrounding properties.

Thank you,
Dr. Jon Groves, Pastor
Victory Baptist Church
5040 E Shady Acres Dr
Inverness, FL 34453
352-726-9719

Attachment: Application Submittal (12716 : CU-21-03 Jon Groves for Victory Baptist Church)

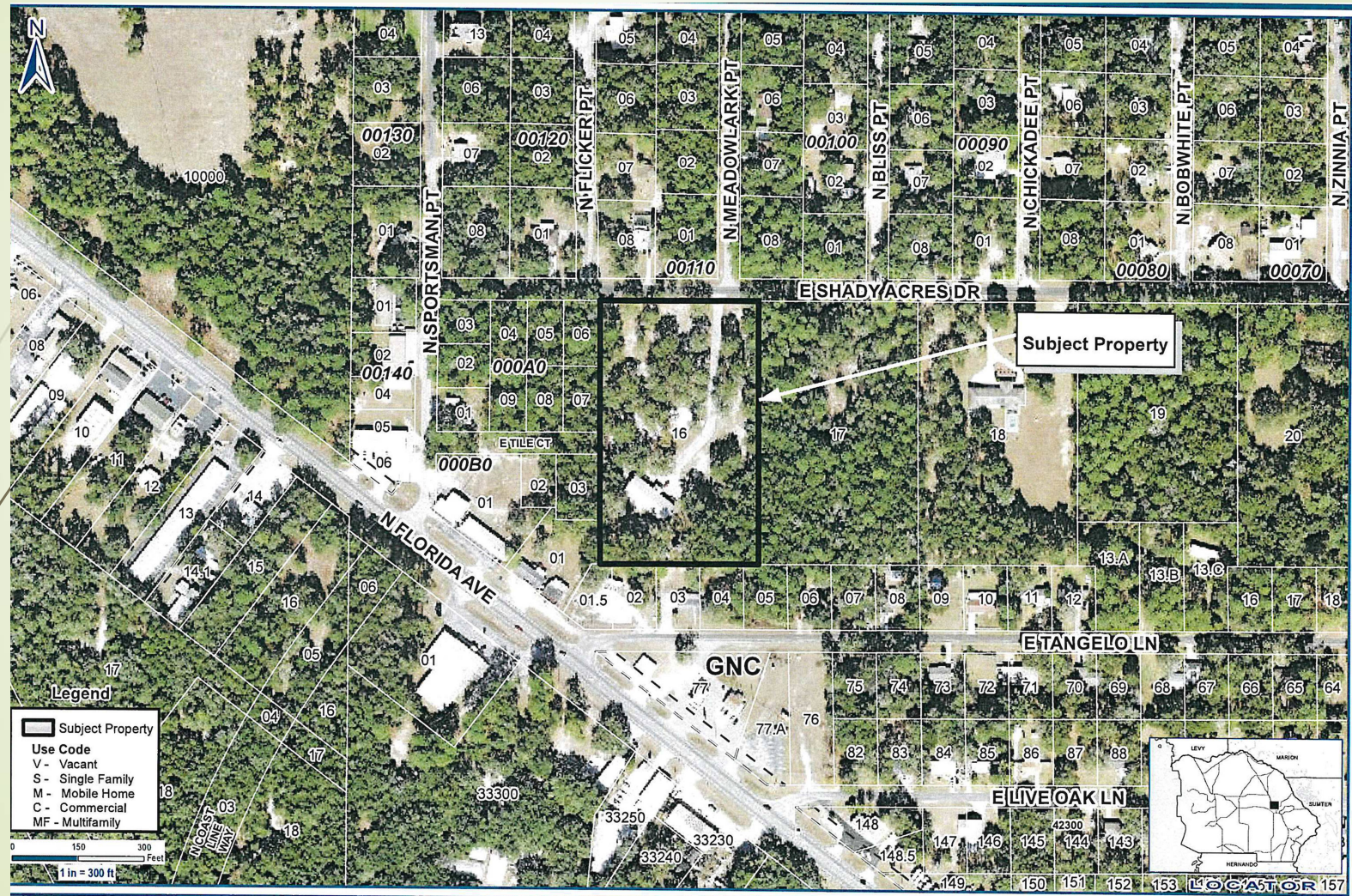


CU-21-03 Jon Groves for Victory Baptist Church

5040 E. Shady Acres Dr., Inverness, FL



Aerial View





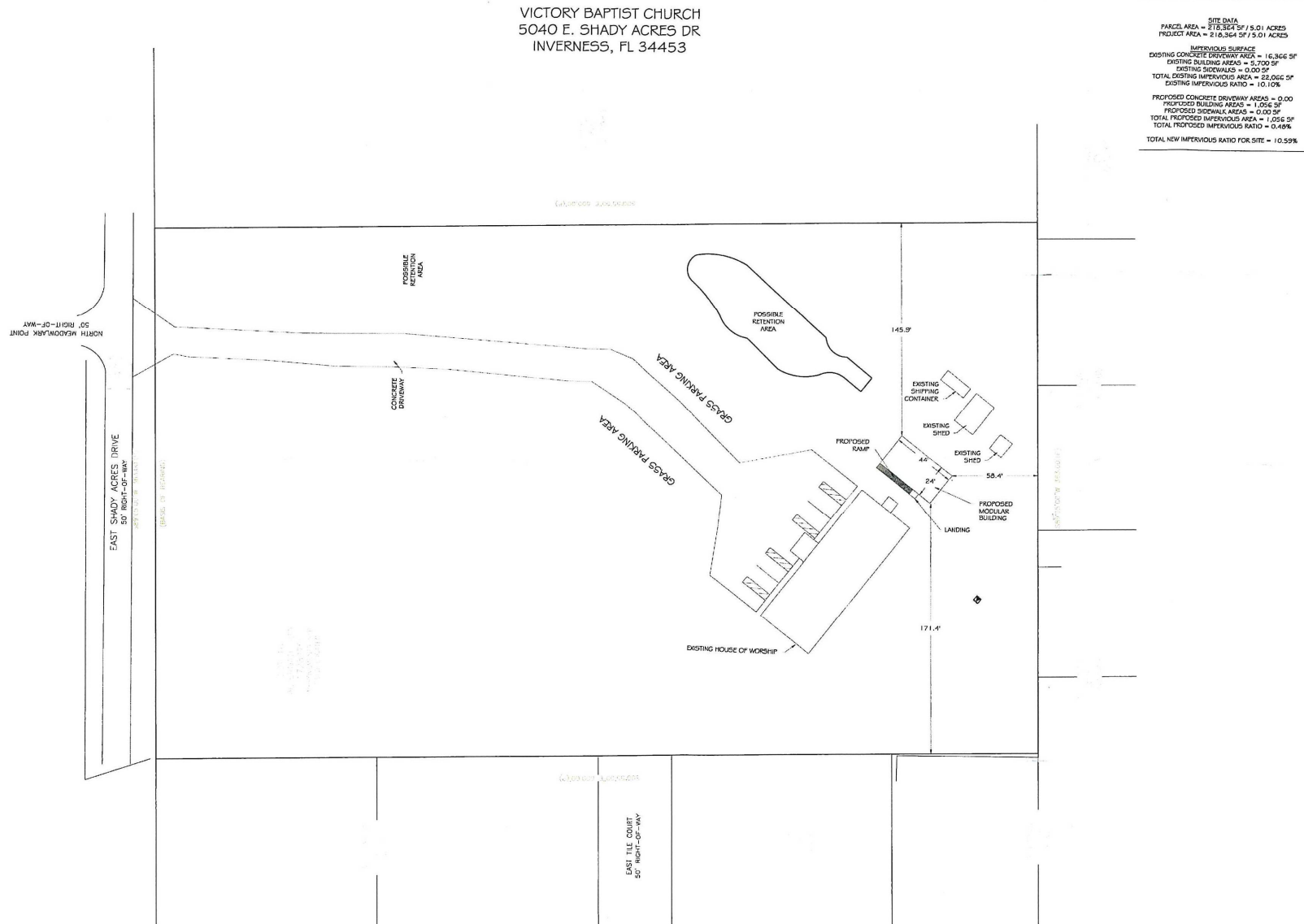
Attachment: coordinator power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)



Attachment: coordinator power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)



Attachment: coordinator power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)

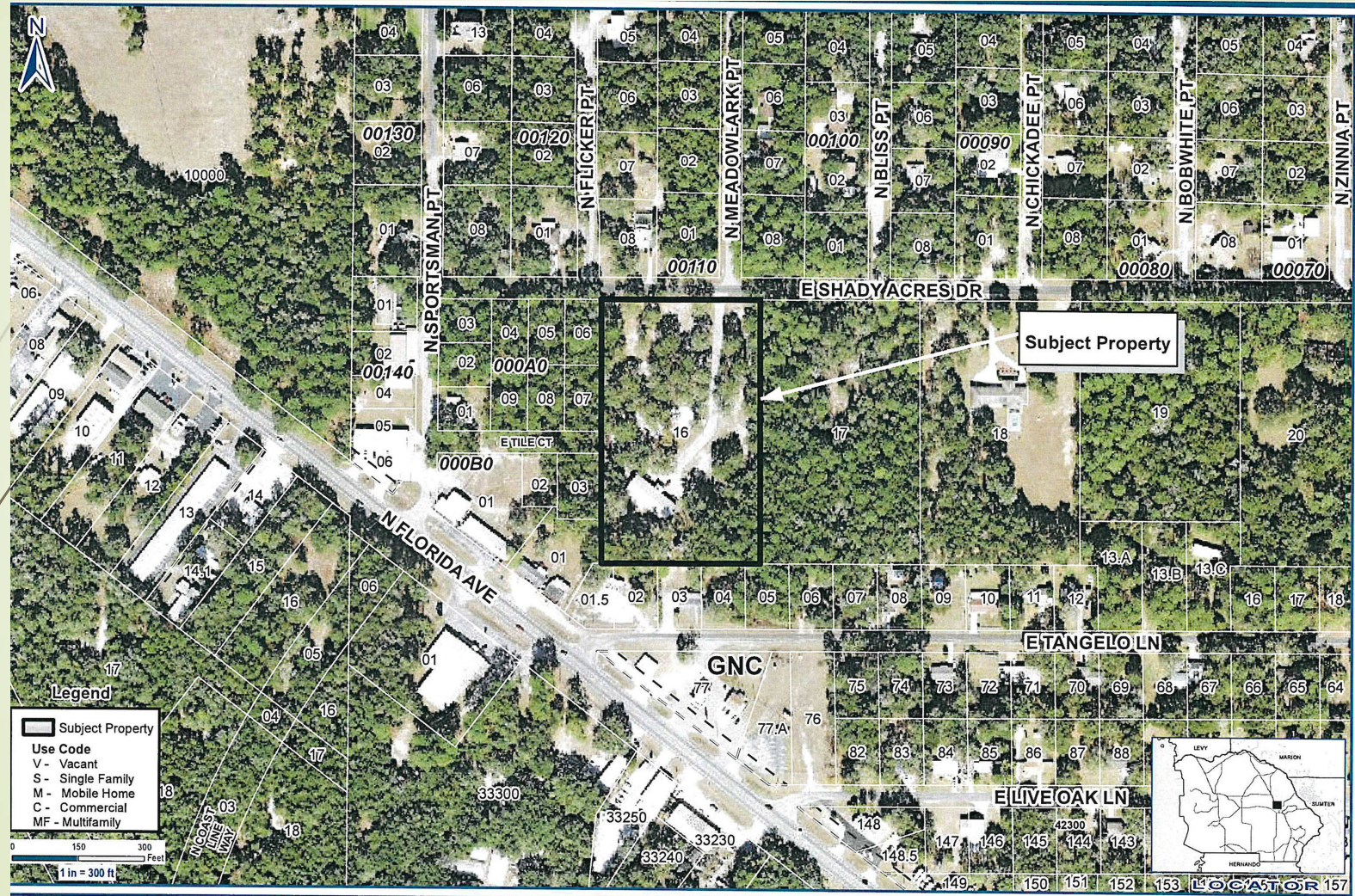


CU-21-03 Jon Groves for Victory Baptist Church

5040 E. Shady Acres Dr., Inverness, FL



Aerial View





Attachment: Planner power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)



Attachment: Planner power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)



Attachment: Planner power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)





Attachment: Planner power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)



Attachment: Planner power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)



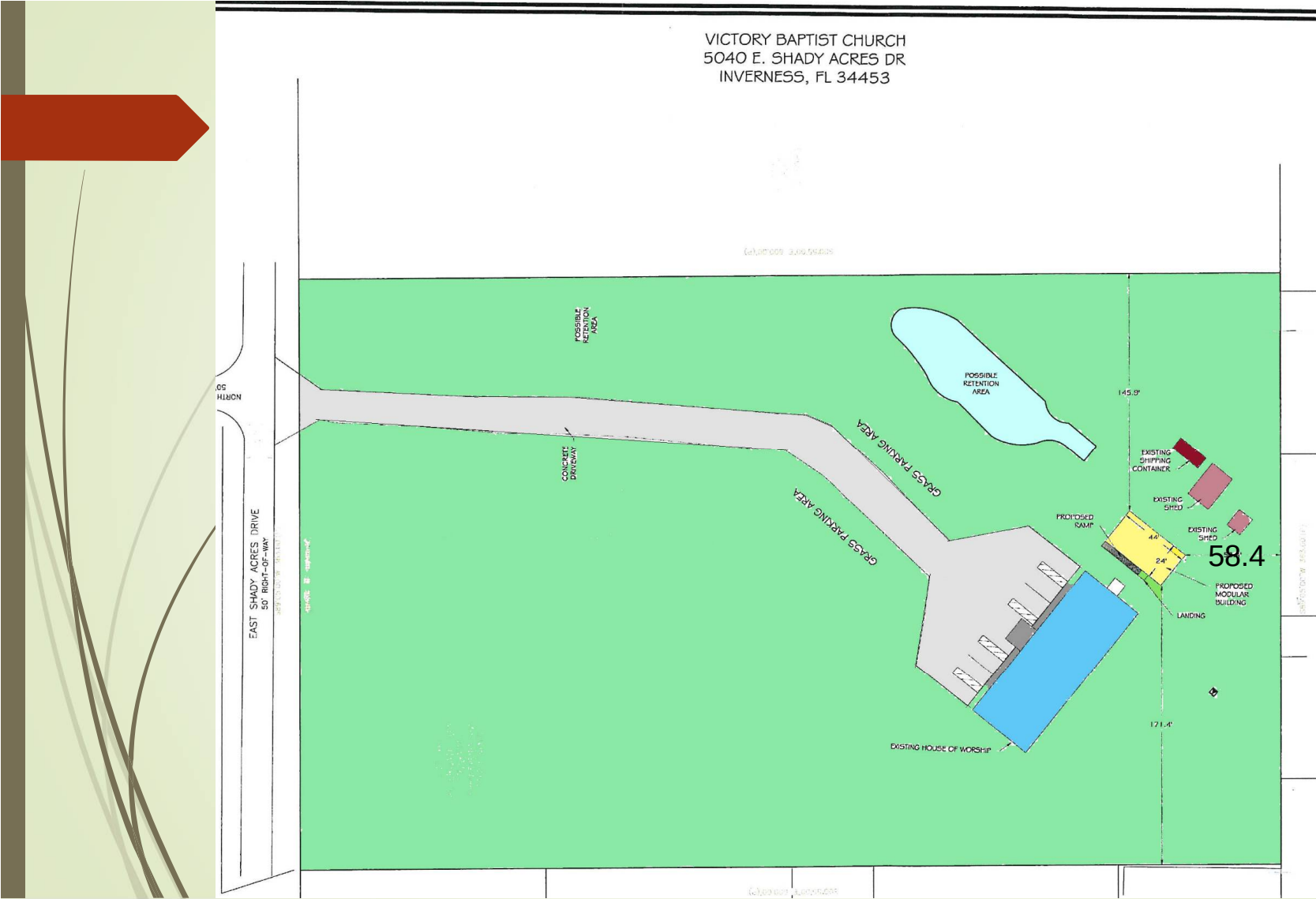
Attachment: Planner power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)



Attachment: Planner power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)



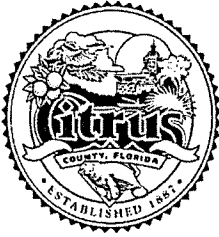
Attachment: Planner power point (12716 : CU-21-03 Jon Groves for Victory Baptist Church)





AGENDA MEMORANDUM

FROM:	Michael Sherman,
SUBJECT:	CPA-21-05 – Evaluation and Appraisal Report (EAR) Amendments Chapter 3 and Chapter 4
AGENDA DATE:	April 15, 2021
<u>BRIEF OVERVIEW:</u> The purpose of this application is to comply with the requirements of F.S. 163.3191 (1) and F.A.C. 73C-49, whereby, Citrus County must review the Comprehensive Plan and determine if the need exists to amend the Plan to reflect changes in State requirements.	
<u>BUDGET IMPACT/FUNDING SOURCE:</u>	
<u>RECOMMENDED ACTION:</u> Conduct a public hearing on April 15, 2021 to consider CPA-21-05- Evaluation and Appraisal Report (EAR) Amendments Chapter 3 and Chapter 4.	



PM2-21-20

**DEPARTMENT OF GROWTH MANAGEMENT
LAND DEVELOPMENT DIVISION
2021 COMPREHENSIVE PLAN AMENDMENT
STAFF FINDINGS REPORT
TO THE
PLANNING AND DEVELOPMENT COMMISSION**

**APPLICATION NUMBER: CPA-21-05 – Evaluation and Appraisal Report (EAR)
Amendments Chapter 3 and Chapter 4**

DATE: March 26, 2021

PREPARED BY: Amy Bidwell, Senior Planner, Land Development Division

AB

OVERVIEW:

The purpose of this application is to comply with the requirements of F.S. 163.3191 (1) and F.A.C. 73C-49, whereby, Citrus County must review the Comprehensive Plan and determine if the need exists to amend the Plan to reflect changes in State requirements.

In June 2020, Citrus County evaluated its Comprehensive Plan and determined that amendments are necessary to reflect changes in State requirements. Specifically, the County's evaluation indicates changes are necessary to the Coastal, Lakes, River Management Element, as well as, the Conservation Element. It is noted that, pursuant to F.S. 163.3191 (2), amendments will be prepared and transmitted to the Department of Economic Opportunity within one year (no later than July 1, 2021).

STAFF ANALYSIS:

A review of the Comprehensive Plan indicated that the issues affecting the Conservation Element (Chapter 3) and the Coastal, Lake, River Management Element (Chapter 4) need to be updated to reflect current Statutes and guidelines. More Specifically, Chapter 3 requires a reference to the water supply plan 163.3177 (6)(d)(3): and Chapter 4 requires the addition of a shoreline use component 163.3178 (2)(g), the need to address working waterfronts 163.3178 (2)(g), an update to evacuation data 163.3178 (2) (d), an update of the Coastal High Hazard Area (CHHA) maps and definition 163.3178 (2) (h), the need to address sea level rise 163.3178 (2) (f) (1).

The proposed changes to the Goals, Objectives and Policies are provided in strike-through and underline format. Many of the Goals, Objectives, and Policies were revised or updated to reflect new programs, agency name changes, changes in statutes, and similar items.

Changes to the text are shown as strike-through to reflect language to be removed and underlines to reflect language to be added. A majority of the text changes encompass updated data and tables as well as updated programs and services.

CONCURRENCY DISCUSSION: No issues are evident.

PROPOSED FINDINGS OF FACT:

1. The request is to update the Conservation Element (Chapter 3) and the Coastal, Lakes, River Management Element (Chapter 4) of the Comprehensive Plan for consistency.
2. Section F.S. 163.3191 (1) and F.A.C. 73C-49 outlines the need to update the Comprehensive Plan for all mandatory and optional elements based upon relevant and appropriate data and analysis for required elements, and this proposal will provide an update.
3. The proposed amendment is consistent with the Goals, Objectives and Policies of the Citrus County Comprehensive Plan.

SUMMARY OF AGENCY COMMENTS: As this application proposes to amend the Conservation Element (Chapter 3) and the Coastal, Lakes and River Management Element (Chapter 4), F.S. 163.3184. (3) (b) (2) states that the amendment is subject to State review and is required to be transmitted to reviewing agencies for comments.

SUMMARY OF PUBLIC COMMENTS: There have not been any public comments received at the time of the writing of this report.

SUMMARY OF ANY CONCERNS RECEIVED PURSUANT TO LEGAL ADVERTISEMENT AND/OR PUBLIC NOTIFICATION PROCESS: No concerns have been identified as a result of the public notification process to date.

AB/SW/cb

June 8, 2020

Mr. D. Ray Eubanks, Administrator
Florida Department of Economic Opportunity
Bureau of Community Planning
107 E. Madison Street
Caldwell Building – MSC 160
Tallahassee, FL 32399-6545

RE: Citrus County Evaluation and Appraisal Notification Letter

Dear Mr. Eubanks:

In accordance with the requirements of F.S. 163.3191 (1) and F.A.C. 73C-49, Citrus County must review the Comprehensive Plan and determine if the need exists to amend the Plan to reflect changes in State requirements. The County must then notify the Department of Economic Opportunity regarding this determination no later than July 1, 2020.

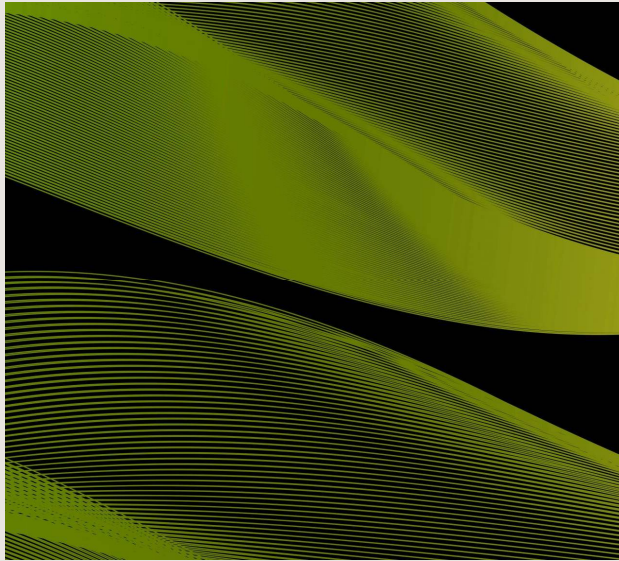
Citrus County has evaluated its Comprehensive Plan and determined that amendments are necessary to reflect changes in State requirements. Specifically, the County's evaluation indicates changes are necessary to the Coastal, Lakes and Rivers Management Element as well as the Conservation Element. It is noted that, pursuant to F.S. 163,3191 (2), amendments will be prepared and transmitted to the Department of Economic Opportunity within one year (no later than July 1, 2021).

Sincerely,

Brian J. Coleman, Chairman
Citrus County Board of County Commissioners

Cc: Randy Oliver, County Administrator
Denise A. Dymond Lyn, County Attorney
Michael Sherman, AICP, Director; Department of Growth Management
Joanna L. Coutu, AICP, Director; Land Development Division

CPA-21-05



Evaluation and Appraisal (EAR) Based
Amendments

Citrus County Land Development
Division

Planning and Development Commission
April 15, 2021

Evaluation and Appraisal (EAR) Based Amendments

- In accordance with the requirements of F.S. 163.3191 (1) and F.A.C. 73C-49.
- The County must determine if the need exists to amend the Plan to reflect changes in State requirements.
- At least every 7 years.
- Citrus County evaluated its Comprehensive Plan in 2020 and determined that amendments are necessary to reflect changes in State requirements.

- Citrus County notified the Department of Economic Opportunity regarding this determination in June of 2020. (Notice was due July 2020).
- Pursuant to F.S. 163.3191 (2), amendments will be prepared and transmitted to the Department of Economic Opportunity within one year from notification of the need for amendment to meet State requirements.
- EAR based amendments will be transmitted no later than July 1, 2021.

- Review of the Comprehensive Plan indicated that the following issues need to be updated to reflect current Statutes and guidelines.
- Conservation Element - Chapter 3 requires a reference to the water supply plan 163.3177 (6)(d)(3)
- Coastal, Lakes and River Management Element - Chapter 4 requires the addition/update of:
 - update of the Coastal High Hazard Area (CHHA) maps and definition 163.3178 (2) (h),
 - address sea level rise 163.3178 (2) (f) (1)
 - shoreline use component 163.3178 (2)(g),
 - working waterfronts 163.3178 (2)(g),
 - update to evacuation data 163.3178 (2) (d),

Conservation Element - Chapter 3

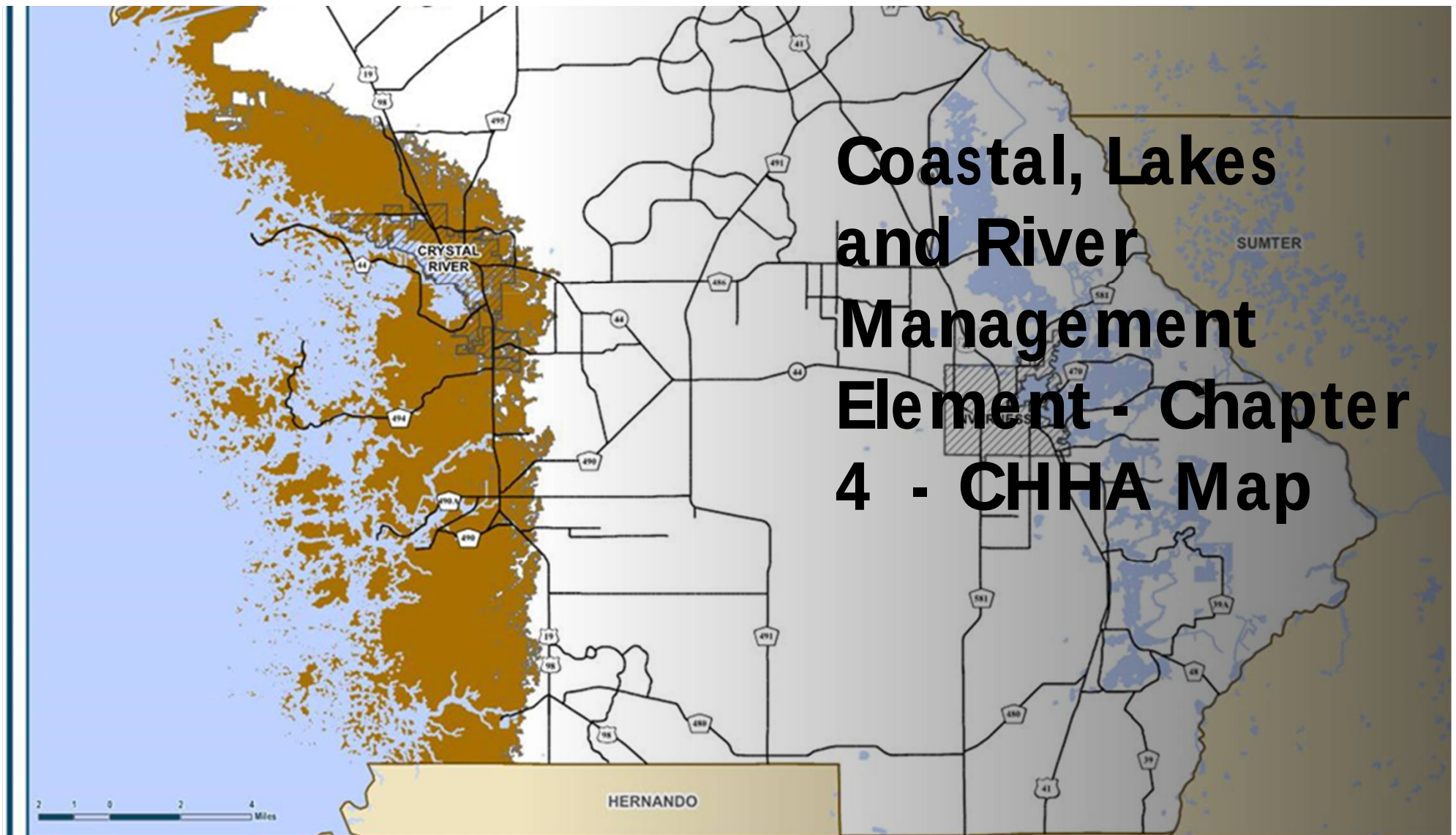
- The County ~~should~~ will continue to assist the district in the implementation of the Regional Water Shortage Supply Plan. In 1997, the Florida Legislature significantly amended Chapter 373, F.S., to include specific regional water supply planning requirements for the Water Management Districts (WMDs). The statutes were revised to require the preparation of a Districtwide Water Supply Assessment; the designation of one or more water supply planning regions within each district; and the preparation of a Regional Water Supply Plan (RWSP) for any planning regions where sources of water were determined to be inadequate to meet future demands. The statute requires the reassessment of the need for a RWSP every five years, and that each RWSP shall be based on a minimum 20-year timeframe (Section 373.0361, F.S.). In response to the amended statutes, the District completed a Water Supply Assessment in 1998 that quantified water supply needs through the year 2020 and identified areas where future demand could not be met with traditional groundwater sources (SWFWMD, 1998). In addition, the County should provide specific measures for local concerns and conservation programs.

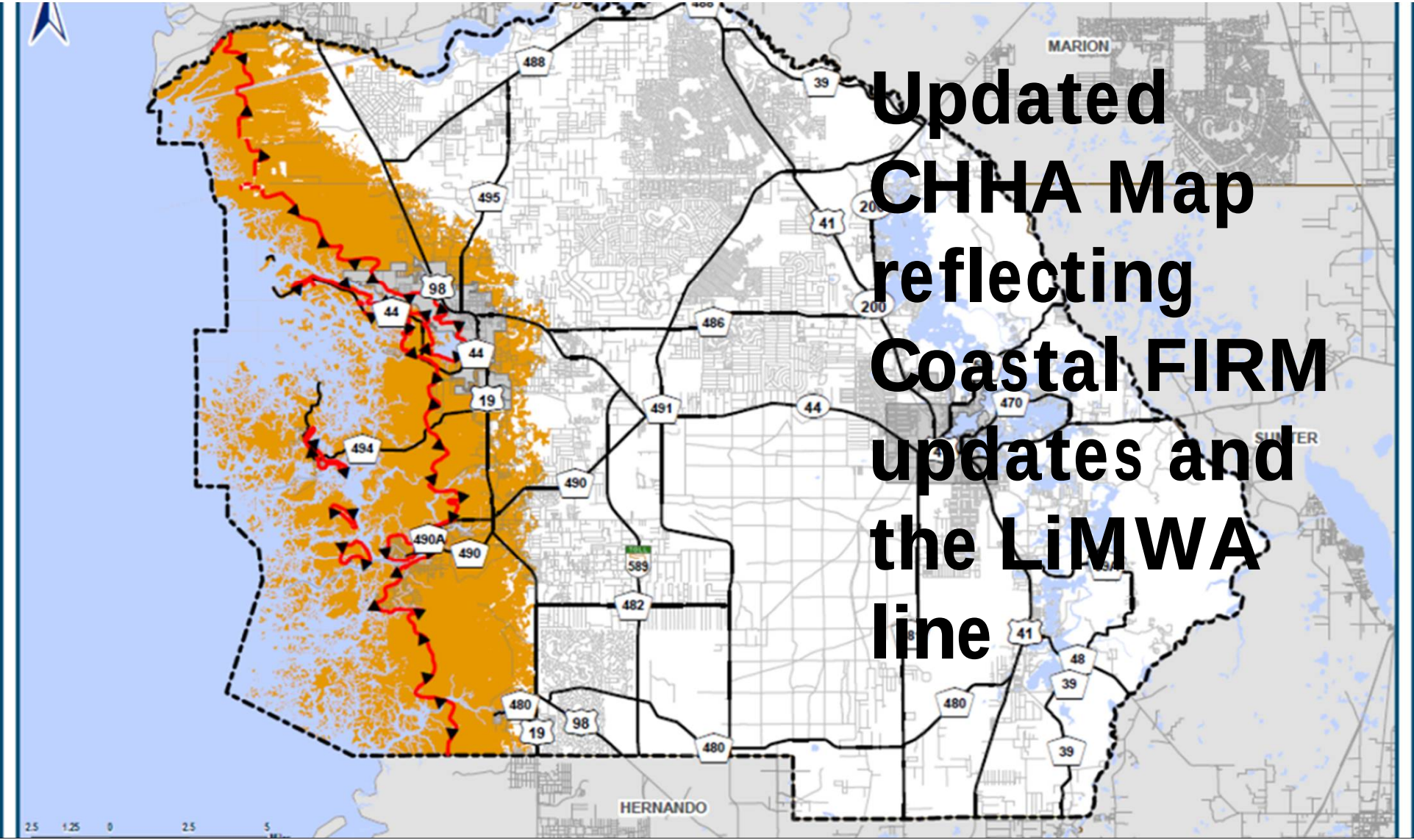
- Objective 3.7 The County, with assistance from the ~~WRWSA~~ RWSP and SWFWMD, shall maintain estimates, project demands, and available water supplies for the planning period.
- Policy 3.7.1 The County shall establish a program in coordination with the SWFWMD and the ~~WRWSA~~ RWSP to estimate and project needs and sources for a ten-year period based on the demands for use and the quantity and quality of water available to meet demands.
- Objective 3.8 The County shall implement water conservation and reuse options using the policies and techniques as outlined in the 10 year Regional Water Supply Plan ~~Water Supply Facilities Work Plan~~.

Coastal, Lakes and River Management Element - Chapter 4

- Coastal High Hazard Area (CHHA) maps and definition 163.3178 (2) (h)
 - **Definition:** “Coastal High Hazard Area” (CHHA): The coastal high-hazard area is the area below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. (Florida Statutes, Section 163.3178) These Special Flood Hazard Areas (SFHAs) along the coasts have additional hazards due to wind and wave action. These areas are identified on Flood Insurance Rate Maps (FIRMs) as zones V and VE. In 2021 Citrus County Coastal FIRM flood maps were updated to include a line called the Limit of Moderate Wave Action (LiMWA). The LiMWA marks the inland limit of the “Coastal A Zone”— the part of the coastal SFHA referenced by building codes and standards where wave heights can be between 1.5 and 3 feet during a base flood event.

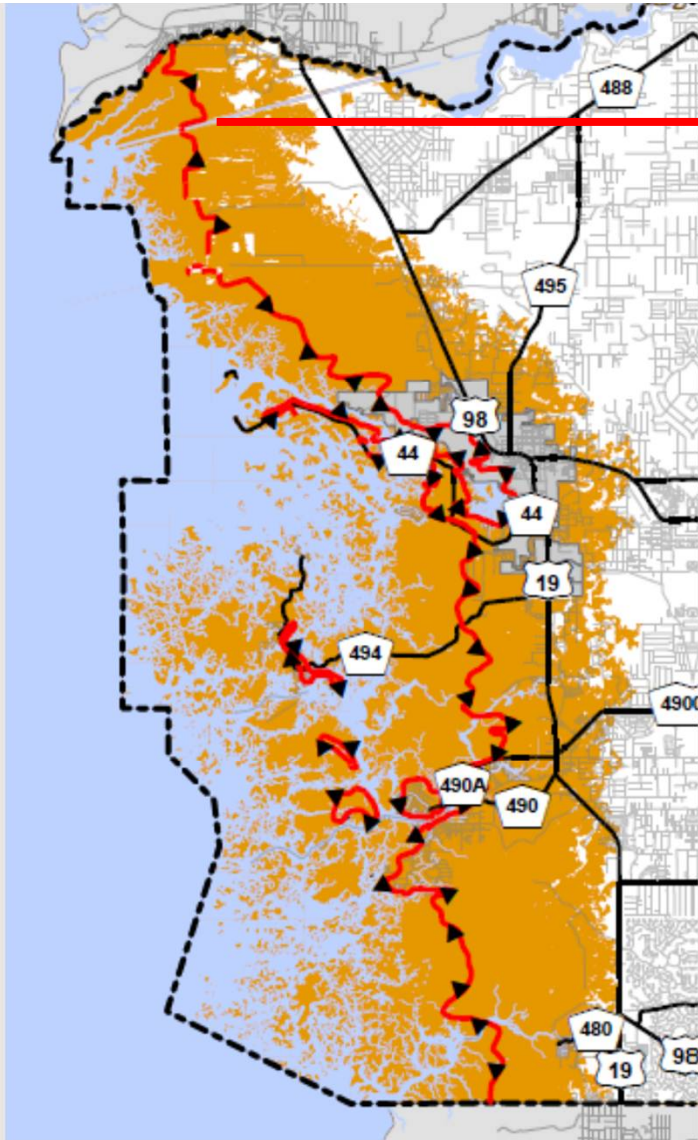
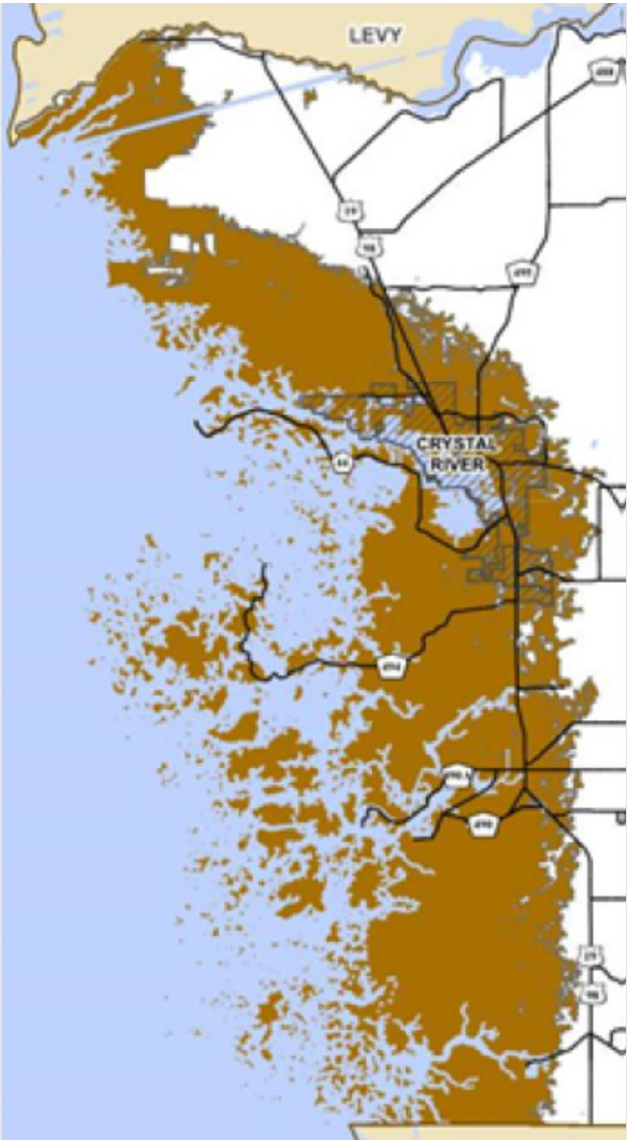
Coastal, Lakes and River Management Element - Chapter 4 - CHHA Map





Updated CHHA Map reflecting Coastal FIRM updates and the LIMWA line

Previous CHHA
Map



LiMWA

New CHHA Map

Coastal, Lakes and River Management Element -

Chapter 4 Sea Level Rise

- “Sea Level Rise” An increase in sea level caused by a change in the volume of the world’s oceans and changes in local ground elevations. Sea level rise leads to increased frequency and depth of flooding in coastal areas. (FEMA Coastal Flood Risk Study)”
- Policy 4.10.3 The Coastal High Hazard Area shall incorporate all lands and waters which lie within the Category 1 Hurricane Evacuation Zone. Such area is generally based upon the surge zone as depicted in the 2010 Statewide Regional Evacuation Study, Withlacoochee Region (SRES). The Coastal High Hazard Area boundary and the Limit of Moderate Wave Action (LiMWA) shall be shown on the Land Development Code Atlas.

- Policy 4.10.4 ~~Reserved~~ New development, redevelopment, and infrastructure in vulnerable areas shall use best practices to address sea level rise.
- Policy 4.10.4B In order to reduce flood risk from, or associated with, the impacts related to sea-level rise, continue to promote the use of the development and redevelopment principles, strategies and engineering solutions contained in the Florida Building Code and the Land Development Code.

Shoreline Use and Working waterfront

- Shoreline Use and Working Waterfront language was updated to include Marinas to comply with FS.
- - Water-dependent Land Uses
 - Objective 4.5 Recreational and working waterfronts including water dependent and water-related land uses have priority over all other land uses with exception to conservation, along shoreline areas. The Generalized Future Land Use Map (GFLUM) shall contain designated areas for coastal water-dependent and water-related land uses.
 - **Public Access**
 - Objective 4.12 Increase public access to Coastal, Lakes, and River shoreline areas. A public access study shall be completed by 2040. 2009

- Policy 4.14.1 The County shall develop joint planning and management programs with the Cities of Crystal River, Inverness, Yankeetown, Inglis, and Dunnellon and the Counties of Hernando, Marion, Sumter, and Levy to:
 - Ensure adequate preservation of recreational and commercial working waterfronts including water-dependent and water-related land uses
 - Prevent water pollution
 - Control and retrofit stormwater runoff and inadequate facilities
 - Protect living marine resources
 - Reduce exposure to natural hazards
 - Ensure public access

Evacuation data

- Evacuation data in Chapter 4 has been updated to reflect the removal of the Withlacoochee Regional Planning Council data from 2004.
- Updated Evacuation Data reflects the Evacuation Map created by the Citrus County Office of Emergency Management and the GIS division.
- The Evacuation Zones and routes have not changed.
- The Maps and tables were updated to reflect the new source and date of 2014.

CHAPTER THREE

CONSERVATION ELEMENT

Updated:
EAR BASED AMENDMENTS
July 11, 2006, Ord. No. 2006-A12
December 11, 2007, Ord. No. 2007-A37
May 27, 2008, Ord. No. 2008-A13
(Stipulated Settlement Agreement)
February 14, 2012, Ord. No. 2012-A01
February 26, 2013, Ord. No. 2013-A04

This page left intentionally blank

CHAPTER THREE CONSERVATION ELEMENT TABLE OF CONTENTS

I.	INTRODUCTION	1
	A.Purpose	1
	B. Current Situations and Trends	1
	C.Geographic Setting and Physiography	2
	1. Climate	6
	2. Geology.....	6
	3. Soils.....	8
II.	INVENTORY AND ANALYSIS.....	14
	A.Water Resources	14
	1. Surface Water.....	14
	2. Floodplains.....	31
	5. Wellfield Selection and Protection.....	47
	B. Analysis of Ecological Communities	52
	A. Inventory of Ecological Communities	53
	C.Air Quality	69
	D.Soil Erosion	69
	E. Commercial Uses of Natural Resources.....	73
	1. Forested Lands	73
	2. Fisheries	73
	C. Mining	75
	F. Hazardous Waste.....	78
	G.Conservation and Recreation Lands.....	78
	1. State Acquisition Programs.....	81
	2. Proposed Acquisition Sites	81
	3. Public Land Descriptions	82
III.	CONSERVATION PLAN.....	9392
	A.Water Resources	9392
	1. Surface Waters	9392
	2. Floodplains.....	9594
	3. Groundwater Resources	9594
	B. Ecological Communities and Wildlife.....	9897
	C.Air Quality	9998
	D.Soil Erosion	10099
	E. Commercial Uses of Natural Resources.....	10099
	F. Hazardous Waste.....	101400

Conservation Element

G.Conservation and Recreation Lands.....[101](#)~~100~~

H.Wetlands.....[101](#)~~100~~

IV. GOALS, OBJECTIVES, AND POLICIES[103](#)~~102~~

I. INTRODUCTION

A. Purpose

The purpose of the Conservation Element is to provide a guide for conservation, protection, and preservation of the natural resources of Citrus County. The Conservation Goal of the County is to protect and enhance natural resources to promote the health, safety, and welfare of the public.

This element catalogs past and current data on Citrus County's natural resources, as well as development factors that have or could impact upon them. It also incorporates elements of reports and studies conducted by other regulatory agencies describing programs or needs to restore or protect our natural resources. Drawing upon this data, a Conservation Plan is provided which lists policies and directions designed to provide a basis for County action or decisions that have environmental ramifications.

Citrus County's economy and culture are irrevocably linked with our natural resources. The well being and health of Citrus County's residents is directly influenced by the quality of air, water, and other natural resources. Our quality of life and recreational opportunities are also dependent upon a healthy environment and many sectors of our economy rely on quality natural resources. Therefore, without protecting and conserving our natural resources, Citrus County risks irreparably harming our lifestyle and future growth.

B. Current Situations and Trends

The past fifty years has featured rapid growth throughout the State of Florida. Citrus County and the surrounding Nature Coast have experienced some of the highest rates of growth in the nation. This growth has drastically impacted upon the County's environment by direct conversion and loss of natural habitat and indirect alteration through fragmentation, control of fire and hydrology, and introduction of non-native plants and animals.

A brief view of existing land use patterns demonstrates that a majority of the County's developable lands are committed. These committed lands include presently developed and platted properties.

Strong stewardship of the County's resources can maintain a vibrant economy and a safe and healthy community for all residents. The protection and safeguards directed towards the County's resources serve a primary role in maintaining the health of remaining natural areas and functions.

Without appropriate protection measures, the County's continued growth may jeopardize our ground and surface waters, aquifer recharge, air quality, and recreational and economic use of natural resources.

In some instances, actions which have already occurred must be addressed through mitigation or retrofitting to curb adverse impacts. Tools such as public acquisition, land use management and regulation, and public education also play important roles in ecosystem protection.

C. Geographic Setting and Physiography

The geographic setting, physiography, and drainage section utilizes materials from the Ground Water Resource Availability Inventory (GWRAI), Citrus County, Florida, Southwest Florida Water Management District (SWFWMD), August, 1987.

Citrus County is located on the coast of west-central Florida and is bounded on the west by the Gulf of Mexico, on the north by Levy and Marion Counties, on the east by Sumter County, and on the south by Hernando County. Citrus County has an area of approximately 773.2 square miles which includes about 100 square miles of inland surface-water area. Land surface altitudes range from sea level along the coast to an average of about 100 feet above the National Geodetic Vertical Datum (NGVD) along the Brooksville Ridge. At least two hills have altitudes higher than 225 feet above NGVD (Figure 3-1).

W. H. White, 1970, delineated four major physiographic features in Citrus County. These include the Coastal Swamps, the Gulf Coastal Lowlands, the Brooksville Ridge, and the Tsala Apopka Plain (Figure 3-2). The physiographic areas are primarily a function of topographic relief and underlying sediments.

The coastal swamp area parallels the coast and extends inland about two to five miles. It is comprised of both tidal marshes and coastal swamps. Elevations range from sea level in the tidal marshes to about 10 feet above NGVD in some of the swamp areas. Poorly drained organic soils directly overlay limestone of the Floridan aquifer system in much of the coastal swamp area.

The coastal lowland area lies between the coastal swamp and the Brooksville Ridge and ranges from about two to eight miles in width. Elevations range from sea level to about 100 feet above the NGVD. Sandy soils in the area contain little organic material.

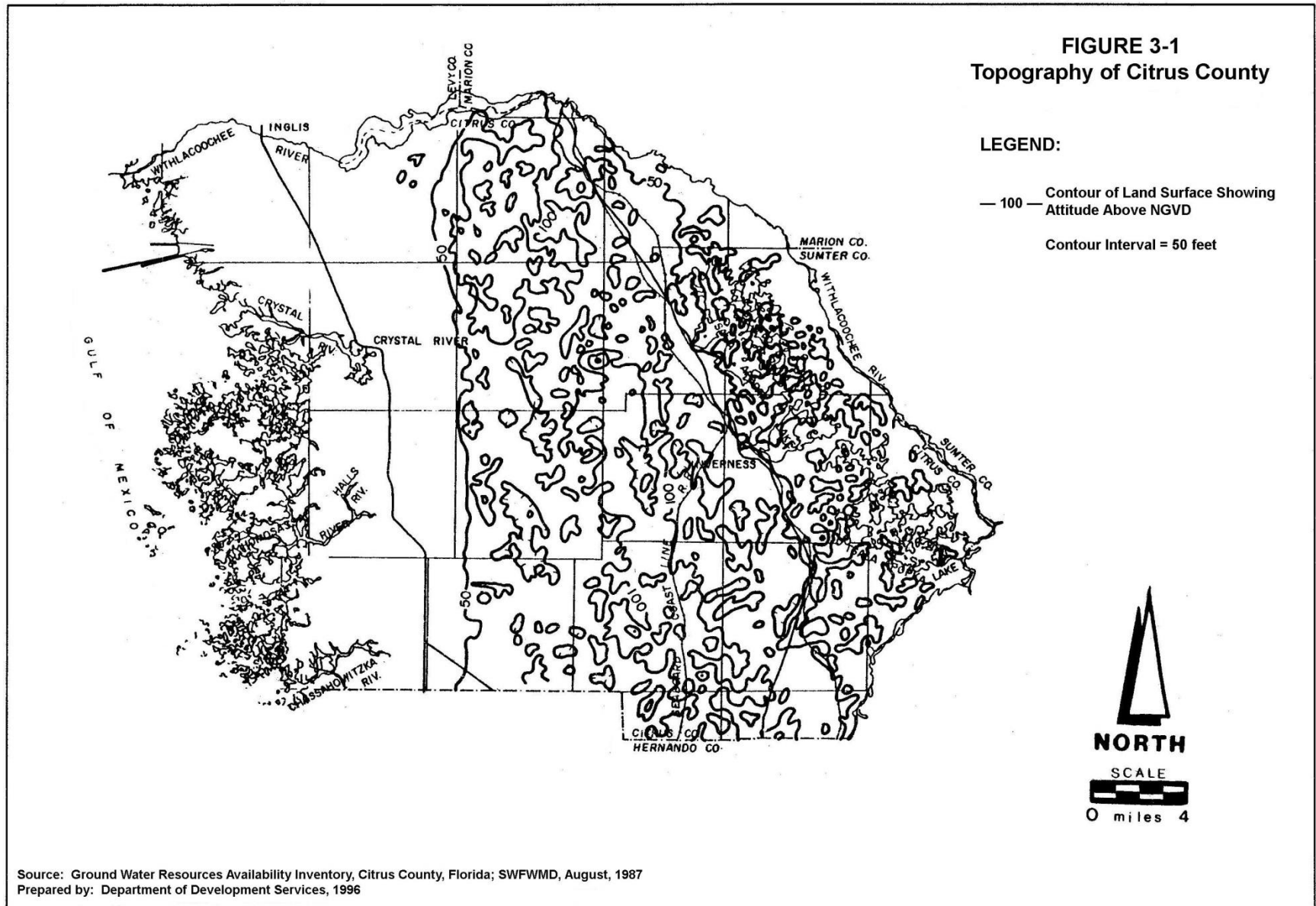
The Brooksville Ridge extends north-south and occupies the central part of Citrus County. It extends west of US-41 and ranges from about 17 miles in width at the Hernando County line to about five miles in width at the Marion County border. Elevations along the Ridge range from 70 to 237 feet above NGVD. The edges of the Ridge are characterized by deep, sandy soils. The soils of the Central Ridge area are a mixture of poorly drained to well drained, sandy, clayey soils. The entire Brooksville Ridge area overlies a clayey unit that varies between 10 and 30 feet in thickness, but allows good hydraulic connection to the underlying Floridan aquifer system via solution features and fractures. The Ridge has an irregular surface due to karst activity and elevations may vary over 100 feet in short lateral distances.

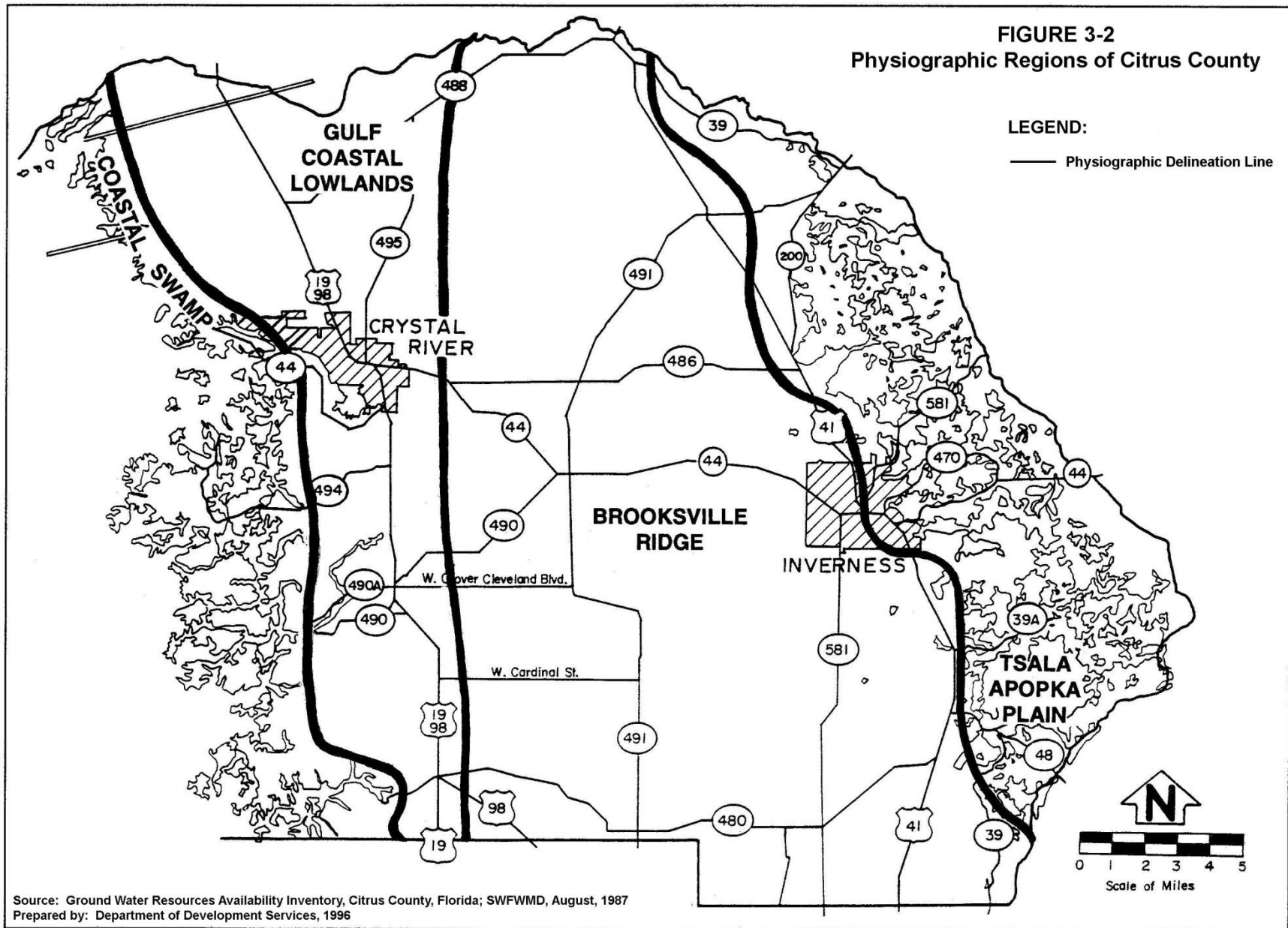
The Tsala Apopka Plain lies between the Brooksville Ridge and the Withlacoochee River. It has a large number of interconnected lakes (Tsala Apopka Chain of Lakes) that are divided by peninsulas and islands. Clastic deposits cover the limestone surface and elevations range from 35 to 75 feet above the NGVD. The soils are generally sandy and weakly cemented with organic matter.

The main surface drainage features in Citrus County are the Withlacoochee River, which forms the entire eastern and northern borders, and the Crystal, Homosassa, and Chassahowitzka Rivers located along the west coast. The Withlacoochee River begins in the Green Swamp and flows to the northwest. It drains about 2,980 square miles and empties into the Gulf of Mexico near Yankeetown. The Crystal, Homosassa, and Chassahowitzka Rivers all begin as springs about three to five miles inland and flow to the Gulf. Very little surface-water runoff contributes to the flow of these coastal rivers.

The existence of rivers and streams in the County is limited because of rapid infiltration of rainfall. Upon infiltration, the recharged water generally moves coastward and is eventually discharged from coastal springs. These spring cavities are often large, connected by conduits, and can accommodate sizable flows. Citrus County has three spring groups that contain three first magnitude springs (SWFWMD, 2001). A spring group is defined as a complex of springs, often spread over an area of several square miles, which are discharge points for ground water in a discrete ground water basin. The Kings Bay Springs group (also known as Crystal River) is the largest and contains over 30 individual springs. The Homosassa Springs Group and Chassahowitzka Springs Group form the headwaters of their respective coastal rivers.

FIGURE 3-1
Topography of Citrus County





1. Climate

The climate of Citrus County is humid subtropical, characterized by high mean annual rainfall and temperature. Generally, the summers are hot and humid with the majority of the rainfall occurring between June and September. The mean annual temperature is about 71 degrees Fahrenheit, with monthly means of 82 degrees Fahrenheit for August and 60 degrees Fahrenheit for January (National Oceanic and Atmospheric Administration, 1983). Summer temperatures usually peak in the low to mid 90's and are cooled by frequent convectional thundershowers. Winter temperatures are quite variable due to the frequent passage of cold fronts. Cold temperatures from a front generally last only two to three days and temperatures rarely remain below freezing during the day (Wolfe and others, 1986).

Rainfall in Citrus County varies both seasonally and annually. Mean annual rainfall is about 56 inches, but annual rainfall has ranged between 36 and 86 inches during the period of record (1915-1985) at the Inverness National Weather Station. Maximum monthly and maximum daily rainfalls were recorded as 17.4 and 10.5 inches respectively. The least amount of rainfall occurs in the spring and fall. In these transition periods, low pressure systems do not influence the state nearly as frequently as in winter and local convective shower activity is much weaker than in summer. Long lasting rainstorms are uncommon during the summer months, but when they do occur, they are usually associated with tropical storms or hurricanes. Yankeetown received 38.7 inches of rain during the 24-hour period of September 5-6, 1950, as the result of a hurricane.

2. Geology

About half of Citrus County has Eocene or Oligocene limestones exposed at or very near (10-20 feet) the land surface. In general, the eastern and western edges of the County have limestone outcrops, or limestone very close to land surface, while the central ridge area is covered by undifferentiated sand and clay. A map of the surficial geology is shown in Figure 3-3. A simplified stratigraphic sequence from top to bottom includes undifferentiated sands and clays of varying thickness overlying clays of the Hawthorn Formation which overlie a thick sequence of limestones including the Oligocene Suwannee Formation, Eocene Ocala Group, and Eocene Avon Park Formation.

Quaternary sediments consist of clastic deposits dominated by quartz sand. Strata may consist of residual fluvial and wind derived deposits. Portions of Citrus County have only a veneer of Quaternary sediments overlying the Eocene Ocala Group and Avon Park Limestone (Vernon, 1951).

Pliocene to Miocene sediments are represented by the Stratenville and Devils Millhopper facies of the Hawthorn Formation. These sediments were deposited in a variety of environments and consist of sand, salty sand, and waxy green clay.

Phosphorite pebbles and oyster bars are common. The Hawthorne Formation may act as a partial confining unit to the Floridan aquifer.

Below the surficial sand and clays lie a thick sequence of carbonate deposits comprised of Eocene limestone including the Suwannee, Ocala, and Avon Park. These chemically precipitated deposits of limestone and dolomite contain shells and shell fragments of marine origin. The Oligocene Suwannee Limestone is exposed mainly in the southwestern and northeastern areas of the County and is a bedded, pure to slightly sandy limestone with secondary dolomitization. The Eocene Ocala Group consists of fossils in a silt to sand size matrix and is usually soft, porous, and friable (Brooks, 1981). The Avon Park Formation consists of finely crystalline dolomite with some fossiliferous limestone. It is very permeable in some areas and attains thicknesses up to 500 feet. The Avon Park is the deepest formation containing potable water (Seaburn and Robertson, 1985).

Below the Avon Park is the Lake City Limestone. It contains gypsum and anhydrite which significantly degrade the overall water quality of the formation. Limestone units continue through the Tertiary to depths of about 2,900 feet.

The dominant structural feature that affects Citrus County is the Ocala Uplift which raises Eocene limestones and Olostones to altitudes of 90 feet above NGVD. Extension of the strata on the top and flanks of the structure resulted in tensional stresses sufficient to cause widespread, near vertical, fracturing, and occasional normal faulting. The primary fractures are oriented northwest-southeast with secondary fractures trending northeast-southwest (Vernon, 1951).

The hydrological significance of this feature is twofold: 1) the proximity of limestone to land surface has resulted in the development of karstic terrain and an area of relatively high recharge to the Floridan aquifer; and 2) the fractured nature of the rocks allows for the enlargement of these fractures and the development of caverns as groundwater moves through these zones. The fractured zones have greater groundwater production capabilities (Seaburn and Robertson, 1986). Also, because the limestone is close to land surface the area is ideal for limestone mining. This economical resource is used as road base, fill, concrete, and asphalt production. The quarried limerock is taken from the Oligocene Suwannee, and Eocene Ocala Formations. Other minor economical products include gravel, sand, clay, and limited hard rock phosphate.

Karstic terrain has a significant influence on the County's natural landscape and pattern of development. Karst is very close to the surface in the Tsala Apopka Plain and most of the Gulf Coastal Lowlands. Limestone outcroppings, springs and solution holes are common features of the landscape. The aquifer is very exposed in these areas and highly vulnerable to contamination. In the central ridge, karstic limestone is typically covered with sand and other soil materials. This provides some protection to the underlying aquifer. In some areas in the Central Ridge, karstic

limestone is located near the surface. These areas are highly prone to sinkhole formation and may have caverns near the surface.

The karst terrain is the basis of many of the County's ecological systems. Surface and ground waters are closely interrelated and often intermix. River and lake levels are often a direct reflection of groundwater levels. Spring flow and seepage back into the aquifer constitute the base flow of the Withlacoochee River and Tsala Apopka chain of lakes. Spring-fed coastal rivers and wetlands discharge to estuaries and are critical for the maintenance of salinity regimes. Exposed limerock within hammocks and limesinks, caverns, and large sinkholes also support listed plant and animal species specific to those habitats.

3. Soils

The General Soils Map for Citrus County depicts four broad divisions as follows:

- Mineral Soils of the Upland Ridge;
- Mineral Soils of the Flatwoods;
- Mineral and Organic Soils of the Coastal Swamps, Tidal, and Freshwater Marshes; and Coastal Island; and
- Mineral and Organic Soils of the River Valley Lowlands.

Each area outlined in Figure 3-4 consists of more than one type of soil; therefore this figure is intended for general planning purposes (refer to USDA, Soil Conservation Service publication "Soil Survey for Citrus County, Florida" for a detailed description of soil types in the County). Acreages for each soil type are provided in Table 3-1.

Excessively drained and well drained soils occur in the Brooksville Ridge and Tsala Apopka Lake areas. These soils consist of the Candler-Lake-Astatula association, the Arredondo-Kendrick-Sparr association, and the Tavares-Adamsville association and support longleaf pine and turkey oak communities. Recharge is generally high in this division due to the high permeability of these soils and the general lack of a confining layer between the surficial soils and the limestone of the Floridan aquifer system.

Somewhat poorly drained and poorly drained soils are found in the Gulf Coastal Lowlands and along parts of the Withlacoochee River. The predominant soil types are the Boca-Broward-Redlevel association and the Basinger-EauGallie-Myakka association. These soils support hardwood forests and mesic hammock communities. Recharge is moderate to low in these soils.

Poorly drained and very poorly drained soils occur in the Coastal Swamp area. The major soil group associations are Homosassa-Weekiwachee-Durbin, Okeelanta-Lauderhill-Terra Ceia, and Rock outcrop-Hallandale-Homosassa. These soils are frequently subject to flooding and have very low recharge rates. They support brackish marshes, forested wetlands, and pine flatwoods.

Conservation Element

Poorly drained sandy and mucky soils are associated with the marshlands and hydric forests occurring between the Tsala Apopka chain of lakes and the Withlacoochee River. The major soil groups are the Basinger-Immokalee-EauGallie association and the Terra Ceia-Okeelanta association.

FIGURE 3-3
Geologic Units at Land Surface in Citrus County

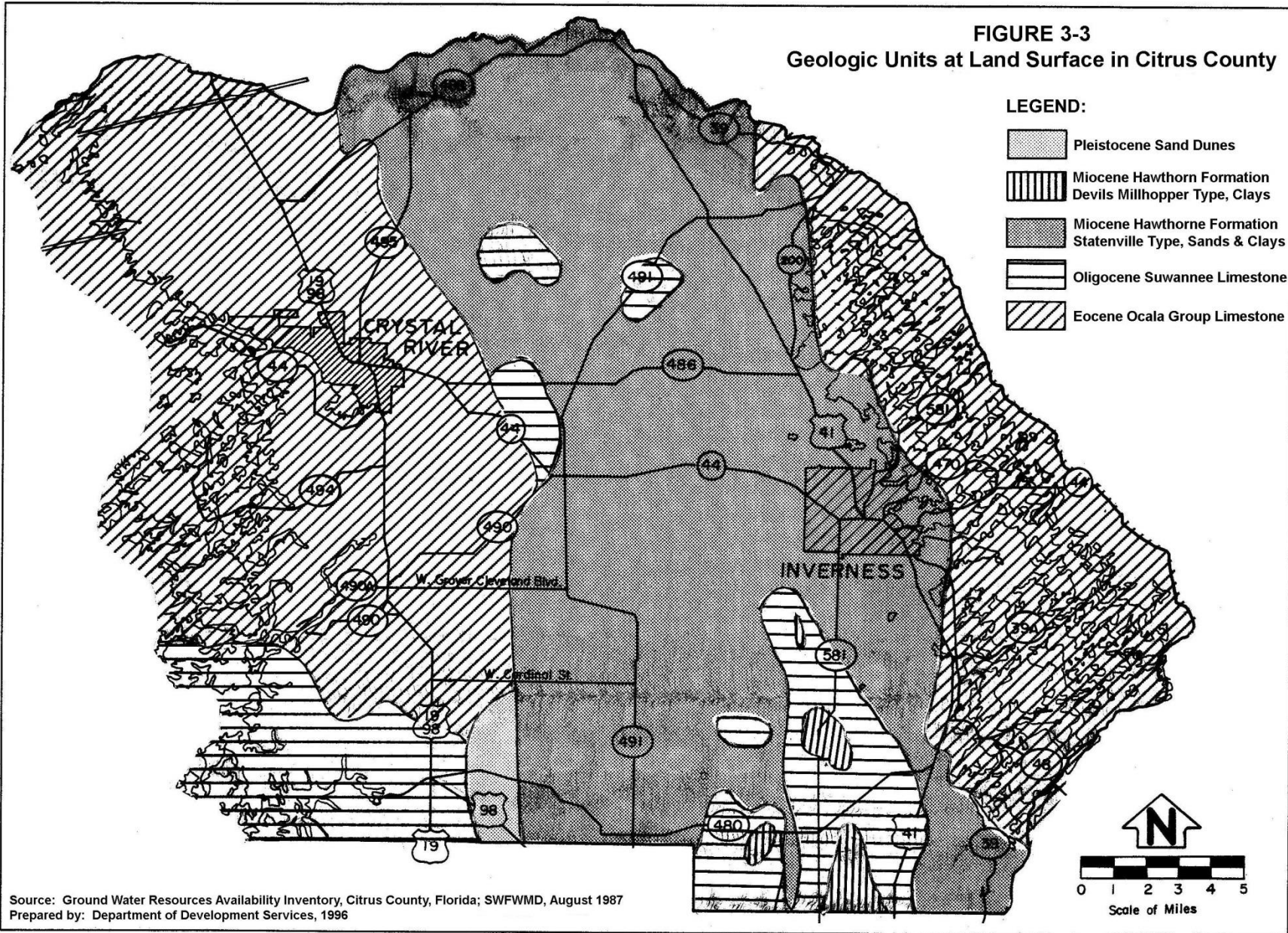
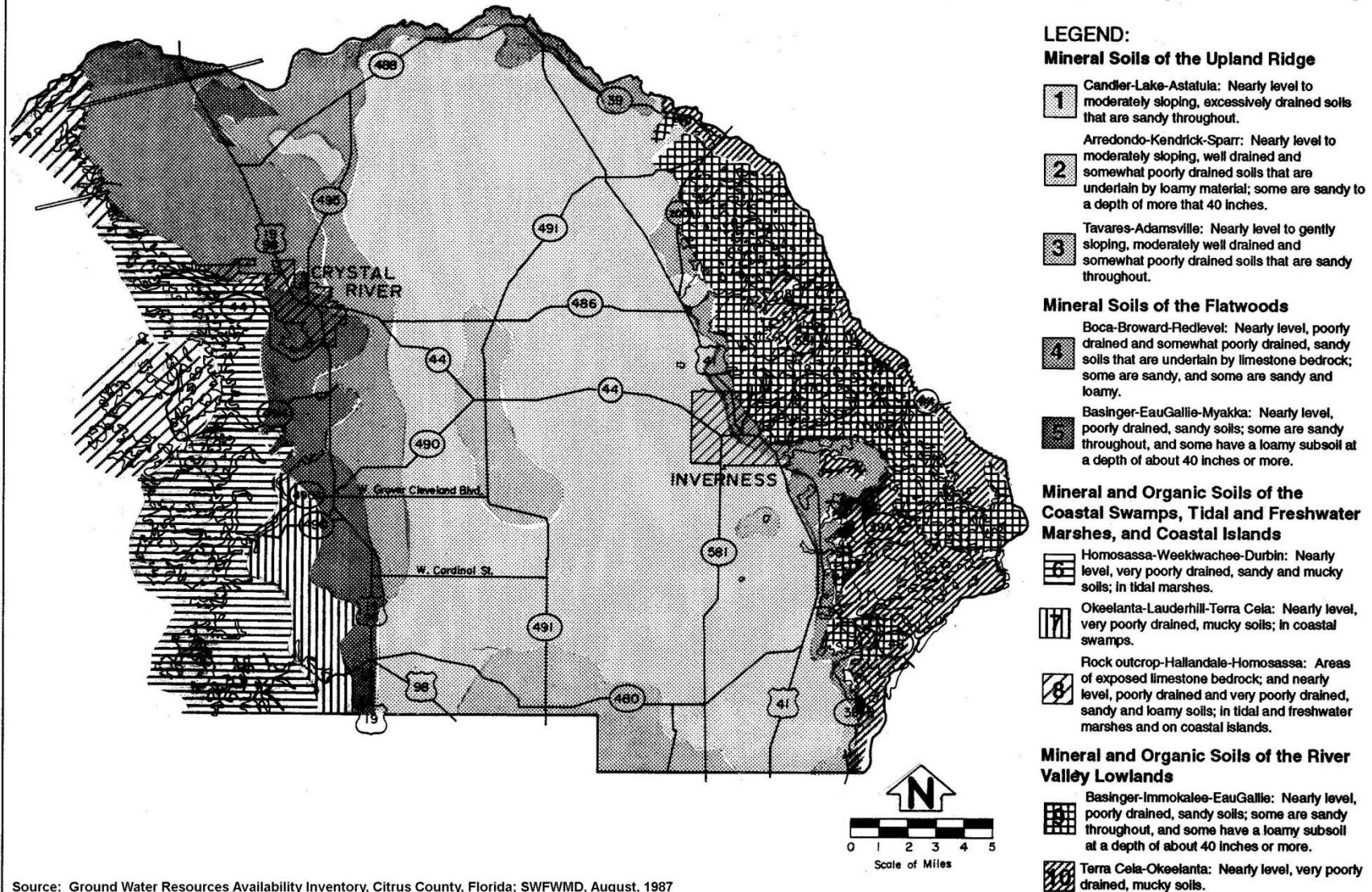


FIGURE 3-4
Generalized Soils Map of Citrus County



**TABLE 3-1
ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS IN CITRUS COUNTY**

May Symbol	Soil Name	Acres	Percent
2	Adamsville Fine Sand	13,184	3.1%
3	Candler Fine Sand, 0 to 5 Percent Slopes	73,761	17.2%
4	Candler Fine Sand, 5 to 8 Percent Slopes	7,878	1.8%
5	Basinger Fine Sand	7,619	1.8%
6	Basinger Fine Sand, Depressional	8,850	2.1%
7	Myakka Fine Sand	3,044	0.7%
8	Paola Fine Sand, 0 to 5 percent slopes	138	0.0%
9	Pompano Fine Sand	2,933	0.7%
10	Pompano Fine Sand, Depressional	1,263	0.3%
11	Tavares Fine Sand, 0 to 5 Percent Slopes	30,483	7.1%
12	Immokalee Fine Sand	8,170	1.9%
13	Okeelanta Muck	747	0.2%
14	Lake Fine Sand, 0 to 5 Percent Slopes	32,312	7.6%
15	Lake Fine Sand, 5 to 8 Percent Slopes	2,564	0.6%
16	Arrendondo Fine Sand, 0 to 5 Percent Slopes	19,996	4.7%
17	Arrendondo Find Sand, 5 to 8 Percent Slopes	6,462	1.5%
18	Kendrick Fine Sand, 0 to 5 Percent Slopes	4,236	1.0%
19	Kendrick Fine Sand, 5 to 8 Percent Slopes	1,358	0.3%
20	Pits	2,614	0.6%
22	Quartzipsammments, 0 to 5 Percent Slopes	3,654	0.9%
23	Weeki-Wachee - Durbin Mucks	9,842	2.3%
24	Okeelanta-Lauderhill – Terra Ceia Mucks	9,949	2.3%
25	Lochloosa Fine Sand, 0 to 5 Percent Slopes	1,683	0.4%
26	Williston – Pedro – Rock Outcrop Complex, 2 to 5 Percent Slopes	300	0.1%
27	Pomello Fine Sand, 0 to 5 Percent Slopes	901	0.2%
28	Redlevel Fine Sand	2,953	0.7%
29	Astatula Fine Sand, 0 to 5 Percent Slopes	28,643	6.7%
30	Astatula Fine Sand, 5 to 8 Percent Slopes	7,630	1.8%
31	Sparr Fine Sand, 5 to 8 Percent Slopes	192	0.0%
32	Candler-Urban Land Complex, 0 to 8 Percent Slopes	1,190	0.3%
33	Micanopy Loamy Fine Sand, 2 to 5 Percent Slopes	1,007	0.2%
34	Sparr Fine Sand, 5 to 8 Percent Slopes	5,143	1.2%
36	EauGallie Fine Sand	4,598	1.1%
37	Matlacha, Limestone Substratum-Urban Land Complex	2,006	0.5%
38	Rock Outcrop – Homosassa –Lacoochee Complex	12,775	3.0%
39	Hallandale-Rock Outcrop Complex, Rarely Flooded	12,011	2.8%
40	Homosassa Muck Fine Sandy Loam	7,858	1.8%
41	Candler Fine Sand, 8 to 12 Percent Slopes	240	0.1%
46	EauGallie Fine Sand, Depressional	3,702	0.9%

TABLE 3-1 Continued
ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS IN CITRUS COUNTY

Map Symbol	Soil Name	Acres	Percent
47	Fort Meade Loamy Fine Sand, 0 to 5 Percent Slopes	1,366	0.3%
48	Arents, 45 to 65 Percent Slopes	1,100	0.3%
49	Terra Ceia-Okeelanta Association, Frequently Flooded	11,178	2.6%
50	Kanapaha Fine Sand, 0 to 5 Percent Slopes	896	0.2%
51	Boca-Pineda, Limestone Substratum Complex	3,467	0.8%
52	Anclote Fine Sand, Depressional	1,071	0.3%
53	Boca Fine Sand	9,903	2.3%
54	Apopka Fine Sand, 0 to 5 Percent Slopes	1,423	0.3%
55	Udorthents, 0 to 5 Percent Slopes	5,080	1.2%
56	Lake, Clayey Surface, 0 to 5 Percent Slopes	1,217	0.3%
57	Ona Fine Sand	1,411	0.3%
58	Myakka, Limestone Substratum-EauGallie, Limestone Substratum complex	5,717	1.3%
59	Boca Fine Sand, Depressional	3,707	0.9%
60	Boca Fine Sand	4,047	0.9%
61	Orsino Fine Sand, 0 to 5 Percent Slopes	2,011	0.5%
62	Malabar Sand	2,325	0.5%
63	Paisley Fine Sand	1,269	0.3%
64	Citronelle Fine Sand	1,182	0.3%
	Water	25,351	5.9%
Total		427,610	100.0%

Source: Soil Survey of Citrus County, Florida, ESDA Soil Conservation Service, October, 1988

Prepared By: Citrus County Community Development Division, 1996

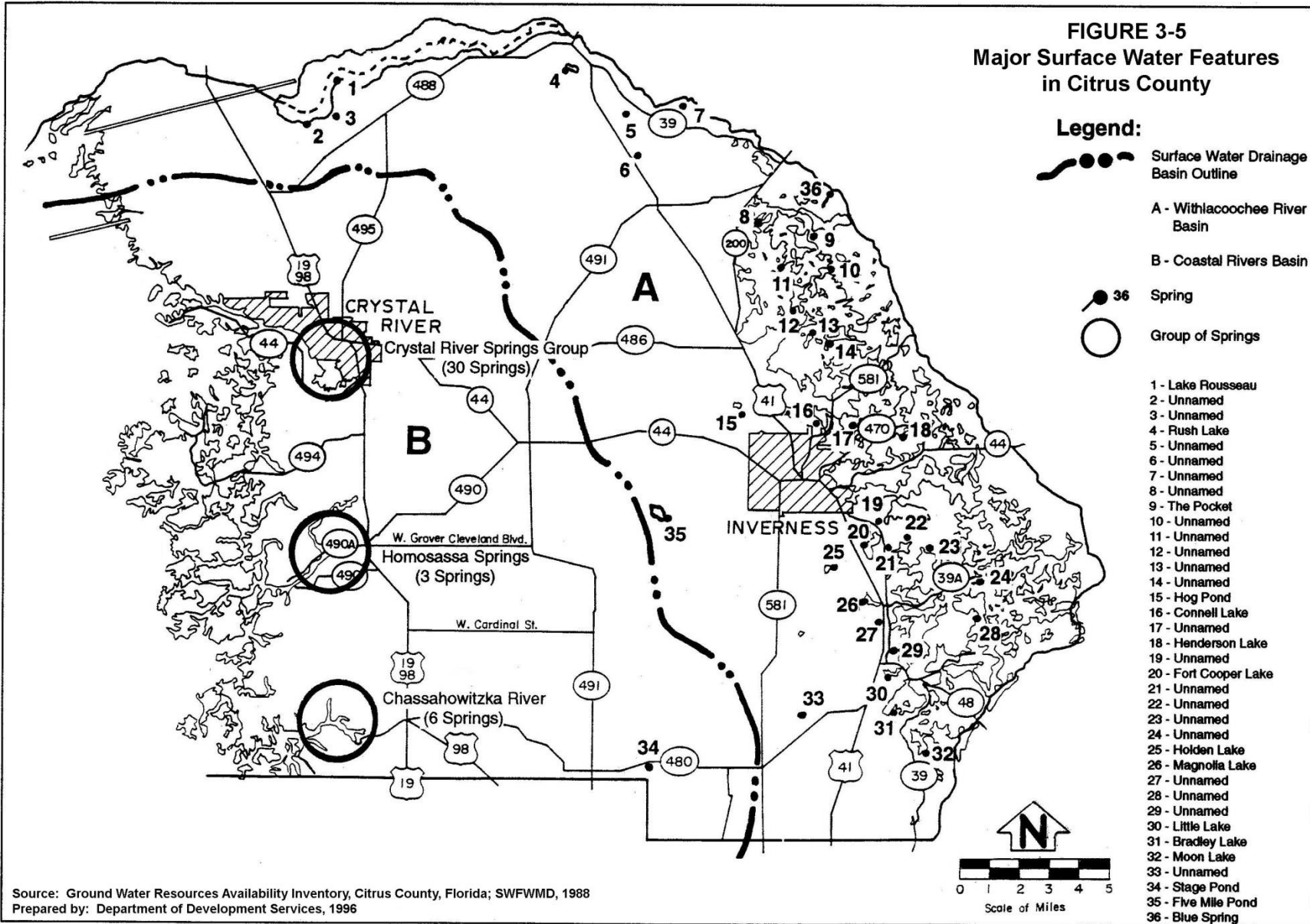
II. INVENTORY AND ANALYSIS

A. Water Resources

1. Surface Water

Surface waters of Citrus County are located within the Springs Coast Watershed and the Withlacoochee River Watershed. The Brooksville Ridge divides the two watersheds within Citrus County. The Brooksville Ridge has deep sands with high infiltration rates, thus allowing little, if any surface water storage.

Major surface water features are detailed on Figure 3-5 and Tables 3-2 and 3-3. Surface water of the Springs Coast Watershed is a result of spring discharge and tidal action. The Withlacoochee River Watershed encompasses the Tsala Apopka Plain and the Withlacoochee River and contains a number of lakes and freshwater marshes.



**TABLE 3-2
MAJOR SURFACE WATER FEATURES BY DRAINAGE BASIN**

Withlacoochee River Watershed	
Water Body Type	System
Estuary	Withlacoochee River
Lake	Tsala Apopka
Lake	Lake Rousseau
Stream	Withlacoochee River
 Springs Coast Watershed	
Estuary	Crystal River
Spring	Cedar Cove Spring
Spring	Hunter Bay Spring
Spring	American Legion Spring
Spring	Crystal Spring
Spring	Idiot's Delight Spring
Spring	Tarpon Spring
Spring	Crescent Drive Spring
Spring	Homosassa Spring
Stream	Crystal River
	Homosassa River
	Chassahowitzka River

Source: FDEP Florida Water Quality Assessment 305(b), Technical Report, 1994

Prepared By: Citrus County Community Development Division, 1996 updated 2005

Conservation Element

TABLE 3-3
SURFACE WATER QUALITY DATA FOR 1970 – 1993/ MEDIAN VALUES FOR EACH WATERSHED
(Current Period of Record “1989-1993” Used Where Available)
-Period Prior to 1989 is Evaluated as Historical Information-
****USGS Hydrologic Unit: 0300208 Withlacoochee River, South**

Watershed	Waterbed Data Record				Water Clarity				Dissolved Oxygen		Oxygen Demand			pH Alkalinity		Trophic Status			Coliform		Biological Species Diversity			Cond.	Flow	Water Quality Index
	Max #OBS	Beg. Year	End Year	Data Period	Turb	SD	COLOR	TSS	DO	DOSAT	BOD	COD	TOC	pH	ALK	NITRO	PHOS	CHIA	TOTAL	FBCL	NAT	ART	BBCK	COND	FLOW	WQI
ID Name																										
<i>Water Body Type: Estuary</i>																										
46 Withlacoochee River	13	92	93	Current	1.4	4.4	30	1	8.5	92	M	M	6	7.8	101	0.59	0.03	2	M	68	M	M	M	321	M	M
73 Crystal River	223	70	85	Historical	3	1.8	6	6	6.9	79	1	M	2	7.9	104	0.34	0.04	4	M	M	M	M	M	3195	M	M
<i>Water Body Type: Lake</i>																										
34 Tsala Apopka Outlet	552	70	80	Historical	4	2.4	55	M	7.2	86	M	M	M	7.2	44	0.58	0.02	3	M	M	M	M	M	175	M	M
44 Lake Rousseau	23	89	93	Current	1.5	2	28	2	8.2	87	1	M	5	7.5	103	0.64	0.05	5	M	508	M	M	M	259	M	M
<i>Water Body Type: Stream</i>																										
33 Withlacoochee River	117	70	87	Historical	10	M	30	M	4.8	55	1	M	15	7.5	98	0.57	0.03	M	M	M	M	M	M	260	459	53
44 Withlacoochee River	246	70	83	Historical	3.2	2.7	34	M	6.8	77	1	M	8	7.5	105	0.6	0.03	M	172	9	M	M	M	264	70	26
45 Withlacoochee River	13	89	90	Current	0.9	M	20	2	6.8	77	1	M	6	6.4	64	0.7	0.04	M	M	15	M	M	M	286	436	21
01 Crystal River	34	89	91	Current	M	M	M	M	6.2	68	M	M	M	8.1	86	M	0.03	M	M	M	M	M	M	403	M	32
09 Homosassa River	34	92	93	Current	2.2	1.4	25	5	7.2	81	M	M	3	7.7	117	0.49	0.01	10	M	29	M	M	M	6314	M	19
10 Chassahowitzka River	15	92	93	Current	1.3	1.2	10	3	7.9	91	M	M	1	7.4	138	0.46	0.01	1	M	265	M	M	M	4354	M	21
<i>Water Body Type: Spring</i>																										
02 Cedar Cove Spring	7	89	90	Current	M	M	M	M	3.9	44	M	M	M	7.8	81	M	0.03	M	M	M	M	M	M	293	M	51
03 Hunter Spring Bay	5	89	89	Current	M	M	M	M	5.7	64	M	M	M	7.9	72	M	0.03	M	M	M	M	M	M	177	M	37
04 America Legion Spring	7	89	90	Current	M	M	M	M	6.3	71	M	M	M	7.9	78	M	0.06	M	M	M	M	M	M	330	M	41
05 Crystal Spring	5	89	89	Current	M	M	M	M	M	M	M	M	M	7.9	90	M	0.05	M	M	M	M	M	M	374	M	32
06 Idiots Delight Spring	7	89	90	Current	M	M	M	M	4.1	47	M	M	M	7.9	91	M	0.04	M	M	M	M	M	M	282	M	50
07 Tarpon Spring	6	89	89	Current	M	M	M	M	M	M	M	M	M	7.8	110	M	0.04	M	M	M	M	M	M	1368	M	23
08 Crescent Drive Spring	5	89	89	Current	M	M	M	M	3.8	43	M	M	M	7.7	124	M	0.02	M	M	M	M	M	M	3660	M	45
Index					Good					Fair					Poor											
Wq1-River					0-44					45-59					60-90											
TSI-Estuary					0-49					50-59					60-100											
TSI-Lake					0-59					60-69					70-100											

Source: Florida Department of Environmental Protocol, 1994; Florida Water Quality Assessment, 305 (b) Report
 Prepared By: Citrus County Community Development Division, 1996

TABLE 3-3 (Continued)
LEGEND

ALK – Alkalinity MG/L	COLOR – Color PCU	MAX # OBS – Maximum # of Samples	TOTAL – Total Coliform MPN/100ML
ART – Artificial Substrate DI	COND – Conductivity UMHOS	NAT – National Substrate Density	TSI – Trophic State Index
BEG YR – Beginning Sampling Year	DO – Dissolved Oxygen MG/L	NITRO – Total Nitrogen MG/L	TSS – Total Suspended Solids MG/L
BECK - Beck's Biotic Index	DOSAT – Do % Saturation	pH – pH Standard Units	Turb – Turbidity
BOD - Biochemical Oxygen Demand	END YR – Ending Year	PHOS - Total Phosphorus MG/L	WQI – Water Quality Index
CHLA - Chlorophyll UG/L	FECL – Fecal Coliform MPN/100ML	SD – Secchi Disk Maters	
COD – Chemical Oxygen Demand MG/l	FLOW - Flow CFS	TOC – Total Organic Carbon MG/L	

Source: Florida Department of Environmental Protection; 1994 Florida Water Quality Assessment, 305 (b) Report
Prepared By: Citrus County Community Development Division, 1996

TABLE 3-4
ACTUAL FLOW OF MAJOR SPRINGS IN CITRUS COUNTY

Name	Actual Flow – (CFD)
Citrus Blue Spring	1,296,000
King's Bay Springs Group (30)	79,142,000
Homosassa Springs Group	15,120,000
Chassahowitzka Springs Group	11,923,200
Ruth/Potter Springs	2,505,600
Salt Creek Springs	2,505,600

Note: CFD= Cubic Feet per Day

Source: WRWSA, 1996

Prepared By: Citrus County Community Development Division, 1996, updated 2005

a. Springs

The following information is taken from “*The Hydrology and Water Quality of Select Springs in the Southwest Florida Water Management District*, SWFWMD, 2001; “*Coastal Nitrate Assessment: Nutrient Assimilation Capacity of Five Gulf Coast Rivers*, SWFWMD, 2000”; “*Origin of Nutrients in Ground Water Discharging from The King’s Bay Springs*”, SWFWMD, 1998; “*Water-Quality and Hydrology of the Homosassa, Chassahowitzka, Weeki Wachee, and Aripeka Spring Complexes, Citrus and Hernando Counties, Florida*”, SWFWMD, 1997, and, *Protecting Florida’s Springs Land Use Planning Strategies and Best Management Practices*, FDEP and DCA 2002 .

Citrus County has three (3) 1st magnitude springs groupings: Chassahowitzka Springs, Crystal River Springs (Kings Bay), and Homosassa Springs; and eight (8) 2nd magnitude springs: Blue Springs#1 (Citrus), Bluebird Springs, Echo Spring, Hunter Spring, Potter Spring, Pumphouse Spring, Ruth Spring, and Three Sisters Springs. Water flows for these springs are listed in Table 3-4.

1st Magnitude Springs

Chassahowitzka Springs Group is the headwaters of the Chassahowitzka River. Several springs flow into the main pool from the northeast. The main pool is nearly circular and about 150 ft. in diameter. The bottom slopes gently toward the vent in a crevice. Chassahowitzka Springs Group is bounded on the east by lands designated as Conservation and Low Intensity Coastal Lakes land uses.

Homosassa Springs Group includes the Homosassa Main Springs as well as the Hall’s River and Hidden River springs. This spring group is spread over almost four square miles of the western county. The main spring forms a semicircular pool about seventy-five (75) ft. in diameter with an average depth of about thirty (30) ft. In 2002, water flowed from three (3) limestone openings around a collapsed cavern. Homosassa Springs Group lies predominantly within an area designated Low Intensity Coastal Lakes and Conservation land use, except for the Hall’s River springs which are surrounded by residential and commercial land uses.

Crystal River Springs Group (King’s Bay), which is located in the City of Crystal River, has thirty (30) known springs and sinks. In 2001, the flow from the springs in King's Bay averaged 567 million gallons per day, making it the second largest spring group in Florida. Crystal River/King’s Bay is famed as both a dive and manatee mecca. The Crystal River Springs Group lies predominantly within the City of Crystal River. Springs within County jurisdiction are surrounded by residential land uses.

Springsheds

A springshed is that area of land that feeds a spring. The quality and quantity of water recharging the aquifer within a springshed is directly related to the quality and quantity of water discharged from the associated springs. Springsheds for the above described springs groups are identified on Figure 3.5.1, Springs, and Springshed Map for Citrus County.

Computer models exist to determine the aquifer vulnerability to pollution. The Florida Department of Environmental Protection and Florida Geological Survey are developing the Florida Aquifer Vulnerability Assessment model (FAVA II). This is a GIS-based tool used to predict the relative contamination potential of Florida's groundwater resources. The generalized map published by FDEP shows almost all of Citrus County in the "More Vulnerable" category, the highest level of vulnerability in this model.

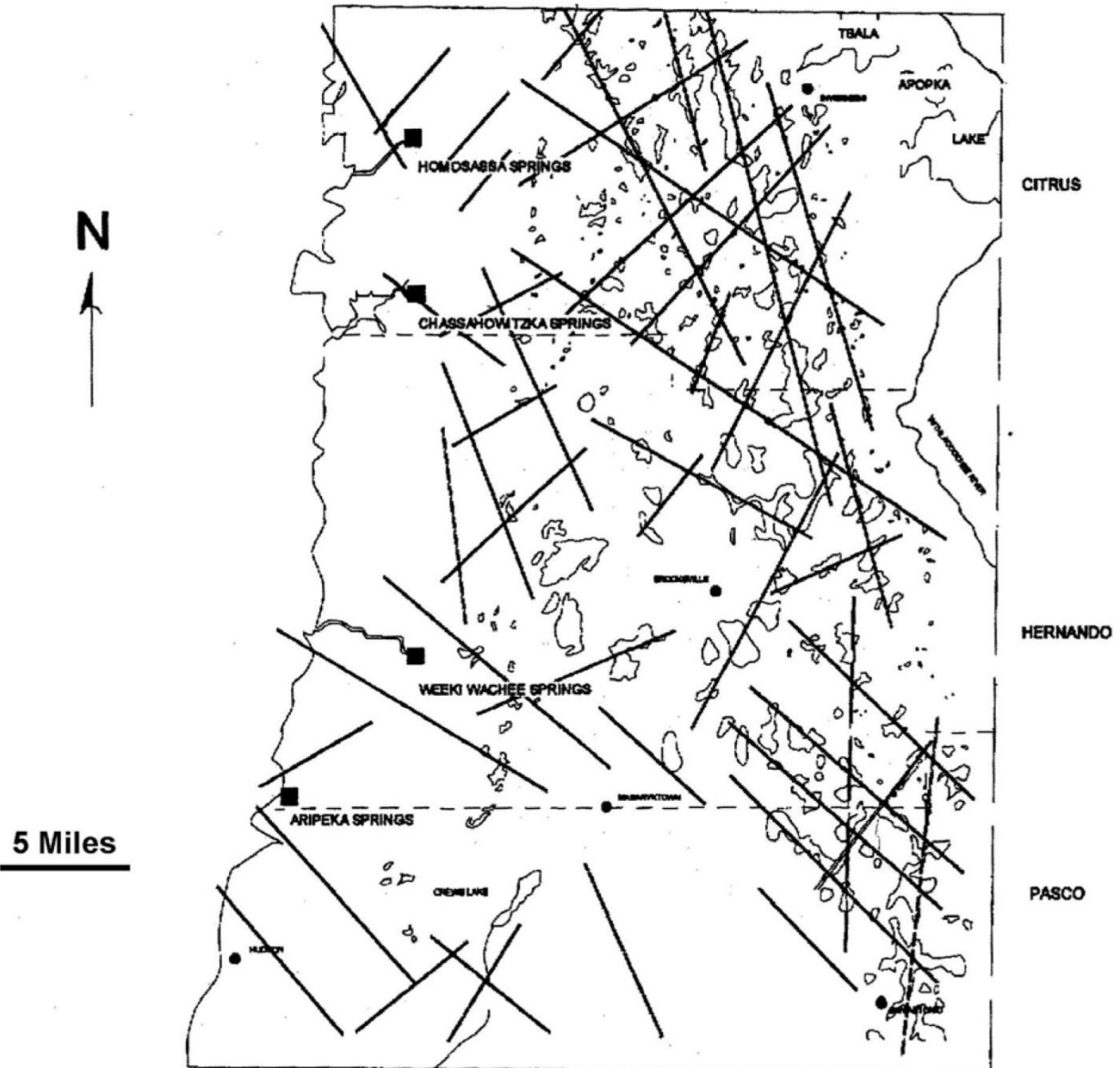
Karst Features

The underlying karst nature of the landscape has created an undulating topography where surface elevations along the Brooksville Ridge can change rapidly. The lack of rivers within this area results from a well-developed underground drainage system in the limestone. Precipitation falling on the Brooksville Ridge moves rapidly to the aquifer through numerous sinkholes and karst features, and moves towards the springs through an extensive system of conduits and passages within the limestone. Cracks, solution holes, and cavities within the limestone of the aquifer result in highly irregular and sometimes very rapid water movement. Subsurface fractures can be the primary paths of groundwater flow within a karst area. The most predominant of these fractures have been mapped by SWFWMD (Figure 3.5.2).

Dye-trace studies in Columbia and Hillsborough Counties has revealed groundwater velocities up to 1.7 miles per day near springs. Groundwater can also move very slowly through small pores and opening in the limestone in a diffuse flow. Water flowing from the springs of this region originates from both fast flowing water, which has been in the aquifer for a relatively short period of time, and diffusely flowing water which has been in the aquifer for a much longer period of time.



FIGURE 3-5.2
FRACTURE TRACES IN SOUTHERN CITRUS COUNTY



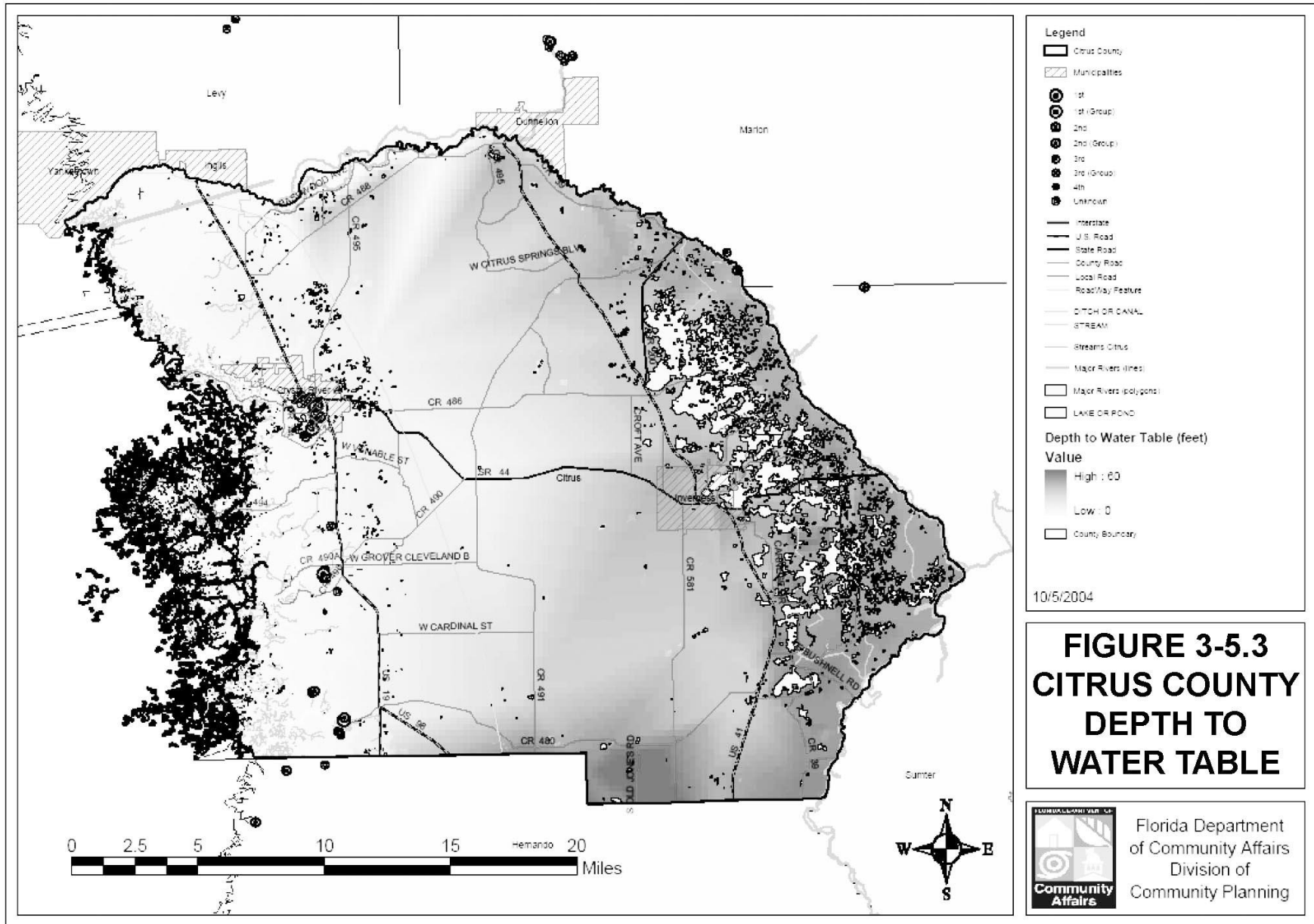
Source: SWFWMD, 1997

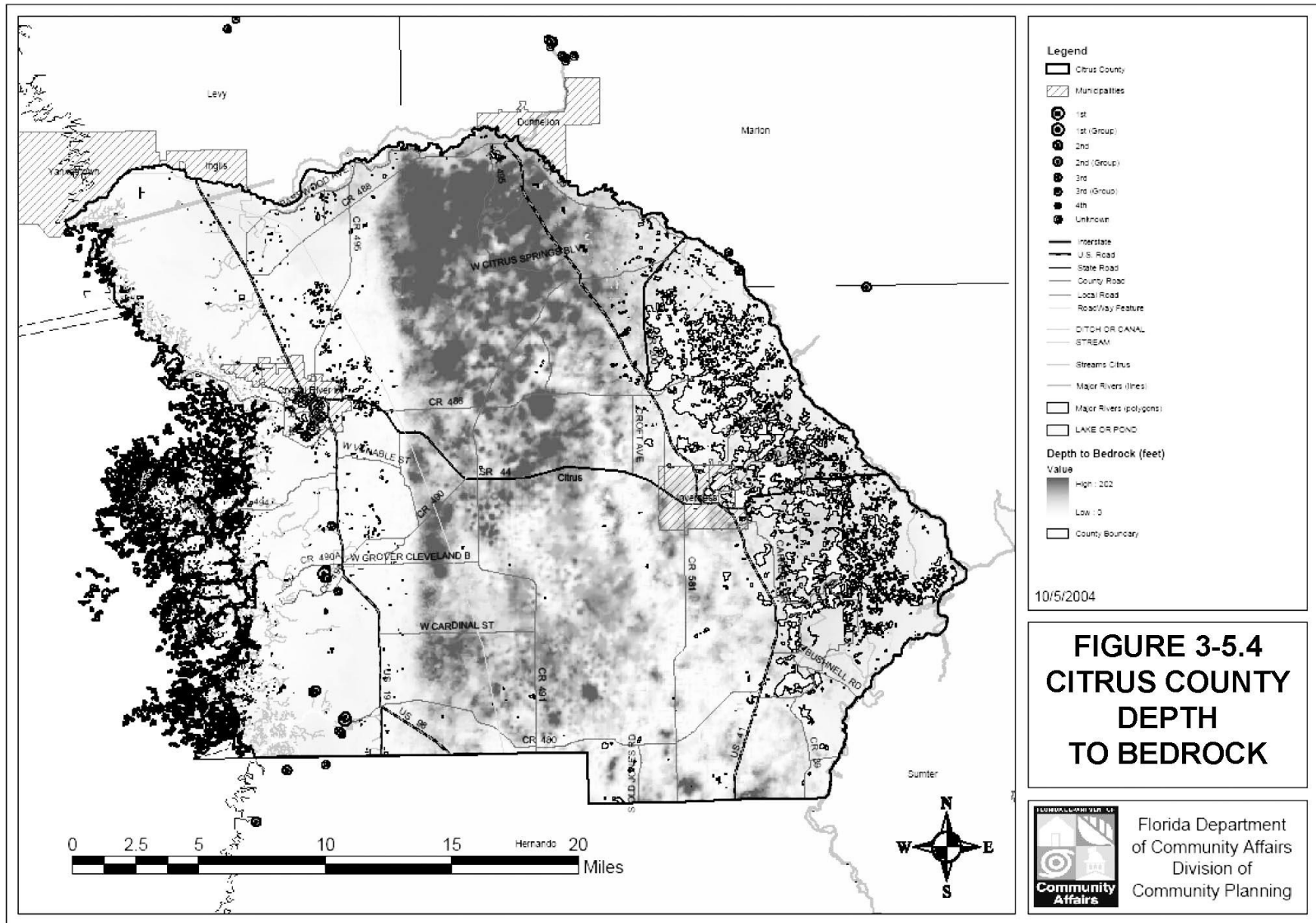
Aquifer Protection

The springsheds depicted in Map 1, are underlain by the Upper Floridan Aquifer, the water source for the first magnitude springs in this county. The aquifer is generally unconfined, meaning there is no barrier between the ground surface and the waters of the aquifer. Recharge to the Upper Floridan Aquifer occurs by the direct infiltration of rainfall and seepage of the surface water from Lake Tsala Apopka and the Withlacoochee River. Recharge is highest along the Brooksville Ridge because of drainage through abundant sinkholes and other karstic features. These karst features and the lack of a confining layer, leaves the aquifer very vulnerable to pollutants from the surface. The aquifer's vulnerability to pollutants has been mapped using the Florida Aquifer Vulnerability Assessment model (FAVA). The FAVA model finds most of Citrus County in the highest category of aquifer vulnerability (Figure 3.5.3 and Figure 3.5.4).

Activities within the springshed can impact the quality and quantity of water flowing from the spring and the health of spring-fed waterbodies, such as Kings Bay, Homosassa River, or Chassahowitzka River. Activities impacting water recharge are often associated with population growth and urban development. The springs and potable water supply wells within the same area draw from the same water source, the Upper Floridan Aquifer. Thus, protecting the spring's water supply also benefits residents by protecting their potable water supply.

Pollutants affecting the aquifer and springs include fertilizers, wastewater, and pollutants from road and parking lot runoff. South West Florida Water Management District has monitored and reported the water quality of the coastal springs and their associated water bodies since the 1990's.





Nutrients in the Groundwater and spring water

Increases in nutrient concentrations in the groundwater, and spring water, are of particular concern. Negative impacts are unlikely to remain confined to a spring. Rivers receive significant portions of their flow from springs and seeps-water table springs that issue from the riverbank. Spring runs – rivers and streams that stem from the outflow of a spring, are also common in this county. Nutrients discharging from the springs is most likely to enter the aquifer from natural organic decay, rainfall, residential and commercial septic tanks, fertilization of residential turf, fertilization of golf course turf, sewage effluent disposal, land disposal of sewage sludge, land disposal of septage sludge, agricultural fertilization, dairies, and cattle. Each of these sources is discussed in *Origin of Nutrients in Ground Water Discharging from the King's Bay Springs* (SWFWMD, 1998). South West Florida Water Management District has focused on two main sources of increased nutrient loads: inorganic fertilizers and animal (including human) waste. Both inorganic fertilizers and wastewater systems (septic tanks, wastewater treatment facilities, and septage spreading) are thought to be a significant source of nitrogen within the spring's water.

After extensive data and analysis, SWFWMD (1997), concluded the dominant nitrate sources to the coastal springs were inorganic in nature, located in close proximity to the springs, did not exist prior to mid 1960's, and was of significant magnitude. This study attributes increased nutrient loads in the coastal springs to residential development with residential turf/fertilization as the principle source and septic tanks as a significant secondary source. It is apparent from SWFWMD's water quality studies, that the water of the Upper Floridan Aquifer is already affected by land-use practices within the spring's region. Fertilizers applied to urban and agricultural land-uses near the springs have leached nitrates into the Upper Floridan Aquifer. This nitrate is traveling through the aquifer and is now beginning to impact water quality at the springs.

Major Surface Water Descriptions Withlacoochee River Watershed

b. Withlacoochee River

The Withlacoochee River Watershed description is derived from the SWFWMD publication; Withlacoochee River Work Group Final Report (July 1, 1994) and appended with SWFWMD publication Withlacoochee River Comprehensive Watershed Management Plan, 2001.

The Withlacoochee River Watershed boundaries encompass parts of Hernando, Citrus, Levy, Sumter, and Lake Counties. The topographic drainage area of the Withlacoochee River is approximately 2,000 square miles and is for the most part totally contained within the basin board boundaries. The following narrative focuses on the drainage area to the Withlacoochee River.

The Withlacoochee River begins in the area known as the Green Swamp located largely in Polk County at an elevation of about 125 feet above mean sea level (msl), and meanders approximately 157 miles northward to its ultimate discharge into the Gulf of Mexico near Yankeetown. The 125 foot drop over the 157 miles is considered a relatively gradual decline, compared to other major Florida rivers. From the Green Swamp to the town of Lacoochee in Pasco County, the slope is approximately 1.6 feet per mile; Lacoochee to Dunnellon in Marion County, the slope is at its flattest, approximately 0.2 foot per mile; and from Dunnellon to the Gulf, approximately 0.8 foot per mile. In those areas where the river's slope is considered mild (less than 1.0 foot per mile), large areas beyond the river's normal banks become flooded under heavy rainfall events due to the relatively small instream conveyance capacity of the river.

Land changes due to agricultural, industrial (mostly mining), silviculture, and other development do not appear to have had an impact on the historic river flows when present data is compared to historic records. In the Green Swamp area, very little development has taken place, and only a few mining and agricultural operations have occurred. These have not had significant impacts to the historical drainage patterns. The drainage alterations that have occurred in the area have been primarily associated with mining, cattle operations, and logging. The impacts from these operations were internal to the properties and do not cause significant offsite drainage. While there has not been a detailed study of the effects of drainage improvements to the river between the Green Swamp and Dunnellon, it is accepted that a number of drainage improvements have been made over the years on public and private lands, primarily with the intent to relieve flooding in low lying areas inundated during heavy rainfall events. The effect of this type of land alteration is to accelerate runoff during periods of high flow through improved conveyance to the river and the elimination of natural storage from the uplands. To what degree this has occurred, it is not known.

The majority of the river's total annual flow is generated from runoff from the contributing watersheds. The flow of the river fluctuates significantly in response to rainfall conditions throughout the basin. Because of the size and the shape of the contributing watershed, flooding in some areas often occurs as a result of numerous "normal" rainfall events when water backs up where the slope is relatively flat. Often portions of the river do not reach flood stage until days after a heavy rainfall event in the upper reaches of the watershed. Groundwater contributes to the flow of the river through springs directly in the river or in tributaries. Groundwater enters the river directly from the exposed aquifer or through the overlying porous sands in areas where the potentiometric surface elevation is above the river bottom. Conversely, during periods of extended low rainfall when groundwater levels are low, surface waters re-enter the groundwater system as recharge thereby diminishing the river's flow. There are numerous springs contributing to the flow of the Withlacoochee River. Two major spring systems are identified here for the purpose of providing a reference to the contribution of groundwater to the river's overall flow. Lake Panasoffkee and Rainbow Springs make significant contributions to the river's overall flow. When surface runoff is low due to lack of rainfall, discharge out of Lake Panasoffkee via the Outlet River is often the major source of flow in that segment of the Withlacoochee River.

Average daily discharge from the Outlet River is approximately 128 mgd. Rainbow Springs is located downstream of the confluence of the Outlet River and north of Dunnellon. It has an average daily discharge of about 493 mgd. These represent 20 percent and 48 percent of the historic average river flow as recorded at Wysong Dam and Holder, respectively. Comparing the two, it is obvious that Rainbow Springs is the major contributor to the river at that point, particularly during low rainfall periods.

Another major feature of the Withlacoochee River watershed is Lake Tsala Apopka. This is not actually a lake, in that it is not a continuous expanse of open water, but instead a series of shallow, interconnected lakes, ponds, and marshes. The system is referred to as the Tsala Apopka Chain-of-Lakes and is a result of two geomorphological features--the Brooksville Ridge to the west, and the Withlacoochee to the east. The lake system was formed primarily from the weathering of the underlying limestone (sinkholes) and as a result is very well connected to the groundwater system. Land surface in and around Tsala Apopka ranges from 40 to 80 feet in elevation. Within the lake area, the terrain becomes increasingly flatter towards the river and this, in turn results in reaches of deeper open water on the west side, whereas the lake consists of mainly marshes on the east side. Until about 1884, Tsala Apopka was connected to the Withlacoochee River only through dense swamps and marshes with no open water connections between the lake and river. Water movement in the lake and river were in the same northward direction, with only a small fraction of the total flow through the lake. The same general flow pattern exists today in the lake; however, flow into and out of the lake is through manmade canals and ditches which are controlled

by structures. River water enters the lake system through the Orange State and Leslie Heifner Canals in the south and returns to the river by way of Shimm Ditch and Bryant Slough along the eastern boundaries and through S-351 canal in the north. Open water in Tsala Apopka occurs as three separate lakes, or pool areas; the Floral City Pool, the Inverness Pool and the Hernando Pool, located on the western side of the system.

Southwest Florida Water Management District (SWFWMD) operates various structures throughout the system. The structures on Orange State and Leslie Heifner are operated to let water into the lakes when the river elevation is higher than the level in the Floral City Pool. They are closed when it is not. Other than these canals, inflow from the river occurs over a large segment of the eastern lake boundary when the river reaches an elevation of about 42 feet msl or greater. As with the river, the Tsala Apopka system is very much affected by groundwater levels. The Floridan aquifer is close to land surface and is overlain by permeable sands. There are many areas where the aquifer is at land surface and many open vents (sinkholes) or springs are visible. The water level of the lake is normally higher than the groundwater level, thereby continuously recharging the groundwater system. During low rainfall periods when groundwater levels decline, the differential between the surface water levels and groundwater levels increase, thus resulting in a greater rate of recharge from the lake. The lake recharges the aquifer in three general directions. The western portion drains primarily due west, whereas the middle portion drains in a northwest direction, and areas along the eastern boundary back towards the river. There is no significant groundwater contribution from the river via the canals, all of which are rainfall dependent.

In conclusion, the surface water system of the Withlacoochee River is complex and very much influenced by the groundwater system. The Withlacoochee River has a dynamic recharge/discharge relationship between its surface waters and the underlying ground water. At any given time, a portion of the river may be a ground water discharge zone, while another portion is a recharge zone for the Floridan Aquifer.

c. Lake Tsala Apopka

The Lake Tsala Apopka description is derived from the SWFWMD publication; Lake Tsala Apopka Environmental Assessment (August, 1990).

Lake Tsala Apopka is comprised of three hydrologically distinct pools covering an area of approximately 19,000 acres in Citrus County. Surface water enters the lake through the Leslie Heifner and Orange State canals in the Floral City Pool and travels northward to the Inverness pool through the Golf Course Structure and Moccasin Slough. Just north of Moccasin Slough, water can bypass the rest of the lake through the Bryant Slough structure (when operated) to the Withlacoochee River. If not, waters move through the lake and through the Brogden Bridge

Structure and Culvert and into the Hernando Pool. Discharges from the lake are through Canal 331 to the Withlacoochee River and through the Van Ness Structure to Two Mile Prairie, a series of sinks north of the lake.

Geology and Hydrology

An extensive literature review was conducted to determine if any differences in the geology of the area could account for differences in water quality and the faster decline of water levels in the Floral City Pool when compared to the other pools. It was determined that none exists. Additionally, the Lake Tsala Apopka Plain is a significant recharge zone to the Floridan aquifer and thus it is unlikely that groundwater contributes to differences in water quality of the three pools. Studies on surface water flow into the lake and through the lake structures show that uncontrolled surface flow through Moccasin Slough rather than operation of the Golf Course Structure is the primary cause of water levels declining at a faster rate in the Floral City Pool. Other studies suggest that during dry seasons, the Floral City Pool area has a greater potential for leakage to groundwater which also contributes to the fast water level decline. Overall, though, water level fluctuations in the entire lake system are influenced to a greater degree by precipitation and evaporation.

Water Quality

Twelve stations were sampled monthly for chemical and physical parameters from June, 1987 through May, 1989. The investigation suggests that the water quality of Lake Tsala Apopka is influenced by inflows from the Withlacoochee River. As water flows northward through the chain of lakes, the river water is diluted by rainfall, surface water runoff, and affected by biological activity, all of which cause noticeable changes in water chemistry. Statistical analyses revealed significant differences in selected parameters between the pools as water moved northward. The data showed a reduced color, increased pH, alkalinity, and hardness, decreased total nitrogen and chlorophyll A concentrations from south to north through the system.

Statistical analyses of water quality data showed that the station located below the outfall canal from the Hernando Pool as being the least similar to any other sampling stations. Water quality problems were documented at this site during the study. Overall, water quality in the lake can be considered good when compared to other lakes in Florida. Data from a 1982 study suggests that nutrient concentrations were at levels higher than those reported during this study, suggesting that nutrients previously found in the water column may now be bound in sediments and aquatic vegetation. Lastly, based on water quality data from Lake Tsala Apopka, both the Floral City and Inverness Pools can be considered mesotrophic while the Hernando Pool can be considered more oligotrophic. However, determinations of trophic state do not account for aquatic macrophyte production, thus the trophic state may be underestimated.

Algal Growth Potential and Limiting Nutrient Assays

The objective of the Algal Growth Potential and limiting nutrient assays for this study was to quantify the algal growth in samples of water from Lake Tsala Apopka and the Withlacoochee River under ideal laboratory conditions and to identify the presence of growth limiting nutrients in this system. The second objective was to determine the availability of growth nutrients at each water quality sampling site.

The results of quarterly algal growth potential test (AGP) indicate the lake is a moderately productive system. These data also show that AGP for the Withlacoochee River is generally higher than for the lake and appears to respond to precipitation in the river watershed. Mean AGP declined from south to north in the chain of lakes, but showed little temporal variability.

The limiting nutrient assays predicted both phosphorus and nitrogen limitations to the growth of algae. However, chemical ratios of bioavailable nutrients predicted nitrogen-limited conditions whereas total nutrient ratios predicted phosphorus-limited conditions.

Macrophyte Abundance and Distribution

Aquatic macrophytes can act as both a sink and a source for nutrients in lake waters; thereby modifying ambient lake water quality by their interaction with sediments and surrounding waters. Lake transects were used to estimate the abundance of submersed vegetation and shoreline oat surveys were employed to estimate the abundance and distribution of emergent and floating-leaved vegetation. Results of the study suggest that all three pools have an assemblage of desirable submersed and emergent and floating-leaved macrophyte species. A considerable increase in submersed aquatic macrophytes, primarily hydrilla, was documented in the Inverness Pool compared to Attardi (1983). The Floral City Pool has much less submersed vegetation than either of the other two pools likely because of an aggressive control problem for hydrilla in the early 1980's. As a result, submersed aquatic plants have not returned to the lake in any significant quantity. This may also be related to highly colored inflows from the Withlacoochee River that would reduce light penetration. Finally, there was no significant change in abundance of submersed or emergent and floating-leaved macrophytes in the Hernando Pool.

Sediments

The bottom substrate composition is controlled by in lake processes and inputs to the lake from the watershed. Sedimentation is a natural process in a lake, however, this can be accelerated by poor land practices within the watershed which can adversely impact lake ecology. Sediment samples were collected along

transects within the three pools using a piston corer to obtain a sediment profile to the lake's hard bottom. Throughout much of the Floral City and Inverness Pools, sediments from shallow areas had relatively low organic content, with organic rich sediments found primarily in deeper areas. Sediments from the Hernando Pool were generally highest in percent water and organic content and there was greater distribution of organic sediments in this pool. The data also suggested that sediments in the Hernando Pool have the highest percent organic content and percent water, indicating that this pool is aging (filling) faster than the other two pools.

Paleolimnological Analysis

Historical changes in water quality can be assessed by examining lake bottom sediment strata. A core was obtained from the Floral City Pool by the University of Florida for trophic state analysis and sediment dating by ^{210}Pb concentrations. Past trophic state conditions are estimated by examining fossil diatom communities. The results of the study suggest that the trophic state of this pool has been moving toward less enriched conditions since the 1940's.

Lake Management Considerations

In conclusion, data suggests that Lake Tsala Apopka is in good environmental condition and no extreme or extensive changes should be made at this time. However, we examined a number of possible management options to enhance the lake and marsh systems of Lake Tsala Apopka. These include the possibility of modifications to the operation schedule of water levels in the three pools. The merits of an extreme drawdown are evaluated along with the physical feasibility of achieving a drawdown. The placement of a structure on Moccasin Slough was examined along with the potential effects to the Flying Eagle Property. Re-establishing original design elevations of canals into the Floral City Pool was considered. Aspects of the Citrus County Comprehensive Plan pertinent to Lake Tsala Apopka and the maintenance of good water quality were reviewed. Lastly, good management practices within the watershed are presented to help maintain the integrity of the lake ecosystem.

d. Lake Rousseau

Lake Rousseau is a man made waterbody formed when a hydroelectric dam was constructed on the Withlacoochee River in the 1920's. The dam discharged back into the original run of the Withlacoochee. However, upon commission of the Cross Florida Barge Canal in 1935, plans were prepared to incorporate Lake Rousseau into the canal system.

In 1964, a canal was constructed which bypassed the old hydroelectric dam and utilized a different course of the original river bed which connected to the constructed portion of the barge canal. The canal system was constructed with a lock system that allows the difference in levels between the river and Lake Rousseau to be navigated.

The water chemistry of Lake Rousseau is strongly influenced by the Withlacoochee River including Rainbow River. During dry periods, flow is dominated by the Rainbow River and other springs in the Withlacoochee River Watershed. During wet periods when surface drainage becomes more important, considerable organic material is delivered to the lake from the abundant wetlands along the Withlacoochee River. While the Withlacoochee River is the overwhelming source of nutrient loading to Lake Rousseau, the large in-lake macrophyte biomass is probably a significant factor in determining lake water quality. Control and removal of tussocks within the Withlacoochee River and Lake Rousseau is currently being addressed by SWFWMD and the Florida Department of Environmental Protection (FDEP).

Springs Coast Watershed

e. Crystal River/King's Bay

The Crystal River/King's Bay description is derived from the publication, "Crystal River/King's Bay Surface Water Improvement and Management Plan" (1996).

Crystal River and King's Bay system, located approximately 60 miles (97km) north of Tampa, Florida, forms a truly unique hydrological system. Tidally influenced, the system is the fourth largest of the 27 first magnitude springs (those systems discharging 100 cubic feet [2.8 cubic meters] per second or greater) in the state (Rosenau et al., 1977). While other spring systems within the state are tidally influenced, the 600 acre (243 ha) King's Bay embayment makes this system unique. As an important recreational area, Crystal River/King's Bay receive an average of over 70,000 visitors who come to dive in the springs, fish, or view manatees in their natural habitat.

The effect of population growth and urbanization on water bodies is one of national concern. Often, common issues are facing the management of the resources in many water bodies. These common issues typically include nutrient

enrichment and "toxic" loads due to wastewater discharges, stormwater runoff, septic tank leachate, industrial and agricultural discharges, atmospheric deposition, or any combination of these. The Crystal River/King's Bay system is no exception.

As a result of legislation passed in 1987 (Surface Water Improvement and Management Act - SWIM Act) and its regional significance, Crystal River/King's Bay was designated the District's fourth ranked SWIM priority water body. A SWIM Plan for Crystal River/King's Bay was developed and adopted in 1989. The initial plan focused on projects designed to gather baseline data needed for developing management strategies and making future evaluations of the ecosystem. It was believed when the first SWIM Plan for Crystal River/King's Bay was developed, that nutrients, particularly from the City's wastewater treatment plant, were the major cause of the river's apparent decline.

As a result of projects undertaken as part of the original SWIM Plan (and summarized in this document), Crystal River/King's Bay present condition has been evaluated, water quality has been assessed, sediments, mapped and evaluated, spring discharge and circulation patterns modeled, vegetation analyzed; all in an attempt to establish existing conditions. Through this process, several problems have been evaluated and/or identified.

A result of SWIM diagnostic studies, a better understanding of the overall Crystal River/King's Bay system has been achieved. Of particular importance is an increased understanding of surface water/groundwater interactions in the spring recharge area. An apparent substantial increase in nitrate concentrations in water being discharged from the King's Bay springs has been documented. Similar increases have been observed for other coastal springs. This appears to be a relatively recent increase (within the last fifteen to twenty years). This data indicated a significant increase in nitrate loading to the groundwater system and ultimately the spring runs.

Biological conditions of King's Bay and the associated upland do indicate substantial changes in the system. Hydrilla, an exotic aquatic plant, provides a major food source for the manatee, but also impairs uses of the resource. Lyngbya, a native but undesirable filamentous blue-green algae, occurs in large quantities in King's Bay. Control of Lyngbya was a recommendation of one of the SWIM studies. Lyngbya, however, is a very resilient algae. Because it grows on the bottom of the bay, traditional harvesting methods are ineffective. Future SWIM efforts will be aimed at the development of a method to harvest Lyngbya off of the bottom of King's Bay without harming other beneficial plants.

Wildlife impacts in the region have occurred primarily as a result of loss of habitat. The maintenance of undeveloped shoreline and littoral zones is recommended to benefit a number of endangered or threatened species.

The water quality in King's Bay is dependent on the quality of water flowing into the bay and water circulation, or mixing, within the bay. Based on water and nutrient budget developed for the King's Bay, springs contribute greater than 99 percent of the water volume discharged to the bay and are also the major loading source of nutrients to the system. Springs contribute approximately 90 percent and 88 percent of the nitrogen and phosphorus load, respectively under existing conditions. Stormwater runoff from the watershed was found to be a minor contributor (less than one percent) of both nitrogen and phosphorus. These percentages assume that the bay functions as one hydraulic unit. In reality, King's Bay functions as two separate water masses; nutrients discharged into the Cedar Cove area cannot affect the southern portions of King's Bay. Supporting this fact is the analysis of water quality in Cedar Cove. After the City of Crystal River removed the wastewater treatment plant discharge from the bay, nutrient levels in Cedar Cove decreased. Nutrient levels in the southern portion of the bay remained relatively the same.

Although nitrogen is an essential plant nutrient and not a health concern unless nitrate concentrations exceed 10 mg/l in drinking water, high levels in surface water could promote undesirable aquatic plant growth resulting in associated water quality and natural systems problems. While no direct cause and effect relationship could be demonstrated for Crystal River (due to the lack of historic data), there may be a link (direct or indirect) between increases in Lyngbya and nitrate loading. Increases in nitrate might also increase the growth of microscopic algae on the leaves of submersed aquatic plants causing adverse impacts. It is also possible that these nitrate concentrations may affect plant growth in the coastal estuary of Crystal River.

While it is becoming very clear that many different factors affect the water quality and natural systems of King's Bay, several specific projects have been proposed to address some of the major issues. Proposed projects in this SWIM plan include: evaluate Lyngbya harvesting methods as a control management strategy; introduce biocontrol organisms for the control of undesirable aquatic plant (e.g., hydrilla); implement silt removal in selected areas of King's Bay; expand environmental education opportunities; and evaluate residential canals as a source of chlorophyll. Implementation of these projects should not be viewed as a solution to the management of Crystal River/King's Bay. It is very likely that additional work efforts will be needed in the future, including the revision of this Plan.

f. Homosassa/Hall's River

The Homosassa/Hall's River description is derived from the publication; Proposed Designation of the Chassahowitzka & Homosassa Rivers as Outstanding Florida Waters, 1992.

North of the Chassahowitzka River, the headwater of the Homosassa River is a good example of a large Florida spring. The head pool of the main spring is nearly 80 feet wide and 44 feet deep, with historical discharge measurements averaging 106 cubic feet per second. The springs are located at the southern edge of the Town of Homosassa Springs. A developed tourist attraction now managed by the Department of Environmental Protection (DEP) surrounds the headwaters of the main spring (Homosassa Springs State Wildlife Park).

Like the Chassahowitzka, the Homosassa River is relatively wide. It is deeper on the average than the Chassahowitzka River, and power boats have little or no trouble navigating the entire length. There are several small marinas and boatyards along the mid and lower portions of the river.

The Homosassa River is a little over seven miles long. Approximately one-and-a-half miles from the headwaters, the largest tributary to the system, Hall's River, enters from the north. Other tributaries include Otter and Turtle Creek from the south, plus several man-made ditches in the Old Homosassa area.

The Homosassa River also is subject to tidal influence, but only to Hall's River. The Homosassa River discharges into the extensive salt marsh of the St. Martin's Marsh Aquatic Preserve and the Chassahowitzka National Wildlife Refuge.

Water quality within the Homosassa River and Hall's River is characterized as "good" (1992 305(b) Water Quality Assessment Technical Appendix). The area around the Homosassa River; however, is more developed than that around the Chassahowitzka River. This urbanization, in combination with hydrologic changes, residential canals, and the use of septic tanks threatens the water quality of the river.

There has been a history of lowered water quality in the area, mostly with elevated nutrients and bacteriological counts. A 1988 study performed for the County found that septic tanks appear to be significant contributors of bacteria to the river system, especially around the headwaters. Other factors found to be contributing to lower water quality included STP leachate, stormwater runoff, and runoff associated with the Homosassa Springs Wildlife Park.

To help address water quality concerns, several actions have been undertaken. As mentioned earlier, the County Public Health Unit is regularly monitoring septic tanks in the area to help correct violations. Also, Citrus County is in the early

planning stages of developing a regional wastewater treatment facility for the Homosassa/Hall's River watershed.

In addition, on January 1, 1989, the Wildlife Park around the main spring was purchased by the State. Since then, captive populations of animals for the petting zoo have been reduced considerably. This is an important step since overland runoff and storm drains for this area lead directly to the river. The storm drains have been plugged, and the dirt and gravel pathways in the zoo (formerly a siltation problem after rains) are now paved. In 1991, the Wildlife Park contracted for the removal of organic matter from the main spring as it was also thought to be a source of water quality problems. Approximately ten cubic yards of debris were suction dredged from the main spring early this year. It is hoped that in addition to improvements in water quality, this may also improve flow to the river. (Recent measurements in the Homosassa River main spring area seem to indicate an overall reduction in flow from the spring. The reasons are unclear, and may involve several factors including extended drought in the area).

Although these activities are expected to improve water quality in the river, recent water quality data is limited, and data documenting water quality improvements are not yet available.

Water clarity, however, remains very good. This is part of the reason why the Wildlife Park is expected to have 200,000 visitors this year alone. The Park has educational programs on-site, and also conducts off-site workshops at local schools.

g. Chassahowitzka River

The Chassahowitzka River description is derived from the publication; Proposed Designation of the Chassahowitzka & Homosassa Rivers as Outstanding Florida Waters, 1992.

Of the 79 first-magnitude springs in the US, Florida, with 27, has more than any other state. Citrus County has three: Crystal River, Homosassa River, and the Chassahowitzka River spring groups.

The spring's complex that forms the headwaters of the Chassahowitzka River is located at the foot of a zone of relict coastal dunes on the edge of the Brooksville Ridge. This cluster of six springs is separated enough to have branching spring runs. From the main spring area in Chassahowitzka, the river flows westward, then southwest to the Gulf of Mexico (a total of about six miles). A narrow underwater channel extending seaward even further represents the river at lower mean sea levels. The Chassahowitzka River is relatively shallow, with depths ranging from a few inches to about five feet. The river and springs are usually very clear, but can be colored by tannins from the runoff and groundwaters entering the system due to storms.

Several tributary creeks contribute flow to the river through their associated springs. These include Salt, Potter, Baird, Johnson, Crawford, and Ryle Creeks. The headwaters of Crawford and Ryle Creeks are in northern Hernando County.

Historically, the area around the river was logged for bald cypress and red cedar. The cessation of logging, plus tree recruitment, has restored nearly all of the dense hardwood forests and hammocks of the area to a near wilderness state.

The primary source of flow for the Chassahowitzka River is groundwater (90 percent). The combined discharge for all springs within the Chassahowitzka area is approximately 150 cubic feet per second, making this the 27th largest spring in the State. Surface water runoff is conveyed to the river system through a combination of drainage structures under US-19, and by overland flow. The exact size of the watershed is undetermined, but is probably in excess of 100 square miles, and extends several miles east of US-19.

The Town of Chassahowitzka is located near the main spring. Residences along the interconnecting canals rely on individual septic tank systems. There are two small sewage treatment plants (STPs) within the watershed, but neither has a direct discharge to the river.

The 1992 Florida Water Quality Assessment 305(b) Technical Appendix indicates the water quality for the Chassahowitzka River is “good” and meets its designated use, although like many areas, it is threatened by urbanization and hydrologic changes. Potential effects on water quality include seepage from septic systems and sedimentation from propeller wash. To address the septic tank issue, the Citrus County Public Health Unit is monitoring septic systems near the river. In addition, Citrus County has a regional wastewater treatment plant in the early stages of planning to help alleviate effects from local STPs and septic systems.

The river system is tidally influenced, at times affecting salinity as far upstream as the main spring. Tidal fluctuations can also affect spring flow and water quality. Recent water quality data is limited. However, springs of this type with influences from both the marine environment and limestone aquifers also typically have widely fluctuating levels of sodium and chloride. Dissolved solids are high, and pH is typical for a spring, usually near 7 or 8. Class III water quality standards are consistently met in the river and springs (historic data). The water in Chassahowitzka River and springs is usually very clear, and temperature remains fairly constant.

Aquatic plant communities are diverse and abundant. In the upper portion of the river, dense growths of eel grass (*Vallisneria Americana*), pond weed (*Potamogeton* sp.), and widgeon grass (*Ruppia maritima*) are found along with some areas of *Hydrilla verticillata* and alga. As the estuary becomes more saline, salt marshes dominated by *Juncus* and *Spartine* are found. Saltgrass (*Spartine*

patens) and saltwort (*Salicornia* sp.) are mixed in, while saltbush (*Baccharis halimifolia*) and marsh elder occasionally occur on scattered limestone outcroppings.

Coastal Estuaries

The west coast of Citrus County is a highly productive estuary with extensive tracts of saltmarsh dotted with coastal hammocks, tidal mud flats, oyster bars, and mangroves. The mixing of freshwater from the coastal springs and rivers with the saltwater of the gulf creates a highly productive ecosystem utilized by over 70 percent of Florida's recreational and commercially important fish, crustaceans, and estuaries.

Water quality of the coastal waters is generally good and in May, 1996, the FDEP reclassified 34,250 acres of mid and offshore waters as Conditionally Approved Shellfish areas. The area opened is south of the Florida Intake Canal and north of Rock Island. The areas are subject to closure if cumulative rainfall over a two-day period exceeds 1.30 inches. It is estimated that the average number of days that the Conditionally Approved areas will be temporarily closed is 6.8 days per month.

2. Floodplains

The extensive presence of surface water and low topography of Citrus County results in a significant amount of floodprone areas. These areas can be divided into two general categories. The western coastal region of the County is influenced by winds, tides, and storm surges coming off the Gulf of Mexico. The topography of this region and low permeability of the soil also increase its vulnerability to localized flooding as a result of heavy rainfall.

The eastern lakes and river region is not subject to tidal action, however, flooding can result from heavy rainfall either locally or in the high recharge area of the Green Swamp at the headwaters of the Withlacoochee River. Flood control structures and water level control by the SWFWMD, under delegation of authority from the U.S. Army Corps of Engineers, has reduced the frequency of flooding that was once a part of the normal cycle of this system; however, river flooding still occurs on occasion. Localized flooding can also occur during heavy rainfall events due to the low permeability of the soils within this region.

Citrus County Floodplain Regulations

Citrus County has adopted a Floodplain Ordinance (C.O.84-06, originally, and amended as 87-13 in November, 1987). This Ordinance and its successor component incorporated into the County's Land Development Code (C.O.90-14) adopted in November, 1990 complies with federal regulations to allow Citrus County homeowners to be eligible for federally subsidized flood insurance.

The objectives of the County's floodplain regulations are numerous and include:

- Protection of human life and health
- To minimize expenditure of public money for costly flood control projects
- To minimize the need for response and recovery efforts associated with flooding and generally undertaken at the expense of the general public;
- To minimize prolonged business interruptions
- To minimize damage to public facilities and utilities such as water and gas mains; telephone, electric, and sewer lines; streets; and bridges located in flood plains
- To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas
- To insure that potential homebuyers are notified that property is in a flood area

The County's floodplain regulations are based on the Flood Insurance Rate Maps (FIRM) published by the Federal Emergency Management Agency (FEMA). Maps dated August 15, 1984, with a revision of map panels 120063-200, 120063-205, and 120063-215 and Index page which were revised November 06, 1998, with accompanying maps and other supporting data are adopted by reference as part of the Land Development Code. The community identification number for the county is 120063. When a property is identified on the FIRM as being located in a Special Flood Hazard Area ("A" Zone or a "V" [velocity] Zone), base flood elevations for development must be determined. The base flood elevation indicates the height of elevation which a structure must be raised in relation to the mean (the average) sea level as determined by the National Geodetic Vertical Datum of 1929 or other appropriate datum. Depending upon the flood zone designation, how the structure is elevated can vary:

- For properties identified within an "A" Zone, the base flood elevation determines the lowest habitable floor level
- For properties identified within a "V" Zone, the base flood elevation determines the placement of the lowest horizontal structural support member for the lowest habitable floor level
- Properties identified within "B" or "C" Zones are defined as areas of lesser flood hazard. Properties in "B" Zones are between the 100-year and 500-year flood, or areas subject to the 100-year flood where average depths are less

than one foot, or where the contributing drainage area is less than 1 square mile or protected by levees. “C” Zones are areas determined to be outside of the 100-year and 500-year floodplains

The repair, replacement, or expansion of a structure in a “V” zone, where such is defined as a “substantial improvement” in accordance with Section 161.54, Florida Statutes (F.S.), is required to be constructed to meet specific design standards established for development in a velocity zone. This determination is based on the cost of the improvement, which equals or exceeds a total of 50 percent of the market value of the structure.

The unnamed storm in March 1993 resulted in coastal flooding equivalent to a Tropical Storm. Damage assessment confirmed that structures constructed in compliance with the County’s floodplain regulations did not experience much flood damage, although some homes that were in compliance with elevation requirements still suffered from scour effects and foundation problems, and some had sinkholes open under them.

In order to avoid confusion, it should be pointed out that FEMA has defined the “Coastal High Hazard Area”, (CHHA) (44CFR Chapter 1, Part 59.1) as the Velocity or “V” zone as depicted on the FIRMs, but the State of Florida and Citrus County use the same term to designate a different geographic area. Per Section 163.3178(2)(h) Florida Statutes which deals with the requirements of the Coastal Management Element, the Coastal High Hazard Area (or high-hazard coastal areas) shall, for uniformity and planning purposes, be defined as category 1 evacuation zones. The CHHA definition found in Rule Section 9J-5.003(17), Florida Administrative Code, differs slightly and defines the CHHA as the evacuation zone for a category 1 hurricane as established in the regional hurricane evacuation study applicable to the local government. The Withlacoochee Regional Hurricane Evacuation Study 2004, Withlacoochee Regional Planning Council, Ocala Florida, is the study covering Citrus County. Throughout this Plan, the Land Development Code, and other county regulations and plans, the term Coastal High Hazard Area will always refer to the state definition. The federal designation will always be referred to as the Velocity Zone or V-zone.

3. Groundwater Resources

The following description is derived from information provided within the publication “Withlacoochee Regional Water Supply Authority: Master Plan for Water Supply, 1996”.

The quality and quantity of groundwater within the State of Florida is determined by the hydrogeology of the region. The west-central region of Florida of which Citrus County is a part has a unique hydrogeology which increases both the vulnerability and production of groundwater.

The typical hydrogeology of Florida consists of limestone overlain by sedimentary material. Rainfall and surface water percolates through the surface materials and then is stored within the cavities and fractures of the limestone. This stored water is referred to as an aquifer and the majority of Florida derives its drinking water from the largest aquifer, the Floridan. The highest quality of water occurs where sandy clay and clay layers named the Hawthorn Formation occur.

The Withlacoochee Region, as a result of geologic processes, lacks the Hawthorn Formation over most of its area. Thus, the Floridan aquifer lies from 0-60 feet below the surface making it more vulnerable to contamination. Excessive pumping is also more likely to impact surrounding surface waters. Research appears to indicate that both the Withlacoochee River and the Tsala Apopka lake chain receive discharge from the aquifer.

The presence of numerous freshwater springs indicates that the limestone of the region is highly fractured resulting in a high transmissivity. The Brooksville Ridge, a high sand ridge that occurs in the center of Citrus and Hernando County provides a high recharge to the Floridan aquifer. All these factors make this region of the State a highly productive component of the Floridan aquifer and a potential producer of large volumes of high quality groundwater with minimal drawdown of the water table or impact on surface water.

a. Groundwater Inventory

Within Citrus County, two aquifer systems are known to occur. The Surficial Aquifer System (SAS) consists of water bearing clastic deposits overlaying the Hawthorn Formation. In Citrus County, the SAS has a thickness range from 0-50+ feet. Usage of the SAS is primarily limited to some domestic wells and irrigation systems.

The Floridan Aquifer System (FAS) is separated from the SAS by confining units of the Alachua or Hawthorn Formations ranging in thickness from 25 to 50 feet. The top of the FAS ranges from -50 to 140 feet NGVD. The FAS is divided into upper and lower units delineated by beds of dolomite from the Avon Park Formation. The Upper Floridan Aquifer System (UFAS) has a general thickness of 600 to 1,800 feet and is the major source for potable water, agriculture, and industrial supplies. The Lower Floridan Aquifer System (LFAS) is separated by a confining layer of the Avon Park Formation. Water from the LFAS is generally nonpotable and not utilized.

b. Groundwater Quality

Water quality plays a principal role in wellfield site selection and development. A dependable source of high quality water reduces production and maintenance costs. The presence of dissolved minerals, besides necessitating costly treatment prior to delivery, can also be an indicator of future problems such as saltwater

intrusion. The top 300 feet of the UFAS is the predominant source for most wells, both domestic and public.

The primary criteria for evaluation of water quality are the amount of contaminants as listed within the Florida Safe Drinking Water Act (FSDWA). Maximum Contaminant Levels, or MCLs, are established for many types of metals, ions, and hydrocarbons. The presence of naturally occurring ions and metals are the most common parameters used for evaluating groundwater. These include Chloride (Cl⁻), Total Dissolved Solids (TDS), Sulfate (SO₄), Iron (Fe), and Total Hardness.

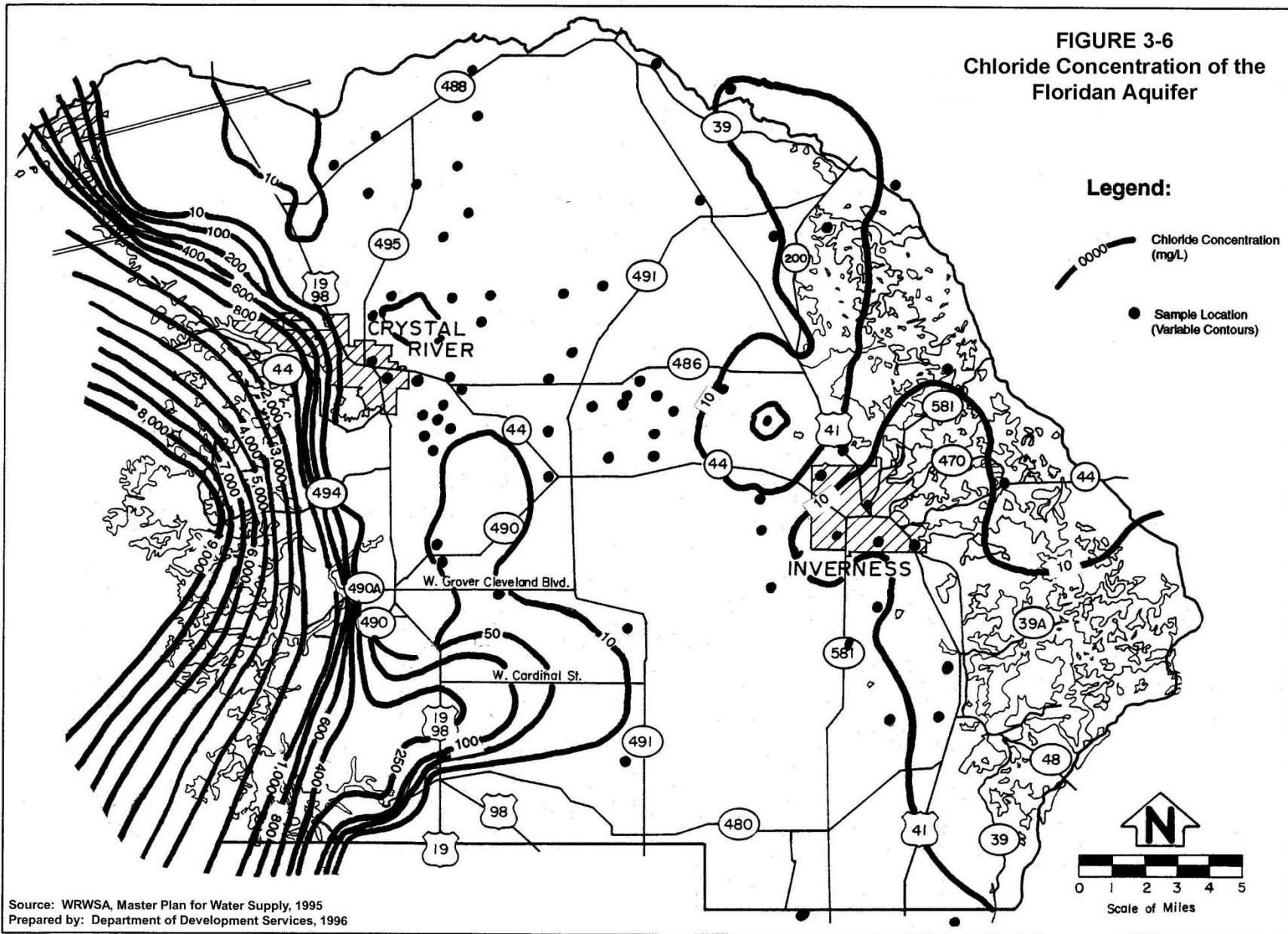
- 1) Chlorides occur as a remnant of previous high sea level and incomplete flushing of the aquifer. The freshwater of the Floridan has greater buoyancy than saline water and the resultant interface depth is indicative of freshwater volume. Reduction of the potentiometric head by pumping can result in an upwelling of the interface. This phenomenon is referred to as saltwater intrusion.

Saltwater intrusion can result in a permanent shifting of the interface. The SWFWMD has implement Water Use Caution Areas (WUCA) over the southern portion of the district to curb saltwater intrusion in that region. Figure 3-6 shows the Chloride Concentration of the Floridan Aquifer for Citrus County.

- 2) Total Dissolved Solids (TDS) is the sum of the dissolved constituents within groundwater. These may include sodium and chloride ions in areas of elevated chlorides or calcium ions in waters with high levels of total hardness. Thus, TDS is a measure of the total mineralization of the water source. The MCL for TDS is 500 mg/L, but it can be exceeded if no other water quality parameter exceeds its MCL. Figure 3-7 shows the TDS concentration of the Florida Aquifer for Citrus County.
- 3) Sulfate is the oxidized form of sulfur. Sources of sulfate in groundwater may be oxidation of sulfide minerals or hydrogen sulfide or the dissolution of sulfate minerals like gypsum. The MCL for sulfate is 250 mg/L. Figure 3-8 shows the Sulfate Concentration of the Floridan Aquifer for Citrus County.
- 4) Elevated iron concentrations are often associated with organic materials or connection to surface waters and/or the surficial aquifer. The MCL for iron is 0.3 mg/L. Figure 3-9 shows the iron concentration for the Floridan Aquifer for Citrus County.
- 5) Total Hardness is the measure of multivalent ion concentrations. These are typically calcium (Ca⁺⁺) and magnesium (Mg⁺⁺). Hardness in groundwater with carbonate increases with the contact time of

Conservation Element

groundwater with carbonate sources. There is no MCL for Total Hardness; however, treatment or softening is often provided when levels are greater than 180-200 mg/L. Figure 3-10 shows the Total Hardness concentration of the Floridan Aquifer for Citrus County.



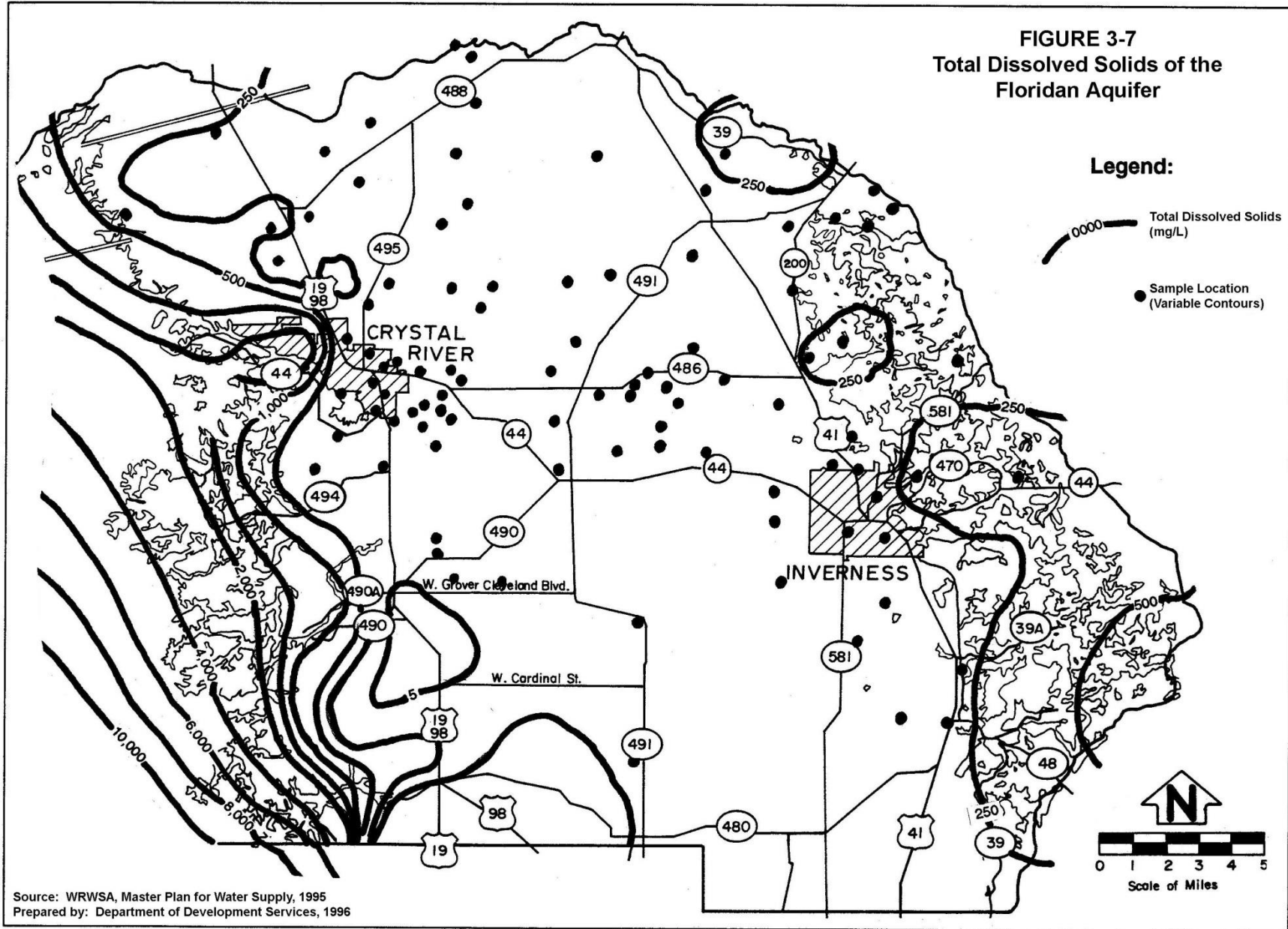
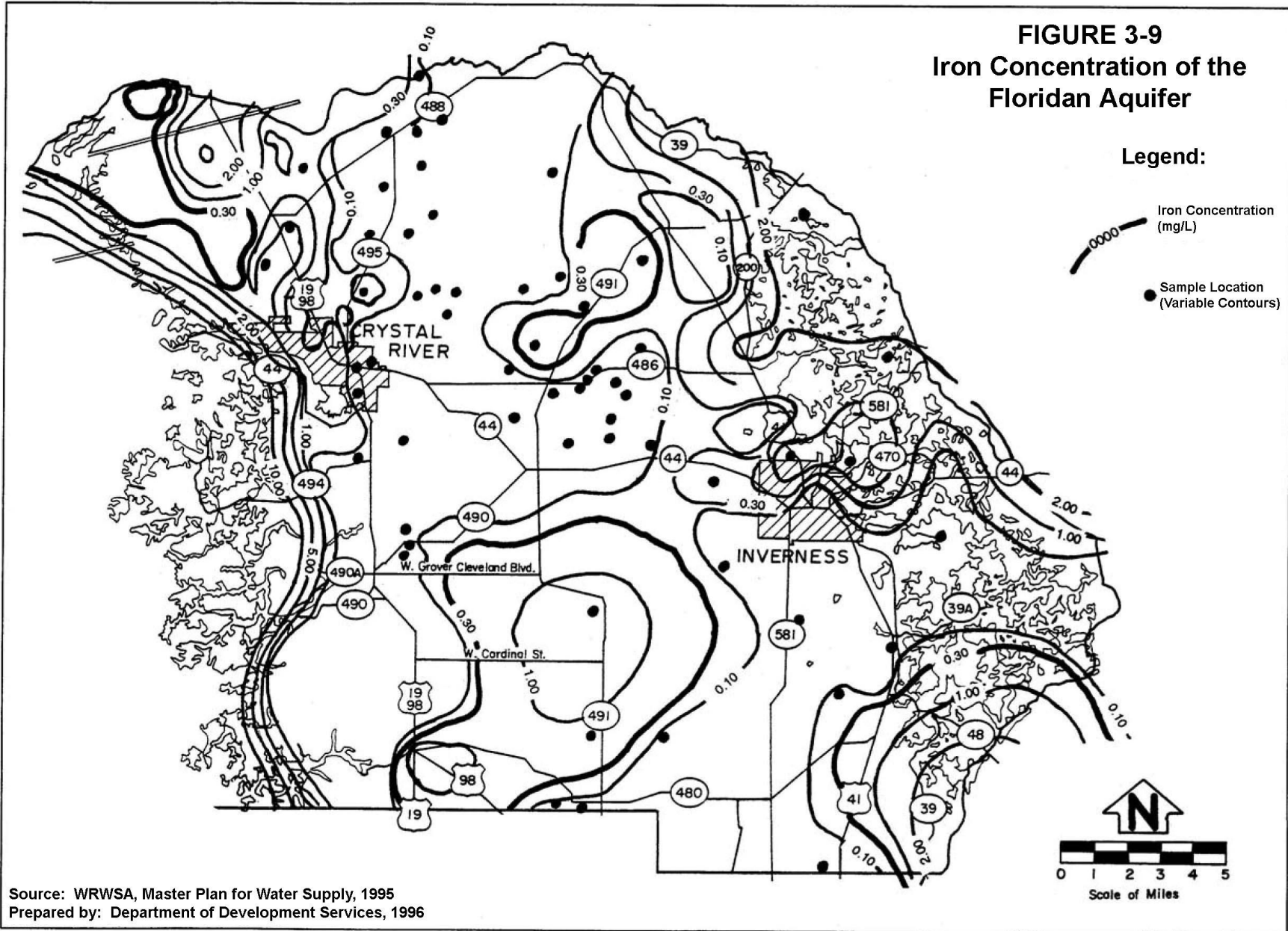




FIGURE 3-9
Iron Concentration of the
Floridan Aquifer





4. Water Supply Issues

a. Hydrologic Budget

One of the greatest issues facing the State of Florida today is water allocation. Though Florida receives on average 55+ inches of rainfall a year and the Floridan Aquifer is one of the largest and most productive aquifers in the world, the tremendous demand for water by development, agricultural and industrial interests has resulted in damage and degradation to surface waters, wetlands, and the aquifer itself. To best understand the issue of water supply, one must look at a hydrologic budget. A simplistic hydrologic budget for the Withlacoochee Regional Water Supply Authority (WRWSA) region would be:

Rainfall + Surface Water Inflow + Groundwater Inflow = Evapotranspiration + Surface Water Runoff + Groundwater Discharge $\pm$ change in storage.

Inflow

Rainfall

The average rainfall for the region is calculated by averaging ten values of annual precipitation. The thirty-year average for WRWSA area is 51.89 inches. Using a total area of 9.39 x 1010 sq. ft., this yields about 8.3 billion gallons per day.

Surface Water

There are two major sources of water to the WRWSA region, the Withlacoochee and Oklawaha Rivers. Using annual mean flow data, the two rivers produce 303 and 255 cubic feet per second respectively, or a total of 378.1 million gallons per day.

Groundwater

The rate at which groundwater enters the WRWSA is not directly measurable. However, using a mathematical formula known as D'Arcy's Law and average transmissivity and hydraulic gradient values provides an approximation. Using average transmissivity values from 33 public wells in the WRWSA establishes a value of 2.21 x 106 gpdf. Hydraulic gradient is defined as the change in total head with a change in distance in a given direction. Using USGS data, a value of 2.37 x 105 feet is estimated.

Utilizing these values in D'Arcy's Law produces an estimate of 494 cfs entering the WRWSA.

Outflow

Evapotranspiration

Evapotranspiration is the amount of water which is returned to the atmosphere through the process of evaporation and transpiration. Using an evapotranspiration rate of 35 inches per year results in 5.6 billion gallons per day being returned to the atmosphere.

Surface Water Runoff

Utilizing annual mean flow data from the Withlacoochee and Oklawaha Rivers at points near surface water exits produces values of 1,059 cfs and 375 cfs respectively. This results in a total of 1,434 cfs or 927 MGD exiting the WRWSA area.

Groundwater Discharge

Groundwater discharge is calculated by adding the flow from springs within the WRWSA area. Adjusting these rates to account for springs that feed the Withlacoochee and Oklawaha produces a net groundwater discharge rate of 1,635 cfs.

Converting all factors to cubic feet per second (CFS) the hydrologic budget for the WRWSA area is as follows:

$$\begin{aligned} \text{SW in} + \text{GW in} + \text{Rainfall} &= \text{SW out} + \text{GW out} + \text{ET} \\ 585 \text{ cfs} + 495 \text{ cfs} + 12,875 \text{ cfs} &= 2,633 \text{ cfs} + 1,980 \text{ cfs} + 8,666 \text{ cfs} \pm \text{Storage} \end{aligned}$$

This leaves a potential storage rate of 676 cfs. Pumpage of more than 676 cfs from wells within the WRWSA could result in declining water levels leading to environmental damage such as wetland loss, spring flow decline, saltwater intrusion or upwelling of mineralized water.

b. Water Use

The following descriptions are derived from data contained within the SWFWMD publication, "Water Supply Needs & Sources 1990-2020" (January, 1992).

Potable Water

Potable Water Use is considered water that is provided to households and associated businesses for direct consumption or indirect consumption for activities. It includes both public supply and private wells. Potable water use projections are forecast using population projections, per capita water use rates and peak rate factors. Table 3-5 shows potable water use projections for Citrus County through 2020.

Agricultural Water Use

Agriculture is an important component of Florida's economy and is based in part on the availability of water for irrigation. SWFWMD estimated projected average daily agricultural water use by estimating projected irrigated acreage and annual irrigation requirements on a per crop basis. Table 3-6 shows agricultural water use projections for Citrus County through 2020.

Industrial Water Use

Industrial Water Use is subdivided into four categories; Chemical manufacturing, food processing, power generation, and miscellaneous use.

Projections for industrial water use are based upon SWFWMD's Annual Water Use Estimates Reports, permit data, industry planning documents, and substantial feedback from industry representatives, including the SWFWMDs Industrial Advisory Committee.

The total projected average daily use for industrial activities is estimated at 2.6 MGD through the year 2020.

Mining Water Use

Water is utilized in some mining processes and also is moved during quarry dewatering. The latter does not constitute consumption and is only significant in its impacts to the hydrology of the area. The total projected average daily water use for mining activities is estimated at 2.0 MGD through the year 2020.

Conservation Element

TABLE 3-5
PROJECTED POPULATION, PER CAPITA, PEAK RATE FACTORS, PUBLIC SUPPLY, AND OTHER POTABLE WATER USE PROJECTS THROUGH
2020 FOR CITRUS COUNTY, FLORIDA
Citrus County Public Supply and Other Potable Water Use Projections

Utility	Reported Population (1)	Population Projections				Per Capita Estimates (2)						Per Capita Projection	Peak Rate Factors	Reported Use (1)		Projected Water Use in MGD							
		1990	1995	2000	2010	2020	1985	1986	1987	1988	1989			1990	1995- 2020	1995- 2020	1990		1995		2000		2010
AVG	MAX	AVG	MAX	AVG	MAX	AVG	MAX	AVG	MAX	AVG	MAX												
Crystal River (3)	4,307	5,441	5,674	6,136	6,598	166	182	110	157	166	173	170(4)	1.50	0.7	1.1	.09	1.4	1.0	1.4	1.0	1.6	1.1	1.7
Inverness (3)	7,078	7,809	8,553	11,098	14,135	172	132	108	128	135	135	135(4)	1.50	1.0	1.5	1.1	1.6	1.2	1.7	1.5	2.2	1.9	2.9
Deltona (5)	3,550	4,282	4,916	6,100	7,190	221	204	170	161	159	145	160(4)	1.50	.05	0.8	0.7	1.0	0.8	1.2	1.0	1.5	1.2	1.7
Sugarmill (5)	3,668	4,124	4,735	5,875	6,925	490	482	251	492	161	146	160(4)	1.85	0.5	0.9	0.7	1.2	0.8	1.4	0.9	1.7	1.1	2.0
Rolling Oaks (5)	11,493	13,863	15,916	15,916	15,916	231	221	236	222	256	244	235(4)	1.90	2.8	5.3	3.3	6.2	3.7	7.1	3.7	7.1	3.7	7.1
Homosassa (5)	3,659	4,414	5,067	6,288	7,411	259	122	140	168	181	210	190(4)	1.60	.08	1.3	0.8	1.3	1.0	1.5	1.2	1.9	1.4	2.3
WRWSA – Meadowcrest Hampton Hills (5)	4,758	16,302	27,762	36,346	40,693	114	67	265	347	264	256	265(4)	2.10	1.2	2.5	4.3	9.1	7.4	15.4	9.6	20.2	10.8	22.6
Other Potable (6)	57,309	59,347	60,071	76,905	95,204	-	-	-	-	-	120	120	1.30	6.9(7)	8.9	7.1	9.3	7.2	9.4	9.2	12.0	11.4	14.9
Totals	95,822	115,582	132,694	164,664	194,072									14.4	22.3	18.9	31.1	23.1	39.1	28.1	48.2	32.6	55.2

- 1) Based on data reported by the Utility to the SWFWMD Planning Department for inclusion in the SWFWMD's Annual Water Use Estimates Reports. Maximum day use in 1990 is determined by multiplying the 1990 average day reported use by the peak rate factor
- 2) Per capita water use estimates as reported in SWFWMD's 1985-88 Annual Water Use Estimates Reports. The per capita water use for 1989-1990 is based on data reported by the utility to SWFWMD's Planning Department for inclusion in the SWFWMD's 1989 and 1990 Annual Water Use Estimates Reports.
- 3) Population projections represent functional populations (permanent population plus one-third of the seasonal population) from the local government comprehensive plan
- 4) Per capita water use based on historical per capita use reported by the utilities to the SWFWMD for inclusion in the Annual Water Use Estimates Reports
- 5) Population projections represents functional populations (permanent population plus one-third of the seasonal population) from the County Comprehensive Plan
- 6) Other potable use represents utilities that are permitted for average quantities of less than 0.5 mgd plus rural water use. It is determined by subtracting the projected population served by utilities whose current average daily permitted quantity exceeds 0.5 mgd from the seasonally adjusted BEBR medium county-wide population estimates
- 7) Estimated use calculated by multiplying other potable population by a per capita rate of 120 gpd

TABLE 3-6
COUNTY-WIDE AGRICULTURAL LAND USE PROJECTIONS FOR ALL MAJOR CROPS IN CITRUS COUNTY THROUGH 2020
Citrus County Agricultural Water Use Projections

Acreage Projections (1)						Assigned Efficiencies	Water Use Rates (2)					Projected Water Use in MGD (3)				
Crop Type	1990	1995	2000	2010	2020		1990	1995	2000	2010	2020	1990	1995	2000	2010	2020
Agronomics	(3,049)	(3,049)	(3,049)	(3,049)	(3,049)	-	-	-	-	-	-	-	-	-	-	-
Aquaculture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Citrus (4)																
Low volume	78	-	-	-	-	75	21	21	21	21	21	0.1	0.0	0.0	0.0	0.0
Overhead	25	-	-	-	-	70	22	22	22	22	22	0.0	0.0	0.0	0.0	0.0
Seepage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nursery (5)	76	116	177	269	410	-	90	90	90	90	90	.05	.08	1.2	1.8	2.7
Pasture (6)	53	53	53	53	53	50	19	19	19	19	19	0.1	0.1	0.1	0.1	0.1
Sod	(200)	(305)	(465)	(708)	(1,080)	-	-	-	-	-	-	-	-	-	-	-
Strawberries	65	65	65	65	65	75	45	45	45	45	45	0.2	0.2	0.2	0.2	0.2
Tomatoes																
Spring	57	57	57	57	57	50	51	51	51	51	51	0.2	0.2	0.2	0.2	0.2
Fall	8	8	8	8	8	50	38	38	38	38	38	0.0	0.0	0.0	0.0	0.0
Other Vegetables																
Spring	444	407	384	339	295	50	40	40	40	40	40	1.3	1.2	1.1	1.0	0.9
Fall	65	59	55	49	43	50	37	37	37	37	37	0.2	0.2	0.2	0.1	0.1
	(212)	(195)	(184)	(163)	(142)											
Totals	871	765	799	840	931							2.6	2.7	3.0	3.4	4.2

- 1) 1990 acreage from "Agricultural Land Use in the SWFWMD," IFAS 1990; 1995-2020 acreage from "Agricultural Land Use Projections in the SWFWMD," IFAS 1990. Values in () are non-irrigated acreage
- 2) Water use rates (acre-season) determined from the SWFWMD's Agricultural Water Use Model, assuming a 2 in 10 rainfall year, the predominate soil requiring the highest water use, and accounting for assigned efficiencies. Water use for crop establishment is included for vegetables, "Other" water uses included in accordance with SWFWMD permitting rules. Water use for frost/freeze projection is not included
- 3) Projected water use calculated by multiplying acreage, irrigation rate, and 0.0000744
- 4) 1990 Citrus acreage from the Commercial Citrus Inventory 1990 (FASS, December 1990)
- 5) Water Use Rate Determined from SWFWMD's Benchmark Farm and AIM data
- 6) Irrigation rate calculated assuming average rainfall year

TABLE 3-7 RECREATIONAL WATER USE					
YEAR	1990	1995	2000	2010	2020
Golf Course Water Use	2.9	3.7	4.2	5.2	5.9
Landscape Water Use	0.1	0.1	0.1	0.1	0.2

All use in MGD

Source: SWFWMD Water Supply Needs & Sources 1990-2020 (January 1992)

Prepared By: Citrus County Community Development Division, 1996

Recreation Water Use

Water use for recreation is predominantly used for golf course maintenance and other large scale landscaped areas. SWFWMD projections are based upon historical use and information provided by SWFWMD's Green Industry Advisory Committee. Table 3-7 shows Recreational Water Use projections for Citrus County through the year 2020.

Annual Water Use and Summary

Table 3-8 summarizes the water use estimates and projections for Public and Rural Potable Supply, Agricultural, Industrial, Mining, Recreational, and Total Average Daily Water Use through the year 2020. The table also reflects the data previously listed for Citrus County, as well as the other counties within the SWFWMD.

5. Wellfield Selection and Protection

A regional wellfield site must possess acceptable levels of the water quality parameters previously discussed. Further, a wellfield site should be located within an area of high recharge to limit fluctuation in both water quality and quantity, as well as avoid adverse impact to surrounding water bodies and wetlands. Finally, a wellfield should be located in an area with no or low contamination potential and this condition should be protected for new pollution sources.

a. Recharge

Recharge is defined as the replenishment of groundwater in an aquifer. Recharge to the shallow or surficial aquifer occurs directly by local rainfall which is not intercepted by evapotranspiration, runoff, foliage, or depression storage. Recharge to the Floridan aquifer occurs where the elevation of the potentiometric surface is at or below the elevation of the water table. Recharge also occurs directly through sinkholes and lakes hydraulically connected to the aquifer.

The ability of the Floridan aquifer to recharge has been reviewed in general in the discussion on the hydrologic budget. However, a more refined method to assess a

specific region's recharge capability is to assess its transmissivity. The WRWSA Master Plan utilized known values for transmissivity and leakage within a simulation model to determine areas of high recharge.

b. Contamination Potential

Groundwater can be contaminated by many commonly available man-made materials. Introduction to the aquifer may occur directly through a spill or application, indirectly through leakage from a storage facility, or improper waste treatment.

TABLE 3-8
TOTAL PROJECTED AVERAGE DAILY WATER USE (mgd)

	1990	1995	2000	2010	2020
Public Supply	7.5	11.8	15.9	18.9	21.2
Rural	5.8	7.2	7.2	9.2	11.4
Agricultural	2.6	2.7	3.0	3.4	4.2
Industrial	1.6	2.6	2.6	2.6	2.6
Mining	0.9	2.0	2.0	2.0	2.0
Recreation	3.0	3.8	4.3	5.3	6.1
Total	21.4	30.1	35.0	41.4	47.5

Source: SWFWMD Water Supply Needs & Sources, January 1992

Prepared by: Citrus County Division of Planning, 1996

Hazardous substance and petroleum product regulated sites are registered with both the EPA and FDEP. Wastewater facilities and solid waste facilities are also registered and monitored. A quick description of the available data bases are provided below.

Comprehensive Environmental Response, Compensation, and Liability Act Index System (CERCLIS)

The CERCLIS is an identification of those facilities and/or locations currently being investigated by the EPA or associated State environmental agency. A listing in CERCLIS does not necessarily indicate the presence of contamination, only that the site is being investigated.

Resource Conservation and Recovery Act Index System List (RCRIS)

The RCRIS lists facilities and/or location that are handling, storing, or transporting hazardous substances or hazardous waste. The facilities listed in RCRIS are potential sources of contamination, but no release has necessarily been reported at those sites.

Treatment, Storage, and Disposal (TSD)

The TSD is an indicator that the facility is engaged in the treatment, storage, or disposal of hazardous waste. A listing in TSD does not necessarily indicate the presence of contamination but does mark the site as a potential source.

Solid Waste Facilities (SWF)

The SWF list includes facilities and/or locations identified with the handling or landfilling of solid waste. Inclusion of the site on the SWF list does not indicate that contamination has been reported, but rather there is the potential.

Sanitary Tank Inventory System (STI)

The STI list includes all facilities and/or locations that are required by Florida Administrative Code to register above-ground or underground petroleum storage tanks. Inclusion of this list does not indicate that a release of petroleum products has occurred, but that there is a potential for release.

Leaking Underground Storage Tanks (LUST)

The LUST list includes specifically those sites which have reported possible releases of petroleum products which may have led to soil and/or groundwater contamination.

c. Identification of Wellfield Suitability Areas

The WRWSA incorporated all these data fields into a groundwater flow model. Additional fields of existing wellfields and their average withdrawal was included to identify potential impacts to existing systems. The resulting modeling program then generated a wellfield suitability area map for the region. A reproduction of this area within Citrus County is provided in Figure 3-11.

The resultant model identified an area south of the existing WRWSA wellfield as the best location for future wells. In this region of the County, the transmissivity of the Upper Floridan Aquifer is so great, drawdown is less than one foot with a 16 MGD withdrawal.

The productive value of a quality wellfield combined with the supporting infrastructure to treat, store, and transport the water throughout the service area represents a considerable investment. Due to the vulnerability to the groundwater of Florida to contamination, proactive steps to prevent contamination are an appropriate use of land use regulation.

The DEP has an approved statewide Wellhead Protection Rule which provides for a 500-foot radius primary zone of protection as to the facilities and industries they regulate. The rule set a minimum standard and recognizes the need for larger zones due to local geological conditions in the state.

Delineation of more specific wellhead protection plans are dependent on site-specific analysis of existing wellheads, current and future production levels, groundwater movement and travel times, potentiometric levels, and hydraulic gradients within the region.

The Homosassa Special Water District (HSWD) with assistance from the Florida Rural Water Association and FDEP commissioned a wellhead protection plan in 1996. This plan used existing data and best available science to identify three delineated protection zones. These zones in order of importance are the 500-foot well buffer established by Chapter 62-521 F.A.C., a five-year travel time and a ten-year travel time. This plan was ultimately accepted by the District and provided to the Citrus County Board of County Commissioners in the Summer of 1996, with a request to incorporate its finding within the Comprehensive Plan. Due to its legal limitations, the HSWD cannot regulate land uses with the protection zones.

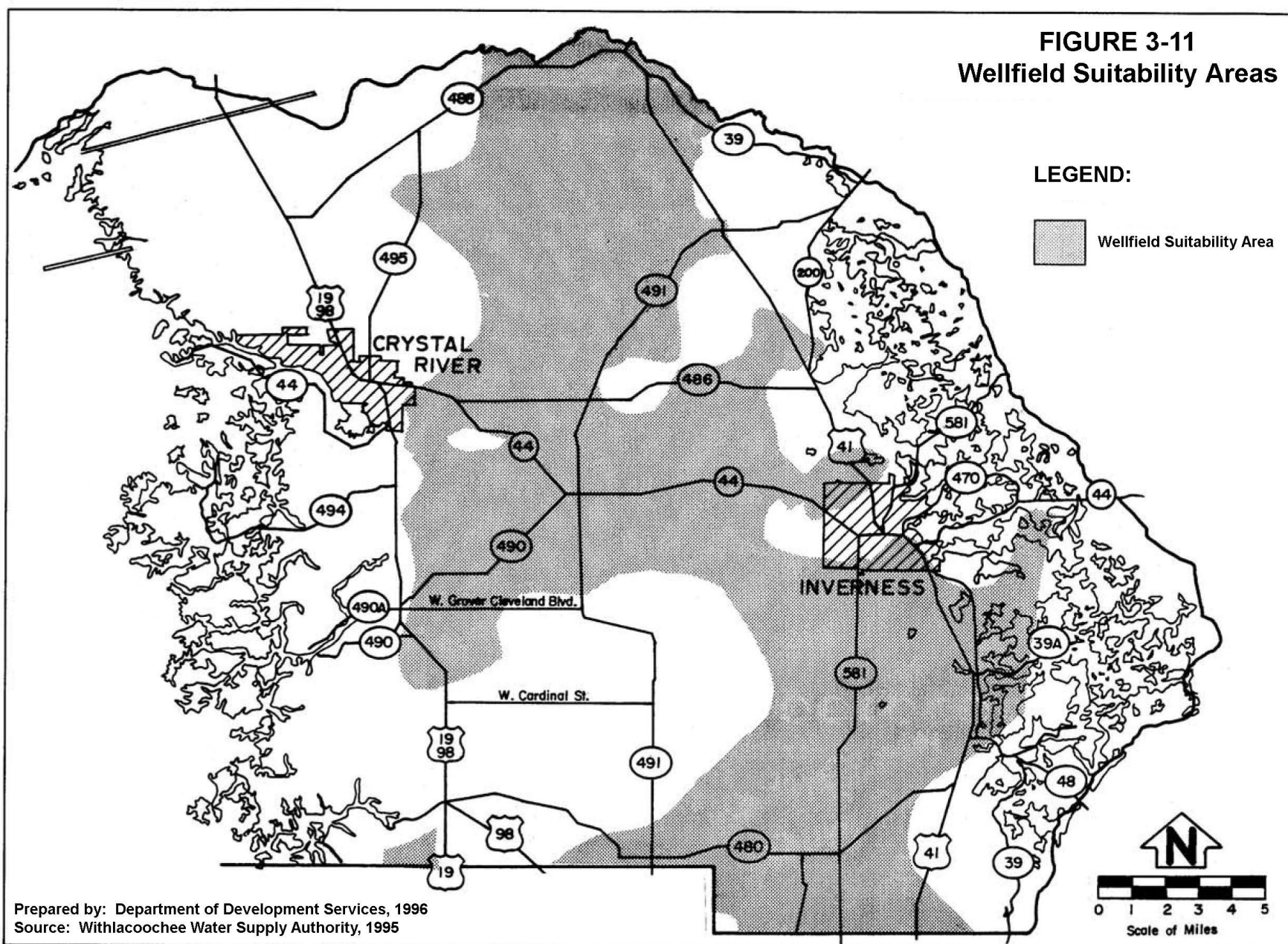
The County's current LDC regulations provide some protection to well fields, but this is done on a general level and does not incorporate site-specific plans such as the HSWD plan. A more comprehensive review of all regional wellheads could provide the basis of a wellhead protection ordinance that incorporates site-specific data. Such a review would require assistance from the SWFWMD and the FDEP.

6. Water Conservation

Citrus County's continued growth will place greater pressures on our water supply sources. According to the SWFWMD water use estimates, 98 percent of all water use in Citrus County is derived from groundwater. Greater pressures on our water supplies demonstrate the need for conserving water. This will ensure appropriate use of our resources and assist in protecting our most vulnerable resource.

The SWFWMD has adopted rules which require restrictions and enforcement of emergency water conservation measures. These measures can be applied to naturally occurring droughts or failed/contaminated public systems.

LEGEND:



Water conservation is the wise and efficient use of water and its protection from unnecessary use or depletion. Water conservation can be two-fold, the first implementing resource protection measures and the second implementing measures for wise use of the resource. Appropriate examples are water and groundwater-wellfield protection ordinances and conservation-landscape measures, respectively.

Water conservation options include landscaping codes, water-wastewater reuses, and public information programs. Wise and efficient use of groundwater resources will enable the residents of Citrus County to conserve and protect their water supplies. This efficient use will ensure that the water resources are not overdrawn, thus not placing unneeded pressures on the Floridan aquifer located within Citrus County.

The County through its LDC encourages the use of xeriscape principles and regulates stormwater management, wellhead protection, and concurrency management to minimize environmental impacts. The County also actively monitors water usage and through cooperation with the SWFWMD educates the public on water restrictions and applications.

B. Analysis of Ecological Communities

Florida hosts one of North America's most diverse and important reservoirs of biological diversity. Over 650 vertebrates regularly inhabit Florida with about 115 species being endemic only to Florida. Florida also contains a vast array of botanical species with approximately 3,500 species of vascular plants. Over 250 species of plants and at least 410 invertebrates are also endemic to the state.

The range and needs of this vast array of flora and fauna presents particular problems in maintaining Florida's stunning diversities. Many species are adapted to the cyclic natures of Florida's hydrology ranging between both upland and wetland communities for forage and reproduction. Other species have evolved to survive in the fire maintained upland habitats of scrub and sandhill. Finally, many of the larger invertebrates and predators are dependent on large tracts because of their wide-ranging habits and established territories.

The fast pace of Florida's development has resulted in a severe decline in some of Florida's unique ecological communities and a general decline in all categories. Conversion of natural lands for both agricultural and residential purposes has fractured Florida's natural environment.

Besides direct loss, man's impact and modification of natural functions, especially hydrology and fire, have resulted in further loss of ecosystem integrity due to succession by fire intolerant or transitional species. Alterations of drainage contours, diversion of water sources and loss of isolated wetlands and temporary ponds have also taken their toll. The profusion of both major and secondary roadways results in direct wildlife loss and secondary impacts resulting from "fringe affects" i.e., the fragmentation of tree

canopy by open space corridors. A final cause of degradation is the invasion of non-native vegetation and wildlife.

Within Citrus County, the majority of public land acquisition has targeted coastal and lakes region wetlands. While these tracts do contain upland habitats, they are often a type and quantity that does not support viable populations of many upland dependent species. An exception is the Citrus Tract of the Withlacoochee State Forest, a 42,000+ acre tract composed almost solely of Sandhill and Xeric Hardwood Hammocks. The combination and diversity of these public lands result in the presence of many of Florida's listed and endemic species in numbers that assure their long-term presence within the County.

Limitations on land use and density, land development regulations that protect wetlands and natural habitats and retention/provision of trees and landscape help many wildlife species to co-exist within the developed areas. Public education and support for public land management also assist in protecting our native ecological communities.

A. Inventory of Ecological Communities

The wide range in topography, soils, and hydrology provide a diverse foundation for ecological communities. Generally vegetation is used as the basis for classification of native ecological communities. The FWC, in a far reaching project, has utilized satellite imagery and interpretation to quantify the type and location of native ecological communities. The following description derived from FWC publications, describes plant communities found within Citrus County.

Descriptions of Plant Communities for Landsat Habitat Mapping

Prepared by: Terry Gilbert
Florida Wildlife Commission
Office of Environmental Services
Nongame Wildlife Section
Tallahassee, FL 32399

Introduction

The purpose of this narrative is to define the plant communities or associations of community types that are being mapped statewide as part of the Florida Game and Freshwater Fish Commission's project to develop a comprehensive statewide habitat system for Florida. The mapping phase is a three-year effort that is being accomplished by the Office of Environmental Services Nongame Wildlife Section in cooperation with the FDOT.

The communities were grouped into categories following Hartment (1978), Kautz (1986), and various other sources listed in the bibliography. The final selection of plant community types or associations being mapped are based on: 1) their overall habitat importance to wildlife in the state; 2) the ability to accurately map these particular communities using digital image classification techniques associated with the Landsat thematic mapper; and 3) the ability to accomplish a statewide vegetation mapping effort as a three-year project. Appendix I contains an outline of the native plant communities together with their corresponding Landsat class numbers, and number order for color table construction.

A. Upland Plant Communities

Pinelands: The pinelands category includes north and south Florida pine flatwoods, south Florida pine rocklands, and commercial pine plantations. Pine flatwoods occur on flat sandy terrain where the overstory is characterized by longleaf pine, slash pine, or pond pine. Generally, flatwoods dominated slash pine occupies intermediate or moderately moist areas. The understory and groundcover within these three communities are somewhat similar and include several common species such as saw palmetto, gallberry, wax myrtle, and a wide variety of grasses and herbs. Generally wiregrass and runner oak dominate longleaf pine sites, fetterbush and bay trees are found in pond pine areas, while saw palmetto, gallberry, and rusty lyonia occupy slash pine flatwoods sites. Cypress domes, bayheads, titi swamps, and freshwater marshes are commonly interspersed in isolated depressions throughout this community type, and fire is a major disturbance factor. An additional pine flatwoods forest type occurs in extreme south Florida on rocklands where the overstory is the south Florida variety of slash pine, and tropical hardwood species occur in the understory. Scrubby flatwoods is another pineland type which occurs on drier ridges, and on or near old coastal dunes. Longleaf pine or slash pine dominate the overstory, while the groundcover is similar to the xeric oak scrub community. Commercial pine plantations are also reluctantly included in the pinelands association. This class includes predominately planted slash pine, although longleaf pine and loblolly pine tracts also occur. Sand pine plantations, which have been planted on severely site prepared sandhill sites in the north Florida panhandle, are also included in this category. An acceptable accurate separation of areas of densely stocked native flatwoods and older planted pine stands with a closed canopy was not consistently possible.

The Landsat data compiled by the FGFWFC indicates there are 9,106.8 hectares of pinelands within Citrus County.

Sand Pine Scrub: Sand pine scrub occurs on extremely well-drained, sorted, sterile sands deposited along former shorelines and islands of ancient seas. This xeric plant community is dominated by an overstory of sand pine and has an understory of myrtle oak, Chapman's oak, sand-live oak, and scrub holly. Ground cover is usually sparse to absent, especially in mature stands, and rosemary and lichens occur in some open areas. Sites within the Ocala National Forest, which have an overstory of direct seeded sand pine, and an intact understory of characteristic xeric scrub oaks, are also included in this category. Fire is an important ecological management tool, and commonly results in even-aged stands within regenerated sites. The distribution of this community type is almost entirely restricted to within the state of Florida.

The Landsat data compiled by the FGFWFC indicates there are 1,093.0 hectares of sand pine scrub within Citrus County.

Sandhill: Sandhill communities occur in areas of rolling terrain on deep, well-drained, white to yellow, sterile sands. This xeric community is dominated by an overstory of scattered longleaf pine, along with an understory of turkey oak and bluejack oak. The park-like ground cover consists of various grasses and herbs, including wiregrass, partridge pea, beggars tick, milk pea, queen's delight, and others. Fire is an important factor in controlling hardwood competition and other aspects of sandhill ecology. Although many of these sites throughout the state have been modified through the selective or severe cutting of longleaf pine, these areas are still included in the sandhill category.

The Landsat data compiled by the FGFWFC indicates there are 41,330.3 hectares of sandhill within Citrus County.

Xeric Oak Scrub: Xeric oak scrub is a xeric hardwood community typically consisting of clumped patches of low growing oaks interspersed with bare areas of white sand. This community occurs on areas of deep, well-washed, sterile sands, and it is the same understory complex of scrubby oaks and other ground cover species that occurs in the sand pine scrub community. This condition frequently occurs when the short time periods between severe fires results in the complete removal of sand pine as an overstory species. Also included in this category are sites within the Ocala National Forest which have been clearcut, and are sometimes dominated during the first one to five years by the xeric oak scrub association. The xeric oak scrub community is dominated by myrtle oak, Chapman's oak, sand-live oak, scrub holly, scrub plum, scrub hickory, rosemary, and saw palmetto.

Fire is important in setting back plant succession and maintaining viable oak scrubs.

The Landsat data compiled by the FGFWFC indicates there are 879.4 hectares of xeric oak scrub within Citrus County.

Mixed Hardwood Pine Forests: This community is the southern extension of the Piedmont southern mixed hardwoods, and occurs mainly on the clay soils on the northern Panhandle. Younger stands may be predominantly pines, while a complex of various hardwoods become co-dominants as the system matures over time through plant succession. The overstory consists of shortleaf and loblolly pine, American beech, mockernut hickory, southern red oak, water oak, American holly, and dogwood.

Also included in this category are other upland forests that occur statewide which contain a mixture of conifers and hardwoods as the co-dominant overstory component. These communities contain longleaf pine, slash pine, and loblolly pine in mixed association with live oak, laurel oak, and water oak, together with other hardwood species characteristic of the upland hardwood hammocks and forests class.

The Landsat data compiled by the FGFWFC indicates there are 4,746.8 hectares of mixed hardwood pine forest within Citrus County.

Hardwood Hammocks and Forests: This class includes the major upland hardwood associations that occur statewide on fairly rich sandy soils. Variations in species composition and the local or spatial distributions of these communities are due in part to differences in soil moisture regimes, soil type, and geographic location within the state. The major variations within this association are mesic hammocks, xeric hammocks, coastal and hydric hammocks, and live oak or cabbage palm hammocks.

The mesic hammock community represents the climax vegetation type within many areas of northern and central Florida. Characteristic species in the extreme north include American beech, southern magnolia, Shumard oak, white oak, mockernut hickory, pignut hickory, sourgum, basswood, white ash, mulberry, and spruce pine. Mesic hammocks of the peninsula are less diverse due to the absence of hardwood species which are adapted to more northerly climates, and are characterized by laurel oak, hop hornbill, blue beech, sweetgum, cabbage palm, American holly, and southern magnolia.

Xeric hammocks occur on deep, well-drained, sandy soils where fire has been absent for long periods of time. These open, dry hammocks contain live oak, sand-live oak, bluejack oak, blackjack oak, southern red oak, sand-post oak, and pignut hickory.

Coastal and hydric hammocks are relatively wet hardwood forests that are found between uplands and true wetlands. These sometimes seasonally wet forests are associated with some non-alluvial peninsula streams, scattered broad lowlands, and are also found in a narrow band along parts of the Gulf and Atlantic coasts where they often extend to the edge of coastal salt marshes. These communities contain water oak, red maple, Florida elm, cabbage palm, red cedar, blue beech, and sweetgum. Live oak and cabbage palm hammocks are often found bordering large lakes and rivers, and are distributed throughout the prairie region of south central Florida and extend northward in the St. John's River basin. These communities may occur as mixed stands of oak and palm, or one of these species can completely dominate an area.

The Landsat data compiled by the FGFWFC indicates there are 18,266.0 hectares of hardwood hammocks and forests within Citrus County.

B. Wetland Plant Communities

Coastal Salt Marshes: These herbaceous and shrubby wetland communities occur statewide in brackish water along protected low energy estuarine shorelines of the Atlantic and Gulf coasts. The largest continuous areas of salt marsh occur north of the range of mangroves, and border tidal creeks, bayous, and sounds. Salt marshes are sometime interspersed within mangrove areas, and also occur as a transition zone between freshwater marshes and mangrove forests such as in the Ten Thousand Islands area along the southwest Florida coast. Plant distribution within salt marshes is largely dependent on the degree of tidal inundation, and many large areas are completely dominated by one species. Generally, smooth cordgrass typically occupies the lowest elevations immediately adjacent to tidal creeks and pools, while black needlerush dominates less frequently inundated zones. The highest elevations form transitional areas characterized by glasswort, saltwort, saltgrass, sea ox-eye daisy, marsh elder, and saltbush. For the purposes of this project, cordgrass, needlerush, and transitional or high salt marshes are collectively mapped as this single category.

The Landsat data compiled by the FGFWFC indicates there are 14,557.9 hectares of coastal salt marshes within Citrus County.

Freshwater Marsh and Wet Prairie: These wetland communities are dominated by a wide assortment of herbaceous plant species growing on sand, clay, marl, and organic soils in areas of variable water depths and inundation regimes. Generally, freshwater marshes occur in deeper, more strongly inundated situations and are characterized by tall emergents, and floating leafed species. Freshwater marshes occur within depressions, along broad, shallow lake and river shorelines, and are scattered in open areas within hardwood and cypress swamps. Also, other portions of freshwater lakes, rivers, and canals which are dominated by floating-leaved plants such as lotus, spatterdock, duck weed, and water hyacinths are included in this category. Wet prairies commonly occur in shallow, periodically inundated areas, and are usually dominated by aquatic grasses, sedges, and their associates. Wet prairies occur as scattered, shallow depressions within dry prairie areas and on marl prairie areas in south Florida. Also included in this category are areas in Southwest Florida with scattered dwarf cypress having less than 20 percent canopy coverage, and a dense groundcover of freshwater marsh plants. Marshes and wet prairies are dominated by various combinations of pickerel weed, sawgrass, maidencane, arrowhead, fire flag, cattail, spike rush, bulrush, white water lily, water shield, and various sedges. Many marsh or wet prairie types, such as sawgrass marsh or maidencane prairie, have been described and so-named based on their dominant plant species.

The Landsat data compiled by the FGFWFC indicates there are 8,875.2 hectares of freshwater marsh and wet prairie within Citrus County.

Cypress Swamp: These regularly inundated wetlands form a forested border along large rivers, creeks, and lakes, or occur in depressions as circular domes or linear strands. These communities are strongly dominated by either bald cypress or pond cypress, with very low numbers of scattered black gum, red maple, and sweetbay. Understory and ground cover are usually sparse due to frequent flooding but sometimes include such species as buttonbush, lizard's-tail, and various ferns.

The Landsat data compiled by the FGFWFC indicates there are 514.8 hectares of cypress swamp within Citrus County.

Hardwood Swamp: These wooded wetland communities are composed of either pure stands of hardwoods, or occur as a mixture of hardwoods and cypress. This association of wetland-adapted trees occurs throughout the state on organic soils and forms the forested floodplains of non-alluvial rivers, creeks, and broad lake basins. Tree

species include a mixed overstory containing black gum, water tupelo, bald cypress, dahoon holly, red maple, swamp ash, cabbage palm, and sweetbay.

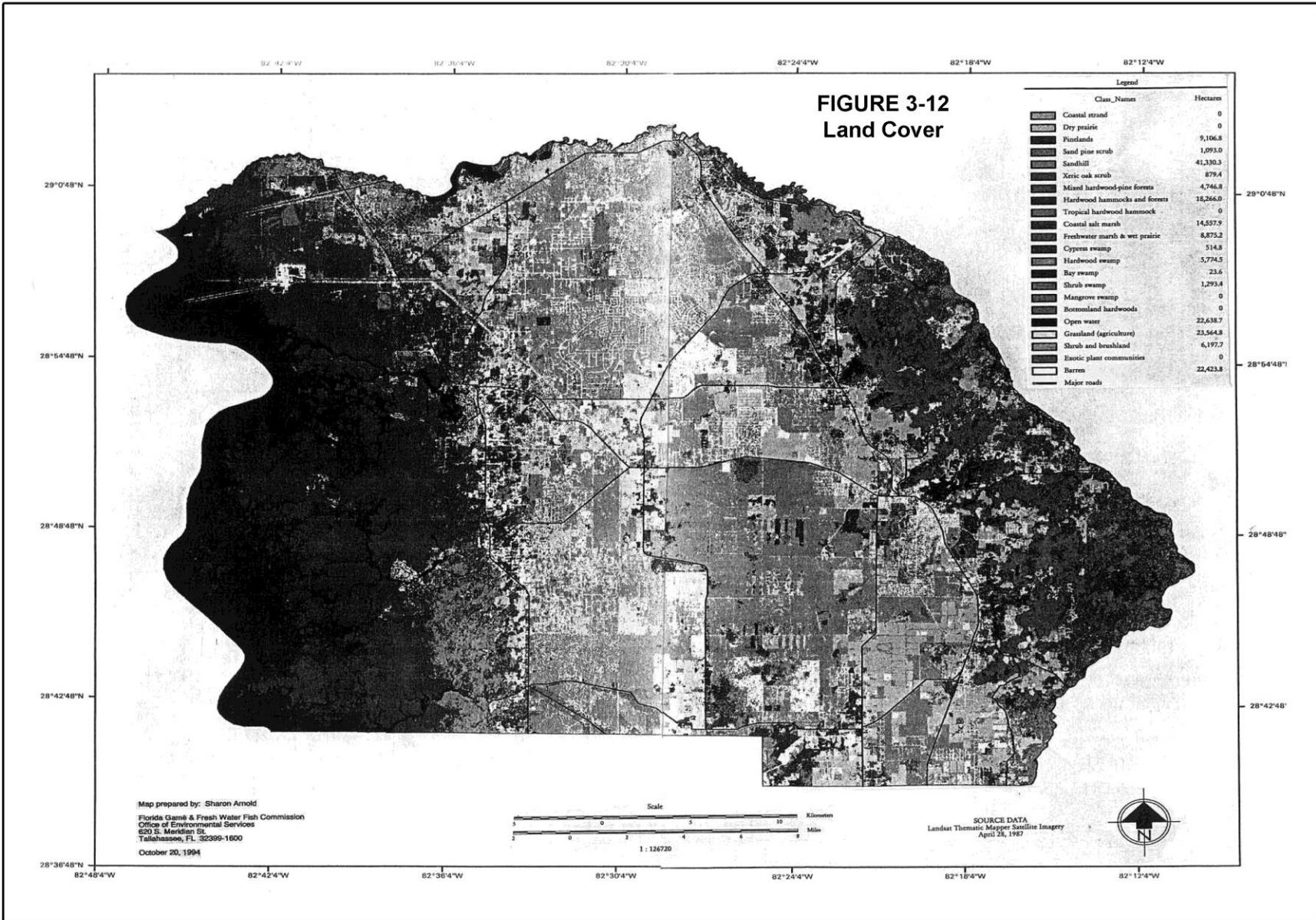
The Landsat data compiled by the FGFWFC indicates there are 5,774.5 hectares of hardwood swamp within Citrus County.

Bay Swamp: These hardwood swamps contain broadleaf evergreen trees that occur in shallow, stagnant drainages or depressions often found within pine flatwoods, or at the base of sandy ridges where seepage maintains constantly wet soils. The soils, which are usually covered by an abundant layer of leaf litter, are mostly acidic peat or muck which remain saturated for long periods but over which little water level fluctuation occurs. Overstory trees within bayheads are dominated by sweetbay, swamp bay, and loblolly bay. Depending on the location within the state, other species including pond pine, slash pine, blackgum, cypress, and Atlantic white cedar can occur as scattered individuals, but bay trees dominate the canopy and characterize the community. Understory and groundcover species may include dahoon holly, wax myrtle, fetterbush, greenbriar, royal fern, cinnamon fern, and sphagnum moss.

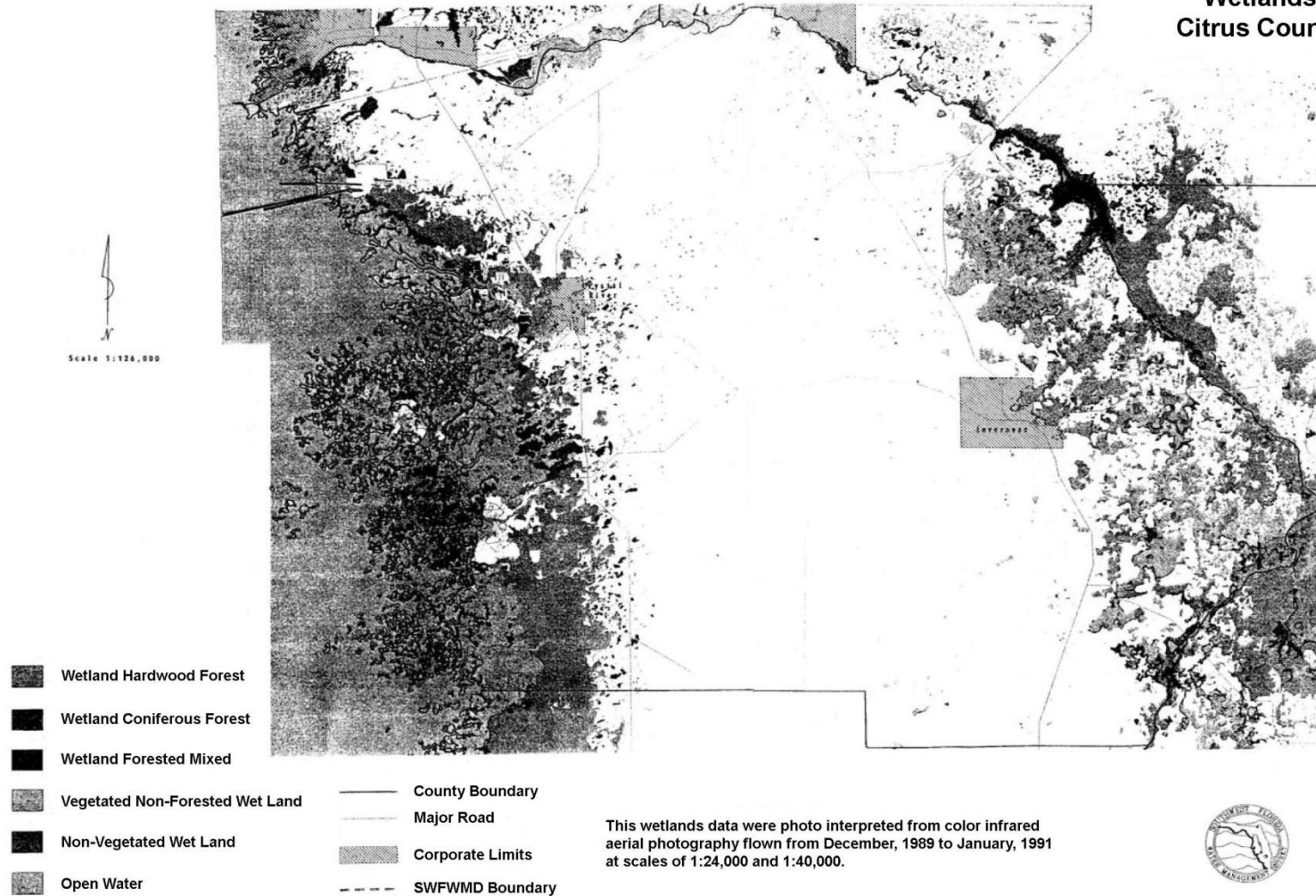
The Landsat data compiled by the FGFWFC indicates there are 23.6 hectares of bay swamp within Citrus County.

Shrub Swamp: Shrub swamps are wetland communities dominated by dense, low-growing, woody shrubs or small trees. Shrub swamps are usually characteristic of wetland areas that are experiencing environmental change, and are early to mid-successional in species complement and structure. These changes are a result of natural or man-induced perturbations due to increased or decreased hydroperiod, fire, clear cutting or land clearing, and siltation. Shrub swamps statewide may be dominated by one species, such as willow, or an array of opportunistic plants may form a dense, low canopy. Common species include willow, wax myrtle, primrose willow, buttonbush, and saplings of red maple, sweetbay, black gum, and other hydric tree species indicative of wooded wetlands. In northern Florida, some shrub swamps are a fire-maintained subclimax of bay swamps. These dense shrubby areas are dominated by black titi, swamp cyrilla, fetterbush, sweet pepperbush, doghobble, large gallberry, and myrtle-leaf holly.

The Landsat data compiled by the FGFWFC indicated there are 1,293.4 hectares of shrub swamp within Citrus County.



**FIGURE 3-13
Wetlands
Citrus County**



B. Listed Wildlife

The quantity and quality of ecological communities within Citrus County support substantial wildlife populations. Some of these species, due to variety or reduction in numbers, have been afforded protection under the Endangered Species Act (Federal) or its companion legislation at the state level. A fourth category of focal species, species selected based on their utility as indicators of natural communities has also been included. These species, their rank, status, range, presence in Citrus County and habitat indicators are listed in Table 3-9.

TABLE 3-9
Listed Wildlife Species in Citrus County

Focal Species	Scientific Name	FNAI Global Rank	FNAI State Rank	Federal Status	State Status	Habitat Indicator
Flatwoods Salamander	<i>Ambystoma Cingulatum</i>	G2G3	S2S3	LT	LS	Flatwoods Dome/ Basin Swamp
Tiger Salamander	<i>Ambystoma Tigrinum</i>	G5	S3	N	N	Mixed Forest Flatwoods
One-Toed Amphiuma	<i>Amphiuma Pholeter</i>	G3	S3	N	N	Floodplain Forest Foodplain Swamp
Striped Newt	<i>Notophthalmus Perstriatus</i>	G2G3	S2S3	N	N	Flatwoods Sandhill Scrub
Gulf Hammock Dwarf Siren	<i>Pseudobranchus Striatus Lustricolus</i>	G5T1	S1	N	N	Dome/Basin Swamp Freshwater Marsh
Gopher Frog	<i>Rana Capito</i>	G3	S3	N	LS	Sandhill Scrub Flatwoods
American Alligator	<i>Alligator Mississippiensis</i>	G5	S4	L(T/A)	LS	River, Lakes, Swamp, Estuaries
Loggerhead	<i>Caretta Caretta</i>	G3	S3	LT	LT	Estuaries, Gulf Waters
Green Turtle	<i>Chelonia Mydas</i>	G3	S2	LE,LT	LE	Estuaries, Gulf Waters
Eastern Diamondback Rattlesnake	<i>Crotalus Adomanteus</i>	G4	S3	N	N	Sandhill Flatwoods
Leatherback	<i>Dermochelys Coriacea</i>	G2	S2	LE	LE	Estuaries, Gulf Waters
Eastern Indigo Snake	<i>Drymarchon Corais Couperi</i>	G3	S3	LT	LT	Sandhill Scrub, Flatwoods, Hardwoods, Hammock
Hawksbill	<i>Eretmochelys Imbricata</i>	G3	S1	LE	LE	Estuaries Gulf Water
Cedar Key Mole Skink	<i>Eumeces Egregius Isularis</i>	G4T1	S1	C2	N	Scrub, Coastal Strand
Gopher Tortoise	<i>Gopherus polyphemus</i>	G3	S3	N	LS	Sandhill Scrub Flatwoods Xeric Hammock
Atlantic Ridley	<i>Lepidochelys Kempii</i>	G1	S1	LE	LE	Estuaries Gulf Waters
Gulf Slat Marsh Snake	<i>Nerodia Clarkii Clarkii</i>	G4T3	S3?	N	N	Salt Marsh
Florida Pine Snake	<i>Pituophis Melanoleucus</i>	G5T3?	S3	N	LS	Sandhill Scrub, Xeric Hammock

TABLE 3-9 (continued)
Listed Wildlife Species in Citrus County

Focal Species	Scientific Name	FNAI Global Rank	FNAI State Rank	Federal Status	State Status	Habitat Indicator
Suwannee Cooter	<i>Pseudemys Concinna Suwanniensis</i>	G5T3	S3	N	LS	Alluvial Streams, Blackwater Streams, Spring Run Stream
Short-Tailed Snake	<i>Stilosoma Extenuatum</i>	G3	S3	N	LT	Sandhill Scrub, Xeric Hammock
Cooper's Hawk	<i>Accipiter Cooperii</i>	G4	S3	N	N	Hammocks, Woodlands
Bachman's Sparrow	<i>Aimophila Aestivalis</i>	G3	S3	N	N	Flatwoods
Roseate Spoonbill	<i>Ajaia Ajaja</i>	G5	S2	N	LS	Salt Marsh, Mud Flats
Scott's Seaside Sparrow	<i>Ammodramus Maritimus Peninsulae</i>	G4T2	S3	N	LS	Salt Marsh
Florida Scrub Jay	<i>Aphelocoma Coerulescens Coerulescens</i>	G3	S2	LT	LT	Scrub, Scrubby Flatwoods
Limpkin	<i>Aramus Guarauna</i>	G5	S3	N	LS	Freshwater Swamp Freshwater Marsh
Great Egret	<i>Ardea albus</i>	G5	S4	N	N	Marshes, Ponds, Shorelines, Mudflats
Florida Burrowing Owl	<i>Speotyto cunicularia floridana</i>	G4T3	S3	N	LS	Sandhill, Dry Prairie
Short-Tailed Hawk	<i>Buteo Brachyurus</i>	G4G5	S1	N	N	Flatwoods Swamps, Mangroves
Piping Plover	<i>Charadrius Melodus</i>	G3	S2	LE, LT	LT	Beaches, Tidal Flats
Marian's Marsh Wren	<i>Cistothorus Palustris Mariana</i>	G5T3	S3	N	LS	Salt Marsh
Florida Prairie Warbler	<i>Dendroica Discolor Paludicola</i>	G5T3	S3	N	N	Hammocks, Tidal Swamp, Mangroves
Little Blue Heron	<i>Egretta Caerulea</i>	G5	S4	N	LS	Marshes, Swamps, Ponds, Shorelines
Snowy Egret	<i>Egretta Thula</i>	G5	S3	N	LS	Marshes, Swamps, Shorelines

TABLE 3-9 (continued)
Listed Wildlife Species in Citrus County

Focal Species	Scientific Name	FNAI Global Rank	FNAI State Rank	Federal Status	State Status	Habitat Indicator
Tri-Colored Heron	<i>Egretta Tricolor</i>	G5	S4	N	LS	Marshes, Swamps, Shorelines
American Swallow-tailed Kite	<i>Elanoides Forficatus</i>	G5	S2	N	N	Forested Wetlands
White Ibis	<i>Eudocimus Albus</i>	G5	S4	N	LS	Salt Marsh, Freshwater Marsh, Wet Prairie, Mangroves
Merlin	<i>Falco Columbarius</i>	G5	S2	N	N	Flatwoods Marshes
Peregrine Falcon	<i>Falco Peregrinus</i>	G4	S2	N	LE	Coast
Southeastern American Kestrel	<i>Falco Spavarius Paulus</i>	G5T4	S3	N	LT	Sandhill, Old Fields
Magnificent Frigate Bird	<i>Fregata Magnificens</i>	G5	S1	N	N	Tidal Swamp, Estuaries, Gulf Waters
Whooping Crane	<i>Grus americana</i>	G1	SNR	LE, XN	LS	Prairies, Freshwater marsh
Florida Sandhill Crane	<i>Grus Canadensis Pratensis</i>	G5T2T3	S2S3	N	LT	Prairies, Freshwater marsh
American Oyster Catcher	<i>Haematopus Palliatus</i>	G5	S2	N	LS	Beaches, Mud Flats
Southern Bald Eagle	<i>Haliaeetus Leucocephalus</i>	G4	S3	N	LT	Rivers, Lakes, Coastal Waters
Least Bittern	<i>Ixobrychus Exilis</i>	G5	S4	N	N	Fresh Water Marsh
Black Rail	<i>Laterallus Jamaicensis</i>	G4	S2	N	N	Salt marsh
Wood Stork	<i>Mycteria Americana</i>	G4	S2	N	LE	Swamps, Marshes, Ponds, Shorelines
Yellow-Crowned Night Heron	<i>Nyctanassa Violacea</i>	G5	S3	N	N	Swamps, Marshes, Mangroves, Shorelines
Black-Crowned Night Heron	<i>Nycticorax Nycticorax</i>	G5	S3	N	N	Marshes, Shorelines
Brown Pelican	<i>Pelecanus Occidentalis</i>	G4	S3	N	LS	Estuaries, Coastal Waters
Red-Cockaded Woodpecker	<i>Picoides Borealis</i>	G5	S2	LE	LS	Sandhill (Mature Open Pinelands) Flatwoods
Hairy Woodpecker	<i>Picoides Villosus</i>	G5	S3	N	N	Hammocks, Forests

TABLE 3-9 (continued)
Listed Wildlife Species in Citrus County

Focal Species	Scientific Name	FNAI Global Rank	FNAI State Rank	Federal Status	State Status	Habitat Indicator
Glossy Ibis	<i>Plegadis Falcinellus</i>	G5	S3	N	N	Salt Marshes, Freshwater Marshes, Wet Prairies, Mangroves
Florida Clapper Rail	<i>Rallus Longirostris Scottii</i>	G5T3?	S3?	N	N	Salt Marsh, Mangroves
Black Skimmer	<i>Rynchops Niger</i>	G5	S3	N	LS	Beaches, Estuaries, Coastal Waters
Least Tern	<i>Sterna Antillarum</i>	G4	S3	N	LT	Beaches, Estuaries, Coastal Waters
Caspian Tern	<i>Sterna Caspia</i>	G5	S2	N	N	Beaches, Estuaries, Coastal Waters
Royal Tern	<i>Sterna Maxima</i>	G5	S3	N	N	Beaches, Estuaries, Coastal Waters
Sandwich Tern	<i>Sterna Sandvicensis</i>	G5	S2	N	N	Beaches, Estuaries, Coastal Waters
Rafinesque's Big-eared Bat	<i>Corynorhinus rafinesquii</i>	G3G4	S2	N	N	Terrestrial Caves, Woodlands
Florida Long –Tailed Weasel	<i>Mustela Frenata Peninsulae</i>	G5T3	S3	N	N	Forests, Swamps, Marshes
Gulf Slat Marsh Mink	<i>Mustela Vison Halilimnetes</i>	G5T3	S3	N	N	Saltmarshes
Southeastern Bat	<i>Myotis Austroriparius</i>	G3G4	S3	N	N	Terrestrial Caves, Woodlands
Round-tailed Muskrat	<i>Neofiber alleni</i>	G3	S3	N	N	Freshwater Marshes
Florida Mouse	<i>Podomys Floridanus</i>	G3	S3	N	LS	Scrub, Sandhill, Flatwoods
Florida Panther	<i>Puma concolor coryi</i>	G5T1	S1	LE	LE	Forests, Swamps, Marshes
Sherman's Fox Squirrel	<i>Sciurus Niger Shermani</i>	G5T3	S3	N	LS	Sandhill, Flatwoods, Swamps
Homosassa Shrew	<i>Sorex Longirastris Eionis</i>	G5T3	S3	N	LS	Hydric Forests, Hydric Swamps
West Indian Manatee	<i>Trichechus Manatus</i>	G32	S2	LE	LE	Rivers, Estuaries, Coastal Waters, Springs
Florida Black Bear	<i>Ursus Americanus Floridanus</i>	G5T2	S2	N	LT	Swamps, Forests

FNAI GLOBAL ELEMENT RANK (Priority)

- G1** Critically imperiled globally of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerability to extinction of other factors.
- G4** Apparently secure globally (may be rare in parts or range).
- G5** Demonstrably secure globally.
- G#?** Tentative rank (e.g., G2?).
- G#G#** Range of rank; insufficient data assign specific global rank (e.g., G2G3).
- G#T#** Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as about (e.g., G3T1).

Definition parallels global element rank; substitute “S” for “G” in above global ranks, and “in Florida” for “globally” in the above global rank definitions.

FEDERAL LEGAL STATUS (U.S. Fish and Wildlife Service [USFWS]).

- LE** Listed an Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species, which is in danger of extinction throughout all, or a significant portion of its range.
- LT** Listed as Threatened Species. Defined as any species, which is likely to become an endangered species within the foreseeable future throughout all, or a significant portion of its range.
- C2** Candidate Species, Category 2. Taxa for which information now is in possession of the USFWS indicates that proposing to list the species as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat(s) are not currently available to support proposed rules at this time.
- LT/A** Threatened due to similarity of appearance.

XN Nonessential experimental population.

N Not currently listed, nor currently being considered for addition to the List of Endangered and Threatened Wildlife and Plants.

STATE LEGAL STATUS
(Florida Fish and Wildlife Conservation Commission [FWC])

LE Listed as Endangered Species by the FWC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.

LT Listed as Threatened Species by the FWC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined, or very likely to become, an endangered species within the foreseeable future.

LS Listed as Species of Special Concern by the FWC. Defined as a population, which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation, which, in the foreseeable future, may result in its becoming a threatened species.

N Not currently listed, not currently being considered for listing.

Note: Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas inventory assigns two ranks. The global rank is based on a species worldwide status; the state rank is based on the status of the species in Florida. Ranks are based on many factors, the most important ones being estimated number of occurrences, estimated abundance (number of individuals for species; area for natural communities), range, relative threat of destruction, and ecological.

Source: Florida Natural Areas Inventory Tracking List, 2005

Prepared By: Citrus County Community Development Division, 2005

C. Air Quality

Air quality in Citrus County is good. Ambient air quality standards of both the State and the EPA have not been exceeded in the County. The pollutants included in these standards are carbon monoxide, lead, nitrogen oxides, ozone, sulfur dioxide, and total suspended particulates.

Comparison of FDEP air quality data with the National Ambient Air Quality Standards demonstrates that sulfur dioxide and total suspended particulates are the only air pollutants monitored by the FDEP within Citrus County. These monitoring sites consist of four stations in the vicinity of Crystal River.

The FDEP maintains the state-wide Air Pollutant Information System for all point air pollution sources. The list of Citrus County's point sources of air pollution is located in Table 3-10. This Table describes the facility name, source/control devices, and allowable emissions. These air pollution sources have recorded no air quality violations. This is possibly due to the fact that some are not monitored and the sprawled nature of Citrus County spreads the pollutants over a greater area.

Citrus County has within its borders significant acreage of public conservation lands that are managed, in part, by the use of prescribed burning. Prescribed burns are necessary to the health of the fire-maintained communities and reduce the risk of wildfire. Smoke from prescribed burns can be wide spread, creating a nuisance and potential health risk for some people.

D. Soil Erosion

Erosion is the wearing away of land surface by one or more factors such as water, wind, or other geological agents. Erosion is typically viewed in two categories; geologic and accelerated. Geologic erosion occurs over long time periods brought about by natural factors. Accelerated erosion is most commonly associated with activities of man or animals whereby vegetation is removed or reduced and the land surface is exposed.

The vulnerability of soils to erosion is based in large part on its physical and chemical properties. The Natural Resources Conservation Service evaluates erosion in three separate categories.

Erosion factor K indicates the susceptibility as a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) to predict the average annual rate of soil loss by sheet and rill erosion. Losses are expressed in tons per acre per year. These estimates are based primarily on percentage of silt, sand, and organic matter (up to four percent) and on soil structure and permeability. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur over a sustained period without affecting crop productivity. The rate is expressed in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their resistance to wind erosion in cultivated areas. The groups indicate the susceptibility of soil to wind erosion and the amount of soil lost. Soils are grouped according to the following distinctions:

1. Sands, coarse sands, fine sands, and very fine sands. These soils are generally not suitable for crops. They are extremely erodible, and vegetation is difficult to establish.
2. Loamy sands, loamy fine sands, and loamy very fine sands. These soils are very highly erodible. Crops can be grown if intensive measures to control wind erosion are used.
3. Sandy loams, coarse sandy loams, fine sandy loams, and very fine sandy loams. These soils are highly erodible. Crops can be grown if intensive measures to control wind erosion are used.
4. Clays, silty clays, clay loams, and silty clay loams that are more than 35 percent clay. These soils are moderately erodible. Crops can be grown if measures to control wind erosion are used.

The 64 soil types identified within Citrus County have erosion factors ranging from 0 to 0.32 in the K category and 0 to 5 in the T category. Wind erodibility groups consist of 1 through 4 with the majority classified as 2.

Vulnerability to erosion is most often associated with development activities which expose the surface soils to wind. Agricultural operations utilize best management practices to prevent soil loss. Best management practices are also utilized during construction and stormwater management design to further reduce the potential for erosion as a result of runoff. The Natural Resources Conservation Service, Nature Coast Soil and Water Conservation District and the County Extension Office, all offer programs and assistance to local farmers, residents, and businesses.

**TABLE 3-10
AIR POLLUTANT POINT SOURCE INFORMATION
CITRUS COUNTY**

FACILITY	SOURCE/CONTROL	ALLOWABLE EMISSIONS						
		VOC	SO ₂	PM	NOX	CO	PM ₁₀	OTHER
Sunshine Materials, Inc. dba Carroll Contracting	Asphalt Batch Plant w/ Wet Scrubber	•	•	•	•	•	•	
	Liquid Asphalt Heater	•	•	•	•	•	•	
Citrus Memorial Hospital	Type O-IV Waste Incinerator Gas Fired	•	•	•	•	•	•	HCI
Florida Power Corporation	400 MW Steam Unit #1	•	•	•	•	•	•	
	500 MW Steam Unit #2	•	•	•	•	•	•	
	Power Plant Siting Unit #5	•	•	•	•	•	•	
	Power Plant Siting Unit #4	•	•	•	•	•	•	
	Fly Ash Transfer from Unit #1			•				
	Fly Ash Transfer Solo Baghouse Unit #1 & #2			•				
	Fly Ash Storage Silo			•				
	Fly Ash Transfer from Unit #2			•				
	Fly Ash Transfer from Unit #2			•				
	Three 820 KW Diesel Generators	•	•	•	•	•	•	
	Four Cooling Towers	•	•	•	•	•		
	Bottom Ash Storage Silo			•			•	
Asphalt Production Corporation	Asphalt Batch Plant at 900 T/DA with Bar			•				
Crystal River Quarries	Dolomite Limestone Crushing/Drying/Grinding	•	•	•	•	•	•	
Seven Rivers Hospital	Pathological Incinerator with Afterburner			•				
	Pathological Incinerator with Afterburner	•	•	•	•			
Florida M & M	Cement Silo w/ Butler DF-4A Dust Collector		•				•	
	Butler DF-4A Dust Collector for Fly Ash Silo	•	•	•	•			
Sunshine Materials, Inc.	Cement Storage Silo		•				•	
	Fly Ash Storage Silo		•				•	
Ewell Industries	Concrete Block Plant – Cement Silo		•				•	
	Concrete Block Plant – Boiler	•	•	•	•	•	•	PB
Hooper Funeral Home	Power Pak Incinerator Model IE-43	•	•	•	•	•	•	
Director's Crematory	Human Crematory	•	•	•	•	•	•	
Amcon Products	Cement Silo w/ Portec DF-4 Baghouse			•				
	Fly Ash Silo w/Portec DF-4 Baghouse			•		•		

TABLE 3-10 (Continued)
AIR POLLUTANT POINT SOURCE INFORMATION
CITRUS COUNTY

FACILITY	SOURCE/CONTROL	ALLOWABLE EMISSIONS						
		VOC	SO ₂	PM	NOX	CO	PM ₁₀	OTHER
Metal Industries	Propane Fired Drying Oven	•	•	•	•	•	•	
	One Paint Spray Booth	•		•				
	Air Stripper #1 for GW Cleanup	•						
	Air Stripper #2 for GW Cleanup	•						
Beverly Hills Memorial	Crematory/Incinerator Fired on LP Gas	•	•	•	•			
Central Material Co.	Asphalt Batch Plant with Cyclone & Baghouse	•	•	•	•	•	•	
	Oil Heater	•	•	•				
Progress Materials, Inc.	MMBTU/HR Boiler Fueled by #2 Fuel Oil	•	•	•	•	•	•	PB
Ewell Industries	Cement Storage Silo			•			•	
	Fly Ash Storage Silo			•			•	
	Mixer & Truck Loading			•			•	
Strickland Funeral Home	Crematory Fired with LP Gas	•	•	•	•	•	•	
Coleman Concrete	Cement Storage Silo			•			•	
	Baghouse Exhaust			•			•	
	Cement Mixers			•			•	
Proline Boats, Inc. Fiberglass Boat Building Plant	Dust Collector for Woodwork Area #1	•						STYRENE
	Dust Collector for Woodwork Area #2			•				
Citrus Sand & Debris	ACI/allowed 20 tons/hr.	•	•	•	•	•	•	
Chase E. Davis Funeral Home	Human Crematory – Propane Fired			•				
Sunshine Materials, Inc.	Cement Silo #1			•				
Monex Resource, Inc.	Fly Ash Storage/Transfer Silo #1/ Stay Clean Baghouse			•				
Florida Gas Transmission Sta# 26	6500 BHP Natural Gas Fired Turbine Engine	•	•	•	•	•	•	
HCR Limestone Inc./Holnam	Limestone Crusher			•			•	

Key: VOC – Non Methane Volatile Organic Compounds NOX – Nitrogen Oxides

SO₂ – Sulfur Dioxide CO – Carbon Monoxide

PM – Particulate Matter PM₁₀ – Particulate Matter up to 10 micrometers

Source: Florida Department of Environmental Protection, Air Pollutant Information System: Master Detail Report, July, 1996

Prepared by: Citrus County Community Development Division, 1996

E. Commercial Uses of Natural Resources

1. Forested Lands

In 1980, forested lands within Citrus County accounted for approximately 60 percent of the land area or 236,229 acres (Forest Statistics for Florida, United States Forest Service, 1980). In 1995, the Department of Agriculture and Consumer Services, Division of Forestry estimated 124, 228 acres of forested lands in the County. This estimate demonstrates a decline of 47 percent or 112,001 acres of forested lands. The declining figures indicate that considerable lands have shifted into the rural/transitional land use category. These once forested lands are more than likely representative of the large residential developments of the County.

2. Fisheries

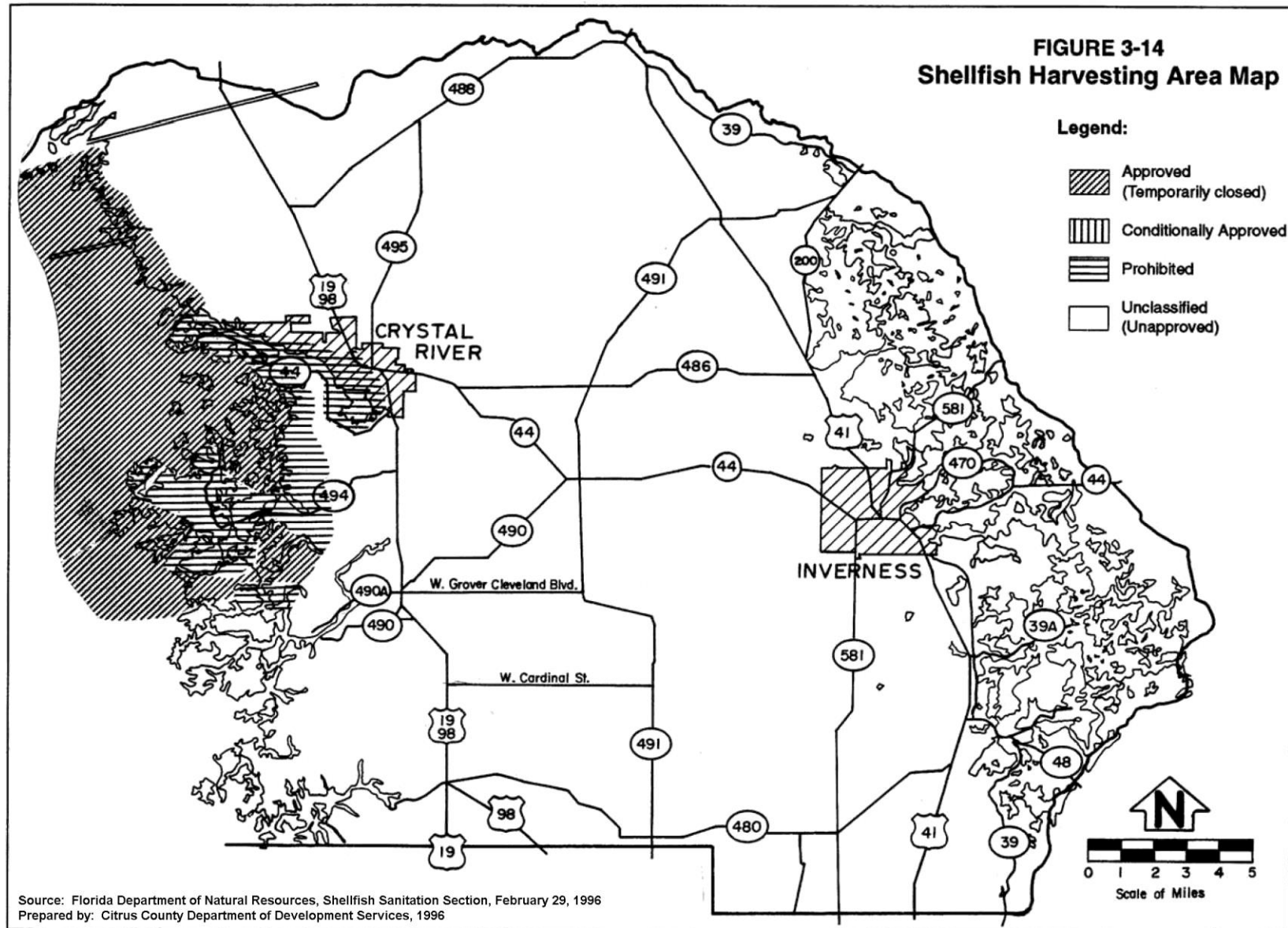
The Florida Fish and Wildlife Conservation Commission provide statistics for the weight and value of fishery landings in Florida. The available data represents the landings of Citrus County (Table 3-11). It is important to note that a portion of the landing value is not derived from our immediate coastal waters, but is representative of fish caught throughout the Gulf of Mexico.

TABLE 3-11
2003 FISHERY LANDINGS
CITRUS COUNTY

	Pounds (Millions)
Fish	0.97
Shellfish	1.49
Total	2.46

Source: Florida Fish and Wildlife Commission Marine
Fisheries Information Summary, 2003
Prepared By: Citrus County Community Development
Division, 2004

Shellfish harvesting areas along the coastal waters of Citrus County are regulated by the FDEP. The majority of the harvesting areas are classified as "approved" or "conditionally approved" areas. The third largest areas are classed as "prohibiting" shellfish harvesting. Coastal developed areas and discharge areas of poor water quality represent the areas in which are classified as "prohibited" or "conditionally approved". These areas are subject to continual water quality monitoring, in order to administer appropriate shellfish harvesting requirements and protect the health of potential consumers. Figure 3-14 illustrates the Shellfish Harvesting Area as approved by FDEP.



C. Mining

Mining activities in Citrus County include sand, limestone, dolomite, and phosphate operations. Citrus, Levy, and Hernando Counties are situated on geologic formations which are located close to the land surface. This explains why the tri-County area has a large percentage of limestone and dolomite mining. Figure 3-15 illustrates the approximate locations of phosphate, limestone, dolomite, and sand resources.

Figure 3-15 is provided to illustrate the general location of solid mineral commodities within the County, and to relate their distribution to the public lands and environmentally sensitive areas. In some cases, active or inactive mining sites may be located outside the defined resource areas. Smaller commercially viable deposits may not be represented in Figure 3-15.

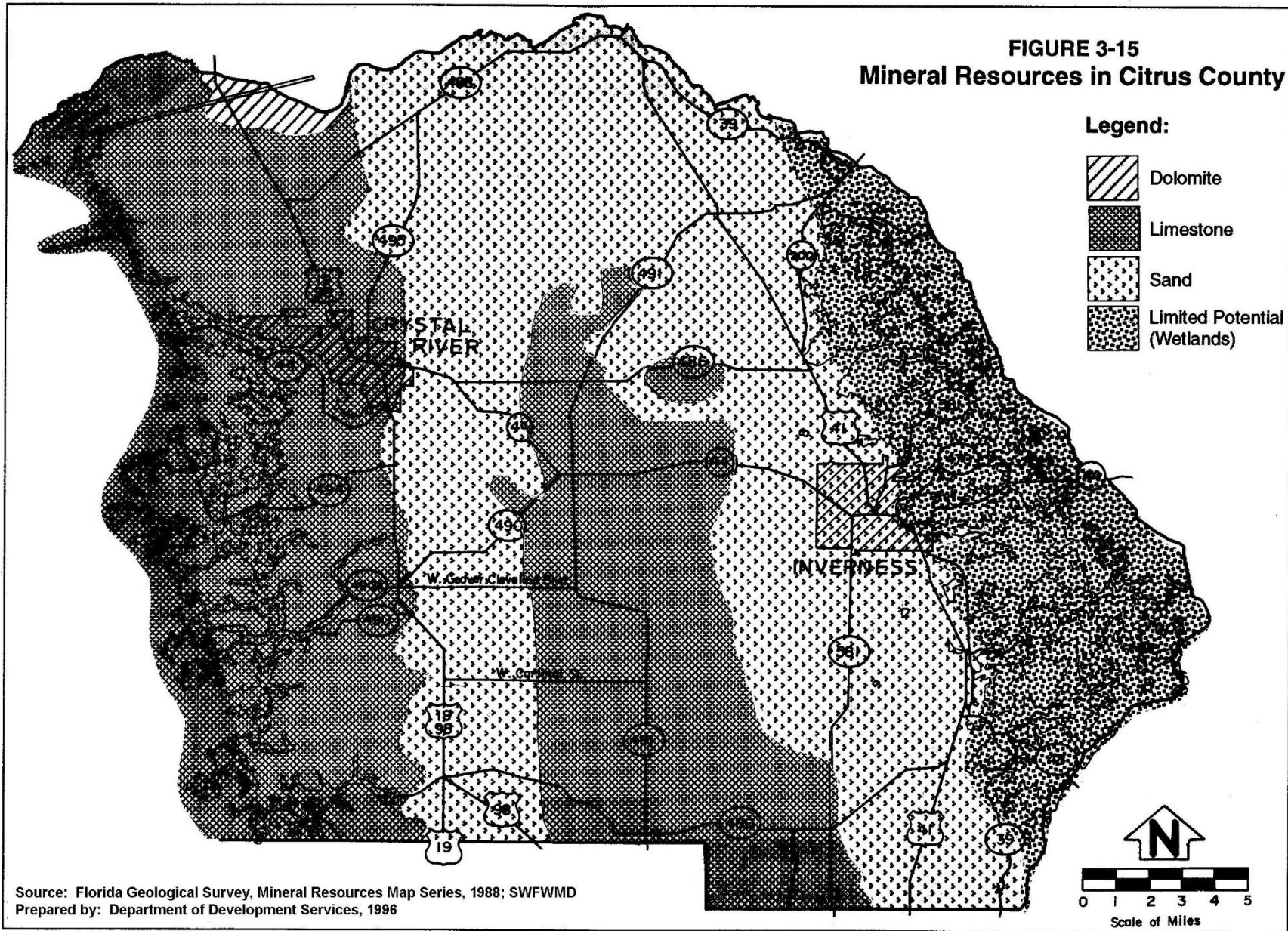
Limestone distribution spans from the northwest to the southeast areas of the County. These economic reserves are located at or near the land surface. Sub-economic reserves are found in the Tsala Apopka Plain and the southwest portion (Chassahowitzka) of the County. The principal use of limestone is for road base construction.

Dolomite distribution is confined to the northwest portion of the County (Figure 3-15). Both the economic and sub-economic resources are located in this area, while the economic reserves are located to the south. Dolomite deposits are closely associated with limestone reserves and are restricted to three areas of the state. The primary use of dolomite is for soil conditioning.

Sand resources in the County are located along the east and west slopes of the Brooksville Ridge (Figure 3-15). These sand reserves illustrate only the larger deposits and do not incorporate less extensive reserves.

Phosphate deposits are located in the eastern portion of the County (Figure 3-15). These resources include hardrock phosphate reserves which have been sought both historically and presently. The most notable areas are located along the US-41 corridor from Hernando to Inverness.

Mining in the County includes phosphate, limestone, dolomite, and sand operations. These operations are representative of 0.13 percent of the County land area. The mining commodities, companies, and locations are described in Table 3-12.



**TABLE 3-12
ACTIVE AND INACTIVE MINES IN CITRUS COUNTY**

Company Name	Commodity & (Number of Sites)	Section	- Township	- Range
Allen's Pit	Sand	29	18	18
Carroll's Pit	Sand	32 & 33	18	18
Ralph Rook's Pit	Sand	30	18	18
Sand Land	Sand	5	18	19
Croft Pit	Sand	3	19	19
Bass/Rooks Pit	Sand	28	19	18
Material Exchange	Sand	19	19	18
Frasure Hull Peach Orchard (Multiple Owners)	Sand	18 & 19	19	18
Manko Company, Inc.	Phosphate (1)(A)	5	18	19
Carroll Contracting/SMI	Limestone (1)(A)	32 & 33	18	18
Crystal River Mining	Limestone (1)(A)	15 & 16	18	19
		21 & 22	18	19
	Dolomite (1)(I)	34 – 36	17	16
	(1)(I)	1 & 2	18	16
		30	17	17
Florida Rock Industries	Limestone (A)	36	20	19
	(A)	1 & 2	21	19
	(A)	12	21	19
	(A)	7	21	20
Citrus Mining & Timber, Inc.	Limestone (A)	36	20	19
(Independent Aggregates)				
Holnam, Inc. / HCR	(A)	16 & 17	17	16
Limestone, Inc.		20 & 21	17	16
		28 & 29	17	16
	(I)	14 – 16	17	16
		22 – 28	17	16

Note: A = Active I = Inactive

Source: Florida Mining Atlas: A Guide to Mineral Resource Management, Appendices, 1982

Citrus County Division of Planning, 1988

Prepared By: Citrus County Community Development Division, 1988

F. Hazardous Waste

Hazardous waste management is an emerging issue in Citrus County. The County has implemented a household hazardous waste management program with a permanent collection site. The County also coordinates the transportation of wastes for small quantity generators and electronics recycling. For further detailed information in reference to hazardous wastes, refer to the Solid Waste Subelement of the Infrastructure Element. Passive Radon Controls, as stated in the Florida Building Code, are recommended for the areas shown in Figure 3-16.

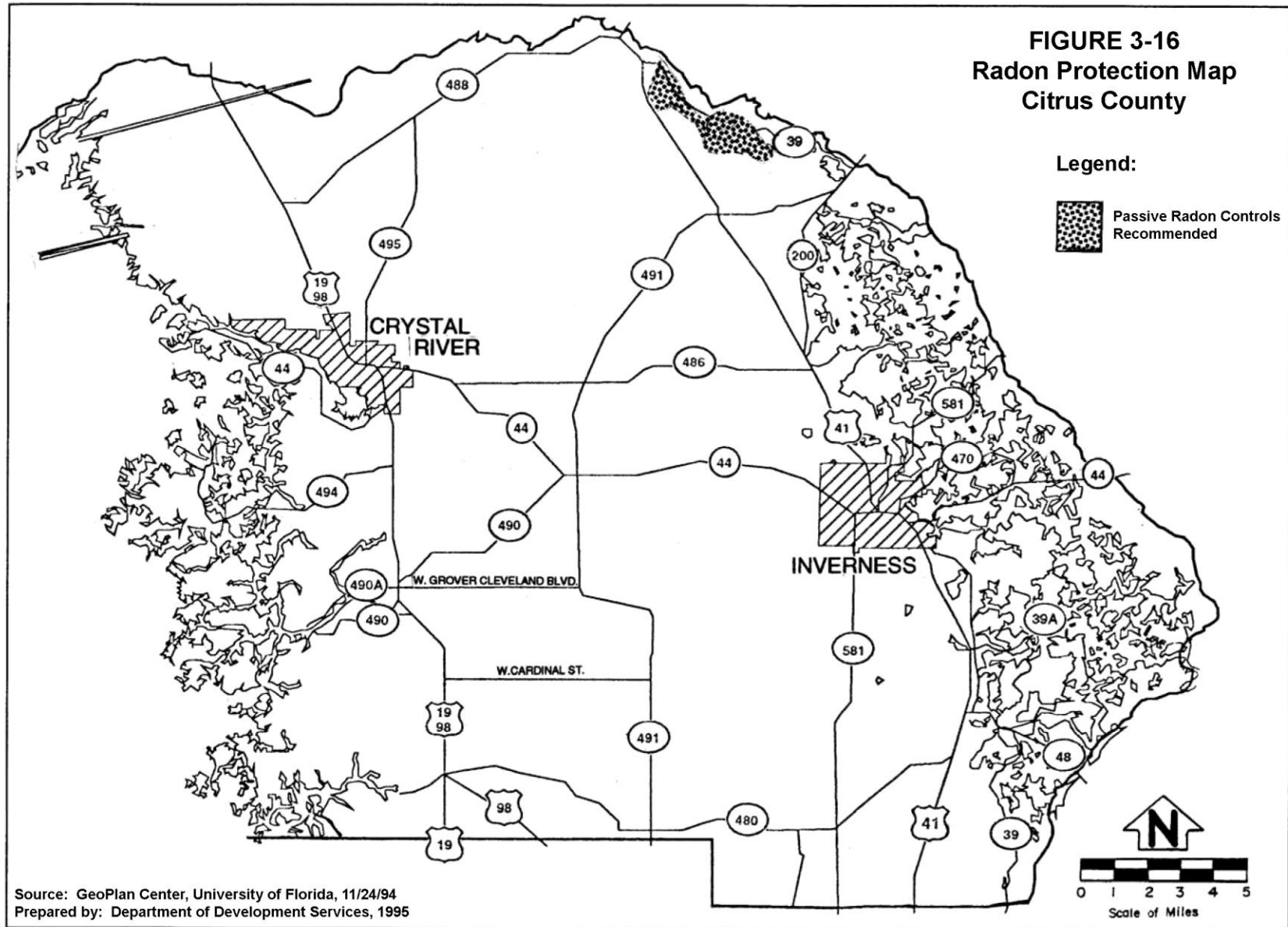
Radon Contamination

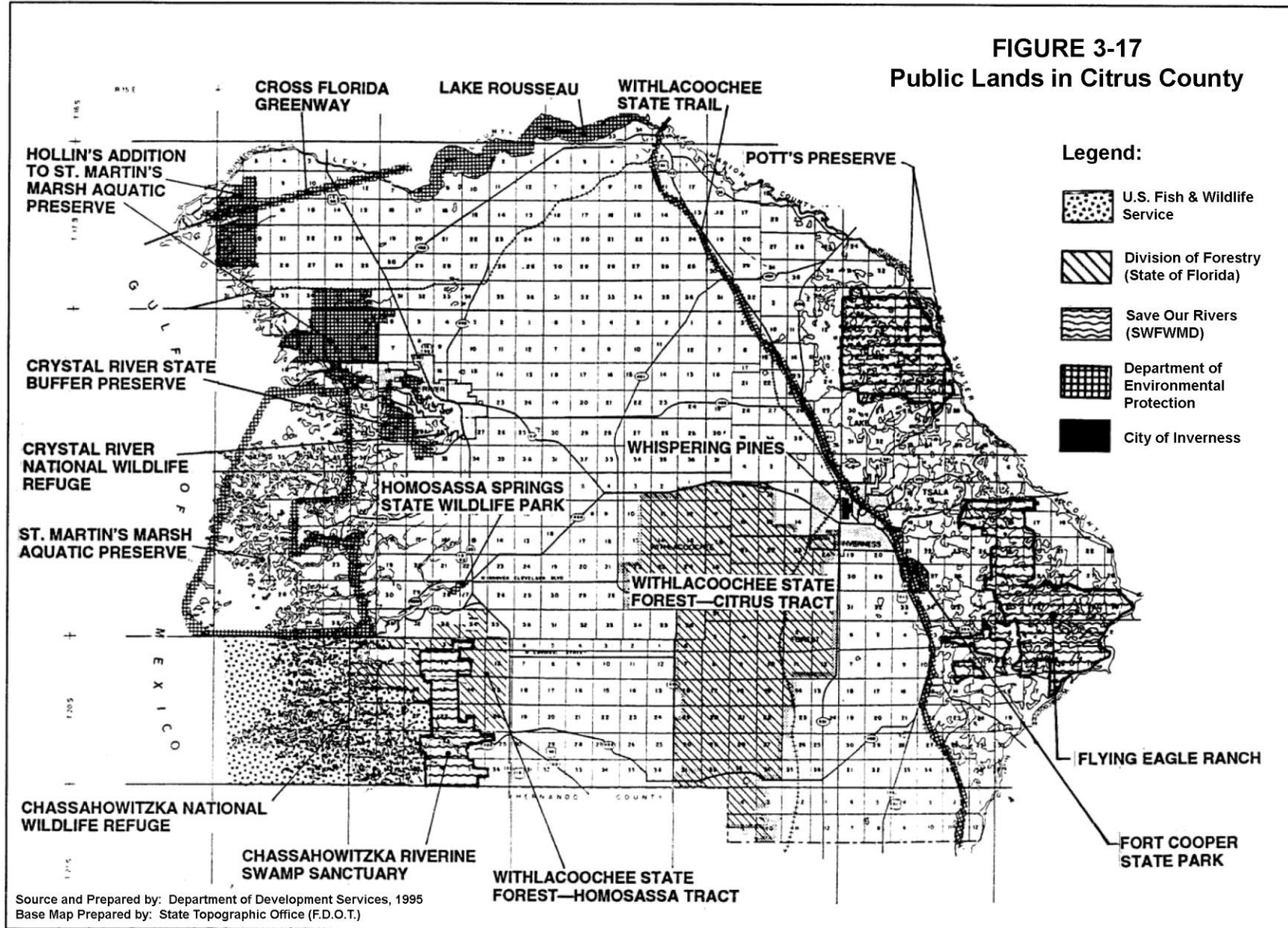
Radon is a naturally occurring radioactive gas which is derived from the decay of uranium found in soils and mineral deposits. Within the County these soils and mineral deposits are associated with past and current phosphate mining operations. The location of phosphate soils extends along US-41 and CR-39 corridors, as well as portions of the Withlacoochee State Forest.

There are two major development related concerns for long-term exposure to radon: 1) location of soils containing phosphate, and 2) the use of phosphate soils for fill material under enclosed structures. Preventing the use of phosphate soils for fill under enclosed structures can be an effective measure to reduce unnecessary distribution throughout the County.

G. Conservation and Recreation Lands

Approximately one-third of the acreage within Citrus County is held in public ownership as conservation and recreation lands. These tracts encompass a variety of habitats and are managed by a number of regional, state, and federal agencies. Most of these sites are substantially complete with only a few privately owned inholdings or adjacent properties identified for purchase. No new large acquisition sites have been identified within the County. A list of the public lands, their managing agency, acreage, and current recreational uses is provided in Figure 3-17 and Table 3-13.





1. State Acquisition Programs

Public ownership of conservation lands in Citrus County date back to the 1930's. The State initiated Preservation 2000 (P-2000), an ambitious land preservation program in 1990. P-2000 provided funding for the acquisition of conservation lands through several programs including the Conservation and Recreational Lands (CARL), Florida Communities Trust (FCT), Save Our Rivers (SOR), and Rails to Trails. Large tracts of land were acquired to enhance the existing holdings. Properties acquired through the P-2000 program include Cross Florida Greenway, Potts Preserve, Lecanto Sandhill tract and Annutteliga Hammock tract of the Withlacoochee State Forest. Preservation 2000 has been followed by the Florida Forever Program. Like P-2000, Florida Forever provides funding for the acquisition of public conservation and passive recreational lands. No new natural areas have been proposed for acquisition in Citrus County under this program. Florida Forever funding is being used to acquire outparcels and perimeter tracts to complete the coastal conservation areas. The McGregor Scout Camp is the most extensive tract currently under acquisition. It unexpectedly became available for acquisition in 2003.

2. Proposed Acquisition Sites

Florida Springs Coastal Greenway

This Florida Forever project identifies tracts to create and enhance a coastal conservation corridor along the Gulf shore of Citrus County. The project strives to link the Chassahowitzka National Wildlife Refuge with the Crystal River State Park and St. Martins Marsh Aquatic Preserve. The entire project covers over 41,000 acres in several counties. As lands are acquired they are incorporated into existing State conservation projects for management purposes.

McGregor Smith Scout Reservation

The McGregor Smith Scout Reservation became available for public purchase in 2003. Southwest Florida Water Management District (SWFWMD) has pursued this valuable conservation opportunity as an addition to Flying Eagle Ranch. The project site is 4,048 acres in size.

Sweet Gum Cave

This cave is part of the Southeastern Bat Maternity Cave project currently included on the Florida Forever list. The cave is located on 10 acres of upland hardwood hammock near the Citrus Tract of the Withlacoochee State Forest.

3. Public Land Descriptions

a. Federal

Chassahowitzka National Wildlife Refuge

Acreage: 30,500 acres
 Managing Agency: USFWS
 Location: West of US-19. Extends from Homosassa River south 12 miles from Chassahowitzka River to Raccoon Point.
 Acquisition: Established in 1943 to benefit waterfowl
 Description: The site is predominantly salt marsh, hardwood swamp, mangrove, upland forest, and open water. There are no facilities or services. Access is by boat only. Speed Zones are in effect between April 1 and August 31. Airboat traffic is limited to Hernando County waters on posted routes, and by permit. Camping and fires are prohibited.

Crystal River National Wildlife Refuge

Acreage: 45 acres
 Managing Agency: USWFS
 Location: Kings Bay in Crystal River
 Acquisition: Funds raised by citizens of Citrus County in conjunction with the Nature Conservancy. Purchased by the Federal government in August 1983.
 Description: This site consists of twenty hydric hammock islands, totaling 33.12 acres and the surrounding coastal waters. There are 30 natural springs discharging 600 million gallons per day. There are no facilities or services on site. Access is only by boat. Speed Zones are in effect between September 1 and April 30, and November 15 through March 31.

b. State

Acreage: Managing Agency: Location:	Chassahowitzka River and Coastal Swamps 5, 677 acres SWFWMD West of US 19 in southwest Citrus and northwest Hernando Counties, borders Chassahowitzka National Wildlife Refuge to the west, Chassahowitzka Wildlife Management Area to the South, and the Homosassa Tract of the Withlacoochee State Forest to the north. Access is by way of US-19 South of Homosassa Springs to Miss Maggie Drive (CR-480) to end.
Acquisition: Description:	Purchased under the Save Our Rivers Program in 1990. The site includes nearly two miles along the Chassahowitzka River, three tributaries (Potter Creek, Salt Creek, Baird Creek), and the Chassahowitzka Springs Group. The site contains salt marsh, pine flatwoods, cypress swamp, and improved pasture. There is a campground with boat ramp, store, canoe/boat rentals, 56 RV sites, and 32 primitive campsites. The campground managed by Citrus County Division of Parks and Recreation by contract.
Acreage: Managing Agency: Location: Acquisition:	Cross Florida Greenways State Recreation and Conservation Area 77,000 acres, 1,457 acres in Citrus County. FDEP, Office of Greenways & Trails & USDD, Army Corps of Engineers Gulf of Mexico to the St. John's River. Gulf of Mexico to Lake Rousseau in north Citrus County. Cross Florida Barge Canal authorized by Congress in 1942. Completion of 25 miles of channel (including Citrus County) by 1972. Project halted and ultimately deauthorized. Ownership of acquired lands transferred to State of Florida. Legislation specifically requires a management plan that will convert former barge canal lands into a continuous cross-state greenway for recreational and conservation activities.
Description:	Much of the greenway within Citrus County consists of highly disturbed areas along the Barge Canal. The Canals consists of a 150-foot wide channel with 250-foot wide water surface. Average depth is 13-feet. Uplands consist of spoil islands, spoil berms, and disturbed walkways which are being recovered by pioneering vegetation. The area is of some historical significance. Fossils and artifacts were unearthed

Conservation Element

during construction of the channel. There is a boat ramp just east of US-19 on south shore, picnic sites, restrooms, playground, shelters, fishing docks, observation towers, boardwalk, and multipurpose trails. Backpack and youth camping are by permission only.

Crystal River State Archeological Site

Acreage: 14.74 acres
 Managing Agency: FDEP, Division of Recreation & Parks
 Location: One (1) mile west of US-19, two (2) miles north of Crystal River on N. Museum Point
 Acquisition: Private donation by three Citrus County Families in 1962
 Description: This site contains two large truncated “temple mounds”. One mound is a conical burial mound located on an irregular-shaped shell midden ridge. The second mound cluster contains a small oval-shaped shell midden mound, a circular burial mound, and two stele stones, located in a hydric hammock. Facilities include a visitor center/ museum, ½ mile of interpretive trail (with plaques), and two picnic tables. The site is of historical significance. It dates back 1600 years and is officially listed on the National Register of Historic Places. It became a National Historic Landmark in 1990.

Crystal River Preserve State Park

Acreage: 38,000 acres
 Managing Agency: FDEP, Division of Coastal & Aquatic Managed Areas
 Location: West of US-19 between Homosassa Springs and the Cross Florida Greenway. Serves as a buffer area to St. Martin’s Marsh Aquatic Preserve to the west
 Acquisition: Predominantly acquired as a series of tracts through the P-2000 and Florida Forever programs.
 Description: Coastal lands are marine tidal marsh and swamp with hundreds of islands in the Gulf of Mexico. Upland areas contain pine flatwoods, scrub, hardwood hammocks, and bottomland hardwood.
 Facilities and Services: Field office located off Old Tallahassee Road near the Curtis Tool intersection.

	Flying Eagle Ranch
Acreage:	17,092 acres
Managing Agency:	SWFWMD
Location:	Southeastern Citrus County bordered on the east by the Withlacoochee River, north by SR-44, and generally east by Tsala Apopka Lake Chain. Access is by way of US-41 East along Eden Drive to the Moccasin Slough Gate.
Acquisition:	Original acreage was purchased under the Save Our Rivers Program in 1987 for \$5,017,012.00
Description:	The property includes over five miles of frontage to the Withlacoochee River and its forested floodplain. It is covered in hydric and mesic hammock, hydric swamp, freshwater marsh, sand hill, flatwoods, cropland, and pasture. Recreational amenities include 13 miles of bicycle trail, nine miles of equestrian trails, over 16 miles of hiking/backpack trails, three primitive campsites, one equestrian campsite, two portable toilets, and hunting. Thirteen archaeological sites have been identified. Four are identified as significant in the Florida Master Site File, which is maintained by the Florida Department of State, Division of Historical Resources.

	Fort Cooper State Park
Acreage:	709 acres
Managing Agency:	FDEP, Division of Recreation & Parks
Location:	Two miles southeast of Inverness off US-41 on Old Floral City Road (State Road. 39).
Acquisition:	Purchased through the Land Acquisition Trust Fund in 1970.
Description:	The park is centered around Lake Holathlikaha, a spring fed lake surrounded by sand hill and hardwood hammocks, as well as, a marsh to the east. Amenities include a ranger station, two bathhouses/restrooms/dressing areas, drinking fountains, and outside showers, two picnic pavilions, hiking trails with interpretive plaques, and one equestrian trail. The park site is historically significant. Fort Cooper was named in honor of Major Mark Cooper. Utilized during the Second Seminole war, first as a scout post between 1836 and 1841, then a rendezvous and dispatch post until 1842.

Homosassa Springs Wildlife State Park

Acreage:	183 acres
Managing Agency:	FDEP, Division of Recreation & Parks
Location:	Main Entrance – US 19 – Homosassa Springs. West entrance to wildlife park on – Fish Bowl Drive – Homosassa Springs
Acquisition:	Purchased by State from Citrus County in January 1989 for \$3,449,600.00
Description:	The park is predominantly hydric hammock and wetlands surrounding the Homosassa Springs Group, a first magnitude spring group that forms the headwaters of the Homosassa River. A manmade canal named Pepper Creek, connects the US-19 entrance to the main park and is used to transport visitors from the Main entrance to the park by pontoon boat. The State Wildlife Park offers visitors an opportunity to see and learn about Florida's native wildlife as they stroll through a wetlands and hydric hammock on nature trails. Park rangers offer educational programs on the endangered manatees, alligators, and an American crocodile, and Florida's snakes and birds of prey. A floating underwater observatory in the main spring allows a close-up view of manatees and schools of saltwater fish. The children's Education Center provides hands-on exhibits. There are restrooms and a picnic area. The park is historically significant. It was first opened by Elmo Reed in the 1940's. Artifacts retrieved from these springs date back 8,500 years.

Pott's Preserve

Acreage:	9,432 acres
Managing Agency:	SWFWMD
Location:	Northeast Citrus County, west of Hernando and north of CR-581. Bordered on east by the Withlacoochee River. Access is by way of Turner Camp Road (SR-581) to either the Dee River Road Gate or Hooty Point Road
Acquisition:	Purchased under the Save Our Rivers Program in 1989 for \$12,198,846.00
Description:	Potts Preserve is located in the Tsala Apopka chain of lakes and includes portions of the Hernando Pool. The lands are a mixture of hydric and mesic hammock, hydric swamp, freshwater marsh, scrubby flatwoods, pine flatwoods, and improved pasture. Facilities include equestrian, hiking, and backpacking trails, campsites, a group camp, boat launch, and portable restrooms. Eight archaeological sites have been identified. Six considered significant in the Florida Master Site File listing.

St. Martin's Marsh Aquatic Preserve

Acreage: 23,123 acres
 Managing Agency: FDEP, Office of Coastal & Aquatic Managed Areas
 Location: West of US-19 between Homosassa Springs and Crystal River. Abuts north boundary of Chassahowitzka National Wildlife Refuge, north to southerly mean high water line of the Salt River.
 Acquisition: Designated an aquatic preserve on October 21, 1969 by resolution.
 Description: This aquatic preserve is predominantly wetlands and open water. It contains salt marsh, oyster reefs, tidal flats, marine grassbeds, mangrove forest, and hammock islands. Ten shell middens have been recorded with Florida Division of Historical Resources, (more likely to exist).

Withlacoochee State Forest (Annutelig Hammock)

Acreage: 5200 acres
 Managing Agency: FDOF
 Location: North and south of CR-480, east of Sugarmill Woods subdivision
 Acquisition: Acquired in 1999 through the CARL program.
 Description: This large tract was formerly part of the Sugarmill Woods subdivision. It contains extensive upland plant communities including sand hill, xeric and sand pine scrub, xeric and mesic hammock, and pine plantation. Public use facilities include hiking and equestrian trails.

Withlacoochee State Forest (Citrus Tract)

Acreage: 41,222 acres
 Managing Agency: FDOF
 Location: Central Citrus County. Majority of property is east of CR-491, south of SR-44, west of CR-581, and north of CR-480
 Acquisition: Federal Government land use project FLA-LV-3. Acquired between 1936-1939, at an average cost of \$4.20/acre. Managed by Soil Conservation from 1939-1954 and U.S. Forest Service from 1954-1958. Transferred to the Florida Forest Service in September of 1958 under a lease-purchase agreement. Title transfer to State of Florida in February 1983.
 Description: This tract includes a variety of upland plant communities characterized by well-drained soils. They include sandhill, xeric oak scrub, sand pine scrub, xeric hammock, mesic hammock, and pine plantation. Public use facilities include three improved campgrounds, equestrian trails and facilities, and hiking trails. The southern portion of the tract contains large sinks and a cavern system. Historically significant sites include the former site of Manfield, the original County seat, and two inactive cemeteries.

Withlacoochee State Forest (Homosassa Tract)
 Acreage: 5,190 acres
 Managing Agency: FDOF
 Location: South of Yulee Drive, west of US-19, north of Miss Maggie Drive, borders Chassahowitzka National Wildlife Refuge and Chassahowitzka River.
 Acquisition: Purchased for \$7.15 million in April 1992, under the CARL Program
 Description: This site contains a wide variety of natural communities including hydric hammock, estuarine tidal marsh, floodplain swamp, mesic flatwoods, dome swamp, maritime hammock, sandhill, scrubby flatwoods, spring-run stream, and improved pasture. No facilities or improvements are provided.

Withlacoochee State Forest (Lecanto Sandhills)
 Acreage: 1857 acres
 Managing Agency: FDOF
 Location: Between CR-491 and Homosassa Trail south of SR-44
 Acquisition: Purchased under the CARL program in 2001
 Description: This site contains a variety of upland plant communities typical of well-drained soils. Plant communities include sandhill, xeric oak scrub, xeric hammock, and sand pine scrub. Public facilities have not been installed. Hiking is available on firebreaks and existing unimproved roads.

Withlacoochee State Forest (Two-Mile Prairie)
 Acreage: 2,900 acres
 Managing Agency: SWFWMD and Florida Division of Forestry
 Location: Between CR-491 and CR-39, west of Stokes Ferry.
 Acquisition: Purchased jointly through the Save Our Rivers and Conservation and Recreational Lands programs.
 Description: This tract contains a variety of upland communities characterized by well-drained soils, marshes, and the southern bank of the Withlacoochee River. A trail network is accessible from CR-491 and includes bicycle, hiking, and equestrian trails. Canoeing and non-gas powered boating, fishing, primitive camping, and picnicking is also available.

Conservation Element

Attachment: Comp Plan Chapter 3 strike through and underline (12725 : CPA-21-05 – Evaluation and Appraisal Report (EAR) Amendments

Withlacoochee Trail State Park

Acreage: 46 miles
 Managing Agency: FDEP, Division of Recreation & Parks
 Location: Generally runs parallel to US-41 along east side of Citrus County.
 Acquisition: Purchased through the Rails to Trails program in 1989.
 Description: Entire trail is a paved bicycle/hiking lane. Traverses through rural development, sand hill, xeric hammocks, and other predominantly upland habitats. It intersects with Fort Cooper State Park where facilities and primitive camping is available. The trail is located on the former CSX Railroad right-of-way. CSX Railway played an important role in the early development of Citrus County.

Yulee Sugar Mill Ruins State Historical Site

Acreage: 6 acres
 Managing Agency: FDEP, Division of Recreation & Parks
 Location: 3 miles off US 19 on SR-490/Yulee Drive
 Acquisition: Presented to the Citrus County Federation of Women's Club in 1923, deeded to State in 1953
 Description: This site preserves the remains of a Sugar Mill, including boiler, chimney, mill machinery, three cooking kettles, two wells, and the cooling vat location pit. There is a picnic pavilion, picnic area, interpretive plaques, and restrooms. It is a historically significant site that was part of a sugar plantation owned by one of Florida's most outstanding historic figures, David Levy Yulee.

Conservation Element

TABLE 3-13 RECREATIONAL OPPORTUNITIES AT A GLANCE			HUNTING	FISHING	HORSEBACK RIDING	SWIMMING	CAMPING	YOUTH GROUP CAMPING	BACKPACK CAMPING	CANOEING	BOATING	DAY HIKING	NATURE APPRECIATION	PICNICKING	F; FACILITY N: NO FACILITY	BICYCLING	P: PAVED T: UNPAVED
AREA	AGENCY	ACRES															
Chassahowitzka National Wildlife Refuge	USFWS	30,500	•	•		•				•	•		•				
Chassahowitzka River and Coastal Swamps	SWFWMD	5,676		•			•		•	•	•	•	•	•F			
Cross Florida Greenways State Recreation and Conservation Areas	FDEP	1,457		•	•			•	•	•	•	•	•	•N		•U	
Crystal River National Wildlife Refuge	USFWS	45		•		•				•	•		•				
Crystal River State Archaeological Site	FDEP	15												•F			
Crystal River State Buffer Preserve	FDEP	32,000		•						•		•	•				
Flying Eagle Ranch	SWFWMD	17,092	•	•	•		•		•	•	•	•	•	•N		•U	
Fort Cooper State Park	FDEP	709		•		•	•		•	•		•	•	•F			
Homosassa Springs State Wildlife Park	FDEP	168											•				
Potts Preserve	SWFWMD	9,975		•	*		•		•	•	•	•	•	•N		•U	
St. Martins Marsh Aquatic Preserve	FDEP	23,123		•						*	•	•	•				
Withlacoochee State Forest (Annutteliga Hammock)	FDOF	5,200										•	•				
Withlacoochee State Forest (Citrus)	FDOF	41,222	•	•	•		•	•	•			•	•	•F		•U	
Withlacoochee State Forest (Homosassa)	FDOF	5,190			*		*		*			*	•	*			

Attachment: Comp Plan Chapter 3 strike through and underline (12725 : CPA-21-05 – Evaluation and

Conservation Element

TABLE 3-13 (continued) RECREATIONAL OPPORTUNITIES AT A GLANCE			HUNTING	FISHING	HORSEBACK RIDING	SWIMMING	CAMPING	YOUTH GROUP CAMPING	BACKPACK CAMPING	CANOEING	BOATING	DAY HIKING	NATURE APPRECIATION	PICNICKING	F; FACILITY N; NO FACILITY	BICYCLING	P: PAVED TT: UNPAVED
AREA	AGENCY	ACRES															
Withlacoochee State Forest (Lecanto Sandhills)	FDOF	1,857										•	•				
Withlacoochee State Forest (Two- Mile Prairie)	SWFWMD	2,980		•		•	•			•	•	•	•	•N		•	
Withlacoochee State Trail	FDEP	45 Miles			•							•	•			•P	
Yulee Sugar Mill Ruins State Historic Site	FDEP	6												•F			

Note: *Proposed

Source: www.dep.state.fl.us

Prepared by: Citrus County Community Development Division, 2005

III. CONSERVATION PLAN

A. Water Resources

1. Surface Waters

The surface waters of Citrus County play a vital role in the economy of our County and the lives of our citizenry. The health and vitality of our surface waters has a direct correlation to the continued health and well being of our community.

Citrus County is fortunate in having a number of quality studies conducted on its surface and ground water. These studies often looked at both historic and recent data and developed methodology to determine pollutant types, sources, and corrective action.

Citrus County is split between two major watersheds: the Withlacoochee and the Springs Coast. Southwest Florida Water Management District has adopted comprehensive watershed management plans for each basin. These plans serve to integrate and analyze existing data on each watershed, identify and prioritize water resource issues, develop strategies to address the issues, identify funding sources, and implement monitoring procedures. Other water management initiatives within these basins include the Crystal River and Kings Bay Surface Water Improvement Plan (SWIM), Minimum Flows and Levels program (MFL), and the Florida Springs Task Force.

The Florida Department of Environmental Protection issued a Southwest Florida District Water Quality Assessment 305(b) Report in November, 1994. The overall water quality is described as “GOOD”, the highest of four categories, except the lake chain region of the Withlacoochee River which is rated “FAIR”, the second highest category.

While the classification of “GOOD” is certainly encouraging, it is misleading on two fronts. First, the classification is from a statewide context and compared to water bodies in urban or industrial areas, it is not surprising that water quality in Citrus County is “GOOD”. Second, while our overall quality is still high, to locals and those who have visited our waters for many years, it has obviously degraded from historic levels and corrective action is called for to curb the observed trends.

The Withlacoochee River has a dynamic recharge/discharge relationship between its surface waters and the underlying ground water. Hydrologic studies performed by the US Geological Survey indicate that at any given time, a portion of the river may be a groundwater discharge zone while another portion is a recharge zone. This unique feature causes the river to be a complex recharge/discharge zone for the Floridan Aquifer. In this way, surface and ground water quality and quantity are intimately linked. The Withlacoochee River Comprehensive Watershed Management Plan (2001) reported the surface and ground water quality as very good but very

vulnerable to nonpoint source pollution. Major issues identified for this watershed include flood plain protection and a flood management program, improving the linkage between watershed management and land use planning, septic leachate, and invasive exotic plant species. Minimum Daily Flows and Levels for waterbodies within this basin are scheduled for adoption as shown below.

Table 3-14
Minimum Daily Flows and Levels
Adoption Dates for Waterbodies in the
Withlacoochee River Watershed

Waterbody	Scheduled Date of Adoption
Tsala Apopka	2005
Citrus County Lake (Ft. Cooper)	2005
Lower Withlacoochee River System	2010-2017
Middle Withlacoochee River System	2010-2017

Source: SWFWMD, 2005

The Springs Coast Watershed encompasses the western half of the County. The Crystal, Homosassa, Halls, and Chassahowitzka rivers and associated coastal aquatic resources are dominant features of the watershed. The Homosassa and Halls Rivers, Crystal River, King's Bay, and Chassahowitzka River are all recognized as Outstanding Florida Water Bodies. The watershed is characterized by its karst geology and many springs. Coastal springs constitute the major source of surface water in this area. The Crystal River and King's Bay SWIM (1980) plan found the springs discharge contributes 90 percent of the nitrates in King's Bay. This finding has been substantiated by more recent studies of the coastal springs and rivers. The Springs Coast Comprehensive Watershed Management Plan (2001) identified critical issues in this watershed as nitrate concentrations in spring discharge, reduction of septic leachate, addressing data gaps and monitoring needs, controlling exotic invasive plants, and establishing regulations for karst sensitive areas. Minimum Daily Flows and Levels for waterbodies within this basin are scheduled for adoption as shown below.

Table 3-15
Minimum Daily Flows and Levels
For Springs Coast Watershed

Waterbody	Scheduled Date of Adoption
Chassahowitzka River System	2008
Chassahowitzka River Spring	2008
Homosassa River System	2009
Homosassa River Spring	2009
Kings Bay Spring	2009
Kings Bay Spring	2010-2017

Source: SWFWMD, 2005

Citrus County has focused on three major issues threatening its surface waters. Citrus County Utilities Division is addressing the problem of ineffective package plants and

septic systems near the coastal waters. The County is concurrently addressing land use compatibility concerns as they relate to water bodies, wetlands, and spring protection. Citrus County adopted Wastewater and Water Reuse Master Plans in 1999. The Wastewater Master Plan outlined the County's intent to provide for an orderly expansion of wastewater services while eliminating ineffective package plants and septic tanks which threaten the water quality of area lakes and rivers. Current projects within this plan include the installation of centralized sewer collection in the Homosassa, Ozello, and Chassahowitzka areas, decommissioning the ineffective Riverhaven wastewater treatment plant, and obtaining funding for a wastewater reuse treatment and distribution facility. The Water Reuse Plan established a wastewater reuse system to make beneficial use of increased wastewater flows in the coastal and lakes regions. The County should continue to prioritize projects and identify funding sources for wastewater projects that address water quality concerns.

The County has adopted several initiatives to address land use concerns in the coastal and lakes regions. A Coastal High Hazard Ordinance that restricted land use density and intensity was adopted in 2004.

2. Floodplains

The County has implemented strict land use regulations to limit both the number and type of development within floodplains. In addition, all new structures must be constructed in compliance with FEMA based floodplain regulations contained within the County's LDC.

Since adoption of the LDC, three large storm events, the March storm of 1993, Tropical Storm Josephine in October, 1996, and the hurricane season of 2004, have impacted Citrus County's floodplains. Post storm assessments reaffirm that structures constructed to meet the County's floodplain regulations received less damage by flooding waters as opposed to older, lower structures. The County should continue to actively enforce compliance with its floodplain regulations and encourage owners of pre-ordinance structures to elevate when practical. The County has established a system to track cumulative damage of floodplain structures.

3. Groundwater Resources

The County's groundwater supplies are good to excellent in both quality and quantity. Since there are often no, or limited, confining layers to the Floridan aquifer, this valuable resource is vulnerable to contamination. Groundwater resources are particularly vulnerable in karst sensitive areas where karstic limestone is located very close to the surface (Figure 3-18).

The land area identified in on the Citrus County Springs and Springsheds Map (Figure 3-5.1) is the area that should be subject to protective measures. The combined springshed is considered to be the area where the development of land will have the most direct impact on the springs and spring quality. As shown, this is nearly the entire County.

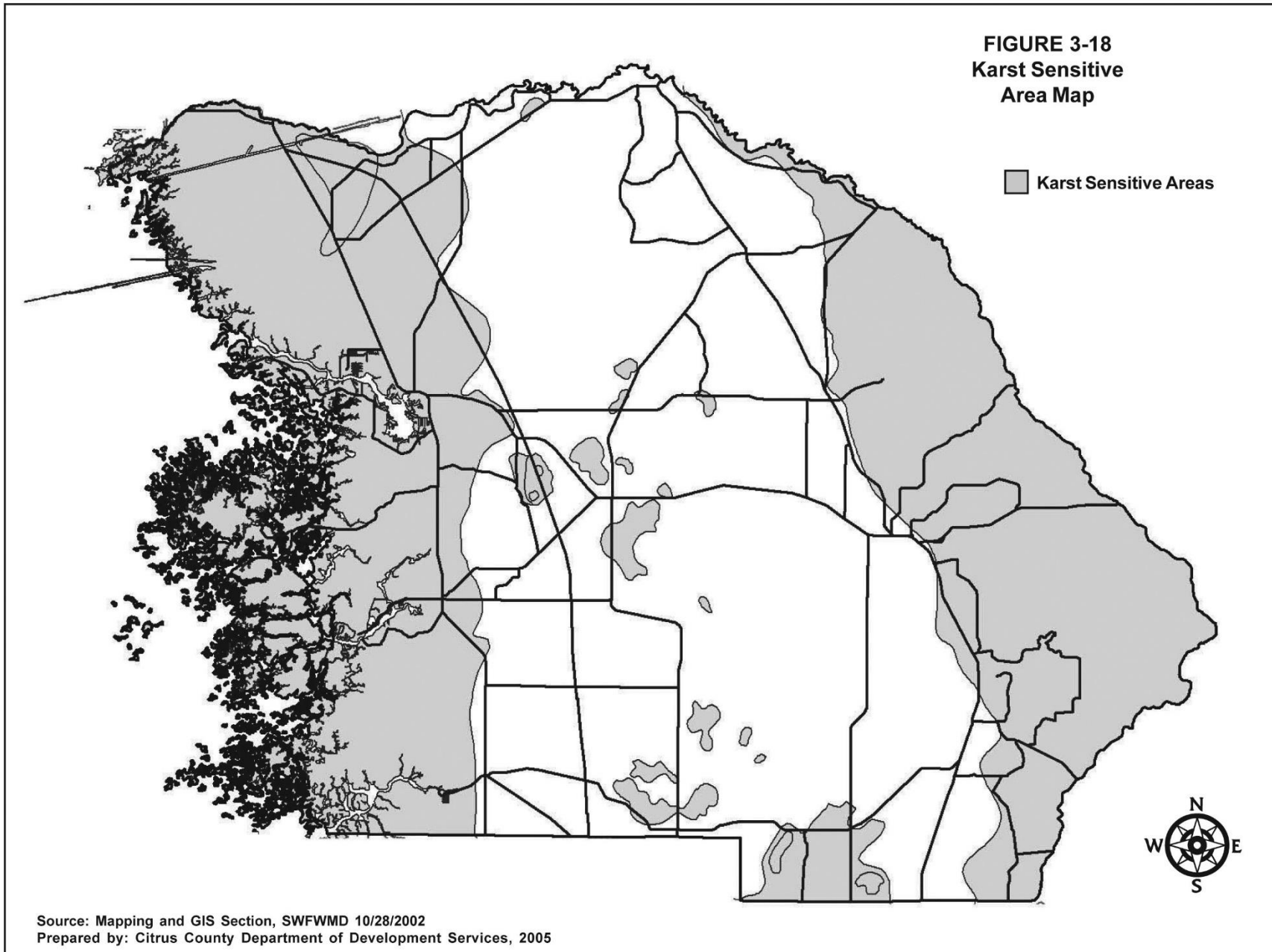
The Citrus County LDC contains generalized wellhead protection regulations, but more site-specific protection standards utilizing all available data would afford protection that is more complete. The Homosassa Special Water District with the assistance of the Florida Rural Water Association and FDEP developed a detailed wellhead protection plan for their wells.

The increasing growth in the Tampa Bay Water area has resulted in Tampa Bay Water developing a resource plan, which identifies future water sources. This report includes areas within the Withlacoochee region and Citrus County. In order to assure protection of the region's natural resources and sufficient supply for existing and future residents the County has adopted regulations, which will prohibit out of County export unless the receiving community has exhausted all local sources. The County has also taken action to assure that all withdrawals do not have an adverse effect on the environment.

Water conservation is an important component to protecting our water supplies. There are many techniques, which can serve to reduce water consumption without drastic regulations. The County has adopted standards within the Land Development Code to encourage xeriscaping and the use of native species in landscaping. The County should continue to assist the district with their water conservation program and provide incentives for xeriscaping, reuse, and public information.

Emergency conservation of water is administrated by the SWFWMD under enabling legislation of Section 373.246, F.S. A water shortage plan was adopted as rule by the SWFWMD. This rule provides for water use restrictions and enforcement procedures.

The County ~~should~~will continue to assist the district in the implementation of the ~~Water Shortage Plan~~. Regional Water Shortage Supply Plan. In 1997, the Florida Legislature significantly amended Chapter 373, F.S., to include specific regional water supply planning requirements for the Water Management Districts (WMDs). The statutes were revised to require the preparation of a Districtwide Water Supply Assessment; the designation of one or more water supply planning regions within each district. The statute requires the reassessment of the need for a RWSP every five years, and that each RWSP shall be based on a minimum 20-year timeframe (Section 373.0361, F.S.). In response to the amended statutes, the District completed a Water Supply Assessment in 1998 that quantified water supply needs through the year 2020 and identified areas where future demand could not be met with traditional groundwater sources (SWFWMD, 1998) In addition, the County should provide specific measures for local concerns and conservation programs.



B. Ecological Communities and Wildlife

The number and acreage of public lands acquired for natural resources and recreation has substantially increased since 1989. The State owns and manages large tracts of conservation lands along the Withlacoochee River, Lake Tsala Apopka, and the gulf shore. Many of the projects undertaken as part of the Save Our Rivers Program, P2000, and Florida Forever have been completed. The State continues to acquire inholdings and perimeter sites to complete projects. The most notable and largest recent addition to the County's public conservation lands is the McGregor Smith Scout Camp parcel. This property became available to purchase in 2003. Southwest Florida Water Management District is acquiring it as a part of Flying Eagle Ranch. The State has continued its efforts to complete and connect public lands into greenways and wildlife corridors. The Florida Forever project, Coastal Springs Coast Greenways, targets connecting parcels for acquisition. Conservation lands within the Springs Coast watershed are as follows:

Table 3-16
Conservation Lands Within the
Spring Coast Watershed

Names of Conservation Tract	Acreage (2001)	Managing Entity
Withlacoochee State Forest Two-Mile Prairie	159,306	FDOF and SWFWMD
Potts Preserve	9,432	SWFWMD
Flying Eagle Ranch	16,347**	SWFWMD
Fort Cooper State Park	741	FDEP
Chassahowitzka National Wildlife Refuge	30,842*	USFWS
Chassahowitzka Wildlife Management Area	27,262*	FWC
Chassahowitzka River and Coastal Swamp	5,680	SWFSMD
Crystal River National Wildlife Refuge	80	USFWS
Crystal River Preserve State Park	27,295	FDEP
St. Martins Marsh Aquatic Preserve	23,120	FDEP
Annutteliga Hammock	8,600	FDOF and SWFWMD
Homosassa Springs State Park	178	FDEP

Source: Florida Natural Areas Inventory, 2005

*located in multiple counties

** acquisition still in progress

Except for those outholdings where existing development has occurred, a vast majority of Citrus County's west coast is in public ownership.

Upland Habitats are represented by the Citrus Tract, Lecanto Sandhills tract, Annutteliga Hammock tract, and the Two Mile Prairie Tract of the Withlacoochee State Forest and Fort Cooper State Park (709 acres). Two additional acquisitions, more recreational in nature, are the Cross Florida Greenway and the Withlacoochee State Trail, a lineal park that extends the entire north-south length of the County on an old CSX railroad bed.

The presence of large natural tracts in public ownership increases the potential for long-term survival of both listed and unlisted wildlife. In addition, adoption of regulations within the LDC to conduct biological surveys and preserve native habitat protection further mitigates development impacts.

A potential threat to some species is the degradation of habitat from invasive exotic plant infestation. The Citrus tract's colonies of red-cockaded woodpeckers lose foraging range due to the presence of the exotic weed cogon grass. Along the coast, the South American Brazilian Pepper tree is becoming an increasing problem. Proper management such as control burning can often reduce exotic weed presence but in some cases more direct measures are necessary. The County should continue to support land management programs to maintain quality habitat and assist in the elimination of exotic weed sources when feasible.

A Manatee Protection Plan was adopted in September, 1991 to provide for long term protection and recovery of this endangered aquatic mammal. This plan along with coastal speed zones and manatee sanctuaries has resulted in a significant reduction of man-related deaths of manatees in Citrus County waters. The County should continue to work with FWC and USFWS to assist manatee population recovery and resolve man/manatee interaction concerns.

Aquatic weed problems still plague many of the County's surface waters. Improvements in chemical controls and application and methods such as mechanical harvesting and biological control have reduced the County's use of herbicides. Due to the number of wintering manatees dependent on hydrilla beds in King's Bay, the County coordinates weed control with FDEP and USFWS and ceases all aquatic weed control in the winter months. The County should continue to develop and use innovative techniques to increase aquatic weed control efficiency.

Originally, both the Comprehensive Plan and the Land Development Code contain language which requires a "no net loss" plan for wetlands. While no quantitative analysis of wetlands was done in 1985, current wetland plant community's data from FWC indicated 76,667.3 acres of wetlands in Citrus County.

Many species of wildlife can utilize residentially developed land, either in transition between public land tracts or permanently, if sufficient supporting vegetation is provided. The County, through its Agricultural Extension office and other avenues, should educate and promote the use of best management practices by the public both residentially and commercial. The County, through its LDC, promotes the retention of existing trees and vegetation and the use of native or beneficial landscaping by developers and homeowners.

C. Air Quality

Air quality in Citrus County is excellent. Current growth trends are directed towards development patterns which do not degrade ambient air quality significantly. As the County continues to expand, air quality monitoring should be considered to determine if ambient air quality is being degraded. The development of a feasibility study directed towards determining appropriate avenues for the maintenance of air quality, such as monitoring alert/advisory programs, and adoption of standards, should be conducted. The location of transportation arterials should be designed to minimize and mitigate impacts of vehicular emissions on residential areas.

D. Soil Erosion

Soil erosion within Citrus County is almost entirely confined to development and not agriculture. Agriculture is rapidly declining within Citrus County and the types of agricultural practices used do not generate erosion problems. Development of roadways, subdivisions, and other related site developments can cause soil erosion. The Land Development Code requires the stabilization of soils within subdivision and roadway construction. The County's LDC also contains regulations requiring soil erosion controlling practices for individual development sites.

Agricultural land uses within the Central Ridge include silviculture and cattle production. The latter agricultural use retains the land in pasture, causing minimal concern for erosion. Likewise, pine plantations and pine straw harvesting leave the soil surface undisturbed. The County continues to promote and encourage Best Management Practices for harvesting and management of pine plantations.

E. Commercial Uses of Natural Resources

Commercial uses of natural resources of Citrus County include: forestry, fisheries, mining, and recreational services. These commercial uses with the exception of mining utilize renewable living resources of the County.

The County should maintain and enhance its strong position towards the protection of the natural resources necessary for supporting our forestry, fisheries, and recreational industries. The protection is extremely important as a portion of the County's population relies on these resources for income.

The passage of the inshore net ban law has had a significant impact on commercial fishermen in Citrus County. The County should continue to support alternatives to net fishing such as shellfish harvesting, aquaculture, and ecotourism.

Mining resources include limestone, dolomite, sand and phosphate. Citrus County, as well as the surrounding counties, has abundant mineral resources at or near land surface. This fact makes the mineral resources economical to exploit. The County should continue to recognize the areas of important mineral resource and regulate the location of land uses for the protection of economically recoverable mineral resources. The County should also support the state in assuring proper reclamation and the use of BMP's by the mining industry.

F. Hazardous Waste

Hazardous waste management is a relatively new role for Citrus County. The hazardous waste management program is addressed more extensively in the Solid Waste Subelement of the Infrastructure Element.

Radon Contamination

The Citrus County Board of County Commissioners recognized the concerns of radon gas exposure. However, 1988 state legislation prohibits local governments from regulating exposure to radon gas. The Department of Community Affairs has developed a radon map for the County. The County should make this map available to all interested parties.

G. Conservation and Recreation Lands

Conservation and recreation lands within Citrus County include federal and state natural reservations. These natural reservations are managed by various agencies each having their own objectives for land management. All these reservations are unique and provide the County with outstanding resources.

The County should assist these acquisition programs with technical assistance and program support. Federal and State natural reservations should not be sought for public purposes which conflict with their respective agency objectives.

H. Wetlands

One of the most difficult aspects of environmental protection for local governments is the evaluation and permitting of environmental impacts that is within the jurisdiction of other state and federal agencies. The staffing of person(s) with sufficient expertise to evaluate environmental conditions such as wetlands can be considerable. Aspects of environmental evaluation such as wetlands delineation is often an interpretive process and thus subject to challenge and litigation. This, combined with current Property Rights protection and case law, creates a difficult and complicated venue for local government regulation.

Historically, Citrus County allowed a percentage of wetland impacts with limited regard to environmental impact. This approach resulted not only in direct loss, but in long-term degradation caused by drainage alteration or historical connections.

During the adoption process of the Citrus County Comprehensive Plan, the County abandoned this approach and adopted more stringent regulations based on a “no net loss” approach. These regulations, developed under the Stipulated Settlement process, combined with the emplacement of strict density criteria for environmentally sensitive lands, curbed wetland impacts. The County later amended its wetland policies and regulations to recognize the Ecosystem Management concept adopted by FDEP. This

Conservation Element

approach allowed mitigation to compensate for wetland loss when the overall ecosystem benefited. The application of Ecosystem Management resulted in mitigation being provided distant from the site of wetland impact. The County is concerned about the loss of wetlands within highly visible commercial corridors and suburban landscapes. The County should amend its wetland policies and regulations to address concerns about off-site mitigation and the public benefit of wetlands impacts.

IV. GOALS, OBJECTIVES, AND POLICIES

GOAL #3 - Citrus County shall preserve, protect, and restore its natural resources for the health, safety, and welfare of its citizens

Water Resources

- Surface Water

- Objective 3.1 Maintain and restore surface water quality consistent with state surface water classification and respective surface water quality standards.
- Policy 3.1.1 A minimum setback of 50 feet from water bodies and wetlands shall be established and maintained for all new subdivided parcels. The setback requirement shall be measured from the mean high water line or line of ordinary high water as appropriate.
- Policy 3.1.2 Citrus County shall utilize or administer water quality studies on all water bodies and assist in adopting management plans for all water bodies. Water quality management plans shall address at a minimum:
- Stormwater treatment/retrofitting
 - Non-structural flood control
 - Protection of natural drainage features
 - Surface water regulations
 - Sewage retrofitting
- Policy 3.1.3 During construction in the vicinity of water bodies or wetland areas, the following criteria shall be met:
- A buffer of 15 feet or greater shall be established to reduce adverse impacts on natural vegetation
 - A buffer of 25-feet or greater shall be established upland of springs, spring-fed waterbodies, and open sinkholes
 - Existing topography and vegetation shall be retained within the buffer area
 - Pervious pavement materials or equivalent methods shall be used to reduce runoff into adjacent and downstream waters
 - Silt screens shall be placed between the construction or land clearing site and the water body or wetland to prevent erosion and siltation
 - After permitted shoreline stabilization construction natural vegetation shall be retained or replaced with suitable native

	vegetation to minimize and stabilize erosion and to decrease pollution
Policy 3.1.4	A mechanism shall be established in the Land Development Code, which allows for greater setbacks and buffers when environmental characteristics require additional protection measures.
Policy 3.1.5	Site preparation/land clearing other than minimal vegetation removal, shall not commence until development approval is granted.
Policy 3.1.6	Steeply sloping shores resulting from approved fill deposition shall be prohibited.
Policy 3.1.7	Shallow filter or spreader berms shall be used adjacent to shorelines where slopes exceed 10:1.
Policy 3.1.8	The construction of new canals shall be prohibited unless overriding public need is demonstrated. The criteria for determining public needs are as follows: • Flood control • Water quality management • Resource management
Policy 3.1.9	Runoff from structures, streets, yards, and parking areas shall be carefully controlled to prevent flooding in adjacent areas or pollution of water bodies.
Policy 3.1.10	To ensure protection of surface water quality/pollution, all new development/construction which is not subject to the Stormwater Review and permit procedures of the Southwest Florida Water Management District (SWFWMD) shall be subject to County Stormwater Review and Approval. Design and performance standards of the SWFWMD for stormwater discharge facilities and management systems, shall be the minimum criteria used by the County. The County shall establish and maintain procedures for review monitoring and enforcement of permit conditions. If and when an interlocal agreement is enacted, the agreement will supersede this policy.
Policy 3.1.11	The County shall support and/or initiate proposals to protect and maintain the water quality of the Chassahowitzka, Homosassa, Halls, and Withlacoochee Rivers as Outstanding Florida Waters.

- Flood Plain

- Objective 3.2 The County shall protect the flood storage and conveyance functions of the 100 year flood plain and properties within flood prone areas by limiting development and fill activities consistent with the policies and standards in the Future Land Use Element.
- Policy 3.2.1 The County shall provide and update the flood plain management handout to inform and educate people about the County's flood plain protection regulations.
- Policy 3.2.2 The County shall support the acquisition of undeveloped lands within flood plain areas under the Florida Forever Program, if warranted.
- Policy 3.2.3 The County shall maintain standards for stormwater quantity/flooding for development that is not covered by any State agency. The County shall establish and maintain procedures for review, monitoring, and enforcement of permit conditions.

Groundwater Resources**- Groundwater Protection**

- Objective 3.3 Maintain and, whenever possible, improve existing groundwater quality.
- Policy 3.3.1 Proposed development shall be evaluated for its adverse impact on aquifer recharge and discharge areas, and their vulnerability to contamination shall be assessed before any development is permitted. Additionally, development shall be evaluated to minimize adverse impacts on first magnitude springs and water.
- Policy 3.3.2 Drainage wells and sinkholes are prohibited for the disposal of stormwater where they recharge into potable water aquifers. In instances where they exist, these wells shall be abandoned using approved methods which include adequate sealing and plugging (required by Section 17.28, Florida Administrative Code (F.A.C.)).
- Policy 3.3.3 The County shall continue to work with SWFWMD and FDEP to provide property owners with information about the protection of groundwater quality.

- Well/Wellfield Protection

- Objective 3.4 The County shall maintain its interim wellhead protection regulations utilizing five-year time of travel zones to establish zones of contribution and develop a more comprehensive wellhead protection program within the planning period.
- Policy 3.4.1 Interim groundwater protection regulations shall be adopted placing appropriate guidelines and restriction on land uses involving storage, use, handling, production, or transportation of contaminants within zones of protection an all wells/wellfields which withdraw or have permitted withdrawal capacity of 100,000 gallons per day or greater.
- Policy 3.4.2 The County shall support and assist the SWFWMD in the development of a groundwater modeling program.
- Policy 3.4.3 The County shall seek funding and assistance to develop site specific wellhead protection plans for the regional wellfields within the County.
- Policy 3.4.4 The County shall adopt wellhead protection regulations which utilize the findings of the modeling program to establish zones of contribution for public water supply wells.

- High Recharge and Wellfield Locations

- Objective 3.5 The County shall utilize the Withlacoochee Regional Water Supply Authority (WRWSA) Master Plan for Water Supply in determining future regional wellfield locations.
- Policy 3.5.1 The Public Utilities Division, in coordination with the WRWSA and the Community Development Division, shall develop a plan which identifies and prioritizes high recharge and future well/wellfield locations for protection and acquisition.
- Policy 3.5.2 The high recharge and future well/wellfield location plan shall consider multiple use sites for protection and acquisition. These multiple uses should include but are not limited to recreation, wildlife habitat, and community services.
- Policy 3.5.3 The County shall recognize public acquisition programs as an alternative to purchase lands for water supply and groundwater recharge.

Policy 3.5.4 The County will continue to seek funding to prepare an assessment and adopt programs to protect natural groundwater recharge areas.

- Water Conservation

Objective 3.6 The County shall continue measures to conserve fresh water resources as defined by F.A.C.

Policy 3.6.1 The County shall adopt water conservation regulations providing recognition and/or incentives for xeric landscaping, reuse of grey and treated wastewaters, and public information.

Policy 3.6.2 The County shall adopt a water conservation ordinance and plan, which supports the SWFWMD water conservation rule and addresses local concerns.

Policy 3.6.3 The County shall support the use of treated wastewater on golf courses and other appropriate land when feasible.

Objective 3.7 The County, with assistance from the WRWSA and SWFWMD, shall maintain estimates, project demands, and available water supplies for the planning period.

Policy 3.7.1 The County shall establish a program in coordination with the SWFWMD and the WRWSA to estimate and project needs and sources for a ten-year period based on the demands for use and the quantity and quality of water available to meet demands.

Objective 3.8 The County shall implement water conservation and reuse options using the policies and techniques as outlined in the 10 year Water Supply Facilities Work Plan.

Flora and Fauna

- Wildlife and Habitat

Objective 3.9 The natural balance of ecological communities becomes altered as development increases. To arrest and reverse this trend, the County shall implement measures to identify and protect ecological communities and threatened wildlife. The destruction of endangered and threatened species and species of special concern shall be prohibited unless mitigated pursuant to US Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC) regulations. The alteration of areas for which the presence on-site of such species has been documented or confirmed shall also be prohibited unless the

Conservation Element

alteration of habitat may be permitted where project alternatives that would comply with the prohibition are impracticable and mitigation measures that will ensure the survival of a viable population of the affected species can be successfully implemented. The County requires biological sites surveys and shall require the developer to provide assurances that the proposed development is consistent with this policy and the standards and criteria adopted by the FWC. Additionally, the County shall maintain written criteria through Land Development Regulations for protection of all listed species.

- Policy 3.9.1 The County shall not take actions which have the potential to jeopardize conservation acquisitions.
- Policy 3.9.2 The County shall support an acquisition program to identify and recommend prioritization of environmentally endangered lands for State/local acquisition. Communities that will receive priority include scrub, sandhill, springs, and hardwood hammocks.
- Policy 3.9.3 The County will maintain a program to coordinate the continuing cooperation between adjacent local governments to conserve, appropriate use, and protect unique vegetative communities located within more than one local jurisdiction.
- Policy 3.9.4 The County shall continue to enforce wetland protection regulations in the County Land Development Code (LDC) and revise them to reflect Ecosystem Management and Environmental Resource Protection (ERP) standards.
- Policy 3.9.5 The County shall continue to enforce regulations and programs providing for the protection of endangered, threatened, and species of special concern, require inspections for proposed development sites and establish habitat mitigation criteria. Habitat mitigation criteria shall be designed to provide net positive improvement to the affected species.
- Policy 3.9.6 The County shall utilize FWC data to develop and maintain a comprehensive inventory of ecological communities, habitat conditions, occurrences, and disturbances of endangered, threatened, or species of special concern.
- Policy 3.9.7 The County will assure, through its Best Management Practices program for wildlife, that agricultural practices are compatible with the protection of wildlife and natural systems.

Conservation Element

- Policy 3.9.8 All nonresidential development in excess of five (5) acres and new residential development via the platting process shall be required to have a biological survey conducted when native vegetative or ecological communities are present. The survey will utilize FWC recommended methodology. If listed species are determined to be present, preservation and/or impact mitigation shall be required prior to issuance of a final development order. The mitigation for listed species or their habitat shall be determined by the FWC, Florida Department of Environmental Protection (FDEP), or USFWS.
- Policy 3.9.9 The County shall continue development and maintain programs to encourage private land owners to use best available management practices to protect habitat of endangered and threatened species.
- Policy 3.9.10 The County shall continue measures to preserve and protect the native tree canopy and offset the loss of trees due to development and construction activities.
- Policy 3.9.11 The County shall encourage and promote the removal of invasive exotic vegetation from all development sites.

- West Indian (Florida) Manatee

- Objective 3.10 Citrus County shall protect and maintain the West Indian (Florida) manatee population in accordance with the objectives of the Research and Management Plan for Crystal River Manatees, Manatee Recovery Plan, and future protection plans prepared by the FDEP and the USFWS.
- Policy 3.10.1 Citrus County shall cooperate with State and Federal manatee protection efforts and grant full weight to U.S. Fish and Wildlife Service's jeopardy opinions.
- Policy 3.10.2 Citrus County shall maintain a Manatee Protection Plan designed to protect manatee populations.
- Policy 3.10.3 Educational materials on coastal and marine resource conservation and manatees in particular, shall be disseminated to boaters, and displayed in areas where both manatees and humans congregate.

Air Quality

- Objective 3.11 Citrus County shall meet or exceed ambient air quality standards established by the FDEP and establish long range measures to

monitor, identify, and maintain air quality at acceptable levels with the planning period.

Policy 3.11.1 The County shall reduce the potential for vehicular emissions by:

- Encouraging planned developments and multiple use commercial centers
- Requiring vegetative buffers between new transportation arterials and new residential developments
- Promoting alternative transportation modes
- Maintaining appropriate levels of service on arterial and collector roads
- Promoting cleaner burning fuels

Policy 3.11.2 The County shall develop a strategic program, with the assistance of FDEP, to identify, monitor, and reduce air pollution or maintain air quality at acceptable levels.

Soil Erosion

Objective 3.12 The County shall reduce soil erosion and sedimentation which may result from agriculture, roadway construction, and land development, in accordance with the US Natural Resources Conservation Service (USNRCS) adopted practices.

Policy 3.12.1 The County shall assist the USNRCS in activities directed towards minimizing soil erosion.

Policy 3.12.2 The County shall encourage best management practices for controlling soil erosion and stormwater runoff associated with agriculture uses.

Policy 3.12.3 Characteristics of soil, suitability, and capability shall be considered in determining appropriate land uses and subdivision.

Policy 3.12.4 The County shall adopt policies within the Land Development Code to require revegetation of cleared properties to control soil erosion and fugitive dust.

Commercial Uses of Natural Resources

Objective 3.13 Conservation efforts have been designated to protect natural resources and ensure environmental protection of land, water, air, and wildlife. To continue this objective, the County LDC shall contain provisions to regulate commercial uses of natural resources in a manner which will protect socio-economic benefits while simultaneously maintaining conservation objectives and the areas

Conservation Element

determined to be suitable for mineral extraction shall be designated appropriately on the Generalized Future Land Use Map.

- Policy 3.13.1 The County should recognize the areas of high mineral resource value, and the necessary regulations providing protection for mining activities, environment, and surrounding property owners, and require adaptive reuse or reclamation of mined lands.
- Policy 3.13.2 Vegetative buffering shall be established by new or expanding mining operations where the location of adjacent land uses do not provide natural buffering.
- Policy 3.13.3 The County shall include in the land development and enforcement codes provisions for protection of natural resources and the environment associated with commercial activities which utilize resources in large measure.

Hazardous Waste

- Objective 3.14 The County shall administer a hazardous waste management program.
- Policy 3.14.1 The County shall maintain its hazardous waste management program providing for the proper storage, recycling, collection, transportation, and disposal of hazardous waste.
- Policy 3.14.2 The County recognizes the concerns of radon exposure and will assist State/Federal efforts to protect County residents.

Conservation and Recreation Lands

- Objective 3.15 Citrus County shall implement procedures through the Citrus County Ecotourism Committee to protect and assist the management of natural reservations.
- Policy 3.15.1 The County shall assist State and Federal agencies in their management efforts relating to preservation and protection of natural reservations.
- Policy 3.15.2 The County shall provide technical assistance and actively participate in State land acquisition programs.
- Policy 3.15.3 The County shall not seek or support State natural reservations for public uses which conflict with their respective agency objectives.

Conservation Element

- Policy 3.15.4 The County shall designate low density land uses adjacent to natural land reservations and resource based parks where the adjacent lands are undeveloped.
- Policy 3.15.5 The County shall support the U.S. Fish and Wildlife Service's efforts to acquire a site in the Crystal River area for the subsequent development of the Crystal River Wildlife Refuge's Manatee Interpretive/Education Center.
- Policy 3.15.6 Further mining in the Citrus Tract of the Withlacoochee State Forest is prohibited.
- Policy 3.15.7 Development occurring along the edges of natural reservations shall be designed to protect and minimize the impact of development on conservation areas through the use of natural vegetative buffers and clustering of structures away from the conservation area.

Wetlands Protection

- Objective 3.16 Citrus County will protect and conserve the functions and values provided by wetlands so there will be no net loss of wetland functions and values due to development or other activities.
- Policy 3.16.1 The County shall continue to implement wetlands protection standards of the LDC. The County shall ensure that the following steps are taken, in order, when assessing proposed activities that may result in wetland impacts:
1. avoidance of wetland impacts
 2. minimization of unavoidable wetland impacts
 3. compensation for wetland impacts through mitigation
- Policy 3.16.2 The County shall require an FDEP ERP permit and other State or Federal wetland permits prior to issuing local development permits and orders. Where no State or Federal permit is required, the County shall require mitigation for wetlands impacts.
- Policy 3.16.3 Development shall not be allowed at the maximum densities and intensities of the underlying land use district, if those densities would be harmful to natural resources.
- Policy 3.16.4 Wetland protection standards and criteria shall be prepared, included within the County's LDC. The standards and regulations shall include some combination of the following:
- Setbacks and upland buffers
 - Conservation easements

- Compensatory mitigation
- Performance standards
- Evaluation-ranking scheme that includes wetlands type, function, and quality
- Drainage criteria
- Allowed and exempted uses
- Impact on Outstanding Florida Waterbodies
- Significant and insignificant effects of development on wetlands

For those projects which receive exemptions from State or Regional wetland rules, the concepts and principles of Ecosystem Management will be implemented on a local level to achieve environmental benefit.

Policy 3.16.5	Any wetland created or used in compensatory mitigation or portion of an approved development order shall be recorded as a conservation easement.
Policy 3.16.6	Mitigated wetlands shall function ecologically the same as the replaced wetlands unless, otherwise directed, within an ERP or US Army Corps of Engineers (ACOE) permit.
Policy 3.16.7	Uniqueness of the wetland; threatened and endangered species and species of special concern; and surface and groundwater quality and quantity shall be evaluated for all proposed wetland alteration or mitigation.
Policy 3.16.8	The definition of wetlands to be used for regulatory purposes by the County shall be the most comprehensive definition possible, as derived from the definition of wetlands used by the SWFWMD, the FDEP, and the ACOE.
Policy 3.16.9	The County shall utilize data from SWFWMD, FDEP, FWC, and other state agencies in monitoring wetland types and amounts through the planning period.
Policy 3.16.10	The County shall direct land uses which are incompatible with the protection and conservation of wetlands and wetland functions away from high quality wetlands and wetlands connected to Outstanding Florida Waterbodies.
Policy 3.16.11	All applications for land use change shall be required to identify all jurisdictional wetlands on the site survey.

Policy 3.16.12 Parcels that include or are adjacent to conservation areas shall not receive future or current land use designations that are higher in density or intensity than the currently adopted designations unless adequate natural resource protection is ensured.

Policy 3.16.13 The County shall discourage wetland alterations within a Karst Sensitive Area, as delineated by FAVAI.

Springshed Groundwater Protection

Objective 3.17 The County will establish appropriate measures to protect its springs, springsheds, and surface water contributing areas.

Policy 3.17.1 The County will develop and assess objective criteria by which to evaluate development for impacts to first magnitude spring systems by 2009. Assessment of impacts may include ground water impacts, surface water impacts, upland vegetative cover, buffers and filter strips, shoreline impacts, wetland systems, site ground area coverage, watershed level impacts, airborne emissions, and hazardous materials management.

Policy 3.17.2 The County will identify the recharge and groundwater contribution areas, or springsheds, of the three first magnitude springs systems, Crystal River/ King's Bay, Homosassa, and Chassahowitzka.

Policy 3.17.3 The County shall map all springs of second degree or lesser magnitude as part of its comprehensive watershed management master plans being developed in cooperation with the SWFWMD.

Policy 3.17.4 The County will develop land development regulations for springs protection which address the use, storage, and disposal of hazardous materials, best management practices for turf grass and landscaping, enhanced development and parking lot standards, enhanced buffers, habitat/environmental protection standards, and other appropriate and feasible measures to minimize surface and groundwater contamination and the reduction of groundwater recharge.

Policy 3.17.5 In order to maintain aquifer recharge area the County shall require all new subdivisions to preserve and dedicate adequate open space. Open space standards shall be as defined in Policy 17.15.11.

- a. All new subdivisions shall be required to use open space/conservation subdivision design plans.
- b. To the greatest extent possible, units shall be clustered.

- c. Open space shall be connected to adjacent open space to create networks and corridors of larger areas.
- d. Nonresidential development shall be required to minimize the size of contiguous impervious areas.

Surface Water Protection of Springs, Spring Runs and Open Sinkholes

Objective 3.18 Citrus County shall protect the surface water quality of springs, spring runs, and sink holes open to the aquifer.

Policy 3.18.1 The County will develop land development regulations to address development and site construction practices adjacent to springs, spring runs, and sinkholes open to the aquifer.

- All lands cleared for development shall be seeded, sodded, or mulched promptly after clearing if construction has not commenced.
- Erosion control barriers shall be required around the impacted area perimeters unless continuous buffers of natural vegetation of a depth of 15 feet or more exist.

Policy 3.18.2 During construction in the vicinity of springs a buffer of native vegetation of 100 feet or greater shall protect uplands around springs, spring runs, and open sinkholes. When site restrictions interfere with the accommodation of a buffer, an engineered system that meets the same standards of protection may be submitted as an alternative. Spring run shall be defined as a spring fed stream flowing from its source to its confluence into a receiver river, lake, canal, or other body of water.

Policy 3.18.3 The following uses are prohibited from locating within 500 feet of any spring, spring run creek, sink, or contributing stream or surface waterbody (except for the Cross Florida Barge Canal):

Any new business or use classified as one of the following handler types by the Florida Department of Environmental Protection under its Hazardous Waste Compliance and Enforcement Tracking System under the RCRA program.

Handler Types

CLO - Closed

LQG - Large Quantity Generator

MER - Mercury Handler

OIL - Used Oil Handler

TRA - Hazardous Waste (HW) Transporter

TSD - Treater/Storer/Disposer

Conservation Element

Attachment: Comp Plan Chapter 3 strike through and underline (12725 : CPA-21-05 – Evaluation and Appraisal Report (EAR) Amendments

The following handler types are exempt:

NHR - Non-handler.
 CES - Conditionally Exempt SQG
 SQG - Small Quantity Generator

Policy 3.18.4

The following landscaping BMPs shall be instituted within new and revised planned developments to reduce nutrient loading:

- a. Planted turf grass and landscaping on residential lots shall be limited to a maximum of 50% of the upland portion of the deeded lot
- b. Turf grasses and landscape vegetation common to the area shall be used. Landscape vegetation shall be drought tolerant; and
- c. All development shall require best management practices as dictated by the principles and practices of the Florida Yards and Neighborhood Program.

Policy 3.18.5

All new or revised golf course siting, design, construction, and management within County shall be consistent with Best Management Practices for the Enhancement of Environmental Quality on Florida Golf courses (FDEP, 2007).

Policy 3.18.6

BMPs shall be used in the design of stormwater management facilities and systems. The following stormwater BMPs shall be instituted to reduce nutrient loading:

- a. All residential development which requires on-site retention shall use swales with swale blocks or raised driveway culverts whenever possible except when soil, topography, or seasonal high water conditions are inappropriate for infiltration as determined by a professional engineer licensed in the State of Florida.
- b. Design of stormwater systems for residential and commercial uses shall use bio-retention areas (below grade vegetated areas) to increase stormwater treatment and reduce stormwater volume. Downspouts for both residential and commercial development shall be directed from the roof to vegetated areas for uptake.
- c. Vegetated infiltration areas shall be used to provide stormwater treatment and management on all sites except when soil, topography, or seasonal high water conditions are inappropriate for infiltration as determined by a professional engineer licensed in the State of Florida.

- d. Whenever infiltration systems are not feasible, wet detention systems shall be used for stormwater treatment and management.
- e. Developments within the Coastal High Hazard Area or identified sensitive karst areas shall utilize the St. Johns River Water Management District karst sensitive criteria found in SJRWMD Rule 40C-41.063 (7)(a) ERPS – Surface Water Management Basin Criteria and SJRWMD Rule 40C-42, Part II Criteria for Evaluation, Section 9.11 Sensitive Karst Area Basin Design Criteria.
- f. Sensitive karst features, including sinkholes with a direct connection to the aquifer and stream-to-sink features, shall not be utilized as stormwater management facilities. Prior to subdivision approval, all depressions will be investigated by a licensed professional using a professionally acceptable methodology for suitability of water retention using generally accepted geo-technical practices with an emphasis on identification of potential connections to the aquifer. If connections are determined to exist, the depression shall not be used for stormwater retention and the area draining to this feature under pre-development conditions shall be preserved through a conservation easement.
- g. All development approval by the County shall require the applicant to submit to the County a copy of the SWFWMD or DEP stormwater permit and the NPDES notice of intent to be covered by the construction generic permit prior to any land clearing.
- h. All components of the stormwater treatment and management system shall be in common ownership and shall be maintained by the responsible legal entity identified in the SWFWMD or DEP stormwater permit. The studies required above shall be used to characterize on-site soils and determine locations of geologic features including sinkholes, solution pipes, depressions, and depth of soil to lime rock. Sensitive karst features like sinkholes with a direct connection to the aquifer and stream-to-sink features shall be protected.

Policy 3.18.7

The County shall protect springs by prohibiting increases in allowed land use intensity at the Generalized Future Land Use level within 100 feet of a spring or open sinkhole.

Policy 3.18.8

The County shall evaluate adoption of land development regulations to protect springs, spring groups, and wetlands along

the US 19 commercial corridor between Homosassa Springs and Crystal River.

- Policy 3.18.9 The County shall develop and maintain programs (FYN) to educate and encourage homeowners and private landowners to use BMPs to protect natural habitat and to protect water quality, especially on land within the mapped recharge areas of first magnitude springs.
- Policy 3.18.10 The County shall provide educational opportunities (FYN) for landscape and lawn-care professionals regarding the use and application of fertilizers and pesticides.
- Policy 3.18.11 The County shall protect springs by prohibiting increases in allowed land use intensity at the Generalized Future Land Use level within a Karst Sensitive Area without a hydrogeological analysis that addresses impacts to groundwater resources. The analysis shall be performed by a professional geologist or professional engineer licensed in Florida. Karst Sensitive Area shall be defined as an area in which limestone lies within five (5) feet of depth from natural grade.

Sinkholes and karst features

- Objective 3.19 Citrus County shall protect ground water quality by limiting exposure to man-made hazards due to development activity around historic sinkholes and other identified karst features.
- Policy 3.19.1 If there is an existing sinkhole on the proposed development or karst sensitive feature, then a detailed geological/geotechnical investigation shall be required. This investigation must be conducted by a certified geologist or professional engineer experienced in hydrogeology and a report submitted to the County for consideration. The geologic investigation shall be comprehensive enough that recommendations for site planning, engineering design and construction techniques may be made.
- Policy 3.19.2 The following uses and activities shall not be located over or adjacent to an existing sinkhole unless it is determined by a certified geologist or professional engineer experienced in hydrogeology that the area is safe and that there is no subsurface connection that may cause contamination or damage to the groundwater:

Stormwater structures, other than stormwater swales
 Utility structures, above or beneath ground
 Buildings, structures, or impervious surfaces

No septic systems, drain fields, solid waste disposal areas, or chemical storage shall occur within five hundred (500) feet of the existing sinkhole unless it is determined by a professional geologist or professional engineer licensed in Florida and experienced in geohydrology that there is no subsurface connection that may cause contamination or damage to the groundwater:

- Policy 3.19.3 Building setbacks from springs, spring runs, sinkholes, and caves shall be developed based on best data available by 2009. In the interim, a minimum 100-foot building setback shall be required. The setback shall retain natural vegetation.
- Policy 3.19.4 Where a lot of record is unable to accommodate development in compliance with the setbacks set forth in Policy 3.19.3, development shall follow an engineer-designed system with the building and associated paved areas located the maximum distance possible from the karst features. Any swale and berm shall be designed to direct drainage away from the karst feature.
- Policy 3.19.5 The County shall support the State and SWFWMD's efforts to acquire for conservation, properties with significant springs, open sinkholes, and caves.
- Policy 3.19.6 Redevelopment of valid non-conforming lots or structures may seek approval through the Conditional Use process for an engineer-designed system that mitigates the provisions of the spring's protection standards contained within the Plan.

Wastewater disposal in high aquifer recharge areas

- Objective 3.20 Citrus County shall protect ground water quality within high aquifer recharge areas by encouraging use of reclaimed water and provision of central sanitary sewer for new development.
- Policy 3.20.1 All development where service is available, shall connect to systems designed to achieve Advanced Wastewater Treatment (AWT) standards. All development shall be served by a regional wastewater treatment facility as soon as the service is available as stated in Policy 7.3.5.

CHAPTER FOUR

COASTAL, LAKES, RIVER MANAGEMENT ELEMENT

**Updated:
EAR BASED AMENDMENTS
July 11, 2006, Ord. No. 2006-A12**

**September 16, 2008, Ord. No. 2008-A27
February 14, 2012, Ord. No. 2012-A03
October 28, 2014, Ord. No. 2014-A-24
December 4, 2018, Ord. No. 2018-A27**

This page left intentionally blank.

**CHAPTER FOUR
COASTAL, LAKES, RIVER MANAGEMENT ELEMENT
TABLE OF CONTENTS**

I. INTRODUCTION	1
A. Coastal Area Definitions	1
B. Coastal Study Area	2
Figure 4-1 Coastal, Lakes and River Area Boundaries.....	4
II. COASTAL AREA INVENTORY AND ANALYSIS	5
A. Natural Resources of the Coastal Area	5
1. Ecological Communities	5
Figure 4-2 Natural Areas within Coastal Area in Citrus County	7
2. Terrestrial and Aquatic Wildlife	8
3. Preserves and Areas of Special Designation	8
4. Beach and Dune Systems	10
B. Land Use Inventory and Analysis	10
1. Existing Land Use	10
TABLE 4-1 COASTAL AREA GENERALIZED LAND USE	11
2. Water-dependent and Water-related Land Uses	12
3. Need for Water-dependent and Water-related Uses	12
4. Shoreline Land Use Conflicts	12
5. Siting Water-dependent and Water-related Land Uses	13
6. Redevelopment Areas	13
7. Economic Base	13
8. Future Land Use Impacts	14
C. Estuarine Pollution	15
1. Current Conditions	15
2. Point Sources	15
3. Non-point Sources	16
4. Remedial Actions Needed	16
5. Future Land Use Impacts and Facilities Proposed in the Traffic Circulation and Infrastructure Elements	17
6. State, Regional, and Local Regulatory Programs	17
Figure 4-3 Historical and Archaeological Sites in Citrus County	19
D. Archaeological and Historic Resources of the Coastal Area	20
1. Inventory	20
2. Impact of Present Land Use Trends	20
3. Impacts of Future Land Use	20
4. Resource Protection	21
E. Hurricane Evacuation	21

1. Current Program.....	21
2. Coastal Evacuation.....	22
TABLE 4-2 SAFFIR-SIMPSON HURRICANE WIND SCALE	23
TABLE 4-3 POTENTIAL STORM TIDE HEIGHT CITRUS COUNTY (IN FEET ABOVE NAVD88)	24
Figure 4-4 SLOSH Model Evacuation Zones.....	25
Figure 4-5 Citrus County Route Segments Subject to Freshwater Flooding	26
TABLE 4-4 2015 CLEARANCE TIMES FOR BASE SCENARIO (HOURS) CITRUS COUNTY ...	28
TABLE 4-5 CRITICAL ROADWAY LOCATIONS.....	29
Figure 4-6 Evacuation Roadway Network	30
TABLE 4-6 2015 POPULATION-AT-RISK FROM HURRICANES BY EVACUATION LEVEL CITRUS COUNTY	31
TABLE 4-7 CITRUS COUNTY EVACUATION SHELTERS.....	32
TABLE 4-8 HOTEL AVAILABILITY IN HURRICANE EVACUATION SCENARIOS	34
3. Shelter Capacity Needs Assessment.....	34
TABLE 4-9 PUBLIC SHELTER DEMAND FOR HURRICANE EVACUATION BASE SCENARIOS 2015, CITRUS COUNTY	35
F. Post Disaster Planning and Coastal High-Hazard Areas	35
Figure 4-7 Coastal High Hazard Area.....	37
G. Public Access	4038
1. Inventory of Facilities	4038
2. Access Demand and Needs	4038
TABLE 4-10 SUMMARY OF COASTAL SHORELINE ACCESS.....	4139
H. Coastal Area Public Infrastructure	4139
1. Existing Facilities	4139
2. Fiscal Impact of Coastal Infrastructure	4240
TABLE 4-11 FUTURE INFRASTRUCTURE NEEDS COASTAL AREA	4240
III. LAKES AND RIVER MANAGEMENT BOUNDARY	4341
A. Definition	4341
B. Lakes and River Management Boundary Description	4341
IV. LAKES AND RIVER INVENTORY AND ANALYSIS	4341
A. Natural Resources	4341
1. Tsala Apopka Chain of Lakes	4341
TABLE 4-12 ADOPTED LEVELS ON LAKES WITHIN CITRUS COUNTY.....	4442
2. Withlacoochee River.....	4644
Figure 4-8 Lake Levels.....	4745
3. Ecological Communities and Wildlife	4846
4. Significant Preserves.....	4846
B. Land Use Inventory and Analysis	4846
1. Existing Land Use	4846

TABLE 4-13 LAKES AND RIVER AREA GENERALIZED LAND USE.....	<u>4846</u>
2. Water-Dependent and Water-Related Facilities	<u>4947</u>
3. Need for Water-Dependent and Water-Related Facilities	<u>4947</u>
4. Shoreline Land Use Conflicts	<u>4947</u>
5. Future Land Use Impacts	<u>5048</u>
C. Pollution	<u>5048</u>
1. Current Conditions	<u>5048</u>
2. Non-Point Sources	<u>5048</u>
3. Future Land Use Impacts	<u>5048</u>
D. Archaeological and Historic Resources.....	<u>5149</u>
1. Inventory	<u>5149</u>
2. Impact of Land Uses	<u>5149</u>
3. Resource Protection	<u>5149</u>
E. Hazard Planning	<u>5149</u>
1. Assessment	<u>5149</u>
2. Evacuation.....	<u>5250</u>
F. Public Access	<u>5250</u>
1. Inventory of Facilities	<u>5250</u>
TABLE 4-14 SUMMARY OF LAKES AND RIVER ACCESS	<u>5250</u>
2. Access Demand Needs.....	<u>5250</u>
G. Lakes and River Infrastructure	<u>5351</u>
1. Existing Facilities.....	<u>5351</u>
V. COASTAL, LAKES, AND RIVER PLAN	<u>5452</u>
A. Natural Resources	<u>5452</u>
B. Land Use	<u>5452</u>
C. Water Quality	<u>5452</u>
D. Archaeological and Historic Resources.....	<u>5553</u>
E. Post-Disaster Planning and Coastal High-Hazard Areas.....	<u>5553</u>
F. Public Access	<u>5654</u>
G. Infrastructure	<u>5654</u>
H. Watershed Management Plan	<u>5755</u>
I. Implementation Schedule.....	<u>5856</u>
VI. GOALS, OBJECTIVES, AND POLICIES	<u>5957</u>

This page left intentionally blank.

Coastal, Lakes, River Management

I. INTRODUCTION

A. Coastal Area Definitions

Several different, but related, concepts are used by the State of Florida for addressing coastal zone issues. The following definitions from Rule 9J-5, Florida Administrative Code (F.A.C.) are intended to assure that coastal areas and their sensitive resources are managed well.

“Coastal Barriers” means barrier islands, spits, peninsulas, or similar landforms, including the Florida Keys, which front on the Atlantic Ocean, Gulf of Mexico, or Straits of Florida and which separate estuaries or harbors from the open waters of the Atlantic Ocean, Gulf of Mexico, or Straits of Florida. (9J-5.003(16))

“Coastal High Hazard Area” (CHHA): The coastal high-hazard area is the area below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. (Florida Statutes, Section 163.3178) These Special Flood Hazard Areas (SFHAs) along the coasts ~~that~~ have additional hazards due to wind and wave action. These areas are identified on Flood Insurance Rate Maps (FIRMs) as zones V and, ~~V1-V30~~ and VE. In 2021 Citrus County the Coastal FIRM flood maps were updated to include a line called the Limit of Moderate Wave Action (LiMWA). The LiMWA marks the inland limit of the “Coastal A Zone”—the part of the coastal SFHA referenced by building codes and standards where wave heights can be between 1.5 and 3 feet during a base flood event.

Formatted: Underline

Formatted: Underline

Formatted: Underline

Formatted: Underline

Formatted: Underline

“Coastal Planning Area” shall be an area of the local government’s choosing when preparing and implementing all requirements of the Coastal, Lakes, River Management Element (except those requirements relating to hurricane evacuation, hazard mitigation, water quality, water quantity, estuarine pollution, or estuarine environmental quality); however, this area must encompass all of the following where they occur within the local government’s jurisdiction: water and submerged lands of oceanic water bodies, or estuarine water bodies; shorelines adjacent to oceanic waters or estuaries; coastal barriers; living marine resources, marine wetlands, water-dependent facilities or water-related facilities on oceanic or estuarine waters, public access facilities to oceanic beaches or estuarine shorelines, and all lands adjacent to such occurrences where development activities would impact the integrity or quality of the above. When preparing and implementing the hurricane evacuation or hazard mitigation requirements of the Coastal, Lakes, River Management Element, the Coastal Planning Area shall be those portions of the local government’s jurisdiction that lie in the hurricane vulnerability zone. When preparing and implementing the requirements of the Coastal, Lakes, River Management Element concerning water quality, water quantity, estuarine pollution, or estuarine environmental quality, the coastal planning area shall be all occurrences within the local government’s jurisdiction of oceanic waters or estuarine waters. (9J-5.003(18))

Coastal, Lakes, River Management

“Environmentally Sensitive Lands” means areas of land or water which are determined necessary by the local government, based on locally determined criteria, to conserve or protect natural habitats and ecological systems. Nothing in this definition shall be construed to prohibit silvicultural operations which employ the Florida Department of Agriculture and Consumer Affairs Best Management Practices as revised in 1993. (9J-5.003(41))

“Estuary” means a semi-enclosed, naturally existing coastal body of water in which saltwater is naturally diluted by freshwater and which has an open connection with oceanic waters, including bays, embayments, lagoons, sounds and tidal streams and mangrove swamp. (9J-5.003(42))

“Hurricane Vulnerability Zone” (also “areas subject to coastal flooding”) means the areas delineated by the regional or local hurricane evacuation plan as requiring evacuation. The hurricane vulnerability zone consists of the evacuation areas, from the Tropical Storm through the Category 5 Hurricane Evacuation Zone.

“Sea Level Rise” An increase in sea level caused by a change in the volume of the world’s oceans and changes in local ground elevations. Sea level rise leads to increased frequency and depth of flooding in coastal areas. (FEMA Coastal Flood Risk Study)”

Formatted: Underline

The Coastal Planning Area Boundary as defined by Rule 9J-5.003(18), F.A.C., provides for a three-tiered coastal boundary, the general coastal management area and two specific study areas: Hurricane Evacuation and Hazard Mitigation and the Coastal Water Quality Study Areas. The Hurricane Evacuation and Hazard Mitigation Zone includes the areas under Citrus County jurisdiction which lie within the Category 1 Hurricane Storm Evacuation Zone as depicted in the 2014 Evacuation Zone Map Withlacochee Regional Hurricane Evacuation Study 2004 prepared by the Citrus County Emergency Management and GIS, Withlacochee Regional Planning Council, i.e., the Coastal High Hazard Area. The Coastal Water Quality Study area includes all land and water areas which contribute to surface waters of the coastal area. Refer to Figure 4-1.

B. Coastal Study Area

Analyses of environmental constraints within the Coastal Water Quality Study Area, generally the area west of US-19, resulted in the conclusion that certain parts within that larger area were more environmentally sensitive than others and thus more vulnerable to development impacts. The water quality study area served to establish an environmentally based overlay zone which acts as a boundary between areas of lesser and more intense development. This boundary, described below, is the line from which the Low Intensity Coastal and Lakes (CL) District was established. Areas to the east of the boundary are allowed greater density and intensity. The CL designation limits new development to one unit per 40 acres within the Federal Emergency Management Agency’s (FEMA) Velocity Zones (V-zones) and to one

Coastal, Lakes, River Management

unit per 20 acres outside of the V-zones. The CL district also is applied to the environmentally sensitive lakes and rivers areas, which encompass the northern and eastern perimeters of Citrus County. (See Figure 4-1)

The study area refers to the land inside the environmentally sensitive boundary as established by the water quality study within the coastal area of Citrus County and is defined as follows:

"Those lands and water beginning 1,000 feet west of US-19 at the south County line extending north (1,000 feet west of US-19) to the south boundary of the City of Crystal River, thence along said City boundary to a point 1,000 feet west of US-19, thence north (1,000 feet west of US-19) to the north County line, thence west along the north County line to the limit of County jurisdiction in the Gulf of Mexico, thence south along said limit to the south County line, thence east along the south County line to a point 1,000 feet west of US-19."

Coastal, Lakes, River Management

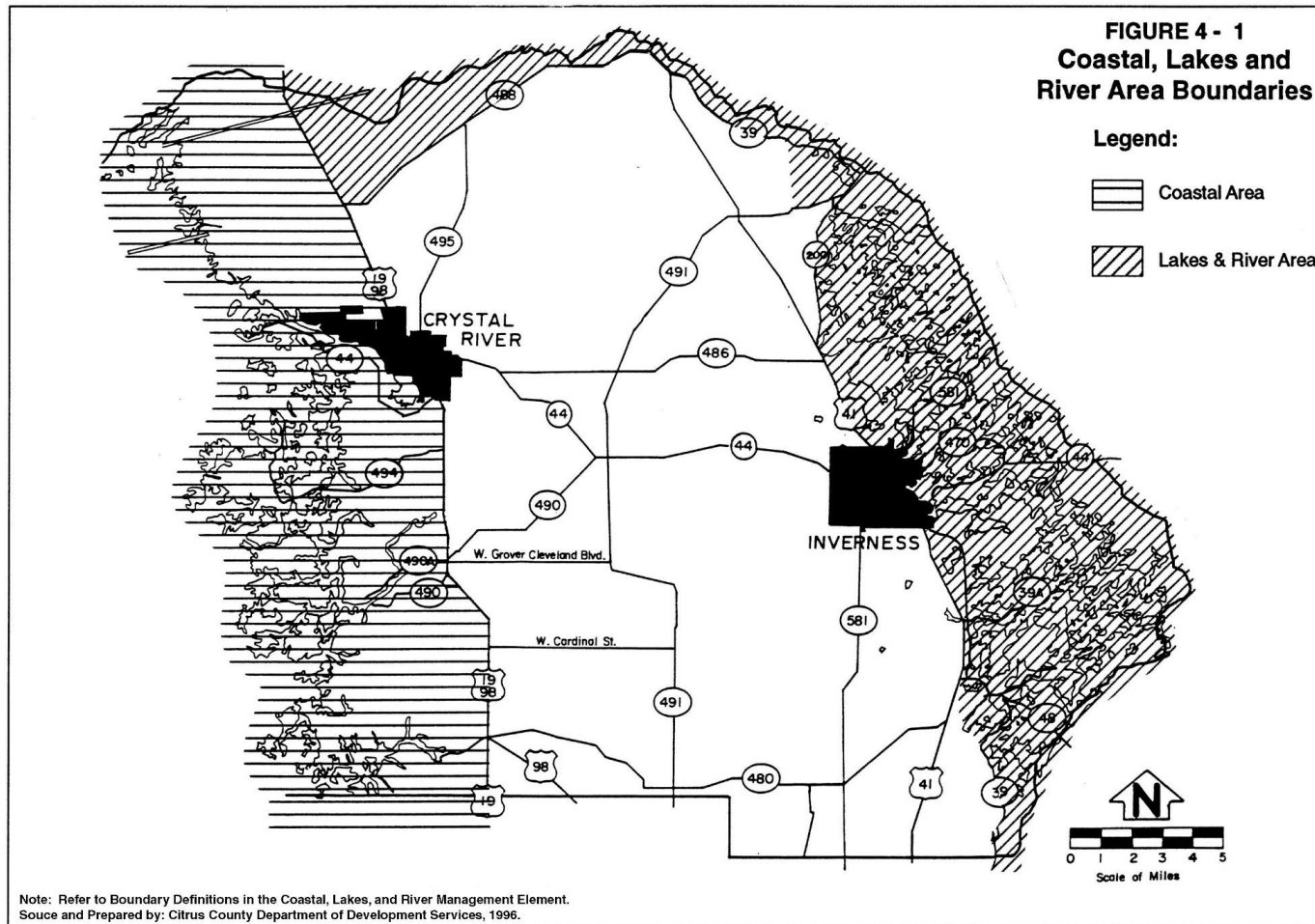


Figure 4-1 Coastal, Lakes and River Area Boundaries

II. COASTAL AREA INVENTORY AND ANALYSIS

A. Natural Resources of the Coastal Area

1. Ecological Communities

Generalized ecological communities of the Coastal study area include South Florida flatwoods, salt marshes, hardwood swamps, and mangrove communities (see the Conservation Element for Ecological Community Descriptions). In addition to these generalized communities, other notable coastal features include three spring-fed river systems, three associated coastal estuaries, a black-water river and its coastal estuary (Withlacoochee River and Bay), and extensive marine grass beds.

a. Upland Habitats

Upland communities of the coastal study area consist of South Florida flatwoods, oak/maritime hammock uplands, and pine/oak scrub communities. South Florida flatwoods are located in a strip one to two miles west of US-19 within the coastal area. The oak/maritime hammocks and the pine/oak scrub communities are scattered through the coastal area in small acreages.

b. Wetland Habitats

Wetland habitats of the coastal area include freshwater hardwood swamps, salt marshes, and mangrove communities. The freshwater hardwood swamps are located in two large areas: one located north of Crystal River and the second located between the Homosassa and Chassahowitzka Rivers. The distribution of salt marshes is extensive within the coastal area, extending from the northern and southern County lines 1 to 6 miles inland. Mangrove communities are concentrated in two areas: west of Chassahowitzka (Chassahowitzka National Wildlife Refuge) and on the coastal fringe area west of Ozello.

c. Deepwater Habitats

Deepwater habitats are those areas which lie within the submerged surface water areas. Within the coastal study area, these deepwater habitats include spring-fed rivers, coastal estuaries, and marine grass beds.

1) Spring-fed Rivers

Spring-fed rivers include the Crystal River, Homosassa River, Halls River, and Chassahowitzka River. These rivers support a diverse system of marine and freshwater plants and wildlife. The importance of these systems is most noted by the habitats which are essential for the propagation of freshwater/marine fisheries and the maintenance of high water quality to ensure the productive functions of their associated estuarine waters.

Coastal, Lakes, River Management**2) Coastal Estuaries**

Coastal estuaries within Citrus County are difficult to define as either 1 or 4 specific areas where freshwater sources mix with saline coastal waters. This estuarine characteristic is reflective of the County's coastline which is an area of Floridan and surficial aquifer discharge. Discharges of this type are noted by the numerous springs and estuarine waters of the coastline. Several areas along the coast have estuarine associated names such as Crystal Bay, Withlacoochee Bay, Dixie Bay, Tiger Tail Bay, Greenleaf Bay, Homosassa Bay, Blue Bay, Porpoise Bay, and Chassahowitzka Bay.

Coastal estuaries within Citrus County contain tidal flats, oyster bars (shoals), and marine grass beds. Along with these marine habitats, the associated saltmarsh, mangrove swamps, contiguous freshwater swamps, and drainage ways provide vital functions which maintain estuarine systems.

3) Marine Grass Beds

Marine grass beds are widely distributed throughout the coastal waters of the County. These grass beds trend westward approximately seven to 12 miles into the gulf waters (Figure 4-2) and consist of five seagrass types. The existence and preservation of these beds are vital for providing nurseries and spawning areas for fish and crustaceans.

Coastal, Lakes, River Management

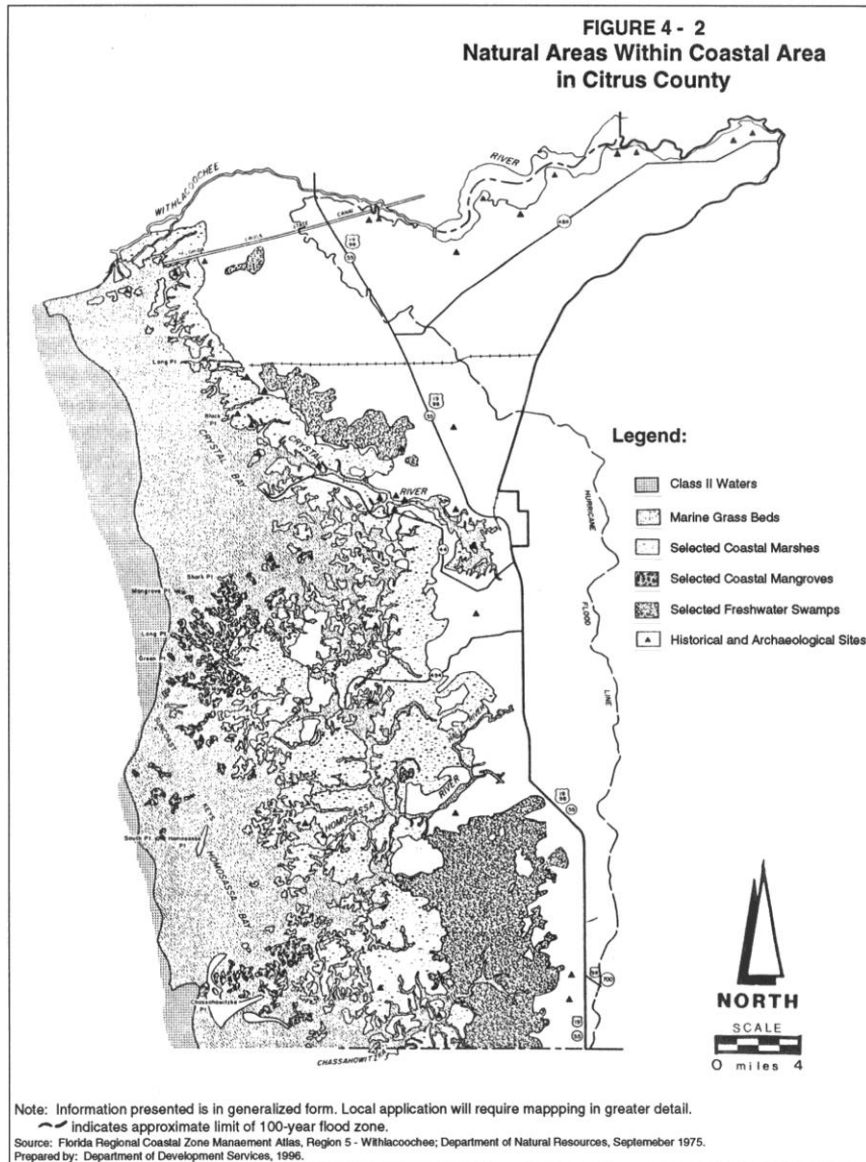


Figure 4-2 Natural Areas within Coastal Area in Citrus County

Coastal, Lakes, River Management

2. Terrestrial and Aquatic Wildlife**a. General Description**

The general wildlife composite of the coastal study area is comprised of those species associated with their respective habitat. Habitat in this reference is the ecological community in which certain species live (i.e. saltmarsh, marine grass bed, or pine/oak scrub). The Conservation Element contains a description of each ecological community. Several natural areas of the coastal study area do not align with the community descriptions of the Conservation Element. These areas include spring-fed rivers, coastal estuaries, and marine grass beds. The description of wildlife within spring-fed coastal rivers, coastal estuaries, and marine grass beds of the coastal study area include a diversified assemblage of freshwater and marine species. These coastal deep water habitats support freshwater and marine aquatic wildlife.

b. Endangered and Potentially Endangered Species

The Conservation Element contains two tables which list endangered and potentially endangered species by ecological community type and Federal/State status.

c. Special Habitats

The coastal study area contains three special habitats for terrestrial and aquatic wildlife. These habitats include bird rookeries, bald eagle and osprey nesting locations, and West Indian (Florida) manatee habitats. Bird colonies utilize the coastal wetlands and mangrove swamps for nesting areas (rookeries). Bald eagles utilize the coastal areas adjacent to water for nesting.

The West Indian (Florida) manatee is addressed within the Manatee Protection Element and represents one of the most important resources of the County. The County's coastal waters (marine, estuarine, spring-fed rivers, black-water river (Withlacoochee)), and the Cross Florida Barge Canal provide habitat for the manatee.

Manatees are known to travel through the Lake Rousseau locks and seek habitat in tributaries of the Withlacoochee River.

3. Preserves and Areas of Special Designation

Preserves and areas of special designation within the coastal study area have been developed to protect natural systems and to regulate use for the protection of public health, safety, and welfare. These areas consist of over 49,877 acres of

Coastal, Lakes, River Management

State and Federally owned uplands, wetlands, and submerged lands. Refer to the Conservation Element for a geographic representation of these areas.

a. St. Martins Marsh Aquatic Preserve

The St. Martins Aquatic Preserve authority for providing management directives is found in Sections 253 and 258, F.S. These management program policy directives are detailed in Chapter III of the aquatic preserve's management plan. The major management objective is to ensure the maintenance of natural conditions and the secondary management objective is to ensure public recreation opportunities while assuring the continued propagation of all wildlife. This aquatic preserve includes approximately 23,000 acres of submerged lands located in the central area of the coast and does not contain upland areas within its designation.

b. Crystal River State Buffer Preserve

The Crystal River State Buffer Preserve is currently a 32,000 acre preserve. (For further discussion and illustration, refer to the Conservation Element.)

c. Shellfish Harvesting Areas

The DEP operates the Shellfish Harvesting Area Program. This program classifies coastal waters into four regulatory categories:

- Approved Area - Normally open to shellfish harvesting; may be temporarily closed under extraordinary circumstances such as red tides, hurricanes, and sewage spills
- Conditionally Approved Area - Periodically closed to shellfish harvesting on predictable pollution events
- Prohibited Areas - Shellfish harvesting is not permitted due to actual or potential pollution
- Unclassified Areas - Shellfish harvesting is not permitted pending bacteriological and sanitary surveys

In addition to regulating the harvesting areas, the Florida Marine Patrol is the enforcement authority for size limits and seasons. Shellfish harvesting areas status, boundaries, and classification are amended depending upon changes in coastal water quality.

d. Outstanding Florida Waters

Outstanding Florida Waters (OFW) as designated for special protection in Chapter 17-3, F.A.C., are afforded the highest protection through state water quality standards.

Coastal, Lakes, River Management

OFW within the coastal area include:

- Crystal River/King's Bay
- Crystal River National Wildlife Refuge (NWR)
- Chassahowitzka River System
- Homosassa River System

State Aquatic Preserves and State Preserves include:

- Crystal River State Preserve
- St. Martins Marsh Aquatic Preserve

e. Crystal River and Chassahowitzka - National Wildlife Refuges

The United States Fish and Wildlife Service (USFWS) operate and manage the Crystal River and Chassahowitzka National Wildlife Refuges within the coastal area. These two refuges provide excellent habitat for a diverse assemblage of wildlife. (For further discussion and illustration, refer to the Conservation Element.)

4. Beach and Dune Systems

Active beach and dune systems are not present within Citrus County. The low energy coast associated with Citrus County, as well as the west coast of Florida - north of Dunedin and southwest of Franklin County, does not generate systems characteristic of sandy beach and dune environs. Our low energy coast is characterized by gradual slopes, salt marshes, and sea grass beds.

The County maintains an artificial beach located on Fort Island at the terminus of CR-44 West. This site is operated by the Parks and Recreation Division and contains a 950 linear feet filled sand area protected by two rock groins.

B. Land Use Inventory and Analysis

1. Existing Land Use

Existing land uses within the coastal study area are illustrated and defined in the Future Land Use Element. The generalized coastal land use categories, acreage, and percentages, are described in Table 4-1.

Coastal, Lakes, River Management

**TABLE 4-1
COASTAL AREA GENERALIZED LAND USE**

Land Use	Acreage	Percentage
Residential	5,661	6.08
Commercial	610	0.66
Industrial	196	0.21
Extractive	585	0.63
Transportation-Utility	1,571	1.69
Public/Semi-Public	118	0.13
Conservation	49,877	53.59
Recreation-Open Space	262	0.28
Agriculture	11,444	12.30
Vacant-Committed	2,409	2.59
Vacant-Undeveloped	20,342	21.86
TOTAL	93,075	100.00

Source: Citrus County Land Use Survey, April, 1995.

Prepared by: Citrus County Division of Planning, 1995.

The dominant land use within the coastal study area is conservation. Conservation land areas consist of 49,877 acres or 54 percent of the total area. This acreage is reflective of land areas of various State or Federal properties including the Crystal River State Reserve, St. Martins Marsh Aquatic Preserve, Yulee Sugar Mill State Historic Site, Crystal River State Archaeological Site, and the Chassahowitzka and Crystal River National Wildlife Refuges.

The second dominant land use is agriculture. Agricultural land uses comprise 11,444 acres or 12 percent of the total area. Dominant agriculture uses are pasture, range, and silviculture activities which are concentrated in the northern and southern areas of the coastal area.

The next largest land use in the coastal area is vacant undeveloped. This land use comprises 20,342 acres or 22 percent of the total area. Vacant, undeveloped lands are distributed throughout the coastal area and mostly consist of salt marsh and freshwater forested wetlands (hydric hammocks).

Residential land uses comprise 5,661 acres or six percent of the land in the coastal area. Predominant residential land uses are single family conventional and mixed residential (refer to Future Land Use Element for definitions).

The remaining land uses in the coastal area comprise 12.3 percent of the total area or 11,412 acres. These land uses includes commercial, industrial, extractive,

Coastal, Lakes, River Management

transportation/communications/utility, public/semi-public, recreation and open space, and vacant committed uses which are detailed in Table 4-1.

2. Water-dependent and Water-related Land Uses

Water-dependent land uses, [or Working Water Fronts](#), are defined as activities which can be carried out in or adjacent to water areas because the use requires access to the water body for: waterborne transportation, recreation-access, electrical generating facilities, or water supply. With Citrus County these include, but are not limited to, commercial marinas, boat ramps/docks, electrical generation plants, and fishing piers.

Water-related land uses are defined as activities which are not directly dependent upon access to a water body, but which provide goods and services that are directly associated with water-dependent or waterway uses. These uses within Citrus County include, but are not limited to, commercial resorts, campgrounds, fish camps, [marinas](#) seafood processing operations, dive ships, and bait and tackle stores.

3. Need for Water-dependent and Water-related Uses

The need for water-dependent and water-related uses is determinant upon the demand placed on water resources. Water use demands may include recreation, public access, [marinas](#) conservation, sport and commercial fishing, navigation, supply withdrawals, and the dissolution of effluent discharges. Land uses on water bodies throughout the coastal area include recreation, conservation, public access, residential, utility, and commercial.

Allocation of land uses adjacent to water bodies should incorporate the need for future land and resource protection requirements. The current and future needs for public access, recreation, and resource protection are vital for developing and maintaining both a healthy (community) economy and water body.

4. Shoreline Land Use Conflicts

Shoreline Land use conflicts are prevalent within the coastal area of Citrus County. The predominant shoreline land use is residential, therefore, many conflicts are associated with commercial (recreation-commercial and fishing industry) land uses which are not generally compatible with residential uses.

One particular shoreline conflict has evolved between homeowners in the coastal communities. This conflict occurs between homeowners who use their property for the seasonal stone crab industry and those homeowners which do not. The conflict appears to be related to the changing community characteristic of a fishing village to that of a residential retirement area.

Coastal, Lakes, River Management

Secondly, recreational access has the potential to conflict with surrounding shoreline land uses. Measures to protect against conflict include buffering, set-backs, and appropriate siting.

5. Siting Water-dependent and Water-related Land Uses

Water dependent and water-related land uses should have priority over the siting of non-water dependent or related land uses. These non water-dependent and related land uses include, but are not limited to residential, commercial, industrial, and agricultural uses, which do not require shoreline access. It is important to note that some of the above land uses in particular circumstances do require shoreline access (i.e., water-related commercial marinas, and dive centers).

6. Redevelopment Areas

The *Old Homosassa Community Area Redevelopment Plan* was established in 2003 in conjunction with the Waterfronts Florida Partnership Program. Refer to Appendix “H”.

7. Economic Base

The major components of the current economic base of the coastal area are mining, retail and tourism, commercial, industrial, communications and utilities, and manufacturing. The major employer is Progress Energy Corporation, formerly Florida Power Corporation (FPC), located northwest of the City of Crystal River, which operates four coal-fired electric generation plants and a nuclear electric generation plant.

Water-related industries provide a large sector of the employment base. These industries include boat manufacturing and services, commercial fishing, dive shops, and retail and tourist trades. These water-related businesses depend upon the resources of the coastal fisheries and the West Indian (Florida) manatee. These two resources draw tourists state-wide, nationally, and internationally. Provisions and standards will be included in the Future Land Use Element and County Land Development Code to assure that adequate land is available for these industries.

Two major industrial parks are located in the coastal region: Seven Rivers Industrial Park and Rooks Industrial Park. Future industrial land uses will most likely be limited in the coastal region.

Mining has traditionally been an important segment of the County's economic base. The areas currently mined in the coastal area are located in the northwest section.

Coastal, Lakes, River Management

The commercial base is dominated by large, strip shopping centers located on US-19. These are located primarily in Crystal River and Homosassa. Small, neighborhood-type commercial establishments are distributed throughout the coastal area. Provisions for commercial development in the Future Land Use Element and County Land Development Code will assure that future needs will be met.

8. Future Land Use Impacts

Impacts to the natural systems of the coastal area and future populations should be minimized. The projected impacts include: 1) loss of natural vegetative communities; 2) loss of wildlife habitat; 3) degradation of living resource; 4) loss and degradation of habitat for endangered, threatened, and species of special concern; and 5) subjection of a larger population to coastal hazards. The focal point to protecting the abundant resources is the designation of low intensity land uses and the emphasis of natural systems acquisitions. Subsequent sections of this Element contain analyses of future land use impacts as it relates to the subject within the section.

The following figures, measured from the designated categories on the Generalized Future Land Use Map (GFLUM) provide a very general measure of the scope of the future land use impacts.

The projected impact of future land uses in the coastal study area will collectively result in the loss or degradation of approximately 62,984 acres of native vegetative communities and agricultural lands. The major future land use designations include Low Intensity Coastal and Lakes (40,550); Coastal and Lakes Residential (7,527); Extractive (8,331); Industrial (1,306); and Transportation, Communications, and Utilities (5,270).

Native vegetative communities are protected by the conservation land use which accounts for 49,877 acres of land in the coastal area.

These figures reflect the amount of designated land use on the GFLUM in the Coastal Study Area. Refer to the Future Land Use Element, Section IV (D), Future Land Use Categories for a complete tabulation.

Related impacts include the loss of listed and non-listed wildlife and associated habitats, degradation of surface and groundwaters, and degradation of living marine resources.

Coastal, Lakes, River Management

C. Estuarine Pollution**1. Current Conditions**

The Conservation Element describes the coastal water quality as generally good. This measure was derived from the 1994 Florida Water Quality Assessment 305(b), Technical Report. Water quality of the coastal area, especially estuarine systems, have and are experiencing degrading factors. These factors include increased stormwater/urban runoff, seepage from on-site sanitary sewage disposal, sewage treatment plant effluent, residential use of pesticides, herbicide and fertilizers, and activities associated with commercial and leisure boating.

2. Point Sources

Point source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft, from which pollutants are or maybe discharged (USC 33§1251. 502 (14)) of the Clean Water Act. Point sources of pollution in the coastal area waters are defined to include any direct discharge into surface waters or adjacent wetlands and all marina/multi-slip docking facilities. Currently, there are a number of marina/docking facilities, which operate in the coastal waters. The recreational facilities identify 486 wet slips and 705 dry slips in county waters.

A major point source of pollution into King's Bay has been eliminated with the construction of a sprayfield facility for the City of Crystal River sewage treatment plant. Effluent from the plant is no longer discharged to a canal leading to King's Bay.

Secondly, Progress Energy discharges cooling waters into the coastal area adjacent to its Crystal River electric generating plants. The FDEP previously determined that the discharge of thermal (heated) water resulted in the destruction of marine sea grass beds and that substantial damage to near shore areas had occurred under the criteria set forth in 17-3.05 F.A.C. Progress Energy disagreed on the total area affected and the extent of impact.

Thirdly, marina and docking facilities generate and sustain several forms of pollution. These facilities have the potential to introduce petroleum products, human waste, and anti-bottom fouling paints to the water column and sediments. These pollutants can cause severe detriment to the associated aquatic habitats and animal life.

The application of herbicides for the control of aquatic plants may be contributing directly or indirectly to the degrading water quality of the coastal area. The long-term effects of chemical aquatic plant control should be addressed.

Coastal, Lakes, River Management

3. Non-point Sources

Non-point sources of pollution are the most prevalent pollutant in the coastal area. These non-point sources include urban/stormwater runoff, boating activities, on-site sewage disposal facilities, and agricultural runoff. The cumulative effects of non-point sources in the coastal area may prove to be the largest detriment to the estuaries and spring-fed river systems.

4. Remedial Actions Needed

Point sources of pollution are important to control as they often discharge concentrated effluents into water bodies which may cause deleterious affects. Progress Energy's thermal discharge is regulated by the DEP and the Environmental Protection Agency (EPA). Their active regulatory role is reflective of the National Pollution Discharge Elimination System.

Progress Energy has completed several actions to mitigate the concerns of the DEP and EPA. These include:

- The construction of operation of helper cooling towers;
- The reduction in seasonal cooling water use by 15 percent;
- The construction and operation of a Mariculture Center; and
- Seagrass monitoring with restoration as necessary.

The combined cost of these actions was 80-100 million dollars.

Marine and docking facilities are considered point sources due to their ability to concentrate pollutants in sediments and significantly degrade water quality in the docking area. The County's Marine Sanitation and Live Aboard Ordinances were developed to assist in the protection of the water quality by alleviating degrading factors. These factors include disposal of human waste and discharge of petroleum products.

Non-point sources have been demonstrated to contribute significantly to the degradation of the coastal area waters. The two most predominant sources are stormwater urban runoff and seepage from on-site sewage disposal. The County should develop a strategic program to retrofit all areas that are not served by a sanitary sewage system and stormwater/urban runoff systems.

Coastal, Lakes, River Management

5. Future Land Use Impacts and Facilities Proposed in the Traffic Circulation and Infrastructure Elements**a. New Point Sources**

Surface waters of the County provide economic support for persons dependent upon the fisheries and recreational industries. Indirect economic impacts are associated with the tourism trade and commercial retail sales. Primary importance should be given for the preservation of endangered and threatened species such as the West Indian (Florida) manatee. Facilities proposed in the Infrastructure Element are not planned to increase point sources of pollution.

b. Increase from Non-point Sources

The primary projected impacts to the coastal waters from designated future land uses includes: seepage from on-site sewage disposal and stormwater runoff. These two non-point sources historically have had tremendous impacts on coastal resources. Future development should provide regional sewage disposal and treatment and should provide additional stormwater treatment (i.e., greater storage and filtering).

Facilities proposed in the Traffic Circulation and Infrastructure Elements should have no primary impacts to the resources of the Coastal Area. Proposed roadway improvements include resurfacing and minor reconstruction of existing corridors. The resurfacing and reconstruction of roadways should include improved drainage systems.

6. State, Regional, and Local Regulatory Programs

State pollution regulation is largely embodied within the DEP. The DEP regulates dredge and fill in waters of the state and jurisdictional wetlands in a cooperative effort with the Army Corps of Engineers (ACE) and the water management district. In addition, the Department of Environmental Regulation (DER) regulates pollution discharges, establishes water quality standards and minimum treatment requirements, issues permits, licenses water operations, and administers wastewater construction grants.

The DEP is responsible for selling and leasing state owned submerged lands if the action is "not contrary to the public interest". The proposed use of the conveyed or leased submerged lands must not interfere with the conservation of fish, marine wildlife, or other natural resources. In addition, the DEP manages the St. Martins Marsh Aquatic Preserve. This preserve has special requirements for the sale or lease of state-owned submerged lands. (Refer to Section II.A.3.a. and Conservation Element for further discussions).

Coastal, Lakes, River Management

Regionally, the Southwest Florida Water Management District (SWFWMD) regulates stormwater discharge and water withdrawal, diversion, storage, and consumption. SWFWMD is the primary regional agency responsible for controlling water quality associated with freshwaters entering estuarine system. Within the County, SWFWMD maintains no flood control structures in the coastal area; therefore, there are no restrictions to freshwater input to estuaries. SWFWMD regulates stormwater controls and wetlands. Their Save Our Rivers (SOR) Program established a funding source and mechanism for purchasing environmentally sensitive lands. This program through the preservation/conservation of these lands will assist in the improvement and maintenance of freshwater entering estuaries.

Locally, the Citrus County Health Department, Environmental Health Section, oversees a number of programs, which affect the County's coastal waters. These programs include regulation of on-site sewage disposal systems, inspection of regional wastewater systems, and investigation of citizen complaints.

The most wide reaching program is the regulation of on-site sewage disposal systems (OSDS) in accordance with Chapter 64E-6, F.A.C. The majority of the residential areas in the coast area are not served by a centralized sanitary sewer, thus OSDS systems are installed. Prior to OSDS installation, a site evaluation is conducted to determine soil type, water table level, and other location features. This information is evaluated with structure size and configuration and a system is designed to Chapter 64E-6, F.A.C. standards.

In addition, the Environmental Health Section inspects OSDS systems, which are pending to be utilized by modified/new structures, or failed systems. If a system is determined to be substandard, it must be upgraded to Chapter 64E-6, F.A.C. standards.

The Environmental Health Section inspects wastewater treatment facilities through the directions of a County Ordinance authorizing the Public Health Unit to enforce 62-600, F.A.C. This program has proven instrumental in identifying and requiring improvements of deficient wastewater treatment facilities.

The final program the Environmental Health Section implements, which may affect estuarine systems, is their complaint program. Citizens' complaints concerning sewage, household garbage, etc., are investigated and valid complaints are followed through until resolution.

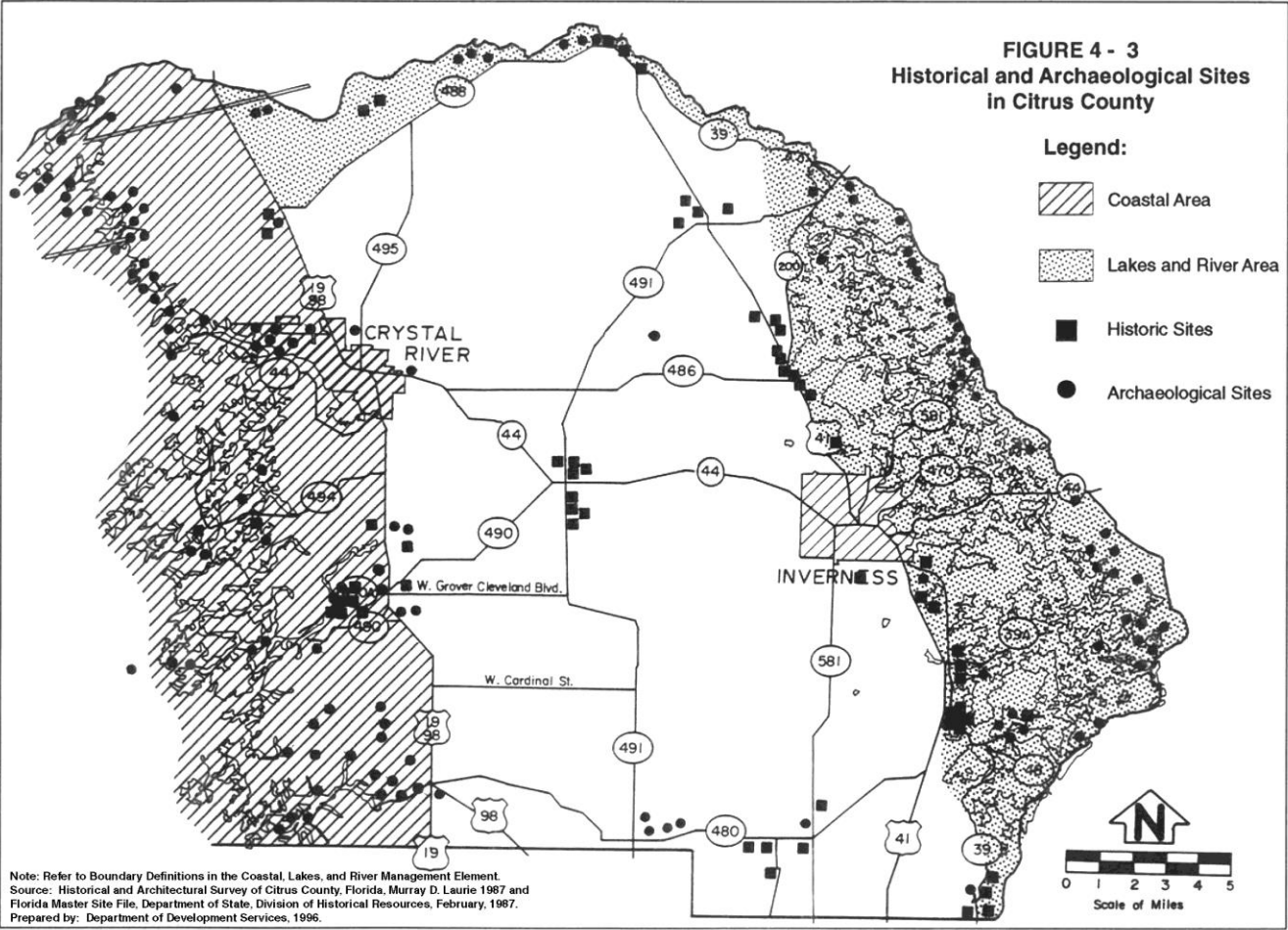


Figure 4-3 Historical and Archaeological Sites in Citrus County

Coastal, Lakes, River Management

D. Archaeological and Historic Resources of the Coastal Area**1. Inventory**

Known historic resources of the coastal area are concentrated within the vicinity of the early established communities of Red Level, Ozello, Homosassa, and Chassahowitzka. Whereas, archaeological resources are evenly distributed along the coastal area with concentrations found near surface waters and the Crystal River State Historic Site (refer to Figure 4-3).

The Department of State, Division of Historic Resources maintains the Florida Master Site File. This site file is a central archive for Florida archaeological and historic sites reported to the Department of State and is not the result of a comprehensive professional survey. The Citrus County Architectural and Historical Survey, 1987, listed 39 sites within the coastal area of Citrus County. These sites include structures with architectural, settlement, commercial, agricultural, and religious significance.

In 1993, an archaeological study of Citrus County was undertaken to assemble physical and cultural data related to history and prehistory and to assist with the identification and evaluation of previously unrecorded archaeological sites. Phase I, completed in June, 1993, included a sample survey of the County and discovered 52 new sites. Phase II, of the archaeological study was completed in 1995 as a follow-up to Phase I. A total of 4000+ acres were surveyed during this project, which produced 137 new archaeological and historic sites countywide. Of these sites, 97 were located in the geomorphological units identified coastal lowlands, coastal plain, and coastal marshes. The archaeological reports and maps are on file in the Department of Development Services.

2. Impact of Present Land Use Trends

Current land use trends present a moderate level of impact of historic and archaeological resources. The coastal communities are resources. The coastal communities are experiencing growth which may threaten many historic and archaeological sites. New home building may cause the relocation or destruction of historic structures in the highly valued coastal properties. Archaeological sites may be endangered by the expansion of development towards the westerly areas of the coast. Examples of such expansion are persons seeking homes on the County's coastal islands and keys, many of which may contain archaeological sites.

3. Impacts of Future Land Use

Future land uses are projected to indirectly impact historic and archaeological sites. No designated sites have been proposed for development. Development

Coastal, Lakes, River Management

review standards are contained in the LDC for the protection and preservation of significant sites.

4. Resource Protection

Currently, only Yulee Sugar Mill Ruins and Crystal River Indian Mounds are protected by Federal status (refer to Recreation and Open Space Element for location). This protection status is referred to as the National Register of Historic Sites and Places (National Historic Preservation Act of 1966 - P.L. 87-665 and Executive Order 11593).

All other sites are protected by the review standards contained in the LDC. The Florida Archives and History Act, Section 267, F.S., provides misdemeanor penalties for appropriating, destroying or altering an archaeological site on State lands without permission. In addition, Section 380, F.S., provides a measure of protection through the Development of Regional Impact Review process.

E. Hurricane Evacuation

1. Current Program

The current program for planning, managing, and enforcing Hurricane Evacuations is administered by the Sheriff's Department, Office of Emergency Management. The roles and responsibilities of each County department are defined in the Citrus County Emergency Operations Plan.

Authority for implementation of emergency management procedures is provided in an ordinance adopted by the Board of County Commissioners (BCC). The Citrus County Emergency Procedures Ordinance was adopted on May 28, 1991 (Ordinance No. 91-04) pursuant to Ch. 252 Florida Statutes. It addresses natural or man-made disasters, emergencies, designation of authority and succession, and empowers the designation of a local state of emergency.

Specifically, Ord. 91-04 authorizes emergency measures including:

- Expenditure of funds, distribution materials and supplies
- Provide emergency assistance to victims of any emergency
- Direct and coordinate plans and programs for emergency management
- Appoint personnel for assistance
- Established emergency operation centers
- Request for state assistance
- Waive procedures for appropriation and expenditure of public funds, employment, acquisition of supplies, equipment and materials

Coastal, Lakes, River Management

2. Coastal Evacuation

The information in this section is taken from the ~~2010 Statewide Regional Evacuation Study, Withlacoochee Region (SRES 2014 Evacuation Zone Map)~~ prepared by ~~the Withlacoochee Regional Planning Council (WRPC) and the Florida Division of Emergency Management~~ Citrus County Office of Emergency Management and GIS. This report, which replaces the *WRPC Hurricane Evacuation Study (2004)*, contains updated population and land use data and represents a quantitative, statewide standardized study across Florida. The major components of the study include an analysis of hazards, vulnerability, demographics, behavioral factors, transportation, and other factors important to emergency preparedness. The SRES- Evacuation Map contains a detailed analysis of potential evacuation from coastal storms and hurricanes, inland flooding, and wildfires. The complete SRES-Evacuation Zone data report is on file in the Department of Planning and Development GIS.

a. Hurricane Hazards

The principal tool used to predict the expected hazards from hurricanes affecting the region is the Sea, Lake and Overland Surges from Hurricanes (SLOSH) numerical storm surge prediction model. The SLOSH model predicts the storm surge heights that result from hypothetical hurricanes with selected various combination of pressure, size, forward speed, track, and winds. Additional technical information on the hurricane analysis models can be found in the SRES report which also provides a description of the various hazards from hurricanes including high wind speeds, storm surge on the coastline, and freshwater flooding.

The intensity of a storm is measured by the Saffir-Simpson scale of hurricane intensities. Refer to Table 4-2, Saffir-Simpson Hurricane Wind Scale. Tropical storm winds range from 39 to 73 mph. A tropical storm becomes a hurricane when the one-minute average speed of 74 mph is reached. Damage from high wind increases exponentially for each storm category. Any hurricane force wind can create a significant amount of structural, agricultural, or projectile damage. Tornadoes are another hazard spawned by high wind conditions. Mobile homes are particularly vulnerable to damage from high winds.

Coastal, Lakes, River Management

**TABLE 4-2
SAFFIR-SIMPSON HURRICANE WIND SCALE**

Hurricane Category	Sustained Wind Speeds	Potential Damage
1	74-95 mph	Very dangerous winds will produce some damage
2	96-110 mph	Extremely dangerous winds will cause extensive damage
3	111-130 mph	Devastating damage will occur
4	131-155 mph	Catastrophic damage will occur
5	156 mph and above	Catastrophic damage will occur

Source: Withlacoochee Regional Planning Council, 2010 Statewide Regional Evacuation Study
Prepared by: Citrus County Geographic Resources and Community Planning Division, 2014

Storm surge is a potential threat on the coastline of Citrus County. The SLOSH analysis indicates that a storm surge could affect properties a distance of up to 10.5 miles from the coastline. Populated areas that are subject to possible storm surge include the City of Crystal River, Chassahowitzka, Ozelto, and Homosassa.

Freshwater flooding is also a potential problem in a hurricane event because a storm can bring up to 6 to 12 inches of rainfall in a 24-hour period causing widespread flooding. Such flooding can block evacuation routes in advance of the storm, and create barriers to safe return after the storm. Contamination to drinking water supplies is also a threat.

b. Hurricane Vulnerability

As part of the regional study, all coastal areas were mapped using remote-sensing LIDAR (Light Imaging Detection and Ranging). The SLOSH model was used to predict the magnitude of storm surge for various scenarios of storm strengths and directions and to map storm surge inundation areas. Refer to Figure 4-4. Based on these areas of inundation, evacuation zones were established, the population at risk was determined for various hurricane intensities, and the facilities vulnerable to hurricane related flooding were identified.

The population at risk is defined as the number of persons that must be evacuated from the hazards of a tropical storm or hurricane. Using the SLOSH model, the entire population in the potential storm tide area is calculated and then classified according to five evacuation levels (evacuation levels A, B, C, D and E) that correspond to the five categories of hurricane on

Coastal, Lakes, River Management

the Saffir-Simpson Hurricane Scale. The evacuation zones are defined by the Citrus County Office of Emergency Management based on the expected inundation areas and logical boundaries. All mobile homes and RV units are considered at risk even in areas not vulnerable to storm tide because they are vulnerable to hurricane force winds. Potential storm tide heights were also estimated as shown in Table 4-3.

In every evacuation there are residents who choose to evacuate even though they are not located in a surge vulnerable area or in a mobile home or RV. The phenomenon is termed “shadow evacuation” and has been documented in behavioral studies on hurricane evacuation. There are also a percentage of the population at risk that do not evacuate even though they are deemed to be at risk. The *2010 Statewide Regional Evacuation Study, Withlacoochee Region (SRES) Evacuation Zone Map* contains planning assumptions to assist in development of anticipated evacuating populations under different storm scenarios. For planning purposes, the “Base Scenario” is used which represents 100% participation of population at risk plus “shadow evacuation”. The Base Scenario is considered the “planning scenario”, and is the more conservative estimate which will be used for growth management purposes. According to the SRES, the difference between the population at risk and the actual evacuating population can be as much as 20% to 40%.

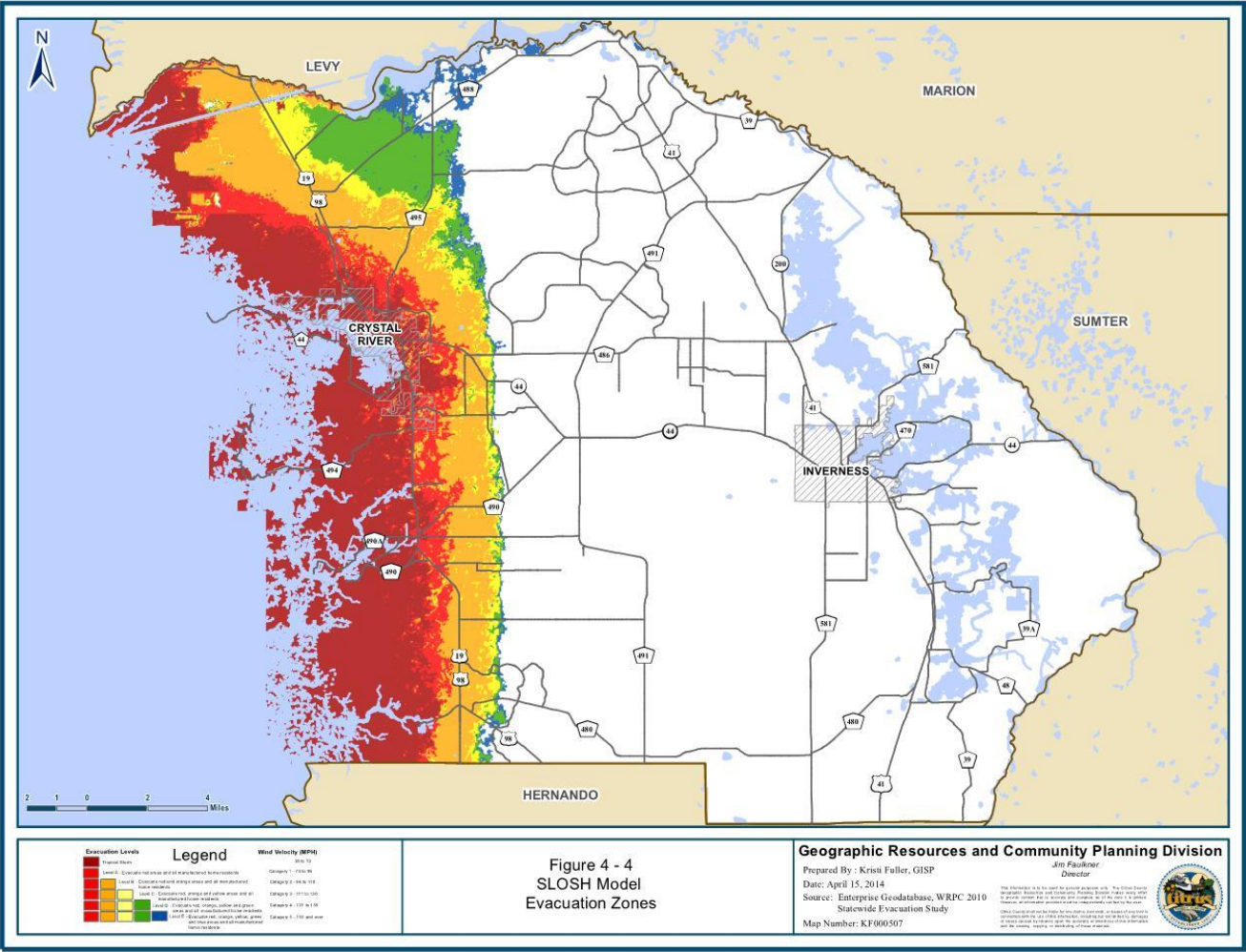
**TABLE 4-3
POTENTIAL STORM TIDE HEIGHT
CITRUS COUNTY
(IN FEET ABOVE NAVD88)**

Storm Strength Category	Potential Storm Tide Height
1	4.8-10.8
2	12.4-19.9
3	19.0-25.1
4	25.5-32.3
5	30.1-41.3

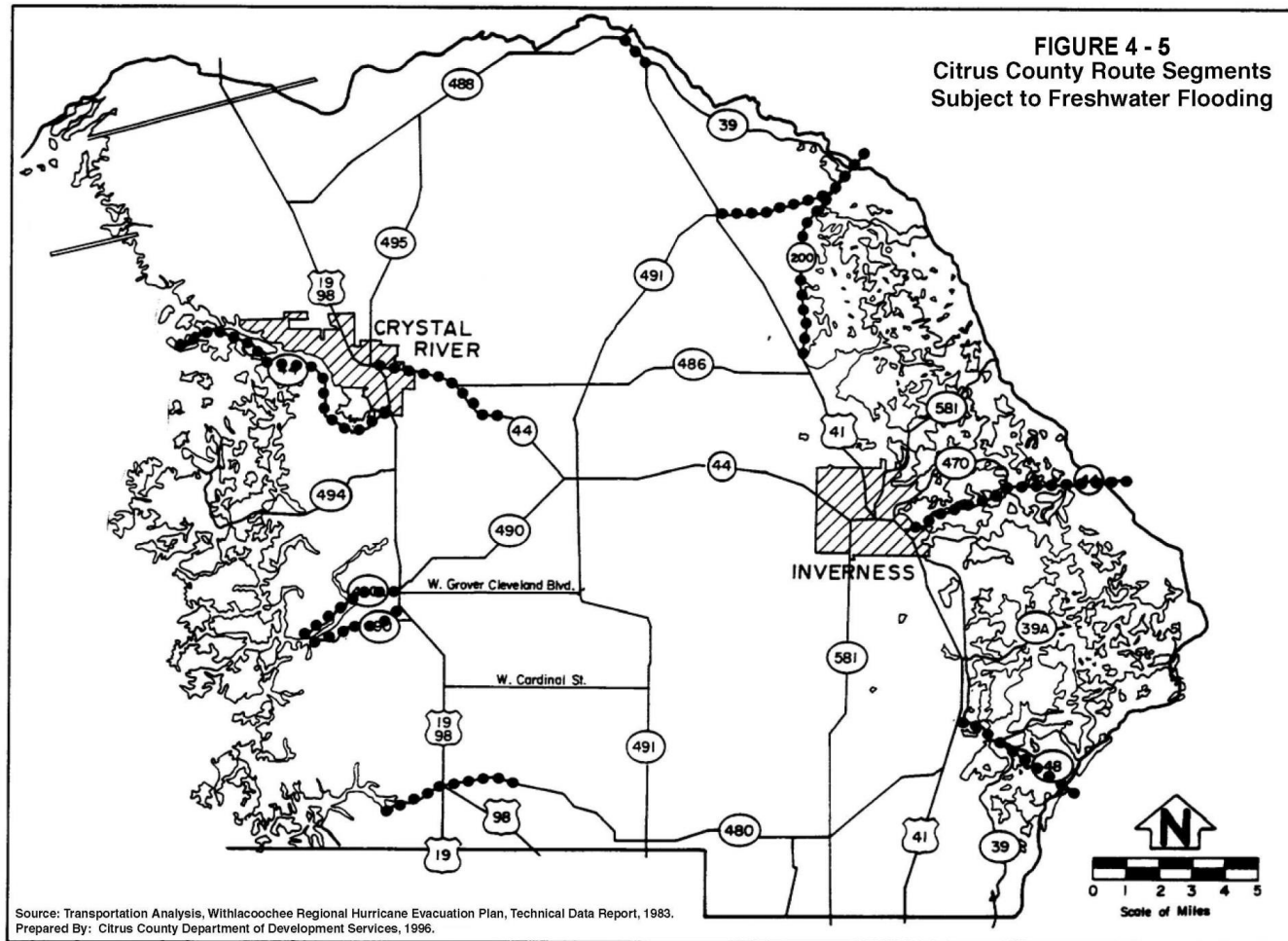
Source: Withlacoochee Regional Planning Council, 2010
Statewide Regional Evacuation Study, Table IV-1.

Prepared by: Citrus County Geographic Resources and
Community Planning Division, 2012/2014

Coastal, Lakes, River Management



Coastal, Lakes, River Management



Coastal, Lakes, River Management

c. Roadway Network and Clearance Times

The hurricane evacuation routes involve all the major roadways in Citrus County and are shown in Figure 4-6. The regional road network is also presented in Figure 4-6.

With the onset of a storm there is danger from both surge and freshwater flooding. Because roadways are the main concern for residential evacuation, the elevation of the roads along with the depth of water that can possibly occur is important. This information can provide the emergency manager with a tool to order evacuations in a timely manner. Evacuation routes that will easily deteriorate due to surge or freshwater flooding may be subject to early closures and rerouting.

Citrus County's coastal lowlands provide for a large number of roads that could be affected by surge flooding. The County's extensive coastal keys create a large area for surge inundation. The eastern boundary of the county will experience the greatest amount of freshwater flooding within Lake Tsala Apopka's broad reach. Each of the roads in Table 4-5 is expected to be inundated with water. (Information based on FEMA Flood Insurance Rate Maps.)

The WRPC has conducted extensive analysis of the regional road network and has used a transportation model to determine the trip generation/distribution of evacuation trips and the resulting clearance times. Calculated clearance times are used by emergency managers to help determine when to order an evacuation order. Clearance time is the time required for evacuees to secure their homes and prepare to leave, then spent by all vehicles traveling along the evacuation route network, and the additional time spent on the road caused by traffic road congestion. For Citrus County in the 2015 time period, the clearance time to shelter ranges from 12.5 hours to 14.0 hours depending on the evacuation level required. The regional clearance time is between 14.5 and 20.0 hours. Refer to Table 4-4, 2015 Clearance Time for Base Scenario.

Coastal, Lakes, River Management

**TABLE 4-4
2015 CLEARANCE TIMES FOR BASE SCENARIO (HOURS)
CITRUS COUNTY**

	Evacuation Level A	Evacuation Level B	Evacuation Level C	Evacuation Level D	Evacuation Level E
Clearance time to shelter	12.5	13.0	13.0	14.0	14.0
In-County Clearance Time	13.5	13.5	14.5	16.5	19.0
Out of county Clearance Time	13.5	14.0	14.5	17.5	19.0
Regional Clearance Time	14.5	14.5	15.5	18.5	20.0

Source: Withlacoochee Regional Planning Council, 2010 Statewide Regional Evacuation Study, Table ES-12.
Prepared by: Citrus County Geographic Resources and Community Planning Division, 2014

Note:

Base scenario, 2015

This information is valuable for the emergency officials and the FDOT in improving the flow of evacuation traffic. For example, it can be used to adjust the traffic signal timing patterns to provide maximum green time for evacuating vehicles. Fuel requirements along major routes can be estimated, and intelligent transportation system technology can be deployed to provide better monitoring and notification of traffic conditions.

Coastal, Lakes, River Management

**TABLE 4-5
CRITICAL ROADWAY LOCATIONS**

US 19 from CR 488/Dunnellon Road to out of county (Cross Florida Barge Canal)
SR 44/Gulf to Lake Highway from intersection with CR490/Homosassa Trail to CR491/Lecanto Highway
SR 200 from CR491/Lecantio Highway out of County
US 19 from CR44 to SR 44/5 Street (northbound into Crystal River)
US 19 from SR 44/5 Street to CR 495/Citrus Avenue (downtown Crystal River)
US 19 from CR495/Citrus Avenue to CR 488/Dunellon Road (northbound out of Crystal River)
SR 44/Gulf to Lake Highway from CR 581/Pleasant Grove Road to US 41 (Inverness)
US 41 from SR 44/Gulf to Lake Highway to intersections with SR 44 eastbound traffic (Inverness)
SR 44/Gulf to Lake Highway from US 41 to out of county and I-75

Source: ~~Withlacoochee Regional Planning Council, Withlacoochee Hurricane Evacuation Study, 2004.~~
 Prepared by: Citrus County Division of ~~Community Development GIS, 2004~~ 2014.

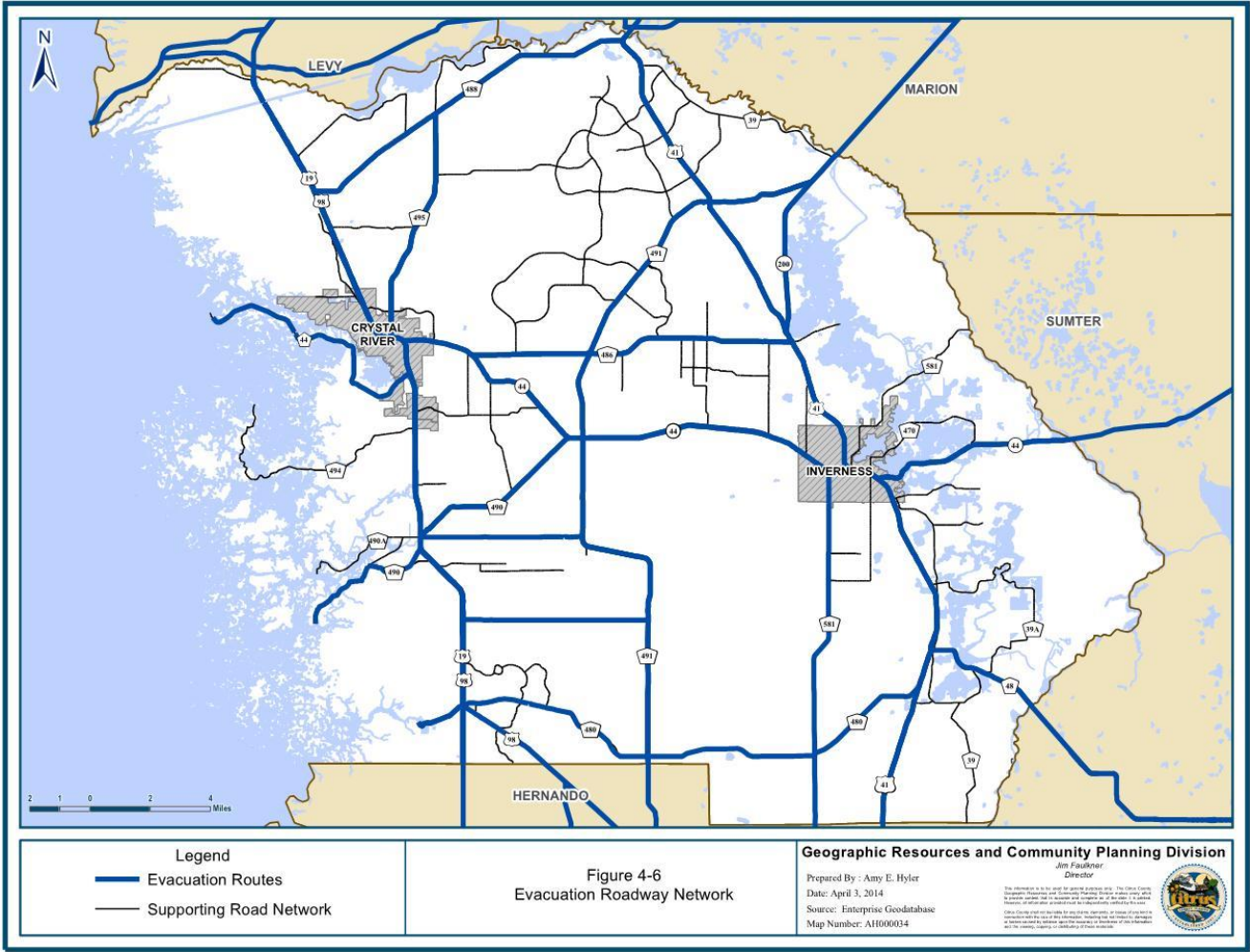


Figure 4-6 Evacuation Roadway Network

Coastal, Lakes, River Management

d. Housing and Population Data

Census data on population and housing were used in conjunction with Geographic Information Systems (GIS) to map the location of the population at risk. It is assumed that persons living in areas flooded by storm surge should be evacuated. This includes permanent residents, in single family, multifamily, and mobile home units, as well as, tourists staying in hotels/motels, condominiums, and rental units in storm surge vulnerable areas. In Evacuation Zone A, an estimated 23,042 persons are at risk residing in site built and mobile homes. Refer to Table 4-6.

TABLE 4-6
2015 POPULATION-AT-RISK
FROM HURRICANES BY EVACUATION LEVEL
CITRUS COUNTY

	Evacuation Zone A	Evacuation Zone B	Evacuation Zone C	Evacuation Zone D	Evacuation Zone E
Site Built Homes	16,100	8,268	1,445	3,549	2,144
Mobile/Manuf. Homes	6,942	4,802	976	1,238	792
Total	23,042	13,070	2,421	4,787	2,936

Source: Withlacoochee Regional Planning Council, 2010 Statewide Regional Evacuation Study, Table IV-6.

Prepared by: Citrus County Geographic Resources and Community Planning Division, 2014

Note:

Population figures are not inclusive, meaning figures listed for a higher zone are not included in the lower zone.

e. Shelter Capacity

The emergency shelter inventory for Citrus County is comprised of public schools, churches, and public buildings. Refer to Table 4-7. Only a small percentage meets the American Red Cross Standards (ARC) for shelter construction. Table 4-7 provides the location of the Citrus County Special Needs Shelters. The hotel availability is also shown in Table 4-8.

Coastal, Lakes, River Management

**TABLE 4-7
CITRUS COUNTY EVACUATION SHELTERS**

NAME	ADDRESS	CITY	PET FRIENDLY	SPECIAL NEEDS
PRIMARY SHELTERS				
Central Ridge Elementary	185 W. Citrus Springs Blvd.	Citrus Springs	No	No
Citrus High School	600 W. Highland Blvd	Inverness	No	No
Citrus Springs Elementary School	3570 W. Century Blvd	Citrus Springs	No	No
Citrus Springs Middle School	150 W. Citrus Springs Blvd.	Citrus Springs	No	No
Crest School	2600 S. Panther Dr.	Lecanto	No	No
Floral City Elementary School	8457 E. Marvin Street	Floral City	No	No
Forest Ridge Elementary School	2927 N. Forest Ridge Blvd.	Hernando	No	No
Hernando Elementary School	2353 N. Croft Road	Hernando	No	No
Inverness Middle School	1000 Middle School Dr.	Inverness	No	No
Inverness Primary School	206 S. Line Street	Inverness	No	No
Lecanto High School	3810 W. Educational Path	Lecanto	No	No
Lecanto Middle School	3800 W. Educational Path	Lecanto	No	No
Lecanto Primary School	3790 W. Educational Path	Lecanto	Yes	No
Pleasant Grove Elementary	630 Pleasant Grove Road	Inverness	No	No
Renaissance Center	3630 W. Educational Path	Lecanto	No	Yes
Rock Crusher Elementary	814 S. Rock Crusher Road	Homosassa	No	No
Withlacoochee Technical Institute	1201 W. Main Street	Inverness	No	No

Coastal, Lakes, River Management

TABLE 4-7 - continued
CITRUS COUNTY EVACUATION SHELTERS

NAME	ADDRESS	CITY	PET FRIENDLY	SPECIAL NEEDS
SECONDARY SHELTERS				
Beverly Hills Lions Club	72 Civic Circle	Beverly Hills	No	No
Calvary Chapel Inverness	960 S. US Hwy 41	Inverness	No	No
Central Florida Community College	3800 S. Lecanto Hwy.	Lecanto	No	No
First Assembly Church	4201 S. Pleasant Grove Road	Inverness	No	No
First Baptist Church	8545 E. Magnolia	Floral City	No	No
First Baptist Church of Crystal River	700 N. Citrus Avenue	Crystal River	No	No
First Baptist Church of Inverness	123 S. Seminole Avenue	Inverness	No	No
First Christian Church	1005 Hillside Court	Inverness	No	No
First Lutheran Church	1900 W. Highway 44	Inverness	No	No
First Presbyterian Church	206 Washington Avenue	Inverness	No	No
First United Methodist Church of Inverness	3896 S. Pleasant Grove Rd.	Inverness	No	No
Floral City Community Center	8370 E. Orange Avenue	Floral City	No	No
Good Shepherd Lutheran Church	439 E. Norvell Bryant Hwy.	Hernando	No	No
Highlands Emergency Center	4325 S. Little Al Point	Inverness	No	No
Hope Evangelical Lutheran Church	9425 N. Citrus Springs Blvd.	Citrus Springs	No	No
Main Street Baptist Church	960 S. Highway 41	Inverness	No	No
Mt. Olive Missionary Baptist Church	2105 N. Georgia Rd.	Crystal River	No	No
New Church Without Walls	3962 N. Roscoe Rd.	Hernando	No	No
Our Lady of Fatima	550 S. Highway 41	Inverness	No	No
Riverside Christian Church	7771 N. Carl G. Rose Hwy	Hernando	No	No
St. Elizabeth Anne Seton Hall	1180 Country Club Blvd.	Dunnellon	No	No
St. Margaret Episcopal Church	114 N. Osceola Avenue	Inverness	No	No
V.F.W. Leroy Rooks	1930 S. Highway 200	Hernando	No	No

Source: Citrus County Sheriff's Office, Emergency Management

Prepared by: Citrus County Geographic Resources and Community Planning Division, 2014

Coastal, Lakes, River Management

**TABLE 4-8
HOTEL AVAILABILITY
IN HURRICANE EVACUATION SCENARIOS**

Storm Surge Area Category	Room Availability
Tropical Storm	695
1	108
2	16
3	77
4	9
5	0
TOTAL	905

Source: Withlacoochee Regional Planning Council, Withlacoochee Hurricane Evacuation Study, 2010

Prepared by: Citrus County Geographic Resources and Community Planning Division, 2014

Formatted: Highlight

3. Shelter Capacity Needs Assessment

Formatted: Highlight

As required by Statute, the Florida Department of Community Affairs has prepared a Statewide Emergency Shelter Plan. (Section 235.26(8)(b) Florida Statutes). This plan is updated biennially to address current availability of shelter space for each county and submitted to the Governor and Cabinet for approval.

Shelter space is identified as two categories: At Risk Shelters are used for persons within the county that need to remain in a shelter throughout a storm event. These shelters are designed to meet the standards of ARC 4496 Shelter Criteria. (American Red Cross) Host Shelters are ones that may be opened in an event that calls for mass evacuation from another area of the State. These shelters do not have to meet the rigid criteria of ARC 4496 to withstand hurricane force winds. Host or other non-ARC 4496 approved shelters may also be used when a localized event occurs such as flooding or evacuation due to a fire or hazardous material spill.

Shelters typically are schools and other publicly owned buildings. If new construction is not designed to meet the ARC 4496 requirements, we must retrofit existing buildings to meet these standards. The cost of retrofitting a structure is often higher and the project more difficult than if the work is done during original construction. In addition, one rarely achieves the highest capacity when retrofitting and often falls short of funding for necessary things such as generators.

According to the 2010 Statewide Regional Evacuation Study, Withlacoochee Region (SRES), Citrus County has a public shelter capacity of 4,750 persons. The 2015 projected demand for shelter for Evacuation Zone A (Category 1 hurricane) will create a demand for 5,078 persons, a deficit of 328 persons. Of course, more intense storms will result in larger areas being evacuated and create a greater demand for shelter. Refer to Table 4-9.

Formatted: Highlight

Coastal, Lakes, River Management

TABLE 4-9

**PUBLIC SHELTER DEMAND
FOR HURRICANE EVACUATION
BASE SCENARIOS 2015, CITRUS COUNTY**

County	Capacity	A	B	C	D	E
Citrus	4,750	5,078	5,385	7,513	12,478	13,716

Source: Withlacoochee Regional Planning Council, 2010 Statewide Regional Evacuation Study, Table V-10a.

Prepared by: Citrus County Geographic Resources and Community Planning Division, 2014

Formatted: Highlight

People with special needs are the handicapped, disabled, hearing and visually impaired, and others requiring special assistance. The Citrus County Sheriff's Department, Office of Emergency Management is responsible for overall direction and control of evacuation procedures and for an orderly, coordinated evacuation for persons with special needs. Specifically, this office provides for the identification, public information, warning, evacuation, sheltering, and recovery operation for people with special needs. To facilitate the evacuation process, a roster of such persons is maintained and assistance is provided with transportation.

Specific strategies have been developed in the policy section of this element to reduce the existing shelter deficit, and to meet the future demands for adequate shelter capacity. The policy section contains specific requirements for hurricane shelters in both mobile home parks and mobile home subdivisions, which meet the requirements of ARC 4496. In addition, a policy supporting the establishment of a hurricane mitigation fund is created to assist in providing the resources needed for hazard mitigation projects identified in the *Local Mitigation Strategy*.

The County will continue efforts to reduce hurricane evacuation times through implementation of controls on land use density in the coastal area. In addition, proposed development projects in the hurricane vulnerable area will be reviewed using a traffic-modeling program to assure that emergency evacuation times are not increased.

F. Post Disaster Planning and Coastal High-Hazard Areas

The Coastal High Hazard Area (CHHA) is defined in Chapter 163 Florida Statutes:

The coastal high-hazard area is the area below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. [Ch. 163.3178]

Coastal, Lakes, River Management

The map reflects a worst-case scenario of hurricane storm surge inundation at mean-high tide. It shows the maximum surge expected to occur regardless of the storm track or direction of the hurricane. Unless otherwise indicated, all references to the "Coastal High Hazard Area" in this plan refer to the Category 1 storm surge line as defined in Ch. 163.3178 Florida Statutes. The extent of the CHHA for Citrus County is shown in Figure 4-7.

Local level of service planning requirements for evacuation time have been established in Florida Statutes and are shown below. The 16-hour Out of County evacuation time is also referenced in Policy 4.9.3 of this Chapter.

(9)(a) A proposed comprehensive plan amendment shall be found in compliance with state coastal high-hazard provisions if:

- 1. The adopted level of service for out-of-county hurricane evacuation is maintained for a category 5 storm event as measured on the Saffir-Simpson scale; or*
- 2. A 12-hour evacuation time to shelter is maintained for a category 5 storm event as measured on the Saffir-Simpson scale and shelter space reasonably expected to accommodate the residents of the development contemplated by a proposed comprehensive plan amendment is available; or*
- 3. Appropriate mitigation is provided that will satisfy subparagraph 1. or subparagraph 2. Appropriate mitigation shall include, without limitation, payment of money, contribution of land, and construction of hurricane shelters and transportation facilities. Required mitigation may not exceed the amount required for a developer to accommodate impacts reasonably attributable to development. A local government and a developer shall enter into a binding agreement to memorialize the mitigation plan.*

(b) For those local governments that have not established a level of service for out-of-county hurricane evacuation by July 1, 2008, by following the process in paragraph (a), the level of service shall be no greater than 16 hours for a category 5 storm event as measured on the Saffir-Simpson scale.

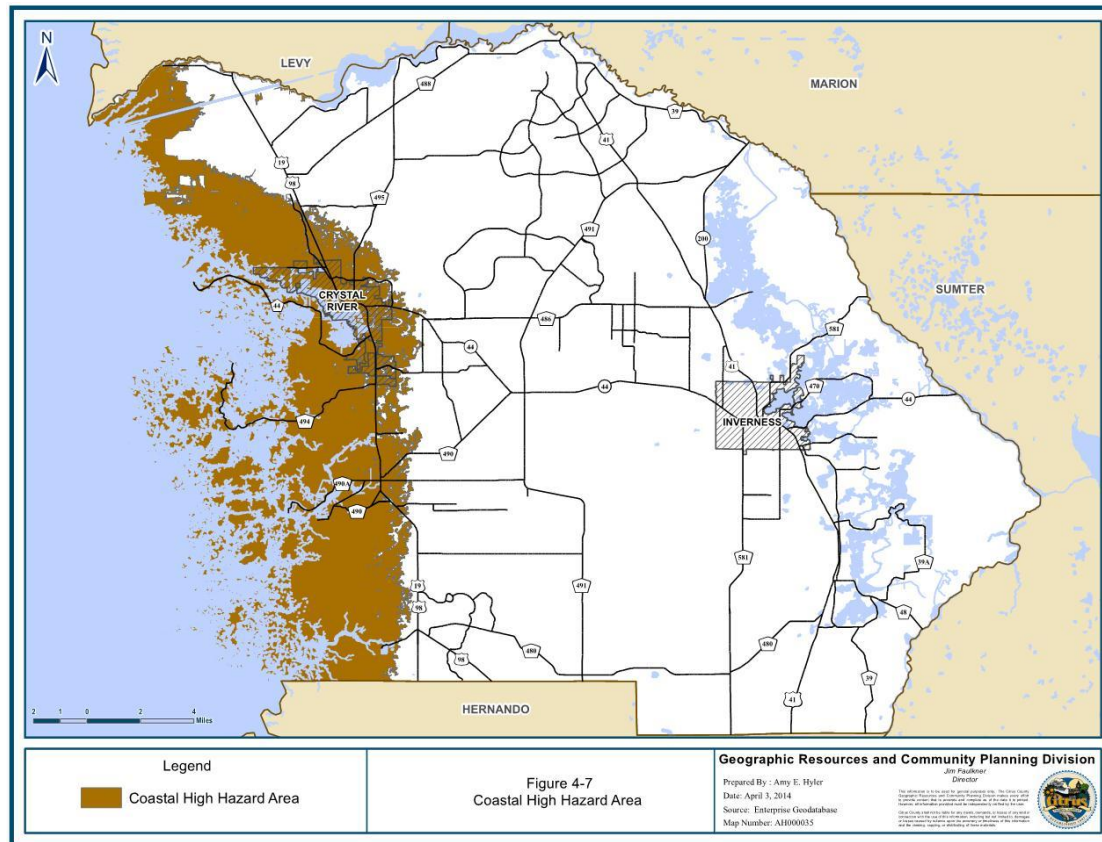
(c) This subsection shall become effective immediately and shall apply to all local governments. No later than July 1, 2008, local governments shall amend their future land use map and coastal management element to include the new definition of coastal high-hazard area and to depict the coastal high-hazard area on the future land use map.

[Ch. 163.3178]

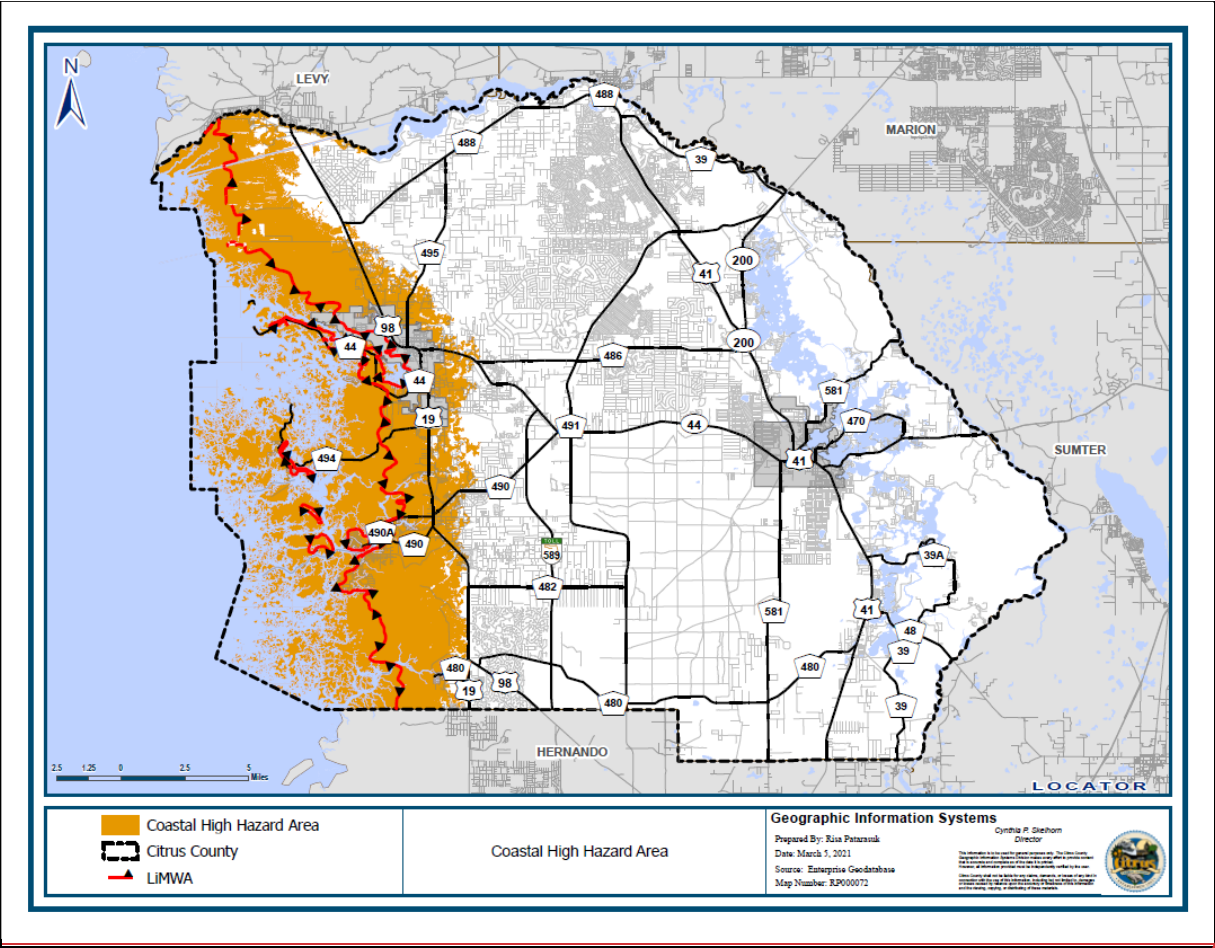
Coastal, Lakes, River Management

Figure 4-7 Coastal High Hazard Area

Coastal, Lakes, River Management



Coastal, Lakes, River Management



Formatted: Border: : (No border)

Coastal, Lakes, River Management

G. Public Access**1. Inventory of Facilities**

A detailed inventory of public access facilities is provided in the Recreation and Open Space Element. This inventory (Table 2-1) details the facility types and opportunities provided by shoreline and water use access sites. Figures 2-3 and 2-5 in the Recreation and Open Space Element illustrate the location of each site within Citrus County and the City of Crystal River.

2. Access Demand and Needs

The coastal area offers many recreational opportunities; however, the public is often precluded from these opportunities. Table ~~4-12~~ 4-10 summarizes coastal shoreline access. This summary is not limited to saltwater areas due to the nature of the County's coastal area and the access provided by the four coastal rivers.

Saltwater beach access in the County cannot be treated similar to other areas in the state due to our extremely limited resource. Saltwater beach demand is greater than the available supply. The County's only saltwater beach is located at Fort Island Gulf Beach. This site has been slated for expansion within the Recreation and Open Space Element. This proposed expansion, if permitted, may be the only site available for current and future saltwater beach locations. Any expansion of saltwater beach areas will require dredging and filling activities, which are not consistent with marine resource protection policies.

Freshwater beach locations are limited by the wetlands associated with the springs and riverine systems of the coastal area. Currently, the only site is located at Hunter's Spring Park (City of Crystal River). Future expansions of such areas are limited by shoreline land uses and wetland areas. Analysis of needed freshwater beach areas was not conducted. If such areas are determined as needed, appropriate facilities may include swimming areas with a boardwalk access and swimming pools.

The need for fishing piers in the coastal area has been demonstrated in the Recreation and Open Space Element. However, no quantified determination of needs has been completed. The gradual slope of our coastal waters (1:6, 667) and the resultant shallow waters demonstrate that parallel shoreline boardwalks may be a better alternative to perpendicular shoreline piers.

The Fort Island Trail Park constructed in 1993/94 provides access to the Crystal River. It contains two double lane boat ramps, three boat docks, a fishing pier, rest rooms, and an administrative office. The development of this park added 1,009 feet of shoreline access (259 feet for pier and 750 feet bank access). At Fort Island Gulf Beach, a 200 ft. fishing pier has been added.

Coastal, Lakes, River Management

Coastal boat access, as inventoried, consists of boat ramps, launching lanes, dry slips, and wet slips. The total boat ramps and lanes in the coastal area consist of 27 and 32, respectively. Wet slips and dry slips consist of 486 and 704, respectively. The need for 2 ramps on the Crystal River and 1 on the Homosassa River has been identified. In 1993, 2 ramps and 4 lanes were added at Fort Island Trail Park.

An analysis of future needs for wet and dry slips, marinas, and multi-slip docking has not been completed due to limited standards and measures. These standards are used to measure the amount of need based upon the demand demonstrated by the potential user group (population, tourists, etc.).

TABLE 4-10
SUMMARY OF COASTAL SHORELINE ACCESS

Access	Public	Private	Total
Saltwater Beach (feet)	950	---	950
Freshwater Beach (feet)	240	---	240
Fishing Pier (linear feet)	1299	105	1404
Coastal Boat Access (Ramps, Lanes)	27, 32	10, 14	17, 18
Coastal Wet Slips	---	486	486
Coastal Dry Slips	---	705	705

Source: Citrus County Public and Private Recreation Inventory July 1987
Division of Parks and Recreation, 2005
Prepared by: Citrus County Community Development Division, 1996

H. Coastal Area Public Infrastructure

1. Existing Facilities

Existing infrastructure in the coastal area consists of package wastewater facilities, public landfills, roadways, bridges, potable water facilities, and man-made drainage facilities.

A regional wastewater treatment facility exists in the City of Crystal River, yet for purposes of this analysis, the facility is located outside the boundary of the Coastal Area.

a. Package Wastewater Facilities

The coastal area contains 34 package wastewater facilities. These facilities are described and illustrated within the Infrastructure Element.

b. Public Landfills

Two landfills are located within the coastal area. These include a flyash landfill at Progress Energy electric generation site and a closed public landfill

Coastal, Lakes, River Management

in the Homosassa area (refer to the Infrastructure Element for discussion and illustrations).

c. Roadways and Bridges

Existing and projected needs for roadways and bridges in the coastal area demonstrate that no new facilities or expansion to transportation systems are needed currently through the year 2010.

d. Potable Water Facilities

Potable water supply facilities in the coastal area include package and regional facilities. Regional facilities include the Ozello Water Association and the Homosassa Special Water District. Package facilities typically serve limited service areas (refer to the Infrastructure Element for discussions and illustrations).

e. Man-made Drainage Facilities

Man-made drainage facilities other than roadway culverts and subdivision improvements in the coastal area include mosquito control ditches.

2. Fiscal Impact of Coastal Infrastructure

The future coastal infrastructure needs are summarized in the Table below. A detailed analysis of coastal infrastructure including estimated cost, funding sources, and phasing is provided in the Capital Improvement Element of this Plan.

**TABLE 4-11
FUTURE INFRASTRUCTURE NEEDS
COASTAL AREA**

Project	Target Year	Estimated Cost
Fort Island Beach Renourishment	2007	\$70,000
Fort Island Trail Road Improvements	2005-2007	\$2,300,000
Homosassa Wastewater Facility Phase 4	2004-2006	\$4,750,000
Homosassa Wastewater Facility Phase 5	2004	\$1,500,000
US-19 sewer Expansion	2004-2008	\$2,375,000
Homosassa Wastewater Facility Phase 7	2006	\$1,500,000
Homosassa Wastewater Facility Phase 6	2005	\$1,500,000
Homosassa Southfork Phase V	2004 –2008	\$2,500,000

Source: Citrus County Office of Management and Budget, Capital Improvements Program, FY 2004-2008
Prepared by: Citrus County Community Development Division, October, 2004

Coastal, Lakes, River Management

III. LAKES AND RIVER MANAGEMENT BOUNDARY**A. Definition**

The lake and river management boundary and study area as defined includes the major surface water bodies, wetlands, and land areas which are subject to freshwater flooding of the Tsala Apopka Plain and the Withlacoochee River system.

B. Lakes and River Management Boundary Description

The study area and management boundary are defined as follows:

"Those lands and waters beginning at the southern County line extending north along the centerline of CSX railroad right-of-way to the southern boundary of the City of Inverness, thence east, north, and then west along said boundary to 400 feet east of US-41, thence north along US-41 to 400 feet east of SR-200, thence north along SR-200 to the intersection of SR-200 and the south line of Section 35, Township 17 South, Range 19 East, thence northeast along SR-200 to intersection of SR-200 and the east line of Section 35, Township 17 South, Range 19 East, thence north along section line to CR-491, thence west along CR-491 to a point 1,300 feet west of the easterly section line of Section 34, Township 17, Range 19 East, thence 2,700 feet south to south line of Section 34, Township 17 South, Range 19 East, thence east along south line of Section 34, Township 17 South, Range 19 East and thence north along the east line of Sections 34, 27, 22, and 15 to centerline of CR-39, thence west along CR-39 to 400 feet east of US-41, thence 400 feet northeast along US-41 to 400 feet north of CR-488, thence west along said line 400 feet north of CR-488 to 1,000 feet west of US-19, thence north along said line to the north County line, thence east along said line to the south County line, thence along said line to centerline of CSX railroad right-of-way."

IV. LAKES AND RIVER INVENTORY AND ANALYSIS**A. Natural Resources**

Natural resources of the Lakes and River area are dominated by the surface water features of the Tsala Apopka Plain (Tsala Apopka Chain of Lakes) and the Withlacoochee Riverine System.

1. Tsala Apopka Chain of Lakes

Tsala Apopka Chain of Lakes consists of three pools - Floral City, Inverness, and Hernando - which generally flow northwesterly through the Hernando Pool and the Tsala Apopka Outfall Canal to the Withlacoochee River. This lake system (Tsala Apopka Plain) is comprised of approximately 60 percent upland area, which consists of forests, urban land, pastures, and citrus groves. The remaining

Coastal, Lakes, River Management

40 percent of the area consists of wetlands and open water. The wetlands are comprised of riverine/lake cypress swamps and freshwater marshes.

The lake system functions beneficially in many ways. These benefits are recognized by a highly productive biologic system and a significant recharge area for the Floridan aquifer.

SWFWMD maintains and operates control structures on Lake Tsala Apopka for its Lake Levels Project. This project was initiated to protect water bodies and guide activities such as withdrawal, augmentation of lakes, and dredge and fill projects. Lakes regulated by this project in Citrus County are listed in Table 4-12.

The Lake Level Program objectives are to: 1) provide guidelines for development bordering lakes, 2) conserve the water storage and recharge capabilities of lakes, 3) provide levels for operation of lake control structures, and 4) provide information for districts water use permitting (WUP) activities. Levels set by this project include 10-Year Flood Warning Level, Minimum Flood Level, and Minimum Level (low and extreme) and are listed in Table 4-14 and Figure 4-8.

10-Year Warning Level - means that elevation, in feet above mean sea level, which approximates the level of flooding expected on a frequency of not less than the 10 year recurring interval, or on a frequency of not greater than a 10 percent probability of occurrence in any given year, as determined from analysis of best available data. This is an advisory level provided only as a discretionary guideline for lakeshore development.

TABLE 4-12
ADOPTED LEVELS ON LAKES WITHIN CITRUS COUNTY

NAME	10-YEAR FLOOD WARNING	MINIMUM FLOOD	MINIMUM LOW MANAGEMENT	MINIMUM EXTREME LOW MANAGEMENT
1. Bradley	43.40'	42.50'	40.25'	38.25'
2. Cato	38.82'	38.00'	35.50'	34.00'
3. Connell	35.68'	35.50'	32.00'	35.25'
4. Cooter	41.80'	40.50'	38.25'	36.25'
5. Hog Pond (Nina)	35.92'	34.50'	32.00'	30.00'
6. Holden (Inverness)	32.44'	32.00'	29.50'	28.00'
7. Little (Consuella)	43.40'	41.40'	39.00'	37.25'
8. Magnolia	32.36'	31.00'	28.50'	27.00'
9. Rush (Williams) Tsala Apopka	36.20'	35.75'	33.25'	31.25'
10. Floral City Pool	43.40'	42.50'	40.25'	38.25'
11. Hernando Pool	40.50'	39.00'	36.75'	34.75'
12. Inverness Pool	41.80'	40.50'	38.25'	35.25'
13. Twin	38.11'	37.00'	35.00'	33.00'

Source: SWFWMD Lake Levels Program Annual Report, 1995
Prepared by: Citrus County Community Development Division, 1996

Coastal, Lakes, River Management

Minimum Flood Level - means the highest level to which a surface water body shall be allowed to fluctuate without interference except as approved by the Board (SWFWMD - Governing Board) for the purpose of conserving the waters in the state so as to realize their full beneficial use. Such level shall be expressed as an elevation, in feet above mean sea level. Drainage works in the lake require district permits to ensure proper design and prevent over drainage, so that the lake's ability to reach the minimum flood level is maintained.

For levels with control structures, this is the maximum level, which the lake would achieve by operation of the control structure. It is a peaking elevation and not one which is held.

Minimum Water Level - means the level of surface water at which further withdrawals would be significantly harmful to the water resources of the area. Such level shall be expressed as an elevation, in feet above mean sea level, and may incorporate a low level and extreme low level, which together establish the lower limits of the range, to which a water body shall be allowed to fluctuate naturally. Two minimum water levels are established: the minimum level-low level and the minimum level-extreme low level. These levels are illustrated in Figure 4-8.

Minimum Level-Low Level - the normal yearly low level used as a guide to operate a lake control structure. For WUP purposes, this level can be used to:

- Regulate lake augmentation to prevent wasting groundwater resources to evapotranspiration and water table loss, prevent possible flooding through loss of storage, reduce possible solution of limestone, and lessen the water quality impacts of augmentation
- Provide information to regulate only those withdrawals that can greatly affect the level of the lake

Minimum Level-Extreme Low Level - This is a drought year low level used to operate a lake control structure. It is not a drawdown level, but merely a normal cyclic low that the lake should reach only periodically for the biological health of the lake.

Best Surface Water Management Practices - are to be used in the design, construction, operation, and maintenance of structures or devices and require a consideration and evaluation of both long-term and short-term effects of the activity upon the water resources of the district. Factors to be considered include the following:

- Conservation and proper utilization of surface water
- Prevention of damage from floods, soil erosion, and excessive drainage
- Preservation of natural resources, fish, and wildlife

Coastal, Lakes, River Management

- Storage for aquifer recharge
- Non-consumptive uses, including but not limited to, navigation, recreation, and aesthetics

2. Withlacoochee River

The Withlacoochee River is a blackwater river, which originates from the headwaters of the Green Swamp. This river flows northwesterly and westerly to form the County's eastern and northern boundaries prior to discharging into the Gulf of Mexico. As the river traverses the landscape in the County, it passes through hardwood swamps, freshwater marshes, sandhills, flatwoods, and floodplain swamps. A predominant feature of the river is the impoundment referred to as Lake Rousseau located in the extreme north portion of the County.

Coastal, Lakes, River Management

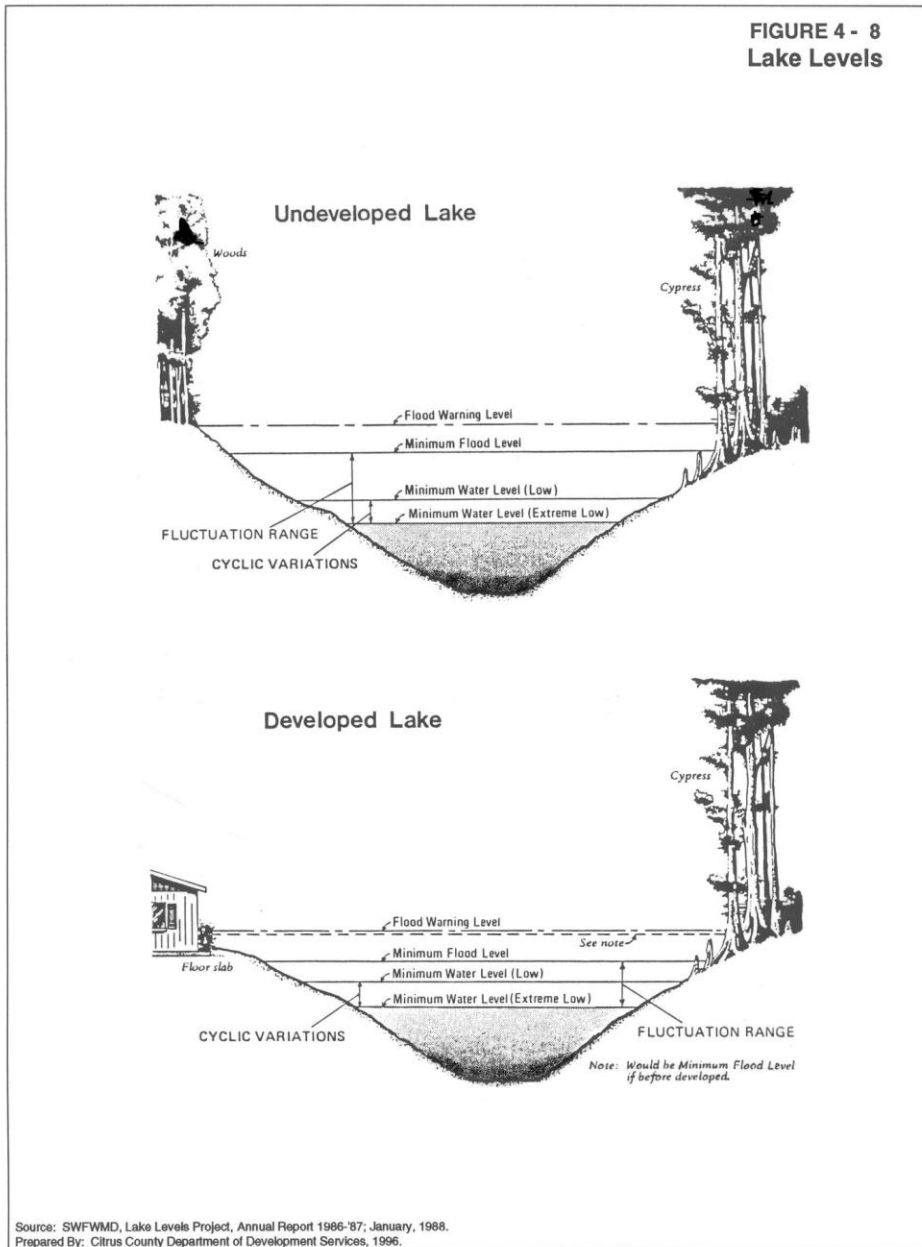


Figure 4-8 Lake Levels

Coastal, Lakes, River Management

3. Ecological Communities and Wildlife

Ecological communities and wildlife within the Lakes and River Area are diverse. The diversification is reflective of the characteristics of the Withlacoochee River basin and Tsala Apopka Plain through the interactions of the associated wetlands, uplands, and open water areas (refer to the Conservation Element for illustrations and discussions on ecological communities, and wildlife).

4. Significant Preserves

Within the Lakes and River Area, there are three natural reservations. The reservations include Lake Rousseau State Recreation Area (SRA), Flying Eagle Ranch, and Potts Preserve. The Flying Eagle Ranch and Potts Preserve are both SOR projects purchased through SWFWMD for the protection of the Withlacoochee River system and associated surface and groundwater resources.

B. Land Use Inventory and Analysis**1. Existing Land Use**

Existing land use within the Lakes and River Area (LRA) is detailed and illustrated within the Future Land Use Element. This section is provided for an overview of land uses specifically within the Lakes and River Area. Table 4-15 contains the acreage and percentage of the total Lakes and Rivers in areas of generalized land uses.

TABLE 4-13
LAKES AND RIVER AREA GENERALIZED LAND USE

Land Use	Acreage	Percentage
Residential	13,089	17.60
Commercial	212	0.29
Industrial	11	0.01
Extractive	138	0.19
Transportation - Utility	461	0.62
Public/Semi-Public	115	0.15
Conservation	25,185	33.87
Recreation - Open Space	1,203	1.62
Agriculture	17,934	24.12
Vacant - Committed	5,977	8.04
Vacant - Undeveloped	10,024	13.48
TOTAL	74,349	100.00

Source: Citrus County Land Use Survey, April, 1995

Prepared by: Citrus County Community Development Division, 1995

Coastal, Lakes, River Management

The dominant land use in the LRA is conservation. This land use category comprises 34 percent or 25, 185 acres of the LRA.

The second largest land use is agriculture, which comprises 17,934 acres or 24 percent of the total area. Agriculture within the LRA mainly consists of pasturelands, row crops, silviculture, and citrus groves.

The third largest category is residential consisting of 13,089 or 18 percent of the land area of the LRA. Most of the residential is single-family residential land use. Vacant undeveloped lands comprise 10,024 acres or 13.5 percent of the LRA.

The remaining land uses, commercial, industrial, extractive, transportation-utility, public/semi-public, and recreation/open space and vacant committed comprise the remaining 8,117 acres or 10.9 percent of the total LRA.

2. Water-Dependent and Water-Related Facilities

Water-dependent and water-related land uses in the LRA are similar to such uses in the coastal area, with exception to coastal resources (Section II.B.2). The LRA water-dependent land uses may include public access sites, commercial recreation areas, water supply facilities, industrial sites requiring discharge waters, whereas water-related uses may include boating supplies/repair, bait and tackle stores, and parks.

The Recreation and Open Space Element contains a description and an illustration of public access sites within the LRA. This description, however, provides only those water-dependent sites for public access.

3. Need for Water-Dependent and Water-Related Facilities

The need for water-dependent and water-related land uses is determinant upon demands placed on a water body and resource limitations. These demands may include recreation, commercial-recreation, [marinas](#), public water supply, and industrial siting. In order to ensure in the future that these uses are not precluded from shoreline siting, it is necessary to designate appropriate land uses analyzing future needs with priority being established for resource and environmental protection.

4. Shoreline Land Use Conflicts

Shoreline land use conflicts, which may arise within the LRA, are similar to those in the coastal area. The location of residential areas adjacent to water-related or dependent commercial facilities, industrial sites, or public access sites without appropriate setback and landscape buffering requirements can cause conflict. In addition, many land uses which are not water-dependent or water-related are utilizing vast shoreline areas; examples include residential, commercial, and

Coastal, Lakes, River Management

agricultural uses. This continuing practice may prove to be detrimental towards the provision of public access, commercial, institutional, or governmental.

5. Future Land Use Impacts

Future land use impacts in the LRA are associated with the density and intensity of development. Generalized impacts include loss of natural vegetative cover, decreased water quality, increased stormwater, loss of wildlife habitat, and degradation of lake and river resources. The majority of future land use designations include low intensity coastal and lakes, coastal and lakes residential (development communities), and conservation categories.

C. Pollution

1. Current Conditions

Currently, there are no point sources of pollution in the LRA. However, non-point sources are prevalent throughout the area.

2. Non-Point Sources

Non-point sources in the LRA include on-site sewage treatment disposal-facilities, urban/stormwater runoff, application of aquatic herbicides, and agricultural runoff. These non-point sources are all indicative of the developing characteristics of the LRA. Many older subdivisions and agricultural operations have no facilities for controlling or treating runoff. In addition, the majority of the residential lands in the Lakes and River Area utilize on-site sewage treatment. This type of treatment has been documented to fail and thus add pollutant into adjacent surface water and wetland systems.

3. Future Land Use Impacts

Existing land uses in the LRA do not reflect the significance of the lake and river resources of the County. The development of the entire watershed for the Tsala Apopka Chain of Lakes and Withlacoochee River is not wise. SWFWMD has recognized this area as an important regional and local resource for the preservation of groundwater resources and the maintenance of surface water quality.

a. New Point Sources

New point sources should not be permitted in the LRA of the County. These lakes and rivers are important for the maintenance of surface and groundwater resources and the continued economic benefits of the associated recreation industries.

Coastal, Lakes, River Management

b. Increase in Non-Point Sources

Primary impacts to the LRA surface waters from future land uses include seepage from on-site sewage disposal and stormwater runoff. Historically, these two sources have had impacts to the water quality on the lake and river systems. Future development should not be permitted without regional sewage disposal and treatment and additional stormwater treatment.

Facilities proposed in the Traffic Circulation and Infrastructure Elements are not projected to cause primary impacts to the resources of the LRA. Proposed roadway improvements include only resurfacing and reconstruction of existing facilities.

D. Archaeological and Historic Resources

1. Inventory

Known archaeologic and historic resources are distributed throughout the LRA. The Citrus County Architectural and Historic Survey lists approximately 78 sites in the LRA. These include sites of landscape, transportation, architecture, cultural, commercial, religious, and settlement significance. The Florida Master Site File lists many historic and archaeologic resources throughout the LRA.

2. Impact of Land Uses

The projected impacts to historic and archaeologic resources are estimated to be minimal. Development review standards need to be established for the protection and preservation of these resources.

3. Resource Protection

The well-known Fort Cooper Historic Site within the Fort Cooper State Park and the Floral City Historic District are registered under the National Register of Historic Sites and Places. All other sites are protected by the provisions contained in the LDC.

E. Hazard Planning

1. Assessment

The procedures for evacuating areas in eminent danger of flooding in the LRA are located in the County's Peacetime Emergency Plan. This Plan and the Director of Emergency Management along with State officials coordinate evacuation procedures if required.

Coastal, Lakes, River Management

2. Evacuation

In the event of a hurricane or other natural hazard resulting in the flooding of areas in the LRA evacuation procedures are implemented. The evacuation network as depicted in the Hurricane Evacuation Section is often subject to flooded roadway segments. These roadway segments should be analyzed and, upon upgrading, flooding problems should be remedied.

F. Public Access**1. Inventory of Facilities**

The LRA contains 25 boat ramps with 29 launching lanes. Shoreline access in the LRA consists of 760 and 909 linear feet of freshwater beaches and fishing access, respectively (refer to Table 4-16). These facilities are inventoried and illustrated within the Recreation and Open Space Element.

TABLE 4-14
SUMMARY OF LAKES AND RIVER ACCESS

Access	Public	Private	Total
Freshwater Beach (feet)	740	20	760
Fishing Access (linear feet)	539	370	909
Boat Access (Ramps, Lanes)	17, 21	8, 8	25, 29
Wet Slips	---	74	74
Dry Slips	---	---	---

Source: Citrus County Public and Private Recreation Inventory July, 1987
(Revised: July 1988)

Division of Parks and Recreation, 1996

Prepared by: Citrus County Community Development Division, 1996

2. Access Demand Needs

The demand for public access sites in the LRA includes boating access, shoreline fishing, and general water-related recreation activities. Boating access sites are numerous; however, many sites are either undeveloped or underdeveloped. Additional public access facilities in the barge canal area are proposed in the Cross Florida Greenbelt State Recreational and Conservation Area Management Plan.

With the exception of boating facilities (boat ramps), shoreline access sites are almost nonexistent within the LRA. These shoreline access sites include fishing structures (piers, docks, and boardwalks) and naturally vegetated shoreline within public parks. Shoreline access sites provide for water-related recreation opportunities such as fishing, water skiing, hiking, bird watching, and nature study. The incorporation of an active and passive multiple use park facility with shoreline access can provide greater benefits to the recreational users.

Coastal, Lakes, River Management

G. Lakes and River Infrastructure**1. Existing Facilities****a. Regional Wastewater Facilities**

The only regional wastewater facility in the Lakes and River Area is the Canterbury Lakes facility. This facility provides service to the Hernando area (refer to the Sanitary Sewer Subelement for illustrated service area).

b. Package Wastewater Facilities

There are 12 package wastewater facilities within the LRA. These facilities vary in service area size and capacity (refer to the Sanitary Sewer Subelement).

c. Public Landfills

Landfills in the Lakes and River Area consist of four closed facilities (refer to the Solid Waste Subelement for discussion and illustrations).

d. Roadways and Bridges

Roadways and Bridges in the Lakes and River Area include:

- US-19 and Barge Canal and Withlacoochee River Bridges
- US-41 and Withlacoochee River Bridge
- SR-200 and Withlacoochee River Bridge
- SR-44 and Lake Tsala Apopka and Withlacoochee River Bridges
- CR-48 and Withlacoochee River Bridge

e. Potable Water Facilities

Potable water facilities in the Lakes and River Area include 16 package facilities and four regional facilities (refer to the Potable Water Subelement for discussion and illustrations).

f. Man-Made Drainage Facilities

Man-made drainage facilities include the canals within the Tsala Apopka Chain of Lakes, the SWFWMD outfall canal from the Hernando Pool to the Withlacoochee River and the outfall of the Cross Florida Barge Canal from Lake Rousseau (Withlacoochee River) [refer to the Drainage Subelement for discussion and illustrations].

Coastal, Lakes, River Management

V. COASTAL, LAKES, AND RIVER PLAN**A. Natural Resources**

Coastal area natural resources include coastal spring-fed river systems, major Florida springs, freshwater and marine wetlands, natural upland areas, and estuaries. The significance of coastal resources is identified by the recreationally and commercially important resources and local, state, and federal protection efforts. These efforts include the designation of and on-going acquisitions of the United States Fish and Wildlife Service, US Department of the Interior, and DEP.

Lakes and River Area natural resources include the lakes, marshes, swamps associated with and bordering the Tsala Apopka Planing and the Withlacoochee Riverine Corridor. SWFWMD has recognized the importance of these systems through the Save Our Rivers Acquisition Program. This program has secured the acquisitions of the Flying Eagle Ranch and the Dee River Ranch, both containing riverine corridor and wetlands of the Tsala Apopka Plain.

Historically, areas in the Coastal, Lakes, and River Areas have been subdivided without concern for providing sufficient upland area to support the proposed activities. This type of land development is inappropriate to maintain and protect the resources for which the area is known.

Native habitats, living marine resources, wetlands, and special habitats should be protected by provisions in the land development regulatory codes, which stipulate adequate upland area requirements and the protection/enhancement of native vegetation.

B. Land Use

The sensitive coastal, lakes, and river resources are vulnerable to high density or intensive development. The associated resources are affected by stormwater runoff, sewage effluent, on-site sewage disposal, and the alteration of shoreline areas. If resources are to be protected, the appropriate allocation, siting, and development standards must be applied.

Development standards for shoreline areas are an important resource protection tool. These standards are developed to protect the resource, which created the demand, protect public health and safety, and avoid land use conflicts.

C. Water Quality

Estuarine water quality is characterized as good with continuing degrading factors. These degrading factors include unsewered subdivisions, untreated stormwater runoff, and sanitary sewage effluent. Historically, the coastal area had a greater number of point sources, but these sources were controlled or eliminated by state and

Coastal, Lakes, River Management

local regulatory action. An indicator of estuarine pollution are the shellfish harvesting areas designated as prohibited areas for the collection of shellfish.

The Lakes and River Area water quality is characterized as good with continuing degrading factors. Similar to the coastal area, the degrading factors include unsewered subdivisions and untreated stormwater runoff.

The unsewered subdivision in the Coastal, Lakes, and River Areas should be served by sanitary sewer systems within the near future and the County should develop strategic plans to address and retrofit areas with inadequate stormwater treatment.

D. Archaeological and Historic Resources

Known archaeological and historic resources in the coastal area are distributed throughout; with concentrations of historic resources in the early established communities and archaeological resources scattered about with concentrations near the Crystal River Indian Mounds. These resources are important culturally to the Citrus County area and the State.

The County should develop a comprehensive archaeological and historic resource analysis and include appropriate comprehensive plan policies for protection of these resources.

In order to protect archaeological and historic resources from proposed development, all new subdivisions should identify resources and follow applicable development standards.

E. Post-Disaster Planning and Coastal High-Hazard Areas

The Coastal High Hazard Area (CHHA) is representative of the evacuation zone of a Category 1 storm surge line, consistent with the Withlacoochee Regional Hurricane Evacuation Plan, 2010. The associated hazards of these areas are avoidable through three alternatives: 1) restricting concentrated population, 2) limiting the public expenditure of funds, and 3) reducing densities of future developable areas.

A local post-disaster redevelopment plan should outline reconstruction procedures, which the community can pursue following a natural disaster. The plan should identify a process, which will reduce future damages and include:

- Intergovernmental coordination
- Guidelines for determining feasibility of repairing and reconstructing damaged structures including standards to which reconstruction should be complete
- Post-disaster timetable outlining recovery, redevelopment, relocation, and hazard mitigation priorities

Coastal, Lakes, River Management

- Identification of those areas which have the highest potential for damage based on past experiences on studies and establish policies for evaluating the possibility of relocating or structurally modifying public infrastructure located in those areas
- Identification of funding sources or funding mechanisms which may be needed to replace, repair, and/or relocate damaged public infrastructure
- Identification of the feasibility of public acquisition following a natural disaster. Acquisition should address areas adjacent to public holdings and those areas with a history of frequent storm impacts

F. Public Access

Public access in the Coastal, Lakes, and River Areas is supplied by both the public and private sectors. These access sites include boat ramps, marinas, fishing structures, freshwater beaches, and a public saltwater beach. The importance of planning future access facilities and projecting needs is demonstrated by cost savings and the securing of appropriate areas to meet those needs.

A public access analysis study should be incorporated into the study to determine future shoreline land use requirements. The analyses should apply the following natural resource constraints:

- Wetlands
- Endangered and threatened wildlife
- Special habitats
- Living marine resources
- Natural habitats

The County's long-range objective should be to identify and secure appropriate lands for providing public access. The development of facilities which provide a multiple use base of active and passive recreation while providing access for water-related recreation (i.e.: fishing and nature study) and which protect additional shoreline areas should be sought.

G. Infrastructure

Existing infrastructure in the Coastal, Lakes, and River Areas is limited to roadway and bridges, potable water supply, and man-made drainage facilities. The level of service (LOS) standards, areas of service, and phasing of infrastructure are designated in the Infrastructure Element. Restrictions to infrastructure development should be adopted which limit facilities to serve development or redevelopment at densities designated within the Future Land Use Element and designs should reflect natural resource protection and the maintenance of safe hurricane evacuations.

The State Coastal Infrastructure Policy, Chapter 380.27, Florida Statutes, requires that:

Coastal, Lakes, River Management

- No State funds shall be used for the purpose of constructing bridges or causeways to coastal barrier islands as defined in Section 161.54(2) which are not accessible by bridges or causeways on October 1, 1985
- After a local government has an approved coastal management element pursuant to Section 163.3178, no State funds which are un-obligated at the time the element is approved shall be expended for the purpose of planning, designing, excavating for, preparing foundations for, or constructing projects which increase the capacity of infrastructure unless such expenditure is consistent with the approved coastal management element

The County should identify the merits of the State Coastal Infrastructure Policy and through land development controls restrict future development of infrastructure into Coastal High Hazard Areas and coastal barrier islands. This policy is reflective of coastal barrier functions:

- First-line defense against major storms by dissipation of wave energy
- Habitat for endangered and threatened species
- Protection of estuaries used as nurseries and habitats for commercial and recreationally important species
- Food supply points for migratory species
- A wide range of recreational opportunities
- Scientific, aesthetics, and archaeological centers

H. Watershed Management Plan

The Southwest Florida Water Management District and Citrus County have initiated a phased, multi-year project for development of a Watershed Management Plan for flood protection using a watershed-based approach to resource management consistent with the SWFWMD's Comprehensive Watershed Management (CWM) Initiative. The project is being funded jointly by the County and the District through the District's Cooperative Funding Program.

The project consists of five phases:

1. Data Collection – collect, integrate and analyze the existing information pertinent to each watershed and create a database for analytical purposes. Data to include GIS, Digital Terrain Models and hydrologic data where applicable.
2. Watershed Characterization – Define the hydrologic parameters of the watershed such as basin and sub-basin boundaries, flow paths, control points, infrastructure inventory, storage and conveyance features.
3. Watershed Plan – identify and prioritize existing and future water resource management issues relating to water supply, flood protection, water quality, and natural systems. Develop preventative or remedial management actions to address the identified issues.

Coastal, Lakes, River Management

4. Implementation – includes immediate maintenance, level of service determination, stormwater infrastructure master planning, design, permitting, acquisition of easements, and construction.
5. Maintenance – ongoing review and evaluation to measure the effectiveness of the projects.

The studies are scheduled to be completed by 2010 and will provide the information necessary for an effective flood control and management program for Citrus County. It will also provide the detailed topographic data needed for creation of the revised digital flood insurance rate maps.

I. Implementation Schedule

This implementation schedule contains a list of actions recommended by the Coastal, Lakes, and River Management Element. These actions were formulated through the analysis of the Element and are designed to carry out the necessary measures to meet the Coastal, Lakes, and River Plan. Measures in the objectives and policies, which set a specific standard, are not listed in this schedule.

Action to be Taken	Date of Completion
1) Adoption of standards for signs on Coastal, Lakes, and River roadways.	2007
2) Preparation of shoreline development guide.	2007
3) Preparation of resource education materials.	Accomplished
4) Strategic Plan to retrofit areas without stormwater controls and treatment.	2005-2010
5) Preparation of a Historic and Archaeological Analysis.	2009
6) Preparation of a Post-Disaster Redevelopment Plan.	2008

Coastal, Lakes, River Management

VI. GOALS, OBJECTIVES, AND POLICIES

GOAL #4 - Preserve, protect, and enhance resources of the Coastal, Lakes, and River Areas and where appropriate, restrict development activities which would damage or destroy these resources, protect human life, and limit the public expenditure in areas subject to natural disasters.

Natural Resources

- Habitats and Wetlands

Objective 4.1 Protect native vegetative and ecological communities.

The components of this program are:

- Continued efforts to protect native vegetation and ecological communities. The primary emphasis shall be on, but not limited to, upland habitat for endangered and threatened species and other environmentally sensitive communities. The County will continue efforts to preserve and protect these communities by seeking dedications via the development process, fees-in-lieu of dedications to purchase land, and active coordination with federal, state, local, and regional agencies and/or private organizations to purchase these lands
- The adoption of standards requiring on-site preservation of native habitat implemented through the development review process

Policy 4.1.1 No subdivisions shall be approved unless all lots proposed for development contain upland areas large enough to support the proposed activity and all required buffers and preservation areas.

Policy 4.1.2 The County Land Development Code (LDC) shall contain requirements that native vegetation be utilized in required buffers, setbacks, and open spaces.

Policy 4.1.3 The County LDC shall contain requirements for filtering all runoff from lands adjacent to wetlands and water bodies.

Policy 4.1.4 Standards for signs along coastal, lakes, and river roadways and shores shall be adopted and enforced to preserve visual amenities.

Coastal, Lakes, River Management

- Living Marine Resources

- Objective 4.2 Protect wildlife, living marine resources, and special habitats from adverse impacts of development and human activities. Continue to enforce the natural resource protection provisions in the LDC and related ordinances.
- Policy 4.2.1 Coastal wildlife, living marine resources, and special habitats to include:
- Endangered, threatened, and species of special concern
 - Bird Rookeries
 - Bald Eagle and Osprey nesting locations
 - Marine Grass Beds
 - Fisheries
 - Oyster Beds
- Policy 4.2.2 Reserved
- Policy 4.2.3 The County Land Development and Enforcement Codes shall protect wildlife; especially endangered, threatened and species of special concern.
- Policy 4.2.4 Living marine resources: marine grass beds, fisheries, and oyster bars shall be protected and enhanced.
- Policy 4.2.5 The unpermitted destruction of marine grass beds and oyster bars is prohibited.
- Objective 4.3 Reserved

- Resource Education

- Objective 4.4 Continue the ongoing program of public education to assist in the protection of estuarine, riverine, and lake natural resources.
- Policy 4.4.1 The Community Development Division shall coordinate with the Division of Aquatic Services, the Marine Science Station, U.S. Fish and Wildlife Service (USFWS), and Florida Department of Environmental Protection (DEP) to prepare educational materials.
- Policy 4.4.2 The educational materials shall be posted at each public access to estuarine, riverine, or lake waters and distributed to all libraries and schools. These materials shall also be posted at private/commercial access points with permission of the owner and

Coastal, Lakes, River Management

may be located at strategic points throughout waterbodies where appropriate.

Land Use**- Water-dependent Land Uses**

Objective 4.5 Recreational and working waterfronts including water dependent and water-related land uses have priority over all other land uses with exception to conservation, along shoreline areas. The Generalized Future Land Use Map (FLUM) shall contain designated areas for coastal water-dependent and water-related land uses.

Policy 4.5.1 The priority ranking of shoreline land uses shall be:

- Water-dependent uses
- Water-related uses
- Non-water related uses

- Shoreline Performance Standards

Policy 4.6.3 New marinas and multi-slip docking facilities must conform to the following criteria:

- Public use marinas are only allowed in marine commercial areas
- Must provide vehicular-trailer parking and sewage pump out facilities
- All proposed parking, dry storage and non-water dependent facilities must be built on upland areas
- Hurricane contingency plans shall be approved by the Community Development Director and Director of Emergency Management
- Shall comply with all applicable County Regulations and Policies
- Coastal and riverine wetlands and grass beds shall be avoided
- Economic need and viability shall be demonstrated
- Fueling facilities shall be designed to contain spills
- Water Circulation shall be maintained
- Any environmental disruptions will be mitigated
- Shall comply with the County Manatee Protection Plan
- Placement of new marinas/multi-slip docking facilities, multifamily docking facilities, and single family docking facilities exceeding one slip per 100 feet of shoreline shall

Coastal, Lakes, River Management

- be prohibited from designated critical habitats of the West Indian (Florida) manatee
- Construction materials used in shoreline or submerged land construction shall minimize environmental impacts and the best available technology shall be used. Examples of construction standards which are consistent with minimizing environmental impacts are: heavy grade PVC pipe filled with concrete, wood pilings minimally treated, galvanized steel or iron pilings, cantilever dock facilities, floating docks with sealed injected solid foam (may contain CFC's), and dry storage
- Pump-out facilities shall be contained in all marinas, multi-slip, and multifamily residential docking facilities, which are connected to a permitted package, or regional wastewater sewage treatment facility

Coastal, Lakes, and River Water Quality

Objective 4.7	Improvement and maintenance of estuarine and coastal riverine water quality. Water quality in the coastal area shall meet or exceed the "good" water quality index (Environmental Protection Agency [EPA] established in the 305 (b) Technical Report, DEP, 1994.) Water quality in the Lakes and River Area shall be consistent with policies of the Conservation Element.
Policy 4.7.1	No new point sources shall be permitted in waters of the Coastal, Lakes, and River Area except where mandated by the EPA and DEP.
Policy 4.7.2	Reserved
Policy 4.7.3	In order to reduce the amount of untreated stormwater effluent, the County shall prepare a strategic plan to retrofit appropriate areas.
Policy 4.7.4	The volume, velocity, and timing of river and stream flows into estuarine waters shall not be artificially altered from their long-term seasonal ranges.
Policy 4.7.5	Roadways and bridges shall not interfere with surface water flows and should be built with appropriate measures to avoid degrading water quality. Causeways shall not be built.

Coastal, Lakes, River Management

Archaeological and Historic Resources

- Objective 4.8 The protection, preservation, and sensitive reuse of historic resources shall be implemented through the policies below and development of a comprehensive analysis and plan by 2009.
- Policy 4.8.1 The Community Development Division shall prepare a Historic and Archaeological Analysis Report in 2009.

Hurricane Evacuation

- Objective 4.9 The County shall maintain or reduce hurricane evacuation times by requiring that new developments not degrade the existing evacuation Level of Service (LOS).
- Policy 4.9.1 Maintain and improve the County's Hurricane Evacuation sections of the Peacetime Emergency Plan and coordinate the integration of existing evacuation deficiencies into the regional and local evacuation plans.
- Policy 4.9.2 The Geographic Resources and Community Planning Division shall prepare periodic reports at least every seven years on the population at-risk for use in evacuation planning.
- Policy 4.9.3 The Hurricane Evacuation Level of Service Standard for Out of County evacuation is sixteen (16) hours for a Category 5 storm event.
- Policy 4.9.4 All roadway improvements along the County's evacuation network shall include practicable remedies for flooding problems.
- Policy 4.9.5 No new hurricane shelters shall be located within the Category 5 hurricane evacuation area.
- Policy 4.9.6 The hurricane vulnerability zone consists of the evacuation areas, from the Tropical Storm through the Category 5 Hurricane Evacuation Zone, as identified in the Storm Tide Atlas in the *2010 Statewide Regional Evacuation Study, Withlacoochee Region (SRES)*.
- Policy 4.9.7 Development orders issued for developments of regional impact shall contain conditions which require mitigative measures for impacts on hurricane shelter capacity and hurricane evacuation times for developments which generate a number of evacuating vehicles greater than the evacuation traffic capacity on designated hurricane evacuation routes.

Coastal, Lakes, River Management

- Policy 4.9.8 All proposed Comprehensive Plan Amendments and new developments within the CHHA must meet the following criteria:
- The adopted LOS for “out of county” hurricane evacuation is maintained for a category 5 storm event as measured on the Saffir-Simpson scale.
 - A 12 hour evacuation time to shelter is maintained for a category 5 storm event as measured on the Saffir-Simpson scale and shelter space reasonably expected to accommodate the residents of a development contemplated by the proposed comprehensive plan amendment is available; or
 - Appropriate mitigation is provided that will satisfy Policy 4.9.8 (a). or (b). Appropriate mitigation shall include, without limitation, payment of money, contribution of land, and construction of hurricane shelters and transportation facilities.
 - County shall enter into a binding contract with the developer detailing any required mitigation.
 - If the LOS for the host evacuees has not been established the LOS shall not exceed 16 hours for a category 5 event.
- Policy 4.9.9 Citrus County shall assess and adopt regulations in the hurricane vulnerable zone which: (1) limit new development in coastal areas and additional mobile home units; and/or (2) allow new development in coastal areas provided that mitigating measures are established which do not increase hurricane evacuation times; (3) promote land acquisition; and/or (4) establish a fee in lieu program and use those funds generated by fees to support future shelter development..
- Policy 4.9.10 The County shall utilize the American Red Cross (ARC) 4496 Standards for Hurricane Evacuation Shelter Selection, which includes standards for shelter location, capacity, inventory, and interior safety criteria during hurricane associated hazards.
- Policy 4.9.11 The County shall conduct evacuation traffic analysis using the planned distribution of the County's buildout population. To facilitate this task, the County will utilize a transportation network modeling system. Transportation network modeling shall also be utilized to monitor the impact of large residential projects and of ongoing development on hurricane evacuation times.
- Policy 4.9.12 In order to increase public awareness of hurricane hazards, the County shall provide emergency preparedness information and educational opportunities to the public.

Coastal, Lakes, River Management

- Policy 4.9.13 Lands within hurricane vulnerable areas, particularly low-lying and shoreline areas shall be targeted for public acquisition to protect the natural and beneficial functions of floodplains.
- Policy 4.9.14 The County should not improve or build public facilities which encourage growth in the Coastal High Hazard Area, except for necessary public services for existing developments or resource based recreation facilities.
- Policy 4.9.15 A hurricane mitigation fund shall be established to provide the resources needed for hazard mitigation projects in the adopted Local Mitigation Strategy.
- Policy 4.9.16 The County shall consider the adoption of a shelter mitigation impact fee to provide funds for construction of the additional shelter capacity needed as a result of growth.
- Policy 4.9.17 All new mobile home parks and mobile home subdivisions shall be required to construct a hurricane shelter that meets ARC 4496 standards to shelter at least 70% of the residents of the subdivision. Such shelters shall not be located within the hurricane vulnerability zone. (per Policy 4.9.5) Alternatively, the developer may pay a fee to the shelter mitigation fund.
- Policy 4.9.18 The County shall require all new shelters meet the ARC 4496 Shelter Guidelines as outlined in Appendix A of the Comprehensive Plan.

Post-disaster and Coastal High Hazard Area

Coastal High-Hazard Area

- Objective 4.10 The County shall direct population concentrations away from the Coastal High-Hazard Area through appropriate regulations in the Land Development Code.
- Policy 4.10.1 The County shall continue to amend its building codes to reflect coastal hazard concerns and the amendments to the Southern Standard Building Code.
- Policy 4.10.2 New sanitary sewer facilities and on-site sewage systems in the Hurricane Surge Areas (vulnerability zone) and areas subject to freshwater flooding shall be flood proofed and equipped with back flow preventors, respectively.

Coastal, Lakes, River Management

- Policy 4.10.3 The Coastal High Hazard Area shall incorporate all lands and waters which lie within the Category 1 Hurricane Evacuation Zone. Such area is generally based upon the surge zone as depicted in the *2010 Statewide Regional Evacuation Study, Withlacoochee Region (SRES)*. The Coastal High Hazard Area boundary shall be shown on the Land Development Code Atlas.
- Policy 4.10.4 ~~Reserved~~New development, redevelopment, and infrastructure in vulnerable areas shall use best practices to address sea level rise
- Policy 4.10.4B In order to reduce flood risk from, or associated with, the impacts related to sea-level rise, continue to promote the use of the development and redevelopment principles, strategies and engineering solutions contained in the Florida Building Code and the Land Development Code.
- Policy 4.10.5 Population concentration shall be directed away from the Coastal High Hazard Area.
- Policy 4.10.6 The County shall relocate or replace infrastructure located in the Coastal High Hazard Areas to limit public losses from various events including, but not limited to, storm damage, hurricanes, severe flooding, abandonment of facilities and/ or structures, and tornadoes.
- Policy 4.10.7 Lands within hurricane vulnerable areas, particularly low-lying and shoreline areas subject to storm surge shall be targeted for public acquisition to protect the natural and beneficial functions of floodplains.
- Policy 4.10.8 The LDC shall contain additional disaster preparedness requirements for new developments whose residents might have limited mobility and/or demand specialized facilities.
- Policy 4.10.9 No new Institutional Occupancy uses (i.e., the use of a building or structure, or a portion thereof, in which care or supervision is provided to persons who are or are not capable of self-preservation without physical assistance or in which persons are detained for penal or correctional purposes or in which the liberty of the occupants is restricted, including, but not limited to; hospitals, nursing homes (24-hour care for 6 or more people), psychiatric hospitals, jails, detention centers, reformatories, pre-release centers and other residential restrained or supervised care facilities) shall be allowed within the Coastal High Hazard Area unless the location has direct access to a Principal Arterial roadway. Existing facilities shall not expand beyond the density/intensity approved as

Coastal, Lakes, River Management

of January 01, 2004 unless an overriding public need can be demonstrated and the site directly accesses a Principal Arterial roadway.

Coastal, Lakes, River Management

- Policy 4.10.10 New construction or expansion of R-4 residential occupancy uses, as defined by the latest edition of the Florida Building Code, are not allowed anywhere within the Coastal High Hazard Area unless the site has direct access to a Principal Arterial roadway:
- Policy 4.10.10A. New construction or expansion of R-2 residential occupancy uses, as defined by the latest edition of the Florida Building Code, are not allowed within the Coastal High Hazard Area unless all minimum standards of the LDC are met, the proposed development is compatible with surrounding development, the development's access, internal design, and general location do not impede the evacuation of its residents or neighbors, and the project does not negatively impact area evacuation clearance times:
- Policy 4.10.10B. New construction or expansion of the R-1 and R-3 residential occupancy uses, as defined by the latest edition of the Florida Building Code, are allowed within the Coastal High Hazard Area.
- Existing undeveloped subdivisions and groupings of lots are encouraged to cluster dwellings rather than develop typical lots and homesites in order to minimize the overall footprint of development. Such clustering shall not increase density.
- Policy 4.10.11 No new mobile home parks shall be developed within the Coastal High Hazard Area (CHHA) nor shall any existing mobile home park with the CHHA be expanded beyond the number of dwelling units approved as of January 01, 2004. Existing mobile home parks may continue and dwelling units may be maintained, repaired, or replaced as needed, appropriate, and consistent with all other provisions and ordinances. Any replacement unit shall be elevated in compliance with current regulations. No lot or parcel within the CHHA, which currently does not allow mobile homes, shall be permitted to change to allow mobile homes.

Coastal, Lakes, River Management

- Policy 4.10.12 The County shall limit the height of structures within the Coastal High Hazard Area. Residential structures shall be limited to no more than two stories above the base flood or finished floor elevation. Areas under elevated residential structures may be used only for parking of vehicles, limited dead storage, and access to the structure, not finished living area. Nonresidential structures shall be limited to four stories above finished grade. Industrial facilities, electric power generation and transmission facilities, mining operations, agricultural operations, dry boat storage at marinas, and Seven Rivers Community Hospital are exempt from this provision. Construction or expansion of exempted facilities shall require the assurance of compatibility with surrounding development and may require additional buffers, setbacks, and similar measures.
- Policy 4.10.13 Recreational Vehicle (RV) parks, campgrounds, resorts, motels, hotels, and similar temporary lodging facilities are commercial uses. Such uses shall not be allowed to convert to permanent residential uses. No increase in residential dwelling unit densities within the Coastal High Hazard Area shall be allowed.

Post-Disaster Redevelopment

- Policy 4.11.8 To ensure that the property rights of current residents of the CHHA are protected, the County shall authorize redevelopment of up to the actual built density/intensity in existence on the property prior to the natural disaster notwithstanding the maximum permitted density/intensity adopted in the GFLUM and LDC Atlas. All such redevelopment shall meet current federal, state, and local construction and development review standards if feasible.

Public Access

- Objective 4.12 Increase public access to Coastal, Lakes, and River shoreline areas. A public access study shall be completed by 2040 ~~2009~~.

Infrastructure

- Objective 4.13 The LOS standards, areas of service, and phasing of infrastructure in the Coastal, Lakes, and River areas shall be implemented through requirements in the Infrastructure Element and additional standards under this objective shall be incorporated in the County LDC.

Coastal, Lakes, River Management

- Policy 4.13.1 Infrastructure shall be available to serve the development or redevelopment in the Coastal, Lakes, and River areas at densities designated by the GFLUM and shall be consistent with coastal resource protection and the maintenance safe evacuations.
- Policy 4.13.2 No development shall be permitted in the coastal area until the required infrastructure, based on adopted LOS's, are available to serve the proposed area to be development or redeveloped.

Intergovernmental Coordination

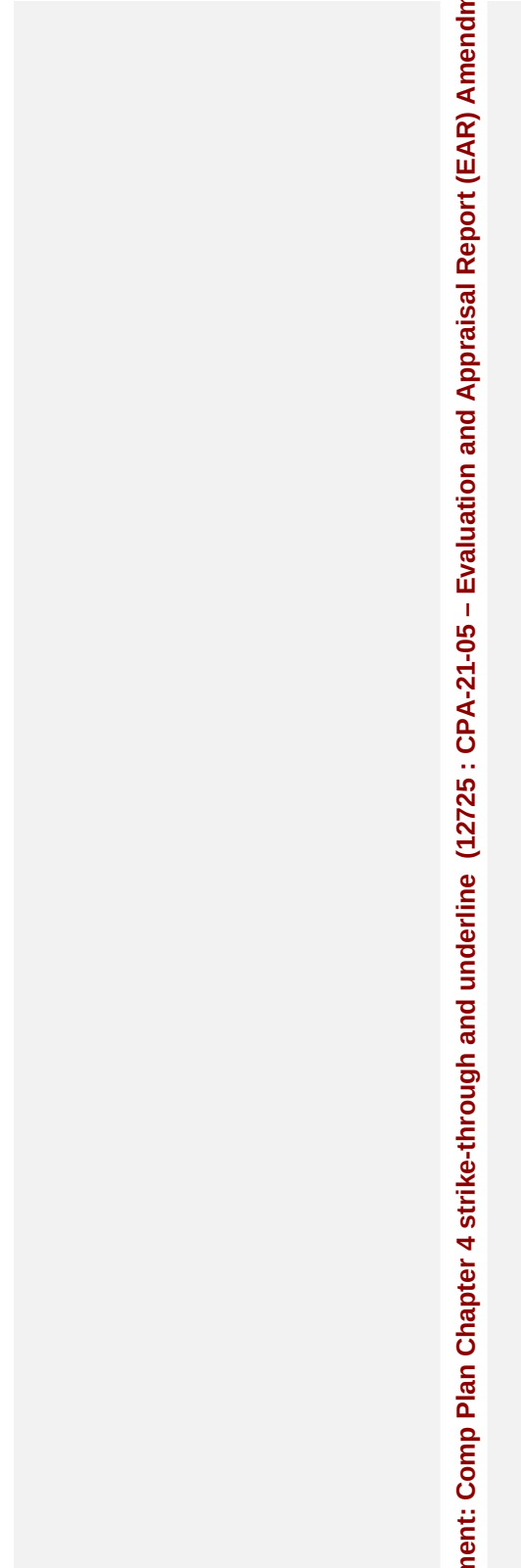
- Coastal, Lakes, and River Resources

- Objective 4.14 An intergovernmental coordination mechanism shall be established to manage coastal, lakes, and river resources affecting or affected by City of Crystal River and the City of Inverness.
- Policy 4.14.1 The County shall develop joint planning and management programs with the Cities of Crystal River, Inverness, Yankeetown, Inglis, and Dunnellon and the Counties of Hernando, Marion, Sumter, and Levy to:
- Ensure adequate [preservation of recreational and commercial working waterfronts including](#) water-dependent and water-related land uses
 - Prevent water pollution
 - Control and retrofit stormwater runoff and inadequate facilities
 - Protect living marine resources
 - Reduce exposure to natural hazards
 - Ensure public access

- Resource Protection Plan

- Objective 4.15 The County shall implement appropriate portions of existing resource management plans and establish a mechanism to coordinate with applicable agencies operating/managing resources.
- Policy 4.15.1 The County shall assist and coordinate in the development and adoption of resource and management plans for natural reservations and preservation areas.
- Policy 4.15.2 The Community Development Division shall continue to coordinate all proposals for change of land use, or extension of infrastructure, adjacent or through natural reservations and preservation areas with appropriate public/private agency (ies).

Coastal, Lakes, River Management



Coastal, Lakes, River Management**- Hazard Mitigation Program**

- Objective 4.16 The County shall minimize future losses to Citrus County residents from all disasters by reducing the risk to people and property.
- Policy 4.16.1 The County will pursue a continuing effort to reduce hazards in accordance with the plans, programs, and activities identified in the Citrus County Local Mitigation Strategy, Adopted by the Citrus County Board of County Commissioners on April 26, 2005 by Resolution No. 2005-085.

CHAPTER THREE

CONSERVATION ELEMENT

GOALS, OBJECTIVES, AND POLICIES

- **GOALS, OBJECTIVES, AND POLICIES**

GOAL #3 - Citrus County shall preserve, protect, and restore its natural resources for the health, safety, and welfare of its citizens.

Water Resources

- Surface Water

- | | |
|---------------|---|
| Objective 3.1 | Maintain and restore surface water quality consistent with state surface water classification and respective surface water quality standards. |
| Policy 3.1.1 | A minimum setback of 50 feet from water bodies and wetlands shall be established and maintained for all new subdivided parcels. The setback requirement shall be measured from the mean high water line or line of ordinary high water as appropriate. |
| Policy 3.1.2 | <p>Citrus County shall utilize or administer water quality studies on all water bodies and assist in adopting management plans for all water bodies. Water quality management plans shall address at a minimum:</p> <ul style="list-style-type: none"> • Stormwater treatment/retrofitting • Non-structural flood control • Protection of natural drainage features • Surface water regulations • Sewage retrofitting |
| Policy 3.1.3 | <p>During construction in the vicinity of water bodies or wetland areas, the following criteria shall be met:</p> <ul style="list-style-type: none"> • A buffer of 15 feet or greater shall be established to reduce adverse impacts on natural vegetation • A buffer of 25-feet or greater shall be established upland of springs, spring-fed waterbodies, and open sinkholes • Existing topography and vegetation shall be retained within the buffer area • Pervious pavement materials or equivalent methods shall be used to reduce runoff into adjacent and downstream waters • Silt screens shall be placed between the construction or land clearing site and the water body or wetland to prevent erosion and siltation |

- After permitted shoreline stabilization construction natural vegetation shall be retained or replaced with suitable native vegetation to minimize and stabilize erosion and to decrease pollution
- Policy 3.1.4 A mechanism shall be established in the Land Development Code, which allows for greater setbacks and buffers when environmental characteristics require additional protection measures.
- Policy 3.1.5 Site preparation/land clearing other than minimal vegetation removal, shall not commence until development approval is granted.
- Policy 3.1.6 Steeply sloping shores resulting from approved fill deposition shall be prohibited.
- Policy 3.1.7 Shallow filter or spreader berms shall be used adjacent to shorelines where slopes exceed 10:1.
- Policy 3.1.8 The construction of new canals shall be prohibited unless overriding public need is demonstrated. The criteria for determining public needs are as follows:
- Flood control
 - Water quality management
 - Resource management
- Policy 3.1.9 Runoff from structures, streets, yards, and parking areas shall be carefully controlled to prevent flooding in adjacent areas or pollution of water bodies.
- Policy 3.1.10 To ensure protection of surface water quality/pollution, all new development/construction which is not subject to the Stormwater Review and permit procedures of the Southwest Florida Water Management District (SWFWMD) shall be subject to County Stormwater Review and Approval. Design and performance standards of the SWFWMD for stormwater discharge facilities and management systems, shall be the minimum criteria used by the County. The County shall establish and maintain procedures for review monitoring and enforcement of permit conditions. If and when an interlocal agreement is enacted, the agreement will supersede this policy.
- Policy 3.1.11 The County shall support and/or initiate proposals to protect and maintain the water quality of the Chassahowitzka, Homosassa,

Halls, and Withlacoochee Rivers as Outstanding Florida Waters.

- Flood Plain

- Objective 3.2 The County shall protect the flood storage and conveyance functions of the 100 year flood plain and properties within flood prone areas by limiting development and fill activities consistent with the policies and standards in the Future Land Use Element.
- Policy 3.2.1 The County shall provide and update the flood plain management handout to inform and educate people about the County's flood plain protection regulations.
- Policy 3.2.2 The County shall support the acquisition of undeveloped lands within flood plain areas under the Florida Forever Program, if warranted.
- Policy 3.2.3 The County shall maintain standards for stormwater quantity/flooding for development that is not covered by any State agency. The County shall establish and maintain procedures for review, monitoring, and enforcement of permit conditions.

Groundwater Resources

- Groundwater Protection

- Objective 3.3 Maintain and, whenever possible, improve existing groundwater quality.
- Policy 3.3.1 Proposed development shall be evaluated for its adverse impact on aquifer recharge and discharge areas, and their vulnerability to contamination shall be assessed before any development is permitted. Additionally, development shall be evaluated to minimize adverse impacts on first magnitude springs and water.
- Policy 3.3.2 Drainage wells and sinkholes are prohibited for the disposal of stormwater where they recharge into potable water aquifers. In instances where they exist, these wells shall be abandoned using approved methods which include adequate sealing and plugging (required by Section 17.28, Florida Administrative Code (F.A.C.)).
- Policy 3.3.3 The County shall continue to work with SWFWMD and FDEP to provide property owners with information about the protection of groundwater quality.

- Well/Wellfield Protection

- Objective 3.4 The County shall maintain its interim wellhead protection regulations utilizing five-year time of travel zones to establish zones of contribution and develop a more comprehensive wellhead protection program within the planning period.
- Policy 3.4.1 Interim groundwater protection regulations shall be adopted placing appropriate guidelines and restriction on land uses involving storage, use, handling, production, or transportation of contaminants within zones of protection an all wells/wellfields which withdraw or have permitted withdrawal capacity of 100,000 gallons per day or greater.
- Policy 3.4.2 The County shall support and assist the SWFWMD in the development of a groundwater modeling program.
- Policy 3.4.3 The County shall seek funding and assistance to develop site specific wellhead protection plans for the regional wellfields within the County.
- Policy 3.4.4 The County shall adopt wellhead protection regulations which utilize the findings of the modeling program to establish zones of contribution for public water supply wells.

- High Recharge and Wellfield Locations

- Objective 3.5 The County shall utilize the Withlacoochee Regional Water Supply Authority (WRWSA) Master Plan for Water Supply in determining future regional wellfield locations.
- Policy 3.5.1 The Public Utilities Division, in coordination with the WRWSA and the Community Development Division, shall develop a plan which identifies and prioritizes high recharge and future well/wellfield locations for protection and acquisition.
- Policy 3.5.2 The high recharge and future well/wellfield location plan shall consider multiple use sites for protection and acquisition. These multiple uses should include but are not limited to recreation, wildlife habitat, and community services.
- Policy 3.5.3 The County shall recognize public acquisition programs as an alternative to purchase lands for water supply and groundwater recharge.
- Policy 3.5.4 The County will continue to seek funding to prepare an assessment

and adopt programs to protect natural groundwater recharge areas.

- Water Conservation

- | | |
|---------------|---|
| Objective 3.6 | The County shall continue measures to conserve fresh water resources as defined by F.A.C. |
| Policy 3.6.1 | The County shall adopt water conservation regulations providing recognition and/or incentives for xeric landscaping, reuse of grey and treated wastewaters, and public information. |
| Policy 3.6.2 | The County shall adopt a water conservation ordinance and plan, which supports the SWFWMD water conservation rule and addresses local concerns. |
| Policy 3.6.3 | The County shall support the use of treated wastewater on golf courses and other appropriate land when feasible. |
| Objective 3.7 | The County, with assistance from the WRWSARWSP and SWFWMD, shall maintain estimates, project demands, and available water supplies for the planning period. |
| Policy 3.7.1 | The County shall establish a program in coordination with the SWFWMD and the WRWSARWSP to estimate and project needs and sources for a ten-year period based on the demands for use and the quantity and quality of water available to meet demands. |
| Objective 3.8 | The County shall implement water conservation and reuse options using the policies and techniques as outlined in the 10 year Regional Water Supply Plan Water Supply Facilities Work Plan. |

Flora and Fauna

- Wildlife and Habitat

- | | |
|---------------|--|
| Objective 3.9 | The natural balance of ecological communities becomes altered as development increases. To arrest and reverse this trend, the County shall implement measures to identify and protect ecological communities and threatened wildlife. The destruction of endangered and threatened species and species of special concern shall be prohibited unless mitigated pursuant to US Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC) regulations. The alteration of areas for which the presence on-site of such species has been documented or confirmed shall also be prohibited unless the alteration of habitat may be permitted where project alternatives |
|---------------|--|

that would comply with the prohibition are impracticable and mitigation measures that will ensure the survival of a viable population of the affected species can be successfully implemented. The County requires biological sites surveys and shall require the developer to provide assurances that the proposed development is consistent with this policy and the standards and criteria adopted by the FWC. Additionally, the County shall maintain written criteria through Land Development Regulations for protection of all listed species.

- Policy 3.9.1 The County shall not take actions which have the potential to jeopardize conservation acquisitions.
- Policy 3.9.2 The County shall support an acquisition program to identify and recommend prioritization of environmentally endangered lands for State/local acquisition. Communities that will receive priority include scrub, sandhill, springs, and hardwood hammocks.
- Policy 3.9.3 The County will maintain a program to coordinate the continuing cooperation between adjacent local governments to conserve, appropriate use, and protect unique vegetative communities located within more than one local jurisdiction.
- Policy 3.9.4 The County shall continue to enforce wetland protection regulations in the County Land Development Code (LDC) and revise them to reflect Ecosystem Management and Environmental Resource Protection (ERP) standards.
- Policy 3.9.5 The County shall continue to enforce regulations and programs providing for the protection of endangered, threatened, and species of special concern, require inspections for proposed development sites and establish habitat mitigation criteria. Habitat mitigation criteria shall be designed to provide net positive improvement to the affected species.
- Policy 3.9.6 The County shall utilize FWC data to develop and maintain a comprehensive inventory of ecological communities, habitat conditions, occurrences, and disturbances of endangered, threatened, or species of special concern.
- Policy 3.9.7 The County will assure, through its Best Management Practices program for wildlife, that agricultural practices are compatible with the protection of wildlife and natural systems.
- Policy 3.9.8 All nonresidential development in excess of five (5) acres and new residential development via the platting process shall be required

to have a biological survey conducted when native vegetative or ecological communities are present. The survey will utilize FWC recommended methodology. If listed species are determined to be present, preservation and/or impact mitigation shall be required prior to issuance of a final development order. The mitigation for listed species or their habitat shall be determined by the FWC, Florida Department of Environmental Protection (FDEP), or USFWS.

- Policy 3.9.9 The County shall continue development and maintain programs to encourage private land owners to use best available management practices to protect habitat of endangered and threatened species.
- Policy 3.9.10 The County shall continue measures to preserve and protect the native tree canopy and offset the loss of trees due to development and construction activities.
- Policy 3.9.11 The County shall encourage and promote the removal of invasive exotic vegetation from all development sites.

- West Indian (Florida) Manatee

- Objective 3.10 Citrus County shall protect and maintain the West Indian (Florida) manatee population in accordance with the objectives of the Research and Management Plan for Crystal River Manatees, Manatee Recovery Plan, and future protection plans prepared by the FDEP and the USFWS.
- Policy 3.10.1 Citrus County shall cooperate with State and Federal manatee protection efforts and grant full weight to U.S. Fish and Wildlife Service's jeopardy opinions.
- Policy 3.10.2 Citrus County shall maintain a Manatee Protection Plan designed to protect manatee populations.
- Policy 3.10.3 Educational materials on coastal and marine resource conservation and manatees in particular, shall be disseminated to boaters, and displayed in areas where both manatees and humans congregate.

Air Quality

Objective 3.11 Citrus County shall meet or exceed ambient air quality standards established by the FDEP and establish long range measures to monitor, identify, and maintain air quality at acceptable levels with the planning period.

Policy 3.11.1 The County shall reduce the potential for vehicular emissions by:

- Encouraging planned developments and multiple use commercial centers
- Requiring vegetative buffers between new transportation arterials and new residential developments
- Promoting alternative transportation modes
- Maintaining appropriate levels of service on arterial and collector roads
- Promoting cleaner burning fuels

Policy 3.11.2 The County shall develop a strategic program, with the assistance of FDEP, to identify, monitor, and reduce air pollution or maintain air quality at acceptable levels.

Soil Erosion

Objective 3.12 The County shall reduce soil erosion and sedimentation which may result from agriculture, roadway construction, and land development, in accordance with the US Natural Resources Conservation Service (USNRCS) adopted practices.

Policy 3.12.1 The County shall assist the USNRCS in activities directed towards minimizing soil erosion.

Policy 3.12.2 The County shall encourage best management practices for controlling soil erosion and stormwater runoff associated with agriculture uses.

Policy 3.12.3 Characteristics of soil, suitability, and capability shall be considered in determining appropriate land uses and subdivision.

Policy 3.12.4 The County shall adopt policies within the Land Development Code to require revegetation of cleared properties to control soil erosion and fugitive dust.

Commercial Uses of Natural Resources

- Objective 3.13 Conservation efforts have been designated to protect natural resources and ensure environmental protection of land, water, air, and wildlife. To continue this objective, the County LDC shall contain provisions to regulate commercial uses of natural resources in a manner which will protect socio-economic benefits while simultaneously maintaining conservation objectives and the areas determined to be suitable for mineral extraction shall be designated appropriately on the Generalized Future Land Use Map.
- Policy 3.13.1 The County should recognize the areas of high mineral resource value, and the necessary regulations providing protection for mining activities, environment, and surrounding property owners, and require adaptive reuse or reclamation of mined lands.
- Policy 3.13.2 Vegetative buffering shall be established by new or expanding mining operations where the location of adjacent land uses do not provide natural buffering.
- Policy 3.13.3 The County shall include in the land development and enforcement codes provisions for protection of natural resources and the environment associated with commercial activities which utilize resources in large measure.

Hazardous Waste

- Objective 3.14 The County shall administer a hazardous waste management program.
- Policy 3.14.1 The County shall maintain its hazardous waste management program providing for the proper storage, recycling, collection, transportation, and disposal of hazardous waste.
- Policy 3.14.2 The County recognizes the concerns of radon exposure and will assist State/Federal efforts to protect County residents.

Conservation and Recreation Lands

- Objective 3.15 Citrus County shall implement procedures through the Citrus County Ecotourism Committee to protect and assist the management of natural reservations.
- Policy 3.15.1 The County shall assist State and Federal agencies in their management efforts relating to preservation and protection of

- natural reservations.
- Policy 3.15.2 The County shall provide technical assistance and actively participate in State land acquisition programs.
- Policy 3.15.3 The County shall not seek or support State natural reservations for public uses which conflict with their respective agency objectives.
- Policy 3.15.4 The County shall designate low density land uses adjacent to natural land reservations and resource based parks where the adjacent lands are undeveloped.
- Policy 3.15.5 The County shall support the U.S. Fish and Wildlife Service's efforts to acquire a site in the Crystal River area for the subsequent development of the Crystal River Wildlife Refuge's Manatee Interpretive/Education Center.
- Policy 3.15.6 Further mining in the Citrus Tract of the Withlacoochee State Forest is prohibited.
- Policy 3.15.7 Development occurring along the edges of natural reservations shall be designed to protect and minimize the impact of development on conservation areas through the use of natural vegetative buffers and clustering of structures away from the conservation area.

Wetlands Protection

- Objective 3.16 Citrus County will protect and conserve the functions and values provided by wetlands so there will be no net loss of wetland functions and values due to development or other activities.
- Policy 3.16.1 The County shall continue to implement wetlands protection standards of the LDC. The County shall ensure that the following steps are taken, in order, when assessing proposed activities that may result in wetland impacts:
- avoidance of wetland impacts
 - minimization of unavoidable wetland impacts
 - compensation for wetland impacts through mitigation
- Policy 3.16.2 The County shall require an FDEP ERP permit and other State or Federal wetland permits prior to issuing local development permits and orders. Where no State or Federal permit is required, the County shall require mitigation for wetlands impacts.
- Policy 3.16.3 Development shall not be allowed at the maximum densities and intensities of the underlying land use district, if those densities

- Policy 3.16.4 would be harmful to natural resources. Wetland protection standards and criteria shall be prepared, included within the County's LDC. The standards and regulations shall include some combination of the following:
- Setbacks and upland buffers
 - Conservation easements
 - Compensatory mitigation
 - Performance standards
 - Evaluation-ranking scheme that includes wetlands type, function, and quality
 - Drainage criteria
 - Allowed and exempted uses
 - Impact on Outstanding Florida Waterbodies
 - Significant and insignificant effects of development on wetlands
- For those projects which receive exemptions from State or Regional wetland rules, the concepts and principles of Ecosystem Management will be implemented on a local level to achieve environmental benefit.
- Policy 3.16.5 Any wetland created or used in compensatory mitigation or portion of an approved development order shall be recorded as a conservation easement.
- Policy 3.16.6 Mitigated wetlands shall function ecologically the same as the replaced wetlands unless, otherwise directed, within an ERP or US Army Corps of Engineers (ACOE) permit.
- Policy 3.16.7 Uniqueness of the wetland; threatened and endangered species and species of special concern; and surface and groundwater quality and quantity shall be evaluated for all proposed wetland alteration or mitigation.
- Policy 3.16.8 The definition of wetlands to be used for regulatory purposes by the County shall be the most comprehensive definition possible, as derived from the definition of wetlands used by the SWFWMD, the FDEP, and the ACOE.
- Policy 3.16.9 The County shall utilize data from SWFWMD, FDEP, FWC, and other state agencies in monitoring wetland types and amounts through the planning period.

- Policy 3.16.10 The County shall direct land uses which are incompatible with the protection and conservation of wetlands and wetland functions away from high quality wetlands and wetlands connected to Outstanding Florida Waterbodies.
- Policy 3.16.11 All applications for land use change shall be required to identify all jurisdictional wetlands on the site survey.
- Policy 3.16.12 Parcels that include or are adjacent to conservation areas shall not receive future or current land use designations that are higher in density or intensity than the currently adopted designations unless adequate natural resource protection is ensured.
- Policy 3.16.13 The County shall discourage wetland alterations within a Karst Sensitive Area, as delineated by FAVAIL.

Springshed Groundwater Protection

- Objective 3.17 The County will establish appropriate measures to protect its springs, springsheds, and surface water contributing areas.
- Policy 3.17.1 The County will develop and assess objective criteria by which to evaluate development for impacts to first magnitude spring systems by 2009. Assessment of impacts may include ground water impacts, surface water impacts, upland vegetative cover, buffers and filter strips, shoreline impacts, wetland systems, site ground area coverage, watershed level impacts, airborne emissions, and hazardous materials management.
- Policy 3.17.2 The County will identify the recharge and groundwater contribution areas, or springsheds, of the three first magnitude springs systems, Crystal River/ King's Bay, Homosassa, and Chassahowitzka.
- Policy 3.17.3 The County shall map all springs of second degree or lesser magnitude as part of its comprehensive watershed management master plans being developed in cooperation with the SWFWMD.
- Policy 3.17.4 The County will develop land development regulations for springs protection which address the use, storage, and disposal of hazardous materials, best management practices for turf grass and landscaping, enhanced development and parking lot standards, enhanced buffers, habitat/environmental protection standards, and other appropriate and feasible measures to minimize surface and groundwater contamination and the reduction of groundwater

recharge.

Policy 3.17.5 In order to maintain aquifer recharge area the County shall require all new subdivisions to preserve and dedicate adequate open space. Open space standards shall be as defined in Policy 17.15.11.

- All new subdivisions shall be required to use open space/conservation subdivision design plans.
- To the greatest extent possible, units shall be clustered.
- Open space shall be connected to adjacent open space to create networks and corridors of larger areas.
- Nonresidential development shall be required to minimize the size of contiguous impervious areas.

Surface Water Protection of Springs, Spring Runs and Open Sinkholes

Objective 3.18 Citrus County shall protect the surface water quality of springs, spring runs, and sink holes open to the aquifer.

Policy 3.18.1 The County will develop land development regulations to address development and site construction practices adjacent to springs, spring runs, and sinkholes open to the aquifer.

- All lands cleared for development shall be seeded, sodded, or mulched promptly after clearing if construction has not commenced.
- Erosion control barriers shall be required around the impacted area perimeters unless continuous buffers of natural vegetation of a depth of 15 feet or more exist.

Policy 3.18.2 During construction in the vicinity of springs a buffer of native vegetation of 100 feet or greater shall protect uplands around springs, spring runs, and open sinkholes. When site restrictions interfere with the accommodation of a buffer, an engineered system that meets the same standards of protection may be submitted as an alternative. Spring run shall be defined as a spring fed stream flowing from its source to its confluence into a receiver river, lake, canal, or other body of water.

Policy 3.18.3 The following uses are prohibited from locating within 500 feet of any spring, spring run creek, sink, or contributing stream or surface waterbody (except for the Cross Florida Barge Canal):

Any new business or use classified as one of the following handler types by the Florida Department of Environmental Protection under its Hazardous Waste Compliance and Enforcement Tracking

System under the RCRA program.

Handler Types

CLO - Closed

LQG - Large Quantity Generator

MER - Mercury Handler

OIL - Used Oil Handler

TRA - Hazardous Waste (HW) Transporter

TSD - Treater/Storer/Disposer

The following handler types are exempt:

NHR - Non-handler.

CES - Conditionally Exempt SQG

SQG - Small Quantity Generator

Policy 3.18.4

The following landscaping BMPs shall be instituted within new and revised planned developments to reduce nutrient loading:

- a. Planted turf grass and landscaping on residential lots shall be limited to a maximum of 50% of the upland portion of the deeded lot
- b. Turf grasses and landscape vegetation common to the area shall be used. Landscape vegetation shall be drought tolerant; and
- c. All development shall require best management practices as dictated by the principles and practices of the Florida Yards and Neighborhood Program.

Policy 3.18.5

All new or revised golf course siting, design, construction, and management within County shall be consistent with Best Management Practices for the Enhancement of Environmental Quality on Florida Golf courses (FDEP, 2007).

Policy 3.18.6

BMPs shall be used in the design of stormwater management facilities and systems. The following stormwater BMPs shall be instituted to reduce nutrient loading:

- All residential development which requires on-site retention shall use swales with swale blocks or raised driveway culverts whenever possible except when soil, topography, or seasonal high water conditions are inappropriate for infiltration as determined by a professional engineer licensed in the State of Florida.

- Design of stormwater systems for residential and commercial uses shall use bio-retention areas (below grade vegetated areas) to increase stormwater treatment and reduce stormwater volume. Downspouts for both residential and commercial development shall be directed from the roof to vegetated areas for uptake.
- Vegetated infiltration areas shall be used to provide stormwater treatment and management on all sites except when soil, topography, or seasonal high water conditions are inappropriate for infiltration as determined by a professional engineer licensed in the State of Florida.
- Whenever infiltration systems are not feasible, wet detention systems shall be used for stormwater treatment and management.
- Developments within the Coastal High Hazard Area or identified sensitive karst areas shall utilize the St. Johns River Water Management District karst sensitive criteria found in SJRWMD Rule 40C-41.063 (7)(a) ERPS – Surface Water Management Basin Criteria and SJRWMD Rule 40C-42, Part II Criteria for Evaluation, Section 9.11 Sensitive Karst Area Basin Design Criteria.
- Sensitive karst features, including sinkholes with a direct connection to the aquifer and stream-to-sink features, shall not be utilized as stormwater management facilities. Prior to subdivision approval, all depressions will be investigated by a licensed professional using a professionally acceptable methodology for suitability of water retention using generally accepted geo-technical practices with an emphasis on identification of potential connections to the aquifer. If connections are determined to exist, the depression shall not be used for stormwater retention and the area draining to this feature under pre-development conditions shall be preserved through a conservation easement.
- All development approval by the County shall require the applicant to submit to the County a copy of the SWFWMD or DEP stormwater permit and the NPDES notice of intent to be covered by the construction generic permit prior to any land clearing.
- All components of the stormwater treatment and management system shall be in common ownership and shall be maintained by the responsible legal entity identified in the SWFWMD or DEP stormwater permit. The studies required above shall be used to characterize on-site soils and determine locations of geologic features

including sinkholes, solution pipes, depressions, and depth of soil to lime rock. Sensitive karst features like sinkholes with a direct connection to the aquifer and stream-to-sink features shall be protected.

- Policy 3.18.7 The County shall protect springs by prohibiting increases in allowed land use intensity at the Generalized Future Land Use level within 100 feet of a spring or open sinkhole.
- Policy 3.18.8 The County shall evaluate adoption of land development regulations to protect springs, spring groups, and wetlands along the US 19 commercial corridor between Homosassa Springs and Crystal River.
- Policy 3.18.9 The County shall develop and maintain programs (FYN) to educate and encourage homeowners and private landowners to use BMPs to protect natural habitat and to protect water quality, especially on land within the mapped recharge areas of first magnitude springs.
- Policy 3.18.10 The County shall provide educational opportunities (FYN) for landscape and lawn-care professionals regarding the use and application of fertilizers and pesticides.
- Policy 3.18.11 The County shall protect springs by prohibiting increases in allowed land use intensity at the Generalized Future Land Use level within a Karst Sensitive Area without a hydrogeological analysis that addresses impacts to groundwater resources. The analysis shall be performed by a professional geologist or professional engineer licensed in Florida. Karst Sensitive Area shall be defined as an area in which limestone lies within five (5) feet of depth from natural grade.

Sinkholes and karst features

- Objective 3.19 Citrus County shall protect ground water quality by limiting exposure to man-made hazards due to development activity around historic sinkholes and other identified karst features.
- Policy 3.19.1 If there is an existing sinkhole on the proposed development or karst sensitive feature, then a detailed geological/geotechnical investigation shall be required. This investigation must be conducted by a certified geologist or professional engineer experienced in hydrogeology and a report submitted to the County for consideration. The geologic investigation shall be comprehensive enough that recommendations for site planning,

- Policy 3.19.2 engineering design and construction techniques may be made. The following uses and activities shall not be located over or adjacent to an existing sinkhole unless it is determined by a certified geologist or professional engineer experienced in hydrogeology that the area is safe and that there is no subsurface connection that may cause contamination or damage to the groundwater:
- Stormwater structures, other than stormwater swales
 - Utility structures, above or beneath ground
 - Buildings, structures, or impervious surfaces
- No septic systems, drain fields, solid waste disposal areas, or chemical storage shall occur within five hundred (500) feet of the existing sinkhole unless it is determined by a professional geologist or professional engineer licensed in Florida and experienced in geohydrology that there is no subsurface connection that may cause contamination or damage to the groundwater:
- Policy 3.19.3 Building setbacks from springs, spring runs, sinkholes, and caves shall be developed based on best data available by 2009. In the interim, a minimum 100-foot building setback shall be required. The setback shall retain natural vegetation.
- Policy 3.19.4 Where a lot of record is unable to accommodate development in compliance with the setbacks set forth in Policy 3.19.3, development shall follow an engineer-designed system with the building and associated paved areas located the maximum distance possible from the karst features. Any swale and berm shall be designed to direct drainage away from the karst feature.
- Policy 3.19.5 The County shall support the State and SWFWMD's efforts to acquire for conservation, properties with significant springs, open sinkholes, and caves.
- Policy 3.19.6 Redevelopment of valid non-conforming lots or structures may seek approval through the Conditional Use process for an engineer-designed system that mitigates the provisions of the spring's protection standards contained within the Plan.

Wastewater disposal in high aquifer recharge areas

- Objective 3.20 Citrus County shall protect ground water quality within high aquifer recharge areas by encouraging use of reclaimed water and provision of central sanitary sewer for new development.

Policy 3.20.1

All development where service is available, shall connect to systems designed to achieve Advanced Wastewater Treatment (AWT) standards. All development shall be served by a regional wastewater treatment facility as soon as the service is available as stated in Policy 7.3.5.

CHAPTER FOUR

COASTAL, LAKES, RIVER MANAGEMENT ELEMENT

GOALS, OBJECTIVES, AND POLICIES

- **GOALS, OBJECTIVES, AND POLICIES**

GOAL #4 - Preserve, protect, and enhance resources of the Coastal, Lakes, and River Areas and where appropriate, restrict development activities which would damage or destroy these resources, protect human life, and limit the public expenditure in areas subject to natural disasters.

Natural Resources

- Habitats and Wetlands

Objective 4.1 Protect native vegetative and ecological communities.

The components of this program are:

- Continued efforts to protect native vegetation and ecological communities. The primary emphasis shall be on, but not limited to, upland habitat for endangered and threatened species and other environmentally sensitive communities. The County will continue efforts to preserve and protect these communities by seeking dedications via the development process, fees-in-lieu of dedications to purchase land, and active coordination with federal, state, local, and regional agencies and/or private organizations to purchase these lands
- The adoption of standards requiring on-site preservation of native habitat implemented through the development review process

Policy 4.1.1 No subdivisions shall be approved unless all lots proposed for development contain upland areas large enough to support the proposed activity and all required buffers and preservation areas.

Policy 4.1.2 The County Land Development Code (LDC) shall contain requirements that native vegetation be utilized in required buffers, setbacks, and open spaces.

Policy 4.1.3 The County LDC shall contain requirements for filtering all runoff from lands adjacent to wetlands and water bodies.

Policy 4.1.4 Standards for signs along coastal, lakes, and river roadways and shores shall be adopted and enforced to preserve visual amenities.

- Living Marine Resources

Objective 4.2 Protect wildlife, living marine resources, and special habitats from adverse impacts of development and human activities. Continue to enforce the natural resource protection provisions in the LDC and related ordinances.

Policy 4.2.1 Coastal wildlife, living marine resources, and special habitats to include:

- Endangered, threatened, and species of special concern
- Bird Rookeries
- Bald Eagle and Osprey nesting locations
- Marine Grass Beds
- Fisheries
- Oyster Beds

Policy 4.2.2 Reserved

Policy 4.2.3 The County Land Development and Enforcement Codes shall protect wildlife; especially endangered, threatened and species of special concern.

Policy 4.2.4 Living marine resources: marine grass beds, fisheries, and oyster bars shall be protected and enhanced.

Policy 4.2.5 The unpermitted destruction of marine grass beds and oyster bars is prohibited.

Objective 4.3 Reserved

- Resource Education

Objective 4.4 Continue the ongoing program of public education to assist in the protection of estuarine, riverine, and lake natural resources.

Policy 4.4.1 The Community Development Division shall coordinate with the Division of Aquatic Services, the Marine Science Station, U.S. Fish and Wildlife Service (USFWS), and Florida Department of Environmental Protection (DEP) to prepare educational materials.

Policy 4.4.2 The educational materials shall be posted at each public access to estuarine, riverine, or lake waters and distributed to all libraries and schools. These materials shall also be posted at private/commercial access points with permission of the owner and

may be located at strategic points throughout waterbodies where appropriate.

Land Use

- Water-dependent Land Uses

Objective 4.5 Water dependent and water-related land uses have priority over all other land uses with exception to conservation, along shoreline areas. The Generalized Future Land Use Map (GFLUM) shall contain designated areas for coastal water-dependent and water-related land uses.

Policy 4.5.1 The priority ranking of shoreline land uses shall be:

- Water-dependent uses
- Water-related uses
- Non-water related uses

- Shoreline Performance Standards

Policy 4.6.3 New marinas and multi-slip docking facilities must conform to the following criteria:

- Public use marinas are only allowed in marine commercial areas
- Must provide vehicular-trailer parking and sewage pump out facilities
- All proposed parking, dry storage and non-water dependent facilities must be built on upland areas
- Hurricane contingency plans shall be approved by the Community Development Director and Director of Emergency Management
- Shall comply with all applicable County Regulations and Policies
- Coastal and riverine wetlands and grass beds shall be avoided
- Economic need and viability shall be demonstrated
- Fueling facilities shall be designed to contain spills
- Water Circulation shall be maintained
- Any environmental disruptions will be mitigated
- Shall comply with the County Manatee Protection Plan
- Placement of new marinas/multi-slip docking facilities, multifamily docking facilities, and single family docking facilities exceeding one slip per 100 feet of shoreline shall be prohibited from designated critical habitats of the West

- Indian (Florida) manatee
- Construction materials used in shoreline or submerged land construction shall minimize environmental impacts and the best available technology shall be used. Examples of construction standards which are consistent with minimizing environmental impacts are: heavy grade PVC pipe filled with concrete, wood pilings minimally treated, galvanized steel or iron pilings, cantilever dock facilities, floating docks with sealed injected solid foam (may contain CFC's), and dry storage
- Pump-out facilities shall be contained in all marinas, multi-slip, and multifamily residential docking facilities, which are connected to a permitted package, or regional wastewater sewage treatment facility

Coastal, Lakes, and River Water Quality

Objective 4.7	Improvement and maintenance of estuarine and coastal riverine water quality. Water quality in the coastal area shall meet or exceed the "good" water quality index (Environmental Protection Agency [EPA] established in the 305 (b) Technical Report, DEP, 1994.) Water quality in the Lakes and River Area shall be consistent with policies of the Conservation Element.
Policy 4.7.1	No new point sources shall be permitted in waters of the Coastal, Lakes, and River Area except where mandated by the EPA and DEP.
Policy 4.7.2	Reserved
Policy 4.7.3	In order to reduce the amount of untreated stormwater effluent, the County shall prepare a strategic plan to retrofit appropriate areas.
Policy 4.7.4	The volume, velocity, and timing of river and stream flows into estuarine waters shall not be artificially altered from their long-term seasonal ranges.
Policy 4.7.5	Roadways and bridges shall not interfere with surface water flows and should be built with appropriate measures to avoid degrading water quality. Causeways shall not be built.

Archaeological and Historic Resources

- Objective 4.8 The protection, preservation, and sensitive reuse of historic resources shall be implemented through the policies below and development of a comprehensive analysis and plan by 2009.
- Policy 4.8.1 The Community Development Division shall prepare a Historic and Archaeological Analysis Report in 2009.

Hurricane Evacuation

- Objective 4.9 The County shall maintain or reduce hurricane evacuation times by requiring that new developments not degrade the existing evacuation Level of Service (LOS).
- Policy 4.9.1 Maintain and improve the County's Hurricane Evacuation sections of the Peacetime Emergency Plan and coordinate the integration of existing evacuation deficiencies into the regional and local evacuation plans.
- Policy 4.9.2 The Geographic Resources and Community Planning Division shall prepare periodic reports at least every seven years on the population at-risk for use in evacuation planning.
- Policy 4.9.3 The Hurricane Evacuation Level of Service Standard for Out of County evacuation is sixteen (16) hours for a Category 5 storm event.
- Policy 4.9.4 All roadway improvements along the County's evacuation network shall include practicable remedies for flooding problems.
- Policy 4.9.5 No new hurricane shelters shall be located within the Category 5 hurricane evacuation area.
- Policy 4.9.6 The hurricane vulnerability zone consists of the evacuation areas, from the Tropical Storm through the Category 5 Hurricane Evacuation Zone, as identified in the Storm Tide Atlas in the *2010 Statewide Regional Evacuation Study, Withlacoochee Region (SRES)*.
- Policy 4.9.7 Development orders issued for developments of regional impact shall contain conditions which require mitigative measures for impacts on hurricane shelter capacity and hurricane evacuation times for developments which generate a number of evacuating vehicles greater than the evacuation traffic capacity on designated

- hurricane evacuation routes.
- Policy 4.9.8 All proposed Comprehensive Plan Amendments and new developments within the CHHA must meet the following criteria:
- The adopted LOS for “out of county” hurricane evacuation is maintained for a category 5 storm event as measured on the Saffir-Simpson scale.
 - A 12 hour evacuation time to shelter is maintained for a category 5 storm event as measured on the Saffir-Simpson scale and shelter space reasonably expected to accommodate the residents of a development contemplated by the proposed comprehensive plan amendment is available; or
 - Appropriate mitigation is provided that will satisfy Policy 4.9.8 (a). or (b). Appropriate mitigation shall include, without limitation, payment of money, contribution of land, and construction of hurricane shelters and transportation facilities.
 - County shall enter into a binding contract with the developer detailing any required mitigation.
 - If the LOS for the host evacuees has not been established the LOS shall not exceed 16 hours for a category 5 event.
- Policy 4.9.9 Citrus County shall assess and adopt regulations in the hurricane vulnerable zone which: (1) limit new development in coastal areas and additional mobile home units; and/or (2) allow new development in coastal areas provided that mitigating measures are established which do not increase hurricane evacuation times; (3) promote land acquisition; and/or (4) establish a fee in lieu program and use those funds generated by fees to support future shelter development..
- Policy 4.9.10 The County shall utilize the American Red Cross (ARC) 4496 Standards for Hurricane Evacuation Shelter Selection, which includes standards for shelter location, capacity, inventory, and interior safety criteria during hurricane associated hazards.
- Policy 4.9.11 The County shall conduct evacuation traffic analysis using the planned distribution of the County's buildout population. To facilitate this task, the County will utilize a transportation network modeling system. Transportation network modeling shall also be utilized to monitor the impact of large residential projects and of ongoing development on hurricane evacuation times.
- Policy 4.9.12 In order to increase public awareness of hurricane hazards, the County shall provide emergency preparedness information and educational opportunities to the public.

- Policy 4.9.13 Lands within hurricane vulnerable areas, particularly low-lying and shoreline areas shall be targeted for public acquisition to protect the natural and beneficial functions of floodplains.
- Policy 4.9.14 The County should not improve or build public facilities which encourage growth in the Coastal High Hazard Area, except for necessary public services for existing developments or resource based recreation facilities.
- Policy 4.9.15 A hurricane mitigation fund shall be established to provide the resources needed for hazard mitigation projects in the adopted Local Mitigation Strategy.
- Policy 4.9.16 The County shall consider the adoption of a shelter mitigation impact fee to provide funds for construction of the additional shelter capacity needed as a result of growth.
- Policy 4.9.17 All new mobile home parks and mobile home subdivisions shall be required to construct a hurricane shelter that meets ARC 4496 standards to shelter at least 70% of the residents of the subdivision. Such shelters shall not be located within the hurricane vulnerability zone. (per Policy 4.9.5) Alternatively, the developer may pay a fee to the shelter mitigation fund.
- Policy 4.9.18 The County shall require all new shelters meet the ARC 4496 Shelter Guidelines as outlined in Appendix A of the Comprehensive Plan.

Post-disaster and Coastal High Hazard Area

Coastal High-Hazard Area

- Objective 4.10 The County shall direct population concentrations away from the Coastal High-Hazard Area through appropriate regulations in the Land Development Code.
- Policy 4.10.1 The County shall continue to amend its building codes to reflect coastal hazard concerns and the amendments to the Southern Standard Building Code.
- Policy 4.10.2 New sanitary sewer facilities and on-site sewage systems in the Hurricane Surge Areas (vulnerability zone) and areas subject to freshwater flooding shall be flood proofed and equipped with back flow preventors, respectively.
- Policy 4.10.3 The Coastal High Hazard Area shall incorporate all lands and

waters which lie within the Category 1 Hurricane Evacuation Zone. Such area is generally based upon the surge zone as depicted in the ~~2010 Statewide Regional Evacuation Study, Withlacoochee Region (SRES)~~ 2014 Citrus County Evacuation Zone Map. The Coastal High Hazard Area boundary and the Limit of Moderate Wave Action (LiMWA) shall be shown on the Land Development Code Atlas.

Policy 4.10.4

~~Reserved~~ New development, redevelopment, and infrastructure in vulnerable areas shall use best practices to address sea level rise.

Formatted: Strikethrough

Formatted: Underline

Policy 4.10.4B

In order to reduce flood risk from, or associated with, the impacts related to sea-level rise, continue to promote the use of the development and redevelopment principles, strategies and engineering solutions contained in the Florida Building Code and the Land Development Code.

Formatted: Underline

Formatted: Underline

Policy 4.10.5

Population concentration shall be directed away from the Coastal High Hazard Area.

Policy 4.10.6

The County shall relocate or replace infrastructure located in the Coastal High Hazard Areas to limit public losses from various events including, but not limited to, storm damage, hurricanes, severe flooding, Sea Level Rise, abandonment of facilities and/or structures, and tornadoes.

Policy 4.10.7

Lands within hurricane vulnerable areas, particularly low-lying and shoreline areas subject to storm surge shall be targeted for public acquisition to protect the natural and beneficial functions of floodplains.

Policy 4.10.8

The LDC shall contain additional disaster preparedness requirements for new developments whose residents might have limited mobility and/or demand specialized facilities.

Policy 4.10.9

No new Institutional Occupancy uses (i.e., the use of a building or structure, or a portion thereof, in which care or supervision is provided to persons who are or are not capable of self-preservation without physical assistance or in which persons are detained for penal or correctional purposes or in which the liberty of the occupants is restricted, including, but not limited to; hospitals, nursing homes (24-hour care for 6 or more people), psychiatric hospitals, jails, detention centers, reformatories, pre-release centers and other residential restrained or supervised care facilities) shall be allowed within the Coastal High Hazard Area unless the location has direct access to a Principal Arterial roadway.

Existing facilities shall not expand beyond the density/intensity approved as of January 01, 2004 unless an overriding public need can be demonstrated and the site directly accesses a Principal Arterial roadway.

- Policy 4.10.10 New construction or expansion of R-4 residential occupancy uses, as defined by the latest edition of the Florida Building Code, are not allowed anywhere within the Coastal High Hazard Area unless the site has direct access to a Principal Arterial roadway:
- Policy 4.10.10A. New construction or expansion of R-2 residential occupancy uses, as defined by the latest edition of the Florida Building Code, are not allowed within the Coastal High Hazard Area unless all minimum standards of the LDC are met, the proposed development is compatible with surrounding development, the development's access, internal design, and general location do not impede the evacuation of its residents or neighbors, and the project does not negatively impact area evacuation clearance times:
- Policy 4.10.10B. New construction or expansion of the R-1 and R-3 residential occupancy uses, as defined by the latest edition of the Florida Building Code, are allowed within the Coastal High Hazard Area.
- Existing undeveloped subdivisions and groupings of lots are encouraged to cluster dwellings rather than develop typical lots and homesites in order to minimize the overall footprint of development. Such clustering shall not increase density.
- Policy 4.10.11 No new mobile home parks shall be developed within the Coastal High Hazard Area (CHHA) nor shall any existing mobile home park with the CHHA be expanded beyond the number of dwelling units approved as of January 01, 2004. Existing mobile home parks may continue and dwelling units may be maintained, repaired, or replaced as needed, appropriate, and consistent with all other provisions and ordinances. Any replacement unit shall be elevated in compliance with current regulations. No lot or parcel within the CHHA, which currently does not allow mobile homes, shall be permitted to change to allow mobile homes.

- Policy 4.10.12 The County shall limit the height of structures within the Coastal High Hazard Area. Residential structures shall be limited to no more than two stories above the base flood or finished floor elevation. Areas under elevated residential structures may be used only for parking of vehicles, limited dead storage, and access to the structure, not finished living area. Nonresidential structures shall be limited to four stories above finished grade. Industrial facilities, electric power generation and transmission facilities, mining operations, agricultural operations, dry boat storage at marinas, and Seven Rivers Community Hospital are exempt from this provision. Construction or expansion of exempted facilities shall require the assurance of compatibility with surrounding development and may require additional buffers, setbacks, and similar measures.
- Policy 4.10.13 Recreational Vehicle (RV) parks, campgrounds, resorts, motels, hotels, and similar temporary lodging facilities are commercial uses. Such uses shall not be allowed to convert to permanent residential uses. No increase in residential dwelling unit densities within the Coastal High Hazard Area shall be allowed.

Post-Disaster Redevelopment

- Policy 4.11.8 To ensure that the property rights of current residents of the CHHA are protected, the County shall authorize redevelopment of up to the actual built density/intensity in existence on the property prior to the natural disaster notwithstanding the maximum permitted density/intensity adopted in the GFLUM and LDC Atlas. All such redevelopment shall meet current federal, state, and local construction and development review standards if feasible.

Public Access

- Objective 4.12 Increase public access to Coastal, Lakes, and River shoreline areas. A public access study shall be completed by 2009.

Infrastructure

- Objective 4.13 The LOS standards, areas of service, and phasing of infrastructure in the Coastal, Lakes, and River areas shall be implemented through requirements in the Infrastructure Element and additional standards under this objective shall be incorporated in the County LDC.

- Policy 4.13.1 Infrastructure shall be available to serve the development or redevelopment in the Coastal, Lakes, and River areas at densities designated by the GFLUM and shall be consistent with coastal resource protection and the maintenance safe evacuations.
- Policy 4.13.2 No development shall be permitted in the coastal area until the required infrastructure, based on adopted LOS's, are available to serve the proposed area to be development or redeveloped.

Intergovernmental Coordination

- Coastal, Lakes, and River Resources

- Objective 4.14 An intergovernmental coordination mechanism shall be established to manage coastal, lakes, and river resources affecting or affected by City of Crystal River and the City of Inverness.
- Policy 4.14.1 The County shall develop joint planning and management programs with the Cities of Crystal River, Inverness, Yankeetown, Inglis, and Dunnellon and the Counties of Hernando, Marion, Sumter, and Levy to:
- Ensure adequate water-dependent and water-related land uses
 - Prevent water pollution
 - Control and retrofit stormwater runoff and inadequate facilities
 - Protect living marine resources
 - Reduce exposure to natural hazards
 - Ensure public access

- Resource Protection Plan

- Objective 4.15 The County shall implement appropriate portions of existing resource management plans and establish a mechanism to coordinate with applicable agencies operating/managing resources.
- Policy 4.15.1 The County shall assist and coordinate in the development and adoption of resource and management plans for natural reservations and preservation areas.
- Policy 4.15.2 The Community Development Division shall continue to coordinate all proposals for change of land use, or extension of infrastructure, adjacent or through natural reservations and preservation areas with appropriate public/private agency (ies).

- Hazard Mitigation Program

- Objective 4.16 The County shall minimize future losses to Citrus County residents from all disasters by reducing the risk to people and property.
- Policy 4.16.1 The County will pursue a continuing effort to reduce hazards in accordance with the plans, programs, and activities identified in the Citrus County Local Mitigation Strategy, Adopted by the Citrus County Board of County Commissioners on April 26, 2005 by Resolution No. 2005-085.