



AGENDA
PLANNING ADVISORY BOARD
SPECIAL MEETING (VIRTUAL)
JULY 22, 2020
5:00 PM
CITY HALL COMMISSION CHAMBERS
204 ASH STREET
FERNANDINA BEACH, FL 32034

The Special Planning Advisory Board Meeting will be held as a VIRTUAL MEETING with board members and City staff participating through video conferencing. This virtual meeting will be broadcasted live for members of the public to view on the City of Fernandina Beach website (www.fbfl.us) and Channel 264 (Comcast only).

- 1. CALL TO ORDER / ROLL CALL / DETERMINATION OF QUORUM**
- 2. PLEDGE OF ALLEGIANCE**
- 3. NEW BUSINESS**

- 3.1 Evaluation and Appraisal Report (EAR) Amendments for Legislative Compliance:** The Northeast Florida Regional Council will present required amendments addressing State of Florida mandated legislative requirements for "Peril of Flood," "Seasonal Population," and "Water Supply Facilities Work Plan" as determined by the 2019 Evaluation and Appraisal Review (EAR) report.

Specifically, revisions are proposed to policies 1.02.04, 4.03.05, 4.03.12, 5.02.08, Objective 5.03, 5.03.12, 5.04.01, 5.04.05, adding new Objective 4.12 Water Supply Facilities Work Plan with supporting policies 4.12.01 through 4.12.05 and adding new policies 5.03.14 through 5.03.22.

Amendments are available for review as part of this agenda item and on the City's Website at www.fbfl.us/EAR.

- 4. BOARD BUSINESS**
- 5. STAFF REPORT**
- 6. PUBLIC COMMENT**
- 7. ADJOURNMENT**

This will be conducted as a virtual meeting with restricted physical access. Public comment may also be provided virtually through use of the Zoom Meeting link below, the phone number provided below, or in person at City Hall with strict restrictions to protect health and safety.

Individuals wishing to provide live comments during the meeting must dial-in or connect via the Zoom Meeting link or phone number below no later than 4:50 PM on July 22, 2020, and will be called upon by their individual registered Zoom Meeting ID Account or by the last-4 digits of their respective phone number. When called upon, please provide your name and home address prior to issuance of public comment. Please limit comment to 3 minutes.

Please click the link below to join the webinar:

<https://zoom.us/j/95285249411?pwd=M2JiSTJMV1VNU2ZHNm9ZSXRWMjdJZz09>

Password: JULY-PAB

Or iPhone one-tap :

US: +13126266799,,95285249411#,,,0#,,45289012# or
+16465588656,,95285249411#,,,0#,,45289012#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 312 626 6799 or +1 646 558 8656 or +1 301 715 8592 or +1 346 248 7799 or +1 669
900 9128 or +1 253 215 8782

Webinar ID: 952 8524 9411

Password: 45289012

International numbers available: <https://zoom.us/j/95285249411?pwd=M2JiSTJMV1VNU2ZHNm9ZSXRWMjdJZz09>

All members of the public are invited to be present and be heard. Persons with disabilities requiring accommodations in order to participate in this program or activity should contact the City Clerk at (904) 310-3115 or TTY/TDD 711 (for the hearing or speech impaired). All interested parties may appear at said meeting and be heard as to the advisability of any action, which may be considered with respect to such matter. For information regarding this matter, please contact the Planning Department (904) 310-3135.

PLANNING ADVISORY BOARD AGENDA ITEM
City of Fernandina Beach



SUBJECT:

ITEM TYPE: Comprehensive Plan Amendment

REQUESTED ACTION:

SYNOPSIS:

CITY ATTORNEY COMMENTS:

Kelly N. Gibson, AICP

Date: July 15, 2020

Submitted By: Kelly Gibson, AICP, Planning Director

2030 Comprehensive Plan, Coastal Management Element

‘Peril of Flood’ legislative updates depicting through strikethrough/underline the changes made for consistency with Section 163.3178(2)(f), Florida Statutes

Policy 5.02.08 (REVISED)

The City ~~shall~~ must coordinate with DEP in evaluating the location of the Coastal Construction Control Line (CCCL) and must require that any construction activities seaward of the CCCL established pursuant to Chapter 161.058 be consistent with statutory provisions.

Policy 5.04.01 (REVISED)

The City ~~shall~~ must designate Coastal High Hazard Areas (CHHA) on the Future Land Use Map (FLUM) series and ensure the criteria for mitigation found in a coastal high-hazard area is met, as defined in F.S. 163.3178(9). The CHHA 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, ~~and as mapped in the Storm Tide Atlas 2011 as part of the Regional Evacuation Study.~~

Policy 5.04.05 (REVISED)

~~The City shall maintain a list of infrastructure facilities located in the CHHA which could be relocated, mitigated or replaced should state or federal funding become available for such activities. It is the City’s intent to relocate, replace, or mitigate impacts to listed infrastructure facilities as funds become available.~~ The City must identify and assess all infrastructure located within the CHHA to determine its vulnerability. This vulnerability assessment will be based on data and analysis contained in the adopted Local Mitigation Strategy. Any decision to abandon or relocate infrastructure outside the CHHA following a natural disaster will be based on a benefit-cost analysis of vulnerable infrastructure consistent with the methodology provided for in the Local Mitigation Strategy.

REVISED OBJECTIVE: 5.03. FLOOD RESILLENCY, HAZARD MITIGATION, DISASTER PREPAREDNESS, AND POST-DISASTER REDEVELOPMENT

The City ~~shall~~ must protect the safety of residents and visitors through limitations on development within the Coastal High Hazard Area, preparation of a post-disaster plan, ~~and~~ through maintaining evacuation routes and standards for evacuation times and by implementing regulations which serve to reduce risks to human life and property from the effects of coastal flooding, erosion, storm surge, sea level rise, or damage to environmental systems and other natural hazards in the coastal and riverine areas through sound planning practices.

Policy 5.03.12 (REVISED)

Construction in floodplains ~~shall~~ must adhere to local development standards in keeping with the requirements of the National Flood Insurance Program (NFIP). The City ~~shall~~ must maintain and update as needed maps of existing development and densities within the floodplain, FEMA flood zones and repetitive loss maps, storm surge/Coastal High Hazard Area maps, and sea level rise impact maps – identifying current and potential future areas subject to inundation.

Policy 5.03.14

The City must document and maintain maps of extreme high tides (“king tides”), more frequent severe rainfall events, and newly revealed areas at risk of flooding to efficiently target mitigation efforts.

Policy 5.03.15

The City has adopted and must maintain a floodplain management ordinance that establishes requirements to safeguard the public health, safety, and general welfare, and minimizes public and private losses due to flooding through regulation of development in flood hazard areas.

Policy 5.03.16

The City must monitor the floodplain ordinance for consistency with the Florida Building Code and any needed updates, and must ensure that future modifications of flood-resistant construction requirements in the floodplain ordinance continue to be consistent with, or more stringent than, requirements of the Florida Building Code and applicable floodplain management regulations set forth in 44 C.F.R. part 60.

Policy 5.03.17

The City floodplain manager and/or Building Official or designee must review all permit applications and site development plans to determine whether proposed development sites will reasonably be safe from flooding. If a proposed development site is in a flood hazard area, all site development activities (including grading, filling, utility installation, and drainage modification), all new construction and substantial improvements must be designed and constructed with methods, practices and materials that minimize flood damage and that are in accordance with the City floodplain ordinance.

Policy 5.03.18

The City must continue to upgrade stormwater infrastructure through drainage improvements, installation of tidal backflow preventers, and seawall/bulkhead repair in addition to sustainable flood management actions such as installation of bioswales, recharge through drainage wells, use of pervious pavement, maintenance of natural preserve and open space areas, and protection of tidal beaches that will be adaptable to future climate events.

Policy 5.03.19

The City must consider purchasing properties in areas most vulnerable to destructive storm surge and flooding for recreational uses and open space.

Policy 5.03.20

The City must ensure that adequate debris staging areas exist and that such staging areas are not in the CHHA, the floodplain, wetlands, other environmentally sensitive area, or area with known cultural or archaeological resources.

Policy 5.03.21

The City must continue participation in the National Flood Insurance Program Community Rating System to reduce flood losses, achieve flood insurance premium discounts for residents, and strive toward Higher Regulatory Standards in order to improve the City's score with each recertification process.

Policy 5.03.22

The City must pursue, through partnerships, hydrologic and hydraulic studies for areas of the City without known base flood elevation information. This information can be used as the basis for updates to Federal Emergency Management Agency (FEMA) flood insurance studies (FIS), flood insurance rate maps (FIRM), and the City's floodplain management ordinance.

2030 Comprehensive Plan, Coastal Management Element

‘Peril of Flood’ Legislative Updates Background Data & Analysis

F.S. 163.3178(2)(f) specifies components that must be contained in the coastal management element required for a local government comprehensive plan. Each must contain a coastal redevelopment component that addresses how to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise. The redevelopment component must (outlined in sections 1 – 6 below with reference to existing, revised, and new policies):

1. Include development and redevelopment principles, strategies, and engineering solutions that reduce the flood risk in coastal areas which results from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise.

Existing Policies

Policy 1.07.03 – Requiring compliance with Florida Statute 163.3178(9)(a) prior to approving a density change in land use within the CHHA

Policy 5.03.04 – Providing a hurricane guide to citizens

Policy 5.03.05 – Developing a post-disaster redevelopment plan that provides the basis for executing specific activities during times of natural disaster

Policy 5.04.02 – Requiring proposed development in CHHA to be evaluated for impacts on traffic circulation, evacuation routes, and proximity to off-island shelter facilities

Policy 5.04.03 – Not allowing public expenditures for infrastructure improvements which subsidize increases in development in the CHHA

Policy 5.04.04 – Requiring that, prior to the development of public facilities in the CHHA, it shall be determined that no other feasible sites exist outside the area

Policy 5.04.06 – Meeting standards for construction within coastal high hazard area and flood proofing

Policy 5.04.07 – Prohibiting amendments to the FLUM which result in a net increase in residential density in the CHHA

Policy 5.04.08 – Directing population concentrations, including nonresidential development, away from the CHHA

Policy 5.04.09 – Prohibiting the location of new assisted living facilities, nursing homes, hospitals, or other similar facilities within the CHHA

Policy 5.04.10 – Recognizing sea-level rise as a potential coastal hazard; working with partners and relevant entities to develop strategies for responding to sea-level rise

Revised Policies

Policy 5.04.01 – Designating CHHA on FLUM and ensuring criteria for mitigation found in CHHA is met

New Policies

Policy 5.03.14 – Documenting and maintaining maps of extreme high tides, more frequent severe rainfall events, and newly revealed areas at risk of flooding

Policy 5.03.15 – Maintaining an adopted floodplain management ordinance

Policy 5.03.17 – Reviewing all permit applications and site development plans to determine whether proposed development sites will be reasonably safe from flooding

Policy 5.03.18 – Continuing to upgrade stormwater infrastructure through drainage improvements, installation of tidal backflow preventers, and other site specific techniques

Policy 5.03.20 – Ensuring that adequate debris staging areas exist and that such staging areas are not in the CHHA

2. Encourage the use of best practices development and redevelopment principles, strategies, and engineering solutions that will result in the removal of coastal real property from flood zone designations established by the Federal Emergency Management Agency.

Existing Policies

Policy 5.03.05 – Developing a post-disaster redevelopment plan that provides the basis for executing specific activities during times of natural disaster. The PDRP should provide a basis for executing the following activities during times of natural disaster:

Policy 5.03.05 (d) – Analyzing and recommending hazard mitigation options, including reconstruction or relocation of damaged public facilities.

Policy 5.03.05 (e) – Developing a redevelopment plan including limitations on redevelopment in areas which have experienced destruction or severe damage from storm surge, waves, erosion, or other manifestations of storm-driven waters

Policy 5.03.05 (f) – Discouraging the rebuilding and redevelopment of facilities which encourage growth in hazardous areas

Policy 5.03.05 (m) – Considering development credits or transfer of development rights for use as incentives to reduce rebuilding damaged structures in the CHHA

Policy 5.04.08 – Directing population concentrations, including nonresidential development, away from the CHHA

Revised Policies

Policy 5.04.05 – Identifying and assessing all infrastructure located within the CHHA to determine its vulnerability so that decisions on abandonment or relocation outside the CHHA are better informed

New Policies

Policy 5.03.19 – Purchasing properties in areas most vulnerable to destructive storm surge and flooding for recreational uses and open spaces

3. Identify site development techniques and best practices that may reduce losses due to flooding and claims made under flood insurance policies issued in this state.

Existing Policies

Policy 5.04.06 – Requiring permanent building construction to meet the standards of the National Flood Insurance Program and local floodplain protection regulations

Policy 5.03.05 (n) – Recommending techniques and methods that lower densities along the oceanfront, as part of PDRP

Policy 5.05.09 – Protecting recreational and commercial working water fronts, helping to prevent losses from disasters

New Policies

Policy 5.03.22 – Pursuing hydrologic and hydraulic studies for areas of the City without known base flood elevation information

4. Be consistent with, or more stringent than, the flood-resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R. part 60.

Revised Policies

Policy 5.03.12 – Ensuring that construction in floodplains must adhere to local development standards in keeping with the requirements of the NFIP

New Policies

Policy 5.03.16 – Monitoring the local floodplain ordinance for consistency with the Florida Building Code and any needed updates; and ensuring that future modifications of flood-resistant construction requirements continue to be consistent, or more stringent than, requirements of the Florida Building Code

5. Require that any construction activities seaward of the coastal construction control lines established pursuant to s. 161.053 be consistent with chapter 161.

Existing Policies

Policy 5.02.09 (a) – Avoiding adverse impacts on the contours and topography 1,000 feet landward of the CCCL

Policy 5.02.09 (b) – Avoiding adverse impacts on the contours and topography for properties eastward of the CCCL

Policy 5.02.12 – Requesting that DEP promptly notify the City of all applications within the City seeking variances or other relief from the CCCL

Revised Policies

Policy 5.02.08 – Coordinating with DEP in evaluating the location of CCCL and require any construction activities seaward of the CCCL be consistent with statutory provisions

6. Encourage local governments to participate in the National Flood Insurance Program Community Rating System administered by the Federal Emergency Management Agency to achieve flood insurance premium discounts for their residents.

Revised Policies

Policy 5.03.12 – NFIP construction standards and mapping of existing development and densities

Policy 5.03.12 – Ensuring that construction in floodplains must adhere to local development standards in keeping with the requirements of the NFIP

New Policies

Policy 5.03.21 – Continuing to participate in the National Flood Insurance Program (NFIP) Community Rating System (CRS)

Other Existing Generalized Floodplain References

Policy 5.03.12 – NFIP construction standards and mapping of existing development

Policy 5.03.13 – Storage of hazardous materials

Policy 5.04.06 – meeting standards for construction within CHHA area

Policy 5.07.20 – requirements of LDRs

Policy 5.14.08 – Special requirements for development activities within floodplain

Policy 1.02.05 – LDC requirements

Policy 1.02.04 – Decisions on FLUM

Policy 1.03.01 – resource protection, LDRs to address development in floodplain

Objective 4.05 – Stormwater Management, **Policies 4.05.04, 4.05.07, 4.05.12, 4.05.15**

Policy 6.06.01 – city-owned floodplains and conservation lands

Policy 7.03.02 – compatible regulations with Nassau County and SJRWMD

Policy 7.04.10 – Work to establish a single regulatory framework

Policy 10.03.08 – Future School siting outside of flood prone areas

Objective 11.05 – Post-disaster strategies in Historic District

2030 Comprehensive Plan, Future Land Use Element

‘Seasonal Population’ legislative updates depicting through strikethrough/underline the changes made for consistency with Sections 163.3177(6)(a)(4) and 163.3177(6)(a)(8)

Future Land Use Policy 1.02.04.

Decisions on amendments to the FLUM shall be based on an analysis of the suitability and compatibility of the proposed use, based on the following factors:

- a. Type and density or intensity of surrounding uses;
- b. Zoning districts in the surrounding area;
- c. Demonstration of adequate water supply and water supply facilities;
- d. Appropriateness of the size of the parcel compared to the proposed use;
- e. Physical condition of the site, and the suitability of soils and topography for the proposed use;
- f. Suitability of the site based on the presence or absence of natural resources, environmentally sensitive lands, flood zones, or historic resources;
- g. Compatibility factors;
- h. Impact on adopted levels of service standards and quality of service standards; ~~and~~
- i. Location in a Coastal Upland Protection Zone (CUPZ); and
- j. The community vision and allowing for the operation of real estate markets to provide adequate choices for permanent and seasonal residents and business. This analysis must analyze at least three aspects of seasonal population: hotel/motel occupants, short-term rentals, and occupancy of second homes. The City must track the best available data on the three aspects of seasonal population.

2030 Comprehensive Plan, Future Land Use Element

‘Seasonal Population’ Legislative Updates Background Data & Analysis

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Relevant Excerpts from the 2019 FERNANDINA BEACH EVALUATION AND APPRAISAL REVIEW (EAR)

Excerpt from Part 1, Section 3

The following amendments will be made to address statutory charges:

- Chapters 2011-139 and 2012-99, amending Sections 163.3177(6)(a)(4) and 163.3177(6)(a)(8), Florida Statutes, required and optional elements of the comprehensive plan; studies and surveys. The required updates relate to providing a balance of uses while allowing for the operation of real estate markets to provide adequate choices for permanent and seasonal residents and businesses and accommodating the minimum amount of land needed to achieve these goals, and the analysis required to support changes to the future land use map.

The April 23, 2019 public workshop considered a draft of text addressing this issue. The text below has distributed as it has been used successfully to satisfy State requirements on this issue, and there was significant consensus on the additional, underlined text.

Objective: The amount of land designated for future land uses in the City shall, consistent with community vision, allow for the operation of real estate markets to provide adequate choices for permanent and seasonal residents and business.

Policy: Future Land Use Map amendments shall include the following analyses:

- a. An analysis of the availability of facilities and services. This shall include data and analysis regarding the capacity of the future land use to accommodate the proposed amendment, and data and analysis addressing at least three aspects of seasonal population: hotel/motel occupants, short-term rentals, and occupancy of second homes.
- b. An analysis of the sustainability of the plan amendment for its proposed use considering the character of undeveloped land, soils, topography, natural resources, and historic resources on site.
- c. An analysis of the minimum amount of land needed to achieve the goals and requirements of the Objective above.

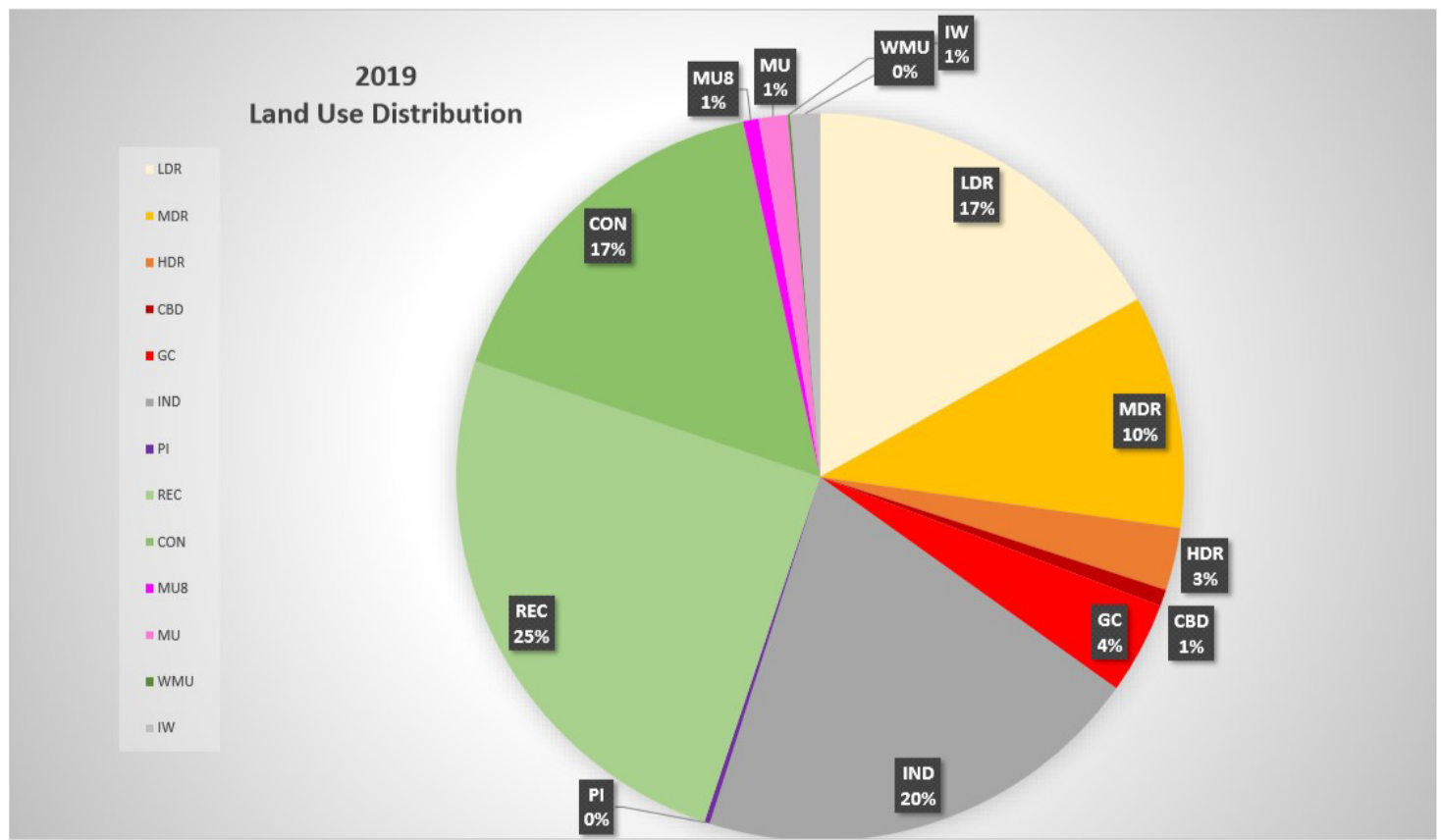
Excerpt from Part 2, Section 3

3) Future Land Use Map Distribution

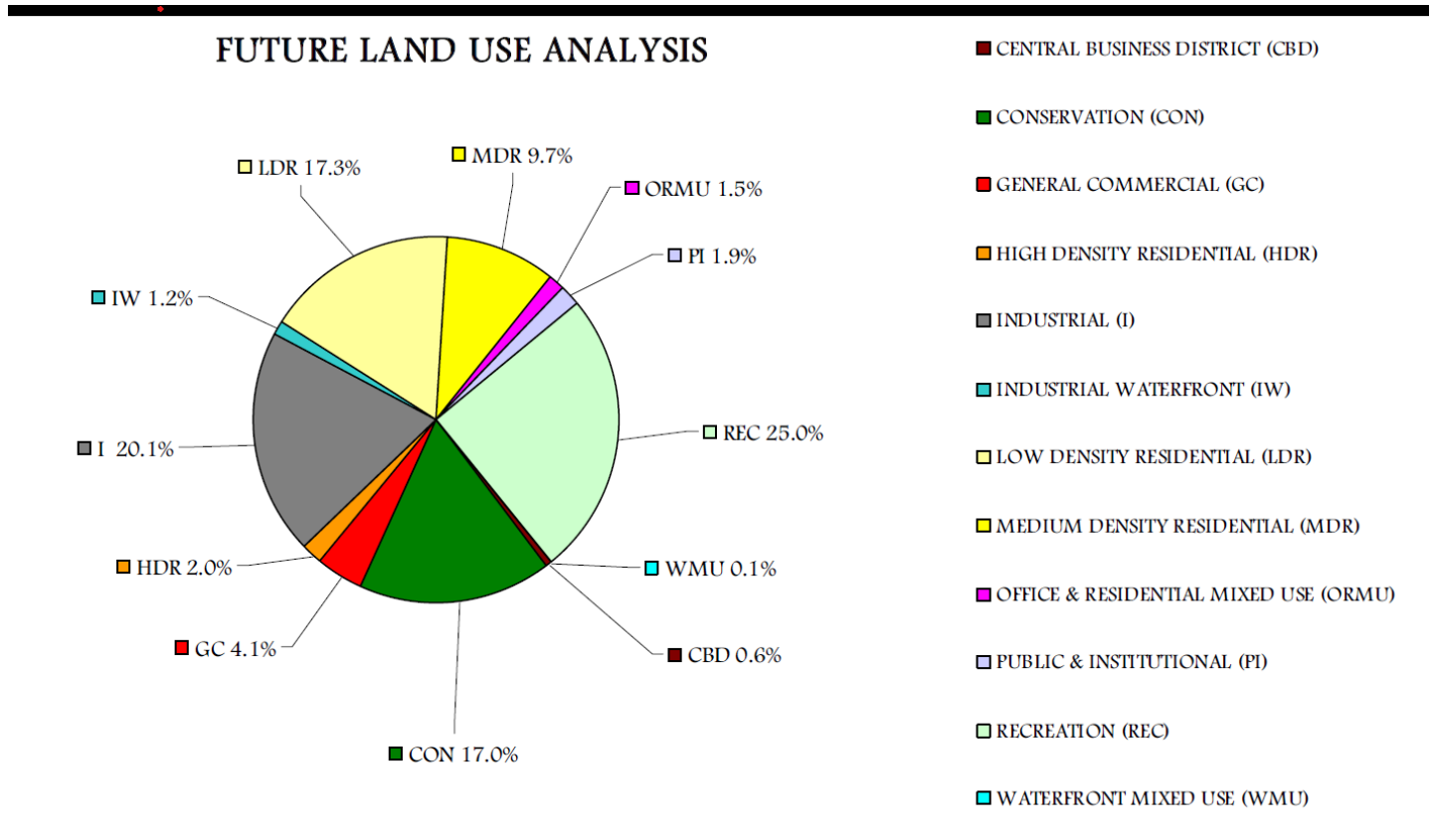
The City is comprised of four primary land use categories: Conservation/ Parks & Open Space, Residential, Commercial and Industrial as depicted on the Future Land Use Map (FLUM). Almost half (42%) of the City is held in conservation or recreational land use. The City’s available residential land makes up another 29%. Just over 21% of the City is held as industrial land and about 4% of the City is commercial. The remaining land use designations are mixed use districts comprised of both commercial and residential uses (CBD, ORMU, and WMU) and public/ institutional lands (PI); combined, these categories hold the remaining 4% of the City’s available land uses.

A comparison of the Future Land Use Map categories in 2009 and 2019 reveals that very little change has occurred to the overall land use composition the City. Some land use categories have marginally changed. The marked increase within the High-Density Residential land use category is attributed to a large-scale annexation within this district. The Central Business District witnessed an increase due to the previously anticipation conversion of lands for properties within the established Community Redevelopment Area (CRA). Nominal change occurred as part of the 8th Street effort which modified General Commercial and Medium Density Residential lands to a new 8th Street Mixed Use designation.

2019 Future Land Use Distribution



2009 Future Land Use Distribution



Residential land uses in Fernandina Beach vary from low densities of four units per acre to high density allowing up to a maximum of ten units per acre. Higher densities are found primarily along the North/South Fletcher Avenue (A1A) beach area and the City's historic "Old Town" area, where the City maintains the original 1811 Spanish plat. The City permits residential, office and retail mixed uses in its Central Business District (CBD) at 34 dwelling units per acre, Office

& Residential Mixed Use (ORMU) at eight dwelling units per acre, and Waterfront Mixed Use (WMU) at two dwelling units per acre future land use categories. Commercial uses within the City are clustered around the dominant commercial “corridors,” located along the major roadways of A1A/S.R.200/ 8th Street, 14th Street and Sadler Road. Only a few commercial land use designations are found along the Fletcher Avenue/ A1A corridor.

Industrial (I) and Industrial Waterfront (IW) land use categories surround the City’s National Register designated historic downtown Central Business District area. West Rock and Rayonier pulp/paper mill factories are located on the north and south ends of downtown. Front Street historically held industrial waterfront related uses such as shrimp docks, processing plants and marinas. Today, the Front Street area is within the City’s Community Redevelopment Area (CRA) and most of the remaining privately-owned small IW properties are eligible to apply for a Waterfront Mixed Use land use designation that provides the opportunity to have both commercial/waterfront industrial and low-density residential uses. The area surrounding the City’s Airport is the other area allocated for industrial land uses.

It is anticipated that Low and Medium Density land use categories will witness the greatest amount of infill development. This equates to just over 700 new single-family residential structure within the 2045 planning horizon. **Table II-4** describes all Future Land Use Map categories containing residential density. Under the existing Future Land Use Map an estimated buildout on existing lots will bring approximately 1990 people to add to the City’s population on a total of 913 new residential structures.

<u>Table II-4.</u> <u>Vacant</u> <u>Residential</u> <u>Lands FLUM</u>	<u>Vacant Land</u> <u>(acres)</u>	<u>Density</u> <u>(dwelling</u> <u>units/acre)</u>	<u>Potential</u> <u>Residential</u> <u>Dwelling Units</u>	<u>Average</u> <u>Household</u> <u>size (2.18)</u>
<u>CBD</u>	<u>0.87</u>	<u>34</u>	<u>30</u>	<u>64</u>
<u>MU</u>	<u>3.97</u>	<u>8</u>	<u>32</u>	<u>69</u>
<u>MU8</u>	<u>0.72</u>	<u>18</u>	<u>13</u>	<u>28</u>
<u>LDR</u>	<u>54.26</u>	<u>4</u>	<u>217</u>	<u>473</u>
<u>MDR</u>	<u>62.37</u>	<u>8</u>	<u>499</u>	<u>1088</u>
<u>HDR</u>	<u>12.24</u>	<u>10</u>	<u>122</u>	<u>267</u>
<u>WI</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>0</u>
<u>TOTAL</u>	<u>134.43</u>	<u>84</u>	<u>913</u>	<u>1990</u>

SOURCE: Fernandina Beach Future Land Use Map, US Census Bureau (Avg. Household Size)

City of Fernandina Beach Water Supply Facilities Work Plan

Public Facilities Element

Exhibit A

(2020 - 2035)

Prepared by:
Northeast Florida Regional Council
2020

Section 1: Introduction

The purpose of the Fernandina Beach (the City) Water Supply Facilities Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the City's jurisdiction. The Work Plan planning period of 2020-2035 was determined after reviewing the 2035 expiration date for the NFRWSP.

At a minimum, it will be necessary to update this document prior to the end of the planning period. In addition, in accordance with Section 163.3177(6)(c), and Section 163.3177(4)(a), F.S., the City must ensure coordination of its comprehensive plan with the plans of SJRWMD. Therefore, if SJRWMD updates its NFRWSP and affects the City, it will be necessary to update the Work Plan during the planning period. Public Facilities Element Policy 4.12.01 and related policies contains enabling language to ensure coordination with SJRWMD's plans.

Section 2: Potable Water Supplier(s) and Service Agreement(s)

2.1 Potable and Nonpotable Water Supplier(s) Information

Figure 1 contains a map of the City's potable water service area, with well station locations identified. Within the City's municipal limits, there are six active stations (#53, #54, #55, #56, #57, and #58) permitted for public supply use. The City of Fernandina Beach supplies its own potable water and does not have any agreements with outside water suppliers.

Figure 1: City of Fernandina Beach Water Supply Service Area



2.2 Water Supply Agreements

Nassau County

The City provides potable water and sanitary sewer services to a portion of unincorporated areas within Nassau County. However, the City does not currently have a written agreement with Nassau County regarding these services. The City plans on exploring options for establishing an agreement with Nassau County regarding its provision of utility services.

2.3 Voluntary Annexation Agreements

City of Fernandina Beach and Property Owners

Pursuant to 82-44 and 82-403 of the Municipal Code the City extends potable water and sanitary sewer services to properties in unincorporated areas of Nassau County following the execution of a voluntary annexation agreement. As of June 2020, the City has documented [REDACTED] agreements. Of this total, [REDACTED] are currently contiguous to the City's jurisdictional boundary and will become incorporated by the end of the calendar year. The remaining properties continue to receive City services and pay a 25% surcharge on monthly bills until they become continuous and are eligible for annexation.

[illegible]

3.1 Water Sources

3.2 Potable Water Demand, Supply, and Facility Capacity

Table 2. City of Fernandina Beach Water Supply Service Area Projections

	2020	2025	2030	2035
Population ¹	21,412	23,315	25,142	25,910
Demand ²	3.75	4.08	4.40	4.53

² Ibid.

CUP Allocation (mgd) ³	6.14	6.58	6.58	6.58
WTP Capacity (mgd) ⁴	18.2	18.2	18.2	18.2

Table 2 demonstrates that the City has adequate potable water supply and facility capacity to accommodate the existing population and projected growth within its service area throughout the planning period.

Section 4: Non-potable Water Suppliers, Sources, Services, and Facilities

4.1 Non-Potable Water Services

The City of Fernandina Beach owns and operates a 3.5 MGD wastewater treatment plant. One hundred percent of the discharge of wastewater from the WWTP is sent into the Amelia River. In 2020, the average daily flow is 1.71 MGD. The wastewater facility is located at 1007 S. 5th Street in Fernandina Beach, Florida. Recognizing that this discharge is a potential source of nonpotable water, the City has future intentions to study this issue. Policy 4.03.05 addresses the timing and development of a reclaimed water program.

Section 5: Water Supply and Facility Concurrency

5.1 Potable Water Level of Service

The City is ultimately responsible for authorizing development within its municipal limits. All future development and redevelopment in the City must be compatible with the adopted LOS standards. Policy 4.01.01 contains enabling language that establishes the City's potable water facilities level of service.

5.2 Water Supply and Facility Concurrency

The current legislative requirements for concurrency [i.e., Section 163.3180(2)(a), F.S.] require that the City's comprehensive plan and land development regulations to ensure that adequate water supplies and facilities are available to serve new development no later than the date on which the City anticipates issuing a certificate of occupancy. In addition, the City must, prior to the approval of a building permit, determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy. Policy 4.03.02 contains language that addresses water supply concurrency statute provisions.

³ City's CUP expires in 2021. Therefore, table utilized the CUP allocation for the last year of the CUP [2021] for 2025, 2030, and 2035.

⁴ City of Fernandina Beach Utilities Department.

Section 6: Water Supply and Facility Capacity Projects – Alternative and Traditional; Potable and Nonpotable

6.1 Fernandina Beach Water Supply Projects

Fernandina Beach does not currently have any projects listed in the NFRWSP.

Section 7: Water Conservation Practices

The City currently implements water conservation practices, including some that are enabled by comprehensive plan policies.

7.1 Water Source Protection Practices

Water conservation is important to reduce potable water demand. The City's water conservation practices include the following:

- Provide a safe and adequate supply of potable water to meet demands of residents (Policy 4.03.01) (Public Facilities)
- Establish water conservation programs and methods (Policy 4.03.06) (Public Facilities)
- Include standards in City's land development regulations that will assist in achieving a reduction in the current rates of water consumption (Policy 4.03.08) (Public Facilities)
- Promote Voluntary Water Conservation measures and enforce mandate of measures during water shortage emergencies (Policy 4.03.2) (Public Facilities)
- Implement water conservation practices as detailed in the City's CUP (Policy 4.03.15) (Public Facilities)

Section 8: Nonpotable Water (reuse) Practices

The City currently implements reuse practices, including some that are enabled by comprehensive plan policies.

8.1 Reuse Practices

Utilization of reuse water is important to reduce potable water demand. The City's reuse practices include the following:

- Encourage pulp mill industries and City facilities in the reuse of reclaimed wastewater (Policy 4.03.07) (Public Facilities)

- Evaluate the feasibility of a reclaimed water program for uses, such as irrigation, that do not require potable water (Policy 4.03.05) (Public Facilities)
- Include standard in City's land development regulations allowing for installation of irrigation systems designed to accept non potable water and connection to a nonpotable water distribution system, when feasible, and available (Policy 4.03.08) (Public Facilities)
- Retrofit existing public irrigation systems to utilize reclaimed water or other non-potable water sources as soon as it becomes available (Policy 4.03.11) (Public Facilities)

Exhibit B

2030 Comprehensive Plan, Public Facilities Element

Referenced in the Water Supply Facilities Work Plan depicting through strikethrough/underline the changes made for Consistency with Section 163.3177(6)(c)3, Florida Statutes

Policy 4.03.05.

~~By December 2013,~~ The City must ~~must~~ evaluate the feasibility of a reclaimed water program for uses, such as irrigation, that do not require potable water. When a reclaimed water program is determined to be feasible, the City must establish a reclaimed water program. The City will expand the availability of reclaimed water as the City determines it is economically feasible and practical to expand the program.

Policy 4.03.12.

~~Voluntary water conservation measures as defined by the St. Johns River Water Management District must be promoted and become mandatory during water shortage emergencies for all potable water users including domestic, public, institutional, industrial, commercial, and agricultural. The City must cooperate with SJRWMD during declared water shortage emergencies by conserving water resources and assisting with enforcement of water shortage emergency declaration, orders, and plans (Rule 40C-21, F.A.C., SJRWMD water shortage plan).~~

OBJECTIVE 4.12.

The City must maintain a Water Supply Facilities Work Plan as required by Florida Statutes.

Policy 4.12.01.

The City must maintain a Water Supply Facilities Work Plan (Work Plan) that is coordinated with SJRWMD's North Florida Regional Water Supply Plan (NFRWSP). The Work Plan and related comprehensive plan policies will be updated, as necessary, within 18 months of an update of the NFRWSP that affects the City.

Policy 4.12.02.

The City's Water Supply Facilities Work Plan (2020-2035) is incorporated into the comprehensive plan as Exhibit A of the Public Facilities Element.

Policy 4.12.03.

The Water Supply Facilities Work Plan must identify the water conservation and reuse practices, along with the traditional and alternative water supply projects, necessary to meet existing and future water demands.

Policy 4.12.04.

The Water Supply Facilities Work Plan will incorporate and identify the projects contained in the North Florida Regional Water Supply Plan and selected by the City for implementation (if any).

Policy 4.12.05.

The City will participate in the development of updates to the St. Johns River Water Management District (SJRWMD) Regional Water Supply Plan and other water supply development-related initiatives facilitated by the SJRWMD that affect the City.

2030 Comprehensive Plan, Public Facilities Element

Addressing the Designation of Nassau County as a Water Resource Caution Area

Background Data & Analysis

According to Chapter 163.3177(6)(c) of the Florida Statutes, local governments subject to a Regional Water Supply Plan (RWSP) are required to amend their comprehensive plan to adopt a Water Supply Facilities Work Plan within 18 months of RWSP approval. The Northeast Florida Regional Water Supply Plan, approved in January 2017, designated the planning area as a Water Resource Caution Area. The City is required to update its Comprehensive Plan to address this requirement. A new objective 4.12 has been added with related policies to address this issue, and the Water Supply Facilities Work Plan is proposed to be added to the Public Facilities Element as an Appendix. It is proposed to be added in its entirety and as such, is not presented in underline/strikethrough format.

FERNANDINA BEACH EVALUATION AND APPRAISAL REVIEW (EAR) REPORT



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Part 1. OVERVIEW

1) Overview of Process

The State of Florida requires communities to review and assess their Comprehensive Plans periodically. The City of Fernandina Beach evaluation and appraisal report, which is frequently simply a letter outlining in general terms what is anticipated to be changed in the plan, and why. Once that letter is received by the Department of Economic Opportunity, the jurisdiction has one year to make changes to the plan. The City of Fernandina Beach opted to seek public input into the current plan, including what was working and what requires change. The Northeast Florida Regional Council (NEFRC) was engaged to facilitate the public conversation, document it, and produce a document in a format like the evaluation and appraisal of the Comprehensive Plan in 2009. Public input and the detailed input of members of the Planning Advisory Board were the principal sources for the local major issues and suggested changes to the plan.

2) Public Participation

The City of Fernandina Beach held four public open house meetings to gather input on the current plan from residents and business owners. These were held on April 23, 25, 28, and 30 of 2019, in four different, publicly accessible locations throughout the City. The open houses were well-attended, and participation was robust. Each open house focused on related elements of the current plan, and efforts were made to match the location to the topic where this was possible. Below is the flyer used as an invitation to the meeting.

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The meeting format was consistent. NEFRC staff provided a quick overview of the comprehensive planning process in Florida and the need for an evaluation and appraisal of the current, 2030 Comprehensive Plan. The input gathered on the current plan was to be used to create an Evaluation and Appraisal Report on the 2030 plan to be submitted to the State by September 1, 2019. That work, along with any comments on the report received by the State and its reviewing agencies, would be used to update the plan into the 2040 Comprehensive Plan. That update will be due by approximately September 1, 2020.

3) Legislative and Regulatory Changes

The following amendments will be made to address statutory charges:

- Chapters 2011-139 and 2012-99, amending Sections 163.3177(6)(a)(4) and 163.3177(6)(a)(8), Florida Statutes, required and optional elements of the comprehensive plan; studies and surveys. The required updates relate to providing a balance of uses while allowing for the operation of real estate markets to provide adequate choices for permanent and seasonal residents and businesses and accommodating the minimum amount of land needed to achieve these goals, and the analysis required to support changes to the future land use map.

The April 23, 2019 public workshop considered a draft of text addressing this issue. The text below was distributed as it has been used successfully to satisfy State requirements on this issue, and there was significant consensus of the additional, underlined text.

Objective: The amount of land designated for future land uses in the City shall, consistent with community vision, allow for the operation of real estate markets to provide adequate choices for permanent and seasonal residents and business.

Policy: Future Land Use Map amendments shall include the following analyses:

- a. An analysis of the availability of facilities and services. This shall include data and analysis regarding the capacity of the future land use to accommodate the proposed amendment, and data and analysis addressing at least three aspects of seasonal population: hotel/motel occupants, short-term rentals, and occupancy of second homes.
 - b. An analysis of the sustainability of the plan amendment for its proposed use considering the character of undeveloped land, soils, topography, natural resources, and historic resources on site.
 - c. An analysis of the minimum amount of land needed to achieve the goals and requirements of the Objective above.
- Chapter 2015-69, section 1, amending Section 163.3178, adding requirements to the Coastal Management Element to reduce the flood risk in coastal areas that result from high tide events, storm surge, flash floods, stormwater runoff and the related impacts of sea level rise.

The following amendments will be made to address the designation of Nassau County as a Water Resource Caution Area:

- Chapter 163.3177(6)(c) Florida Statutes requires that local governments within Water Resource Caution Areas adopt a Water Supply Facility Work Plan and adopt comprehensive plan amendments related to it.

Part 2. COMMUNITY ASSESSMENT

1) CHANGES IN LAND AREA- The City's current boundary measures at 12.49 square miles. Its land area represents just under 2% of Nassau County. Growth of the City is overwhelmingly dependent upon annexation through its provision of water and sewer services to area residents which abut the City's jurisdictional limits. Over the past 10 years, the City has increased its land area by approximately ½ a square mile, with the Crane Island development representing roughly half that land area in 2018. It is anticipated that the City will continue to experience a similar rate of growth into the next planning horizon. This will be witnessed through the execution of voluntary annexation agreements and anticipated development along the City's southern boundaries. **Table II-1** identifies the annexations which occurred between 2009-2019.

Table II-1. Annexations 2009-2019 (with missing 2003 case)

ORDINANCE NUMBER	TOTAL ACREAGE	OWNER	ADDRESS	DATE
2002-39 / RESO 2003-15	5.58	Joseph S. Francis M. Lee	2707 Sadler Rd	1/21/2003
2009-13	0.492	Richard A. & Kimberly Crawford	1220 S. 14th Street	9/1/2009
2010-28	2.67	COFB	2203 Ryan Road	10/19/2010
2012-24	2.06	Steve Johnson	1505 S. 14th St	11/7/2012
			1545 S. 14th St	11/7/2012
			1551 S. 14th St	11/7/2012
2013-04	0.71	CEMR Inc.	1463 Nectarine St	6/4/2013
(total 8.52)	4.75	Various	1601 Nectarine St	6/4/2013
	0.83	Trevett Homes Inc.	1603 Nectarine St	6/4/2013

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	2.23	Nassau BOCC	1620 Nectarine St	6/4/2013
2013-30	22.1	Various	2851 Bailey Road	11/19/2013
2013-38	4.47	Kermit G. Philipps Charitable Trust	Hirth Road	1/7/2014
2013-41	6.53	Kermit G. Philipps Charitable Trust	Hirth Road	1/7/2014
2014-08	1.18	Just Amelia LLC	960030 Gateway Blvd	5/20/2014
(Total 17.46)	1.22	Zions First Nat. Bank	960062 Gateway Blvd	5/20/2014
	0.33	Gaspar Holdings LLC	960062 Gateway Blvd	5/20/2014
	2.31	J Twenty-Nine Eleven LLC	960108 Gateway Blvd	5/20/2014
	1.31	Starmax Florida LLC	960144 Gateway Blvd	5/20/2014
	1.66	Various	960135 Gateway Blvd	5/20/2014
(reso 2013-45)	0.81	Hess Realty LLC	3100 S 8th Street	5/20/2014
	2.9	Gateway to Amelia	961687 Gateway Blvd	5/20/2014
	1.24	Gateway Commons	960185 Gateway Blvd	5/20/2014
	1.27	Gateway Commons	960194 Gateway Blvd	5/20/2014
	1.29	Corner Stone of Amelia	9900 A I Parkway	5/20/2014
	1.88	FPU	3076 S. 8th Street	5/20/2014
2014-31	1.3	Steve Johnson	1505 S. 14th St	12/2/2014

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2015-02	15.7	Summerwoods of Amelia	AI Pkwy / Hirth Rd (Riverbend)	7/21/2015
2015-31	0.46	James Hardwick	3133 Bailey Road	12/15/2015
	4.43	James Hardwick	3141 Bailey Road	12/15/2015
2016-24	0.96	Aspire at Amelia II LLC	3017 Amelia Road	10/4/2016
(total 7.91)	6.95	Aspire at Amelia II LLC	3021 Amelia Road	10/4/2016
2016-35	9.26	First National Bank South	S. 14th + Lime Street	1/17/2017
2018-22	0.46	Louis A & Rosemarie C. Llerandi	1336 S. 14 Street	9/18/2018
(total .66)	0.2	Louis A & Rosemarie C. Llerandi	1451 Nectarine St	9/18/2018
2018-25	0.57	Prestar LTD	TJ Courson	9/18/2018
2018-33	187.29	Crane Island	Crane Island	2/19/2019
2018-45	0.61	AI Pkwy / Entry to Aspire	The Aspire at Amelia LLC	1/15/2019
TOTAL ACREAGE	298.012			

2) POPULATION TRENDS AND ESTIMATES

Fernandina Beach has experienced stable growth increases over the past 50 years. During the decade between 1960 -1970 the City's population dropped by roughly 300 people. This decrease may be attributed in part to the September 1964 hurricane, Hurricane Dora. Dora, with 110 mph winds, severely damaged the City's waterfront and downtown CBD causing over \$3.1 billion (1995 USD) in damages to the Northeast Florida region (NOAA-American Meteorological Society). The City was able to recover from a 4% population decrease by 1980 and grew at a more rapid rate of roughly 20% in the two decades (1980-2000) that followed, respectively. The City's population estimate in 2010 indicated less than 8% growth within that decade. When viewed collectively, the City has maintained a steady rate of growth measuring around 1% each year since 1960. **Table II-2** displays the population estimates and changes for the City for the decades between 1960 and 2010. **Table II-3** illustrates an estimated continued pattern of growth at 1% annually between the years of 2010-2019.

This annual trend is forecasted to continue through the next planning horizon with the City's estimated population nearing 14,500 by the year 2045 according to the University of Florida, Bureau of Economic and Business Research (BEBR) population models. Models indicate most of the growth is expected early within the planning horizon and predict even slower rates of increase as we near the year 2045. Forecasting models predict that the City's 2070 population will be near 15,000 people. The City's share of the County's population is expected to decline over the next 25 years. By 2045, the City's population will comprise approximately 13% of the County's overall population. Based on BEBR projections Nassau County is expected to grow about 5% between 2020-2025. The average annual rate of population increase for Nassau County is anticipated to decline to around 1% by 2045. Between 2025-2045, Nassau County is expected to grow by almost 23,800 people of which the City's share of population is approximately 2,300 new residents during the same timeframe." *These figures are expected to be refined with the final population model prepared by BEBR in late- December 2019.*

Table II-2. Historical US Census Counts for Fernandina Beach, Florida

YEAR	POPULATION ESTIMATE	NUMERICAL CHANGE	PERCENTAGE CHANGE	ANNUAL RATE OF GROWTH
1960	7276			
1970	6955	-321	-4.41%	
1980	7224	269	3.87%	0.39%
1990	8765	1541	21.33%	2.13%

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2000	10654	1889	21.55%	2.16%
2010	11487	833	7.82%	0.78%
GROWTH 1960-2010			55%	
AVG. ANNUAL RATE OF GROWTH				1%
<i>Source: Population Division, US Census Bureau 1960-2010</i>				

Table II -3. Fernandina Beach Estimated Population Change 2010-2019

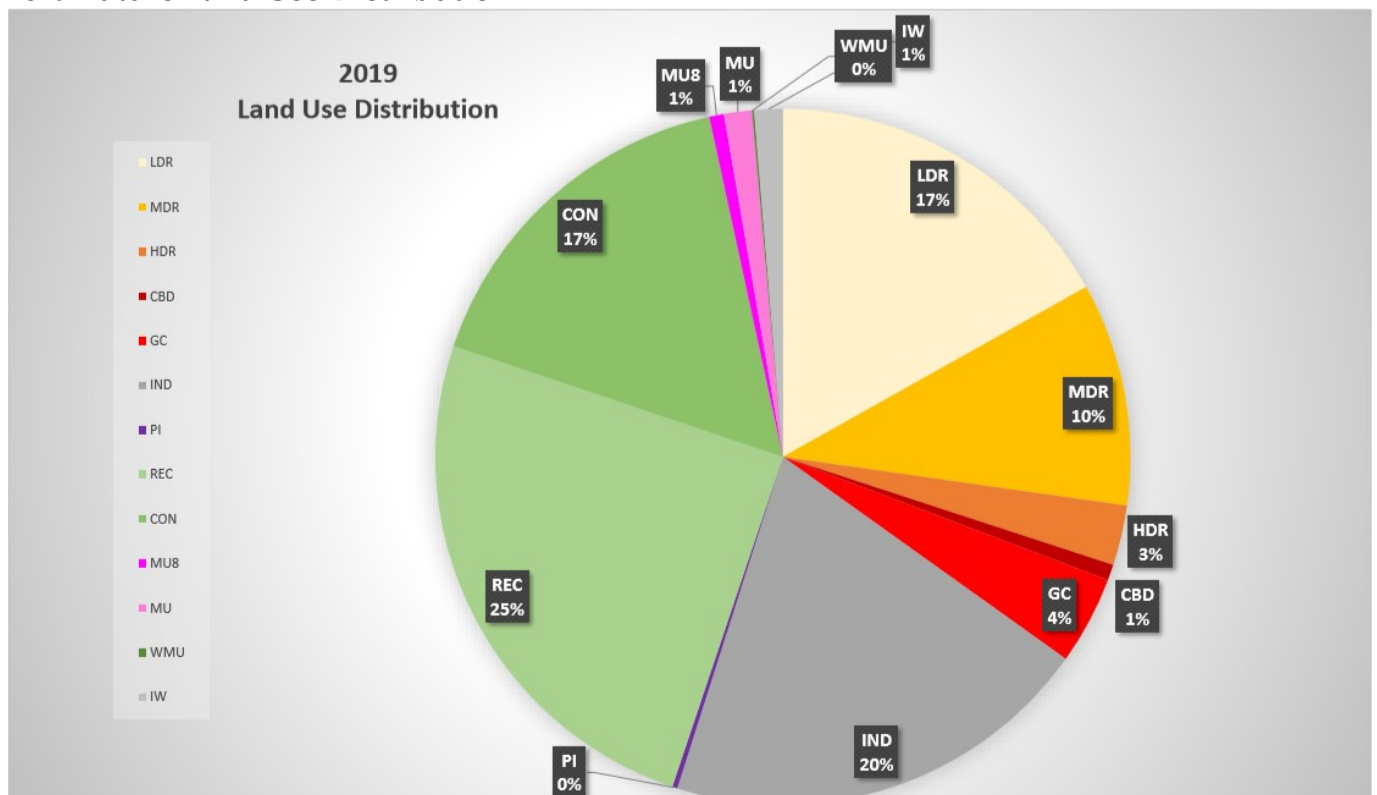
YEAR	EST. POPULATION	NUMERICAL CHANGE
2010	11,487	
2011	11,409	-78
2012	11,486	77
2013	11,524	38
2014	11,636	112
2015	11,705	69
2016	11,881	176
2017	11,960	79
2018	12,234	274
2019	12,558	324
% Change in 9 Years = 9.32%		
Annual Rate of Growth = 1%		
<i>Source: US Bureau, American Community Survey 2010 - 2019</i>		

3) Future Land Use Map Distribution

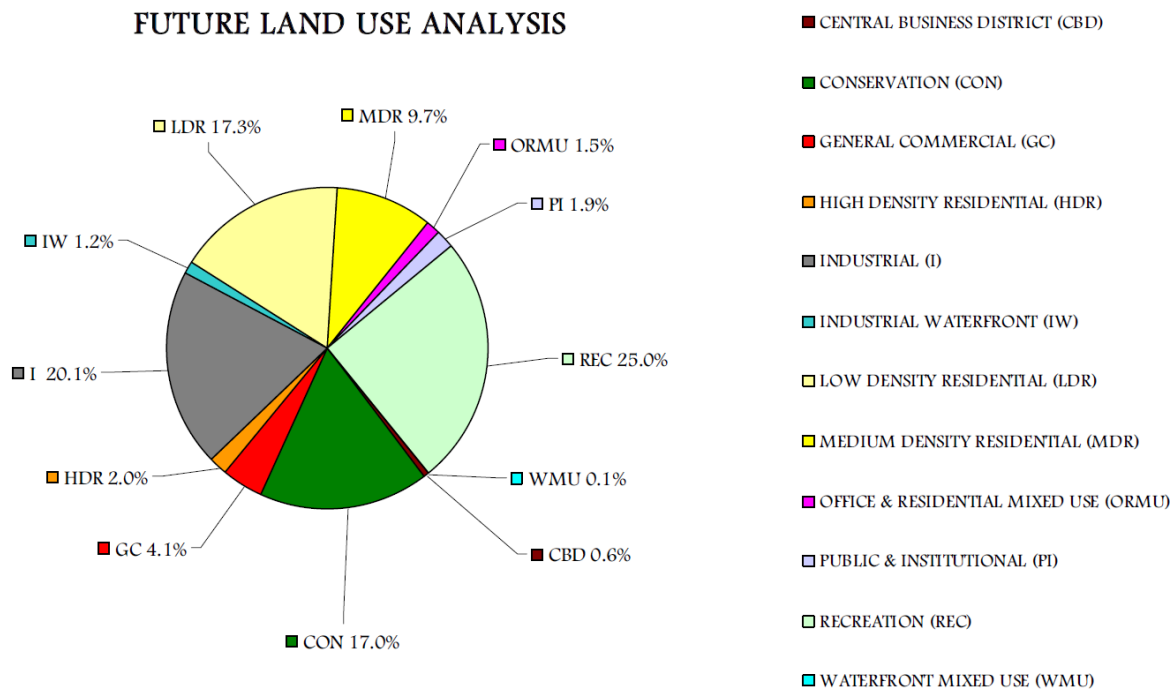
The City is comprised of four primary land use categories: Conservation/ Parks & Open Space, Residential, Commercial and Industrial as depicted on the Future Land Use Map (FLUM). Almost half (42%) of the City is held in conservation or recreational land use. The City's available residential land makes up another 29%. Just over 21% of the City is held as industrial land and about 4% of the City is commercial. The remaining land use designations are mixed use districts comprised of both commercial and residential uses (CBD, ORMU, and WMU) and public/ institutional lands (PI); combined, these categories hold the remaining 4% of the City's available land uses.

A comparison of the Future Land Use Map categories in 2009 and 2019 reveals that very little change has occurred to the overall land use composition in the City. Some land use categories have marginally changed. The marked increase within the High-Density Residential land use category is attributed to a large-scale annexation within this district. The Central Business District witnessed an increase due to the previously anticipation conversion of lands for properties within the established Community Redevelopment Area (CRA). Nominal change occurred as part of the 8th Street effort which modified General Commercial and Medium Density Residential lands to a new 8th Street Mixed Use designation.

2019 Future Land Use Distribution



2009 Future Land Use Distribution



Residential land uses in Fernandina Beach vary from low densities of four units per acre to high density allowing up to a maximum of ten units per acre. Higher densities are found primarily along the North/South Fletcher Avenue (A1A) beach area and the City's historic "Old Town" area, where the City maintains the original 1811 Spanish plat. The City permits residential, office and retail mixed uses in its Central Business District (CBD) at 34 dwelling units per acre, Office & Residential Mixed Use (ORMU) at eight dwelling units per acre, and Waterfront Mixed Use (WMU) at two dwelling units per acre future land use categories. Commercial uses within the City are clustered around the dominant commercial "corridors," located along the major roadways of A1A/S.R.200/ 8th Street, 14th Street and Sadler Road. Only a few commercial land use designations are found along the Fletcher Avenue/ A1A corridor.

Industrial (I) and Industrial Waterfront (IW) land use categories surround the City's National Register designated historic downtown Central Business District area. West Rock and Rayonier pulp/paper mill factories are located on the north and south ends of downtown. Front Street historically held industrial waterfront related uses such as shrimp docks, processing plants and marinas. Today, the Front Street area is within the City's Community Redevelopment Area (CRA) and most of the remaining privately-owned small IW properties are eligible to apply for a Waterfront Mixed Use land use designation that provides the opportunity to have both commercial/waterfront industrial

and low-density residential uses. The area surrounding the City's Airport is the other area allocated for industrial land uses.

It is anticipated that Low and Medium Density land use categories will witness the greatest amount of infill development. This equates to just over 700 new single-family residential structure within the 2045 planning horizon. **Table II-4** describes all Future Land Use Map categories containing residential density. Under the existing Future Land Use Map an estimated buildout on existing lots will bring approximately 1990 people to add to the City's population on a total of 913 new residential structures.

Table II-4. Vacant Residential Lands

FLUM	Vacant Land (acres)	Density (dwelling units/acre)	Potential Residential Dwelling Units	Average Household size (2.18)
CBD	0.87	34	30	64
MU	3.97	8	32	69
MU8	0.72	18	13	28
LDR	54.26	4	217	473
MDR	62.37	8	499	1088
HDR	12.24	10	122	267
WI	0	2	0	0
TOTAL	134.43	84	913	1990

SOURCE: Fernandina Beach Future Land Use Map, US Census Bureau (Avg. Household Size)

4) DEMOGRAPHIC PROFILE

The City of Fernandina Beach demographic profile based on 2010 Census data is summarized in **Table II-5**. The City's household size is less than the national average and its population is 13 years older than the US average age (37.2). Similar to other Florida cities, Fernandina Beach tends to have an older population with almost 10% more people aged 65+ compared to the national average of 13%.

Table II-5. Demographic Snapshot

CATEGORY	FIGURE
Population (2010 Census)	11,487 people
Average Household Size	2.18 people
Average Family Size	2.65 people

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Speaks Language other than English at Home	1,031 people
Median Age	50 years old
65 years and over	22.3% of the population
Per Capita Income (2010 dollars)	\$30,019
Median Family Income (2010 dollars)	\$61,523
Owner Occupied Housing units	3,464 units
Renter Occupied Housing Units	1,712 units
Vacant Housing Units	1,888 units
Mean Travel Time to Work	26 minutes

Source: US Census Bureau, American Community Survey

5) INTERNAL AND EXTERNAL ECONOMIC FACTORS

The City of Fernandina Beach is located about 35 miles from downtown Jacksonville on Amelia Island, roughly half an hour from Jacksonville International Airport. The City is served by two major railways (First Coast Rail and CSX) and is home to a natural deep-water port. Fernandina Beach provides a unique combination of pristine beaches and a small-town atmosphere. The City's economy is diverse, ranging from tourism-based employment to pulp and paper mill industries to charter fishing and shrimping. The Port of Fernandina, operated by the Nassau County Ocean Highway and Port Authority, continues to play a crucial role in future economic development. The significance of its role has been recognized by its inclusion in the Florida Strategic Intermodal System (SIS) Plan of the Florida Department of Transportation (FDOT). The Fernandina Beach Airport, located on 602 acres and operated by the City, has general aviation and transport facilities. Recent investments at the airport include a new terminal.

The targeted industries that have the potential to be eligible for incentives from Nassau County have changed since the last review of the Comprehensive Plan. They now include Aviation and Aerospace, Health and Life Sciences, Manufacturing, Defense and Homeland Security, Information Technology, Financial and Professional Services, Logistics and Distribution, Cleantech, Corporate Headquarters, and Research and Development. Fernandina Beach has maintained its manufacturing uses and the jobs they support. According to the Bureau of Workforce Statistics and Economic Research at the Florida Department of Economic Opportunity, the most jobs by industry in Workforce Development Area 8, which includes Nassau County, are Trade, Transportation and Utilities, with the most jobs, followed by Education and Health Services, Professional and Business Services, Financial Activities, Construction, and Self-Employment. That data source also identifies the fastest growing industries in Area 8

(those projected to grow more than 15% between 2018 and 2026) as Ambulatory Care Health Services (25.4%), Educational Services (19.5%), Professional, Scientific and Technical Services (15.5%) and Food Services and Drinking Places (15.4%). Of those, all but Educational Services are projected to add 15% or more to the number of people they employ. Nassau County's unemployment as of April 2019 was 2.7%.

On the local level, the City of Fernandina Beach has focused on its downtown and commercial corridors. In 2015, it was designated a Florida Main Street Community. This program of the Florida Department of State, Bureau of Historic Preservation is a technical assistance program for traditional historic commercial corridors. The Nassau County Chamber of Commerce, the City of Fernandina Beach, the Nassau County Economic Development Board and business and community leaders make up the Board of Directors that oversees this program with the goal of generating greater economic stability for downtown. This includes revitalizing the area by encouraging reuse of vacant buildings, creating civic pride, and preserving the historic aspects that make downtown Fernandina Beach unique. In addition, the City has focused on the commercial corridor at 8th Street as the gateway to downtown and updated the land development regulations in the area to support infill, redevelopment and economic opportunities.

Part 3. LOCAL MAJOR ISSUES

1. Managing Growth

One takeaway from the community meetings was the need for a philosophical read and revision of the comprehensive plan to acknowledge that manmade and natural systems are stressed, and changes need to be made to ensure that they are not further stressed.

2. Implementation

Mechanisms to implement the comprehensive plan need to be examined and modernized as needed, and ways to fund robust implementation and enforcement of rules are needed.

Intergovernmental Coordination

Especially on Amelia Island, agreed upon policies that outline the parameters of collaboration are needed. Nassau County, the School District and the Military are important partners, but State and regional agencies will also be required to succeed in addressing the local major issues.

Part 4. ASSESSMENT OF PLAN GOALS, OBJECTIVES AND POLICIES

The following are overall observations of the themes that came out of each of the public discussions on each element. It is not reflective of every issue raised in the four public meetings and transcriptions of public comment and other relevant materials are posted on the [website](#), accessed from the NEFRC homepage at www.nefrc.org.

1. Future Land Use Element

Adaptive reuse should be incentivized over new development. Resiliency to wind and flooding should be required in new construction and significant retrofits, and subject to rigorous enforcement. Low impact and sustainable development should be strictly defined and required, as opposed to encouraged. The new policy considered to address Sections 163.3177(6)(a)(4) and 163.3177(6)(a)(8), Florida Statutes was recommended to be balanced by policies that ensure the quality of life for full-time residents. It was mentioned in the context of the future land use categories that changes from the conservation or recreation/open space future land use category should not be considered unless approved by a voter referendum. An overall theme was that the policy context that encourages development needs to be replaced by a policy of growth management, relying on good data regarding capacity and analysis that anticipates future conditions including climate change and anticipated development in all impact areas including schools, clear rules that require that developers provide reliable and verifiable data and analysis so that impacts may be assessed, clear policies on when development is appropriate or not, and rigorous enforcement. It came up in several discussions that the example of Monroe County's process for consideration of changes to the future land use map should be considered.

2. Multi-modal Transportation

Congestion issues were extensively discussed at the April 30, 2019 meeting on this element. All major roads present a problem, including state and county roads. 8th Street is a problem. Several approaches were discussed including a toll on the bridge, congestion pricing, and charging for beach parking. Ultimately it was discussed that the options and the feasibility of their implementation needs to be studied. This might be a project fundable through the TPO, and it could look both at revenue for the city to address mobility costs as well as congestion. There was consensus on the need to establish a mobility fee, as a mechanism to charge new developments for their share of added traffic, and to take another look at how potential impacts to traffic are assessed and how

concurrency is enforced. The fee would fund transportation projects including bike trails. The need for a City-wide network for bike trails was identified, along with the need for education on bicycle safety. There was consensus on the need for a roundabout at Atlantic and South Fletcher.

3. Housing

The April 23, 2019 discussion included emphasis on resiliency and affordability in housing construction, and the need for consistent and rigorous enforcement of City codes. There were concerns expressed regarding the need for maintenance and protection of existing subsidized and affordable housing. Concerns were expressed that it might be unrealistic to envision much more new affordable housing in the City, given limited opportunities for new or redevelopment. There was some consensus on the elimination of Policy 3.03.10, the policy which suggests offering incentives such as lessening of development requirements to those who would build affordable housing. There was discussion that incentives would be better used to facilitate the reuse of existing buildings or infill development rather than building on sites that have never been developed. Partnerships with the county might result in more units with a better chance of sustaining affordability. Public transit will be needed to ensure that there is access to housing and jobs in the City and county. There was consensus that the number of trees should increase as new houses are constructed, and that the protection of conservation areas needs to be enhanced. It was noted that the capacity of green and man-made infrastructure needs to be revisited and understood before new housing is considered. The overall theme that the concurrency system needs to be reviewed, modernized to reflect current conditions and capacities and strictly enforced came up in the context of housing.

4. Public Facilities

At the April 30, 2019 meeting, it was discussed that the Water Supply Facility Work Plan that will be added to the comprehensive plan should include high volume users. A handout was provided as an overview of the requirements of such a plan. The need for better data on the capacity of the Floridan Aquifer, the potential for increased salinity due to sea level rise and the amount of water available for withdrawal based on permitting was noted as being necessary in order to develop a meaningful concurrency standard. The need to eliminate septic tanks and assist homeowners with the expense was noted. Overall, the need to collaborate with the county on all aspects of the capacity of systems on Amelia Island was strongly supported.

5. Conservation and Coastal Management

The public discussion of the conservation policies was extremely robust, and took place on the same day, April 29, 2019, that the EPA upgraded Nassau County from non-attainment to attainment for the 2010 1-hour sulfur dioxide standard. There was consensus on the need to restrict access to dunes, and that 48 of them need to be rebuilt, extended and then maintained. Other areas of consensus as reflected by the public who attended the meeting include the need for a beach parking management plan, elimination of driving on the beach, enhanced communication on emergency preparedness and better access to emergency plans, better enforcement of tree protection (Policy 5.11.06), replacement of gas-powered golf carts at the public course to electric, acquisition of sensitive lands, a plan for invasive species in public lands, maintenance of wildlife corridors, expansion of bike trails, clarification and reconsideration of the definition of open space in new residential development, encouragement and funding to support connections to the City sewer, City-wide dark sky lighting policies, focus on turtle protection, and encouragement of water conservation. There was discussion of the “Peril of Flood” comprehensive plan amendments adopted by the City of Boynton Beach and Nassau County, as a place to start in identifying how to respond to the requirements of the legislative change to Section 163.3178 of the Florida Statutes. Please see the facilitated notes from the April 29 meeting for all the issues considered and all the areas of consensus.

6. Recreation and Open Space

The public discussion on April 29, 2019 blended discussion of conservation and recreation and open space. See above.

7. Intergovernmental Coordination

County staff that attended the April 25, 2019 meeting agreed on the need for City/County coordination on all of Amelia Island. This came up in the context of annexations, where County regulations were different than those of Fernandina Beach, so that when a site was annexed into the City it was non-complying. The issues of land conservation, environmental protection, beach and dune protection, land use, stormwater and infrastructure planning, traffic congestion and mitigation, emergency preparedness and adaptation, bike trails, beach access and parks as well as annexation were identified as appropriate for collaboration. The County referred to the concept of “joint planning areas” as an approach to address collaboration and is considering including them on the

future land use map. The idea that Amelia Island should have such a designation or that City/County collaboration on all aspects of green and built infrastructure should be the norm on the Island came up in this discussion and later at the discussion on public facilities. The City and County should mirror each other's actions in the comprehensive plan in order to address the issue of collaboration. County and City should coordinate on school locations. Coordination with the military was noted in the discussions on public facilities. There was consensus that the element needs to be modernized to reflect current and desired future collaboration on issues beyond the control of just the City.

8. Capital Improvements

There was consensus on the four issues that arose at the April 30, 2019 public meeting. There is a need for a 20-year capital improvement plan, and it needs to be recognized that it is a plan and not a budget. More emphasis needs to be placed on maintenance and operating funding. Capital projects need to be considered with longevity, life cycle and maintenance costs in mind. Using the example of the airport, the need for information sharing and coordination with the military is critical.

9. Port Facilities

The Port of Fernandina is located such that when it is accessed by trucks, they must take 8th Street and go through the neighboring historic and residential districts. There was extensive public discussion on the impacts of the port on the community, including its impact outside the boundaries of the port. At the public discussion on April 25, 2019, there was conversation indicating that trucks stop or slow down in residential communities, often late at night or very early in the morning, resulting in noise, fumes, trash, safety concerns and a negative impact on community character. The port itself was identified as negatively impacting community character and safety, as it handles materials that could be hazardous, it can generate loud noises at usually quiet times, it can stack containers in such a way that residential views of the river are blocked, and its lighting is not designed with the comfort of adjacent neighborhoods in mind.

A deep-water port might be viewed as a land use that is incompatible with adjacent residential land uses. Its economic value to the City of Fernandina Beach must have been considered when siting the port. This was recognized in public input, and solutions were suggested to address the issues raised. The Port Sub-Element/Master Plan, Ordinance 2018-30, has been proposed but never adopted by the City. It was seen by the public in attendance as addressing most of the community character and safety issues. Chapter

311.14(2) requires that the Port of Fernandina 10-year strategic plan be consistent with the City's comprehensive plan, making the consideration of goals, objectives and policies in the comprehensive plan a useful community conversation and a mechanism for implementation. There was discussion of the port hiring security and cleanup personnel to implement policies that would address impacts on the residential neighborhood, and to allow port personnel to enforce the rules off port grounds by arrangement with the Fernandina Beach Police Department. There was also a call to develop a suite of solutions, such as use of software to better regulate port traffic, staging areas for trucks using public property or by arrangement with private landowners, and unloading of trucks off Amelia Island and the use of trains to access the port. When energy efficiency was discussed at the April 29, 2019 meeting, there was consensus that vessels should use port-side power, to eliminate as much as possible the need for them to run their engines. The need for a plan to adapt to and mitigate for sea level rise in the area between the mill and the port was noted. Overall, there was consensus that the port should not increase its current footprint and that it should use its assets to the benefit of the port and the City. There was discussion of a port/community advisory board.

10. Public School Facilities

At the April 23, 2019 meeting, there was much agreement that the City should have a right of first refusal on School District-owned properties within its boundaries, and that land should be used, or buildings should be repurposed in support of community goals. There was discussion that the concurrency evaluation regarding schools be more rigorous and that developers be asked to pay for mitigation whenever their proposed development will impact schools. Schools were recognized as a topic requiring intergovernmental coordination between the city, the School District and the County.

11. Historic Preservation

Concerns were expressed at the April 23, 2019 meeting that the character of new construction in historic districts falls short of the desired vision for those special areas. It was raised in the context particularly of historic schools that such buildings should be included in historic districts. The importance of historic structures and their vulnerability to the impacts of climate change was noted. It was suggested that a larger area be designated a historic district, bounded by the river, Dade Street, 8th Street and Lime Street, or that a downtown district be established. The need for policy, rules and enforcement to preserve archaeological artifacts was noted.

12. Economic Development

There was consensus at the April 25, 2019 public workshop that this element should be renamed “Resilient and Sustainable Economic Development”, and that the environment should be considered whenever economic development is considered. Maintenance of the sense of community, the sense of place, tourism, seasonal population, and the vision for the City are all required to be considered when considering economic development. The impact of waterfront industry is important, beyond just the port, as these large employers also have the potential for negative impacts on the adjacent residential community. It is noted that air quality near these facilities is improving, and efforts should be continued to collaborate on their environmental and visual impact on community character. As was brought up in discussions on every element, the impacts of economic development proposals must be evaluated under strict concurrency standards and such standards require rigorous enforcement.

13. Comprehensive Plan Implementation Measures

The City's 2030 Comprehensive Plan took an aggressive approach in its efforts for implementation. Budget constraints, redirection of staff, staffing shortfalls, and leadership for certain implementation measures have left many of the directed studies and activities remaining as incomplete. It is suggested that the timeframes be removed from corresponding policies directing each study. Alternatively, studies should be funded or evaluated to determine if they need to remain within the Comprehensive Plan. Table IV-1 identifies the status of Comprehensive Plan directed studies and planning efforts.

Table IV-1 – Comprehensive Plan Studies

STUDY	DUE	STATUS
Stormwater Management Plan	2011	2012
Downtown Market Study to develop overall marketing strategy <i>Formulate Partnership with Merchants Association and TDC</i>	2012	Main Street Est. 2015
Overall Mobility Assessment including Bicycle and Pedestrian Needs	2012	2018-2019
20-year Capital Improvements Program	2012	
Waste Management Plan (to include recycling, waste reduction strategy, etc.)	2012	
Fire Department Master Plan	2012	2018
Police Department Master Plan	2012	Accreditation Process Fulfills
Animal Services Strategic Plan	2012	
Archaeological Predictive Model	2012	2014
Housing Needs Assessment	2013	2018
Establish Neighborhood Planning Areas	2013	Preliminary Analysis performed in 2015
Reclaimed Water Feasibility Study	2013	

2019
FERNANDINA BEACH
EVALUATION AND APPRAISAL REVIEW (EAR)

Dune Management Plan	2013	Partially Completed
Green Local Government Designation Requirements	2013	
Energy Conservation Plan	2014	Partially Completed
Economic and Taxation Assessment for Annexation	2014	
Urban Forestry Inventory Assessment (working towards completion)	2014	2018
Boating & Waterways Needs Assessment	2015	
City-wide Parking Needs Assessment	2015	
Parks & Recreation Master Plan	2015	2015
Community and Regional Food Planning Assessment	2015	
Cemetery Master Plan	2016	2016
10 –year Water Supply Plan (as directed by SJRWMD)	2018	

City of Fernandina Beach Small-Area Population Estimates and Projections

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February 14, 2020

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INTRODUCTION

The University of Florida's Bureau of Economic and Business Research (BEBR) produces the official population estimates and projections for the State of Florida through a contract with the Florida Legislature. That contract funds the development of estimates at the state, county and city levels, and projections at the state and county levels. Because this data is often required at much smaller levels of geography for many planning activities and other purposes, BEBR also develops estimates and projections for smaller geographic units.

The City of Fernandina Beach requires small-area population estimates and projections in support of planning and decision support. This project generated those data using a GIS-based model which develops forecasts based on historical growth by census tract, constrains and directs population change using property parcel-level build-out analysis, and controls population totals at the county level to BEBR's 2019 official county forecast. The purpose of this document is to describe the methods used by BEBR to develop small-area population estimates and projections for City of Fernandina Beach.

GEOSPATIAL SMALL-AREA POPULATION ESTIMATION AND FORECASTING MODEL OVERVIEW

The Geospatial Small-Area Population Estimation and Forecasting Model ("Model") developed by GIS Associates, Inc., was used to estimate and project permanent residential population at the parcel level, and then normalize those projections to BEBR's latest county level population estimates and forecasts. First, a Build-out Submodel was developed to estimate the maximum residential development potential at the parcel level. Current permanent population was estimated, and then build-out values were forecasted with the Build-out Submodel. Areas which cannot physically or lawfully allow residential development (built-out areas, water bodies, public lands, commercial areas, etc.) were excluded from the Build-out Submodel. Conversely, the Growth Drivers Submodel identified areas where growth is more likely to occur based on proximity to certain spatial features (e.g., roads) that tend to drive growth to certain areas.

Growth was projected based on a combination of historic growth trends (using an approach similar to what BEBR uses for its county level forecasts), and spatial constraints and influences, which both restrict and direct growth. Population growth calculations were controlled to BEBR's 2019 medium projections (BEBR's latest population forecasts), which were available in five-year increments to the year 2045. The source of this data is the BEBR publication *Projections of Florida Population by County, 2020-2045, with Estimates for 2018*. (Florida Population Studies, Bulletin 183, April 2019).

BUILD-OUT SUBMODEL

The Build-out Submodel was developed using county property appraiser's GIS parcel database, including the associated tax roll information. Existing housing units were identified using data provided by the property appraiser which was vetted by city planners. BEBR applied average unit occupancy and average household size from the 2010 decennial census tract data to convert housing units to population. BEBR then controlled the city population total to BEBR's 2018 official population estimate, resulting in a slightly upward adjustment of 2.6%. This is likely attributable to an increase in unit occupancy since the 2010 Census.

GROWTH DRIVERS SUBMODEL

The Growth Drivers Submodel is a raster (cell-based) GIS model representing development potential. The submodel is a continuous surface of 10-meter cells containing values of 0-100, with '100' having the highest development potential and '0' having the lowest development potential. (See Figure 2). It influences the Model by factoring in the attraction of certain spatial features, or growth drivers on development. These drivers were identified from transportation and land use/land cover data. They include the following:

1. Proximity to roads and interchanges prioritized by level of use (with each road type modeled separately)
2. Proximity to existing residential development
3. Proximity to existing commercial development (based on parcels with commercial land use codes deemed attractors to residential growth)
4. Proximity to coastal and inland waters
5. Proximity to large planned developments



Figure 1. Parcels shaded by projected housing unit density (yellow is low, tan is medium, and brown is high)

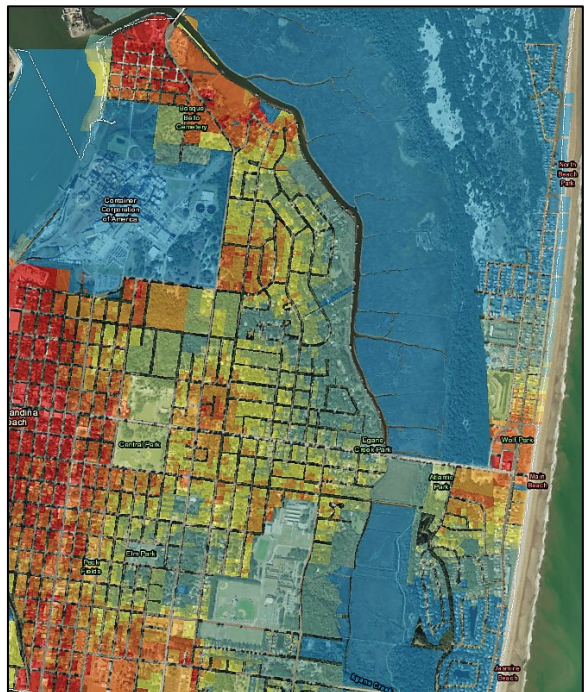


Figure 2. Parcels shaded by growth driver values (high development potential in red, moderate in yellow and low in blue)

Data used for generating the Growth Drivers Submodel and their sources are listed in Table 1 below.

Table 1. GIS datasets used in the Growth Drivers Submodel

Growth Driver	Data Source
Roads and Limited Access Road Interchanges	Florida Department of Transportation (FDOT) Major Roads: Functional Classification (FUNCLASS), and FDOT Limited Access Road Interchanges
Existing Residential Land Uses	County Property Appraiser Parcel Data
Selected Existing Commercial Land Uses	County Property Appraiser Parcel Data
Coastal and Inland Waters	Land Cover Data, and Florida Geographic Data Library (FGDL) Coastline Data
Large Planned Developments	Multiple sources, including the city and county, the North-east Florida Regional Council, GIS Associates and BEBR

Each of the drivers listed in Table 1 were used as independent variables in a logistic regression equation. Dependent variables included existing residential units built during or after 1995 as the measure of “presence”, and large undeveloped vacant parcels outside of large planned developments were used to measure “absence”. The resulting equation could then be applied back to each of the regional grids resulting in a single regional grid with values 0 through 100, for which a value of 0 represented the lowest relative likelihood of development, and a value of 100 represented the highest relative likelihood of development.

This submodel encompasses the City of Fernandina Beach and its surrounding areas to account for the presence or absence of growth drivers outside the city that could influence growth within it. This submodel was used by the Model to rank undeveloped parcels based on their development potential, which is explained in the Growth Calculation Methodology section. Note that growth can still occur in areas assigned relatively low values from this submodel based on the historical growth trends.

GEOSPATIAL SMALL-AREA POPULATION ESTIMATION AND FORECASTING MODEL

The Geospatial Small-Area Population Estimation and Forecasting Model (“Model”) integrates the Build-out Submodel and the Growth Drivers Submodel with the Population Projection Engine™, which makes the projection calculations using a combination of those submodel values, historic growth trends, and growth controls from BEBR’s county-level forecasts.

Historic Growth Trends

The historic growth trends were derived from historic census population counts for 1990, 2000, and 2010, and parcel-based population estimates for 2018. For 1990 and 2000, census block population estimates were summarized at the 2010 tract level and combined with the 2010 tract

population estimates. For 2018, population was estimated by applying average unit occupancy and persons per household (from tract-level data from the 2010 Census) to parcel-based housing unit counts by census tract, and then adding population in group quarters. These estimates were used to produce up to twelve tract level projections using five different demographic extrapolation methods.

The five demographic extrapolation methods for projecting housing units and population utilized by the model were Linear, Exponential, Constant Share, Share-of-Growth and Shift-Share. The Linear and Exponential techniques employ a bottom-up approach, extrapolating the historic housing units for each census tract with no consideration for the county's overall growth. The Constant Share, Share-of-Growth and Shift-Share techniques employ a ratio allocation, or top-down approach, allocating a portion of the total projected county population or growth to each census tract based on that tract's percentage of county population or growth over the historical period. Each of the five methods is a good predictor of growth in different situations and growth patterns, so using a combination was the best way to avoid the largest possible errors resulting from the least appropriate techniques for each census tract (Sipe and Hopkins 1984). This approach is similar to the one BEBR uses for its county population forecasts.

The launch year was 2018, which we estimated using parcel-level data and controlled to the 2018 BEBR estimate. The projections were made for 2020, 2025, 2030, 2035, 2040 and 2045. Note that for the 2018-2020 iteration, the typical five-year growth was reduced to reflect only a two-year change. The methods and base periods used were the following:

1. **Linear Projection Method:** The Linear Projection Method assumes that the future change in the number of persons for each census tract will be the same as during the base period (Rayer and Wang, 2019). For the 2020-2030 projections, one linear trend from 2010 through 2018 (8-year period) was used. For the 2035-2045 projections, two additional linear trends were used, one from 1990 through 2018 (28-year period) and one from 2000 through 2018 (18-year period).
2. **Exponential Projection Method:** The Exponential Projection Method assumes that population will continue to change at the same percentage rate as during the base period (Rayer and Wang, 2019). One calculation was made from 2000 through 2018 (18-year period).
3. **Constant Share Projection Method:** The Constant Share Projection Method assumes that each census tract's future percentage of the county's total population will be the same as over the base period (Rayer, 2015). Two Constant Share (CS) calculations were made, one based on the 2010 shares and one based on 2018 shares.
4. **Share-of-Growth Projection Method:** The Share-of-Growth Projection Method assumes that each census tract's future percentage of the county's total growth will be the same as over the base period (Smith and Rayer, 2013). However, if population change is negative at the tract level and positive at the county level (or vice versa), higher county-level

projections would result in larger declines in tract projections. This is counterintuitive, so the “Plus-minus” variant of the Share-of-Growth Method was used (Smith, Tayman and Swanson, 2001). For the 2020-2030 projections, one Share-of-Growth trend from 2010 through 2018 (8-year period) was used. For the 2035-2045 projections, two additional Share-of-Growth trends were used, one from 1990 through 2018 (28-year period) and one from 2000 through 2018 (18-year period).

5. **Shift-Share Projection Method:** The Shift-Share Projection Method assumes that each census tract’s future percentage of the county’s total annual growth will change by the same annual amount as over the base period (Smith and Rayer, 2013). For the 2020-2030 projections, one Shift-Share trend from 2010 through 2018 (8-year period) was used. For the 2035-2045 projections, two additional Shift-Share trends were used, one from 1990 through 2018 (28-year period) and one from 2000 through 2018 (18-year period).
6. **Average of the Projection Extrapolations:** For the 2020-2030 projections, six calculations were made using base periods of 8 and 18 years; the highest and lowest were excluded, and the remaining four were averaged. For the 2035-2045 projections, twelve calculations were made using base periods of 8, 18, and 28 years; the highest four and lowest 4 were excluded, and the remaining four were averaged.

Growth Calculation Methodology

After the development of the Build-out Submodel, the Growth Drivers Submodel, and the historical growth trends, GIS Associates’ Population Projection Engine™ tool was used to make the growth calculations. The methodology for calculating growth for each projection increment included the following steps:

1. Applying projected tract-level population growth to parcels within each tract.
2. Checking growth projections against build-out population and reducing any projections exceeding build-out to the build-out numbers.
3. Summarizing the resulting population growth and comparing it against BEBR’s county-wide population growth.
 - a. If the sum of the model’s small-area projections exceeded the BEBR county projection, projected growth for all tracts was reduced proportionally.
 - b. If the model’s projections were less than the BEBR projections (which tends to be more common), the Growth Drivers Sub-model would be repeatedly applied until the BEBR projected growth for each five-year increment was reached. This process involved raising the populations of parcels in which growth driver values in the highest decile had available capacity for growth.

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