APPLICATION FOR FEDERAL ASSISTANCE

Version 7/03

		2. DATE SUBMITTED	Applicant Identifier
1. TYPE OF SUBMISSION:		**3. DATE RECEIVED BY STATE**	State Application Identifier
Application	Pre-application		
☑ **Construction**	☐ **Construction**	**4. DATE RECEIVED BY FEDERAL AGENCY**	Federal Identifier
☐ **Non-Construction**	☐ **Non-Construction**		

5. APPLICANT INFORMATION

Legal Name: City of DeFuniak Springs	**Organizational Unit:** Department:
Organizational DUNS: 025253659	Division:
Address:	**Name and telephone number of person to be contacted on matters involving this application (give area code)**
Street: P.O. Box 685	Prefix: Ms. / First Name: Sara
City: DeFuniak Springs	Middle Name Warren
County: 066 Walton	Last Name Bowers
State: Florida / Zip Code 32435	Suffix:
Country: USA	Email: bowsara@defuniaksprings.net
6. EMPLOYER IDENTIFICATION NUMBER *(EIN):* 66-5960306	Phone Number (give area code) 850-892-8500 / Fax Number (give area code) 850-892-8504

8. TYPE OF APPLICATION: ☑ **New** ☐ **Continuation** ☐ **Revision** If Revision, enter appropriate letter(s) in box(es) (See back of form for description of letters.) ☐ ☐ Other (specify)	**7. TYPE OF APPLICANT:** (See back of form for Application Types) C - Municipal Other (specify) **9. NAME OF FEDERAL AGENCY:** USDA, Rural Development
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 10-766 TITLE (Name of Program): Community Facilities Loan and Grant	**11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:** Compressed Natural Gas Fueling Facility
12. AREAS AFFECTED BY PROJECT *(Cities, Counties, States, etc.):* City of DeFuniak Springs incorporated area and Walton County	
13. PROPOSED PROJECT Start Date: 4/1/2013 / Ending Date: 8/31/2013	**14. CONGRESSIONAL DISTRICTS OF:** a. Applicant 01 FL / b. Project 01 FL

15. ESTIMATED FUNDING:

a. Federal	$ 850,000.00
b. Applicant	$ 0.00
c. State	$ 0.00
d. Local	$ 0.00
e. Other	$ 0.00
f. Program Income	$ 0.00
g. TOTAL	$ 850,000.00

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. Yes. ☑ THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON

DATE: January 3, 2013

b. No. ☐ PROGRAM IS NOT COVERED BY E. O. 12372

☐ OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?

☐ Yes If "Yes" attach an explanation. ☑ No

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.

a. Authorized Representative

Prefix Mr.	First Name Charles	Middle Name Harold
Last Name Carpenter		Suffix
b. Title Mayor		c. Telephone Number (give area code) 850-892-8506
d. Signature of Authorized Representative		e. Date Signed

OMB Approval No. 0348-0041

BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	$ 35,000 .00	$ .00	$ 35,000 .00
2. Land, structures, rights-of-way, appraisals, etc.	$ 10,000 .00	$ .00	$ 10,000 .00
3. Relocation expenses and payments	$ 0 .00	$ .00	$ 0 .00
4. Architectural and engineering fees	$ 54,920 .00	$ .00	$ 54,920 .00
5. Other architectural and engineering fees	$ 44,480 .00	$ .00	$ 44,480 .00
6. Project inspection fees	$ 24,960 .00	$ .00	$ 24,960 .00
7. Site work	$ 6,250 .00	$ .00	$ 6,250 .00
8. Demolition and removal	$ 0 .00	$ .00	$ 0 .00
9. Construction	$ 123,125 .00	$ .00	$ 123,125 .00
10. Equipment	$ 543,750 .00	$ .00	$ 543,750 .00
11. Miscellaneous	$ 0 .00	$ .00	$ 0 .00
12. SUBTOTAL *(sum of lines 1-11)*	$ 842,485 .00	$ 0 .00	$ 842,485 .00
13. Contingencies	$ 84249 .00	$ .00	$ 84,249 .00
14. SUBTOTAL	$ 926,734 .00	$ 0 .00	$ 926,734 .00
15. Project (program) income	$ 0 .00	$ .00	$ .00
16. TOTAL PROJECT COSTS *(subtract #15 from #14)*	$ 926,734 .00	$ .00	$ 926,734 .00

FEDERAL FUNDING		
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.	Enter eligible costs from line 16c Multiply X 100.00 %	$ 926,734 .00

United States Department of Agriculture
Rural Utilities Service

USDA Form RD 1940-20 Exhibit I

for the

City of DeFuniak Springs, Florida
CNG Fueling Facility

BASKERVILLE-DONOVAN, INC.
Innovative Infrastructure Solutions

EB 0000340
BDI Project No. 106403.02

January 2013

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Executive Summary

The City of DeFuniak Springs is proposing to construct a Compressed Natural Gas (CNG) Fueling Facility on property at the northwest corner of Burdick Avenue and 10th Street. The City has programmed in their current budget to begin purchasing vehicles fueled by compressed natural gas. The Walton County School Board is committed to begin purchasing replacement buses fueled with compressed natural gas and Walton County and the Sheriff's Department have expressed an interest as well. The fueling facility would be made available to these agencies as well as to the general public in the area and travelers passing through the area. This survey summarizes whether the project has any impacts on the environment.

1 Primary Beneficiaries

The primary beneficiaries of the project will be local governments in Walton County, Florida. Secondary beneficiaries will be residents and visitors to the area. The proposed project will make compressed natural gas available to local governments, businesses, residents, and visitors in the area.

2 Area Description

The City of DeFuniak Springs is located in central Walton County, Florida. DeFuniak Springs was settled in the 1880's and is located at I-10 and SR 331 and to the north with US 90 passing through the heart of town. The area in and around DeFuniak Springs is rural and primarily agricultural in nature, featuring grain corn, cotton and peanuts. A general location map of the City of DeFuniak Springs is provided as **Figure 1**, the project area is shown in **Figure 2**, and a preliminary site plan is included as **Attachment 1**.

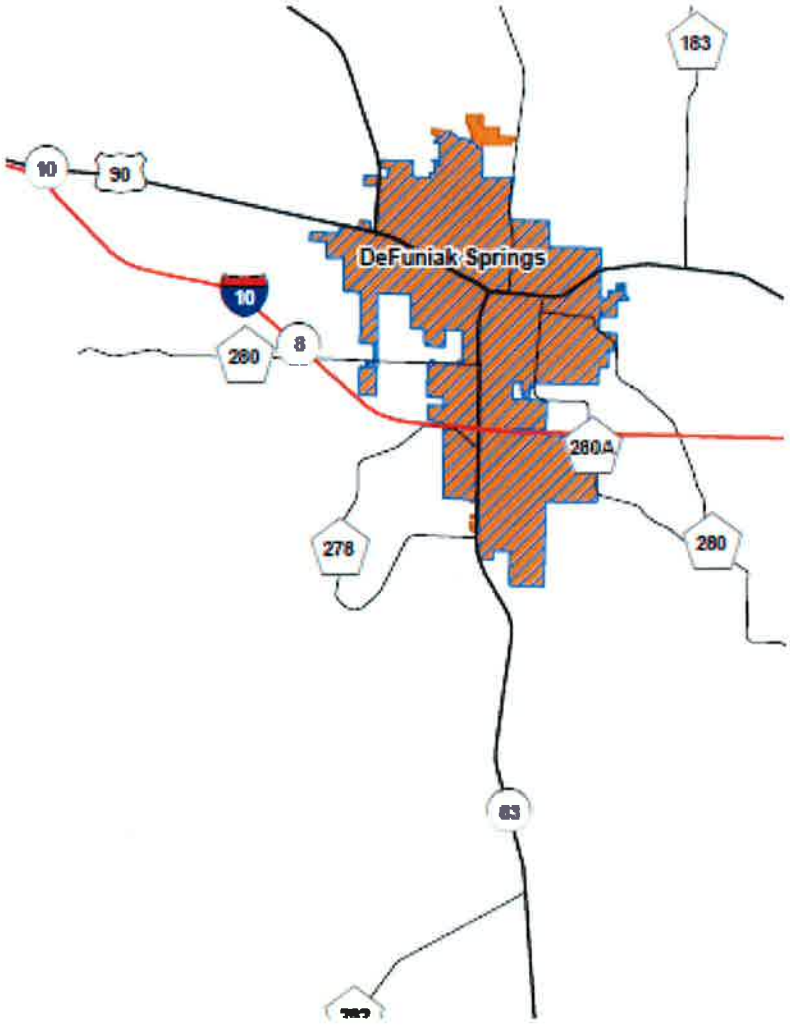


Figure 1 – General Location Map

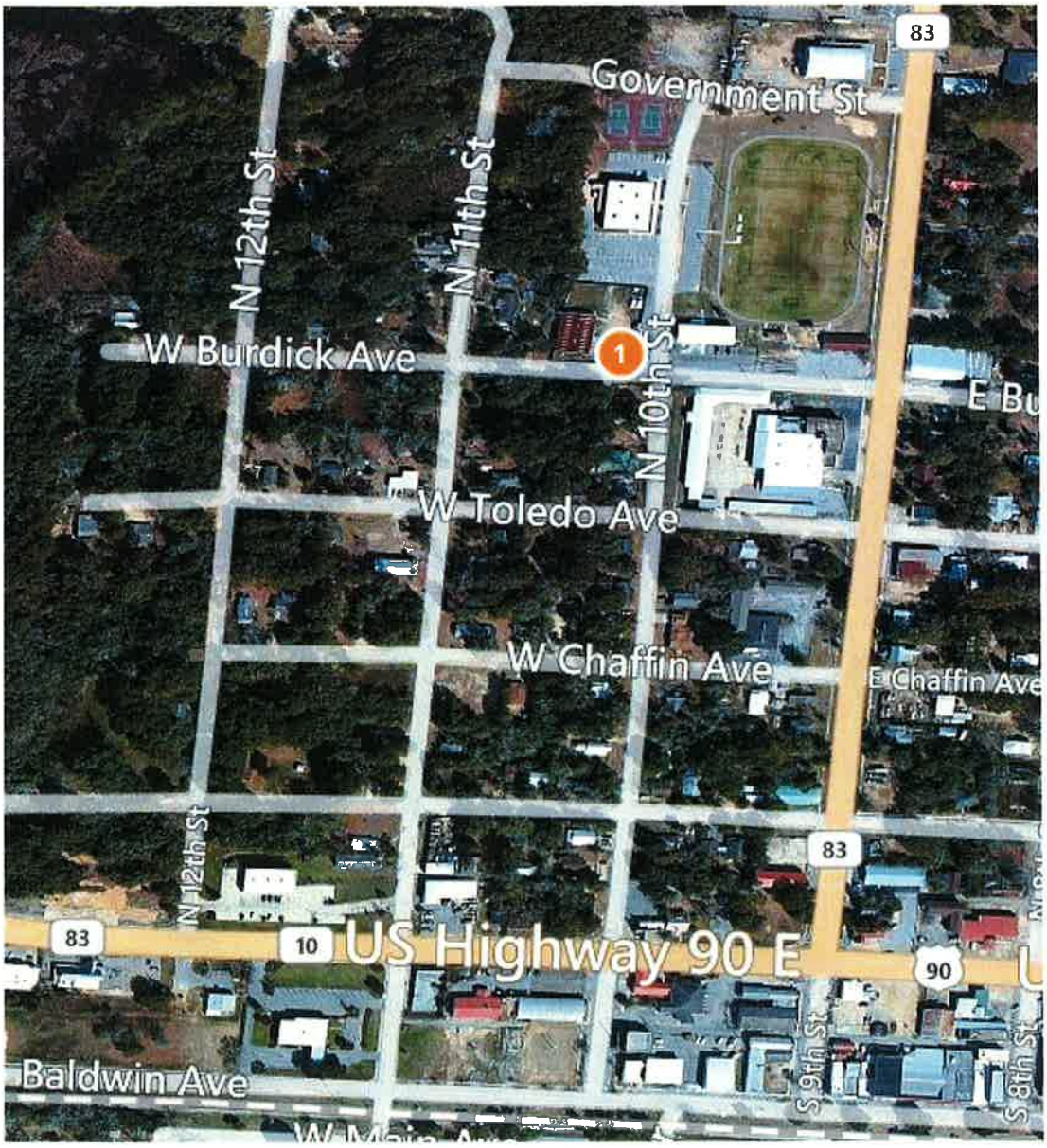


Figure 2 – Project Area

Land uses surrounding the project area include medium density residential, institutional, commercial, and recreational. All construction will take place on City property and within City right-of-ways. An excerpt from the City's Future Land Use map is shown in **Figure 3**.

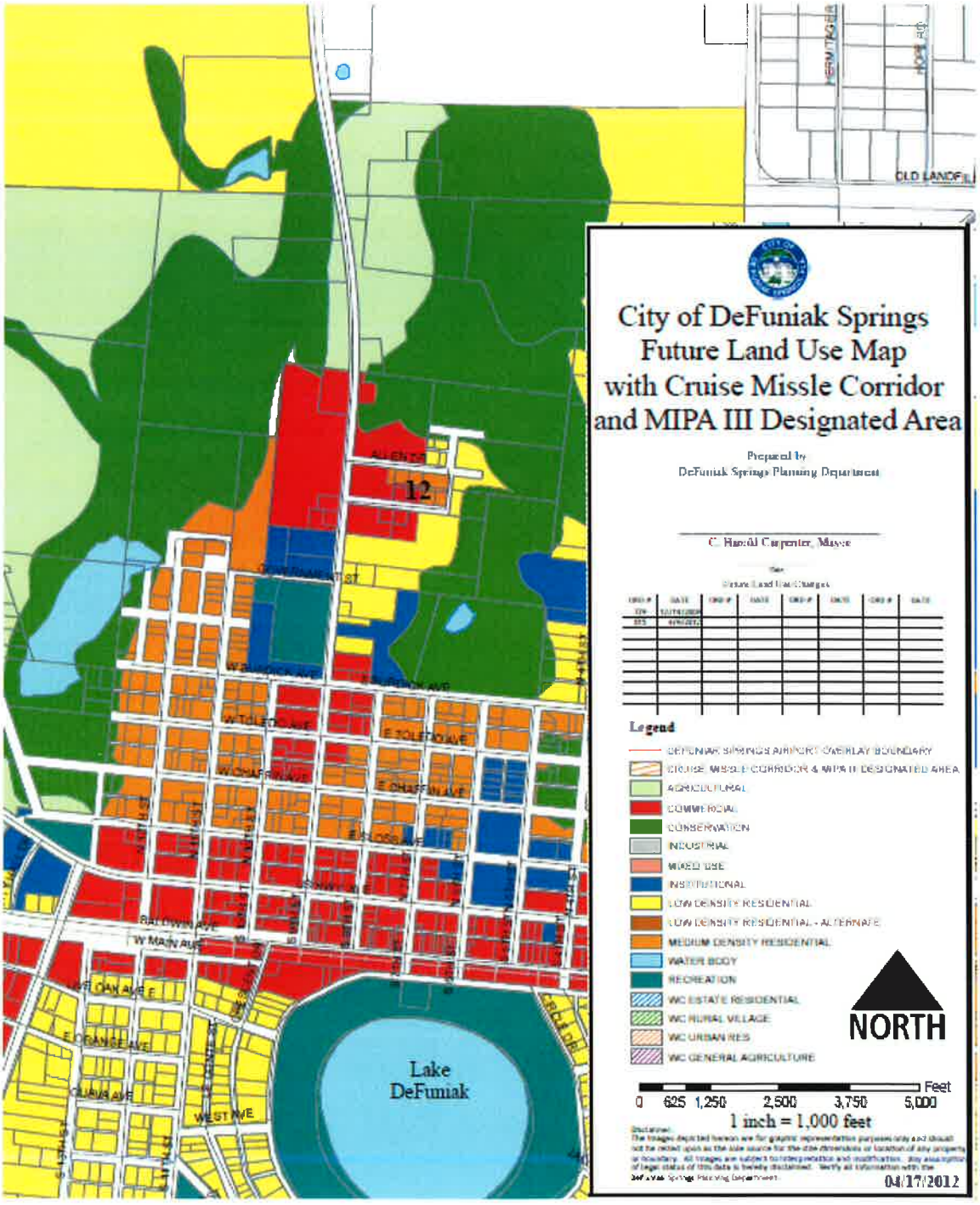


Figure 3 – Excerpt from DeFuniak Springs Future Land Use Map

The proposed site is fairly level occurring at approximately 220 feet according to the USGS 7.5 minute DeFuniak Springs East Quadrangle NAD 88. An excerpt from the topographic map of the area is included in **Figure 4**.

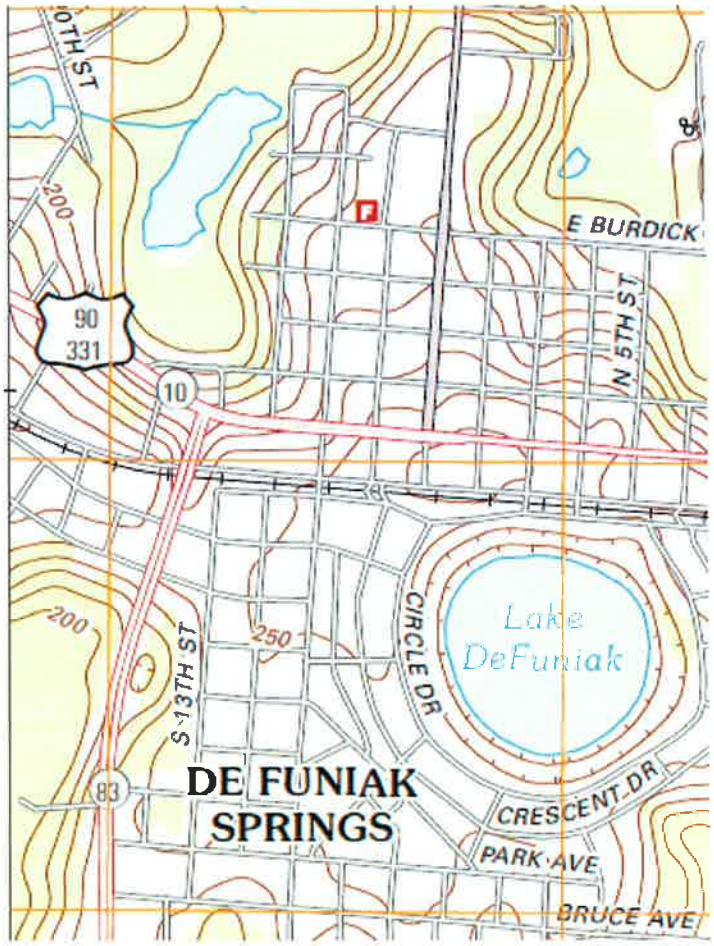


Figure 4 – Topographic Map

Soils in the planning area are somewhat poorly drained fine sands which are usually associated with flats on marine terraces. A USDA web soil survey for the planning area is attached as **Attachment 2**.

An evaluation of the area flood plains is essential to determine if there will be potential flooding impacts to the project site. The project site is located in Zone X, outside the flood plain, as shown on the FIRM included in **Attachment 3**. There will be no adverse impacts to the project area from the flood plains since no area is outside Zone X.

3 Air Quality

The planning area is not located in a non-attainment area. The project will not generate any emissions that will affect air quality.

4 Water Quality

Groundwater from the Floridan aquifer is the source of drinking water for the City of DeFuniak Springs. The Floridan aquifer is a deep, rock formation that would not be impacted by any work associated with this project.

5 Solid Waste Management

Solid waste generated during construction will be disposed of within on-site containment containers that will be hauled to local landfills. Solid waste generated during day to day activities would be minimal and will be handled by the DeFuniak Springs Sanitation Department.

6 Transportation

The transportation system in the project area is composed of two-lane residential roads. County Road (CR) 83, 9th Street, is a two lane highway that is one of the major north-south thorough fares in DeFuniak Springs. Burdick Avenue and 10th Street, two-lane residential roads, border the property on the south and east respectively. The proposed improvements will generate some additional vehicle trips along a one block area of Burdick Avenue. Easy access to and from CR 83 will keep this traffic to a minimum.

7 Noise

Long term Noise impacts from the project and its primary beneficiaries would be minimal.

8 Historic and Archaeological Properties

The City of DeFuniak Springs was settled in the 1880's and does contain properties of historic significance. There are five properties and districts listed on the National Register of Historic Places. These include the Perry L. Biddle House, Chautauqua Hall of Brotherhood, DeFuniak Springs Historic District, Operation Crossbow Site and Sun Bright. This is also home of the Walton-DeFuniak Springs Library, the oldest library in Florida still serving the public. There are over 172 structures located in the Historic District. None of these sites will be impacted by the project

9 Wildlife and Endangered Species

To determine the likelihood of encountering endangered species or other species of special concern in the project area, an unofficial report was developed from mapping tools provided by the Florida Natural Area Inventory (FNAI), administered by Florida State University.

FNAI applies a grid to the state to subdivide large areas into square mile sections for analysis. In the case of the project area, one matrix section applies, #4322. **Table 1** is a list of species of community known to occur in this vicinity, and considered likely within this Matrix Unit because:

1. Documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; or
2. There is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

Table 1. Likely Endangered and Threatened Species in Vicinity of the Project Area

Matrix Unit ID: 4322

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Upland hardwood forest	G5	S3	N	N

Species listed in **Table 2** lie within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

Table 2. Potential Endangered and Threatened Species in the Project Area

Matrix Unit ID: 4322

33 **Potential** Elements Common to Any of the 2 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Andropogan arctatus *Pine-woods Bluestem*	G3	S3	N	LT
Arnoglossum diversifolium *Variable-leaved Indian-plantain*	G2	S2	N	LT
Asclepias viridula *Southern Milkweed*	G2	S2	N	LT
Baptisia calycosa var. villosa *Hairy Wild Indigo*	G2T2	S3	N	LT
Baptisia megacarpa *Apalachicola Wild Indigo*	G2	S2	N	LE

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Carex baltzellii *Baltzell's Sedge*	G3	S3	N	LT
Coelorachis tuerculosa *Piedmont Jointgrass*	G3	S3	N	LT
Coreopsis integrifolia *Ciliate-leaf Tickseed*	G1G2	S1	N	LE
Drymarchon couperi *Eastern Indigo Snake*	G3	S3	LT	LT
Gopherus polyphemus *Gopher Tortoise*	G3	S3	N	LT
Heterodon simus *Southern Hognose Snake*	G2	S2	N	N
Hynmebnocallis henryae *Panhandle Spiderlily*	G2	S2	N	LE
Lachnocaulon digynum *Bog Button*	G3	S3	N	LT
Lampropeltis calligaster *Mole Snake*	G5	S2S3	N	N
Lilium iridollae *Panhandle Lily*	G2	S2	N	LE
Macranthera flammea *Hummingbird Flower*	G3	S2	N	LE
Magnolia ashei *Ashe's Magnolia*	G2	S2	N	N
Nuphar advena ssp. ulvacea *West Florida Cowlily*	G5T2	S2	N	N
Panicum nudicaule *Naked-stemmed Panicgrass*	G3	S3	N	LE
Peucaea aestivalis *Bachman's Sparrow*	G3	Se	N	N
Pituophis melanoleucus mugitus *Florida Pine Snake*	G4T3	S3	N	SSC
Platanthera integra *Yellow Fringeless Orchid*	G3G4	S3	N	LE
Pteronotropis welaka *Bluenose Shiner*	G3G4	S3S4	N	SSC
Quercus arkansana *Arkansas Oak*	G3	S3	N	LT
Rana capito *Gopher Frog*	G3	S3	N	SSC
Phexia parviflora *Small-flowered Meadowbeauty*	G2	S2	N	LE
Rhexia salicifolia *Panhandle Meadowbeauty*	G2	S2	N	LT
Phododendron austrinum *Florida Flame Azalea*	G3	S3	N	LE
Phynchospora crinipes *Hairy-peduncled Beaksedge*	G2	S2	N	LE
Sarracenia leucophylla *White-top Pitcherplant*	G3	S3	N	LE

Scientific and Common Names	Global	State	Federal	State

	Rank	Rank	Status	Listing
Tephrosia mohrii *Pineland Hoary-pea*	G3	S3	N	LT
Xyris longisepala *Karst Pond Xyris*	G2G3	S2S3	N	LE
Xyris scabrifolia *Harper's Yellow-eyed Grass*	G3	S3	N	LT

FNAI GLOBAL RANK DEFINITIONS

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 and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.

G4 = Apparently secure globally (may be rare in parts of range).

G5 = Demonstrably secure globally.

G#G# = Range of rank; insufficient data to 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 above (e.g., G3T1).

FNAI STATE RANK DEFINITIONS

S2 = Imperiled in Florida 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.

S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.

S4 = Apparently secure in Florida (may be rare in parts of range).

FEDERAL LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

LE = Endangered: species in danger of extinction throughout all or a significant portion of its range.

LT = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

SSC = Listed as Species of Special Concern by the FFWCC. 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. (SSC* indicates that a species has SSC status only in selected portions of its range in Florida. SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)

N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see:
http://www.doacs.state.fl.us/pi/.

LE = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.

LT = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.

Since this is a long established, developed site there are no anticipated impacts to critical habitats of threatened or endangered species because the site has had public access usage for many years. However, in the event that critical habitats are discovered during the construction process, provisions will be made to preserve the habitats.

10 Energy

The power requirements to the site will be upgraded from 120 volts single phase to 480 volts, three phase. The higher power rating is available to the site. The increased power usage will be minimal and not affect the overall capacity of the existing electrical facilities.

11 Construction

Construction of the project will be performed in accordance with all local, state, and federal guidelines. To reduce impacts from soil erosion and siltation the contractor will be required to use hail bales and silt fences in all areas where runoff can occur from the project site. This will specifically include areas that will allow runoff directly into surface waters or stormwater drainage structures.

12 Toxic Substances

No toxic substances will be used or produced by the project facilities or its primary beneficiaries.

13 Public Reaction

A public hearing for the proposed project has not been held.

14 Alternatives to the Proposed Project

The use of CNG to power vehicles is economically feasible and environmentally safer over the continued use of fossil fuels. The savings to the users could be in excess of a 30% reduction in fuel costs. Cleaner emissions from burning CNG will positively impact the environment. There are other up and coming alternatives for powering vehicles. There is the use of biodiesel vehicles that uses a blend of petroleum diesel and vegetable oils; ethanol fueled vehicles that run on a mixture of gasoline and a propellant derived from grain; hybrid cars that operate using a combination of gasoline power and electric power; and cars powered with hydrogen. There are pros and cons associated with each of these alternative fuel sources but the most important advantage of CNG is that fueling facilities are being constructed all over the United States and the low cost makes it more attractive for businesses and the general public.

15 Mitigation Measures

No adverse environmental impacts are anticipated from the proposed project; therefore, no mitigation measures are necessary.

16 Permits

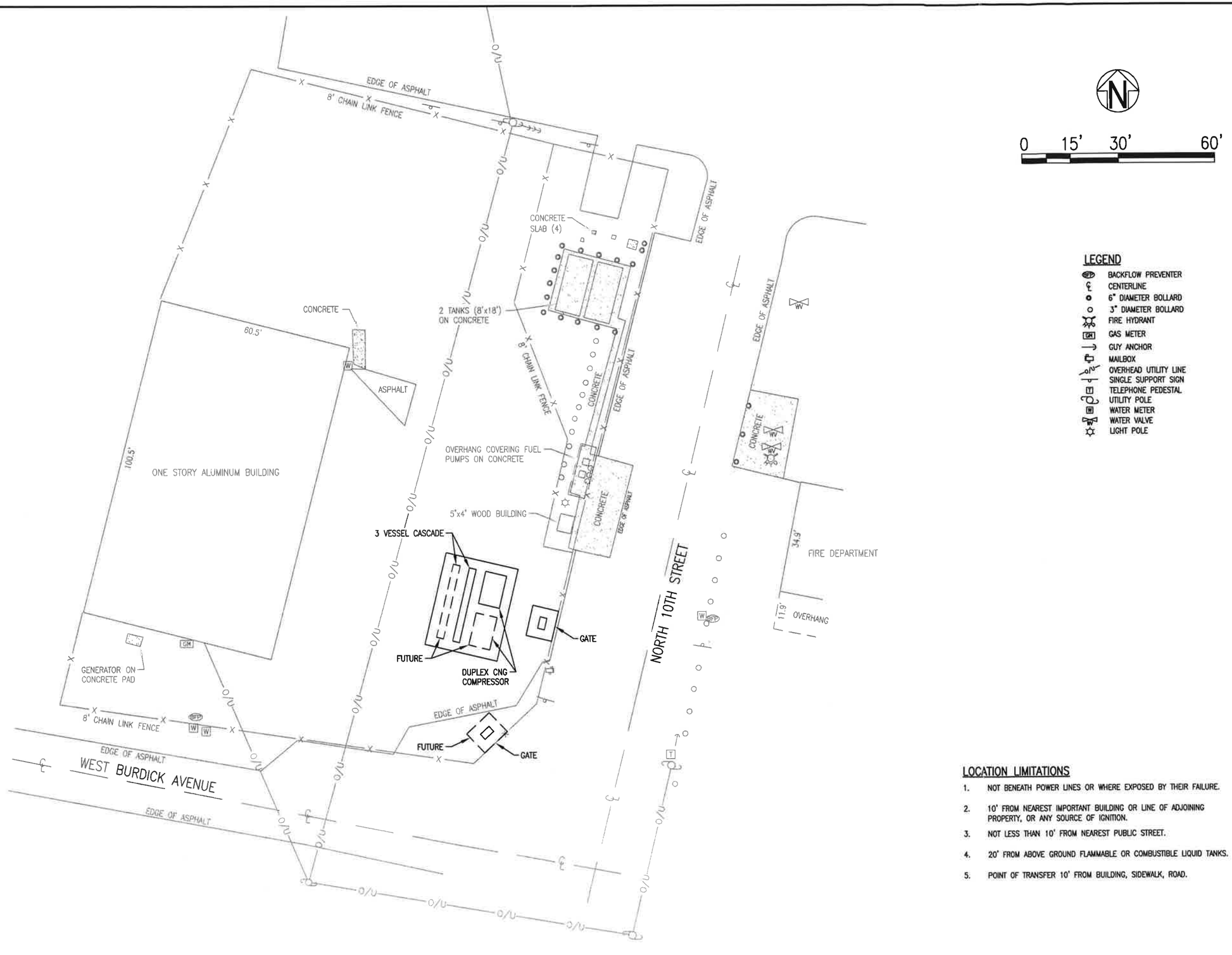
The City of DeFuniak Springs will need to ensure that the proposed site meets all of the requirements of the designated land use or proceed through a conditional use process. The Public Service Commission will need to be provided copies of the plans early in the design phase to coordinate any potential safety issues that might arise. When construction

begins the Contractor will be required to obtain the necessary building permits which will at least include an electrical permit.

17 Other Federal Actions

There are no other federal actions or programs associated with this project.

Attachment 1 – Preliminary Site Plan



LEGEND

- BACKFLOW PREVENTER
- CENTERLINE
- 6" DIAMETER BOLLARD
- 3" DIAMETER BOLLARD
- FIRE HYDRANT
- GAS METER
- GUY ANCHOR
- MAILBOX
- OVERHEAD UTILITY LINE
- SINGLE SUPPORT SIGN
- TELEPHONE PEDESTAL
- UTILITY POLE
- WATER METER
- WATER VALVE
- LIGHT POLE

LOCATION LIMITATIONS

1. NOT BENEATH POWER LINES OR WHERE EXPOSED BY THEIR FAILURE.
2. 10' FROM NEAREST IMPORTANT BUILDING OR LINE OF ADJOINING PROPERTY, OR ANY SOURCE OF IGNITION.
3. NOT LESS THAN 10' FROM NEAREST PUBLIC STREET.
4. 20' FROM ABOVE GROUND FLAMMABLE OR COMBUSTIBLE LIQUID TANKS.
5. POINT OF TRANSFER 10' FROM BUILDING, SIDEWALK, ROAD.

BASKERVILLE-DONOVAN, INC.
Innovative Infrastructure Solutions
449 WEST MAIN STREET
PENSACOLA, FLORIDA 32502 (850) 438-9661
ENGINEERING BUSINESS: EB-0000340

PROPOSED CNG FUELING FACILITY DEFUNIAK SPRINGS, FLORIDA

NO.	DATE	APPR.	REVISION/ACTION TAKEN

NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

PROJECT NO: 106403.02
SCALE: 1"=20'
DRAWN BY: FCC
CHK'D BY: RSM
PROJ. MGR: RSM
DATE: 05/29/12

ATTACHMENT 1

K:\1064 DeFuniak Springs\106403.02\DWG\Attachment 1.dwg, Dec 28, 2012 - 8:28:02AM, rthompson

Attachment 2 – Soil Survey

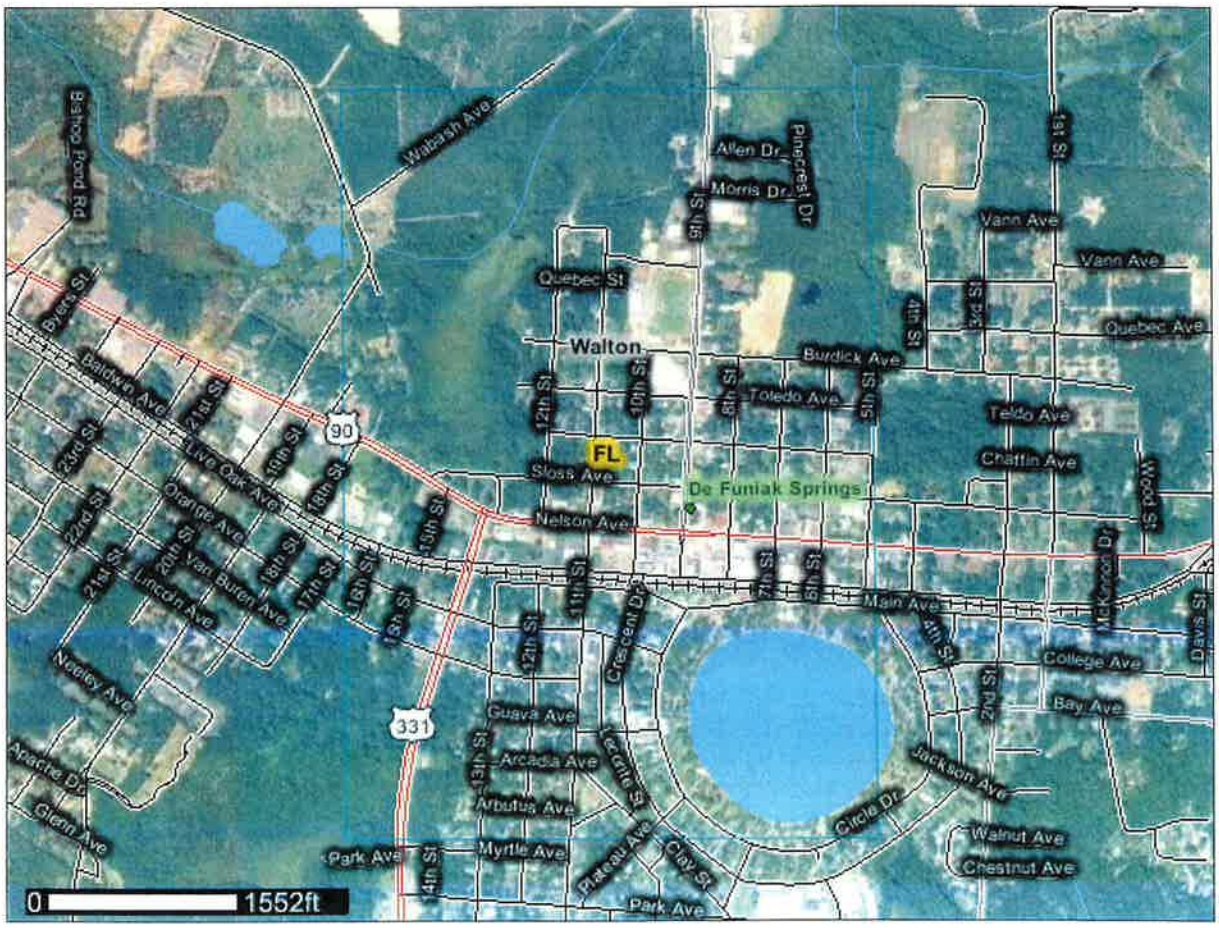
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Walton County, Florida



December 27, 2012

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

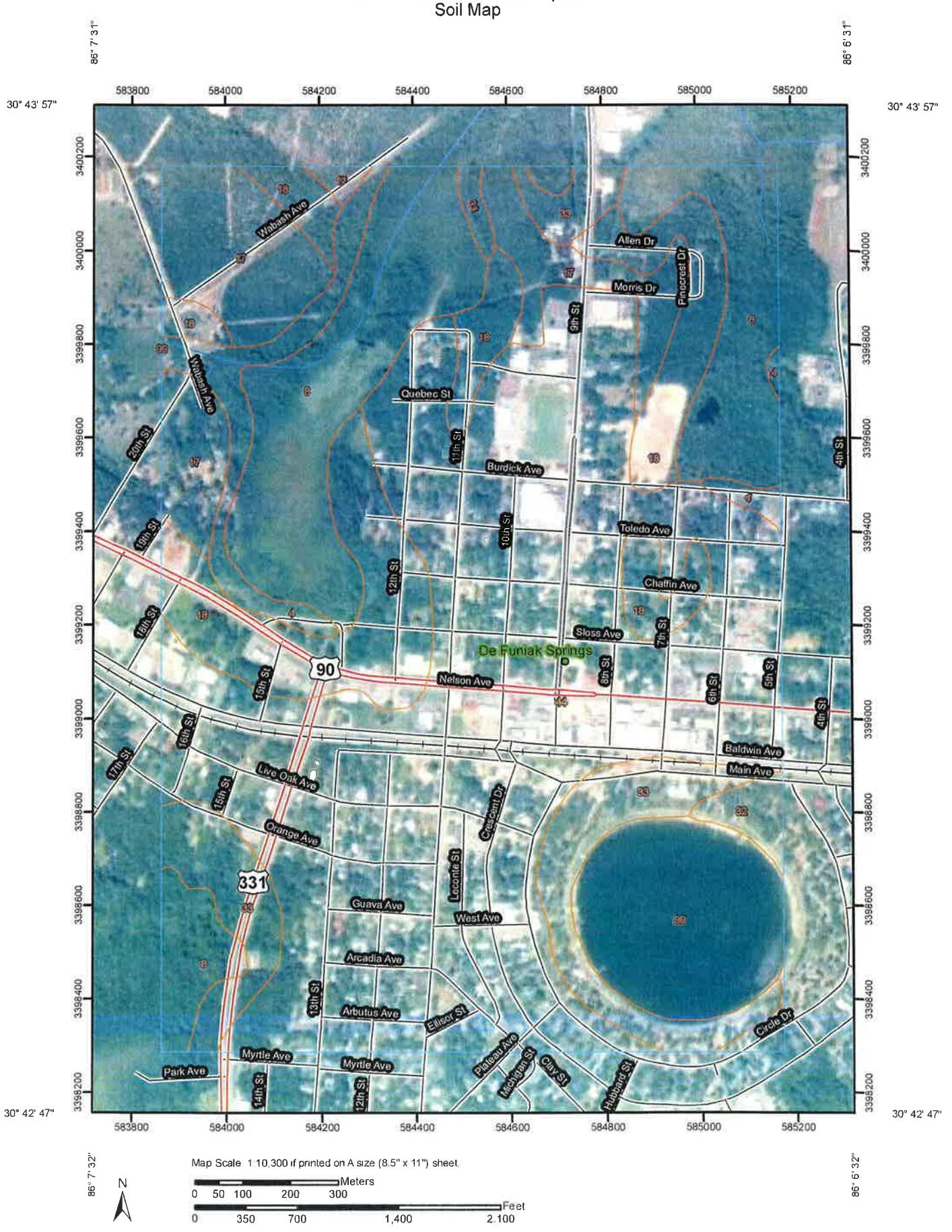
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:10,300 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Walton County, Florida
Survey Area Data: Version 11, Feb 1, 2010

Date(s) aerial images were photographed: 9/16/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Walton County, Florida (FL131)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
4	Chipley sand, 0 to 5 percent slopes	19.7	3.2%
8	Dorovan-Pamlico association, frequently flooded	94.2	15.4%
17	Lakeland sand, 0 to 5 percent slopes	52.5	8.6%
18	Lakeland sand, 5 to 12 percent slopes	78.0	12.7%
32	Troup sand, 5 to 8 percent slopes	5.3	0.9%
33	Troup sand, 8 to 12 percent slopes	47.7	7.8%
44	Lakeland-Troup-Urban land complex, 0 to 5 percent slopes	276.1	45.1%
99	Water	39.0	6.4%
Totals for Area of Interest		**612.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially

where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Walton County, Florida

4—Chipley sand, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains
Elevation: 10 to 350 feet
Mean annual precipitation: 62 to 70 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 232 to 262 days

Map Unit Composition

Chipley and similar soils: 80 percent
Minor components: 20 percent

Description of Chipley

Setting

Landform: Flats on marine terraces, rises on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 3.7 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 3s
Hydrologic Soil Group: A

Typical profile

0 to 6 inches: Sand
6 to 80 inches: Sand

Minor Components

Albany

Percent of map unit: 3 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear

Foxworth

Percent of map unit: 3 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Mandarin

Percent of map unit: 3 percent
Landform: Flats on marine terraces, rises on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear

Hurricane

Percent of map unit: 3 percent
Landform: Flats on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Blanton

Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Leon

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear

Eglin

Percent of map unit: 2 percent
Landform: Rises, marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Lakeland

Percent of map unit: 2 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

8—Dorovan-Pamlico association, frequently flooded

Map Unit Setting

Landscape: Coastal plains
Elevation: 0 to 450 feet
Mean annual precipitation: 62 to 70 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 232 to 262 days

Map Unit Composition

Dorovan and similar soils: 60 percent
Pamlico and similar soils: 20 percent
Minor components: 20 percent

Description of Dorovan

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic material

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Very high (about 22.7 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7w
Hydrologic Soil Group: B/D

Typical profile

0 to 60 inches: Muck

Description of Pamlico

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear

Across-slope shape: Concave
Parent material: Herbaceous organic material over sandy marine deposits

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Very high (about 14.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7w
Hydrologic Soil Group: A/D

Typical profile

0 to 30 inches: Muck
30 to 80 inches: Sand

Minor Components

Bibb

Percent of map unit: 6 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear

Kinston

Percent of map unit: 6 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear

Leon

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear

Rutlege

Percent of map unit: 3 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear

17—Lakeland sand, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains
Elevation: 20 to 300 feet
Mean annual precipitation: 62 to 70 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 232 to 262 days

Map Unit Composition

Lakeland and similar soils: 85 percent
Minor components: 15 percent

Description of Lakeland

Setting

Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Eolian or sandy marine deposits

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 4s
Hydrologic Soil Group: A

Typical profile

0 to 4 inches: Sand
4 to 80 inches: Sand

Minor Components

Eglin

Percent of map unit: 3 percent
Landform: Rises, marine terraces

Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Bonifay
Percent of map unit: 3 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Troup
Percent of map unit: 3 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Foxworth
Percent of map unit: 2 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Chipley
Percent of map unit: 2 percent
Landform: Flats on marine terraces, rises on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Kenansville
Percent of map unit: 2 percent
Landform: Stream terraces on marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear

18—Lakeland sand, 5 to 12 percent slopes

Map Unit Setting
Landscape: Coastal plains
Elevation: 20 to 300 feet
Mean annual precipitation: 62 to 70 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 232 to 262 days

Map Unit Composition
Lakeland and similar soils: 80 percent

Minor components: 20 percent

Description of Lakeland

Setting

Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Eolian or sandy marine deposits

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6s
Hydrologic Soil Group: A

Typical profile

0 to 3 inches: Sand
3 to 80 inches: Sand

Minor Components

Troup

Percent of map unit: 10 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Bonifay

Percent of map unit: 5 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Foxworth

Percent of map unit: 3 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Chipley

Percent of map unit: 2 percent

Landform: Knolls on marine terraces, rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

32—Troup sand, 5 to 8 percent slopes

Map Unit Setting

Landscape: Coastal plains
Elevation: 20 to 350 feet
Mean annual precipitation: 62 to 70 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 232 to 262 days

Map Unit Composition

Troup and similar soils: 80 percent
Minor components: 20 percent

Description of Troup

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 5.1 inches)

Interpretive groups

Farmland classification: Farmland of local importance
Land capability (nonirrigated): 4s
Hydrologic Soil Group: A

Typical profile

0 to 4 inches: Sand
4 to 53 inches: Loamy sand
53 to 65 inches: Sandy loam
65 to 80 inches: Sandy clay loam

Minor Components

Lucy

Percent of map unit: 5 percent
Landform: Ridges on marine terraces, hills on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Bonifay

Percent of map unit: 4 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Lakeland

Percent of map unit: 3 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Fuquay

Percent of map unit: 2 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Albany

Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear

Blanton

Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Chipley

Percent of map unit: 2 percent
Landform: Knolls on marine terraces, rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

33—Troup sand, 8 to 12 percent slopes

Map Unit Setting

Landscape: Coastal plains
Elevation: 20 to 700 feet
Mean annual precipitation: 62 to 70 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 232 to 262 days

Map Unit Composition

Troup and similar soils: 75 percent
Minor components: 25 percent

Description of Troup

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Properties and qualities

Slope: 8 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 4.8 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6s
Hydrologic Soil Group: A

Typical profile

0 to 2 inches: Sand
2 to 62 inches: Loamy sand
62 to 80 inches: Sandy loam

Minor Components

Lucy

Percent of map unit: 5 percent
Landform: Ridges on marine terraces, hills on marine terraces

Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Bonifay
Percent of map unit: 5 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Cowarts
Percent of map unit: 4 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Lakeland
Percent of map unit: 4 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Orangeburg
Percent of map unit: 3 percent
Landform: Ridges on marine terraces, hills on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Albany
Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear

Blanton
Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

44—Lakeland-Troup-Urban land complex, 0 to 5 percent slopes

Map Unit Setting
Landscape: Coastal plains
Elevation: 40 to 300 feet
Mean annual precipitation: 62 to 70 inches

Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 232 to 262 days

Map Unit Composition

Lakeland and similar soils: 40 percent
Troup and similar soils: 25 percent
Urban land: 20 percent
Minor components: 15 percent

Description of Lakeland

Setting

Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Eolian or sandy marine deposits

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 4s
Hydrologic Soil Group: A

Typical profile

0 to 4 inches: Sand
4 to 80 inches: Sand

Description of Troup

Setting

Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 5.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 3s
Hydrologic Soil Group: A

Typical profile

0 to 7 inches: Sand
7 to 51 inches: Loamy sand
51 to 55 inches: Sandy loam
55 to 80 inches: Sandy clay loam

Description of Urban Land

Setting

Landform: Marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: No parent material

Minor Components

Bonifay

Percent of map unit: 10 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Fuquay

Percent of map unit: 3 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Lucy

Percent of map unit: 2 percent
Landform: Ridges on marine terraces, hills on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

99—Water

Map Unit Composition
Water: 100 percent

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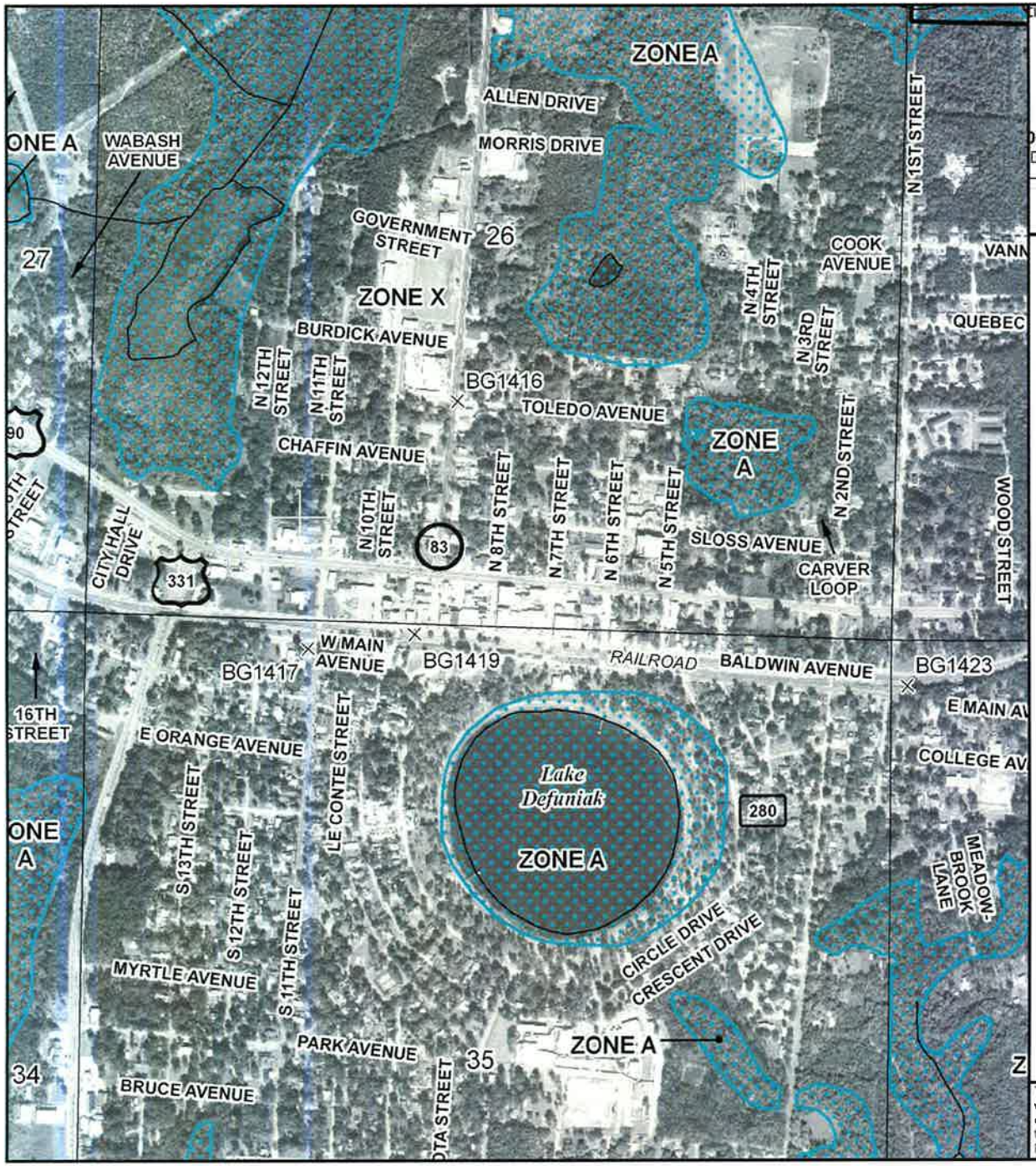
Attachment 3 – Flood Map



ional Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

00 0 1000 2000

FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0280G

FIRM

FLOOD INSURANCE RATE MAP

WALTON COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 280 OF 738

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEFUNIAK SPRINGS CITY OF	120316	0280	G
WALTON COUNTY	120317	0280	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12131C0280G

MAP REVISED
SEPTEMBER 29, 2010

Federal Emergency Management Agency