City of Jacksonville Beach 2050 Comprehensive Plan

Data Inventory and Analysis (DIA)

April 2024

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I. Future Land Use Element DIA

Future Land Use Element
Data Inventory and Analysis

Introduction

Pursuant to the requirements of Chapter 163 of the 2019 Florida Statutes, the Future Land Use Element consists of data inventory and analysis (DIA) that influences and informs the overarching visions, intents, and strategies that will guide the growth and development of the City of Jacksonville Beach. The City's existing land uses, vacant land, build-out potential, natural resources, and population projections were evaluated and analyzed in order to update the City's land use designations which will shape how the City will grow in the next 20+ years. The updated 2050 Future Land Use Map (FLUM) (FLU-M2) is provided as a regulatory tool to direct future development.

History and Setting

Jacksonville Beach is situated between the Atlantic Ocean and the Intracoastal Waterway along the northeastern coast of Florida. The City is one of four incorporated cities which opted to retain their independent municipal structure in 1968, when the voters in Duval County elected to form the Consolidated City of Jacksonville. The City of Jacksonville has municipal powers throughout its jurisdiction, although it is still often referred to in general usage as Duval County. In this Plan Element and the Elements which follow, it may be referred to in either form, but the meaning is the same. The Consolidated City of Jacksonville serves in the capacity of a county government for the City of Jacksonville Beach and provides most of the same services that other Florida cities receive from their county governments.

Geographic Location

The Cities of Jacksonville Beach, Atlantic Beach, and Neptune Beach are all incorporated municipalities located in the southeastern area of the City of Jacksonville. The three cities are collectively referred to as the "Beaches" without regard to the fact that they exist and function as separate political entities. Jacksonville Beach is the largest and southernmost of the three and is situated immediately north of the Ponte Vedra and Sawgrass areas in unincorporated St. Johns County. Two major regional arterial highways, Beach Boulevard (U. S. Highway 90) and J. Turner Butler Boulevard (State Road 202/ Butler Boulevard), connect Jacksonville Beach with the rest of Duval County to the west. State Route A1A (3rd Street) runs through the City in a north-south direction. Jacksonville Beach is approximately 14 miles east of I-95 and 17 miles east-southeast of Jacksonville's downtown area.

Municipal Boundaries

Jacksonville Beach is bounded on the north by the city limits of Neptune Beach along the common border of Seagate Avenue (20th Street North). St. Johns County is the southern boundary of the City; and the Atlantic Ocean and the Atlantic Intracoastal Waterway (Pablo Creek) provide the east and west city limit lines, respectively. The land area within these boundaries is approximately 8.4 square miles. The City of Jacksonville is the largest city in the

continental United States, with a total land area of 776 square miles. Jacksonville Beach comprises approximately 1.03 percent of that area.

Existing Land Use Conditions

In order to better guide and direct future land uses within the City of Jacksonville Beach, it is necessary to first gain an understanding of present land use patterns. The City of Jacksonville Beach covers approximately 8.4 square miles. The existing 2019 land uses were determined by their Florida Department of Revenue Land Use Codes and may not precisely reflect what is 'on the ground' but provide insight into the current conditions and development patterns of the City. To provide a basis for analysis these existing land uses have been further grouped into the following distinct categories which include their definitions from the Florida Department of Revenue. It is important to note that this analysis does not include the City's waterways or wetlands. The classifications of existing land uses is limited to the developable land within the City.

Agriculture: Property used for production of food, feed, and fiber commodities, livestock and poultry, bees, fruits and vegetables, and sod, ornamental, nursery, grazing farm animals and horticultural crops that are raised, grown, or produced for commercial purposes. The City of Jacksonville Beach does not contain any agriculture land use.

Commercial: Business property, such as supermarkets, shopping centers, office buildings, medical centers, hotels, theatres, RV parks, financial institutions, stores, etc. which are intended to operate with a profit.

Residential: Property zoned for single-family homes, multi-family apartments, mobile homes, retirement homes, and co-ops.

Government: All property owned by or leased to the Government or acquired by the Government under the terms of the contract. Not subject, in whole or in part, to Ad Valorem property taxes. Examples include forests, parks, public schools, county hospitals, military buildings etc.

Industrial: Property used for industrial purposes. Types of industrial property include heavy manufacturing buildings, light manufacturing buildings, packing plants, mineral processing plants, warehouses, wineries, sawmills, etc.

Institutional: Property which is not strictly commercial, industrial, agricultural, or residential, but which serves some public purpose, even if privately owned. Examples include private schools, private hospitals, orphanages, cemeteries, sanitoriums, nursing homes, etc.

Miscellaneous: Includes property such as utility, gas, and electricity, rights-of-way, streets, roads, outdoor recreation or parkland, railroad land, utilities, waste land, submerged land, etc.

The current distribution of existing land uses is shown in Table FLU-T1 and FLU-M1.

Table FLU-T1: Existing Land Uses

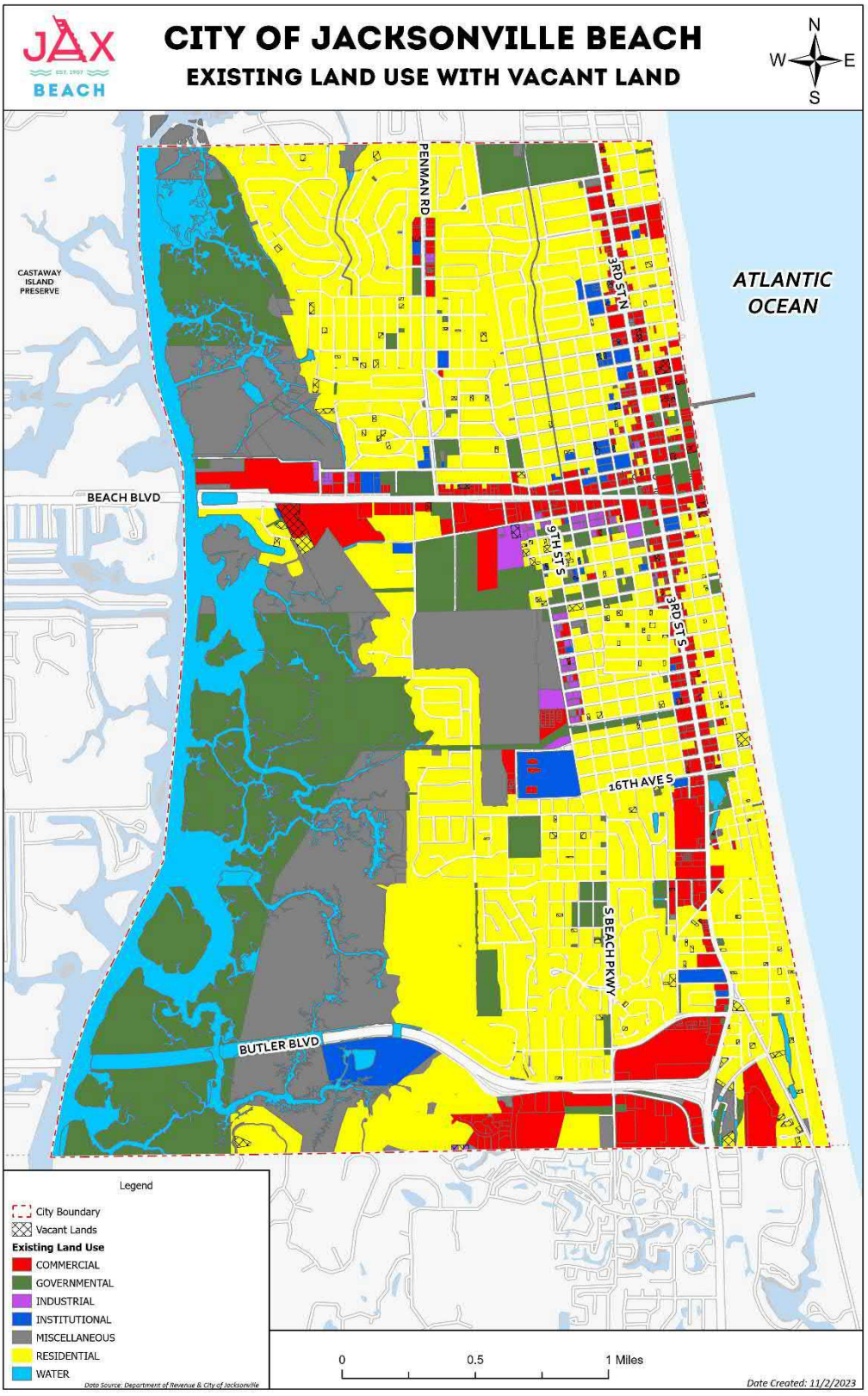
Land Use	Acres	% of Total
Residential	1,749	44.9%
Commercial	448	11.5%
Industrial	36	0.9%
Institutional	99	2.5%
Government	849	21.8%
Agriculture	0	0.0%
Miscellaneous	714	18.3%
Total	**3,895**	**100%**

Source: Florida Department of Revenue (DOR) (2019)

Vacant Land Analysis

An analysis of vacant land was conducted based on the Florida Department of Revenue (DOR) data as of April 2023. Approximately 6.5% (255 acres) of the City's developable area is classified as "vacant". The breakdown of vacant land in the City by Future Land Use Designation is detailed in the build-out analysis section of this report.

Map FLU-M1: Existing Land Use with Vacant Land.



Population Trends and Projections

The 2021 American Community Survey (ACS) estimates the average household size for the City of Jacksonville Beach is 2.19 persons per household. Average household size is assumed to continue its historic decline, but at a slower rate as a minimal size is approached.

During the period of 2025 to 2050 it is projected that 2,172 additional people will reside in the City, creating the need for approximately 992 additional resident households. Due to the City of Jacksonville Beach being a coastal community that experiences tourism, and consequently experiencing seasonal population changes, it is important to consider the seasonal population estimates in the population data. Per the U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates, it is estimated that 990 units in Jacksonville Beach are vacant units for seasonal, recreational, or occasional use. Based on the average household size of 2.19 persons per household, 990 units equates to a seasonal population of an estimated 2,168 people.

The population and housing projections used in this analysis estimated a 2025 resident population in Jacksonville Beach of 25,070 residents. Compared to a 2021 population estimate of 24,075, this indicates a 4% increase in population. The population estimates show that the growth rate slows after 2025, however, by 2050 it is projected 27,242 people will reside in Jacksonville Beach. Data from the Shimberg Center for Housing Studies, based on 2000 and 2010 U.S. Census data and population projections by the Bureau of Economic and Business Research, University of Florida was also analyzed. These population projects were pre global pandemic (COVID-19 during 2019-2021), and therefore show a much slower estimated population growth. According to the U.S. Census, "Florida was the fastest-growing state in 2022, with an annual population increase of 1.9%, resulting in a total resident population of 22,244,823[1]."

Table FLU-T2: Population Projections

Year	2025	2030	2035	2040	2045	2050
Population	25,070	25,983	26,525	26,852	27,064	27,242
Increase as a Percentage		3.64%	2.09%	1.23%	0.79%	0.66%

Source: Estimates and projections by Shimberg Center for Housing Studies, based on 2010 and 2020 U.S. Census data and population projections by the Bureau of Economic and Business Research, University of Florida.

Table FLU-T3: Population Projections Pre-Pandemic

Year	2025	2030	2035	2040	2045	2050
Population	24,176	24,777	25,265	25,583	25,834	26,087
Increase as a Percentage		0.97%	0.98%	0.98%	0.98%*	0.98%*
** Assumed growth rate based on population trends.*						

Source: Estimates and projections by Shimberg Center for Housing Studies, based on 2000 and 2010 U.S. Census data and population projections by the Bureau of Economic and Business Research, University of Florida.

[1] Growth in U.S. Population Shows Early Indication of Recover Amid Covid-19 Pandemic, United States Census Bureau (2022). https://www.census.gov/newsroom/press-releases/2022/2022-population-estimates.html

Future Land Use Designations and Analysis

The 2050 Future Land Use Map, Map FLU-M1, designates future land uses within the City of Jacksonville Beach limits through the 2050 planning horizon.

Table FLU-T3: Future Land Use Designations and Analysis (Current).

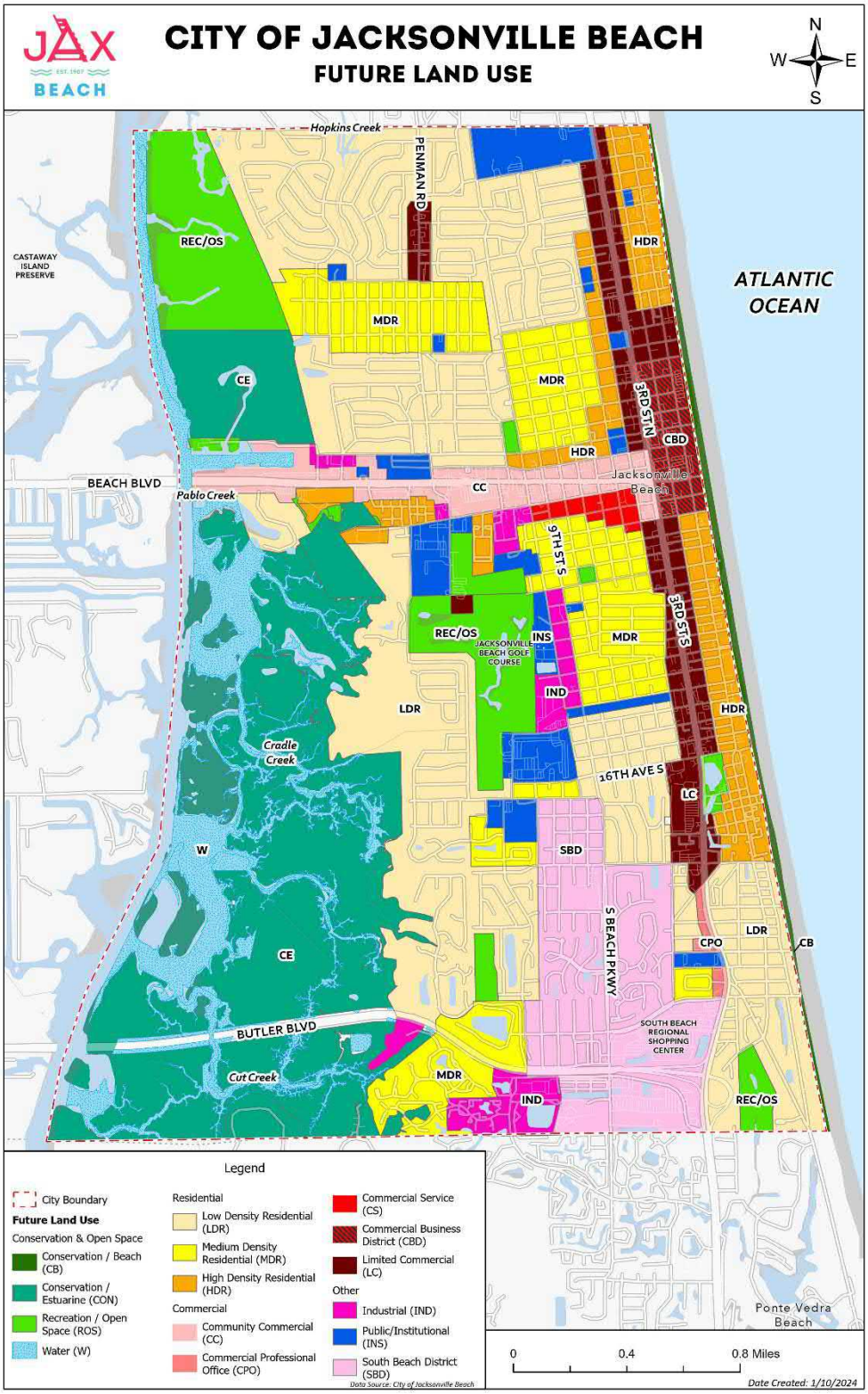
Land Use Categories	Future Land Use 2050 Map	
	Acres	% of Total
Agricultural	0.0	0.0%
Recreation/Open Space	385	7.7%
Conservation	1,203	24.0%
Central Business District (CBD)	68	1.4%
Commercial Professional Office (CPO)	12	0.2%
Community Commercial (CC)	146	2.9%
Commercial Limited (CL)	233	4.6%
Commercial Services (CS)	24	0.5%
Industrial	114	2.3%
Institutional	195	3.9%
Low Density Residential	1,427	28.5%
Medium Density Residential	531	10.6%
High Density Residential	266	5.3%
South Beach District (Mixed Use)	410	8.2%
Marina Mixed-Use		
Total	**5,014**	**100%**

Source: City of Jacksonville Beach Planning Department.

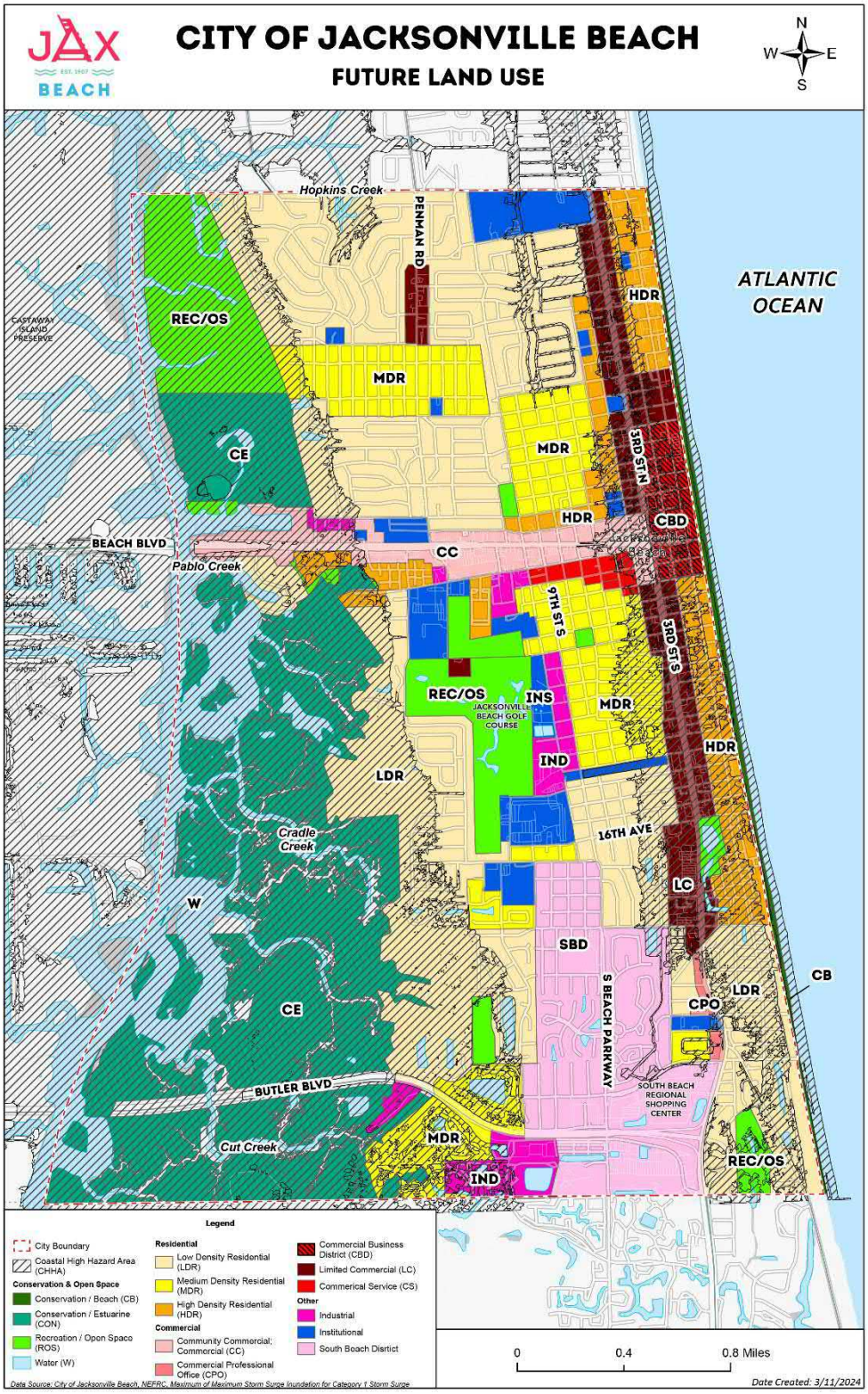
Future Land Use Designation Changes

A Marina Mixed-Use land use category was created in 2024 to provide for a mix of water-dependent and water related uses that support the one marina accessible in Jacksonville Beach and serving the residents of Duval County. The creation of the Marina Mixed-Use land use category is the only change to the 2030 Comprehensive Plan Future Land Use Designations and Future Land Use Map.

Map FLU-M2: 2050 Future Land Use Map



Map FLU-M3: 2050 Future Land Use Map with Coastal High Hazard Area (CHHA)



Build Out Analysis

Based on the vacant acres within the City and the future land use designation of those vacant acres, a maximum build out analysis was conducted and is detailed in Table FLU-T2 below.

Table FLU-T4: Build Out Analysis

Future Land Use Category	Vacant Acres	Maximum DU/AC	Maximum Impervious Surface Ratio (ISR)	Maximum Density (Build Out)	Maximum Intensity SF
Commercial Limited (CL)	0.0	20 du/acre	85%	-	-
Community Commercial (CC)	5.1	20 du/acre*	85%	102 units	
Central Business District (CBD)	0.0	7-40 du/ac*	-	-	-
Commercial Professional Office (CPO)	0.0	-	65%	-	-
Industrial	4.8	-	85%	-	533,174
Institutional	4.3	-	85%**	-	477,635
Low Density Residential	70.0	6 du/ac	-	420	-
Medium Density Residential	20.7	7 du/ac	-	145	-
High Density Residential	15.5	40 du/ac	-	620	-
South Beach District (Mixed Use)	53.1	Single-Family: 0-6 du/ac Multi-Family: 7-10 du/ac	35% Floor Area Ratio ***	Single-Family: 319 Multi-Family: 531	809,563
Marina Mixed-Use District		20 du/ac			
Total	246.7	-			

** Per the July 1, 2023 Senate Bill 102, commonly referred to as the Live Local Act, this density and therefore maximum build out is subject to increase, provided the provisions within the Live Local Act are met. Additional details on potential implications of the Live Local Act are in the Housing Element Data Inventory and Analysis.*

***Based on a commercial land use with 85% ISR.*

****Based on the requirements in the South Beach Community Redevelopment Plan.*

Considering the limited vacant land remaining within the City, and the estimated demand for 992 additional resident households, the primary way to accommodate growth and create jobs and economic development that will strengthen and diversify the community's economy is through redevelopment. The maximum build out of the remaining residential designated land uses can accommodate the anticipated growth. However, the maximum build out is a best case-scenario which may not be feasible. Therefore, again, the primary means of accommodating growth and strengthening the economy will be through redevelopment of existing properties and/or underutilized property. Additionally, redevelopment within the City discourages urban sprawl and is a smart growth tool.

Natural Resources Inventory

The presence of natural resources and the ability of land to support development within the City of Jacksonville Beach will be a major determinant for the future land use pattern. It is important to take these natural resources into consideration when guiding growth in order to avoid the potential adverse impacts of development activity. Below is an inventory of the natural resources located in the City of Jacksonville Beach.

Waterbodies and Shoreline Protection

The City of Jacksonville Beach is located on the Atlantic Ocean, and the Intracoastal Waterway is along the west side of the City, functioning as a natural tributary. Additional waterways throughout Jacksonville Beach include a combination of estuarine and marine wetlands, freshwater emergent wetlands, freshwater forested/shrub wetlands, tributary creeks, and freshwater ponds. Concentrations of wetlands are located along the Intracoastal Waterway. An estimated 652 acres of the City of Jacksonville Beach are water, and an additional 1,189 acres (approximately 25% of the City) are wetlands.

The City of Jacksonville Beach waterways provide natural buffers that plays an integral role in protecting the city from extreme weather conditions such as hurricanes, tropical storms, and the associated storm surges. The waterways and associated features (wetlands, beaches, wildlife, habitat, marshes, etc.) are key in maintaining the resiliency and adaptability of Jacksonville Beach.

Waterways within the City of Jacksonville Beach have historically been protected by setback restrictions. The City is essentially built out, therefore, the waterways will continue to be protected and only receive minimal effects from future development and redevelopment. Although development and redevelopment will not encroach into the protected waterways, urban runoff can threaten the health and wellbeing of the waterways and water quality. Increases in pollution levels associated with runoff should be minimal, protecting and sustaining the present state water quality, vegetation, and wildlife.

As a coastal community, the single most significant physical feature of the City is the broad, sandy beach which separates the upland area of the City from the ocean. The beach is 3.7 miles long and has an area of approximately 130 usable acres based on a width which varies from 200 to 350 feet. The entire oceanfront is accessible to the public. There are 56 points of access (street ends, walkways, and public and private? ramps) and 12 blocks of boardwalks (multi-modal path) available for public use. All beach access points and additional parks and open space are depicted on Map #. The City's beach, like those throughout Northeast Florida, suffers significant erosion, primarily as a result of winter storms known as "Northeasters." Federal, state, and local authorities cooperate in carrying out regular renourishment programs.

The entire oceanfront is classified as a VE-zone by the Federal Emergency Management Agency (FEMA) and is subject to wind and wave velocity hazards during severe storms. The extent of the VE-zones landward of the bulkhead along the shoreline is not extensive and generally coincides with the Department of Environmental Protection's Coastal Construction Control Line. The A-zones generally

extend from the edges of the V-zones to 1st Street. Any development or redevelopment of properties in these A-zone areas will have to be elevated a minimum of one and a half feet above the present ground level. The City has adopted and enforces a flood hazard protection ordinance and a coastal construction code in addition to development regulations and building codes. Additional details related to coastal conditions and their effect on development are addressed in the Conservation and Coastal Management Element.

Estuarine Systems and Wetlands

The wetlands along the Intracoastal Waterway, which comprise approximately 25 percent (1,189 acres) of the City's land area, are another significant physical feature of the City. The entire western boundary of Jacksonville Beach lies along the Pablo Creek estuary. The Intracoastal Waterway segment through the City follows Pablo Creek through the estuary and changes to a man-made canal in St. Johns County just south of Butler Boulevard. The canal then continues south to connect with the Tolomato River estuary near the City of St. Augustine.

Upland Floodplains

In addition to the designated floodplains located in the coastal high-hazard zones discussed in the previous subsections, there are a few small upland areas which have been identified by the Federal Emergency Management Agency (FEMA) as being subject to flooding as a result of a 100-year storm event. These areas are generally located in developed or developing parts of the community adjacent to the oceanfront or Pablo Creek estuary. These areas are denoted as being "unnumbered A zones" i.e., those special flood hazard areas for which no base flood elevation has been established. A more detailed discussion of the parts of the City impacted by potential flood hazards is contained in the Stormwater Management Sub-element of the Public Facilities Element and in the Conservation and Coastal Management Element.

There are no rivers, creeks, canals, or streams outside of the estuarine system which are prone to flooding as a result of a 100-year storm event.

Under the City's adopted flood hazard area ordinance, no encroachments are permitted without an engineer's certification that no increase in flood levels will result and structures must be elevated to a height to be determined by the best available information.

Coastal High Hazard Area (CHHA)

Because Jacksonville Beach is a coastal community, it is expected that flooding during a 100-year storm will be attributable to the rise in sea level and/or storm surge. The destructive potential of this flooding in certain exposed areas can be compounded by the presence of waves.

The Army Corps of Engineers historically has applied the phrase "coastal high-hazard zones" to those areas expected to experience coastal flooding with wave action at depths sufficient to support a three-foot wave. This concept was later adopted by the Federal Emergency Management Agency (FEMA) to delineate V (velocity) zones. The Coastal High Hazard Area, or CHHA as it is referred to, is now defined as the area below the elevation of the Category 1 storm

surge line as established by a Sea, Lake, and Overland Surges form Hurricanes (SLOSH) computerized storm surge model (Sec. 163.3178(2)(h), F.S.) This definition includes certain flood zone areas associated with the Pablo Creek floodplain. For planning purposes, all non-isolated flood prone areas are included within the defined coastal high hazard area.

Additional details related to floodplains and the CHHA, including a map of the CHHA, and their effect on development are addressed in the Conservation and Coastal Management Element.

Air Quality

The Florida Department of Environmental Protection rates the quality of air in the City of Jacksonville Beach as good. A good rating means the air quality index (AQI) is between 0 to 50 and indicates little potential for the air to affect public health.

Generally, the absence of major industries within and around the City helps to maintain the air quality in the City. Pollution generated from redevelopment, demolishing structures, land clearing, and new development can lead to deteriorated air quality.

Automobile emissions are the largest contributor to air pollution in the City of Jacksonville Beach. As the City grows, increased automobile traffic and traffic congestion can also increase air pollution.

Mineral Resources

There are no significant deposits of commercially valuable minerals known to exist within the City of Jacksonville Beach.

Potable Water Wells

The City has six wells providing raw water for treatment at two plants. There are no additional water wells planned at this time, nor will any be required as part of the Potable Water Subelement of the Public Facilities Element of this Plan. The well field serving Water Treatment Plant #1 is located in the vicinity of the treatment plant on South 1st Avenue in the central area of the City. This area is completely developed with a mixture of land uses including residential areas of all types, commercial, industrial, and institutional uses including the municipal government complex.

The second well field is located in the southern part of the City at 2500 Pullman Street. ??? The land around this site is mostly vacant or developed for lower density single family residential use. Much of the vacant, platted area to the south and east of the well field is in the designated South Beach Community Redevelopment Area. The vacant land immediately around the wells and Water Treatment Plant #2 was programmed for recreation and open space use in the adopted South Beach Redevelopment Plan. The South Beach Park (a.k.a. Sunshine Park or Sunshine Playground) was improved with a skate park and other playground equipment in 2022.

Additional details on the availability of potable water and the anticipated potable water demand is detailed in the Public Facilities Element Data Inventory and Analysis.

Soils and Topography

Soils in the City generally fall within three broad associations: the Leon-Ortega group, the Mandarin-Kureb group, and the Wesconnett-Maurepas-Stockade group. As a largely developed

community, much of the City is classified as urban land and detailed analysis is unavailable. A map showing the general soil types in the City is included in the Conservation and Coastal Management Element Data Inventory and Analysis. All of the dominant soil types found in this area are sandy, generally level; and may be prone to seasonal wetness and periodic high water tables. As a result, most of the area is subject to some limitations for development and proper drainage control.

Summary

This Land Use Data Inventory and Analysis has effectively provided the data to guide the type, location, and timing of development in an appropriate manner. The Land Use Element is the foundation of the Comprehensive Plan and is dependent upon the visions, intents, and strategies of each of the other Elements. It sets the planning framework for the City to accommodate projected growth and development, minimize adverse impacts on natural, vulnerable, and/or historic resources, and maintain essential amenities at desired levels to sustain the quality of life within the City. The challenge of an almost fully built out City is not lost on this analysis. Redevelopment will be an integral part of achieving the visions, intents, and strategies of the Comprehensive Plan.

II. Transportation Element DIA

Transportation Element
Data Inventory and Analysis

Executive Summary

Pursuant to the requirements of Chapter 163 of the 2022 Florida Statutes, the Transportation Element consists of a data inventory and analysis relating to the existing transportation system levels of service and system needs and the availability of transportation facilities and services, the projected transportation system levels of service and system needs, and growth trends and travel patterns and interactions between land use and transportation. The Transportation Element does not stand alone in this effort, but instead works with the Future Land Use, Intergovernmental, Capital Improvements, and Public Facilities element to fulfill the requirements of the Florida Statute.

The City of Jacksonville Beach is located on the Atlantic Ocean approximately 15 miles east of downtown Jacksonville, in Duval County and adjoins St. Johns County to the south and the City of Neptune Beach to the north. Jacksonville Beach is the largest of the County's three beach communities (Jacksonville Beach, Neptune Beach, and Atlantic Beach). As a beach community, much of the traffic within the City of Jacksonville Beach is related to the beach and other recreational amenities. Furthermore, residents of the City and surrounding communities commute to the surrounding employment centers in Jacksonville.

This update was undertaken in order to reflect changes in state legislation and local policies of the City of Jacksonville Beach, and to update the traffic projections to reflect a 2050 planning horizon.

Unlike many of the local governments in Florida that are affected by growth management legislation changes through the years, the City of Jacksonville Beach has very little vacant land within its jurisdiction that is available for new development. New developments affecting Jacksonville Beach traffic are more likely to be located in St. Johns County or west of Jacksonville Beach within the City of Jacksonville. Within the City of Jacksonville Beach, most new vehicular traffic will be due to the redevelopment of existing developed land within the city's jurisdiction, and from growth in adjacent jurisdictions.

The City of Jacksonville Beach sees increased pedestrian and bicycle traffic compared to surrounding communities. Furthermore, the City has decided that SR A1A shall not be widened, nor should parallel roadways be widened, thus constraining the transportation system. With that said, the City has a dense network of streets in a grid pattern which serve to disperse traffic and provide options to motorists. Two existing transit routes presently serve Jacksonville Beach.

No roadway expansion projects are planned for the City or surrounding areas. As such, the need for a robust mobility network, rather than a focus on roadways, is necessary to accommodate the transportation needs of the City. The City of Jacksonville Beach embarked on a multi-modal master planning process in September 2021, which resulted in the final adopted Urban Trails Master Plan in November 2022. Implementing the Urban Trails Master Plan should be a priority for the City of Jacksonville Beach, and this Transportation Element shall correlate with, build-on, and facilitate the plan.

I. Overview

Purpose

This report documents the 2023 update of the Transportation Element of the Comprehensive Plan for the City of Jacksonville Beach, which was initially adopted on October 15, 1990.

Besides updating the Transportation Element in order to reflect current conditions, new development forecasts, and changing local and regional goals and development objectives, the City of Jacksonville Beach Transportation Element has also been updated to reflect the most recent version of Chapter 163 of the Florida Statutes.

The Transportation Element expands consideration for transit and multimodal transportation issues with regard to the designation of SR A1A and parallel arterial and collector routes as "constrained facilities."

Overview of Factors Affecting Traffic in the City of Jacksonville Beach

Unlike many other urban areas of Florida, the City of Jacksonville Beach has very little land within its jurisdiction that is available for new development. The most likely sources of increased Jacksonville Beach traffic is new development in St. Johns County and eastern Jacksonville; and the redevelopment of existing developed land within the city's own jurisdiction. Other factors affecting Jacksonville Beach traffic include the growing number of seasonal residences within the city, increased short-term rentals (such as AirBNB) along with the limited availability of parking and the prevalence of bicycle and pedestrian traffic on local streets in the city. As such, it is anticipated that growth in the City will be more limited than other communities in the area. With the desire to not expand the roadways, it is important to create mobility options for all users. The Urban Trails Master Plan has laid the groundwork and implementation plan for an effective multi-modal transportation system within and throughout the City. This Transportation Element will prioritize and aid in implementation of the Urban Trails Master Plan.

Vehicular Facilities Overview

The major roadway facilities in the city are 3rd Street (SR A1A), Beach Boulevard (US 90), and J. Turner Butler Boulevard (SR 202). SR A1A is the major north south artery through the city. The center of Jacksonville Beach is located at the junction of SR A1A and Beach Boulevard. SR A1A and J. Turner Butler Blvd. form the primary link between northeastern St. Johns County and employment centers in Jacksonville. The St. Johns County line is located slightly south of J. Turner Butler Blvd., via SR A1A. Atlantic Boulevard (SR 10) and Wonderwood Drive also provide access to Jacksonville from the northern portions of Jacksonville Beach.

Within Jacksonville Beach there is a dense network of connected local streets generally in a grid pattern, with a mix of complementary land uses in close proximity to each other. As a consequence, there is a high level of local bicycle and pedestrian activity in the city, particularly within the parts of Jacksonville Beach that are closest to the Atlantic Ocean.

Transit and Multimodal Facilities Overview

Public transportation services and facilities are provided for the City of Jacksonville Beach by the Jacksonville Transportation Authority (JTA). Two transit routes serve the City; Route 10 generally serves SR A1A, from South Beach Regional Shopping Center to the south, and north to Neptune Beach before

continuing west to downtown Jacksonville. The First Coast Flyer (Red Line) serves Beach Boulevard and the street network around Jacksonville Beach City Hall. This route continues west to downtown Jacksonville.

The City of Jacksonville Beach has no port, aviation, or rail facilities within its boundaries.

Existing and Projected Land Use and Socioeconomic Data

The base year for this study has been established as 2019, the latest year for which both land use and traffic count data are available. Long range analyses were considered for planning purposes; a long-range (2050) horizon was established.

As a part of this study, the 2005 land use and socioeconomic data (ZDATA) base for the Northeast Florida Regional Planning Model NERPM 2005 has been significantly revised for Jacksonville Beach to reflect 2050 conditions.

The long rang projection includes the impacts of anticipated population growth, travel trends, transit availability, and roadway network. The intent is that the growth rates capture changes in travel trends (i.e. people driving more, driving less, biking more, etc.). The growth rate encompasses not just the growth in COJB and surrounding areas, but also changes in the amount people may drive.

An increase in the number of multifamily units is expected for the City of Jacksonville Beach throughout the long-range planning horizon, although the number of single family dwelling units and hotel motel units are both expected to remain stable. Commercial and industrial employment are also expected to remain relatively unchanged in Jacksonville Beach through the planning horizon, due to the lack of land available for new development and current trends for the redevelopment of existing developed areas. Service employment is expected to increase.

Due to limited growth in single family housing within the City of Jacksonville Beach, little or no growth in school enrollment is expected. However, growth elsewhere in Duval County will ensure that existing available classroom space is fully utilized within the Jacksonville Beach study area. The traffic impacts of schools will therefore remain about the same over the planning period for this update.

II. Existing Facilities Inventory and Analyses

Roadway Inventory

Map TE-M1 is a base map that shows the arterial and collector roadways that have been addressed in this Transportation Element Update.

Table TE-T1 lists each of the roadway links, the roadway jurisdiction, and its functional classification. For 2022, the base year for this Transportation Element, Table TE-T1 lists the number of lanes and the roadway type (e.g. freeway, divided, or undivided) for each roadway addressed in the Element.

Roadway Jurisdictions

Four agencies share responsibility for the roadways in Jacksonville Beach. The JTA is responsible for construction of improvements to J. Turner Butler Boulevard (SR 202), but the Florida Department of Transportation (FDOT) is responsible for maintenance of that roadway. FDOT is responsible for maintenance and improvements to SR A1A and Beach Boulevard, although the JTA is responsible for ongoing improvements to Beach Boulevard.

As stipulated in an interlocal agreement between the City of Jacksonville Beach and the Consolidated City of Jacksonville (Duval County), the City of Jacksonville has assumed responsibility for all traffic engineering within the city limits of Jacksonville Beach except for traffic signs; as well as operations and maintenance responsibility for the following routes:

1. Ponte Vedra Blvd. from SR A1A to the St. Johns County line;
2. Penman Road north of Beach Blvd. to beyond the Jacksonville Beach city limits;
3. 2nd Avenue North. from the Intracoastal Waterway to 20th Street North; and
4. 20th Street North, from Beach Blvd. to 2nd Avenue North.

Table TE-T1: Roadway Inventory

Segment	From	To	Length (Miles)	Jurisdiction	Functional Classification	Lanes & Type
J Turner Butler Boulevard	West City limits	South Beach Pkwy.	4.80	FDOT	Freeway	4F
J Turner Butler Boulevard	South Beach Pkwy.	SR A1A/3rd St.	1.09	FDOT	Freeway	4F
Beach Boulevard	West City limits	Penman Rd.	0.87	FDOT	Principal Arterial	6D
Beach Boulevard	Penman Rd.	9th Street South	0.42	FDOT	Principal Arterial	5U
Beach Boulevard	9th Street South	SR A1A/3rd St.	0.41	FDOT	Principal Arterial	5U
Beach Boulevard	SR A1A/3rd St.	1st St.	0.14	JAX	Collector	4D
SR A1A	South City limits	JT Butler Blvd.	0.46	FDOT	Principal Arterial	4D
SR A1A	JT Butler Blvd.	Osceola Avenue	0.89	FDOT	Principal Arterial	4D
SR A1A	Osceola Avenue	13th Avenue South	0.59	FDOT	Principal Arterial	4D
SR A1A	13th Avenue South	5th Avenue South	0.52	FDOT	Principal Arterial	4D
SR A1A	5th Avenue South	Beach Blvd	0.34	FDOT	Principal Arterial	4D
SR A1A	Beach Blvd.	4th Avenue North	0.31	FDOT	Principal Arterial	4D
SR A1A	4th Avenue North	8th Avenue North	0.26	FDOT	Principal Arterial	4D
SR A1A	8th Avenue North	15th Avenue North	0.45	FDOT	Principal Arterial	4D
SR A1A	15th Avenue North	Seagate Ave.	0.32	FDOT	Principal Arterial	4D
Penman Road	(South End)	Beach Blvd.	0.46	CJB	Collector	2U
Penman Road	Beach Blvd.	8th Avenue North	0.49	JAX	Minor Arterial	3U
Penman Road	8th Avenue North	Seagate Ave.	0.85	JAX	Minor Arterial	3U
Ponte Vedra Boulevard	South City limits	SR A1A/3rd St.	0.65	JAX	Collector	2U
1st Street South	Ponte Vedra Blvd	16th Ave. South	1.10	CJB	Collector	2U
1st Street South	16th Ave. South	Beach Blvd	1.04	CJB	Collector	2U
1st St. N/16th Ave. N	Beach Blvd.	SR A1A/3rd St.	1.24	CJB	Collector	2U
South Beach Parkway	South City limits	JT Butler Blvd.	0.26	CJB	Local	2U

Table TE-T1, continued: Roadway Inventory

Segment	From	To	Length (Miles)	Jurisdiction	Functional Classification	Lanes & Type
South Beach Parkway	JT Butler Blvd.	Jacksonville Dr.	0.12	CJB	Collector	4D
South Beach Parkway	Jacksonville Dr.	Osceola Ave.	0.63	CJB	Collector	4D
9th Street South	Osceola Ave.	13th Avenue South	0.54	CJB	Collector	2U
9th Street South	13th Avenue South	Beach Blvd	0.92	CJB	Collector	2U
10th Street North	Beach Blvd.	8th Avenue North	0.50	CJB	Collector	2U
10th Street North	8th Avenue North	Seagate Ave.	0.86	CJB	Collector	2U
Roberts Drive	Seabreeze Avenue	13th Avenue South	0.24	CJB	Collector	2U
America Avenue	Jacksonville Dr.	Osceola Avenue	0.64	CJB	Collector	2U
America Avenue	Osceola Avenue	Seabreeze Avenue	0.27	CJB	Collector	2U
Fairway Lane/Seabreeze Ave.	15th Street South	Roberts Drive	0.89	CJB	Collector	2U
15th Street South	Fairway Lane	Beach Blvd.	0.68	CJB	Collector	2U
Marsh Landing Parkway	JT Butler Blvd.	South Beach Pkwy.	0.69	FDOT	Collector	2U
Sanctuary Parkway	JT Butler Blvd.	South Beach Pkwy.	0.51	FDOT	Collector	1U
Jacksonville Drive	America Avenue	Ponte Vedra Boulevard	0.85	CJB	Collector	2U
Osceola Avenue	America Avenue	1st Street South	0.94	CJB	Collector	2U
16th Avenue South	Roberts Drive	1st Street South	0.85	CJB	Collector	2U
13th Avenue South	Roberts Drive	SR A1A/3rd St.	0.68	CJB	Collector	2U
5th Avenue South	9th Street South	1st Street South	0.54	CJB	Collector	2U
3rd Avenue South	9th Street South	SR A1A/3rd St.	0.40	CJB	Collector	2U

Jurisdiction: Florida Department of Transportation (FDOT), City of Jacksonville (COJ), City of Jacksonville Beach (CJB)

Lanes and Type: Four Lane Freeway (4F), Six Lanes Divided (6D), Five Lanes Undivided (5U), Four Lanes Divided (4D), Three Lanes Undivided (3U), Two Lanes Undivided (2U), One Lane Undivided (1U)

Functional Classification of Roadways

The functional classification of a roadway reflects the type of traffic anticipated to be handled by that roadway. The functional classifications of roadways are listed in Table TE-T1.

These roadway functional classifications have been determined from roadway inventory data as documented by the Florida Department of Transportation (FDOT). No changes are proposed to the functional classification of roadways within the jurisdiction of the City of Jacksonville Beach.

Functional Classifications:

Freeway – Provides for rapid and efficient movement of large volumes of traffic between areas and across the urban area; not intended to provide land access service (J. Turner Butler Boulevard).

Principal Arterial – Carries most of the long trips made within and through an urban area; emphasizes traffic movement rather than land access; carries higher volumes of traffic than other arterial highways (Beach Blvd. and SR A1A/ Third Street).

Minor Arterial – Links collectors with principal arterials; carries a mix of short and long trips; serves both traffic movement and land access; carries more traffic than collectors and less traffic than principal arterials (Penman Road).

Collector – Links local roads with minor arterials and principal arterials; carries shorter trips; emphasizes land access; carries more trips than local roads (all other roads listed in Table TE-1 and addressed in this study, except for South Beach Parkway south of J Turner Butler Blvd.)

Local – All public roads below collector; provides access to and within subdivisions; carries lower traffic volumes than collectors. Not eligible for Federal aid transportation funding. (Except for South Beach Parkway south of J Turner Butler Blvd., local roads in Jacksonville Beach are not addressed in the Transportation Element.)

Map TE-M1: Functional Classification of Roadways

Identification of Constrained and Backlogged Roadways

Constrained Roadways

For this Transportation Element update, constrained roadways are defined as "arterial or collector roads that will not be expanded by the addition of two or more through lanes because of physical, environmental or policy constraints. Physical constraints primarily occur when intensive land use development is immediately adjacent to roads, thus making expansion costs prohibitive. Environmental and policy constraints primarily occur when decisions are made not to expand a road based on environmental, historical, archaeological, aesthetic or social impact considerations."

SR A1A, South Beach Parkway, and 9th Street South have been identified as constrained roadways.

Community leaders previously determined that they would not support any capacity improvements to A1A or to parallel minor arterial highways or collector roads. Instead, they decided to focus on transportation system management activities such as signalization improvements, new and/or improved transit services, and intersection and multimodal improvements. This Transportation Element update reflects this policy.

In accordance with this policy, this Transportation Element update identifies SR A1A, Penman Road, 9th Street South, and Ponte Vedra Blvd as Constrained Roadways.

Peak Hour Volume and Capacity Analyses

For each roadway addressed in this Element, Table TE-T2 shows its maximum service volume (as described below), the volume of peak hour traffic on that link in 2022 (as determined from actual traffic count data, adjusted as necessary), and the corresponding "v/c" (volume/capacity) ratio for that link. The "v/c" ratios shown in Table TE-2 represent 2022 peak hour traffic in relation to the "service volume" that has been determined for that link.

Congestion and Level of Service Overview

The "service volumes" listed in Table TE-T2 represent the maximum volume of peak hour traffic that can be carried on that link at the level of service that has been designated for that link. A congested link is defined as a link where the existing or forecast volume of traffic is greater than the corresponding "service volume" for that link.

According to the FDOT 2018 Quality/Level of Service Handbook, level of service (LOS) represents a qualitative assessment of a roadway's operating conditions or the average driver's perception of the quality of traffic flow. LOS is represented by one of the letters A through F, A for the freest flow and F for the least free flow.

The following generalized level of service descriptions are adapted from the level of service descriptions as documented in the Highway Capacity Manual 2000 (p. 300).

Level of Service **A** Average Speeds Influenced By Speed Limits

Level of Service **B** Average Speeds Influenced by Other Drivers

Level of Service	**C**	Stable Flow under Ideal Conditions
Level of Service	**D**	The Highest Volume That Can Be Maintained Without A Likely Breakdown In Flow
Level of Service	**E**	Capacity – Actual Operating Speeds May Vary Considerably
Level of Service	**F**	Above Capacity - Forced Flow With Unpredictable Characteristics

Roadways under the jurisdiction of the Florida Department of Transportation (FDOT), as shown in Table TE-T1, are required to maintain a level of service D, as defined and determined in the FDOT 2018 Q/LOS Handbook, in accordance with the criteria provided in the Highway Capacity Manual 2000.

Roadways under the jurisdiction of the City of Jacksonville are required to maintain a Level of Service E. The current policy of the City of Jacksonville Beach is that roadways under the jurisdiction of the City of Jacksonville Beach are required to maintain a Level of Service D.

Table TE-T2: Roadway Volume and Capacity Analyses

Segment	From	To	2022 AADT	Adopted LOS Standard	Peak Hour Service Volume	2022 Peak Hour Volumes	Volume / Capacity
J Turner Butler Boulevard	West City limits	South Beach Pkwy.	70,500	D	7,690	6,345	0.83
J Turner Butler Boulevard	South Beach Pkwy.	SR A1A/3rd St.	48,000	D	7,690	4,320	0.56
Beach Boulevard	West City limits	Penman Rd.	39,000	D	4,890	3,510	0.72
Beach Boulevard	Penman Rd.	9th Street South	29,500	D	3,250	2,655	0.82
Beach Boulevard	9th Street South	SR A1A/3rd St.	23,000	D	3,250	2,070	0.64
Beach Boulevard	SR A1A/3rd St.	1st St.	7,400	E	3,400	666	0.20
SR A1A	**JT Butler Blvd.**	**Osceola Avenue**	**40,500**	**Constrained (D)**	3,250	3,645	1.12
SR A1A	**Osceola Avenue**	**13th Avenue South**	42,000	**Constrained (D)**	3,250	3,780	1.11
SR A1A	13th Avenue South	5th Avenue South	37,000	Constrained (D)	3,250	3,330	1.02
SR A1A	5th Avenue South	Beach Blvd	37,000	Constrained (D)	3,250	3,330	1.02
SR A1A	Beach Blvd.	4th Avenue North	40,000	Constrained (D)	3,250	3,600	1.11
SR A1A	4th Avenue North	8th Avenue North	35,000	Constrained (D)	3,250	3,150	0.97
SR A1A	8th Avenue North	15th Avenue North	29,500	Constrained (D)	3,250	2,655	0.82
SR A1A	15th Avenue North	Seagate Ave.	29,000	Constrained (D)	3,250	2,610	0.80
Penman Road	(South End)	Beach Blvd.	2,000	Constrained (D)	1,125	180	0.16
Penman Road	Beach Blvd.	8th Avenue North	18,000	Constrained (E)	1,597	1,620	1.01
Penman Road	8th Avenue North	Seagate Ave.	18,000	Constrained (E)	1,597	1,620	1.01
Ponte Vedra Boulevard	South City limits	SR A1A/3rd St.	6,000	Constrained (E)	1,597	540	0.34
1st Street South	Ponte Vedra Blvd	16th Ave. South	550	D	1,125	50	0.04
1st Street South	16th Ave. South	Beach Blvd	2,500	D	1,125	225	0.20
South Beach Parkway	South City limits	JT Butler Blvd.	12,400	D	1,125	1,116	0.50
South Beach Parkway	JT Butler Blvd.	Jacksonville Dr.	12,400	D	2,925	1,116	0.38
South Beach Parkway	Jacksonville Dr.	Osceola Ave.	12,400	D	2,925	1,116	0.38

SV – Service Volume
PH – Peak Hour
Constrained – Roadways that will not be expanded due to physical, environmental, or policy constraints.

Table TE-T2, continued: Roadway Volume and Capacity Analyses

Segment	From	To	2022 AADT	Adopted LOS Standard	PH SV	2022 PH Volumes	Volume / Capacity
9th Street South	Osceola Ave.	13th Avenue South	12,400	Constrained (D)	1,125	1,116	0.99
9th Street South	13th Avenue South	Beach Blvd	12,400	Constrained (D)	1,125	1,116	0.99
10th Street North	Beach Blvd.	8th Avenue North	400	D	1,125	36	0.03
10th Street North	8th Avenue North	Seagate Ave.	400	D	1,125	36	0.03
Roberts Drive	Seabreeze Avenue	13th Avenue South	1800	D	1,125	162	0.14
America Avenue	Jacksonville Dr.	Osceola Avenue		D	1,125	0	0.00
America Avenue	Osceola Avenue	Seabreeze Avenue		D	1,125	0	0.00
Fairway Lane/Seabreeze Ave.	15th Street South	Roberts Drive	1700	D	1,125	153	0.14
15th Street South	Fairway Lane	Beach Blvd.	1,600	D	1,125	144	0.13
Marsh Landing Parkway	JT Butler Blvd.	South Beach Pkwy.	13,500	E	1,521	1,215	0.80
Sanctuary Parkway	JT Butler Blvd.	South Beach Pkwy.	10,000	E	913	900	0.99
Jacksonville Drive	America Avenue	Ponte Vedra Boulevard	5,900	D	1,125	531	0.47
Osceola Avenue	America Avenue	1st Street South	5,400	D	1,125	486	0.43
16th Avenue South	Roberts Drive	1st Street South	1,000	D	1,125	90	0.08
13th Avenue South	Roberts Drive	SR A1A/3rd St.	3,000	D	1,125	270	0.24
5th Avenue South	9th Street South	1st Street South	150	D	1,125	14	0.01
3rd Avenue South	9th Street South	SR A1A/3rd St.	210	D	1,125	19	0.02
Shetter Avenue	9th Street South	15th Street South	2,590	D	1,125	233	0.21
4th Avenue North	10th Street North	1st Street North	800	D	1,125	72	0.06
19th St. S/6th Ave. N	Beach Blvd.	Penman Rd.	460	D	1,125	41	0.04
8th Avenue North	10th Street North	SR A1A/3rd St.	1,600	D	1,125	144	0.13
15th Avenue North	10th Street North	SR A1A/3rd St.	2,000	D	1,125	180	0.16
Seagate Avenue	West City limits	SR A1A/3rd St.	4,500	D	1,125	405	0.36

SV – Service Volume
PH—Peak Hour
Constrained – Roadways that will not be expanded due to physical, environmental, or policy constraints

The City of Jacksonville Beach lies wholly within the urbanized area of Jacksonville. Therefore, the service volumes shown in Table TE-T2 are derived only from the tables and capacity analysis procedures that are included for urban arterials and urban collector highways in the FDOT 2018 Q/LOS Handbook.

The service volumes shown in Table TE-T2 are to be used only for general planning applications. For more specific planning applications, computer models are available that would more accurately reflect the conditions that may affect the service volume for a particular roadway link.

Public Transit

Public transportation services and facilities are provided for the City of Jacksonville Beach by the Jacksonville Transportation Authority (JTA). A transit hub is located near Beach Boulevard and A1A, at City Hall. Two transit routes intersect near Beach Boulevard and SR A1A (3rd Street), as shown in the Existing Transit Facilities map (Map TE-M2). There are no dedicated Park-and-Ride facilities in Jacksonville Beach, but off-street parking facilities exist in the vicinity of both of these hubs.

In addition to the regular fixed bus transit routes, JTA provides RediRide, which is an on-call transportation service serving most of the City. Patrons can call and schedule rides within the Beaches Zone, and can connect to existing transit routes. The Existing Transit Facilities map (TE-M2) illustrates the existing mass transit network, including the trolley route within Jacksonville Beach.

Map TE-M2: Jacksonville Transportation Authority (JTA) Existing Transit Routes

Bicycle and Pedestrian Facilities

Within Jacksonville Beach there is a dense network of connected local streets generally laid out in a grid pattern, with a mix of complementary land uses in close proximity to each other. Although neither has been quantified, there is a high level of local bicycle and pedestrian activity in the City. The presence of this traffic may be attributable to:

- Residential development densities that are generally above five dwelling units per acre north of Beach Blvd.,
- The configuration of complementary land uses focused on a downtown area,
- A very high level of street connectivity, including many streets carrying relatively low levels of vehicular traffic, and
- The demographic characteristics of an economically stable mixed income beach community.

The City of Jacksonville Beach has enacted several measures in support of nonvehicular traffic, including an on-going program of construction and reconstruction of sidewalks, downtown streetscape improvements, and most recently, adoption of the Urban Trails Master Plan. Measures for improving the walkability of two major streets in Jacksonville Beach, 9th Street South and Penman Road, have recently been implemented. A downtown visioning process has also led to recommendations for additional measures to be undertaken to improve walkability in the downtown area.

Although few streets within the City have marked bike lanes, the residential, low-volume nature of many of the City streets, combined with the grid network, create opportunities for bicyclists to travel throughout the City. Bike lanes and sharrows have been added to 1st Street, recognizing the heavier bicycle traffic volumes on that street.

The City has also identified through its Urban Trails Master Plan (2022), land use policies designed to align urban form and transportation to facilitate walking and bicycling as predominant modes.

Parking Facilities

Off street public parking facilities are located in the coastal area of the City north of Beach Boulevard. Including spaces for handicapped persons, there are a total of over 500 parking spaces available in these facilities, most of which are available for long term public use. The remaining spaces are subject to short term parking restrictions, or are reserved for permit parking or for parking by city employees. The City recently implemented payment requirement for City lots, though parking for residents is free.

There are more than 150 additional right-angle parking spaces available at the beachfront ends of many of the east-west roadways in Jacksonville Beach, including at the ends of 2nd Avenue South, 1st Avenue South, Beach Blvd., 6th Avenue North, 8th Avenue North, and 9th Avenue North. In Jacksonville Beach, the demand for off-street parking peaks on weekends in the summer, due to daytime beach visits.

The City of Jacksonville Beach also provides off street parking at its park facilities, which are located throughout the city.

Parking Management is a major initiative within the City of Jacksonville Beach. Because the personal automobile has become the primary means of mobility for most, and because transportation and land use policies up to now have placed the automobile in a central role, it is necessary to implement objectives and policies that better integrate parking into the overall strategies designed to foster a more multimodal environment.

Some areas to consider when creating parking strategies that blend the auto more readily into a multimodal environment include: on-street parking location and design, off-street parking location and design, remote parking, shared parking, structure (garage) parking and parking fees.

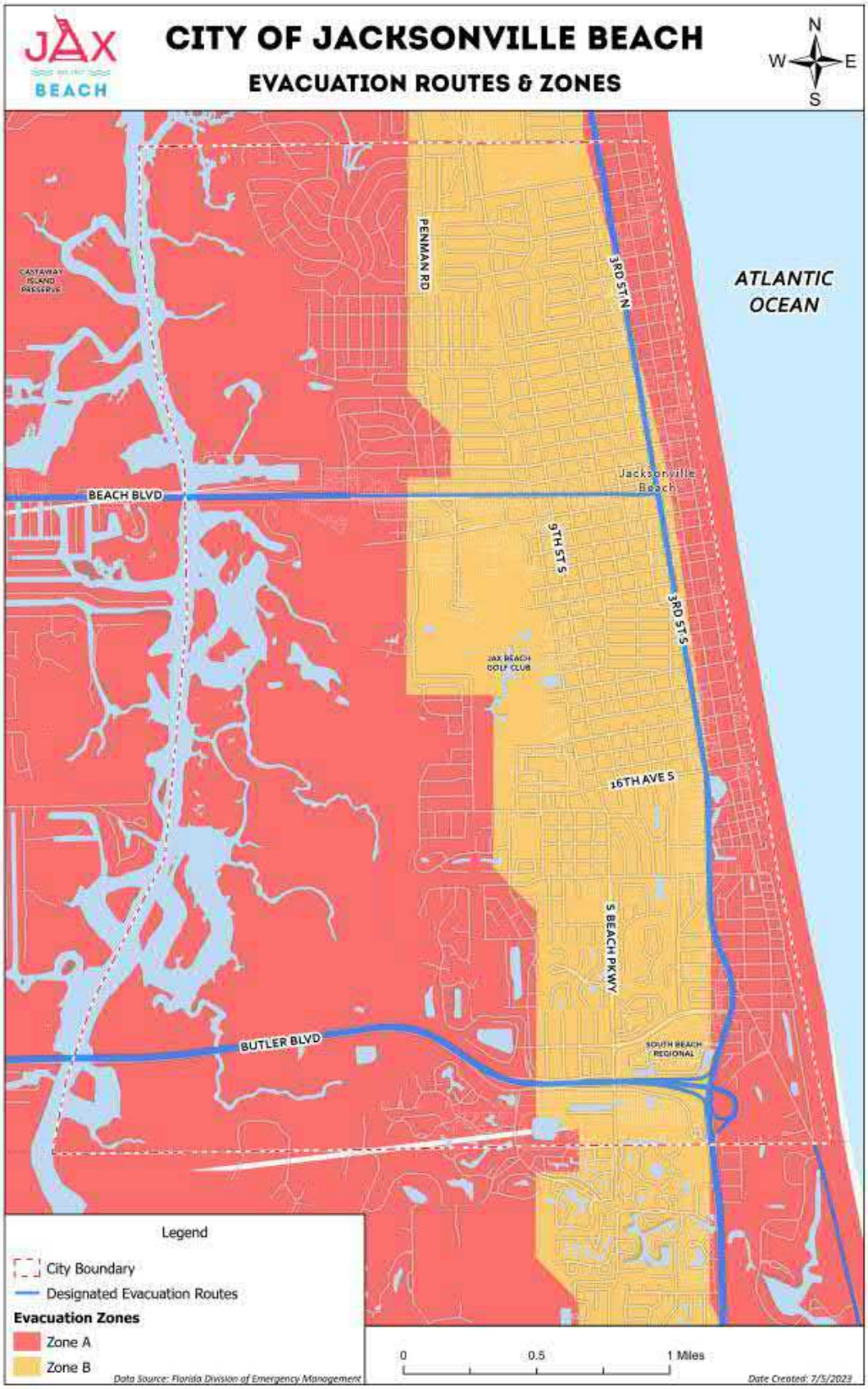
Intermodal Facilities Analysis

Within the City of Jacksonville Beach there are no significant rail, water or air terminal facilities. Although the JTA serves areas within Jacksonville Beach where off street parking is available, dedicated park and ride facilities are not currently located within the City of Jacksonville Beach.

Disaster Route Identification

The Northeast Florida Regional Council prepared the regional Northeast Florida Hurricane Evacuation Study. The aforementioned study provides the basis for the delineation of evacuation zones and associated evacuation routes for the region. The evacuation zones and routes for Jacksonville Beach are published by the Florida Division of Emergency Management. Jacksonville Beach is within Evacuation Zones A and B. The evacuation routes are Beach Boulevard, J. Turner Butler Boulevard, Atlantic Boulevard and SR A1A. The most-recent evacuation plans provided by local and state officials should be utilized for planning purposes, as they may be updated. The map in Figure TE-M3, as provided by the Florida Division of Emergency Management, includes all evacuation routes and zones for the City.

Map TE-M3: Evacuation Routes & Zones



III. Future Needs Analysis

Summary of Traffic Forecasting Methodology

A key component of this update of the Transportation Element has been the development of future traffic forecasts. These forecasts have been used to identify the potential need for new and modified transportation facilities, including new street connections, additional roadway capacity, and multimodal improvements, including new transit services and facilities and new urban trails facilities.

These forecasts were developed based on output from the year 2050 NERPM network model. The output from the NERPM transportation network model was modified as necessary to reflect the current functional operation of the major thoroughfares within the City of Jacksonville Beach as well as throughout Duval and adjacent counties, and to reflect expected growth trends.

The future projections were modified if necessary to reflect reasonable ancillary growth in instances where the future volumes appear to be lower than expected, or lower than existing volumes. For roadways without model data, a growth rate was applied, based on a review of existing and modeled future volumes on an area-wide basis.

Identification and Overview of Recent and Ongoing Projects

The North Florida Transportation Planning Organization (TPO) lists mobility cost feasible improvements with the City. The following improvements have been listed in the 2050 Long Range Transportation Plan (LRTP).

- Penman Road – Beach Boulevard to Atlantic Boulevard – Reconstruct (2 Lane) + Trail
- Mayport Road – Atlantic Boulevard to Dutton Island Road – Context Sensitive Solutions
- Atlantic BRT Line – Along Atlantic Boulevard and SR A1A

No other major roadway capacity improvements have been identified.

Future Traffic Deficiency Analysis

Based on NERPM model outputs for the roadways in Jacksonville Beach that have been included in the Transportation Element, Table TE-T3 shows the projected peak hour traffic volumes for 2050. Table TE-T3 also shows the service volumes for each roadway link, based on the adopted level of service for each roadway link, its functional classification, and the number of through travel lanes. Table TE-T3 also shows each link's v/c ratio, i.e. the ratio of projected 2050 traffic in relation to the corresponding service volume for that roadway link.

The data in Table TE-T3 indicate that the following links that can be expected to become congested by 2050:

- J Turner Butler Blvd, from the west study boundary to South Beach Parkway
- Beach Boulevard from Penman Road to 9th Street South
- SR A1A throughout the City with the exception of 8th Avenue North to 15th Avenue North
- Penman Road from Beach Boulevard to Seagate Avenue
- Ponte Vedra Boulevard
- Sanctuary Parkway

Most of the future congestion in Jacksonville Beach will occur on roadways that have been designated as constrained. Without the option of adding new lanes to existing highways, and given that rights of way are not available for new highways in new corridors in Jacksonville Beach, the City should continue to focus on overall mobility improvements, such as enhanced pedestrian and bicycle infrastructure, and through coordination with local agencies for enhanced and increased transit service.

Table TE-T3: 2050 Traffic and Service Volumes

Segment	From	To	Adopted LOS Standard	Peak Hour Service Volume	2050 Peak Hour Volumes	2050 Volume/ Capacity	2050 Peak Hour LOS
J Turner Butler Blvd	**West City limits**	**South Beach Pkwy**	**D**	7,690	8,108	1.05	E
J Turner Butler Boulevard	South Beach Pkwy.	SR A1A/3rd St.	D	7,690	5,520	0.72	C
Beach Boulevard	West City limits	Penman Rd.	D	4,890	4,304	0.88	D
Beach Boulevard	Penman Rd.	9th Street South	D	3,250	3,637	1.12	F
Beach Boulevard	9th Street South	SR A1A/3rd St.	D	3,250	2,187	0.67	C
Beach Boulevard	SR A1A/3rd St.	1st St.	E	3,400	1,739	0.54	C
SR A1A	**JT Butler Blvd.**	**Osceola Avenue**	**Constrained (D)**	3,250	4,685	**1.44**	**F**
SR A1A	**Osceola Avenue**	**13th Avenue South**	**Constrained (D)**	3,250	4,184	1.23	F
SR A1A	**13th Avenue S.**	**5th Avenue South**	**Constrained (D)**	3,250	4,010	1.23	F
SR A1A	**5th Avenue South**	**Beach Blvd**	**Constrained (D)**	3,250	4,036	1.24	F
SR A1A	**Beach Blvd.**	**4th Avenue North**	**Constrained (D)**	3,250	3,521	1.08	F
SR A1A	**4th Avenue North**	**8th Avenue North**	**Constrained (D)**	3,250	3,496	1.08	F
SR A1A	**8th Avenue North**	**15th Avenue North**	**Constrained (D)**	3,250	3,038	0.93	D
SR A1A	**15th Avenue N.**	**Seagate Ave.**	**Constrained (D)**	3,250	3,425	1.05	F
Penman Road	(South End)	Beach Blvd.	Constrained (D)	1,125	230	0.20	C
Penman Road	**Beach Blvd.**	**8th Avenue North**	**Constrained (E)**	**1,597**	1,679	1.05	E
Penman Road	**8th Avenue North**	**Seagate Ave.**	**Constrained (E)**	**1,597**	1,718	1.08	F
Ponte Vedra Boulevard	South City limits	SR A1A/3rd St.	Constrained (E)	1,597	1,901	1.19	F
1st Street South	Ponte Vedra Blvd	16th Ave. South	D	1,125	441	0.39	E
1st Street South	16th Ave. South	Beach Blvd	D	1,125	623	0.55	E
South Beach Parkway	South City limits	JT Butler Blvd.	D	1,125	713	0.63	E
South Beach Parkway	JT Butler Blvd.	Jacksonville Dr.	D	2,925	1,426	0.49	C
South Beach Parkway	Jacksonville Dr.	Osceola Ave.	D	2,925	1,426	0.49	C

Table TE-T3, continued: 2050 Traffic and Service Volumes

Segment	From	To	Adopted LOS Standard	Peak Hour Service Volume	2050 Peak Hour Volumes	2050 Volume/ Capacity	2050 Peak Hour LOS
9th Street South	Osceola Ave.	13th Avenue South	Constrained (D)	1,125	1,051	0.93	D
9th Street South	13th Avenue South	Beach Blvd	Constrained (D)	1,125	973	0.86	D
10th Street North	Beach Blvd.	8th Avenue North	D	1,125	1,046	0.93	D
10th Street North	8th Avenue North	Seagate Ave.	D	1,125	585	0.52	D
Roberts Drive	Seabreeze Avenue	13th Avenue South	D	1,125	207	0.18	C
America Avenue	Jacksonville Dr.	Osceola Avenue	D	1,125	594	0.53	D
America Avenue	Osceola Avenue	Seabreeze Avenue	D	1,125	1,053	0.94	D
Fairway Lane/Seabreeze Ave.	15th Street South	Roberts Drive	D	1,125	568	0.50	D
15th Street South	Fairway Lane	Beach Blvd.	D	1,125	1033	0.92	D
Marsh Landing Parkway	**JT Butler Blvd.**	**South Beach Pkwy.**	**E**	1,521	1552	1.02	E
Sanctuary Parkway	**JT Butler Blvd.**	**South Beach Pkwy.**	**E**	913	1150	1.26	E
Jacksonville Drive	America Avenue	Ponte Vedra Blvd.	D	1,125	679	0.60	D
Osceola Avenue	America Avenue	1st Street South	D	1,125	621	0.55	D
16th Avenue South	Roberts Drive	1st Street South	D	1,125	308	0.27	C
13th Avenue South	Roberts Drive	SR A1A/3rd St.	D	1,125	290	0.26	C
5th Avenue South	9th Street South	1st Street South	D	1,125	18	0.02	C
3rd Avenue South	9th Street South	SR A1A/3rd St.	D	1,125	281	0.25	C
Shetter Avenue	9th Street South	15th Street South	D	1,125	298	0.26	C
4th Avenue North	10th Street North	1st Street North	D	1,125	92	0.08	C
19th St. S/6th Ave. N	Beach Blvd.	Penman Rd.	D	1,125	53	0.05	C
8th Avenue North	10th Street North	SR A1A/3rd St.	D	1,125	341	0.30	D
15th Avenue North	10th Street North	SR A1A/3rd St.	D	1,125	230	0.20	C
Seagate Avenue	West City limits	SR A1A/3rd St.	D	1,125	517	0.46	D

Map TE-M4: Projected 2050 Peak Hour Level of Service (LOS)

The New TCEA

In response to the 2009 SB 360 legislation, in addition to the general recognition of the unintended consequences of conventional concurrency, the City of Jacksonville Beach has established a Traffic Concurrency Exemption Area (TCEA) option. Specifically, new TCEA standards enable local governments to address the following ten major criteria in their comprehensive plans designating the TCEA:

- Support mobility
- Fund mobility
- Support the purpose of the designation
- Include alternative modes
- Demonstrate how mobility will be provided
- Address urban design
- Identify appropriate land use mixes
- Establish minimum intensity and density standards for development
- Address network connectivity
- Mitigate impacts to the SIS

When evaluating comprehensive plan amendments establishing new TCEAs, reviewers will be interested in how the City's plan 1) Addresses the areas mentioned above; 2) The mechanisms that implements the plan's objectives; and 3) If and how the City plans to measure the effects of the plan in terms of performance measures. These performance measures will include data and analysis that addresses the size, boundaries, and purpose of the TCEA, the short- and long-term need for the TCEA, the impacts created by the TCEA, on the surrounding network, and finally how the plan's multimodal strategies will improve mobility within the TCEA.

Mobility Planning

The City of Jacksonville Beach embarked on a city-wide multi-use trail master plan in 2021. The goal was to provide City residents and visitors of all ages and abilities a high-quality network of urban trail infrastructure that would serve as a multi-modal transportation network, as well as provide a system for activity and recreation. The result was adoption of the Urban Trails Master Plan in November 2022. The Urban Trails Master Plan provides the framework for implementing a comprehensive trail system. The plan identifies links between neighborhoods, beaches, parks, commercial focal points, and natural areas, as well as trail routes, loops, braids, and connectors.

Implementation of the Urban Trails Master Plan will provide the City of Jacksonville Beach with a comprehensive, accessible, and connected urban trails system that can increase pedestrian and cyclist activity and safety in the City, as well as achieve the City's transportation vision. Therefore, implementation of the Urban Trails Master Plan should be a high priority for the City and is a key strategy in the associated Transportation Element of the 2050 Comprehensive Plan. The existing bike lanes and sidewalks are depicted in Map TE-M5, as provided by the City of Jacksonville and Florida Department of Transportation (FDOT).

Map TE-M5: Existing Bike Lanes & Sidewalks

Intelligent Transportation Systems

Intelligent transportation systems (ITS) consist of the use of electronics, communications, and information processing technology to improve all aspects of transportation, including public transportation. ITS applications can have positive effects on transportation system efficiency and sustainability, safety, the environment, congestion, and traveler mobility and convenience. These "intelligent" roads, highways, cars, trucks, public transportation, and freight systems are actively managed as an overall system to achieve the greatest benefits. It can take many forms. For example, travelers experience ITS improved mobility when they:

- Enter a congested freeway via a metered on-ramp;
- Ride a bus that turns traffic lights green as it approaches;
- Pay tolls or parking fees electronically;
- See an electronic message sign along the highway;
- Use a smart phone or other personal electronic device to find transit routes and schedules or to check arrival times;

ITS additionally provides less visible solutions that:

- Help traffic managers detect and respond to accidents promptly;
- Enable traffic managers to adjust speed limits and signal timings, deploy emergency services, and reroute traffic in response to varying conditions;
- Help freight move efficiently by providing a single manifest for shipments being transported by multiple modes;

Disaster Route Evaluation

The City of Jacksonville Beach will continue to recognize the delineated evacuation routes, which are consistent with the updated Northeast Florida Regional Hurricane Evacuation Study. These routes are not expected to change significantly in the future, as new east west roads out of the City of Jacksonville Beach are not programmed for construction.

III. Housing Element DIA

Housing Element
Data Inventory and Analysis

Introduction

Pursuant to 2022 FS 163.3177(f)2, the housing element shall include: A data inventory and analysis (DIA) that influences the overarching vision, intent, and strategies that will guide housing development within the City of Jacksonville Beach. The City's housing trends and needs are evaluated in this analysis to ensure a proper mix of housing types are available to accommodate the diverse housing required to achieve a livable community.

Population

Estimates and projections by Shimberg Center for Housing Studies, based on 2010 and 2020 U.S. Census data and population projections by the Bureau of Economic and Business Research, University of Florida ("BEBR") indicate the City of Jacksonville Beach to have a 2021 population of 24,075. The 2020 population estimates were 23,830 which indicate a 1.03% increase in population. The projections estimate a 2025 resident population in Jacksonville Beach of 25,070 residents. Compared to a 2021 population estimate of 24,075, this indicates a 4% increase in population. The population estimates show that the growth rate slows after 2025, however, by 2050 it is projected 27,242 people will reside in Jacksonville Beach.

Seasonal Population

Due to the City of Jacksonville Beach being a coastal community that experiences tourism, and consequently seasonal population change, it is important to consider the seasonal population estimates in the housing data inventory and analysis. Per the U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates, it is estimated that 990 units in Jacksonville Beach are vacant units for seasonal, recreational, or occasional use. Based on the average household size of 2.19 persons per household, 990 units equates to a seasonal population of an estimated 2,168 people.

Housing Inventory

This section deals with the characteristics and conditions of the existing housing stock in the City. In order to compile this analysis, the primary sources of data include the U.S. Census Bureau and the American Community Survey (ACS). These specific resources were utilized as they are the most current and accurate information available.

Tables HE-T1 through HE-T-14 of this section provide an inventory and comparison of housing characteristics for the City of Jacksonville Beach and Duval County. Data appearing for Duval County represents the entire county, including all unincorporated and incorporated areas as well as Jacksonville Beach.

Dwelling Units by Structure Type

The table below denotes a comparison of dwelling units by structure type for the City of Jacksonville Beach. Single family homes make up the majority of inventoried housing units within the City, although a balance of Multi-family unit types exist. Single-family attached and mobile homes represent a much smaller portion of the types of housing which were inventoried in the 2020 Census.

Table HE-T1: Housing Units by Type, 2016-2020, 5-Year Estimates

Housing Units by Type, 2016-2020 5-Year Estimates	City of Jacksonville Beach	
	Units	Percent
Single-Family Detached	6,218	56.3%
Single-Family Attached	651	5.9%
Multi-Family	4,170	37.8%
Mobile Home[1] or other type of housing	15	0.1%
Total Occupied Housing Units	**11,054**	**100%**

Source: 2020 US Census, 2016-2020 American Community Survey 5-Year Estimates

The table below (Table HE-T2 #) displays a comparison of dwelling units by structure type for the City of Jacksonville Beach when compared to Duval County. Single family housing comprises the majority of housing in Jacksonville Beach at 56%, although multifamily provides a balance of housing types at 37%. This is best compared to Duval County where single family detached housing is the most prominent at 61%.

Table HE-T2: Housing Units by Type, City and Duval County, 2016-2020, 5-Year Estimates

Housing Units by Type, 2016-2020 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent	Units	Percent
Single-Family Detached	6,218	56.3%	228,587	61.8%
Single-Family Attached	651	5.9%	19,460	5.3%
Multi-Family	4,170	37.8%	106,516	28.8%
Mobile Home[2] or other type of housing	15	0.1%	15,141	4.1%
Total Occupied Housing Units	**11,054**	**100%**	**369,704**	**100%**

Source: 2020 US Census, 2016-2020 American Community Survey 5-Year Estimates

Dwelling Units by Tenure

A comparison between owner-occupied dwelling units and renter-occupied dwelling units in Jacksonville Beach and Duval County is presented in Table HE-T3. As depicted below, approximately 68% of the City's occupied dwelling units are occupied by the owner as compared to 57% in the County. The County has a slightly larger percentage of renter-occupied units at 42%, as compared to 31% in Jacksonville Beach.

Table HE-T3: Housing Units by Tenure, 2016-2020, 5-Year Estimates

Housing Units by Tenure, 2016-2020 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent	Units	Percent
Owner-occupied	7,572	68.5%	211,163	57.1%
Renter-occupied	3,482	31.5%	158,541	42.8%
Total Occupied Housing Units	**11,054**	**100%**	**369,704**	**100%**

Source: 2020 US Census, 2016-2020 American Community Survey 5-Year Estimates

[1] It should be noted, as of 2023, there are not mobile homes within the City limits. This 2020, data from the U.S. Census is incorrect as the mobile homes indicated in this table are within the County boundary.
[2] It should be noted, as of 2023, there are not mobile homes within the City limits. This 2020, data from the U.S. Census is incorrect as the mobile homes indicated in this table are within the County boundary.

Household Size

The 2016-2020 American Community Survey (ACS) 5-year Estimates states the average household size within the City is 2.24 persons per owner occupied unit and 1.84 persons per renter-occupied unit. Table HE-T4 lists households according to the number of persons comprising a household in Jacksonville Beach and in the County.

Table HE-T4: Persons per Household

Persons per Household	Jacksonville Beach	Duval County
Total Occupied Households	11,054	369,704
1-person household	3,885	117,435
2-person household	4,453	124,421
3-person household	1,757	60,150
4-or-more person household	959	67,698

Source: 2020 US Census, 2016-2020 American Community Survey 5-Year Estimates

Housing Vacancy

Based on the 2016-2020 American Community Survey (ACS) 5-year Estimates, the City experienced a vacancy rate of 14.3% for all housing units, a figure higher than that experienced by the County, which had a 10.5% vacancy rate. Table HE-T5 shows the number of vacant housing units according to the circumstances creating vacant units.

Table HE-T5: Vacant Housing Units by Type, 2016-2020, 5-Year Estimates

Vacant Housing Units by Type, 2016-2020 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent of total housing units	Units	Percent of total housing units
Total Housing Units	12,905	100%	413,084	100%
Total Vacant Housing Units	1,851	14.3%	43,380	10.5%
Vacant Units For Rent	452	3.5%	11,613	2.8%
Rented, Not Occupied	0	-	3,025	0.7%
For Sale Only	82	0.6%	4,209	1.0%
Sold, Not Occupied	46	0.3%	2,741	0.6%
For Seasonal, Recreational, or Occasional Use	940	7.2%	4,833	1.1%
Vacant Units for Migrant Workers	0	-	0	-
Other Vacant Units	331	2.5%	16,959	4.1%

Source: 2020 US Census, 2016-2020 American Community Survey 5-Year Estimates

Housing Age

Table HE-T5 compares the age of year-round housing units in the City of Jacksonville Beach and Duval County. The majority of year-round housing unit construction in both the City and County took place between 2000-2009. As denoted below, a large majority of Jacksonville Beach's housing stock (63.6%) was constructed between 1970 and 2009.

Table HE-T6: Year Structures Built, 2016-2020, 5-Year Estimates

Year Structure Built, 2016-2020 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent	Units	Percent
2014 or later	1,027	8.0%	19,009	4.6%
2010 to 2013	417	3.2%	11,841	2.9%
2000 to 2009	2,317	18.0%	74,347	18.0%
1990 to 1999	1,676	13.0%	63,268	15.3%
1980 to 1989	2,086	16.2%	64,901	15.7%
1970 to 1979	2,120	16.4%	53,242	12.9%
1960 to 1969	972	7.5%	41,365	10.0%
1950 to 1959	1,260	9.8%	44,661	10.8%
1940 to 1949	510	4.0%	19,180	4.6%
1939 or earlier	520	4.0%	21,270	5.1%
Total	**12,905**	**100%**	**413,084**	**100%**

Source: 2020 US Census, 2016-2020 American Community Survey 5-Year Estimates

Monthly Housing Rent

Table HE-T7 compares the monthly gross rents for specified renter-occupied housing units in the City with Duval County totals for the year 2021. The median gross rent in the City of Jacksonville Beach is approximately $1,675 as compared to $1,154 in Duval County.

Table HE-T7: Gross Rent, 2017-2021, 5-Year Estimates

Gross Rent, 2017-2021 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent	Units	Percent
Less than $500	360	10.6%	8,837	5.5%
$500-$999	116	3.4%	45,360	28.4%
$1,000-$1,499	792	23.3%	68,871	43.0%
$1,500-$1,999	1,236	36.4%	28,616	17.9%
$2,000-$2,499	543	16.0%	6,292	3.9%
$2,500-$2,999	194	5.7%	1,090	0.7%
$3,000 or More	159	4.7%	929	0.6%
Total	**3,400**	**100%**	**159,995**	**100%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Monthly Cost of Owner-Occupied Units

The median monthly owner cost in the City of Jacksonville Beach is approximately $2,043 as compared to $1,471 in Duval County. The monthly owner costs with a mortgage are shown in Table HE-T8. This provides context in terms of the value of owning a home and affordability of owning a home when compared to renting.

Table HE-T8: Owner Costs (with a mortgage), 2017-2021, 5-Year Estimates

Owner Costs (with a mortgage), 2017-2021 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Housing Units with a Mortgage	Percent	Housing Units with a Mortgage	Percent
Less than $500	22	0.5%	1,648	1.1%
$500-$999	306	6.3%	26,670	18.2%
$1,000-$1,499	827	17.1%	47,646	32.5%
$1,500-$1,999	1,175	24.3%	35,774	24.4%
$2,000-$2,499	981	20.3%	17,347	11.8%
$2,500-$2,999	688	14.3%	7,815	5.3%
$3,000 or More	829	17.2%	9,491	6.5%
Total	**4,828**	**100%**	**146,391**	**100%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Value of Owner-Occupied Housing Units

The median home value in the City of Jacksonville Beach is $402,700 as compared to $211,200 in Duval County. The owner-occupied units by value are shown in Table HE-T9.

Table HE-T9: Owner-Occupied Units by Value, 2017-2021, 5-Year Estimates

Owner-Occupied Units by Value 2017-2021 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent	Units	Percent
Less than $50,000	104	1.5%	12,783	5.8%
$50,000-$99,999	97	1.4%	22,988	10.4%
$100,000-$149,999	264	3.7%	29,343	13.3%
$150,000-$199,999	163	2.3%	38,189	17.2%
$200,000-$299,999	858	12.0%	59,635	26.9%
$300,000-$499,999	3,336	46.6%	40,359	18.2%
$500,000-$999,999	1,880	26.3%	13,963	6.3%
$1,000,000 or more	454	6.3%	4,189	1.9%
Total	**7,156**	**100%**	**221,449**	**100%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Household Income

The household income levels for City of Jacksonville Beach, compared to Duval County, are shown in Table HE-T10. The median household income and per capita income for the City is higher than Duval County, and the persons in poverty is lower than that of Duval County.

Table HE-T10: Income, 2017-2021, 5-Year Estimates

Income, 2017-2021 5-Year Estimates	City of Jacksonville Beach	Duval County
Median Household Income (2018 Dollars)	80,026	53,473
Per Capita Income (2018 Dollars)	54,763	30,012
Persons in Poverty, in percent	6.9%	15.5%

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Low- to Moderate-Income Households

The Duval County Consolidated Plan 2021-2025 defines extremely low, very low, low, and moderate income households. These are based upon the most recent information available from the USHUD and is adjusted annually and by family size. The following definitions will be used:

- Extremely Low Income: Households at or below 30% of the area median income (AMI)
- Very Low Income: Households between 30% to 50% of the area median income (AMI)
- Low Income: Households between 50% to 80% of the area median income (AMI)
- Moderate Income – Households between 80% to 100% of the area median income (AMI)

According to the Florida Housing Coalition[3], "eligible household is said to be living in affordable housing when it spends no more than 30% of its income on either rent or mortgage payments. There is an assumption that if a very low to moderate income family is spending more than 30% of its income on housing costs, the family will be cost burdened and not have enough money left over to pay for items such as transportation, food, clothing, and healthcare."

Ratio of Income to Housing Cost

The ratio between housing costs and income within the City of Jacksonville Beach and Duval County are denoted in Table HE-T11, Table HE-T12, and Table HE-T13 below. Affordable housing is determined by comparing the cost of housing to household income. Florida Statutes defines affordable housing as monthly rents or monthly mortgage payments including taxes, insurance, and utilities do not exceed 30% of the median adjusted gross annual income for households.

Rent-to Income Ratio

Rent as a percentage of income for City of Jacksonville Beach compared to Duval County is shown in Table HE-T11. According to Census data the highest percentage of renters in both City of Jacksonville Beach and Duval County are paying 35% or more of their income for housing. This makes affordability an issue for renters in both the City and the County.

[3] Source: Florida Housing Coalition Guidebook, *Affordable Housing in Florida*, https://www.flhousing.org/wp-content/uploads/2019/03/Affordable-Housing-in-Florida-Book-WEB.pdf

Table HE-T11: Gross Rent as a Percentage of Household Income, 2017-2021, 5-Year Estimates

Gross Rent as a Percentage of Household Income 2017-2021 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent	Units	Percent
Less than 15%	656	20.3%	15,464	10%
15% to 19.9%	410	12.7%	20,115	13%
20% to 24.9%	463	14.3%	20,201	13%
25% to 29.9%	547	16.9%	18,727	12.1%
30% to 34.9%	190	5.9%	17,857	11.5%
35% or more	973	30%	62,864	40.5%
Not Computed	260	-	10,331	-
Total	**3,239**	**100%**	**155,228**	**100%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Mortgage Costs to Income Ratio

The monthly mortgage costs-to-income ratio for both the City of Jacksonville Beach and Duval County are shown in Table HE-T12 and Table HE-T13. The majority of owners with and without a mortgage in both the City of Jacksonville Beach and Duval County are paying less than 30% of their income for housing.

Table HE-T12: Owner Costs as a Percentage of Housing Income (with a mortgage), 2017-2021, 5-Year Estimates

Owner Costs as a Percentage of Household Income (with a mortgage) 2017-2021 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent	Units	Percent
Less than 20%	2,499	52.7%	66,029	45.5%
20 to 24.9%	665	14.0%	22,820	15.7%
25 to 29.9%	175	3.7%	15,363	10.6%
30 to 34.9%	312	6.6%	10,580	7.3%
35% or more	1,089	23.0%	30,319	20.9%
Not computed	88	-	1,280	-
Total	**4,740**	**100%**	**145,111**	**100%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Table HE-T13: Owner Costs as a Percentage of Housing Income (without a mortgage), 2017-2021, 5-Year Estimates

Owner Costs as a Percentage of Household Income (without a mortgage) 2017-2021 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent	Units	Percent
Less than 10%	1,056	46.4%	37,102	50.5%
10 to 14.9%	445	19.6%	12,931	17.6%
15 to 19.9%	260	11.4%	7,185	9.8%
20 to 24.9%	135	5.9%	4,335	5.9%
25 to 29.9%	35	1.5%	3,065	4.2%
30 to 34.9%	33	1.5%	1,561	2.1%
35% or more	311	13.7%	7,340	10.0%
Not computed	53	-	1,539	-
Total	**2,275**	**100%**	**73,519**	**100%**

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Cost Burden

Cost-burdened households pay more than 30% of household income on rent or mortgage costs. Data for this section has been supplied by the Florida Housing Data Clearinghouse. Based on 2020 estimates, the data indicates that the majority of households in the City are spending less than 30% of their income on housing.

Table HE-T14: Housing Cost Burden, Duval County and the City of Jacksonville Beach

		Housing Cost Burden		
Geography	Household Income	30% or less	30.1-50%	More than 50%
Duval County	30% AMI or less	6,723	4,875	30,872
Duval County	30.01-50% AMI	11,068	15,992	16,355
Duval County	80.01-100% AMI	29,864	9,057	1,535
Duval County	50.01-80% AMI	33,725	28,079	6,936
Duval County	Greater than 100% AMI	170,096	10,547	1,334
Jacksonville Beach City	30% AMI or less	110	125	367
Jacksonville Beach City	30.01-50% AMI	156	110	237
Jacksonville Beach City	50.01-80% AMI	408	482	433
Jacksonville Beach City	80.01-100% AMI	578	271	120
Jacksonville Beach City	Greater than 100% AMI	6,479	715	141

Source: Estimates and projections by Shimberg Center for Housing Studies, based on U.S. Department of Housing Development, Comprehensive Housing Affordability Strategy (CHAS) dataset and population projections by the Bureau of Economic and Business Research, University of Florida
Source: Florida Housing Data Clearinghouse 2020

Inventory of Standard/Substandard Units

The Census provides indicators for substandard housing by measuring overcrowding and the lack of complete plumbing, kitchen, or heating equipment. Overall substandard housing makes up a very small percentage of the overall occupied units in both the City and the County. An analysis of substandard housing is displayed in Table HE-T15.

Table HE-T15: Substandard Housing, 2017-2021, 5-Year Estimates

Substandard Housing 2017-2021 5-Year Estimates	City of Jacksonville Beach		Duval County	
	Units	Percent of Total Occupied Units	Units	Percent of Total Occupied Units
Overcrowded (1.01 or More Persons per Room)	43	0.4%	8,774	2.3%
No Fuel Used	108	1%	3,751	1%
Lacking Complete Kitchen Facilities	11	0.1%	2,200	0.6%
Lacking Complete Plumbing Facilities	43	0.4%	909	0.2%
• Total	• 205	• 1.9%	• 15,635	• 4.1%

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Government Subsidized Housing

The City of Jacksonville's Housing and Community Development Division (HCDD) administers all HUD funded programs within the Jacksonville Duval Consolidated Government's jurisdiction which the City of Jacksonville Beach is incorporated in. The following are government subsidized housing resources that can be utilized by the City of Jacksonville Beach.

- Florida Housing Finance Corporation: A public corporation of the State of Florida that offers homeownership programs, multifamily development programs, predevelopment and demonstration project loans, and technical assistance for local governments.
- Community Development Block Grant (CDBG): Provides funds through the Small Cities Program for capital improvements.
- HOME Investments Program (HOME): Provides direct financial assistance through a down payment assistance program.
- Housing Opportunities for Persons with AIDS (HOPWA): Provides assistance to persons living with HIV/AIDS to maintain their housing through housing subsidy assistance.
- Section 8: provides rental subsidies to very low, low, and moderate-income households. The rental limits are set each year by the U.S. Department of Housing and Urban Development (HUD).
- Rural and Farm Worker Housing: No rural or farm workers housing is required within the City, and no housing is designated for rural or farming purposes.

Mobile and Manufactured Homes

According to the U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates there are no mobile homes or manufactured homes within the city limits.

Housing for Special Needs

Special housing needs are necessary for the elderly, children, and those who have physical or emotional needs that require special residential accommodations. Such residential accommodations may or may not demand on-site professional medical assistance, twenty-four-hour assistance, or other special facilities. In some cases, special housing situations can involve a group of unrelated residents that share living accommodations because their physical or emotional needs require special services or assistance from other group members.

The City of Jacksonville Beach recognizes the importance of providing housing for special needs. The State of Florida has adopted laws that control local government regulation of certain residential facilities serving special needs groups. These laws ensure that there are adequate sites for group homes in every community throughout the State (Chapter 419, F.S.). Special housing accommodations for Jacksonville Beach's residents can include nursing homes and group homes. Group homes can be further defined as a community residential home, adult family care homes, assisted living facilities, and family foster homes. These special housing facilities are generally defined as follows:

Nursing Homes: Any institution, building residence, private home or other place, whether operated for profit or not, which provides 24-hour nursing care, personal care, or custodial care for persons not related to the owner or manager by blood or marriage. The person under such care resides overnight at the home. See Section 400.021(12) F.S.

Assisted Living Facilities: A facility designed to provide personal care services in the least restrictive and most home-like environment. These facilities can range in size from one resident to several hundred and may offer a wide variety of personal and nursing services designed specifically to meet an individual's personal needs. See Section 400.402, F.S.

Adult Family Care Homes: A full-time, family-type living arrangement, in a private home, under which a person who owns or rents the home provides room, board, and personal care, on a 24-hour basis, for no more than five disabled adults or frail elders who are not relatives. See Section 400.618, F.S.

Community Residential Home: A dwelling unit licensed to serve clients of the Department of Children and Family Services, which provides a living environment for seven to fourteen unrelated residents who operate as the functional equivalent of a family, including such supervision and care by supportive staff as may be necessary to meet the physical, emotional, and social needs of the residents. See Section 419.001, F.S.

Family Foster Home: A private residence in which children who are unattended by a parent or legal guardian are provided 24-hour care. Such homes include emergency shelter family homes, family foster group homes, and specialized foster homes for children with special needs. A person who cares for a child of a friend for a period not to exceed 90 days, a relative who cares for a child and does not receive reimbursement for such care from the state or federal government, or an adoptive home which has been approved by the department or by a licensed child-placing agency for children placed for adoption is not considered a family foster home. See Section 409.175 FS.

Table HE-T16: Foster Homes in the City of Jacksonville Beach

Development Name	Street Address	City	Zip Code	County	Housing Program	Total Units	Assisted Units
Jax Beach Scattered Sites	933 1st Ave. S	Jacksonville Beach	32250	Duval	Project-Based Vouchers	152	67
Pablo Hamlet	1600 Shetter Ave.	Jacksonville Beach	32250	Duval	Housing Credits 9%; Rental Assistance/HUD; Section 207/223(f)	154	154
Pablo Towers	115 3rd St. S	Jacksonville Beach	32250	Duval	Rental Assistance/HUD	199	168

Source: Comprehensive Housing Affordability Strategy (CHAS) dataset

Historic Properties: With this Comprehensive Plan update, a new Historic Preservation Element was added that addresses historic properties in the City of Jacksonville Beach. There are two (2) cemeteries and approximately 515 structures recorded on the Florida Master Site File list with the State. In addition, there are two (2) historic structures listed on the National Register of Historic Places: the Jacksonville Beach Lifeguard Station and the Casa Marina Hotel.

Future Housing Requirements

This section analyzes the anticipated number of new households and the housing needs created by this additional population. The private sector housing delivery process and its ability to meet this demand are also to be examined. In particular, the housing needs expected to be generated by additional very low, low, and moderate-income households are analyzed.

The population and housing projections used in this analysis estimated a 2025 resident population in Jacksonville Beach of 25,070 residents. Compared to a 2021 population estimate of 24,075, this indicates a 4% increase in population. The population estimates show that the growth rate slows after 2025, however, by 2050 it is projected 27,242 people will reside in Jacksonville Beach. Further population estimates are detailed in Table HE-T17 below.

Table HE-T17: Population Projections

Year	2025	2030	2035	2040	2045	2050
Population	25,070	25,983	26,525	26,852	27,064	27,242
Increase as a Percentage		3.64%	2.09%	1.23%	0.79%	0.66%

Source: Estimates and projections by Shimberg Center for Housing Studies, based on 2010 and 2020 U.S. Census data and population projections by the Bureau of Economic and Business Research, University of Florida.

The 2021 American Community Survey estimates the average household size for the City of Jacksonville Beach is 2.19 persons per household. Average household size is assumed to continue its historic decline, but at a slower rate as a minimal size is approached. The 14% overall vacancy rate registered in 2020 is assumed to hold through the projection period, allowing for both reasonable flexibility within the normal housing market and for housing held for seasonal and vacation use.

During the period of 2025 to 2050 it is projected that 2,172 additional people will reside in the City, creating the need for approximately 992 additional resident households.

It is anticipated that housing development in the future will be very similar to those experienced over the past several years. The factors which have caused Jacksonville Beach's growth are likely to continue to shape its future, with many of the same results. Households which are relatively affluent will comprise most of the new households in the future, as they have recently, assuming no drastic changes in market forces.

The private housing market is capable of providing housing for the great majority of Jacksonville Beach's anticipated new households. With relatively low growth rates, sufficient property exists for redevelopment which can address the needed new housing. The private market has shown its capacity to provide housing for the three upper income groups of renters and owners, as indicated by the rent and value data from the 2017-2021 Census cited earlier. Rents below $450 and values below $55,000 will likely require some governmental assistance to be feasible. But the numbers of these households expected to be added in Jacksonville Beach are very modest and within the capacity of recently created state affordable housing initiatives. Another affordable housing option for the City was enacted July 1, 2023 with Senate Bill 102; commonly referred to as the *Live Local Act*. This bill incentivizes affordable housing by allowing multifamily and mixed-use residential as allowable uses in any area zoned for commercial, industrial, or mixed use if at least 40% of the residential units in a proposed multifamily rental development are, for a period of at least 30 years, affordable as defined in s. 420.0004. This bill could help the City of Jacksonville Beach offer more affordable options for those who work in the City but are unable to affordable to live there.

It should be noted, this data and analysis was conducted between 2022-2023. A global pandemic, as a result of the COVID-19 virus (during 2019-2021), may skew the population and housing data in this report. Currently, Florida particularly is experiencing a higher than anticipated population growth. According to the U.S. Census, "Florida was the fastest-growing state in 2022, with an annual population increase of 1.9%, resulting in a total resident population of 22,244,823[4]."

[4] https://www.census.gov/newsroom/press-releases/2022/2022-population-estimates.html

IV. Public Facilities Element

Wastewater Management Subelement DIA

Public Facilities Element

Wastewater Management System Subelement Data Inventory and Analysis

Introduction

This subelement addresses wastewater collection, treatment, and disposal facilities serving Jacksonville Beach (City). Pervious and existing conditions are evaluated, future needs are analyzed, and goals, objectives, and policies are established for wastewater management in the City for the 2023 to 2050 planning period.

In 2010/2011, the City's Wastewater Treatment Facility (WWTF) underwent significant improvements. In order to meet Total Maximum Daily Load (TMDL) standards set forth by the Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP), the City has constructed a new Advanced Wastewater Treatment Facility (AWT) to meet the maximum total nitrogen level of 3 parts per million (PPM) for treated effluent.

The City is permitted to utilize approximately 25% of its treated effluent for private municipal access irrigation, while discharging the remaining reuse quality water through a shared outfall pipe network north through Neptune Beach and Atlantic Beach. The shared outfall force main discharges into the St. John's River near the Mayport Jetties. An additional surface water discharge to Cradle Creek is permitted for wet weather events.

Biosolids are removed from the system and transported to an approved landfill facility operated by Duval County. The City's sanitary sewer facilities have a negligible impact upon adjacent natural resources. In addition, as specified elsewhere in the subelement, the commitment to reduce the number of septic tank disposal systems in a timely fashion will reduce the impact even further

Existing Service Area

Approximately 99 percent of the developed portion of the City is served by the wastewater management system. Other than the shared treated effluent force main described below, Jacksonville Beach does not provide service or have any wastewater facilities located outside of the City limits. Generalized land uses in the service area are shown in Table FLU-T2, Existing Land Use, in the Future Land Use Element.

The wastewater management system is comprised of a central wastewater treatment facility, gravity collection mains, manholes, lift stations, and force mains.

Existing Wastewater Collection System

The collection system is a network of gravity sewer lines, force mains, and lift stations which collect wastewater from residential, commercial, and other establishments, and convey it to the WWTF for processing. Map PFWM-M1 shows the location of the collection system network and other major system components. Significant components of the sewer system are described in Table PFWM-T1.

The collection system is comprised of approximately 97 miles of gravity sewer ranging from 4-inches in diameter to 30-inches. Additionally, the collection system includes 19 miles of force main ranging from 4-inches in diameter to 24-inches. Collection systems typically rely in large part upon gravity-induced flow; however, due to Jacksonville Beach's relatively level terrain, pumps are used to augment the gravity flow. The use of lift stations and force mains allows sewage to be conveyed under pressure. This is necessary

to deliver sewage collected from areas along the oceanfront and the Intercoastal Waterway that are near sea level to the centrally located treatment plant situated on somewhat higher ground.

Map PFWM-1: Existing Wastewater System

There are currently thirty-eight lift stations and associated force mains in operation. The lift stations form a network which is built around five major lift stations (Stations #1, 2, 3, 10, and 14) which collect sewage from a grouping of subdistrict and satellite stations and convey the wastewater directly to the WWTF via force mains. The current status of the transmission system and recommendations for maintains its viability as a contributor to the desired level of service is covered in the "Lift Stations" section later in this subelement.

The lift stations are a critical component of the sewage collection system but as noted in later sections they are not considered to be a major element when assessing the City's ability to maintain an acceptable level of service for current and future populations. While they do require periodic maintenance, repairs, modernization, and expansion if they were not properly sized to fully serve and area; the lift stations themselves are not seen as a system component which merits the detailed planning and analysis given to the treatment plant.

Table PFWM-T1 provides a description of the sewer lift stations within the City. For each component, the capacity and location of the lift station is listed.

Table PFWM-T1: Wastewater Management System Components: Sewage Collection and Transmission System

System Component	Flow	Year Built	Location
Sewer Mains	116 Miles	1930	System-Wide
Lift Station #1	2,125 gpm	-	363 2nd Avenue S.
Lift Station #2	3,000 gpm	-	699 N 4th Street
Lift Station #3	2,400 gpm	-	1024 S 4th Street
Lift Station #4	600 gpm	-	1606 S 1st Street
Lift Station #5	700 gpm	-	50 37th Avenue S
Lift Station #6	310 gpm	-	18 Sandra Drive
Lift Station #7	300 gpm	-	301 18th Avenue N
Lift Station #8	270 gpm	-	825 18th Avenue N
Lift Station #9	500 gpm	-	1850 Tanglewood Dr
Lift Station #10	3,300 gpm	-	300 Palm Tree Road
Lift Station #11	400 gpm	-	251 N. 20th Street
Lift Station #12	170 gpm	-	1744 Marshside Road
Lift Station #13	500 gpm	-	49 Fairway Lane
Lift Station #14	2,800 gpm	-	912 S. 10th Street
Lift Station #15	260 gpm	-	11 Hopson Road
Lift Station #16	260 gpm	-	68 Evans Drive
Lift Station #17	650 gpm	-	3351 Anhinga Court
Lift Station #18	250 gpm	-	901 N. 22nd Street
Lift Station #19	250 gpm	-	33 Rosewood Drive
Lift Station #20	250 gpm	-	400 15th Avenue N
Lift Station #21	160 gpm	-	4235 Marsh Landing Blvd
Lift Station #22	39 gpm	-	Wingate Park South
Lift Station #23	100 gpm	-	1290 N 12th Street
Lift Station #24	310 gpm	-	3750 S 3rd Street
Lift Station #25	240 gpm	-	1781 The Greens Way
Lift Station #26	125 gpm	-	1098 N 17th Street
Lift Station #27	118 gpm	-	3780 Sanctuary Way N
Lift Station #28	100 gpm	-	1241 Blue Heron Lane N

System Component	Flow	Year Built	Location
Lift Station #29	165 gpm	-	190 March Landing Parkway
Lift Station #30	<100 gpm	-	4400 South Beach Parkway
Lift Station #31	39 gpm	-	1100 5th Avenue S
Lift Station #32	39 gpm	-	South Penman/Wingate Park
Lift Station #33	150 gpm	-	Ocean Way Unit 2 S
Lift Station #34	20 gpm	-	323 Lions Club Road
Lift Station #35	124 gpm	-	Jardin De Mer (Bldg. 128-131)
Lift Station #37	<100 gpm	-	2770 Seagate Avenue
Lift Station #38	80 gpm	-	1581 Marsh Inlet Court

Source: Senate Bill 64 Compliance Plan, 2022
City of Jacksonville Beach Sewer Master Plan, 2021

Existing Level of Service

The adopted level of service for wastewater treatment is 100 gallons per capita per day. The present treatment volume required of the City's WWTF is below its rated capacity of 4.5 mgd. As of 2022, the WWTF was treating an average of approximately 1.61 mgd of wastewater, well below its design capacity.

Historical Treated Wastewater Flows

Between 2018 and 2022, the annual average wastewater treated daily ranged from 1.61 mgd in 2022 to 2.49 mgd in 2021 as presented in Table PFWM-T2. Sewage treatment levels have improved as direct result of sewer line rehabilitation, line replacement, and lift station rehabilitation efforts which have reduced system inflow and infiltration.

Table PFWM-T2: Volume of Wastewater Treated (in Million Gallons)

Month	Average Daily Flow (gpd)				
	2018	2019	2020	2021	2022
January	2.35	2.24	1.89	1.85	1.69
February	2.56	2.16	1.80	2.87	1.38
March	2.08	2.01	1.66	2.33	2.18
April	2.11	1.58	N/A	1.95	1.68
May	2.02	1.58	1.67	1.82	1.31
June	2.71	1.69	3.23	1.94	1.18
July	2.24	1.65	2.28	2.70	1.76
August	2.42	1.78	2.28	3.95	1.43
September	1.71	1.96	2.75	3.71	2.58
October	1.48	2.39	2.84	2.62	1.57
November	1.69	2.06	2.18	2.19	1.53
December	2.68	2.10	1.92	1.91	1.00
Average	2.17	1.93	2.23	2.49	1.61

Source: Monthly Operating Reports

Existing Wastewater Treatment System

The City owns and operates the Jacksonville Beach Wastewater Treatment Facility, which is located at 901 10th Street South, between 8th and 10th Avenue South in Jacksonville Beach. The facility treats wastewater collected from the entire City of Jacksonville Beach to achieve advanced wastewater treatment requirements under FDEP Permit Number FL0020231 (issued November 2018). The effluent flow from the WWTF has a permitted capacity of 4.5 mgd annual average daily flow (AADF). The facility generally consists of the following:

- Influent and Headworks
    - A master pump station consisting of four submersible pumps
    - Screening chamber consisting of two traveling bar screens
- Treatment
    - Four sequential batch reactors (SBRs) with four mixer, aerators in each basin and three blowers that provide oxygen for the system
    - Four UltraScreen filters
- Disinfection
    - Two chlorine contact chambers
    - Two rectangular re-aeration basins consisting of six modules
    - Gas chlorination facilities (August 2023 project to convert from gas chlorine to sodium hypochlorite)
    - Dechlorination facilities with sulfur dioxide gas
- Solids Handling
    - Three aerobic digestors which are aerated by three blowers (one redundant)
    - Belt filter press and conveyor system (September 2023 project to install dual belt filter presses and new conveyor system)
    - Disposal at City of Jacksonville Trail Ridge Landfill
- Disposal
    - Effluent transfer pump station to St. John's River with three centrifugal pumps
    - Public Access Reuse System
- Two vertical turbine pumps and hydropneumatic tank at the WWTP (internal)
- Public access reuse irrigation system at City of Jacksonville Beach Golf Course with three vertical turbine pumps.

The WWTF discharges effluent through three outfalls: surface water discharge to St. John's River, surface water discharge to Cradle Creek (limited wet weather discharge), and a land application discharge to a slow rate municipal access system.

According to the monthly operating reports, the WWTP, as of December 31, 2022, is treated a daily average of approximately 1.61 mgs of wastewater, well below the design capacity of 4.5 mgd. The City has consistently met discharge permit requirements.

Existing Effluent Disposal System

Transportation of treated effluent to the mouth of the St. John's River via the effluent force main commenced on April 15, 1987. The existing 24-inch main was sized to convey effluent from Jacksonville Beach, plus the projected daily flows from Neptune Beach and Atlantic Beach. All Beaches communities are connected to the effluent main. The proportionate capacity allocated to the three users is: Jacksonville Beach – 60 percent; Neptune Beach – 13 percent; and Atlantic Beach – 27 percent. A portion of the effluent flow equalization basins originally built in conjunction with the force main were removed to allow for the construction the new AWT plant. The remaining basins have ben converted to chlorine contact and reaeration basins.

Table PFWM-T3: Wastewater Disposal System

System Component	Measure	Year Built	Location
WWTF	4.5 mgd	1969, 1988, 2011	910 S 10th Street
Effluent Force Main	6.5 mgd	1987	910 S 10th Street

Reclaimed Water System

The Public Works Department operates as the only reclaimed water provider within the City, with a permitted capacity of 4.5 mgd, of which approximately 1.123 mgd is treated for municipal access reuse. Reclaimed water is used to irrigate portions of the Jacksonville Beach Golf Course, several football and baseball fields, and the landscaped areas of the police station and the Operation and Maintenance buildings. Reclaimed water provided to the Jacksonville Beach Golf Course is discharged into the Golf Course Pond. Past projects have extended a reclaimed water pipe to the Kirkland and Warren Smith Cemeteries in the area around Beach Boulevard for irrigation and extending reclaimed water to the portions of South Jacksonville Beach is currently being planned. The total reclaimed water use during the 2021-2022 reporting period was 0.538 mgd average.

The City has the ability to provide reclaimed water through slow-rate municipal access sites which have an existing permitted capacity of 1.123 mgd monthly average flow as shown below.

Table PFWM-T4: Permitted Capacity for Slow-Rate Public Access Reuse

User Name	Acres	Capacity (MGD)
Jacksonville Beach Municipal Golf Course	84.0	0.70
Wingate Park	10.4	0.047
Police Station, O&M Grounds, Ball Fields	3.0	0.01
Jacksonville Beach WWTF – Belt Press, Irrigation of Landscape	-	0.03
Other Users	-	0.336
Total		1.123

Source: City of Jacksonville Beach Senate Bill 64 Compliance Plan, 2022

A Reuse Master Plan was completed in 2010, in 2013 a supplement to this master plan was completed and will be utilized as a basis for increasing reuse and reducing wastewater discharge quantities.

Senate Bill 64

In June 2021 the Florida legislature passed Senate Bill 64 (SB64) which requires domestic wastewater utilities to submit a plan for eliminating nonbeneficial surface water discharge of treated wastewater effluent to the Florida Department of Environmental Protection (FDEP), with the goal of providing reclaimed water as a way to discharge treated wastewater effluent. To comply with SB64 the City created the Senate Bill 64 Compliance Plan, which was originally submitted to FDEP in October 2021, and amended in March 2022.

As outlined in the Compliance Plan, the City is working independently of the other beach communities that share the effluent force main and is also working on a possible shared solution with the other beach communities to present a shared approach to meeting the requirements of SB64. The Plan also provides a list of proposed projects and alternatives to address the requirements of SB64. These proposed projects and alternatives will be evaluated by an engineering firm to determine the appropriate approach to satisfy the requirements of SB64 and be economical for the City.

The City currently has a permitted plant capacity of 4.5 mgd, with a permitted 1.123 mgd toward municipal reuse. SB64 requires the City to have 90% beneficial effluent utilization by 2032, which is approximately 2.927 mgd of additional effluent utilization. The City has developed several solutions both independently and in conjunction with Atlantic Beach and Neptune beach. While these solutions are evaluated the City will increase reuse quantity to reduce the amount of discharge that must be addresses as part of the SB64 compliance. Some potential solutions being investigates are initiating indirect potable reuse to increase aquifer recharge, direct potable reuse, and deep-well injection. The next step for the City is to complete a study on the suggested projects and options to determine feasibility, practicality, constructability, and impacted to completion.

Existing Biosolids Handling Practices

Sludge is the send end-product of the treatment process. Presently, sludge is dewatered by a belt filter press and is hauled to a landfill.

Septic Systems

The City's public sanitary sewer system is projected to serve all residents by 2050. Given the requirements of the City's subdivision regulations, new growth areas will be developed only within areas served by the public sewer system. Additionally, recent regulations promulgated by the City's Bio-Environmental Services Division effectively require that all existing septic tanks be phased out. This means that in addition to accommodating the needs of the new population, the public sanitary system will also have to serve those currently on septic systems.

Lift Stations

The current status of the City's lift stations are described as follows:

Lift Station #1: Service area is totally built-out, however, proposed downtown redevelopment could bring some additional flow. No capacity increase will be necessary. Routine maintenance, replacement of worn components, and reconfiguration of controls will suffice to maintain operational capacity.

Lift Station #2: The area served by this lift station is essentially built-out. In 2021 the lift station underwent rehabilitation which included hydraulic capacity increases.

Lift Station #3: The area served by this station is essentially developed and increased flows are not anticipated. This lift station will be reconstructed as part of an EPA grant in 2011/2012.

Lift Station #4: The area served by this station is completely built-out and no redevelopment is likely in the foreseeable future. The force main from this lift station manifolds into the force main from Lift Station No. 5. The pumps will need to be upsized in the future.

Lift Station #5: This lift station was upgraded in 1993 as part of a large inflow/infiltration correction program on the south end of the beach. The force main from this lift station manifolds into the force main from Lift Station No. 4. The pumps will need to be upsized in the future, and electrical components will need to be rehabilitated. Rehabilitation efforts are expected to be complete in Fiscal Year 2024

Lift Station #6: The area served by this station is completely built-out and no redevelopment is likely in the foreseeable future. Only minor adjustments are required for maintenance purposes.

Lift Station #7: The area served by this station is substantially developed, but some redevelopment may take place in the waterfront area. In 2021 the lift station underwent rehabilitation which included hydraulic capacity increases.

Lift Station #8: The area served by this station is built-out and no redevelopment is anticipated. This lift station is scheduled for a complete rehabilitation including civil, mechanical, and electrical upgrades in Fiscal Year 2023.

Lift Station #9: The area served by this station is substantially developed. The pumps will need to be upsized in the future, and electrical components will need rehabilitation. Rehabilitation efforts are expected to be completed in Fiscal Year 2028.

Lift Station #10: The area served by this station is substantially developed. The pumps will need to be upsized in the future, and electrical components will need rehabilitation.

Lift Station #11: Replacement lift station constructed in 1990. This lift station will need rehabilitation of electrical components as well as piping, fittings, and valves.

Lift Station #12: The area served by this lift station is substantially developed. It was constructed in 1988, and will need to have piping, fittings, valves, and electrical components rehabilitated.

Lift Station #13: The area served by this facility is substantially built-out. Originally constructed in 1960, but completely replaced in 1982. The station was upgraded and the trunk line increased in 1992. The lift station will need minor maintenance to the piping fittings and valves, but will need a full rehabilitation of electrical components. Rehabilitation efforts are expected to be completed in Fiscal Year 2026

Lift Station #14: The area served by this station is essentially developed. Constructed in 1970 and replaced in 1990. This lift station has been upgraded to the Master Influent Pump Station.

Lift Station #15: The area served by this station is essentially developed. Constructed in 1969 and upgraded in 1990. Capacity is adequate at this time.

Lift Station #16: The area served by this lift station is essentially developed. New in 1974 and operating adequately to serve its subarea.

Lift Station #17: The area served by this lift station is essentially developed. Constructed in 1989 to replace unit originally built in 1975. In 2021 this station underwent rehabilitation of civil, mechanical, and electrical components.

Lift Station #18: The area served by this lift station is essentially developed. It was built in 1980 and upgraded in 1990. The pumps will need to be upsized in the future, and electrical components will need rehabilitation. Rehabilitation efforts are expected to be completed in Fiscal Year 2029.

Lift Station #19: The area served by this lift station is essentially developed. This 1983 lift station was upgraded in 1993 and the force main relocated to Lift Station #9. Additional upgrades will be needed to the electrical components as well as the pumps.

Lift Station #20: This lift station was eliminated in 1991. A new Lift Station #20 was constructed in 1992 at 15th Avenue and 4th Street North and was upgraded in 2009. This lift station is scheduled to be decommissioned with gravity flow being rerouted to LS-7 and basin LS-2.

Lift Stations #21: This lift station will need maintenance on the piping fittings and valves to address corrosion. It will also need full electrical rehabilitation.

Lift Station No. 23: The area served by this lift station is essentially developed. In 2021 this lift station underwent rehabilitation which included civil, mechanical, and electrical components.

Lift Station No. 24: This lift station was constructed in 1990. The pumps will need to be upsized in the future, and electrical components will need rehabilitation.

Lift Station No. 25: This lift station was constructed in 1991. The pumps will need to be upsized in the future, and electrical components will need rehabilitation. Rehabilitation efforts are expected to be completed in Fiscal Year 2025

Lift Station No. 26: This lift station was constructed in 1991. The pumps will need to be upsized in the future, and electrical components will need rehabilitation.

Lift Station No. 27: This lift station was constructed in 1994 and should not require any upgrade to provide adequate capacity for future development. Corrosion was noted during the 2021 Sewer Master Plan evaluation as well as electrical rehabilitation needs.

Lift Station No. 28: This lift station was redesigned in Fiscal Year 2022, with reconstruction scheduled for Fiscal Year 2023.

Lift Station No. 29: In 2021 this lift station underwent rehabilitation which included civil, mechanical, and electrical components.

Lift Station No. 30: This lift station will need civil, mechanical, and electrical rehabilitation in the future.

Lift Station No. 33: This lift station was redesigned in Fiscal Year 2022, with reconstruction scheduled for Fiscal Year 2023.

Lift Station No. 35: This lift station will need civil, mechanical, and electrical rehabilitation in the future. Rehabilitation efforts are expected to be completed in Fiscal Year 2027

Lift Station No. 37: This lift station will need civil, mechanical, and electrical rehabilitation in the future.

Existing Collection System Deficiencies

The older portions of the gravity sewer system can have issues during peak flow conditions. Some lines are surcharged due to inflow and infiltration, or because of substandard slope.

The collection system continues to experience a minor amount of inflow and infiltration through deteriorating pipes, open joints, leaking manholes, and other problems relating primarily to the age of the system. A systematic program of televising and cleaning existing sewer lines and coating of manholes is ongoing.

Infiltration And Inflow Analysis

A problem affecting the general performance of the City's sanitary sewer system has been infiltration and inflow into the collection lines. Infiltration is the entrance of ground water into the sewer system through

breaks or cracks in the pipelines or structures. The principal causes of infiltration are the degradation and deterioration of older sewer lines, manholes, and sewer services. Inflow occurs as stormwater enters the sewer system through direct connections such as rood leaders, catch basins, and yard drains. Infiltration and inflow can be problems since extraneous water reduces the capacity of the system to convey and treat wastewater. Infiltration and Inflow also result in higher operating and maintenance costs.

Since 1980, Jacksonville Beach has tried to reduce infiltration and inflow from its system. The City has a program of televising, cleaning, and sealing lines and manholes suspected of having infiltration problems, in addition the City has a sliplining program to restore structural stability to pipes. The City recently included a number of projects into their Capital Improvement Plan to address infiltration and inflow.

Assessment Of Wastewater Treatment Needs

This section analyzes the need for facility improvements between 2023 and 2050. A hydraulic study was performed for the treatment plant and 37 lift stations in 2021 and the City is in the process of developing a wastewater master plan. Improvement needs are based on the existing and projected population demands. Existing and future land use mix must also be a consideration in projecting future requirements; however, because of the extent of development already in place, this factor is secondary to the demands resulting from population growth. The performance of facilities in meeting health and safety objectives has also been considered.

The City provides public sewer service to approximately 99 percent of its population. The remaining one percent are served by individual septic systems. Capacity needs have been assessed for those facilities that generally have City-wide impacts. Additionally, the potential performance of all facilities has been examined.

Sewage Treatment Plant Capacity Assessment

The future demand of the City's treatment plant was estimated by using resident per capita wastewater flow generation (150 gallons per capita, per day) as the level of service standard. The population projections used to determine future demand are as presented in the Future Land Use subelement. Table PFWM-3 provides the projected wastewater generation and treatment capacity for the 2023 to 2050 planning timeframe. Data provided in Table PFWM-T2 provides that 2022 an average of 1.61 mgd of wastewater was treated at the WWTP, while the 2022 population was 23,642. The use of 150 gallons per capita per day level of service, then, is considered a conservative figure for planning purposes, and one that takes into account both the non-residential and visitor components of overall wastewater generation in the City.

Table PFWM-T5: Projected population, Wastewater Flows, and Treatment Capacity

	2022	2025	2030	2032
Resident Population	23,624	25,070	25,983	
Wastewater Generation	3.15	3.21	3.31	3.35
Treatment Capacity (mgd)	4.50	4.50	4.50	4.50

Source: City of Jacksonville Beach Senate Bill 64 Compliance Plan, 2022

Sewage Treatment Plant Residual Capacity

As specified in the City's FDEP permit, the WWTP, including residuals treatment facilities, is rated for a flow of 4.5 mgd AADF. The effluent equalization basins, effluent pumps, and effluent force main are also designed for an AADF of 4.5 mgd, the planned ultimate capacity of the treatment facility.

Sewage Treatment Plant Performance Assessment

The WWTP treats wastewater collected from the City to achieve advanced wastewater treatment requirements under FDEP Permit Number FL0020231. The facility generally consists of an influent headworks, treatment, disinfection, solids handing, and disposal Based on discharge monitoring reports from January 2018 to December 2022 the facility if consistently meeting all permit requirements. Additionally, based on the discharge monitoring reports the historic monthly average flows from January 2018 to December 2022 the facility of operating at approximately 46% of permitted capacity and will have sufficient capacity available for the current customer base population as well as for future growth and development.

Summary And Recommendations

Any expansion to the treatment plant's 4.5 mgd capacity is not expected to be needed in the next 20 years, given the reductions in inflow and infiltration and the largely built-out condition of the City, in terms of future growth. One other factor could influence the need for expansion would be any revisions in regulatory agency rules.

A consultant to the City prepared a Reuse Master Plan in February 2010. The City is implementing portions of this reuse plan in various construction projects, and as part of certain St. John's River Water Management District commitments.

Deficiencies which need to be corrected, as listed in the Sewer Master Plan, are as follows:

- Electrical and Mechanical improvements to lift stations as described in the Sewer Master Plan and listed above
- Cleaning, degreasing, and televising portions of the wastewater gravity system as ongoing maintenance

Additionally, continue to evaluate projects that support the Senate Bill 64 Compliance Plan which include:

- Expanding reuse to include usage for HVAC operations for local hospitals
- Expanding reuse as defined in the Reuse Master Plan Supplement dated February 2013
- Expanding ruse to residential/commercial operations
- Initiating indirect ruse by the means of aquifer recharge injection
- Initiating effluent discharge into stormwater ponds, basins, or other storage structure to increase storage or irrigation use
- Initiating indirect potable reuse to increase aquifer recharge
- Initiating potable reuse by utilizing advanced disinfection and blending reuse into the influent of potable water plants, including possible reverse osmosis or other approved methods.

Solid Waste Subelement DIA

Public Facilities Element

Solid Waste Management Subelement
Data Inventory And Analysis

Introduction

The intent of this subelement is to inventory and analyze the current status of the solid waste management system in Jacksonville Beach. Estimates of present waste generation rates as well as projections of the amount of waste expected to be generated as a result of the continued growth and development of the City are included. The inventory and analysis is extremely limited, however, because the City contracts all of the collection activity to private franchise haulers and the City of Jacksonville (COJ), as the county government serving Jacksonville Beach, is responsible for solid waste disposal. The City (use of the word "City" refers to Jacksonville Beach throughout this subelement) retains some responsibility for trash collection from roadsides and in the vicinity of the beach.

Existing Solid Waste Management System

In 2021, approximately 2,588 tons of combined residential and commercial solid waste was collected monthly. This results in an average solid waste collection rate of approximately 7.24 pounds per person per day. This estimated generation rate is based on permanent population estimates measured against data maintained by the Public Works Department for all waste collected in Jacksonville Beach, including household garbage, yard waste, recycling, and commercial dumpsters and compactors.

The collection, recycling and disposal of commercial, residential and other solid wastes generated within Jacksonville Beach's corporate boundaries are generally handled by a private contractor, currently *Waste Pro of Florida, Inc.* Their current contract expires in 2028. The City disposes of trash collected from the beach and barrels located east of Third Street.

Solid wastes from Jacksonville Beach are disposed of at the Trail Ridge Landfill, operated by COJ. This landfill is located in western Duval County, south of Interstate 10, on U. S. Highway 301, approximately 40 miles from Jacksonville Beach. It is estimated by COJ that Jacksonville Beach tonnage represents approximately 4.8% of overall County waste generation annually.

Existing Facilities

The City of Jacksonville Beach does not operate a landfill, transfer station, or any other solid waste collection, disposal, or management facility at this time.

Needs Assessment

Jacksonville Beach is dependent on the solid waste disposal facilities of COJ and has no direct control of facility planning or management.

COJ operates the County's only remaining Class I landfill, the Trail Ridge Landfill. According to the City Of Jacksonville's 2030 Solid Waste subelement, this landfill was opened in 1992, with a design capacity of 3,500 tons per day.

COJ also operates two wood and yard waste mulching facilities, and a Household Hazardous Waste Facility. The Southside Wood and Yard Waste Mulching Facility and the Westside Wood and Yard Waste Mulching Facility are both located on private properties leased by the City/County, and are operated by private contractors.

Solid Waste Generation Rates: The City of Jacksonville Solid Waste and Resource Management Department uses a solid waste generation rate of 6.7 pounds of solid waste generated per capita per day in order to calculate landfill disposal demand and life expectancy. This is generally consistent with the previously stated City of Jacksonville Beach generation rate of 7.24 pounds per capita per day, especially given that the Jacksonville Beach generation rate includes commercial waste, while the Jacksonville disposal demand rate only takes into account residential waste. Commercial and industrial wastes in Jacksonville are currently taken to landfills within the region which offer the lowest disposal charge.

The projected solid waste disposal demand for Duval County through the year 2020, including the beach communities and Baldwin, is provided in Table PFSW-1 below.

Table PFSW-T1: Projected Solid Waste Disposal Demand: 2010-2020

Year	County Population Projection	0.81 (pcpd)/tons per year	5.19 (pcpd)/tons year year	Projected Yard waste Processing Demand (Average tons/day)	Projected Landfill Demand (Average Tons/day)
2010	916,513	135,484	868,098	371	**2,378**
2015	973,665	143,932	922,231	394	**2,527**
2020	1,030,817	152,381	976,364	417	**2,675**

Source: City of Jacksonville, 2030 Solid Waste Sub-Element

Recycling

The City of Jacksonville Beach collects both recyclables and yard trash/debris from residential customers separately from that garbage which is disposed of at the County's landfill facility. In 2021, a total of 12,465 tons of solid waste was collected form residential customers in the City. Of that total, 1,415 tons was in the form of yard waste, and 1,807 tons was in the form of recyclable materials. Together, they represent 26 percent of the residential solid waste generated within the City. The City is also exploring ways of promoting recycling by its commercial customers. To date, such activity is voluntary, and data on commercial recycling is not available.

Hazardous Waste Generation

Based on 1983 data contained in the 1987 NEFRPC regional assessment study, about 46,084 pounds of hazardous wastes were generated in the City. This translated into 2.73 pounds per capita of hazardous wastes. At that rate, the year-round and seasonal/tourist population may be expected to generate 65,150 pounds of hazardous waste by 1990, 76,250 pounds by 1995, and 81,170 pounds by 2000.

While projections demonstrate a potential increase in hazardous waste generation, the City's contribution to COJ's total hazardous waste generation is minute. The City of Jacksonville (according to the 1985 hazardous waste program study) generated about 20.4 million pounds of hazardous waste. Therefore, Jacksonville Beach generates less than one half of one percent of the total hazardous wastes in the City of Jacksonville.

In 1990, COJ constructed a Household Hazardous Waste Facility. This facility is located at 2675 Commonwealth Avenue, and collects, sorts and temporarily stores household hazardous waste for proper disposal by outside vendors.

The City participates in localized collection of hazardous waste products that is sponsored by Duval County to encourage proper disposal. This collection is conducted annually at the City's Operations and Maintenance Facility.

Performance Assessment

In January of 2005, COJ estimated that the Trail Ridge Landfill had a remaining constructed and permitted capacity of 860,145 tons. A prior 1996 COJ analysis of the future lifespan of the Trail Ridge facility, including additional disposal capacity yet to be constructed and permitted at the facility, yielded a then total future available gate tonnage of 12,092, 280, and a projected future site life for the facility of 248 months, or 20.7 years. That capacity is sufficient to handle the projected demands of the County through the Year 2026. Since yard waste processing facilities process their waste streams, as opposed to providing ultimate disposal, their facilities are only limited by their daily processing capacities, and do not have identifiable finite life spans.

Summary And Recommendations

Jacksonville Beach contributes an insignificant amount of solid and hazardous wastes compared to the City of Jacksonville as a whole. Yet the Jacksonville Beach, along with other incorporated municipalities within Jacksonville, if additional capacity beyond the next 15 to 20 years is not identified. The continuation and enhancement of existing programs such as tire recovery and processing, commercial and residential recycling, hazardous waste collection, and construction and yard waste recovery and recycling will be key in reducing the amount of waste ultimately requiring landfill disposal, and could add valuable years to the overall life of the Trail Ridge facility.

Northeast Florida Hazardous Waste Management Assessment

The Florida Legislature recognized the State needed to address the issue of hazardous wastes and passed the Water Quality Assurance Act in 1983. Hazardous wastes are covered in Section 403.7725 of the Act and require that each county conduct a local hazardous waste management assessment.

Two hazardous waste management studies were completed that cover Jacksonville Beach and the City of Jacksonville. This includes the Final Report on a Regional Assessment for Hazardous Waste Facility Needs in the Northeast Region, Volume I, October 1985 and the Final Report on Development of a Hazardous Waste Program for Duval County, Florida, December 1985. Both of these reports were produced for the Northeast Florida Regional Planning Council.

These studies indicated that 1.16 million tons of hazardous wastes are generated from small firms (produce less than 2,200 pounds of hazardous waste in any month) and larger operations (produce more than 2,200 pounds). Most of the hazardous wastes generated come from a few types of uses or materials. These are illustrated in Table PFSW-2. Waste oils, greases, lubricants and lead/acid storage batteries are the principal sources from both large and small waste generators.

A survey conducted in 1985 as part of the report on hazardous waste revealed the following types of businesses or uses were hazardous waste generators in Jacksonville Beach: tire and auto repair establishments; dry cleaning establishment; antique retailers; screen printers; hospital; water transportation and marina services.
While Jacksonville Beach produces less than five percent of the City of Jacksonville's hazardous wastes, the amount and diversity of wastes may be high, considering the fact that the City has no major

industry. All of the uses generating these wastes are either commercial or institutional. **Table PFSW-3** lists the amounts and waste types generated by these businesses in Jacksonville Beach in 1985.

Table PFSW-T2: Hazardous Waste Generation by Waste Category, Duval County, 1985

Category of Waste	Percent of Total Generated	Percent from Small Quantity Generators
Strong Acids or Bases	97.0	
Waste Oils, Greases or Lubricants	0.9	45.0
Lead/Acid Storage Batteries	0.8	46.0
Wastewater with Heavy Metals	0.4	
Dusts with Heavy metals	0.4	
Spent Solvents		6.0
Photographic Wastes		0.6
Other (Used Containers)		0.7

Source: Final Report on a Regional Assessment for Hazardous Waste Facility Needs in the Northeast Florida Region, Volume I, Environmental Resources Management South, Inc. and Flood Engineers-Architects-Planners, Inc., 1985.

Table PFSW-T3: Jacksonville Beach Hazardous Waste Generation, 1985

Type of Waste	Annual Quantity
Spent Solvents	3,500 gallons
Lead-Acid Batteries	11,700 pounds
Waste Oils, Lubricants	8,910 pounds
Solvent Distillation Bottoms	2,808 gallons
Dry Cleaning Filters	3,068 pounds
Rinses with Heavy Metals	310 gallons
Waste Inks	60 pounds
Acid or Alkaline Wastes	20 pounds
Photographic Wastes	100 pounds
Other Ignitable Wastes	7,820 gallons
Waste Formaldehyde	7,708 gallons
Other Non-Specified Wastes	122 pounds

Source: Final Report on a Regional Assessment for Hazardous Waste Facility Needs in the Northeast Florida Region, Volume I, Environmental Resources Management South, Inc. and Flood Engineers-Architects-Planners, Inc., 1985.

Stormwater Management Subelement DIA

Public Facilities Element

Stormwater Management Subelement
Data Inventory and Analysis

INTRODUCTION

The purpose of this subelement is the analysis of the existing stormwater management (drainage) system and the projection of demand for upgrading and expanding the system over the planning period of 2023 through 2050.

Storm drainage has long been a major issue in Jacksonville Beach due to the relatively flat terrain of the city and due to tidal influences. The nature and extent of the problems associated with stormwater management are discussed in detail in this subelement and goals, objectives, and policies are set forth to guide decision makers in addressing these issues throughout the planning period.

EXISTING CONDITIONS

Drainage Basins: Overview

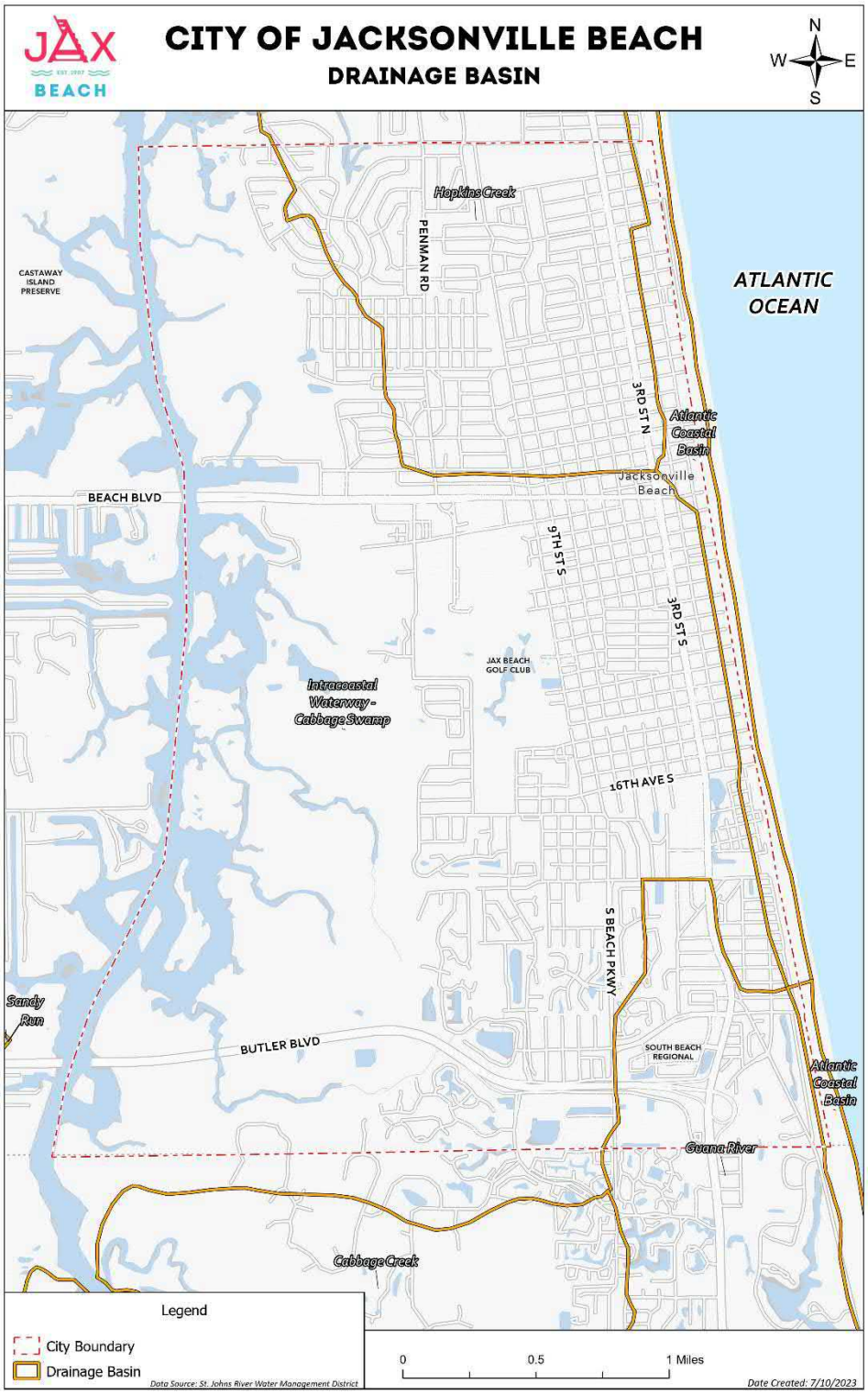
The Intracoastal Waterway, in conjunction with its tidal tributaries and that portion of the St. Johns River within the Duval Beaches, forms an estuarine system where tidal action is the primary hydrodynamic characteristic. The Intracoastal Waterway and its primary tidal tributaries: Cut Creek, Cradle Creek, and Hopkins Creek in Jacksonville Beach, as well as the tributaries to the St. Johns River including Pablo Creeks provide the major natural drainage ways for the Duval Beaches.

Jacksonville Beach topography consists of a north-south ridge located near 10th Street approximately 20 feet in elevation. This ridge slopes easterly to the Ocean and westerly to the Intracoastal Waterway. Numerous drainage ditches, swales, culverts, etc., have been constructed to direct most of the stormwater west to the Intracoastal Waterway.

The Jacksonville Beach drainage system consists of three major drainage basins as shown on the following exhibit. Areas east of these three basins either percolate into the soil or drain into the ocean through existing outfalls or existing access ramps. Some of these beach outfalls which were extended with piping to meet FDEP requirements subsequently fill with sand and have to be excavated intermittently to provide flood relief. Areas west of the three major basins drain into the Intracoastal Waterway through various outfalls. The areas to the west of the drainage basins exhibit less drainage problems than those in the basins, although some localized flooding of roads and intersections has occurred.

The North Basin consists of approximately 638 acres discharging through the Eighth Street FDOT Outfall into Neptune Beach and Hopkins Creek. The system exhibits somewhat less flooding than the other basins. The Central Basin consists of approximately 335 acres and discharges to the Intracoastal Waterway via the Twelfth Avenue FDOT Outfall. This system experienced severe flooding during major storm events prior to completion of Phase I of the Jacksonville Beach Stormwater Program. The South Basin consists of approximately 392 acres, much of it located within the South Beach Redevelopment Area. This system discharges into the Intracoastal Waterway via a Jacksonville Beach owned and maintained canal south of J. Turner Butler Boulevard. The main discharge from the South Beach Basin consists of two culverts under the South Beach Regional Shopping Center. Phase II of the Jacksonville Beach Stormwater Program has been completed, reducing the flooding problems, but with drainage still routed through the South Beach Regional Shopping Center.

Map PFSM-M1: Existing Stormwater System



Drainage and Soil Characteristics

Map CCM-M4 in the Conservation and Coastal Management Data Inventory and Analysis document is the soil and topography map for the City. There are three general soil series found within Jacksonville Beach. The Leon-Ortega group is located in nearly level and gently sloping areas, generally comprised of broad areas of flat woods interspersed with narrow to broad ridges. It occurs throughout the southern part of the City. Leon soils are nearly level and poorly drained and they are found in broad flat wood areas. Ortega soils are moderately well drained and occur in the broad ridges.

The second major soil group, the Mandarin-Kureb series, is found in nearly level to moderately steep areas, and ranges from being poorly drained to excessively drained. This soil series dominates the land between the Atlantic Ocean and the Intracoastal Waterway comprising much of Jacksonville Beach. This unit consists of 70 percent Mandarin, about 15 percent Kureb soils and about 15 percent various soils of minor extent. Mandarin soils are nearly level and somewhat poorly drained. Kureb soils are gently sloping to moderately steep and excessively drained. Both of these soils have seasonal wetness and a high degree of permeability.

The third unit is the Wesconnett-Maurepas-Stockade group. It is comprised of 30 percent Wesconnett soils, 25 percent Maurepas soils, 20 percent Stockade soils and 25 percent soils of a minor extent. Wesconnett soils are nearly level and very poorly drained. These soils are found along the tributaries of the St. Johns River and are found in isolated areas in the south of the City. Excessive wetness and flooding effect the use of these soils.

Table PFSM-T1: Soils and Stormwater Management - Pertinent Characteristics

	LIMITATIONS FOR:		FEATURES AFFECTING:		
Soil Name	Ponds/ Reservoirs	Embankments	Drainage	Terraces/ Diversions	Grassed Waterways
Kureb	Severe:Seepage	Severe:Seepage	Not needed	Not needed	Not Needed
Leon	Severe:Seepage	Severe:Seepage piping, erodes easily	Cutbacks cave, wetness	Not needed	Not needed
Leon-Urban	Severe:Seepage	Severe:Seepage piping, erodes easily	Cutbacks cave, wetness	Not needed	Not needed
Mandarin	Severe:Seepage	Severe:Seepage, piping, erodes easily	Favorable	Not needed	Not needed
Maurepas	Severe:Seepage	Severe:Unstable fill, excess humus, low bearing strength	Floods cutbacks cave	Not needed	Not needed
Ortega	Severe:Seepage	Severe:Seepage piping	Severe:Deep water table	Too sandy. soil boiling	Not needed
Stockade	Moderate:seepage	Moderate:Thin layer	Wetness, floods	Not needed	Not needed
Wesconnett	Severe:Seepage	Severe:Unstable fill, piping	Wetness, cutbacks	Not needed	Not needed

Source: Soil Survey of Duval County, Florida, U.S. Department of Agriculture, Soil Conservation Service in cooperation with the University of Florida, Institute of Agricultural Sciences and Agricultural Experiment Stations, Soil Science Department.

Soils and Storm Water Management

Drainage is affected by such soil properties as permeability, texture, depth to layers that affect the rate of water movement, depth to the water table, slope, stability of ditch banks, susceptibility to flooding, and availability of outlets for drainage. In general, drainage in Jacksonville Beach is controlled primarily by the elevation of the local water table.

Soils are analyzed and classified into three categories: slight, moderate, and severe as they relate to planning, installing and maintaining water control structures. Slight limitations indicate that solid properties and site features are generally favorable for the specified use and that any problem is minor and could be easily overcome. The presence of moderate conditions are an indication that some soil properties or site features are unfavorable for a specific use, but can be modified by special planning, design or engineering. Severe limitations indicate that soil properties and site features are so unfavorable and difficult to correct that major soil reclamation, special design and engineering, or intense maintenance is required.

Stormwater Management Structures

Four types of stormwater management structures are analyzed based on soil properties in Table PFSM-1, which describes some of the common soil names found in Jacksonville Beach and their limitations for and features affecting stormwater management.

Pond Reservoir Areas: hold water behind an embankment. Soils best suited to this use have a low seepage potential, determined by permeability.

Embankments: require soil material that is resistant to seepage, erosion, and piping; and has favorable stability, shrink-swell potential, sheer strength, and compaction characteristics.

Terraces and Diversions: are embankments or a combination of channels and ridges constructed across a slope to intercept runoff. They allow water to soak into the soil or flow slowly to an outlet. Features that affect suitability of a soil for terraces are uniformity and steepness of slope, permeability, ease of establishing vegetation, and resistance to water erosion, soil blowing, soil slipping, and piping.

Grassed Waterways: are constructed to channel runoff to outlets at a non-erosive velocity. Features affecting the use of soils include: slope, permeability, erodibility, wetness, and suitability for permanent vegetation.

Flood Hazard Areas

Flood hazard areas can be described in part by the Flood Insurance Rate Maps published by the Federal Emergency Management Agency (FEMA). There are also areas of shallow flooding outside of identified flood zones.

There are three general flood hazard areas called Zones A and V., as shown on the Flood Insurance Rate Maps (FIRMs) dated November 2, 2018. These zones are shown in Map CCM-M5 in the Conservation and Coastal Management Element Data Inventory and Analysis document. An explanation of the various zones, included the five subtypes of A-zones, is provided below:

AO-Zone - Areas of 100-year shallow flooding where depths are between one and three feet; average depths of inundation are shown, but no flood hazard factors are determined.

AE-Zone - Areas of 100-year flood; base flood elevations and flood hazard factors have been determined.

X-Zone - Areas between the limits of the 100-year flood and a 500-year flood; or certain areas subject to 100-year flooding with average depths of less than one foot or where the contributing drainage area is less than one square mile; or areas protected by levees or seawalls from the base flood

VE-Zone - Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

North of Beach Boulevard and west of 20th Street North much of the Intracoastal marsh land is in Zone AE with base elevations between five and six feet. A narrow transitional band separating the marsh and the edge of the developed City is classified as Zone X and subject to flooding on a 500-year frequency probability. The area just south of the northern city limits and to the west of Arden Way at the termination of Hopkins Creek is classified as Zone AE with a base elevation of five feet. This area is surrounded by a narrow band of Zone X.

A band of land designated as Zone AE follows the end of Hopkins Creek just south of the northern city limit and Seagate Avenue between Seventh and Eighth Streets North ending just north of Eighth Avenue North.

Zone AE's are chiefly located in the Intracoastal marsh land area and along Cut Creek at the west and southwest edges of the City. Three small Zone A areas are located between Tenth Street South and Fairway Lane within the municipal golf course property and areas immediately adjacent to the lakes located in the southern part of the City (Huguenot, Mildred, Duval, Ocean Pond, and Constitution Cove).

A transitional area containing a 500-year flood zone X is found south of Beach Boulevard between the Intracoastal Waterway marsh land and the fringe of the developed urban area.

The oceanfront areas contains a mixture zones including VE zones of varying elevations and AO zones. The VE zones are generally confined to the beach itself seaward of the bulkhead except for an area approximately following the 50 foot Coastal Construction Control Line (CCCL) from 7th Avenue South to Seagate Avenue at the northern City limits. The AO zones, with a depth designation of two feet, include all or part of the land between the VE zone and 1st Street from Seagate Avenue to 16th Avenue South. South of 16th Avenue South, the AO zone roughly coincides with the CCCL.

FEMA updated the FIRMs for Duval County, including Jacksonville Beach in November of 2018.

Existing Stormwater Facilities

This section summarizes the inventory of the Jacksonville Beach stormwater system and the Florida Department of Transportation (FDOT) system to which the city system is connected. Both systems are so interrelated that it was necessary to inventory both for this subelement.

The City's 1992 Stormwater Master Drainage Plan inventoried and inspected the existing Jacksonville Beach storm sewer system. At the onset of the project, the estimated number of structures to be inventories was 1,000. During the inventory, 532 additional structures were located, numbered and catalogued.

In order to determine whether the various documents analyzed for the project were on a common datum, a survey baseline was established through Jacksonville Beach. This baseline was established to allow cross-checking of elevations within catch basins. Elevations were spot-checked against the base loop in several of the key catch basins and several variations were noted, none significantly effecting the accuracy of computer simulation. Prior to final design of any system modifications, the designer must verify field elevations.

a. FDOT plans were obtained from the Florida Department of Transportation. Culvert sizing and invert elevations were obtained from these plans and transferred to the base data.

b. Permit drawings were obtained from Jacksonville Beach and the SJRWMD for many of the more recent subdivisions which have been constructed. This information was also placed in the base data.

c. As-Built drawings were obtained from the St. Johns River Water Management District (SJRWMD) and Jacksonville Beach. Information contained on those base maps have been transferred to the master drawings. Where both construction drawings and as-built drawings were available, the as-built drawings were used.

d. A number of catch basins and culverts which were not shown on any of the other documents were field located and inverts obtained under subcontract to Northeast Florida Surveyors, Inc. (NFS).

e. A significant number of structures not shown on previous inventories were field located by Bessent, Hammack & Ruckman, Inc. (BHR).

Major components of the stormwater system have been identified on Map PFSM-M2.

After each of these structures was identified, jurisdiction was established. There are four ownerships of facilities located within Jacksonville Beach: FDOT, City of Jacksonville Beach, City of Jacksonville (Duval County), and private facilities owned and operated by a homeowners' association, e.g., The Sanctuary stormwater management system.

Map PFSM-M2: Existing Stormwater System

Table PFSM-T2: Major Storm Drainage Facilities

Operating Entity	Location	Description
Dept. of Transportation	3rd Street (S.R. A1A)	Storm Drains
	Beach Boulevard (U.S. 90)	Storm Drains
	5th Avenue North	Interconnector
	6th Avenue North	Interconnector
	12th Avenue South*	DrainageCanal
	15th Avenue North	Storm Drains
	4th Street North	Storm Drains
	8th Street North	Storm Drains
	8th Street North	Drainage Canal Easement
City of Jacksonville	Ponte Vedra Blvd. (CR 203)	Storm Drains
	Penman Road (CR 223)	Storm Drains
Jacksonville Transportation Authority	Butler Boulevard (CR 202)	Storm Drains and Canal
Jacksonville Beach	Ocean Forest	Drainage Canal
	12th Avenue South	*Drainage Canal
	South Basin	Drainage Canal

** Currently operated and maintained by Jacksonville Beach from 4th to 10th Streets.*

Note: The balance of improvements shown on Figure PFSM-4 are owned and operated by the City of Jacksonville Beach.

Source: City of Jacksonville Beach Public Works Department, 2010.

Joint Use Facilities

The joint facilities in Jacksonville Beach include almost 1,900 drainage structures. In addition, more than 650 individual culverts were catalogued. Drainage recognizes no political boundaries, and Jacksonville Beach is no exception. Although it is now the policy of FDOT to prevent co-mingling of city, private, and FDOT generated runoff, it is not possible to reconstruct existing facilities in Jacksonville Beach to provide this separation. New facilities will provide this feature.

Several decades of interconnection of the system is not reversible, and almost all parts of the Jacksonville Beach/FDOT/private system are interrelated. For example, although the City systems on First and Second Streets are designed to flow into the FDOT system on Third Street, the FDOT culverts on Third Street have maintenance issues. The FDOT system and the City system back-up and water flow reverses, flooding City streets as well as Third Street. Recent improvements along 1st Street S., together with the opening of the beach outfalls at the avenue ends, have significantly reduced drainage issues immediately along the coast.

Unless the City and FDOT systems are maintained on an ongoing basis, no amount of capital improvements will relieve flooding for an extended period of time. Street sweeping by Jacksonville Beach in the downtown area, and along First Street helps prevent sand accumulating in the gutters and washing into the system during a rainstorm.

Joint use facilities include:

♦ Hopkins Creek (located in Neptune Beach)	FDOT/JB/NB/AB/Jax
♦ 8th Street Canal	FDOT/JB
♦ 2nd Avenue N. Outfall	JB/Jax
♦ 3rd Street System	JB/FDOT
♦ Beach Boulevard System	JB/FDOT
♦ 12 Avenue S. Outfall	JB/FDOT
♦ J. Turner Butler Outfall	JB/FDOT/PVT
♦ 30th Avenue S. Beach Outfall	JB/FDOT*
♦ Other Beach Outfalls	JB/FDOT*

FDOT - Florida Department of Transportation
JB - Jacksonville Beach
NB - Neptune Beach
AB - Atlantic Beach
Jax - City of Jacksonville
PVT - Private System
** Normally only Jacksonville Beach drainage; however, flooding of FDOT system allows stormwater to enter the Jacksonville Beach system.*

System Performance Assessment

Certain Jacksonville Beach stormwater systems have issues with sand plugging the system. Even though the systems were designed to be self-cleaning by maintaining the velocity of water in the pipes high enough to prevent settling, it is not sufficient to prevent settling, nor to remove sand that has already settled in the lines. Also, as the tide rises during a storm, flow is reduced, and sand settles to the bottom and partially plugs the pipe.

SYSTEM CAPACITY ASSESSMENT

In 2022, the City completed a Citywide Inundation Model to predict inundation areas that result from a variety of storm events and drainage areas. A rapid 2D inundation model was developed to cover the entire City. The model employs hydraulic and hydrologic methods that are grid based.

During model development three storms were selected to simulate with the model and rainfall distributions were based on the Florida modified storm distribution for 24-hour storms. A wide range of possible storms were simulated by utilized rainfall depths from 7.5-inches to 13-inches.

Inches of Rainfall	Duration of Rainfall (Hours)	Approximate Frequency
7.5	24	10-year
9.5	24	25-year
13	24	100-year

The model was developed and utilized as a planning tool, past stormwater studies are expected to be more accurate in areas that are well defined by managed stormwater conveyance systems.

Most FDOT and Jacksonville Beach stormwater system components are undersized to carry the current design storm, a 25-year frequency storm lasting 24 hours. The older systems were designed for a 3-year frequency storm event lasting one hour. In addition, much of the system is further constricted in capacity

by being obstructed with sand. Even when cleaned out completely, most of the system components are insufficient in size to function satisfactorily.

A brief analysis was made to determine if the system could economically be expanded to meet the requirements for a 25-year frequency/24-hour duration storm event throughout the City. Due to financial constraints, design criteria was established for the system to be able to handle a 5-year frequency/24-hour duration storm event.

Projected Future Runoff

All future runoff projections used in the Stormwater Master Drainage Plan report were based upon the City of Jacksonville Beach's adopted 2010 Land Use Plan. Computer models were used to project the runoff from each sub-basin and major basin, assuming the areas were completely built-out to the uses in the 2010 plan. Given the City's slow rate of growth, and the lower 2030 population projection of 23,998, versus a 1999 projected 2010 population of 24,196, then runoff projections used in the Stormwater Drainage Plan are still deemed valid.

Although the Master Plan provides for the "back bone" of a revitalized system, localized flooding can not be completely eliminated by the City's system. The City may investigate more cost effective alternatives to minimize future drainage issues. New development and/or redevelopment, will be required to provide on-site stormwater management systems to limit future impact on the City's system.

STORMWATER DRAINAGE REGULATIONS

Article VIII, Division 5, Section 34-466 of the Jacksonville Beach Land Development Code (LDC) regulates stormwater runoff. This provision was incorporated into the LDRs in 1991, and recently updated pursuant to the State's model floodplain regulation ordinance in 2011. The approach used in this regulation is that the "management and control of stormwater runoff" is responsibility of the builder or developer.

Jacksonville Beach's basic requirement for all types of development except single-family residential subdivisions includes the "retention or detention with filtration, of the first one inch of rainfall; or as an option, for facilities with a drainage area of less than 100 acres, the first one-half inch of run-off pursuant to Chapter 17-25, Florida Administrative Code". Single-family residential projects are regulated by the City's Subdivision Regulations and also through the St. Johns River Water Management District's permitting requirements. Connections to off-site drainage systems mandate that at least one-quarter of the previous requirement must be "retained through infiltration in the pervious areas of the site and the other three-quarters collected in drainage structures constructed on site."

Structured drainage includes three types. The first type includes pipes that are rated at 80 percent of capacity with a flow rate of three to five cubic feet per second (cfs). The second type, dry wells or open bottom cisterns, are rated at full capacity and the soil absorption rate is applied to the open bottom area. The third type, swales and environmental troughs, are rated at the soil absorption rate and a minimum flow design velocity of four feet per second for seeded swales and six feet per second for sodded swales.

Site plans submitted to the City of Jacksonville Beach for approval must show "all areas retained in pervious condition and their past development treatment." Structured drainage must be shown in sufficient detail so that the City can determine the holding capacity. All pipe runs must also be shown with details concerning the materials, direction of slope and the point of connection to off-site drainage systems. Capacity and flow potential must be determined through the application of these requirements to all new public and private development projects other than single-family residential subdivisions.

The Planning and Development Department, in coordination with the Public Works Department, has the responsibility of compliance with this regulation. Technical review is provided by the Public Works Department. Connections cannot be made to off-site drainage systems unless approved by the appropriate City, County, and State government agencies.

Article IX of the Jacksonville Beach Land Development Code (LDC) Regulations, as amended, addresses subdivision development and platting. As of April 2024, LDC Section 34-505(f)* provides design and other criteria for streets and storm drainage. The LDC subdivision regulations mandate that all drainage facilities be constructed to provide "adequate conveyance, detention, or retention of stormwater runoff to prevent flooding and to maintain any natural water courses." Major components of storm drainage must be designed and constructed to accommodate a twenty-five year, 24-hour frequency storm.

Areas subject to periodic flooding must include the delineation of a 100-year, 24-hour floodplain. No building can be permitted within this floodplain unless the first-floor elevation is raised above the 100-year floodplain elevation or the building is floodproofed, as stipulated in LDC Sec. 34-467(10)*.

Since the imposition of the local stormwater management requirements in 1982, the City has found that on-site retention and treatment of stormwater run-off in land development projects is being accomplished and provides an effective means of reducing the rate of increase in the amount of untreated drainage which reaches the outfalls. The local stormwater management ordinance is almost as restrictive as the state requirements administered and enforced by the St. Johns River Water Management District. By requiring developers to provide proof that a water management district permit has been issued, and that final construction has been certified, the City has ensured full compliance with all on-site retention/treatment requirements. In addition, the City quite often attains a third layer of regulating on-site retention through coordination of connections to the Florida Department of Transportation's extensive storm drainage system located in Jacksonville Beach.

** Note—The City's LDC is being updated as part of this project. It is expected these referenced regulations will remain in the LDC, however, the LDC Section reference is subject to change.*

SUMMARY AND RECOMMENDATIONS

The 2022 Jacksonville Beach Community Redevelopment Agency Annual Report identified the following stormwater improvement projects:

- Replacement and Repair of Beach Outfalls
- Ocean Terrace Drainage Improvements
- Reconstruction of the City blocks east of SR A1A from 5th Ave S. to 10th Ave S – this will include a new stormwater conveyance system which will connect to the storm trunk line previously constructed under Phase 3C – Project 2
    - 1st Street S will be reconstructed in order to improve storm-water drainage
    - Most alleyways are to be reconstructed and graded to improve storm-water drainage
- Reconstruction of the City blocks east of SR A1A from 14th Ave S to 16th Ave S. – this will include a new stormwater conveyance system which will connect to the storm trunk line constructed as part of Phase 3C – Project 2
    - The reconstruction will regrade the area to improve surface water flow
    - All beach street ends will be reconstructed to provide improved stormwater drainage
    - The 16th Ave S. end will be reconfigured, and the grade will be raised to drain stormwater runoff to the west

Current proposed drainage area improvements are as follows:

- 6th Ave. N and Palm Tree Rd. area outfall
    - The area drains through the Marina and 19th Street outfall. The 2nd Ave. outfall is owned by the City of Jacksonville and is blocked at 2nd Ave. Outfall improvements are needed along with collection system upgrades.
- Palm Tree Rd. and 1st-2nd Street S. outfall
    - The area drains through the Marina and 19th Street outfall. This project area may be combined with the 6th Ave N and Palm Tree Rd area project.
- 2nd Ave N and 19th – 20th St. N. outfall
    - Outfall improvements will be coordinated with future developments and will include the investigation of a possible new outfall to the marsh east of 20th St.
- Constitution Cove & Sanctuary
    - This project will include a possible pump at Lake Sanctuary next to the City's lift station to allow for the lake to be pumped down prior to a storm event.
- Bentin Dr. North and South outfall
    - This will include the evaluation of the outfall pipe sizes and the possibility of a pump.
- Fairway Lane Curve to Cradle Creek
    - There is a local drainage issue, the addition of a collection system, or exfiltration should be evaluated.
- Huguenot Pond Area
    - The area is need of a collection system upgrade as well as outfall improvements.
- 16th Ave S. at 9th St. South
    - There is a localized drainage issue that causes significant roadway flooding and needs to be evaluated.
- 13th Ave N and San Pablo Circle
    - Flooding in the street is causing pavement failure. The City will investigate upsizing storm drain piping on 13th Ave as well as the drainage canal and box culvert in the area.
- Barbara Lane – Patricia Lane Area
    - There is localized flooding that could be caused by a box culvert issues.
- 24th Street North
    - There have been complaints about ponding and flooding, causes and solutions need to be evaluated.
- 8th Ave N and 11th St N
    - There have been flooding complaints, a connection to the box culvert in the area needs to be evaluated.
- Gonzales St. and 7th St. S
    - Standing water has been observed and it was noted the 6th Ave drainage pipe may be undersized.
- 16th Ave. S. west of A1A
    - Standing water has been observed. Ditch clearing and outfall improvements need to be evaluated.
- Madrid Area
    - The drainage in the area is controlled by a pump at 32nd St S. There is a possibility to add an additional pump to control the Madrid storage pond.

- 33rd – 37th Ave. S, 1st St. S. to Ocean Dr
    - There is no apparent positive outfall for this location and there is the opportunity for outfall improvement through the golf course.
- Upper and Lower 36th Ave. S
    - There is the opportunity for possible drainage ditch improvements in this area.
- Ocean Forest
    - There is localized flooding with an unknown cause. There is the opportunity to evaluate this area using a hydraulic model to assess the causes of the flooding.
- 18th Ave N and 8th St. N
    - There is localized flooding with an unknown cause, there is the opportunity to evaluate this area using a hydraulic model.
- 9th Ave N, east of A1A
    - This area is part of the FDOT system and should be evaluated.
- Pablo Ave and 1st Ave. N at 4th St. N
    - This area is part of the FDOT system and should be evaluated as there have been improvements made in the area but no benefits have been seen.
- Lower and Upper 8th Ave. S
    - There is grass in the right of way and the swale has been filled, this area connects to the central basin and is in need of routine maintenance.
- South end of 8th St. S.
    - There is a localized flooding issue and the addition of a collection system or providing positive drainage should be evaluated.

Required Project Permitting Regulations

The following is a summary assessment of the required project permitting activities and the regulatory agencies that may potentially exercise jurisdiction.

1. U.S. Army Corps of Engineers (COE)

The COE would require a Department of the Army Individual (DAI) Permit for this project, under a joint Wetland Resource Permit Application Review, for the discharge of any solid materials into COE jurisdictional wetland areas. Although the general belief is that the COE only regulates the discharge and not excavation of materials in U.S. Waters, the fact is that the COE can also regulate excavations if the discharge thresholds to jurisdictional areas that result in a requirement for a DAI Permit. If the silt deposit material or required excavation is removed from the COE jurisdictional wetland area and placed directly into uplands or hauled off-site with no subsequent filling of wetlands, a Department of the Army permit would be required, but the potential for mitigation would greatly be reduced. It is strongly recommended that the proposed regrading and excavation activities be designed that they do not discharge any solid materials into the Federal wetlands or regulated waterways.

In addition, the COE permit would go through a public review process, which means that any citizen, environmental organization or governmental body would be allowed to comment on the proposed application. These Federal Agencies would include: U.S. Environmental Protection Agency (EPA), U.S. Fish & Wildlife Services, and the National Marines Fisheries Services. It should be noted that the EPA has the ultimate veto power

over all permits granted by the COE, if the EPA feels that the project is contrary to the general public interest.

2. St. Johns River Water Management District (SJRWMD)

The proposed activities involved with the Jacksonville Beach Stormwater Master Plan will trip several thresholds with the SJRWMD and will require a Management and Storage of Surface Water (MSSW) Permit and Wetland Resource Management Permit.

a. Individual MSSW Permit: This permit is reviewed by the SJRWMD in order to determine the overall impacts of the proposed project on the adjacent land area and watershed drainage basin. The MSSW Permit review requires a consideration of a number of criteria. These will include water quality, wetlands, floodplains, and other environmentally sensitive areas, whether the proposed facilities meet the applicable design and performance standards and whether provisions exist for continued satisfactory operation and maintenance at the proposed facilities. The general scope of the SJRWMD review for the Jacksonville Beach Stormwater Master Plan will include a review of the pre- and post-developed watershed drainage basins, pre- and post-developed time of concentrations, and pre- and post-development peak discharge criteria. Water quality aspects relating to the proposed improvements will also be addressed and will need to conform to the SJRWMD criteria concerning the required water quality treatment volume, pre- and post-peak storm attenuation, and other relevant factors to public health, safety, and welfare.

b. Wetland Resource Permit Application: The Florida Department of Environmental Regulation has delegated to the SJRWMD the responsibility for review and approval of Wetland Resource Permitting (formerly "Dredge and Fill") activities for the jurisdictional areas within the SJRWMD boundaries. The Wetland Resource Permit Application would include a review of the proposed impacts to jurisdictional wetlands, floodplain encroachments, and other impacts to environmentally sensitive areas. This review would also detail what mitigation, if any, would be required. A preliminary review of the project indicates the Wetland Resource Permit would fall into the standard long form application category which indicates excavation impacts in excess of 10,000 cubic yards.

3. Department of Environmental Protection (FDEP) (DEP)

As was outlined within the SJRWMD permit review criteria, FDEP has delegated wetland resource permit review and approval to the SJRWMD and no FDEP permit review is anticipated, unless there is existing utilities relocation within jurisdictional areas or substantial public opposition to the proposed drainage improvements.

4. Environmental Protection Agency (EPA)

The EPA has the authority to comment, modify, and revoke any Individual or Nationwide Permit issued by the COE. The EPA review process would include a public benefit review and an evaluation of the project under the "No Net Loss Wetland Policy" enacted by Congress. No substantial EPA Wetland Resource Permit review is anticipated for the proposed drainage improvements.

Jacksonville Beach is below the U.S. Congressional mandated 100,000 population threshold for the filing of a Federal National Pollutant Discharge Elimination System (NPDES) Permit. In 1991, the Environmental Protection Agency (EPA) determined that Jacksonville Beach and the other Beach Communities would be required to file a permit as a co-applicants with the City of Jacksonville and Florida Department of Transportation.

After lengthy negotiations, the EPA approved the filing of Jacksonville Beach's application separate from the Jacksonville/FDOT program, and to do so as a supplement to the City of Jacksonville's application, eliminating costly duplication of data. Since the Jacksonville Beach discharges through facilities jointly used by the FDOT, the FDOT NPDES program will meet most of the EPA sampling requirements. The final NPDES application was submitted to the EPA in the spring of 1993.

EPA issued NPDES Permit Number FLS000013 for the City of Jacksonville Beach Municipal Separate Storm Sewer System on June 15, 1998, with subsequent renewals thereafter.

Potable Water Subelement DIA

Public Facilities Element

POTABLE WATER SYSTEM SUBELEMENT
Data Inventory and Analysis

Introduction

The purpose of this subelement is to compile a planning level evaluation of the City of Jacksonville Beach's water treatment supply and distribution systems. This analysis uses the City's existing information and City staff's knowledge to identify existing deficiencies in the system, formulate a 10-year water supply plan, identify potential upgrades and expansions of the system over the next 10 years, and ultimately to update the *2030 City of Jacksonville Beach Comprehensive Plan*.

The existing documents used to develop this subelement are:

1. *2030 City of Jacksonville Beach Comprehensive Plan*.
2. Jacksonville Beach 2030 Comprehensive Plan, *Future Land Use* Element
3. 2022 Jacksonville Beach Water Master Plan Hydraulic Modeling Technical Memorandum
4. City of Jacksonville Beach 10-Year Water Supply Facilities Work Plan
5. 2005 *District Water Supply Plan*, prepared by the St. Johns River Water Management District.

Existing Facilities

Potable water is provided to customers within the City's corporate limits. The Public Water System (PWS) is composed of six source water supply wells, two water treatment plants (WTPs), four ground storage tanks, two elevated storage tanks, and a potable water distribution. These components, their locations, rated capacities, and actual operating capacities are outlined in Table PFPW-T1. The Public Works Department operates and maintains the public water supply, treatment, and distribution systems located within the City Limits.

The Jacksonville Beach PWS's operating capacity of 7.0 mgd is sufficient to meet the water needs of the City well beyond the short-term, five-year analysis period in this subelement.

Table PFPW-T1: Potable Water System Components

Potable Water System Components			
System Component	**Location**	**Rated Capacity***	**Actual Capacity****
WATER PUMPING AND TREATMENT			
WTP #1	**337 1st Avenue South**	**4.2 mgd**	**4.2 mgd**
Well #011	590 Shetter Avenue	1,100 gpm	1,465 gpm
Well #014	381 South Penman Road	2,000 gpm	1,250 gpm
Well #015	1005 2nd Avenue North	2,000 gpm	1,835 gpm
Well #016 (permitted project)	6th Avenue North & Palm Tree Road		
WTP #2	**1050 Osceola Avenue**	**2.8 mgd**	**2.8 mgd**
Well #021	1050 Osceola Avenue	1,800 gpm	1,770 gpm
Well #022	1706 South Beach Pkwy	1,600 gpm	1,726 gpm
Well #023	2771 Pullian Street	1,600 gpm	1,726 gpm
Ground Storage Tanks			
WTP #1	337 1st Avenue South	1.0 MG	1.0 MG

Potable Water System Components			
WTP #2	1050 Osceola Avenue	1.0 MG	1.0 MG
Elevated Storage Tanks			
North	1320 11th Avenue North	0.25 MG	0.25 MG
South	2120 22nd Avenue South	0.20 MG	0.20 MG
WATER STORAGE FACILITIES DISTRIBUTION SYSTEM			
Water Mains	Throughout City	~143 miles	

Note: Well #011 is out of service and will be repurposed after Well #016 is installed

There are four private wells in the City that provide potable drinking water to six individual users, and numerous private, shallow irrigation wells within the service area. There are no current plans for the six private potable water users to connect to City water, and significant additional water usage from these wells is not expected.

Extraterritorial water service is not provided from the PWS. However, there is an interconnection with the City of Neptune Beach's water system under an informal mutual aid agreement between the two cities. A wellhead protection ordinance is outlined in Section 34-468 of the City of Jacksonville Beach Land Development Code.

Source Water

The PWS withdraws groundwater from the Floridan Aquifer, which is then treated and delivered to customers. Each WTP has a dedicated wellfield which consists of three wells. Each of the wells is located within a one-half mile radius of its respective treatment plant. The one of the wells at WTP #1 is approximately 1,200 feet deep, while the other two are 900 feet deep, and the three wells at WTP #2 are approximately 900 feet deep.

To determine the effect of salt water intrusion on aquifer pumping for Jacksonville Beach's water supply, as a planning tool, the Jacksonville Beach Subregional Flow and Transport Model was prepared. The objectives of the report were to analyze groundwater in the Jacksonville Beach area, to evaluate saltwater upconing and determine the location of the saltwater-freshwater interface, and to investigate the impacts of present and future groundwater pumping in Jacksonville Beach. The report determined that the critical pumping rate, the rate that would result in salt water upconing, for the City Jacksonville Beach is 6.7 million gallons per day (mgd).

Treatment Facilities

Both WTPs use a similar process which involves aeration, disinfection, and retention to treat potable water. The wells pump raw water to each facility, where the water is aerated through fiberglass tray aerators to remove hydrogen sulfide. WTP #1 has two aerators, each with a capacity of 5,000 gallons per minute (gpm), and WTP #2 is equipped with two 3,500 gpm aerators.

Following aeration, the water is held in concrete ground storage tanks at each WTP site and is disinfected prior to distribution. Gaseous chlorine, stored in 1-ton cylinders, is used for disinfection through two 100-lb chlorinators at each of the facilities. High service pumps at each WTP pump finished water from the tanks into the potable water distribution system.

Improvements to WTP #1 in 1990 and 1991 included replacing the operations building, installing vertical turbine pumps for the wells, and replacing or upgrading the majority of the instrumentation and control equipment for the entire plant and distribution system. In 2002, improvements to WTP #1 included two new replacement wells and a two compartments ground storage tank. In 2020 a third replacement well was installed for WTP #1. In 2015, at WTP #2 a new maintenance facility was constructed.

In 2023 a permit was submitted to the Florida Department of Environmental Protection (FDEP) to convert the existing WTPs from utilizing gaseous chlorine disinfection processes to liquid sodium hypochlorite disinfection processes. This conversion will reduce the risk of chlorine gas from escaping the WTPs as the liquid sodium hypochlorite does not impose an immediate threat to the surrounding environment and public health. The new liquid sodium hypochlorite systems will provide disinfection with a peak design flow of 4.2 mgd through WTP #1 and a peak design flow of 2.8 mgd through WTP #2. This project has been successfully bid and began construction in August of 2023.

Storage Facilities

Each WTP has two 500,000 gallon ground storage tanks, for a combined capacity of 1.0 million gallons per facility. Additionally, two elevated storage tanks maintain pressure in the distribution system and provide additional water storage for the distribution system. The North Elevated Storage Tank was constructed in 1959 with a capacity of 250,000 gallons. The tank is 110 feet high with an overflow elevation at 130 feet above sea level. The South Elevated Storage Tank was constructed in 1950 with a capacity of 200,000 gallons. This tank is 120 feet high with an overflow elevation at 128 feet above sea level.

Distribution System

Each WTP is equipped with three high service pumps, plus an additional fire flow pump, to maintain adequate water pressure in the distribution system. The distribution system provides both potable water and fire suppression water to customers within the City Limits, as shown in Figure PFPW-1. All water services are metered except for fire line water services.

The distribution system consists of piping which ranges in size from 2-inch to 16-inch in diameter. A combination of 8-inch and 12-inch water mains form a loop around the perimeter of the City, which adds to the system's reliability. The age of the major distribution water mains vary from approximately 2 to 60 years old. The pipe materials consist of galvanized steel, cast iron, asbestos-cement, ductile iron, and PVC (typical of newer construction).

The Public Works Distribution and Collection Division operate and maintain approximately 143 miles of water mains, 900 fire hydrants, 2,652 water valves, and 11,040 water services.

Reclaimed Water

The Public Works Department operates as the only reclaimed water provider within the City, with a permitted capacity of 4.5 mgd, of which approximately 0.75 mgd is treated for public access reuse. Reclaimed water is used to irrigate portions of the Jacksonville Beach Golf Course, several football and baseball fields, and the landscaped areas of the police station and the Operation and Maintenance buildings. Reclaimed water provided to the Jacksonville Beach Golf Course is discharged into the Golf Course Pond. Past projects have extended a reclaimed water pipe to the Kirkland and Warren Smith Cemeteries in the area around Beach Boulevard for irrigation and extending reclaimed water to the

portions of South Jacksonville Beach is currently being planned. The total reclaimed water use during the 2021-2022 reporting period was 0.538 mgd average.

Consumptive Use Permit

The City's potable water system operated under St. John's River Water Management District (SJRWMD) Consumptive Use Permit (CUP) #793, which was issues on April 10, 2013, and will expire on April 9, 2033. The CUP authorizes the use of up to 1,029.181 million gallons per year (mgy) of groundwater from the Upper and Lower Floridan aquifer to supply a population of 27,330 in 2033.

The City of Jacksonville Beach owns the Jacksonville Beach Golf Course, which operated under a separate CUP On March 6, 2023 CUP #804-4 was issued to the Jacksonville Beach Golf Course. This permit allows the use of 151.475 mgy or 0.415 mgd, of surface water from the stormwater management system along with 0.07 mgd, annual average, of groundwater from the Upper and Lower Floridan aquifer for emergency backup supplementation of the irrigation pond that is used for golf course and landscape irrigation. This permit is set to expire in 2025. The Golf Course has one groundwater well, one surface water facility, and is connected to the City's reclaimed water system.

WATER QUANTITY

The following sections discuss the current, past, and projected potable water demands for the potable water system.

Potable Water Production

Water production for the PWS has not changed considerably over the past ten years (2007-2017) averaging approximately 2.5 million gallons per day (mgd). Table PFPW-T2 summarizes the annual average daily production (ADP) and maximum daily production (MDP) of finished water produced by each WTP during the past ten years.

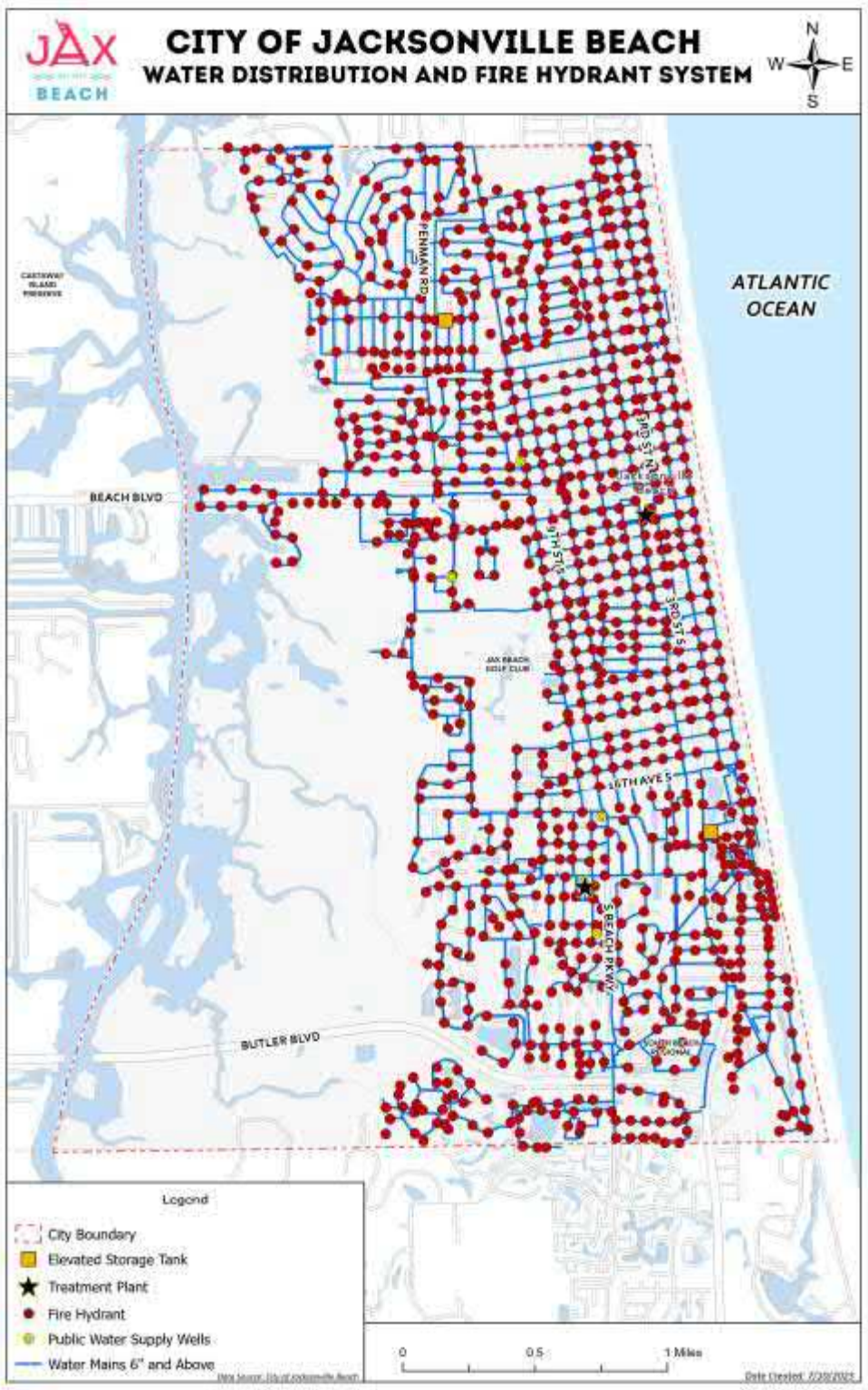
Table PFPW-T2: Past Water Production, 2013-2022

Past Water Production					
Year	**BEBR Population**	**PWS ADP (mgd)**	**PWS MDP (mgd)**	**MDP/ADP**	**gpd/capita**
2013	21,713	2.25	3.09	1.37	103.6
2014	22,136	2.57	2.84	1.10	116.3
2015	22,805	2.55	3.42	1.34	111.8
2016	23,288	2.43	3.09	1.27	104.5
2017	23,503	2.40	3.10	1.29	102.1
2018	23,494	2.50	3.26	1.31	106.3
2019	23,352	2.42	3.44	1.42	103.6
2020	23,830	2.37	3.11	1.31	99.5
2021	24,075	2.49	3.29	1.32	98.2
2022	24,112	2.54	3.20	1.26	105.3
Average	**23,061**	**2.45**	**3.18**	**1.30**	**105.12**

Source: 2022 City of Jacksonville Beach Water Master Plan Monthly Operating Reports

The average per capita water use for public supply in Jacksonville Beach is 98.2 gallons per capita per day based on the 2022 Water Master Plan. City Ordinances require that each equivalent residential connection be design for a water demand of 170 gallons per day (gpd); using the persons per household for 2020 from the Bureau of Economic and Business Research (BEBR) of 2.12, this equates to a flow per capital of 208.8 gpd, which is higher than the City Ordinance.

Map PFPW-M1: Water Distribution and Fire Hydrant System



Projected Water Demand

To develop projections for future water demand in Jacksonville Beach, a combination of population projections and historical per capita water usage are used. Population projections for 2025 and 2035 are 27,118 and 28,719, respectively, based on data provided in the 10-Year Supply Facilities Work Plan. A peaking factor of 1.48 was developed in the 2022 Water Master Plan and used for projections presented in the Plan. In addition, a residential per capita demand of 100 gpd was developed based on historical per capita demands and used for projections developed within the Master Plan.

Table PFPW-T3 shows the projected potable water flow and population based on the projections developed for the SJRWMD CUP.

Table PFPW-T3: Projected Flow and Population

Projected Flow and Population			
Year	**Population**	**Projected Water Use (MGD AADF)**	**CUP Allocation (MGD)**
2020	26,318	2.577	2.812
2025	27,118	2.655	2.818
2030	27,919	2.733	2.819
2035	28,719	2.812	2.820

Source: City of Jacksonville Beach 10-Year Water Supply Facilities Work Plan

The Jacksonville Beach PWS's operating capacity of 7.0 mgd is sufficient to meet the water needs of the City well beyond the short-term, five-year analysis period in this subelement.

The critical pumping rate for saltwater intrusion determined in the 1996 Subregional Flow Report was 6.7 mgd. Comparing this critical pumping rate to the projected ADP and MDP summarized in Table PFPW-3, shows that through 2015 the critical rate is not reached. However, this situation shall continue to be monitored for any significant increases in chloride levels.

According to St. Johns River Water Management District, Jacksonville Beach is not identified as an area with source water shortages through the year 2025. Jacksonville Beach may continue pumping from the Floridan aquifer as their source. However, there is no alternative source water identified for Jacksonville Beach, and it is stressed by SJRWMD that Jacksonville Beach, and all other municipalities, maximize the amount of reuse and stormwater resources to recharge the aquifer. In addition, there are no projects in Jacksonville Beach necessary to meet the need projected in the 2005 District Water Supply Plan.

SYSTEM DEFICIENCIES

The as part of the 2023 Potable Water Sub-Element following deficiencies and/or potential problems have been identified with the potable water system. These problems are expanded upon in the following sections.

Water Treatment

Based on the 10-Year Water Supply Plan and the proposed 2022 Jacksonville Beach Water Master Plan Capital Improvement Program the following projects have been identified:

- New Raw Water Well (Well #016)
- Upgrade telemetry at WTP #2
- Water Plant Adjustable Speed Drives Project

Storage

Based on the 10-Year Water Supply Plan the following projects have been identified:

- South Elevated Tank Exterior Renovation
- Annual Elevated Tank Maintenance Program

Distribution

Based on interviews with the Public Works Department and review of the 2011 Comprehensive Plan, the following potential future deficiencies with the water distribution system are identified:

For the purposes of this sub-element, deficiencies are conditions which inhibit the water distribution system from meeting its operational functions as follows:

1. To meet the level of service flow requirements at peak hourly demand at a desired minimum pressure of 30 pounds per square inch (psi). Sustained pressures above 30 psi are preferred since pressures below this level of service cause flow reductions for users when more than one water-using device is in service.

2. To provide adequate water supply to fight a fire within the service area, while meeting the maximum daily water demand and maintaining a minimum pressure of 20 psi. A minimum pressure of 20 psi is required because of the system's susceptibility to infiltration at low pressure, which may contaminate water supply.

The ability of the water system to provide adequate water supply for a fire demand directly impacts the insurance rates of buildings within the service area. Cities are inspected and rated by independent insurance services periodically (every few years). If the water distribution system cannot meet the pressure criteria above, the system is considered to have deficiencies, i.e. (1) inadequate fire flow to some areas; and (2) low pressure zones.

While the water distribution system has been improved in recent years, there may still be some deficiencies remaining. Causes for these low-pressure deficiencies, several of which may be interrelated, include the following:

1. *Water mains that are insufficient in size* - Undersized water mains, many of which are two-inch galvanized, create supply bottlenecks, which result in low pressure in isolated areas. This usually occurs in areas that are growing, where older infrastructure was not designed for the new growth demands.

2. *Old water mains* - Old cast iron pipes may contain cracks and leaks, and many of which are unlined. The leaks allow water to escape the pipe and affect its ability to maintain water pressure.

3. *Unlined water mains* – Unlined pipes are susceptible to tuberculation.

4. *Tuberculation* - Corrosive deposits that roughen the inside of pipe and reduce its effective size, which reduces the water flow. This leads to low pressure areas for similar reasons to #1 above.

5. *Water quality* - Water age is a significant factor in water quality deterioration within the distribution system. Water often degrades in dead end mains, and the implementation of water looping can improve these conditions.

Public Works Department Assessment

The Public Works Department recently developed a hydraulic model for existing conditions as well as future build out conditions as part of the 2022 Water Master Plan to evaluate maximum daily demands, fire flow, and water age. The development of the hydraulic model included a review of GIS water pressure pipe data from the City and the addition of fire hydrants based on the City's GIS data. Each water system component representation was input into the model based on available as-built data along with information gathered during site visits. After the model was built the Darwin Calibrator tool within WaterGEMS along with field testing data were utilized to calibrate the model. With the development of a calibrated potable water model the City can routinely update their assessment based on the future conditions.

Existing conditions using 2021 demands were modeled to determine the average system pressures, water age, and the available fire flow. Future conditions were then modeled, these conditions utilized buildout water demands obtained from future land use data, existing pipe sizes and distribution system infrastructure, along with existing pumps. These model scenarios determined the average system pressures, water age, and available fire flow. The results of the existing and future conditions model scenarios were then utilized to develop level of service (LOS) criteria to analyze the system for deficiencies.

Table PFPW-T4: Potable Water System LOS Criteria

Potable Water System LOS Criteria		
Item	**Criteria**	**Condition**
Head Loss	10 feet/1,000 feet (maximum)	Normal Demand Conditions
Velocity	10 feet per second (fps) (maximum)	Normal Demand Conditions
Transmission Main Pressure (8-inches or higher)	45 psi (minimum)	Normal Demand Conditions
	85 psi (maximum)	Normal Demand Conditions
Distribution Main Pressure (6-inches or lower)	45 psi (minimum)	Normal Demand Conditions
	80 psi (maximum)	Normal Demand Conditions
	20 psi (minimum)	MDD+FF Condition
Fire Flow	1,000gpm for 2 hours	Fire Flow
Water Age	5-days (maximum)	Normal Demand Conditions

Source: 2022 Jacksonville Beach Water Master Plan

The LOS criteria above was utilized to develop the 2022 Jacksonville Beach Water Master Plan Capital Improvement Program which resulted in projects to address any deficiencies. Additional projects were identified in the 10-Year Water Supply Plan. A summary of the proposed projects identified are as follows:

1. Phase E Water Main Replacement
2. Phase F Water Main Replacement
3. Design of 10st Street S. Water, Sewer and Stormwater Improvements
4. Addition of 5 auto-flushers to the system
5. Water Main Connection on 35th Avenue S.
6. Water Main Connection on Justice Dr.
7. Water Main Connection of Palm Way
8. Sanctuary Blvd to Marsh Landing Blvd Water Main Connection
9. Water Main Replacement on 1st Street S.
10. Water Main Replacement on 4th Street S.
11. Water Main Replacement on A1A
12. Galvanized Steel Water Main Replacement Program
13. Cast Iron Water Main Replacement Program
14. Water Valve Maintenance Program

Several locations contain old pipes composed of asbestos cement (AC). AC pipe is difficult to repair and is usually left undisturbed and abandoned due to the potential health risk. AC pipe is typically replaced with new pipe such as PVC.

Over the past several years, beachfront property and buildings have been purchased and demolished, and are being developed with high-rise (above 3 stories) condominiums. However, a law prevents any new high-rise condominium development above 35 feet. The water distribution system pressure is typically maintained between approximately 50 and 55 psi. Due to the condominium heights, the distribution system alone cannot provide adequate pressure to the upper floors. Therefore, according to Jacksonville Beach utility staff, each high-rise condo is equipped with a booster pump station. Typical low-pressure issues only occur when the booster pump equipment fails.

The following is a list of water main projects that have recently been constructed:

- Lift Station No. 4 Service Area (16th Ave. S. from 1st St. to 3rd St. and 1st St. S. of 16th Ave.) – 800 feet of 6" PVC
- 5th St. N. (2nd Ave. N.-14th Ave. N.) - 4,200 feet of 6" PVC
- 1st St. N. (8th Ave. N.-15th Ave. N.) – 550 feet of 2" PVC; 1200 feet of 6" PVC; 2100 feet of 8" PVC
- A1A (2nd Ave. S. to 6th Ave. N.) – 2000 feet of 2" PVC; 350 feet of 8" D.I.
- 9th Ave. N. (8th St. N. to 10th St. N.) – 800 feet of 6" PVC (City forces)
- Pablo Ave. (4th St. N. to 6th St. N.) – 750 feet of 6" PVC (City force)
- 2nd Ave. N. (Penman Rd. to 4th St. N.); 4th Ave. N. (Penman Rd. to 3rd St. N.) - 9500 feet of 6" PVC
- 6th St. N. and 9th St. N. (2nd Ave. to 4th Ave.) – 428 feet of 6" PVC
- Ocean Drive and 1st St. S. (25th Ave. 30th Ave. S.)- 1500 feet of 6" PVC; 1000 feet of 8" PVC
- Avalon Subdivision – 1200 feet of 4" PVC; 800 feet of 6" PVC; 1700 feet of 8" PVC
- Penman Road Realignment (Beach Blvd. to Shetter Ave.) – 600 feet of 12" PVC; 100 feet of 6" PVC
- Beach Boulevard (Penman Road to Intracoastal Waterway) – 210 feet of 6" PVC; 3810 feet of 8" PVC; 3600 feet of 12" PVC
- Shetter Avenue (15th St. to 8th St. S.) – 523 feet of 8" PVC; 2350 feet of 12" PVC
- 20th Street N., north of Beach Blvd. – 418 feet of 12" PVC;34 feet of 6" PVC

Since water demands are not expected to increase significantly in Jacksonville Beach over the planning period of this Comprehensive Plan, addressing existing maintenance issues will likely be sufficient to address future water distribution needs.

SUMMARY AND RECOMMENDATIONS

Based on the evaluation of the City's existing documents and interviews with City staff, the two existing WTPs can provide sufficient pumping, treatment, and storage capacity to meet the maximum daily demand through the year 2030.

However, the 2023 Potable Water Sub-Element prioritized the following recommended improvements to the distribution system:

1. Replace existing 2-inch galvanized water mains with 2- inch or 6-inch PVC mains and provide additional fire hydrants throughout the City, pending availability of funds.
2. Replace existing 6-inch unlined cast iron water mains with 6-inch PVC mains and provide additional fire hydrants, pending availability of funds.
3. Provide additional fire hydrants where necessary throughout the City on existing water mains, pending availability of funds.
4. Increase water quality by eliminated dead end mains through looping within the system.
5. Increase hydraulic capacity by increasing infrastructure size, decreasing friction within the pipes, and removing dead ends within the system.

Ground Water Aquifer Recharge Subelement DIA

Public Facilities Element

Groundwater Aquifer Recharge Subelement
Data Inventory And Analysis

INTRODUCTION

The Natural Groundwater Aquifer Recharge Sub-Element provides information on the existence of aquifers in the City and the recharge areas associated with those aquifers. Aquifers are water bearing rocks composed of sand, gravel, limestone, and shells. The aquifer is separated by confining layers of materials which are impermeable or semipermeable to water. Groundwater recharge is the hydrological process through which an aquifer is replenished. Water infiltrates the land and flows into the aquifer. A recharge area consists of land area where this infiltration can occur. Because of geologic shifts, a recharge area may not always be located over the aquifer itself; and, in many cases, will be located miles away. Prime recharge areas percolate water into the aquifer very quickly resulting in a high degree of recharge of the aquifer. In Jacksonville Beach, two types of aquifers are present -- the deep Floridan Aquifer which provides us with our source of potable water and the shallow or surficial aquifer used primarily for irrigation purposes.

FLORIDAN AQUIFER

The Floridan aquifer is the major source of potable water for the City of Jacksonville and Jacksonville Beach. The U.S. Geological Survey estimates that over 200 million gallons of water are withdrawn from this aquifer daily. During the 1987 base year for the former 2010 Comprehensive Plan, the City of Jacksonville Beach withdrew and used an average of 3.3 million gallons of raw water per day from its six deep wells. In 2010, despite an increase in resident and visitor population, that figure had dropped to 2.42 mgd. This drop is reflective of water conservation measures and of distribution system improvements.

The top of the Floridan aquifer varies from 300 to 400 feet below mean sea level in the Jacksonville Beach area and is over 1,100 feet thick. The aquifer is recharged in northern Georgia and in an area 30 to 60 miles southwest of Jacksonville where the overlying confining beds are thin or absent. Since there are no areas of either primary or secondary recharge for the deepwater aquifer in the community, there is no further discussion of it in this sub-element.

SHALLOW OR SURFICIAL AQUIFER

Existing Conditions

The shallow aquifer system, which includes the water table zones, semi-confining beds and the rock aquifer; lies immediately beneath the land surface and extends throughout the City. The water table aquifer is made up of medium to fine grain, unconsolidated quartz sand and is located within 25 to 50 feet of the surface. Wells sunk into the shallow aquifer generally yield from 10-15 gallons per minute (gpm), but can reach up to 25 gpm in some areas. The semi-confining beds occur below the water table zone in most of Duval County, but is not prevalent along the coast. Here, a medium to coarse-grained sand replaces the more common limestone layer. Wells drilled into this intermediate zone sand aquifer are at depths of 50 to 450 feet and may yield from 30 to 100 gpm. The total amount of water use from the shallow aquifers is not available, but estimates for all of Duval County are in the 10-25 million gallon per day range.

Discharge and recharge of the shallow aquifer is determined by the relationships among the various elevations of land surface, the presence of surface water bodies, the unconfined water table, and the potentiometric surfaces of confined groundwater. The potentiometric surface refers to the potential height at which water will rise in a tightly cased well tapped into an aquifer. Surface topography, soil characteristics, and pumping all have an effect on recharge and discharge characteristics.

In Jacksonville Beach, rainfall infiltrating the shallow aquifer travels from the relatively higher elevations running along a north-south spine in the City to the natural discharge areas (the Atlantic Ocean to the east and the Intracoastal Waterway to the west). Because soils found in Jacksonville Beach have a relatively high percolation rate, there exists a potential for contamination of the water table aquifer from septic tank failure. However, over 99 percent of the City's population is served by the public sewer system, and the existing septic tanks, where feasible, are expected to be phased out over time.

There is no consolidated body of information available for use in pinpointing recharge locations in the City. Known land forms where the potential for recharge is present include unpaved rights of way, surface water bodies, park area and golf courses, retention/detention facilities, and other "green" areas. The St. Johns River Water Management District has been charged with developing a Groundwater Basin Resource Availability Inventory (GWBRAI) for its jurisdiction. This inventory would include information on the nature and extent of groundwater resources, but unfortunately, the study is not available to local governments at this time. Jacksonville Beach will utilize this information as it becomes available in carrying out our evaluation, appraisal, and plan update responsibilities.

Regulatory Efforts

In 1986, the Federal Safe Drinking Water Act was amended to include the protection of the public water supply wellfields and aquifers providing the primary sources of drinking water for a community. These amendments required states and local governments to cooperate in developing land use controls to protect these areas from pollution. Criteria for this effort are forthcoming from the Environmental Protection Agency and will be followed by the City when they are made available.

The State of Florida has promulgated rules for implementing Chapter 403, F.S., The Florida Safe Drinking Water Act which are supervised by the Department of Environmental Protection. These rules (Chapter 17, F.A.C.) pertain to aquifers, aquifer recharge, and wellfield protection as well as regulation of facilities which discharge or inject substances into the aquifer.

Locally, the principal ordinances affecting the preservation of areas of potential surficial aquifer recharge would include setback requirements, minimum landscaping area requirements, stormwater retention standards, floodplain regulations, and other requirements relating discharges into the storm sewer system. Because of the extent of development already in place or allowed by prior commitments, a wellfield protection ordinance would not have a significant impact. At this time given the scope and level of detail of current information, the body of regulations in force provides some measure of protection for the City's groundwater resources.

Some actions leading to additional protection of the quality of groundwater resources and enhancing the recharging of the shallow aquifer are recommended in other parts of this Comprehensive Plan. For example, as noted earlier in this Sub-Element and elsewhere in this Plan, the City is committed to

prohibiting new septic tanks and removing existing ones from service where feasible. This action will help greatly in alleviating the potential for groundwater contamination in Jacksonville Beach.

Further contribution to recharging of the surficial aquifer has been attained by the implementation of the treated effluent pumping system to provide irrigation water for the municipal golf course and other City-owned properties. This system diverts treated wastewater from the effluent outfall to the golf course and other municipal open space areas which likely serve as shallow aquifer recharge areas.

Senate Bill 64

In June 2021 the Florida legislature passed Senate Bill 64 (SB64) which requires domestic wastewater utilities to submit a plan for eliminating nonbeneficial surface water discharge of treated wastewater effluent to the Florida Department of Environmental Protection (FDEP), with the goal of providing reclaimed water as a way to discharge treated wastewater effluent. To comply with SB64 the City created the Senate Bill 64 Compliance Plan, which was originally submitted to FDEP in October 2021, and amended in March 2022.

As outlined in the Compliance Plan, the City is working independently of the other beach communities that share the effluent force main and is also working on a possible shared solution with the other beach communities to present a shared approach to meeting the requirements of SB64. The Plan also provides a list of proposed projects and alternatives to address the requirements of SB64. These proposed projects and alternatives will be evaluated by an engineering firm to determine the appropriate approach to satisfy the requirements of SB64 and be economical for the City.

The City currently has a permitted plant capacity of 4.5 MGD, with a permitted 1.123 MGD towards municipal reuse. SB64 requires the City to have 90% beneficial effluent utilization by 2032, which is approximately 2.927 mgd of additional effluent utilization. The City is developing several solutions both independently and in conjunction with Atlantic Beach and Neptune Beach. While these solutions are evaluated the City will increase reuse quantity to reduce the amount of discharge that must be addressed as part of the SB64 compliance. Some potential solutions being investigated include indirect potable reuse to increase aquifer recharge, direct potable reuse, and deep-well injection. The next step for the City is to complete a study on the suggested projects and options to determine feasibility, practicality, constructability and impacts to completion.

V. Conservation & Coastal Management Element DIA

Conservation & Coastal Management Element
Data Inventory and Analysis

Introduction

This Conservation & Coastal Management Element sets the foundation for the City of Jacksonville Beach to protect its natural environment, life and property from natural disasters and climate change. The City of Jacksonville Beach has valuable natural amenities including, but not limited to, the beach, waterway access, wildlife, and habitats. Pursuant to the requirements of Chapter 163 of the 2022 Florida State Statutes, this element consists of a data inventory and analysis that influences the overarching vision, intent, and strategies of the Conservation and Coastal Management Element of the 2050 Comprehensive Plan.

Waterbodies

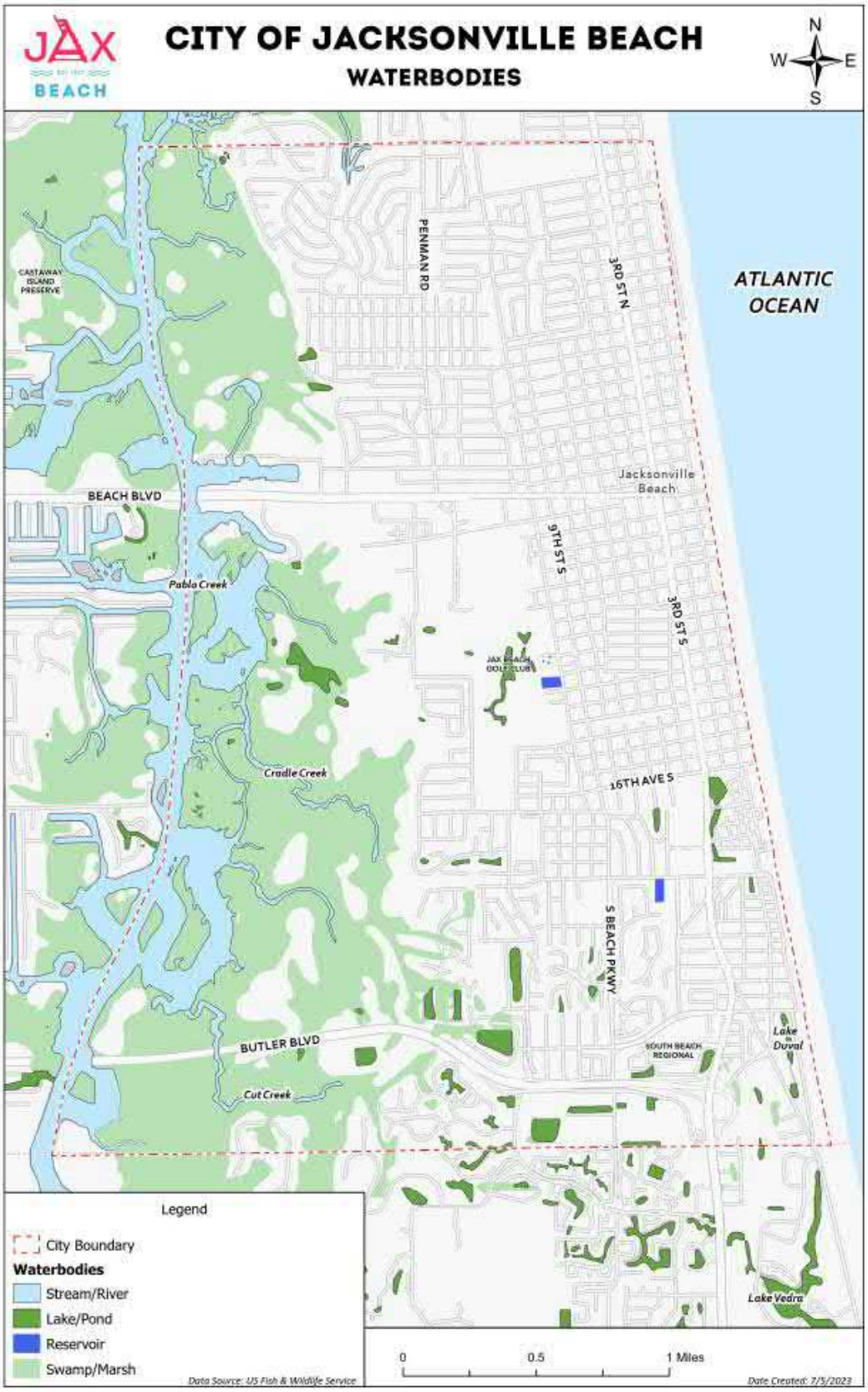
Utilizing the U.S. Fish and Wildlife Service Data, Map CCM-M1 illustrates the waterbodies within and surrounding the City of Jacksonville Beach. The City of Jacksonville Beach is located on the Atlantic Ocean, and the Intracoastal Waterway is along the west side of the City. The Intracoastal Waterway functions as a natural tributary. Additional waterways throughout Jacksonville Beach include a combination of estuarine and marine wetlands, freshwater emergent wetlands, freshwater forested/shrub wetlands, tributary creeks, and freshwater ponds. Concentrations of wetlands are located along the Intracoastal Waterway. City water bodies consist of approximately 652 acres, and all submerged lands and wetlands constitute 1,189 acres of the City.

The City of Jacksonville Beach waterways and connected habitats provide natural buffers that plays an integral role in protecting the city from extreme weather conditions such as hurricanes, tropical storms, and the associated storm surges. The waterways and accompanying features (wetlands, beaches, wildlife, habitat, marshes, etc.) are key in maintaining the resiliency and adaptability of Jacksonville Beach.

Waterways within the City of Jacksonville Beach have historically been protected by setback restrictions. The City is essentially built out, therefore, the waterways will continue to be protected and only receive minimal effects from future development and redevelopment. Although development and redevelopment will not encroach into the protected waterways, urban runoff can threaten the health and wellbeing of the waterways and water quality. Increases in pollution levels associated with runoff should be minimal, thereby protecting and sustaining the current water quality, vegetation, and wildlife.

The City of Jacksonville Beach received a Florida Department of Environmental Protection Coastal Resiliency Grant in which the Phase 1 Summary Report found that the most vulnerable Future Land Use designations are the Conservation and Recreation land use categories, followed by the Low Density Residential category. The report, produced in December 2019, details the flood vulnerability analysis and provided pertinent data for this data and analysis report and element.

Map CCM-M1: Waterbodies Within and Surrounding the City



Wildlife and Habitats

The City of Jacksonville Beach's native vegetation and forests, as well as wetlands, streams, lakes, ponds, and waterways, provide habitat for wildlife within the City. Jacksonville Beach is home to bald eagles, osprey, alligators, otters, dolphins, snakes, and sharks, among many other species. The wildlife in Jacksonville Beach is protected by city, state, and federal laws. In addition, Cradle Creek Preserve, the City's 45 acre preserve along the Intracoastal Waterway provides protected habitat for the native species.

The City of Jacksonville Beach is also a bird sanctuary, offering a unique habitat to hundreds of species, including but not limited to, Wood Storks, Darters, Loons, Royal Terns, Egrets, Osprey, and Woodpeckers.

Conservation of Resources

Conservation lands within and adjacent to the City are identified in Map CCM-M2. Approximately 1,417 acres within the City of Jacksonville Beach are conservation lands. These areas include:

- Cradle Creek Preserve
- Castaway Island Preserve
- Jurisdictional Wetlands

Map CCM-M2: Conservation Lands Within and Adjacent to the City

Threatened and Endangered Species

Wildlife species listed by the United States Fish and Wildlife Service and/or Florida Fish and Wildlife Conservation Commission as endangered or threatened in the City of Jacksonville Beach are detailed in Table CCM-T1 below. This is not an exhaustive list, and is current as of January 2023. Some of the species included are found infrequently in the City of Jacksonville Beach but have ranges that do include the City of Jacksonville Beach.

Table CCM-T1: Threatened and Endangered Wildlife Species

Common Name	Scientific Name	Protection Status
Birds		
Bald Eagle		
Eastern Black rail	*Laterallus jamaicensis ssp. jamaicensis*	Federally Threatened
Least tern	*Sternula antillarum*	State Threatened
Piping Plover	*Charadrius melodus*	Federally Threatened
Red knot	*Calidris canutus rufa*	Federally Threatened
Red-cockaded woodpecker	*Picoides borealis*	Federally Endangered
Wood stork	*Mycteria americana*	Federally Threatened
Mammals		
Anastasia Island beach mouse	*Peromyscus polionotus phasma*	Federally Endangered
West Indian Manatee	*Trichechus manatus*	Federally Threatened
Reptiles		
American alligator	*Alligator mississippiensis*	Federally Threatened
Eastern Indigo Snake	*Drymarchon couperi*	Federally Threatened
Green Sea Turtle	*Chelonia mydas*	Federally Threatened
Hawksbill Sea Turtle	*Eretmochelys imbricata*	Federally Endangered
Leatherback Sea Turtle	*Dermochelys coriacea*	Federally Endangered
Loggerhead Sea Turtle	*Caretta caretta*	Federally Threatened
Amphibians		
Frosted Flatwoods Salamander	*Ambystoma cingulatum*	Federally Threatened

Source: U.S. Fish & Wildlife Service: Information for Planning and Consultation (IPAC); and Florida Fish and Wildlife Conservation Commission

Land Use Coverage

Table CCM-T2: SJRWMD Land Use Coverage

Land Use	Acreage	Percentage	Percentage (Land Area)
Agriculture	0.0	0.0%	0.0%
Open Land and Barren Land	6	0.11%	0.1%
Rangeland	22	0.41%	0.5%
Transportation, Communication, and Utilities	156	3%	3%
Upland Forests	142	3%	3%
Urban and Built-Up	3,189	60%	68%
Water	652	12%	-
Wetlands	1,189	22%	25%
Total	5,356	100%	100%

Source: SJRWMD Land Use Cover.

Agriculture

There is no Agriculture land in the City of Jacksonville Beach.

Open Land and Barren Land

The Barren Land land use covers within the City of Jacksonville include the following:

- Disturbed Land
- Spoil Areas

Rangeland

The Rangeland land use covers within the City of Jacksonville include the following:

- Shrub and Brushland
- Mixed Rangeland
- Herbaceous (Dry Prairie)

Transportation, Communication, and Utilities

The Transportation, Communication, and Utilities land use covers within the City of Jacksonville include the following:

- Auto Parking Facilities (When not directly related to other land use)
- Electric Power Facilities
- Roads and Highways
- Water Supply Plants (Including pumping stations)
- Communications
- Surface Water Collection Features
- Sewage Treatment

Upland Forest

The Upland Forest land use covers within the City of Jacksonville include the following:

- Upland Mixed – Coniferous / Hardwood
- Hardwood – Coniferous Mixed

Urban and Built Up

The Urban and Built Up land use covers within the City of Jacksonville include the following:

- Residential, High Density (Six of More Dwelling Units Per Acre)
- Residential Medium Density (Two – Five Dwelling Units Per Acre)
- Residential Low Density (Less Than Two Dwelling Units Per Acre)
- Swimming Beach
- Commercial and Services
- Institutional
- Cemeteries
- Commercial and Services Under Construction
- Herbaceous (Dry Prairie)
- Marinas and Fish Camps
- Community Recreational Facilities
- Golf Courses
- Parks and Zoos
- Pre-Stressed Concrete Plants
- Open Land
- Other Heavy Industrial
- Other Recreational

Water

The Water land use covers within the City of Jacksonville include the following:

- Reservoirs
- Streams and Waterways

Wetlands

The Wetlands land use covers within the City of Jacksonville include the following:

- Saltwater Marshes
- Wetland Forested Mixed
- Mixed Scrub-shrub Wetland
- Emergent Aquatic Vegetation
- Treeless Hydric Savanna

Mixed Scrub-shrub Wetland

Mixed scrub-shrub wetlands are wetland areas that are dominated by woody vegetation less than 20 feet in height. This can occur in many situations, but in most cases involves transitional or distributed communities on drier sites. Persistent examples of shrub wetlands include shrub bogs and willow swamps.

Pine flatwoods

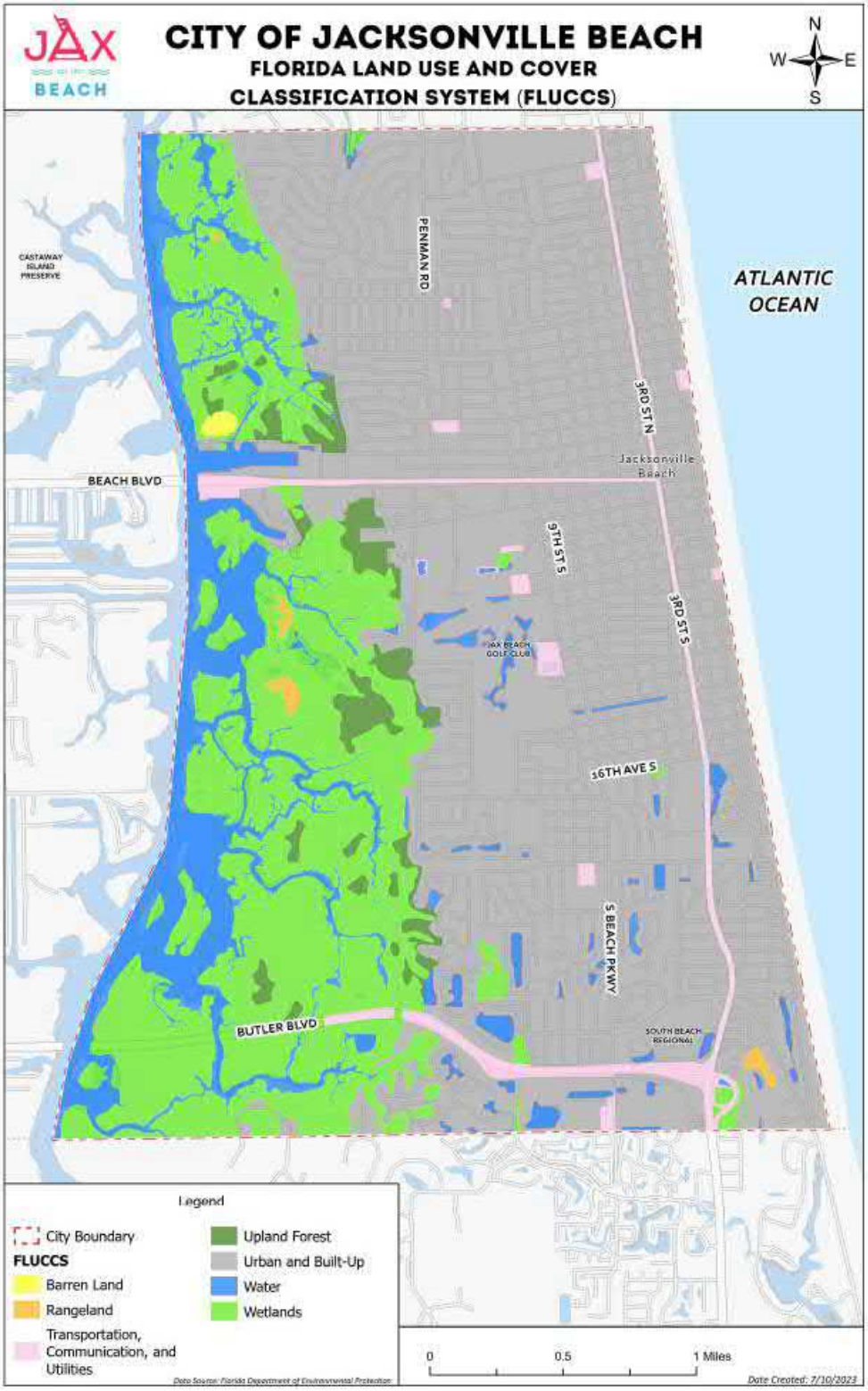
Pine flatwoods include mesic pine woodland or mesic shrubland on flat sandy or limestone substrates, often with a hard pan that impedes drainage.

Shrub and brushland

Shrub and brushland includes saw palmettos, gallberry, wax myrtle, coastal scrub and other shrubs and brush. Generally, saw palmetto is the most prevalent plant cover intermixed with a wide variety of other woody scrub plant species as well as various types of short herbs and grasses. Coastal scrub vegetarian would include pioneer herbs and shrubs composed of such typical plants as sea purslane, sea grapes and sea oats without any one of these types being dominant.

Map CCM-M3 below shows the Florida Land Use and Land Cover (FLUCCS) of the City.

Map CCM-M3: Florida Land Use and Cover Classification System (FLUCCS) Map



Air Quality

The Florida Department of Environmental Protection rates the quality of air in the City of Jacksonville Beach as good. A good rating means the air quality index (AQI) is between 0 to 50 and indicates little potential for the air to affect public health.

Generally, the absence of major industries within and around the City helps to maintain the air quality in the City. Pollution generated from redevelopment, demolishing structures, land clearing, and new development can lead to deteriorated air quality.

Automobile emissions are the largest contributor to air pollution in the City of Jacksonville Beach. As the City grows, increased automobile traffic and traffic congestion can also increase air pollution.

Water Quantity and Quality

This section analyzes the current and projected water needs and sources based on the demands for industrial, agricultural, and potable water use and the quality and quantity of water available to meet these demands. The Public Facilities Element and accompanying Potable Water Subelement provides additional details on the City's water supply and demand.

Water Demands

Potable water is provided to customers within the City's corporate limits. The Public Water System (PWS) is composed of six source water supply wells, two water treatment plants (WTPs), four ground storage tanks, two elevated storage tanks, and a potable water distribution. The Public Works Department operates and maintains the public water supply, treatment, and distribution systems located within the City Limits.

There are two water treatment plants in the City of Jacksonville Beach, the North Plant and the South Plant. The City is permitted a maximum day operating capacity of 4.2 million gallons per day (MGD) for the North Plant and 2.8 MGD for the South Plant. In 2022, the City of Jacksonville Beach's average total potable water consumption (both plants) was 2,372,083 gallons per day.

The City has an emergency water conservation ordinance in effect and enforces use restrictions as needed in cooperation with the St. Johns River Water Management District water demand management policies and programs. The City has rigorous backflow prevention and cross-connection control regulations to prevent accidental contamination of the water supply system.

The City's adopted Level of Service Standard per the 2030 Comprehensive Plan for potable water is 140 gallons per capita per day. The data inventory and analysis provides evidence that there is no reason to change the established level of service for potable water.

Table CCM-T3: Projected Potable Water Demand

Year	Population	Gallons per Capita per Day	Estimated Average Demand (gallons/day)
2022	24,112	140	3,375,680
2025	24,176	140	3,384,640
2030	24,777	140	3,468,780
2035	25,265	140	3,537,100
2040	25,583	140	3,581,620
2050	26,087	140	3,652,180

Water Conservation

The City of Jacksonville Beach participates in water conservation, use, and protection through programs and policies supported by SJRWMD. Per Section 373.016, F.S., the SJRWMD, and all other water management districts, are required to "promote the conservation, replenishment, recapture, enhancement, development, and proper utilization of surface and groundwater." To accomplish this directive, the SJRWMD considers conservation in the development of policy and rules, public information programs, planning, and resource management and evaluation.

Conservation measures are also witnessed through the use of a consumptive use permitting process, which enables the SJRWMD to review certain proposed and existing developments for reasonable and beneficial use of water.

As a measure to conserve water, SJRWMD encourages the reuse of wastewater for irrigation. Incentives to install and utilize wastewater reuse facilities are provided in the Water Management District's permitting provides for wastewater treatment facilities.

Included among the SJRWMD's conservation efforts is a program concerning water conservation. Pamphlets, slide shows, speeches, and addresses made through media sources are a variety of wats in which the District educates and informs the public about water consumption and conservation.

Additionally, the City of Jacksonville Beach Public Works Department is responsible for drinking water distribution, drinking water production, stormwater drainage, wastewater collection, and wastewater treatment. The department works with both Beaches Energy and SJRWMD to provide services to Jacksonville Beach residents and maintain the established level of service. Throughout this effort it is recommended that the City's Public Works department encourage and be conscious of water conservation.

Water Quality

The degradation of water quality in Jacksonville Beach may be a concern if increased growth and development leads to an increase in impervious surfaces. With an increase in impervious surfaces the more concern there is for pollutants and runoff into water bodies. A decrease in water quality can cause several issues for the City including harmful algal blooms. Improvement of water quality should continue to be a cooperative effort between the City, the County, St. Johns River Water Management District (SJRWMD).

Soils

There are three general soil series found within Jacksonville Beach. The Leon-Ortega group is located in nearly level and gently sloping areas, generally comprised of broad areas of flatwoods interspersed with narrow to broad ridges. It occurs throughout the southern part of the City. Leon soils are nearly level and poorly drained and they are found in broad flatwood areas. Ortega soils are moderately well drained and occur in the broad ridges.

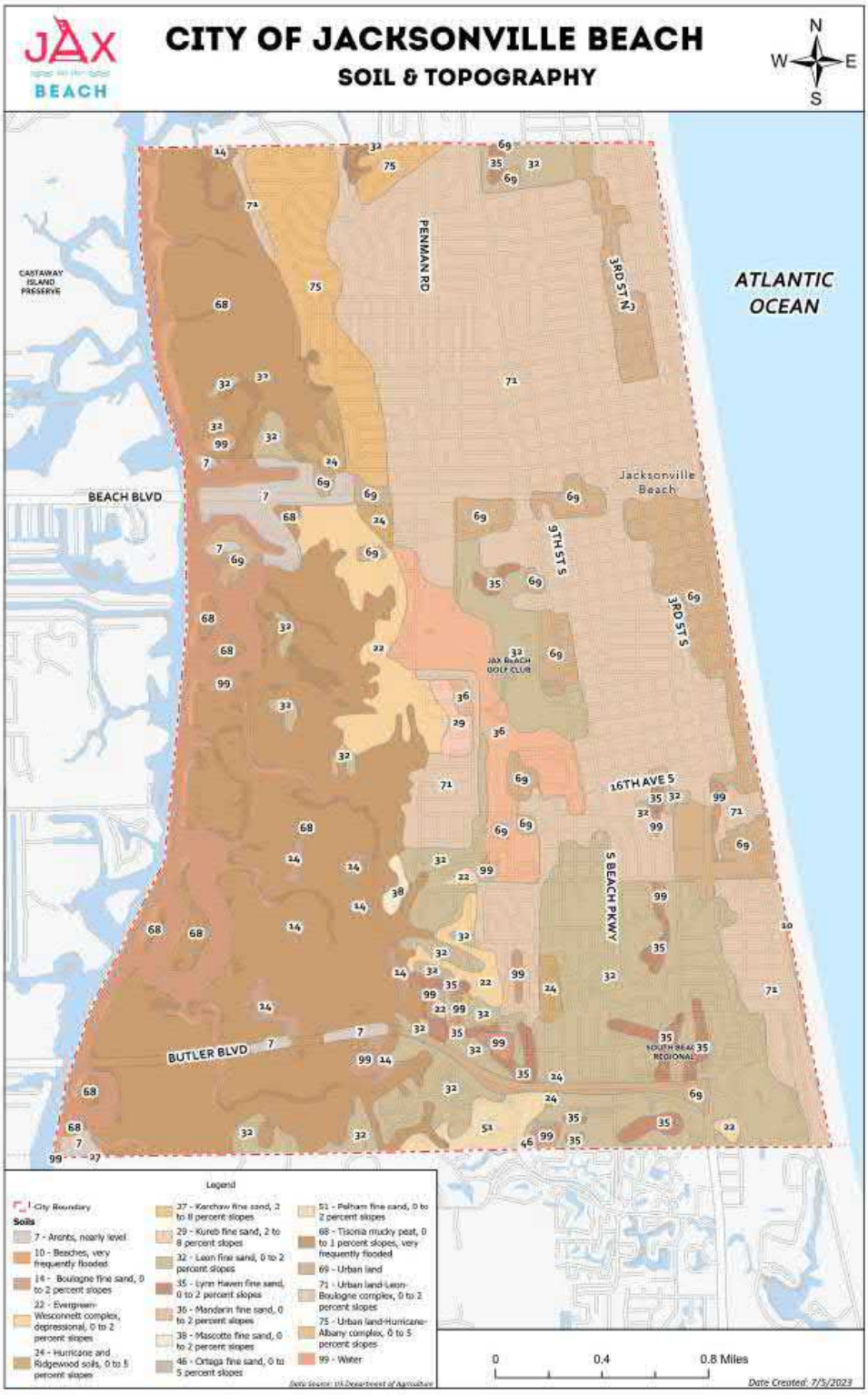
The second major soil group, the Mandarin-Kureb series, is found in nearly level to moderately steep areas, and ranges from being poorly drained to excessively drained. This soil series dominates the land between the Atlantic Ocean and the Intracoastal Waterway comprising much of Jacksonville Beach. This unit consists of 70 percent Mandarin, about 15 percent Kureb soils and about 15 percent various soils of minor extent. Mandarin soils are nearly level and somewhat poorly drained. Kureb soils are gently sloping to moderately steep and excessively drained. Both of these soils have seasonal wetness and a high degree of permeability.

The third unit is the Wesconnett-Maurepas-Stockade group. It consists of 30 percent Wesconnett soils, 25 percent Maurepas soils, 20 percent Stockade soils and 25 percent soils of a minor extent. Wesconnett soils are nearly level and very poorly drained. These soils are found along the tributaries of the St. Johns River and are found in isolated areas in the south of the City. Excessive wetness and flooding effect the use of these soils.

A significant area of Jacksonville Beach is classified as urban land and no detailed analysis of the potential for development has been undertaken. The areas located within this group consist primarily of intensively developed land between the oceanfront and 3rd street and in the commercial area along Beach Boulevard. This group can be easily defined by the fact it has been paved over for the most part and normal evaluation is not possible.

Additional information and analysis on the problems that may exist with respect to certain soil groups in the City is found in the Stormwater Management Subelement- Data and Analysis document. Map CCM-M4 below shows the general soil classification and topography within the City.

Map CCM-M4: Soil and Topography Map



Water Dependent Uses

Land uses which depend on direct water access include a marina, yacht and boat repair facilities, boat ramps, charter and rental boat dockage, the beach, and a fishing pier. In Jacksonville Beach, the ocean fishing pier is the only land use in the oceanfront part of the coastal area which is water-dependent. Beach Marine (Windward Beach Marine), a privately owned marina located on Pablo Creek, is the only marina in Jacksonville Beach. The marina includes 200 wet slips, 300 dry storage boat slips, high speed fueling pumps, concierge service, and additional amenities. Duval County maintains a public boat ramp across the basin from the marina.

Water Related Uses

Water-related uses are associated with activities which are water-dependent but do not require direct water access. These uses support activities such as boat sales, repair and service, marine supply sales, and equipment rentals for aquatic sports. The water-related uses are primarily located in the vicinity of Beach Marine (Windward Beach Marine) on the North side of Beach Boulevard, and include facilities for charter, rental, and tour boats; ships' store; and a dockmaster's office. A Marina Mixed-Use land use category was created in 2023 to provide for a mix of water-dependent and water related uses that support the Windward Beach Marine.

The City's *Cradle Creek Preserve* passive park also lies in and adjacent to the intracoastal wetlands, south of Beach Boulevard. Other water-related uses also occur along the Atlantic Ocean beach. These include restaurants with water views, lodging facilities with beach access, the public fishing pier at 4th Avenue N., along with several small seasonally-operated recreational equipment rental businesses.

Coastal Economy

The City of Jacksonville Beach strives to provide a highly desirable natural setting with water oriented recreational amenities for its residents. Maintenance of the City's natural amenities, specifically the beach and Intracoastal and their associated habitats, is essential to the economic viability of Jacksonville Beach. All water dependent uses, water related uses, and the tourism economy in Jacksonville Beach rely on the natural amenities within and accessible by the City. Therefore, it is essential to the City to protect, maintain, and sustain the quality and quantity of said natural resources.

Floodplains

Flood zones allocated in the City of Jacksonville Beach are illustrated in Map CCM-M5. As a coastal community, the threat to property and human life from flooding would tend to result from tidal inundation and storm surges associated with severe storm events, rather than from upstream drainage conditions. Upstream drainage conditions are controlled by water management structures and facilities under the jurisdiction of a number of agencies, including the Florida Department of Transportation, Duval County (City of Jacksonville), the Jacksonville Transportation Authority, and Jacksonville Beach. In addition, the St. Johns River Water Management District and the City have regulatory control over the provision of stormwater management improvements by private entities.

There are no major waterways within the City, although the Pablo Creek segment of the Intracoastal Waterway does form the City's western boundary. Natural areas subject to flooding from tidal inundation and storm surges in the coastal area of the City are designated in the Future Land Use Element for conservation and recreation use, consistent with the conservation of natural habitat.

Map CCM-M5: Flood Zones Map

Coastal High Hazard Area

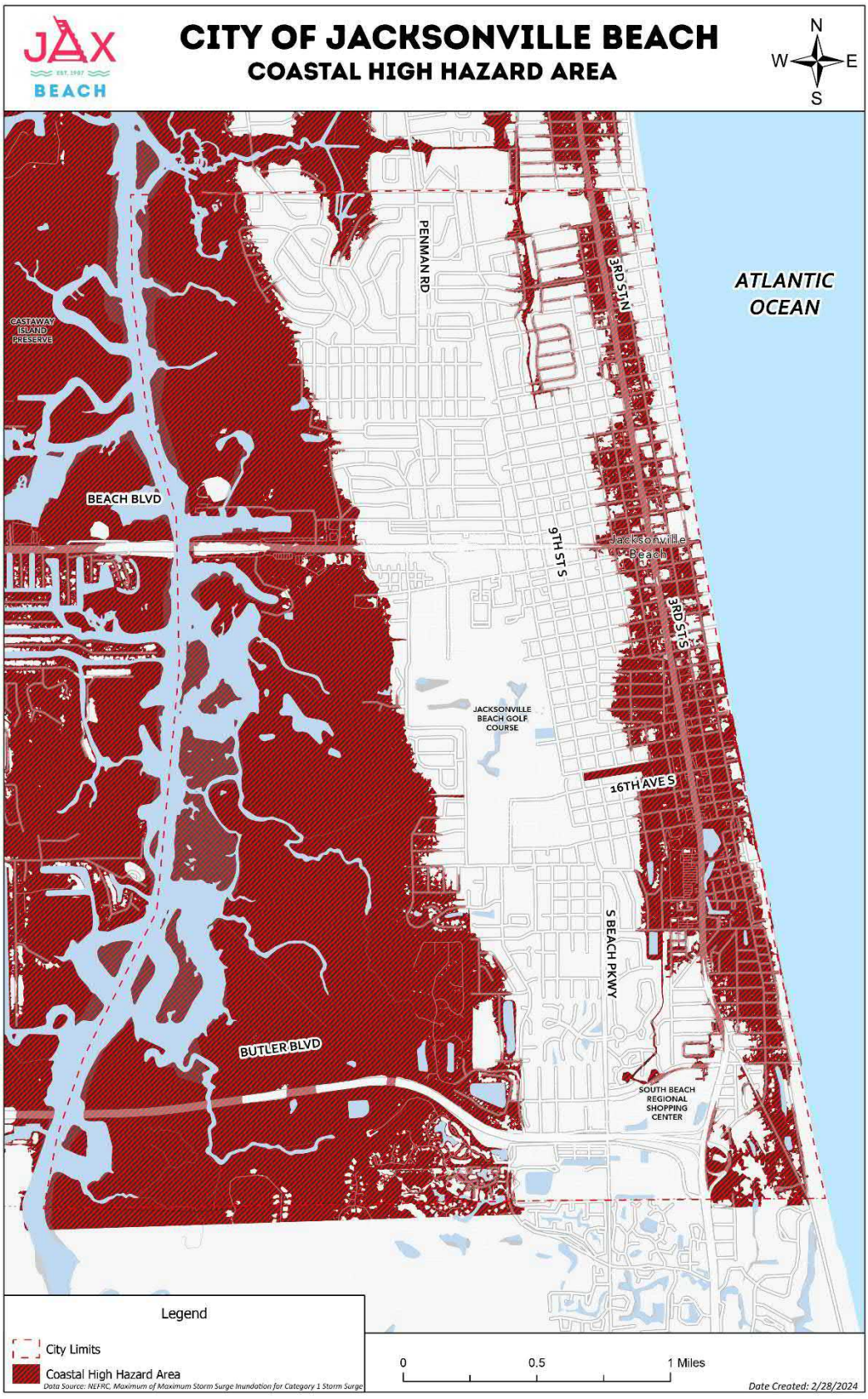
Because Jacksonville Beach is a coastal community, it is expected that flooding during a 100-year storm will be attributable to the rise in sea level and/or storm surge. The destructive potential of this flooding in certain exposed areas can be compounded by the presence of waves.

The Army Corps of Engineers historically has applied the phrase "coastal high-hazard zones" to those areas expected to experience coastal flooding with wave action at depths sufficient to support a three-foot wave. This concept was later adopted by the Federal Emergency Management Agency (FEMA) to delineate V (velocity) zones. The Coastal High Hazard Area, or CHHA as it is referred to, is now defined as 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 (Sec. 163.3178(2)(h), F.S.) Per the City of Jacksonville Beach Ordinance No. 2018-8107, the City defines the Coastal High Hazard Area (CHHA) as follows:

> "A special flood hazard area extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. Coastal high hazard areas are also referred to as 'high hazard areas subject to high velocity wave action' or 'V Zones' and are designated on Flood Insurance Rate Maps (FIRM) as Zone VI-V30, VE, or V."

This definition has been applied to this comprehensive plan update. The City's CHHA is shown in Map CCM-M6.

Map CCM-M6: Coastal High Hazard Area (CHHA)



Hazard Area Delineation

The delineation of the CHHA in Jacksonville Beach is based on the current definition stated above. As shown on the Future Land Use Map with the CHHA overlay, FLU-M3 in the Future Land Use element, the CHHA is concentrated to marshes and immediately adjacent upland areas along the east bank of the Intracoastal Waterway, but does extend into the developed portions of the City. The greater portion of the A-zone flood hazard areas within Jacksonville Beach lie within this western region of the City as well, resulting from the propagation of the storm surge through the entrance to the St. Johns River at Mayport, down the Intracoastal Waterway to impact the lower-lying areas of the City from the north and west.

Hazard Reduction in the Coastal High-Hazard Area

The coastal high hazard areas within Jacksonville Beach, as depicted on Map CCM-M6, present challenges both to existing and future land uses to minimize exposure of the public to unnecessary danger, reduce property damage, and facilitate post-disaster redevelopment. The maximum of maximum storm surge inundation for Category 1 storm surge (the CHHA) encroaches on the City from both the Intracoastal Waterway and the Atlantic Ocean, subjecting these areas to flooding directly related to storm surge.

Much of the coastal high hazard area overlays the city's extensive saltwater marsh system, and, therefore, receives adequate regulatory protection from development. However, a significant portion of this western A-zone extends upland, predominantly in the southwest quadrant of the City. Significant upland areas adjacent to and north of Butler Boulevard, within the Sanctuary subdivision and to the west of Constitution Cove subdivision in the Cradle Creek drainage basin have been classified under the A-zone designation.

Within the A-zones in the western part of the City, structures damaged to an extent exceeding 50 percent of their assessed valuation can be reestablished, but only in a manner which conforms to the requirements for new structures in the specific area. This provision is applicable City-wide and not just in those areas designated as V- or A-zones by FEMA.

Additional upland areas immediately north and south of Beach Boulevard, and extending northward to the City limits are also within this sector. These areas are predominantly built-out, with enforcement of the Flood Hazard Area Ordinance being the principal means of recognizing the susceptibility to flooding. These areas are designated for the lowest density residential uses and should remain so to provide an adequate buffer bordering the marsh and to reduce unwise development in flood prone areas. Moreover, the placement of fill in these areas must be limited to only that which is necessary for streets and building pads. The objective of these development restrictions is to preserve to the greatest degree possible the pre-existing hydrologic regime, and to minimize flood related losses of life and property.

Public infrastructure within the western A-zone is limited to streets, potable water supply and sanitary sewer lines, with some limited storm drainage also present. Because of the low density nature of this residential area, infrastructure investment is minimized to the greatest extent possible. Additionally, the City is working to ensure that all infrastructure required to serve this low density development is flood-proofed, as required by the City's flood hazard area land development code regulations.

Evacuation Routes

The Beaches area operates under a "right turn rule" for evacuation meaning that those persons living between Seagate Avenue and Beach Boulevard use Beach Boulevard to evacuate while the areas south of Beach Boulevard would go to Butler Boulevard to evacuate. Both of these roadways have the capacity to provide good transportation in an emergency situation provided the evacuation has been staged as noted above. The Evacuation Routes and Zones are shown on Map TE-M3 in the adopted 2050 Comprehensive Plan and Transportation Element Data Inventory and Analysis. No alternatives exist or are proposed to supplement these routes. The construction of additional east-west arteries serving Jacksonville Beach is not supported by the growth projections over the planning period.

Disaster Preparedness

The City's public information system is the responsibility of the Jacksonville Beach Police Department, and includes an emergency warning system to notify residents of the event of emergencies. The Department has the capability to dispatch cars with loud-speakers throughout the City to notify the public of imminent threats to public health and safety. In the event of an emergency condition, the Emergency Operations Center at the Jacksonville Beach City Hall maintains liaison with the Duval County Emergency Operations Center and participates as part of the Duval County Warning System. An agreement with the Amateur Radio Emergency Service (ARES) and Jacksonville Beach is in effect to provide a backup communication network.

Sea Level Rise and Planning for the Future

The City of Jacksonville Beach was awarded a grant through the Florida Department of Environment Protection (FY 2019-2020) to analyze the City's vulnerability to sea-level rise, spring tides, and other flood-related events. This grant resulted in the Phase I Summary Report: Flood Vulnerability Analysis. Per the Phase I Summary Report, flood impacts resulting from sea-level rise, spring tides, and other flood-related events or a combination of events will primarily impact the Conservation and Recreation future land use designated areas. Together these two future land use designations account for 90% of the impacted acreage from the 2019 Category 1 storm surge. This indicates a well planned City, as the conservation and recreation areas are the best suited land uses to be effected by flood impacts.

However, the third highest impacted future land use designation is the Low Density Residential category. Additionally, the Phase I Summary Report found that "Category 1 storm surge impacts to developable future land use categories (i.e. residential, commercial and industrial) increases to 34% by 2060 due to the SLR [sea level rise] increment." Further, the study found that due to the additional impacts of sea level rise, the extent of flooding within each future land use category increases over time. Therefore, it is important for the City of Jacksonville Beach to prepare for sea level rise impacts, implement resiliency strategies, especially to those land uses in vulnerable locations, and encourage sustainable, resilient development and redevelopment.

The Phase I Summary Report provides additional sea level rise and flood impact analysis, as well as policy recommendations and engineering solutions appropriate for a built-out city such as Jacksonville Beach. Recommendations and solutions include elevate structures as redevelopment occurs, elevating local roads in conjunction with stormwater improvements, floodproofing infrastructure components where feasible, limited fill/bulkheads/seawalls, and increasing the conveyance of the City's stormwater management system. Additionally, as further expanded on in the Historic Preservation Element, preservation of historic and archaeological resources, which include the sensitive adaptive use of these resources, should be considered and prioritized when planning for the future of Jacksonville Beach.

It is the recommendation of this data inventory and analysis report that the Phase I Summary Report incentives and engineering solutions, as well as the forthcoming Phase II recommendations, be utilized and implemented by the City of Jacksonville Beach to achieve the identified Conservation and Coastal Management Element Vision.

VI. Recreation & Open Space Element DIA

Recreation & Open Space Element
Data Inventory and Analysis

Introduction

The City of Jacksonville Beach has valuable natural amenities including the beach, parks and waterway access. The natural amenities serve as recreation resources in addition to public and private recreation facilities. This Element provides a recreation and open space inventory, analysis, and policies pursuant to the requirements of Section 163.3177(6)(e) of the Florida Statutes. Additionally, current and projected needs for recreation sites, facilities, and open space are analyzed based on an assessment of existing and projected recreation demands and a plan to meet those demands identified.

Jacksonville Beach conducted a Parks Assessment in the FY 2020. The assessment conducted a citizen survey via email and social media and an assessment of the quality of each park amenity was made in addition to potential capital improvements being identified. This data inventory and analysis relied heavily on the Parks Assessment FY 2020.

Definitions

Neighborhood Park – A smaller park that serves as a social and recreational focal point for a neighborhood. Neighborhood parks are generally 1 to 5 acres in size and accessible by foot or bicycle with a service radius of about 0.5 miles. A neighborhood park typically serves a population of up to 5,000 persons.

Community Park – A larger park meant to serve a larger geographic area than the surrounding neighborhood. These parks are typically between 5 and 25 acres in size and provide a diverse range of recreation and leisure activities designed to meet a variety of community-based recreation needs. Facilities and activities may include, but are not limited to, athletic fields and courts, picnic tables, benches, swimming pools, play structures, performing arts and fine arts centers, and gymnasiums.

Nature Reserve Area – An area designed and reserved with consideration for outdoor recreation and nature preservation. A nature reserve area may include, but is not limited to, areas for viewing and studying land, aquatic, or avian wildlife; conservation activities; swimming; hiking; camping; trail facilities; botanical gardens; or nature centers.

Level of Service – An indicator of the capacity per unit of demand for each public facility. The level of service (LOS) indicates the extent or degree of service provided by, or proposed to be provided by, a facility. LOS standards were established by the State of Florida 2019 Statewide Comprehensive Outdoor Recreation Plan (SCORP).

Recreation and Open Space Inventory

This section provides an inventory of existing resource-based and active-based recreational facilities, open space, and identifies parks and playgrounds accessible to the public within the vicinity of the City of Jacksonville Beach. Map RO-M1 shows the recreation and open space within the City of Jacksonville Beach, including beach accesses and park facilities.

A. Classification

Generally, recreation areas are classified as either active-based or passive-based depending on the facilities and natural resources. These terms are defined as follows:

Active-Based – Active-based recreation activities involve those that are built for the enjoyment of a particular activity, such as playing tennis, pickleball, running, walking, and other activities that raise the user heart rate to a level significantly above the resting level. Active-based recreation activities rely on the presence of recreational facilities that enable certain activities to function. Without the provision of such facilities, the activity would either be limited in quality or altogether eliminated. Active-based recreation areas can be further classified as either user oriented or resource based

User-Oriented—User-oriented activities can be provided anywhere, if funding and space are available. Activities include baseball, football, basketball, golf, pickle ball and tennis. User-oriented facilities generally are man-made and should be located to best serve the population of the community.

Resource-Based—Resource-based recreation facilities are those that exist around particular natural resources such as beaches, lakes, ponds, etc. This includes all water related activities, hiking trails, camping, or any other activity adaptable to the existing natural environment. Resource-based activities are designed to maximize use of the natural resources, such as waterways, beaches, and wetlands, since the resources are not present in all communities.

Passive-Based – Passive-based recreation is defined as a more relaxing type of activity that does not significantly raise heart rate above resting level. Passive-based recreation facilities emphasize enjoyment of natural resources, providing refreshment from the pressures of everyday urban life. Examples of passive-based recreation facilities include picnic tables, historical or archaeological sites, park benches, etc. and involve passive-based activities such as sunbathing at the beach, walking through a scenic area, or visiting a local historical site.

B. Inventory of Parks and Recreation Areas

Jacksonville Beach has thirteen municipally owned and operated parks and playgrounds, as listed below.

1. The Carver Center. This park features a community building that includes a fully equipped kitchen and offers educational and workout classes, as well as providing a space for events. Additional amenities include a lighted ballfield, playground set, pavilion area, and basketball court.

2. Cradle Creek Preserve. This park is 43.3 acres of primarily undisturbed land along the Intracoastal Waterway. This park can be explored via a system of natural trails and elevated boardwalks, or accessed and explored via canoe or kayak. An observation platform overlooking Pablo Creek Estuary provides a location for enjoying the panoramic views. Cradle Creek Preserve is the newest of Jacksonville Beach's parks. Potential improvement to the park involves urban trail connectivity through Wingate Park and Paws Park, and possibly to the golf course at Fairway Lane.

3. Gonzales Park. This 3.2-acre park is located on Third Avenue North between Tenth and Eleventh Streets. Gonzales Park features amenities such as two ballfields, a basketball court, BBQ pit, playground equipment, two sheltered picnic areas, and a restroom building. Jacksonville Beach City Council began the process of renovating Gonzales Park in 2021, and in March 2023 the Master Plan for Gonzales Park was finalized. The new plan includes four (4) pickle ball courts, one (1) basketball court, a 7,500 square foot shaded playground area, a renovated bathroom building, a fitness circuit area, and additional park area and amenities.

4. Huguenot Park. This 8-acre park features the Jacksonville Beach Tennis Club, including 7 lighted tennis courts, basketball courts, playground equipment, a fishing pier and boardwalk, and a 3-acre lake with stocked fish. Huguenot Park is located on 16th Avenue South between 3rd Street South and 1st Street South.

   The Capital Improvements Plan (FY 2021) included construction of an eight tennis court. Other improvements planned for include a new half-basketball court, replacing the lights, and a new playground set.

5. Oceanfront Park. This 2-acre park is located on the oceanfront between 5th and 6th Avenues South. Oceanfront Park provides 4 sheltered picnic areas, an educational kiosk system, a sand volleyball court, small children's playground equipment, 2 dune walkovers, a handicapped accessible ramp, and large, circular open space ideal for picnics or recreational activities. This park also includes landscaped pathways around the open space and a bronze statue, Sea Express, as the focal point of the park.

6. Wingate Park. This park is 16-acres located on S Penman Road. Wingate Park has recreation facilities including 2 football fields, 4 softball fields, 4 fields for Little League baseball, and the sub-facility, Paws Dog Park.

   a. Paws Dog Park. This park is a membership playground for dog owners and their dogs. With a membership, dog owners and their dogs can enjoy an off-leash dog park with a large-dog area, a small-dog area, watering bowls, benches, and an educational bulletin board. This park is handicap accessible and a sub-facility of Wingate Park.

7. Rotary Park. This park is located on 2nd Avenue N and features a boat ramp, fishing pier, picnic tables, and playground equipment.

8. South Beach Park and Sunshine Playground. This park is located on Osceola Avenue and South Beach Parkway. South Beach Park features a multi-purpose turf field, a basketball court, 2 pickle-ball courts, a fitness trail with exercise stations, 6 picnic shelters, a skate park, a splash pad, a tennis court, 3 sand volleyball courts, 2 grills, and the children's playground, sunshine playground. Sunshine Playground was renovated in 2021 with new playground equipment and an innovative design.

9. Tall Pines Park. This 1.5 acre park is located on 9th Avenue N West of North Penman Road and includes a basketball court, picnic pavilion with grill and playground equipment.

10. Latham Plaza Seawalk Pavilion. This park is situated adjacent to City Hall, bordering 2nd Street South and the Oceanfront boardwalk. The park features an amphitheater and landscaped lawn where many festivals and special events are put on throughout the year.

11. Penman Park. This 1.5-acre park is located at the intersection of Penman Road and 2nd Avenue North. Park amenities include a basketball court and a multi-purpose field and lights.

12. Jacksonville Beach Fishing Pier. The Jacksonville Beach Fishing Pier is a handicapped-accessible wooden deck pier almost a quarter mile long. The pier offers visitors spectacular views and a prime location for fishing. As of January 1, 2023, the Jacksonville Pier has a $2 general admission fee and a $5 fee for fishing. Duval County residents, and those staying in a local hotel, have a $1 general admission fee and a $3 fee for fishing. The pier is open 7 days a week from 7:00 AM - 7:00 PM.

13. Intracoastal Boat Ramp. The Intracoastal Boat Ramp, also known as the Mike McCue Boat Ramp, is located at the terminus of 2nd Ave North in the City of Jacksonville Beach. The boat ramp serves both the City and the County (City of Jacksonville). The boat ramp includes two (2) boat docks and four (4) boat ramps with 37 parking spaces for boat trailer parking.

C. Neighborhood Parks

1. Tall Pines Park. This park is located in a residential neighborhood on 9th Avenue North and features 2 playground sets, 3 swing sets, 10 park benches, a half basketball court, and 4 picnic tables. Replacement of a swing set and installation of a water fountain are scheduled in FY 2023.

2. 12th Avenue South Park. This neighborhood park is adjacent to the drainage channel along 12th Avenue South. Amenities include a sidewalk and 4 park benches.

D. Public School Recreation Sites

Although there is not a formal joint use agreement for the public school recreation sites in Jacksonville Beach to be publicly accessible, they are still worth noting as they contribute to the quality of recreation and open space accessible to students and often privately. The use of school recreation sites for public recreation represents an efficient use of these facilities and, ultimately, efficient use of public tax expenditures. After the school day and any school-sponsored afterschool activities, and when school is not in session (summer, winter break, spring break, etc.), these facilities are left unused, unless they are made available to the public. The creation and maintenance of a joint-use agreement between the City and the Duval County School Board would be a means to enhance recreation opportunities and meet some of the demands identified in this section.

1. Fletcher Middle School. Fletcher middle school is on the same campus as the Fletcher High School Athletic Complex and includes basketball courts, a track, and a full-sized grass athletic field.

2. San Pablo Elementary School (Magnet School). This magnet elementary school includes a ball field, basketball courts, and large open playground areas.

    i. San Pablo Elementary School Park. This park is a part of San Pablo Elementary School and features a playground area.

3. Seabreeze Elementary School. This elementary school includes basketball courts, playground area with equipment, a batting cage, and a ball field.

4. Jacksonville Beach Elementary School (Magnet School). This magnet elementary school has a basketball court, playground area with equipment, covered picnic area, and open grass play area.

E. State Parks

Although there are no State Parks or State lands in the Jacksonville Beach limits, there are six State Parks in proximity that are worth noting. The parks include the following:

1. Little Talbot Island State Park. This Park is north of Jacksonville Beach in Jacksonville, FL and offers more than five (5) miles of pristine beaches and three (3) miles of bike trails. Little Talbot is a barrier-island nature area that is a prime place for kayaking, surfing, & picnicking.

2. Big Talbot Island State Park. This Park is also north of Jacksonville Beach located on one of Northeast Florida's sea islands. Big Talbot Island State Park is a natural preserve with diverse habitats and beaches.

3. Amelia Island State Park. Less than an hour north of Jacksonville Beach, Amelia Island State Park protects over 200 acres of wilderness on the southern end of Amelia Island. The Park offers horseback rides down the beach, coastline to explore, canoe and kayak rentals, and fishing.

4. Fort George Island Cultural State Park. This Cultural State Park is north of Jacksonville Beach and home to a beautifully restored 1920s resort. The Park offers boating, fishing, bicycling, hiking, and more for their visitors.

5. Pumpkin Hill Creek Preserve State Park. This inland state park is an expansive upland preserve of pine flatwoods that protect the water quality of the Nassau and St. Johns rivers, and also provide habitat for aquatic plants and animals and refuge for birds. The Park also offers 15 miles of multi-use trails. Pumpkin Hill Creek Preserve State Park is part of the larger 7 Creeks Recreation Area.

F. Private Recreation

Private recreation facilities and areas provided within and outside of the City of Jacksonville Beach reduce the need for the City to provide such facilities. Additionally, the limited potential land available for the City to purchase for recreation and open space makes the private sector's involvement even more crucial. Currently the private sector sponsors events such as festivals, volleyball and surfing competitions, and offers active recreation opportunities such as outdoor sports and athletics, karate, yoga, weight training, workout classes, and more. While private recreation does aid the demand on public parks, it must be recognized that these private amenities are not accessible to the public, nor do they provide the scale of recreation or same community benefits as public facilities. Recreation in the public realm is an opportunity and means for all residents to come together, and therefore is key to a sense of community identity and pride.

Map RO-M1: Recreation and Open Space

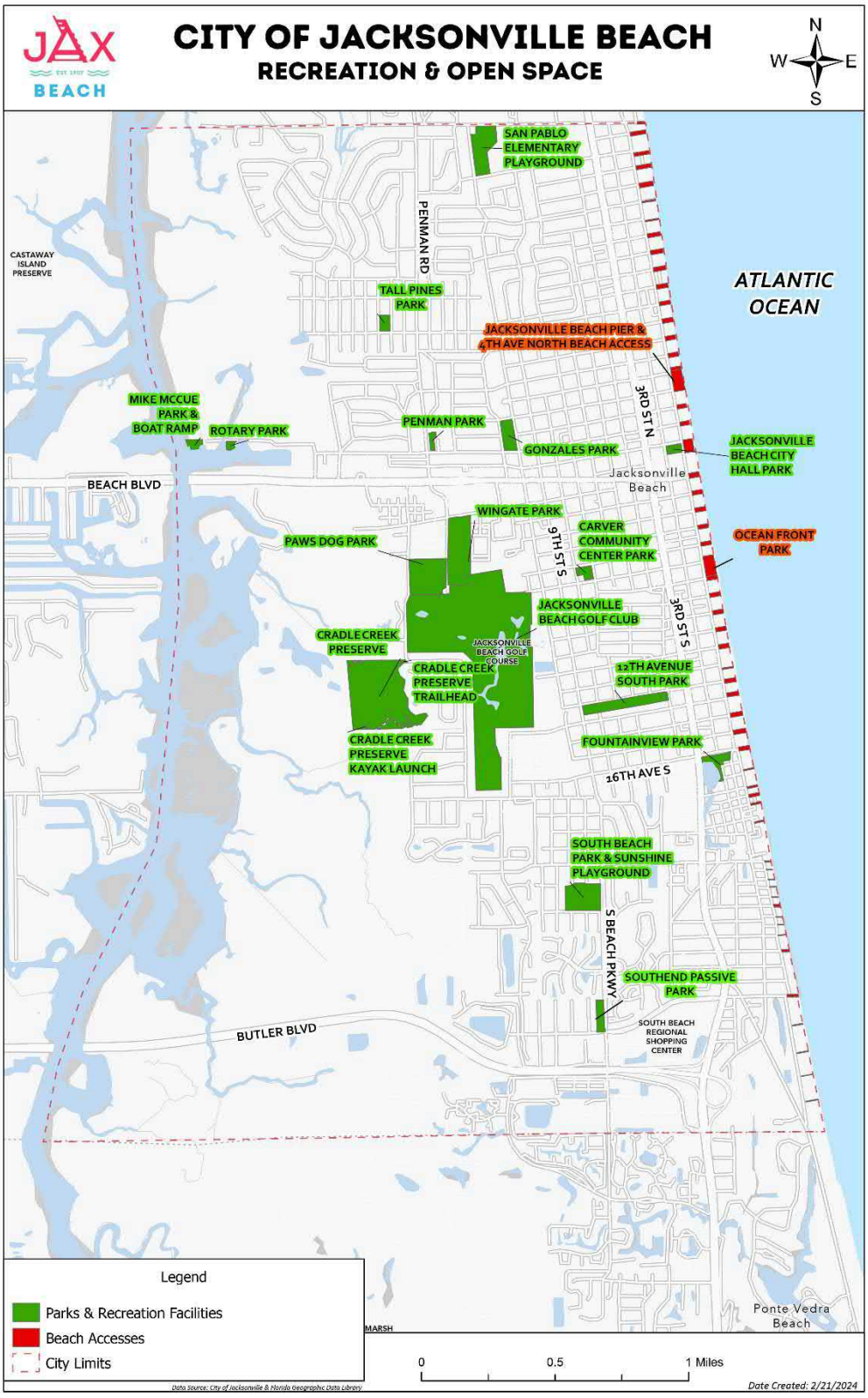


Table RO-T1: City Parks and Amenities, as of March 2024

ID	Park	Active/ passive	Size (Acres)	Basketball Court	Softball/Baseball Field	BBQ Grills	Benches	Bicycle/Walking Trail (paved) miles	Equipped Play Area (Playground)	Open Play Field	Dock	Fishing Pond	Pavilion	Picnic Tables (covered)	Picnic Tables (uncovered)	Tennis Courts	Pickleball Courts	Volleyball Courts	Restrooms	Trash Receptacles	Bicycle Racks	Splash Pad	Skate Park
1	Carver Center 777 5th Avenue S	Active	1.5	1	1				1				1								1		
2	Cradle Creek Preserve 900 S 15th St	Passive	43.3				X	X			X										1		
3	Gonzales Park* 1001 2nd Ave N	Passive	3.2	1	1	1			1					3			4			10			
4	Huguenot Park 218 16th Ave S	Active	6	1			5		1		1	1				7							
5	Latham Plaza/ Seawalk 11 Ocean Front N	Passive	2.0																				
6	Oceanfront Park 429 1st St S	Active	2											4				1	4		5		
7	Wingate Park 101 Penman Rd S	Active	16		8					2													
8	Paws Dog Park (Sub facility of Wingate) 468 Penman Rd S	Passive	-				13	X												6			
9	Penman Park 321 Penman Rd	Active	0.8	1						1													
10	Rotary Park 2293 2nd Ave N	Passive	0.6						1		1				2								
11	South Beach Park 2514 S Beach Pkwy	Active	10.5	3		2		X	1	1 *turf*				6			2	3	1		4	1	1
12	Tall Pines Park 9th Ave 32250	Passive	1.5	1/2		1	10		2				1		4					3			
13	12th Avenue South Park 12th Ave S	Passive	7.2				4	X													1		
Total			94.7	7.5	10	4	32		7	4	2	1	2	13	6	7	6	4	5	19		1	1

**Gonzales Park amenities are based on both the existing (July 2023) conditions and the March 2023 Redevelopment Master Plan. Final development may reflect different amenities.*

Source: City of Jacksonville Beach Parks Assessment (June 2020); City of Jacksonville Beach Parks and Recreation Department

Recreation Analysis

A. Summary of Inventory

The recreation and open space inventory indicates that the City of Jacksonville Beach contains approximately 255 acres of recreation and open space, which includes 94.7 acres of dedicated park space, 24.3 acres of beach access, and roughly 45 acres of nature preserve (Cradle Creek Preserve). A summary of the City of Jacksonville Beach's recreation and open space inventory and amenities can be found in Table RO-T1. As of 2021 the City of Jacksonville Beach is estimated to have a resident population of 24,075[1]. Based on this population, the total park acreage represents 3.93 acres per 1,000 residents.

B. Demand Methodology

Current and future demands for recreation space were determined by applying recreational space standards to population estimates and projections for the City of Jacksonville Beach. Standards for developed park area acreage and service area are established

C. Current Recreation Demand

1. Acreage Demand

To satisfy space requirements needed to support those facilities that are demanded by residents living within that service area, a minimum acreage is established for each park classification.

Park acreage standards were compared to Jacksonville Beach's 2021 population to estimate current demand for park area. Table RO-T2 below identifies existing demand for the Neighborhood and Community Park classifications. Analysis of the existing park area acreage and established neighborhood and community levels of service (2 acres/1,000 residents) shows the City having an existing neighborhood park deficit of 39.5 acres and community park surplus of 37.9 acres. Because of the size and urban form of the City, there are few parks classified as neighborhood parks. Therefore, analyzing the total neighborhood and community park acreage together is a more appropriate analysis. The combined existing neighborhood and community park acreage, compared to the established levels of services, shows an existing park acreage deficit of 1.65 acres.

Huguenot Park and South Beach Park are the City's predominant community parks. These parks are well sited near major streets and are well equipped to serve the City. Per the Parks Assessment FY 2020, the City contains two (2) neighborhood parks, Tall Pines Park and 12th Avenue South Park.

Table RO-T2: Recreation Standards for Size and Classification

Classification	Acres/1,000 Residents	Minimum Size	Service Area	Population Served	Existing	Surplus/(Deficit)
Neighborhood	2.0 ac.	2.0 acres	0.25 mile to 0.5 mile radius	Up to 10,000	8.7 acres	(39.5 acres)
Community	2.0 ac.	2.0 acres	0.5 mile to 3 mile radius	Up to 25,000	86 acres	37.9 acres
Total Neighborhood and Community Park Acreage						**(1.65 acres)**

2. Facility Demand.

Recreational facility demand represents the minimum level of service to be provided by the City of Jacksonville Beach to meet the basic facility needs of the resident population. These needs are only the minimum facility needs of the resident population; the City may provide additional facilities at their discretion. Table RO-T3 identifies existing demand for those recreation facilities based on the City of Jacksonville Beach's 2021 population estimate.

Table RO-T3: Recreation Standards for Facilities

Facility	Standard	Demand	Existing	Surplus/(Deficit)
Baseball/Softball Fields	1 field per 3,000 residents	8 fields	11 fields	3
Basketball Courts	1 court per 5,000 residents	5 courts	7.5 courts	2.5
Boat Ramps	1 ramp per 12,500 residents	2 ramps	1 ramp	(1)
Equipped Play Areas (playgrounds)	1 area per 5,000 residents	5 areas	7 areas	4
Football Fields	1 field per 10,000 residents	2 fields	4 fields*	3
Golf Courses	18 holes per 25,000 residents	18 holes	18 holes	-
Recreation Center & Gym	1 center per 25,000 residents	1 center	1 center	-
Soccer Fields	1 field per 10,000 residents	2 fields	4 fields*	2
Swimming Pools and Splash Pads	1 pool/splash pad per 30,000 residents	-	2	2
Court Sport (Tennis and Pickleball)	1 court per 2,000 residents	12 courts	13 courts	1
Volleyball Courts	1 court per 8,500 residents	3 courts	4 courts	1
Hiking/Exercise Trail	1 mile per 6,000 residents	4.0 miles		

* Field count includes open play fields

Analysis of the current demand for recreational facilities and existing City facilities shows that the City has existing deficiencies in tennis courts and boat ramps.

D. Future Recreation Demand

Table RO-T4: Projected Population

	2021	2025	2030	2035	2040	2050
Duval County	1,033,533	1,076,900	1,136,200	1,181,200	1,217,800	1,278,100
City of Jacksonville Beach*	24,075	25,070	25,983	26,525	26,852	27,242

* Source: Estimates and projections by Shimberg Center for Housing Studies, based on 2010 and 2020 U.S. Census data and population projections by the Bureau of Economic and Business Research, University of Florida.

1. Future Park Area Demand

The demand for park land in the future is based on both the future population and the adopted Level of Service (LOS). Recreation and Open Space Strategy OS.1.1.1 adopted a Level of Service of 2 acres/1,000 residents for neighborhood parks and 2 acres/1,000 residents for community parks. The demand is determined by dividing the future population by 1,000 and then multiplying it by 2 acres for each classification. Although this demand exercise is worthwhile, it is important to note that the City is practically built out. Therefore, there is very limited opportunity for new neighborhood or community parks. However, there is opportunity to improve the existing parks. The success of the South Beach Park (aka Sunshine Park or Sunshine Playground) has demonstrated the opportunity for continual quality improvement of the established, existing parks within the City. The anticipated park area demand and assessed surplus or deficit for the projected populations for the City of Jacksonville Beach in 2030, 2040, and 2050 are provided in Table RO-T5 below.

Table RO-T5: Projected Park Acreage Demand

Year	Population	Classification	Adopted LOS (Acres/1,000 population)	Demand Acres	Existing Acres	Surplus/ (Deficit)
2021	24,075	Neighborhood	2 acres	48.2	8.7	(39.5)
		Community	2 acres	48.2	86	37.8
		Total	*4 acres*	*96.4*	*94.7*	*(1.7)*
2030	25,983	Neighborhood	2 acres	52.0	8.7	(43.3)
		Community	2 acres	52.0	86	34.0
		Total	*4 acres*	*104*	*94.7*	*(9.3)*
2040	26,852	Neighborhood	2 acres	53.7	8.7	(45.0)
		Community	2 acres	53.7	86	32.3
		Total	*4 acres*	*107.4*	*94.7*	*(12.7)*
2050	27,242	Neighborhood	2 acres	54.5	8.7	(45.8)
		Community	2 acres	54.5	86	31.5
		Total	*4 acres*	*109.0*	*94.7*	*(14.3)*

Adopted level of service based on City of Jacksonville Beach established level of service. Existing acres based on Table RO-T2

It is important to note that the City of Jacksonville Beach embarked on a city-wide multi-use trail master plan in 2021. The goal was to provide City residents and visitors of all ages and abilities a high-quality network of urban trail infrastructure that would serve as a multi-modal transportation network, as well as provide a system for activity and recreation. The result was adoption of the Urban Trails Master Plan in November 2022. The Urban Trails Master Plan provides the framework for implementing a comprehensive trail system. The plan identifies links between neighborhoods, beaches, parks, commercial focal points, and natural areas, as well as trail routes, loops, braids, and connectors.

Implementation of the Urban Trails Master Plan will provide the City of Jacksonville Beach with a comprehensive, accessible, and connected urban trails system that can increase park and recreation accessibility and use in the City. Implementation of the Urban Trails Master Plan can also contribute to fulfilling the identified park area and facility deficit within the City. Therefore, implementation of the Urban Trails Master Plan should be a high priority for the City and is a key recommendation of this Recreation and Open Space Data Inventory and Analysis and associated Recreation and Open Space 2050 Comprehensive Plan Element.

2. Future Park Facility Demand

The demand for park facilities is also based on the future population and the adopted Level of Service. The anticipated park facility demand and assessed surplus or deficit for the projected populations for the City of Jacksonville Beach in 2030, 2040, and 2050 are provided in Table RO-T6 below.

Table RO-T6: Projected Park Facility Demand

Facility	Standard	Demand			Existing	Surplus/(Deficit)		
		2030	2040	2050		2030	2040	2050
Baseball/Softball Fields	1 field per 3,000 residents	8	9	9	11 fields	3	2	2
Basketball Courts	1 court per 5,000 residents	5	5	5	7.5 courts	2.5	2.5	2.5
Boat Ramps	1 ramp per 12,500 residents	2	2	2	1 ramp	(1)	(1)	(1)
Equipped Play Areas (playgrounds)	1 area per 5,000 residents	5	5	5	7 areas	2	2	2
Football Fields	1 field per 10,000 residents	2	2	3	4 fields*	2	2	1
Golf Courses	1 course (18 holes) per 25,000 residents	1	1	1	1 course	-	-	-
Recreation Center & Gym	1 center per 25,000 residents	1	1	1	1 center	-	-	-
Soccer Fields	1 field per 10,000 residents	2.5	2.5	2.5	4 fields*	1.5	1.5	1.5

Facility	Standard	Demand			Existing	Surplus/(Deficit)		
		2030	2040	2050		2030	2040	2050
Swimming Pools and Splash Pads	1 pool/splash pad per 30,000 residents	-	-	-	2	-	-	-
Court Sports	1 court per 2,000 residents	13	13	14	13 courts	0	0	(1)
Volleyball Courts	1 court per 8,500 residents	3	3	3	4 courts	1	1	1
Hiking/Exercise Trail	1 mile per 6,000 residents	4.0	4.2	4.3				

E. Extra Jurisdictional Recreation Demand

Parks provided and maintained by the City of Jacksonville Beach can be used by City residents as well as visitors and residents of other municipalities and unincorporated Duval County. On the contrary, parks and open space provided by Duval County, the City of Jacksonville, Atlantic Beach, Neptune Beach, and other municipalities can be used by City of Jacksonville Beach residents. However, given the similar growth rates of the City of Jacksonville, Atlantic Beach, Neptune Beach, and other nearby jurisdictions, the impacts of population growth in the City of Jacksonville Beach are not anticipated to be disproportionate or a significant detriment to the City's park system.

Recreation Plan

A. Park Area Supply

The future supply of park land is based upon the existing improved park acreage and the current supply of unimproved park land. The project park area supply identified in Table RO-T5 above indicates the City has a deficit in both community and neighborhood park acreage. However, due to the limited remaining unimproved and/or vacant land in Jacksonville Beach, providing additional park space will be a challenge for Jacksonville Beach. It is important to note that the abundant supply of beach area and beach access within the City is not taken into account in the park area supply analysis. The beach itself is an extremely valuable and vast resource that meets a variety of resident's recreation needs in addition to fulfilling visitor's recreation needs. Therefore, it is concluded that although the park area supply is showing a deficit, the City has little opportunity to provide additional parks and has the beach as an abundant public resource and thereby provides adequate park area supply given the circumstances.

Most neighborhoods are within close proximity to parks within Jacksonville Beach. Access for all ages is improved when residents can reach recreation opportunities by walking or biking rather than driving, therefore equitable geographic distribution of parks is an important consideration for future supply. The recently adopted (November 2022) Urban Trails Master Plan will work in conjunction with this Comprehensive Plan Element to improve multi-modal access throughout Jacksonville Beach, and particularly to parks and amenities.

B. Park Facility Supply

The future supply of park facilities is based upon the existing improved park sites and the City's ability to add amenities to existing park sites and/or develop new park sites with new amenities. However, as discussed prior, the addition of new park sites is constrained by the limited remaining unimproved, vacant land in Jacksonville Beach. Nonetheless, the ability to improve current park sites is a suitable way to fulfill the future supply of park facilities.

The deficits identified in Table RO-T6 can best be addressed by improving current park sites and utilizing existing Capital Improvement Funds. Additionally, if an active recreation payment in lieu of was established for new residential development within the City, this revenue would be a direct funding source for city park facility improvements. The City's Parks and Recreation Department, City Council, and City staff can best advise the ongoing process of matching resident needs and desires with funding for facility improvements and/or additions.

C. Quality

The service that recreational facilities provide should be measured not only by the quantity available but also by the quality of the facility as well. Facilities that are in despair should be repaired as soon as possible because they can discourage use and therefore reduce the level of service provided by the City. Deteriorated facilities can also provide a location for unwanted activities and signalize that an area is not monitored or upkept. Therefore, recreational facilities that are underdeveloped also limit use by the community. Amenities which provide for a more fulfilling and enjoyable park visit should be provided to the extent desired by the community even though there is no established numerical standard. Additionally, as noted earlier in this report, the best way for the City of Jacksonville Beach to improve their parks and recreation facilities is through improving the quality of the existing parks and recreation facilities. This is a result of the City being practically fully built out with little to no opportunity to establish new parks.

Conducting audits, surveys, and studies such as the City of Jacksonville Beach Parks Assessment (June 2020) is a great way to monitor the quality of the City parks, the level of resident satisfaction with existing facilities, and identify any gaps requiring attention.

Finally, it should be noted that throughout the public engagement phase of this comprehensive plan update, the renovation of South Beach Park (aka Sunshine Park) was repeatedly discussed and highly praised. It was also voiced that quality improvement of parks is something the City of Jacksonville Beach citizen's desire. Therefore, the continuous quality improvement and maintenance of the City parks is encouraged throughout the Recreation and Open Space element.

D. Open Space

Due to the beach, intercoastal, and large reserves such as the Cradle Creek Preserve, Jacksonville Beach provides a notable amount of open space. As of July 2023, the City of Jacksonville Beach is estimated to have 255 acres of recreation and open space. The beach is 3.7 miles long and has an area of approximately 130 usable acres based on a width which varies from 200 to 350 feet. The City also has an estimated 652 acres of City water bodies (lakes, ponds, canals, etc.) and an estimated 1,189 total acres of wetlands or submerged lands. The City also has roughly 1,417 acres of conservation area. These natural areas should continue to be preserved, valued, enhanced, and protected for the present and future generations of Jacksonville Beach.

E. Special Groups

a. Individuals with Disabilities. Parks and recreational facilities should be designed to accommodate the needs of those residents with disabilities and/or special needs. Parking facilities at parks should include ADA compliant parking spaces and active recreation facilities, such as football and baseball fields, should contain accessible routes utilizing ramps as necessary to enable passive participation or spectating at events.

In addition, accessible routes should be provided to all types of amenities within a park, to the extent feasible. Special consideration should be given to improving access, including restroom design, whenever work is done to renovate or expand a park. Particular attention should be given to the simple amenities, such as picnic tables or water fountains, that can easily be improved to provide greater accessibility by a larger range of users.

b. Seniors. The recreational interests of seniors may vary from those of more active age groups. Ensuring an adequate mix of active and passive recreation opportunities is an important way to satisfy the needs of all age groups in the City.

c. Children. Young children lack the size and strength to actively participate in certain recreational activities, but can do so where special facilities are provided. A great example of a recreation activity for young children is a splash pad, which allows the children to safely enjoy the water activity. Playgrounds should also include equipment designed for various youth age groups when space allows, and accessibility should be provided and improved whenever possible.

[1] Population estimates provided by the Shimberg Center for Housing Studies, based on 2010 and 2020 U.S. Census data and population projections by the Bureau of Economic and Business Research (BEBR), University of Florida. This is the official population estimate recognized by the State of Florida.

VII. Intergovernmental Coordination Element DIA

Intergovernmental Coordination Element
Data Inventory And Analysis

INTRODUCTION

The purpose of this element is to identify the relationship of the Jacksonville Beach Comprehensive Plan Elements with those of other governmental entities. Those relationships are especially important with those agencies having service responsibilities within the community, but not having regulatory authority over the use of the land. Since the coordination of plans must be addressed during their preparation, this element reviews the interrelationships of the various governmental entities and establishes guidelines for future coordination.

The importance of coordinating with adjacent jurisdictions in the development of the overall Beaches community, the need to continue to coordinate with the City of Jacksonville/Duval County as well as St. Johns County, and the need to coordinate with special districts and regional and state agencies serving Jacksonville Beach has long been recognized. Jacksonville Beach functions within a context of other governmental entities. The resolution of the problems and issues confronting the City, Jacksonville and Duval County, and the region will be effectively accomplished only if the various governmental jurisdictions cooperate with each other.

INTERGOVERNMENTAL RELATIONSHIPS

The relationships that exist today include those with Duval and St. Johns Counties, the Cities of Neptune Beach and Atlantic Beach; and regional, state, and federal agencies. The plans of these entities having service responsibilities, but not regulatory authority, over land use with the City of Jacksonville Beach were examined.

City of Jacksonville/Duval County

In 1968, the City of Jacksonville and all of Duval County (with the exception of Cities of Jacksonville Beach, Neptune Beach, Atlantic Beach and Baldwin) joined together into a consolidated city/county government. This entity serves as the county government for Jacksonville Beach. Various Jacksonville Beach Departments engaged in coordinative activities with their counterpart agencies in Jacksonville. The coordination generally follows functional lines, e.g. city management in Jacksonville Beach with the Mayor's office in Jacksonville for management matters, Jacksonville Beach Public Works with Jacksonville Public Works for the road and utility areas, and Jacksonville Beach Electric Utilities with the Jacksonville Electric Authority (JEA) in that area of local operations.

Duval County, through its Board of Education, provides and maintains the public educational facilities in the City. The Duval County Library System operates the Beaches Library, which is located in Neptune Beach and is accessible for residents of the three Beaches municipalities. Coordinative efforts in these areas functions through the City Manager's office.

Although the City contracts with private firms for the collection of solid wastes, it is Duval County that provides the sanitary landfill sites for the disposal of this material. There is also an informal mutual aid agreement between Jacksonville Beach and the County for either to provide public safety assistance to the other when necessary. Another informal relationship exists between the City and County with regard

to children wanting to play little league baseball. Any coordinating activities are handled by the Jacksonville Beach Public Works Department, Police and Fire Departments, or Parks and Recreation Department, respectively.

With regard to mass transportation, the Jacksonville Transportation Authority (JTA) provides regularly scheduled bus service to Jacksonville Beach. Their services include bus routes within the City itself, between the Beaches communities, and commuter services into the City of Jacksonville. Some coordination with the Jacksonville Transportation Authority is managed through the City Manager's office and the Planning and Development Department via common membership with JTA staff on the Technical Advisory Committee (TAC) of the Jacksonville Transportation Planning Organization (TPO).

It should also be noted that, because the Consolidated City of Jacksonville functions as the county government for Jacksonville Beach (as well as Neptune Beach and Atlantic Beach), there is one City Council district serving the Beaches communities specifically. In addition, all registered voters in the Beaches communities have the opportunity to vote for the Mayor and the five "at-large" City Council positions in the City of Jacksonville.

St. Johns County

Abutting the City of Jacksonville Beach immediately to the south, St. Johns County does have some formal and informal interactions with the community. First, there exists a mutual aid agreement between the City (coordinated through the Jacksonville Beach Police and Fire Departments) and the Ponte Vedra Municipal Service District for either to provide police, fire or other emergency service assistance to the other when requested.

The Jacksonville Beach municipally-owned electric utility, Beaches Energy Service, provides service to City of Neptune Beach to the north and to the unincorporated areas of Ponte Vedra Beach, Sawgrass and Palm Valley in St. Johns County, to the south. The territorial boundaries of the City's electric system were established by the Florida Public Service Commission.

Jacksonville Beach/Neptune Beach/Atlantic Beach

The Beaches division of the Jacksonville Chamber of Commerce serves all of the Duval County Beaches communities in terms of working to bring new economic development to the area. It is to be noted that the Beaches' Chamber is part of the Jacksonville Chamber, and therefore, an integral element of the regional economic development effort. The importance of this linkage cannot be emphasized enough. Being part of the larger organization is important in developing a coordinated approach to economic development for the entire region.

Mutual aid agreements exist between all of the Beaches communities for public safety emergency situations. In addition, Jacksonville Beach shares an effluent force main with Atlantic Beach to transport treated sewage to the mouth of the St. Johns River. The Jacksonville Beach Public Works Department is the lead agency in coordinating the use and maintenance of the outfall line.

Regional Agencies

The City of Jacksonville Beach is included in the jurisdiction of a number of regional agencies. These include the Northeast Florida Regional Council (NEFRC), the Transportation Planning Organization of the Jacksonville Urban Area Transportation Study (JUATS - TPO), the Duval Soil and Water Conservation District, and the St. Johns River Water Management District (SJRWMD)

Northeast Florida Regional Council

The Northeast Florida Regional Council (NEFRC) provides Intergovernmental Coordination and Review (IC and R) of grant applications as well as a review of local, regional, and state plans affecting the Region. The City of Jacksonville Beach is included in a framework of regional planning programs.

Additionally, the Planning Council provides technical assistance to municipalities and counties within its jurisdiction and coordinates the activities of the Private Industry Council (PIC) in the northeast Florida region. The Planning Council also has a review function in the Development of Regional Impact (DRI) process.

The Jacksonville Beach Planning and Development Department is the primary point of contact on the local level for matters relating to coordination with regional planning activity.

Transportation Planning Organization

Charged with overall transportation planning for this region, the North Florida Transportation Planning Organization (TPO) classifies the major roadways in the area as to their function. The TPO also keeps up-to-date records of traffic counts on the major roads, population growth and vehicle ownership throughout the region. All of this data is used to prepare their 20-year transportation plan for the Jacksonville urbanized area, including Jacksonville Beach.

Primary responsibility for providing coordination with the TPO rests with The Planning and Development Department. The Planning and Development Department currently holds a seat on the Technical Advisory Committee for the TPO.

St. Johns River Water Management District

Management of water resources falls within the jurisdiction of the St. Johns River Water Management District. The agency is headquartered in Palatka and generates revenues by assessing ad valorem millage within its service area and through application and other user fees. The Water Management District also maintains a branch office in Jacksonville. It is governed by a Board of Directors, appointed by the Governor and confirmed by the State Senate.

The Water Management District and the City of Jacksonville Beach have an informal coordinative tie, in that the District reviews plans and issues permits for the control of stormwater runoff. This activity is coordinated by the Planning and Development Department which withholds development orders for private projects pending receipt of the required SJRWMD stormwater management permit. Other regulatory functions of the Water Management District, including permits needed by the City for its activities, are coordinated by the Public Works Department or consultants working for the City.

Duval County Soil and Water Conservation District

Although the Soil and Water Conservation District's primary mission is to provide technical assistance to agricultural interests, it does have a role in the future growth and development of Jacksonville Beach. The District office is responsible for the preparation of the Soil Survey for the entire County, and this is an important tool in any land planning program. There is no formal mechanism for intergovernmental coordination, but the jurisdictions do come into official contact during the annual budget hearings for the District. Organized under Chapter 582, F.S., the District does have the authority to promulgate land use regulations subject to referendum approval by property owners. The City has little direct involvement with this agency, therefore, no specific department has a primary coordinative role.

State Agencies

Several State agencies are involved in the land development process of the City, primarily in the area of growth management and environmental assessment, review, and permitting. These agencies include the Florida Department of Environmental Protection and the Division of Community Development in the newly created Florida Department of Economic Opportunity.

Department of Environmental Protection

The Florida Department of Environmental Regulation (FDEP) is responsible for controlling dredge and fill, stormwater runoff, public water supplies, hazardous and toxic wastes, water well construction and air pollution throughout the State. The FDEP issues National Pollution Discharge Elimination System (NPDES) water quality certifications and reviews power plant and transmission line siting applications. The Department is also responsible for public works projects and the training of sewage treatment plant operators. FDEP responsibilities also include the acquisition and management of State lands and the protection of its resources. These responsibilities include aquatic need research and control, beach erosion and nourishment, and the Florida Geological Survey.

Also, the FDEP has full supervisory powers over the St. Johns River Water Management District and can exercise any power of the District. The Environmental Regulation Commission must approve all non-procedural rules and establishes the State-wide priorities for funding sewage treatment grants.

The FDEP's regulatory functions are monitored by the Planning and Development Department which coordinates local permitting to ensure conformance to coastal construction and setback standards administered on the state level. The Public Works Department is involved in instances where City development activities fall within the agency's jurisdiction, e.g. bulkhead or boardwalk repairs. The Jacksonville Beach Public Works and Planning and Development Departments provide the coordinating effort relating to the FDEP.

Division of Community Development

The Division of Community Development is responsible for the administration of the State's growth management initiatives and for providing technical assistance to local governments and the Northeast Florida Regional Planning Council. The Bureau of Land and Water Management administers the Development of Regional Impact program. Other responsibilities include the updating and administering the State code for energy efficient building construction and statewide disaster preparedness. All involvement of this agency on the local level operates through the Jacksonville Beach Planning and Development Department.

EFFECTIVENESS OF EXISTING COORDINATING MECHANISMS

Jacksonville Beach has been effective in its coordination of public utilities and public safety. It is in these areas where the City, along with some of its neighbors, has devised a number of comprehensive interlocal agreements.

In addition, the agreement governing procedures at the Jacksonville landfill sites has provided Jacksonville Beach with guaranteed areas for disposal of its solid waste. Any new pact signed between the Beaches communities and the City of Jacksonville would probably be less effective from the Beaches' viewpoint.

Outside the areas of public utilities and public safety, Jacksonville Beach's network of intergovernmental coordination is almost nonexistent. Most the growth over the former planning period has occurred outside its boundaries, having gone to Jacksonville or to St. Johns County. Most of Jacksonville Beach's efforts at coordination with Jacksonville have been concerned with problems requiring a regional funding approach or the provision of staff support. Differences in size and resources between Jacksonville Beach and the City of Jacksonville may continue to restrict coordination.

VIII. Capital Improvements Element

Capital Improvements Element
Data Inventory and Analysis

Introduction

Pursuant to the requirements of Chapter 163 of the 2022 Florida Statutes, the Capital Improvements Element consists of data inventory and analysis (DIA) that influencer and informs the overarching vision, intent, and strategies that will guide the capital improvements process. The Capital Improvements Element is intended to insure implementation of the Legislature's intent that local governments plan for the availability of public facilities and services to support future development.

It is important for the City to evaluate the need for public facilities as identified in other Elements of this Plan. This Element will present an analysis of the fiscal capability of the City to fund needed public facilities, recommend financial policies to guide the funding of those identified improvements, and to schedule the funding and construction of improvements in a manner necessary to ensure that capital improvements are provided when required.

Overview

Facilities will be provided either by property owners and/or developers as they develop their property in order to meet the requirements of the City's Land Development Code (LDC); or facilities will be provided by public agencies, including the City of Jacksonville Beach. All capital projects shall be reviewed as to their compatibility and timing in relation to capital projects being implemented or planned by Duval County, the Florida Department of Transportation (FDOT), the St. Johns River Water Management District (SRWMD), the Duval County School Board, the Florida Department of Environmental Protection, and/or any other applicable government agency.

Needed capital improvements are those that are necessary to meet the adopted level of service (LOS) standards established in other Elements of this Plan. LOS standards are used to indicate whether public facilities are adequate to meet the needs of the City's future populations. LOS is a standardized measure of infrastructure operating conditions and is generally defined with reference to a benchmark; a measure of effectiveness.

Definition of a Capital Improvement. The criterion adopted by the City classifies capital improvements as non-recurring improvements requiring expenditures of $100,000 or more for acquisition of property or construction and installation of facilities.

The City of Jacksonville Beach public facilities that require identification and funding:

Transportation: Roadways that are under the jurisdiction of the City and County, and those roadways which need funded improvements.

Sanitary Sewer: Sanitary sewer treatment and effluent disposal facilities necessary to serve the existing and future population of the City. This includes coordination with Duval County to ensure those facilities are available when needed, and recommendations for adequate sanitary sewer facilities.

Solid Waste: Solid waste disposal facilities to service the City's existing and future population. This includes coordination with Duval County to ensure those facilities are available when needed, and recommendations for adequate solid waste collection methods.

Drainage: Drainage systems necessary to meet recommended LOS for stormwater quality and conveyance. Provisions of said services and facilities shall include coordination with Duval County and the Saint Johns River Water Management District (SRWMD), for improvements to systems and basins which serve the City but are outside its jurisdiction.

Potable Water: Potable water treatment facilities necessary to serve the existing and future population of the City. This includes coordination with Duval County to ensure those facilities are available when needed, and recommendations for adequate potable water facilities.

Recreation/Open Space: Land Area necessary to meet the recommended LOS.

Additional LOS standards and analyses pertaining to each of these public facilities are detailed, respectively, in the public facilities and recreation and open space elements.

Funding Sources

The City of Jacksonville Beach utilizes numerous sources to fund operation and capital expenses in the City. The City has employed methods described in this Element in addition to its standard annual budgeting procedures to allocate funds for specific purposes. An overview of various funding sources utilized for capital project funding is included below.

General Fund Revenue Sources

Ad Valorem Taxes (Property Taxes). Ad valorem taxes include revenue from non-exempt property taxation.

Franchise Fees. Franchise fees are paid by utility providers (electricity, natural gas, solid waste) for their use of City streets and property in providing their services. The City assesses a franchise fee for the electric utility and the solid waste collection services.

Licenses, Permits and Fines. All businesses operating in the City are required to pay a local business tax. Fees for driveway permits, zoning, site plan review, plat review and the similar, provide income from this revenue source. Fines for parking tickets, court fines, code enforcement fines, and the like provide additional income.

Intergovernmental Revenue. Intergovernmental revenues are funds collected by the State or County and shared with other local government units. Major sources of shared revenue include cigarette tax, state revenue sharing, and fuel taxes.

Interest Income. Interest income is revenue earned on funds that have been invested by the City.

Other Charges for Services/User Fees. Service and user fees are charges for services provided by the City that are paid by the users to fully or partially cover the costs to provide services.

Utility Services Taxes. Utility taxes are assessed at a certain rate of the monthly purchase price on purchases of electricity, water, and propane and natural gas services on customers within the City limits.

Communication Services Taxes. The Communication Service Tax replaced the franchise fee for dealers of communications services (including, but not limited to, phone and cable TV services). The tax of 5.22% on retail telecommunications sales that originate and terminate within the state of Florida Department of Revenue.

Downtown Redevelopment Fund. The City of Jacksonville Beach currently has a redevelopment trust fund as required under FS 163.387 as the repository for increment tax funds.

Southend Redevelopment Fund. In August 1987, the City approved an ordinance establishing a tax increment trust fund for the South Beach Community Redevelopment District.

Other Funds Revenue Sources

Mobility Fee. The City of Jacksonville Beach has replaced transportation concurrency with the mobility fee program. The intent of the mobility fee program is to replace the transportation concurrency management system with a holistic mobility approach that applies a fee system to new development based upon the link between land use and mobility.

Convention Development. Duval County collects Convention Development Tax revenues resulting from a 2% tax on transient rental (lodging less than six months) transactions. One-half of the proceeds collected within Jacksonville Beach's municipal boundaries are returned to it by the county to be used to promote tourism and to fund the maintenance and upkeep of the SeaWalk and Amphitheater area, in accordance with Florida Statutes (Section 212/0305(4)(a)).

Local Option Gas Tax. The LOGT is an established cent gallon tax levied by Duval County. The tax, generated by a $0.12 tax on sales of diesel or motor duel sold within Duval County, is distributed monthly by the Florida Department of Revenue. Allocation to the City is based on its proportionate share of the county's population, as specified in the interlocal agreement with Duval County that expires in 2036.

Infrastructure Surtax. The Half-Cent Local Discretionary Sales (Infrastructure) Surtax is specifically restricted to be used for: street reconstruction, water, sewer and stormwater improvements, school sidewalks, capital improvements to recreational facilities and the purchase of property for preservation and recreational purposes as per Florida Statues sections 212.054-055.

Downtown Tax Increment. The City created the downtown Tax Increment Financing (TIF) District in 1984.

Southend Tax Increment. The Southend Tax Increment Fund (TIF) was established in June 1987 to support the redevelopment activity in the district.

American Rescue Plan Act. The American Rescue Plan Act of 2021 provided emergency grants, lending, and investment to hard hit small business during the economic downturn of COVID-19.

General and Infrastructure Capital Projects. The General Capital Projects Fund accumulates funds necessary to perform expensive infrastructure improvements or equipment replacements or updates, in order to avoid having to borrow such projects. Funding is primarily from transfers from other funds, interest earnings and occasional grants that the City may receive for such projects.

Utility Services/User Fees. Services and user fees are charges for services provided by the City that are paid by the users to fully or partially cover the costs to provide services.

Golf Course. Charges for use of the City's golf facilities are included in this category.

Meter Service. Part of Beaches Energy Services, meter services provide support services for all meter reading and meter service functions.

Prioritization

The various Elements of this plan discuss and analyze capital improvements necessary for construction, extension, or increase in capacity of public facilities, in addition to addressing existing deficiencies and providing facility expansion to meet projected growth. The methods of project prioritization of the identified capital improvements provide a means to determine the relative priority of each capital project, the City will use the following questions to prioritize projects:

1. Will it be needed to protect public health and safety, fulfill legal obligations, provide facilities and services, or achieve full use of existing facilities?
2. Will it increase efficiency of use of existing facilities, prevent or reduce the need for future capital outlay or promote development?
3. Will the project be necessary to maintain the current level of service or to aid in the implementation of any other policy set forth in the Comprehensive Plan?
4. Is the cost of the purchase reasonable in light of the questions above and will adequate funding be available at the time of purchase?

Financial Feasibility

The Five-Year Capital Improvement Schedule provides the foundation of an annual planning process that allows the City to meet its capital improvement needs and maintain its adopted LOS standards based on projected growth and available existing capacity. The revenue sources described herein are projected to be adequate to fund the projects identified in the Five-Year Capital Improvements Schedule.

CAPITAL IMPROVEMENTS PROGRAM

The City Council adopts a five-year capital improvements program which includes the first year as part of the annual budget, and the remainder of the program is updated each year. The current Capital Improvement Program (CIP) document is a guide to determining and establishing priorities based upon the condition of each Element of the Comprehensive Plan and the capital improvements needed to maintain adopted LOS standards. The CIP is the implementing portion of the City's Capital Improvements Plan. Below is the adopted CIP for the FY2023-2027.

CIP Summary, All Departments

Funding Sources	FY2023	FY2024	FY2025	FY2026	FY2027	Total
001 - General Fund	207,000	237,000	220,000	200,000	135,000	999,000
130 - Convention Development	300,000	300,000	300,000	300,000	300,000	1,500,000
150 - Local Option Gas Tax	310,000	310,000	310,000	310,000	310,000	1,550,000
151 - Infrastructure Surtax	870,000	870,000	7,570,000	820,000	820,000	10,950,000
181 - Downtown Tax Increment	25,252,850	7,712,775	3,055,000	2,800,000	6,177,450	44,998,075
182 - Southend Tax Increment	7,875,000	850,000	10,500,000	584,000	5,136,000	24,945,000
190 - American Rescue Plan Act	4,500,000					4,500,000
315 - General Capital Projects	4,207,400	8,033,037	5,644,278	1,425,868	2,063,190	21,373,773
317 - Infrastructure Capital Projects	777,150	302,225			1,122,550	2,201,925
410 - Electric Utility	10,138,890	9,754,307	12,110,736	9,969,178	13,539,677	55,512,788
411 - Natural Gas	155,000	160,000	165,000	170,000	176,000	826,000
420 - Water & Sewer Utility	3,963,800	4,669,064	2,159,336	4,389,616	4,834,856	20,016,672
423 - Stormwater Utility	3,522,308	4,633,000	1,595,000	1,109,462	2,522,077	13,381,847
430 - Sanitation			300,000			300,000
440 - Golf Course	285,000	195,000	100,000	225,000	101,000	906,000
541 - Meter Service			40,000	40,000	140,000	220,000
Grand Total	**62,364,398**	**38,026,408**	**44,069,350**	**22,343,124**	**37,377,800**	**204,181,080**

Expenses	FY2023	FY2024	FY2025	FY2026	FY2027	Total
Administration & Finance	1,723,500	3,615,000	4,310,000	215,000	160,000	10,023,500
Beaches Energy Services	10,280,000	9,900,000	12,301,000	10,164,000	13,834,000	56,479,000
Community Redevelopment Agency	34,847,308	8,865,000	20,055,000	3,698,462	14,663,077	82,128,847
Information Services	1,015,000	1,831,000	414,600	168,000	844,000	4,272,600
Parks & Recreation	1,815,000	1,087,000	740,000	660,000	596,000	4,898,000
Police	541,590	1,218,408	578,750	582,662	385,723	3,307,133
Public Works	12,142,000	11,510,000	5,670,000	6,855,000	6,895,000	43,072,000
Grand Total	**62,364,398**	**38,026,408**	**44,069,350**	**22,343,124**	**37,377,800**	**204,181,080**

Administration and Finance

Funding Sources	FY2023	FY2024	FY2025	FY2026	FY2027	Total
001 - General Fund	90,000		35,000	55,000		180,000
315 - General Capital Projects	1,633,500	3,615,000	4,275,000	160,000	160,000	9,843,500
Grand Total	**1,723,500**	**3,615,000**	**4,310,000**	**215,000**	**160,000**	**10,023,500**

Expenses	FY2023	FY2024	FY2025	FY2026	FY2027	Total
Fire Marshal						
Vehicle replacement program	55,000			55,000		110,000
Fire Marshal Total	**55,000**			**55,000**		**110,000**
Planning & Development						
Vehicle replacement program	35,000		35,000			70,000
Planning & Development Total	**35,000**		**35,000**			**70,000**
Finance - Utility Billing						
Major equipment replacements	58,500					58,500
Finance - Utility Billing Total	**58,500**					**58,500**
Finance - Property & Procurement						
Major bldg. systems repairs/replacements	925,000	365,000	425,000	110,000	110,000	1,935,000
Major bldg. systems repairs/replacements (not capital)	50,000	50,000	50,000	50,000	50,000	250,000
Building renovations resulting from space needs assessment	600,000	3,200,000	3,800,000			7,600,000
Finance - Property & Procurement Total	**1,575,000**	**3,615,000**	**4,275,000**	**160,000**	**160,000**	**9,785,000**
Grand Total	**1,723,500**	**3,615,000**	**4,310,000**	**215,000**	**160,000**	**10,023,500**

Beaches Energy Services

Funding Sources	FY2023	FY2024	FY2025	FY2026	FY2027	Total
410 - Electric Utility	10,125,000	9,740,000	12,096,000	9,954,000	13,518,000	55,433,000
411 - Natural Gas	155,000	160,000	165,000	170,000	176,000	826,000
541 - Meter Service			40,000	40,000	140,000	220,000
Grand Total	**10,280,000**	**9,900,000**	**12,301,000**	**10,164,000**	**13,834,000**	**56,479,000**

Expenses	FY2023	FY2024	FY2025	FY2026	FY20227	Total
Engineering						
Vehicle replacement program						0
Advanced smart grid infrastructure	320,000	330,000	341,000	292,000	301,000	1,584,000
BES/City communication infrastructure	443,000	458,000	413,000	427,000	516,000	2,257,000
Engineering Total	**763,000**	**788,000**	**754,000**	**719,000**	**817,000**	**3,841,000**
Construction & Maintenance						
Vehicle replacement program		600,000	500,000	900,000		2,000,000
Storage structure						0
Construction & Maintenance Total		**600,000**	**500,000**	**900,000**		**2,000,000**
Electric Capital Projects						
Infrastructure to support system growth & maint.	1,847,000	1,727,000	1,782,000	1,838,000	2,396,000	9,590,000
Major replacement projects	2,467,000	2,514,000	2,563,000	2,612,000	2,663,000	12,819,000
Electric Capital Projects Total	**4,314,000**	**4,241,000**	**4,345,000**	**4,450,000**	**5,059,000**	**22,409,000**
System Operations						
Outage management system	228,000	310,000	400,000			938,000
Outage management system (not capital)	86,000	90,000	94,000	98,000	102,000	470,000
Regulatory cyber & physical security	103,000	107,000	111,000	115,000	119,000	555,000
Building renovations	26,000					26,000
System Operations Total	**443,000**	**507,000**	**605,000**	**213,000**	**221,000**	**1,989,000**
Relay / Substations						
Vehicle replacement program					150,000	150,000
Substation 26kV breaker & relay upgrades		455,000		597,000	484,000	1,536,000
Substation capacitor bank upgrades		43,000		45,000		88,000
Substation battery bank replacement		60,000	63,000	67,000	69,000	259,000
Substation transformers	1,815,000	309,000	3,547,000	328,000	4,579,000	10,578,000
Motor switch replacement		253,000				253,000
Transmission line protective relay upgrades	266,000	274,000		282,000		822,000
Transformer differential protective relay upgrade	247,000	259,000	270,000	278,000		1,054,000
230kV & 138kV circuit breaker upgrades	385,000					385,000
Equipment storage and covered parking						0
Relay / Substations Total	**2,713,000**	**1,653,000**	**3,880,000**	**1,597,000**	**5,282,000**	**15,125,000**
Transmission						
Transmission line hardware renewal & replacement	1,168,000	1,204,000	1,241,000	1,279,000	1,318,000	6,210,000
Transmission Total	**1,168,000**	**1,204,000**	**1,241,000**	**1,279,000**	**1,318,000**	**6,210,000**
Regulatory Compliance						
Regulatory compliance plan	21,000	22,000	23,000	24,000	25,000	115,000
Regulatory compliance plan (not capital)	703,000	725,000	748,000	772,000	796,000	3,744,000
Regulatory Compliance Total	**724,000**	**747,000**	**771,000**	**796,000**	**821,000**	**3,859,000**
Natural Gas Fund						
Natural gas distribution system	155,000	160,000	165,000	170,000	176,000	826,000
Natural Gas Fund Total	**155,000**	**160,000**	**165,000**	**170,000**	**176,000**	**826,000**
Meter Division						
Vehicle replacement program			40,000	40,000	140,000	220,000
Meter Division Total			**40,000**	**40,000**	**140,000**	**220,000**
Grand Total	**10,280,000**	**9,900,000**	**12,301,000**	**10,164,000**	**13,834,000**	**56,479,000**

IX. Public School Facilities Element

Public School Facilities Element
Data Inventory and Analysis

Introduction

Pursuant to the requirements of Chapter 163 of the 2022 Florida Statutes, the Public School Facilities Element consists of a data inventory and analysis that influences the overarching vision, intents, and strategies that ensure public school facilities are provided in a timely manner in the City of Jacksonville Beach. The Public School Facilities Element recognizes schools as the cornerstones of community planning and design. Strategies contained within the Element seek to promote and optimize intergovernmental cooperation for effective operation of the Duval County public school system.

The primary purpose of this analysis is to describe the historical and current relationship between population, housing and school enrollment, and provide a framework for projecting the demands of projected growth on school capacity. Additionally, this public school facilities data inventory and analysis shall comply with the Florida State Statute intent of providing joint processes for, among other purposes, collaborative planning and decision making on population projections and public school siting.

Key Terms and Abbreviations

Level of Service (LOS) Applied to determine whether sufficient capacity exists to accommodate a particular development application; The uniform LOS standards for all public schools is 105% of the permanent Florida Inventory of School House (FISH) capacity plus portables, based on the utilization rate as established by the State Requirements for Education Facilities (SREF).

Florida Inventory of School Houses (FISH) Responsible for the total student stations utilized in determining the level of service and subsequently school concurrency.

Concurrency Service Area (CSA) Established by mutual consent of the DCPS and Cities staff. A defined geographic service area used to assess and determine school concurrency. CSAs are established for every school level (elementary, middle, and high). As of the 2022-2023 school year, the City of Jacksonville Beach is in CSA 6 for all school levels.

Duval County Public Schools (DCPS) DCPS is responsible for the public school system of Duval County. As of the 2022-2023 school year, DCPS consists of 197 schools and is the 20th largest school district in the nation.

Existing Conditions

The City of Jacksonville Beach is in Duval County, Florida. Geographically, Duval County (also referred to as the City of Jacksonville) (the “County”) is situated on Florida’s east coast bordered by the Atlantic Ocean to the east, Nassau County to the north, Baker County to the west, and Clay and St. Johns Counties to the south. The County encompasses 840 square miles with three Beach communities, Jacksonville Beach, Neptune Beach and Atlantic Beach, and the Town of Baldwin representing independent municipalities within the County. Figure PS-F1 defines the geographic relationship of these municipalities and planning districts.

The City Council of the Consolidated City of Jacksonville (“Jacksonville”), the City Commission of the City of Atlantic Beach (“Atlantic Beach”), the Town Council of the Town of Baldwin (“Baldwin”), the City Council of the City of Jacksonville Beach (“Jacksonville Beach”) and the City Council of the City of Neptune Beach (“Neptune Beach”), which are collectively referred to as the “Cities,” and the Duval County School Board and administrative staff of the School District, “Duval County Public Schools” or “DCPS” entered into an Interlocal Agreement in 2007, addressing the coordination of public school facilities. Therefore, Duval County Public Schools (DCPS) is responsible for the public school system in Duval County and, consequentially, the City of Jacksonville Beach. Map PS-M1 depicts both the public and private schools located within the City of Jacksonville Beach.

The Joint Planning Committee, including both elected and citizen members, is an advisory body to the DCPS and the governing bodies of the Cities.

The Joint Planning Committee is composed of nine members as follows:

One member appointed by the DCPS from among its membership;

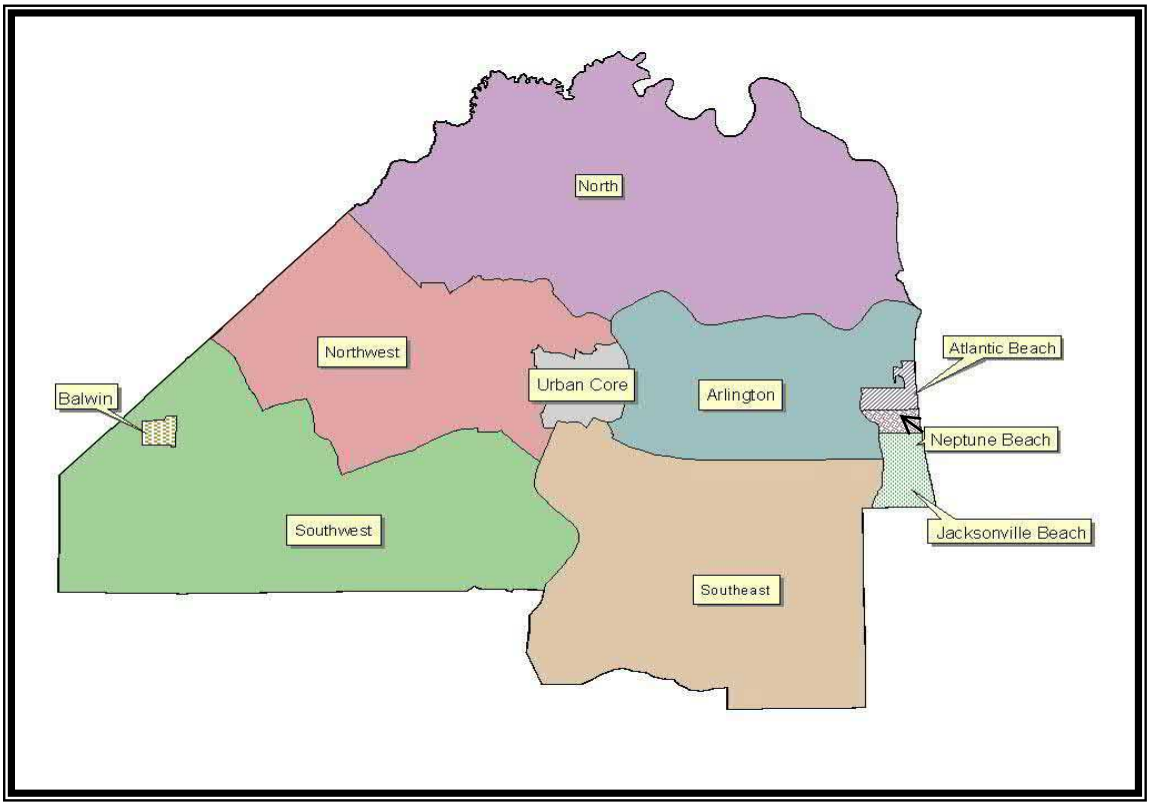
- One member appointed by the City Council of Jacksonville from among its membership;
- Three lay members appointed by the Superintendent of Schools;
- Two lay members appointed by the Mayor;
- One lay member appointed by the City Council President; and
- One lay member appointed jointly by the Mayor, the City Council President, the Chair of the DCPS and the Superintendent of Schools

The Joint Planning Committee reviews and coordinates the activities covered under the Inter-local Agreement. As outlined in Resolution 2001-65-A of the City Council of Jacksonville and the companion Resolution of the DCPS approved on March 7, 2001, the Joint Planning Committee is responsible for the following:

- Review future growth patterns of Duval County;
- Review existing sites and identify future sites and facility needs for schools, libraries, parks and community centers;
- Consider future site-compatible community facilities; and
- Review the annual update of the Interlocal Agreement.

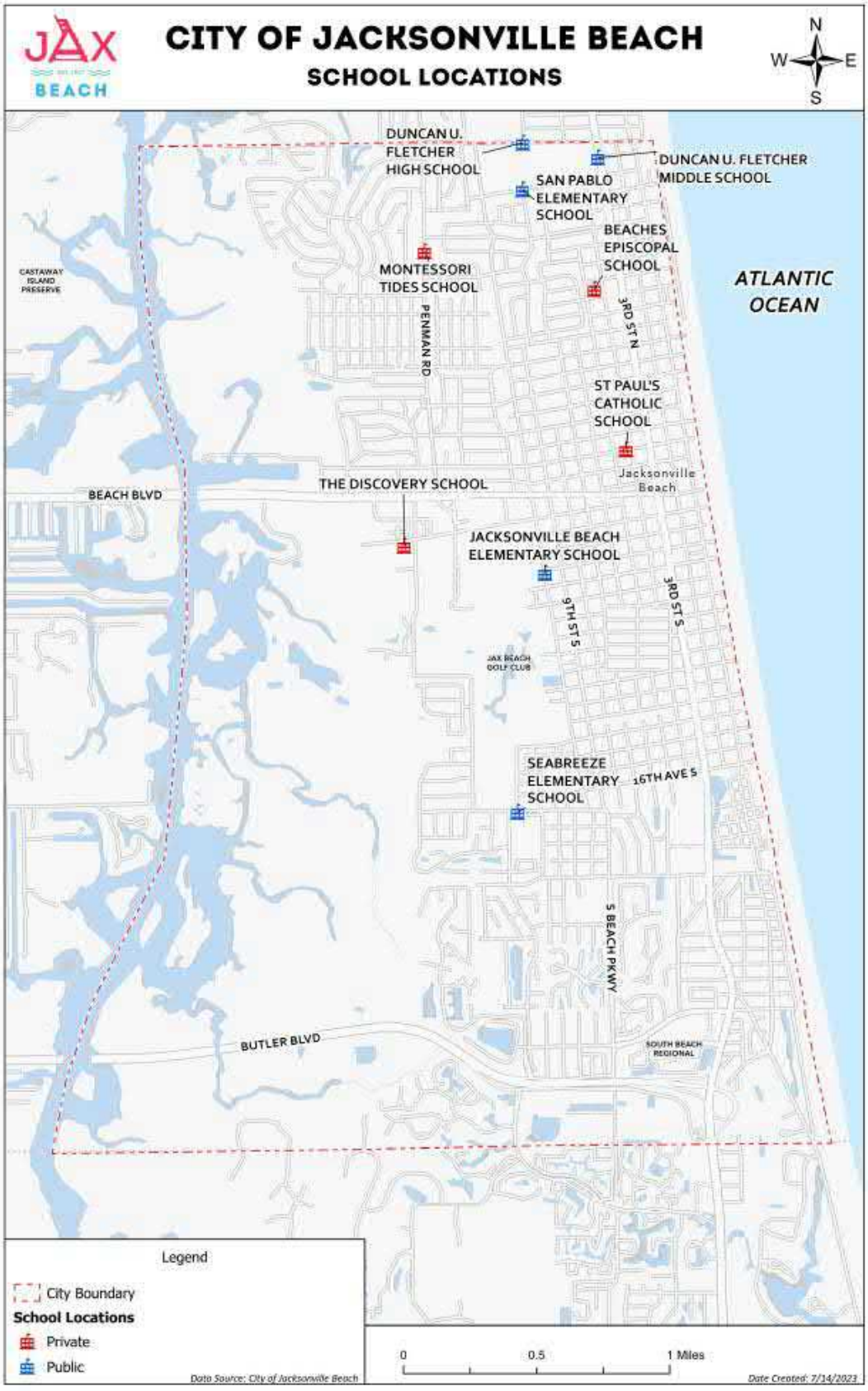
The Joint Planning Committee meets as often as needed to fulfill their responsibilities and report to the participating municipalities, the School Board, and the general public. The meetings ensure that the Interlocal Agreement between the City of Jacksonville, the School Board, and the municipalities is implemented in a timely and efficient manner. The meetings are advertised and open to the public for public participation.

Figure PS-F1 - Duval County Planning Districts and Municipalities



Source: City of Jacksonville Planning and Development Department

Map PS-M1: Public and Private Schools within the City of Jacksonville Beach.



School Concurrency Process

School concurrency ensures coordination between local governments and school boards in planning and permitting developments that affect school capacity and utilization rates. In 2011, the Florida Legislature adopted the Community Planning Act, which changed school concurrency from mandatory to optional. The statutes now provide standards for adopting an interlocal agreement and comprehensive plan amendments. The Cities have opted to maintain school concurrency and will continue to meet the state statutory requirements.

Per the aforementioned Interlocal Agreement, the process for determining school concurrency is as follows:

> "The City will transmit the [proposed residential development] application to DCPS for a determination of whether there is adequate school capacity, for each school type (elementary, middle, and high school), to accommodate the proposed development, based on the [Level of Service} LOS standards, CSAs, and other standards set forth and the Cities' School Concurrency Ordinances."

The Cities are only permitted to issue a School Concurrency Determination upon "DCPS written determination that adequate school capacity to serve the development (or anticipated phase(s) of the development which will be constructed in the first three years) will be in place or under actual construction within 3 years after the issuance of final subdivision or site plan approval, or the functional equivalent; or the execution of a legally binding mitigation agreement between the applicant, the DCPS, and appropriate local government(s)".

Therefore, DCPS is responsible for determining capacity. When an application for residential development is reviewed by the City of Jacksonville Beach, the City transmits said application to DCPS, in which then the uniform methodology for determining whether capacity is available is applied. Per the Interlocal Agreement, capacity is defined as follows:

(a) "Number of total student stations, which is permanent Florida Inventory of School Houses (FISH), plus portables; and

(b) Proposed changes to permanent FISH capacity as a result of construction, rehabilitation, or other changes in school capacity which will commence in the first three (3) years of the Five-Year Capital Facilities Plan.

(c) The following steps shall be used for school concurrency testing:

   i. Q1: Is there current capacity in the CSA and adjacent CSAs?

   ii. Q2: Will adequate facilities be in place or under actual construction which 3 years after the issuance of final subdivision or site plan approval?

   iii. Q3: Are there facilities in the approved CIE scheduled for construction in year 4 or later of the CIE that can be accelerated into the first 3 year of the CIE, and the developer is willing to enter into a binding, financially guaranteed agreement with the school district to construct the accelerated facility within the first 3 years, and the cost of the facility is equal to or greater than the development's proportionate share?

   iv. Q4: Are there capacity improvements in the 4 year CIE to provide adequate facilities to satisfy the demands created by the development, the developer is willing to pay a proportionate share mitigation contribution?

   v. Q5: What other mitigation can be worked out?"

Existing Public School Facilities

The Concurrency Service Area (CSA) boundaries for Elementary Schools, Middle Schools, and High Schools are shown below on **Figures PS-F2** through F4.

Figure PS-F2 : Elementary Schools

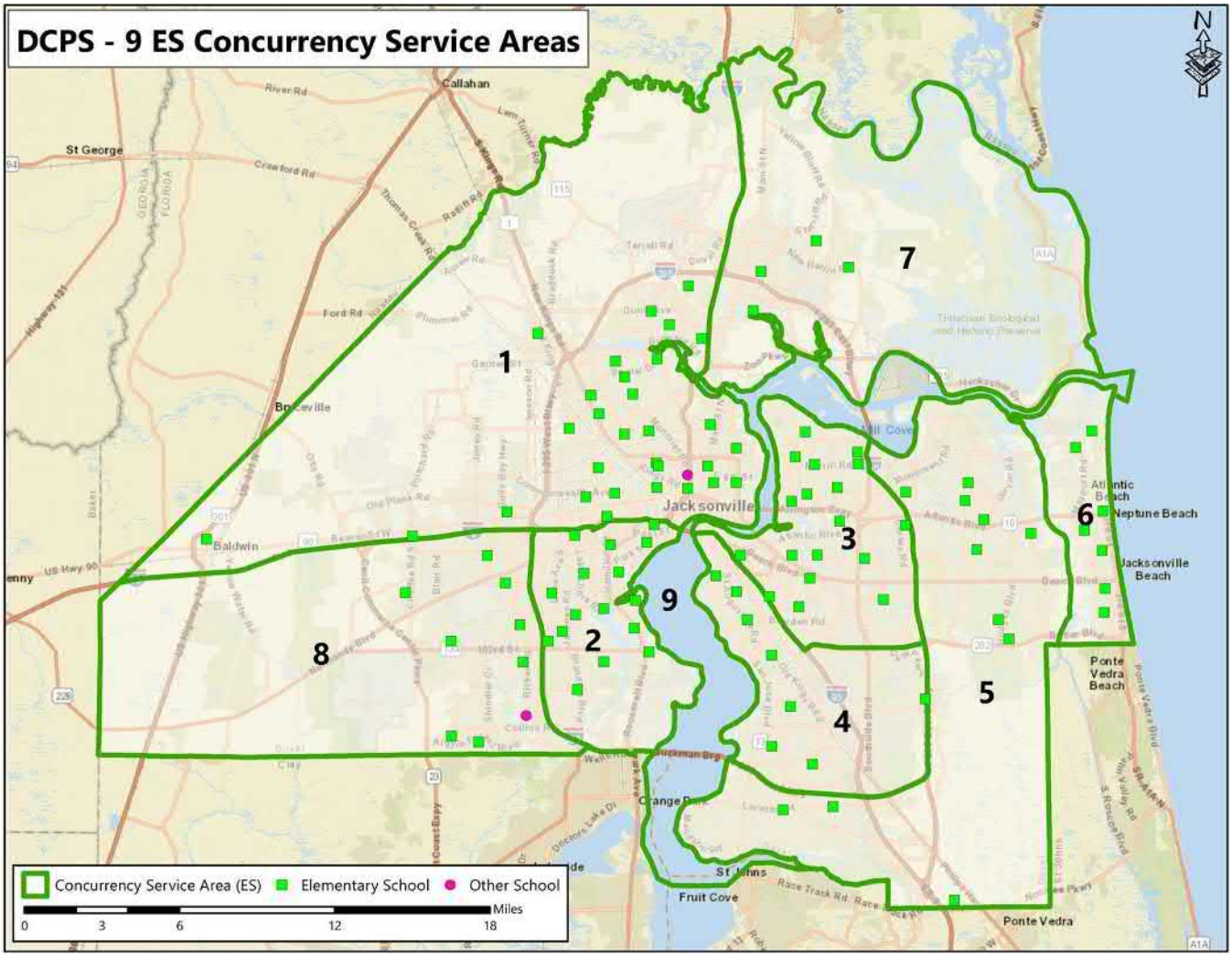


Figure PS-F3: Duval County Public Middle Schools

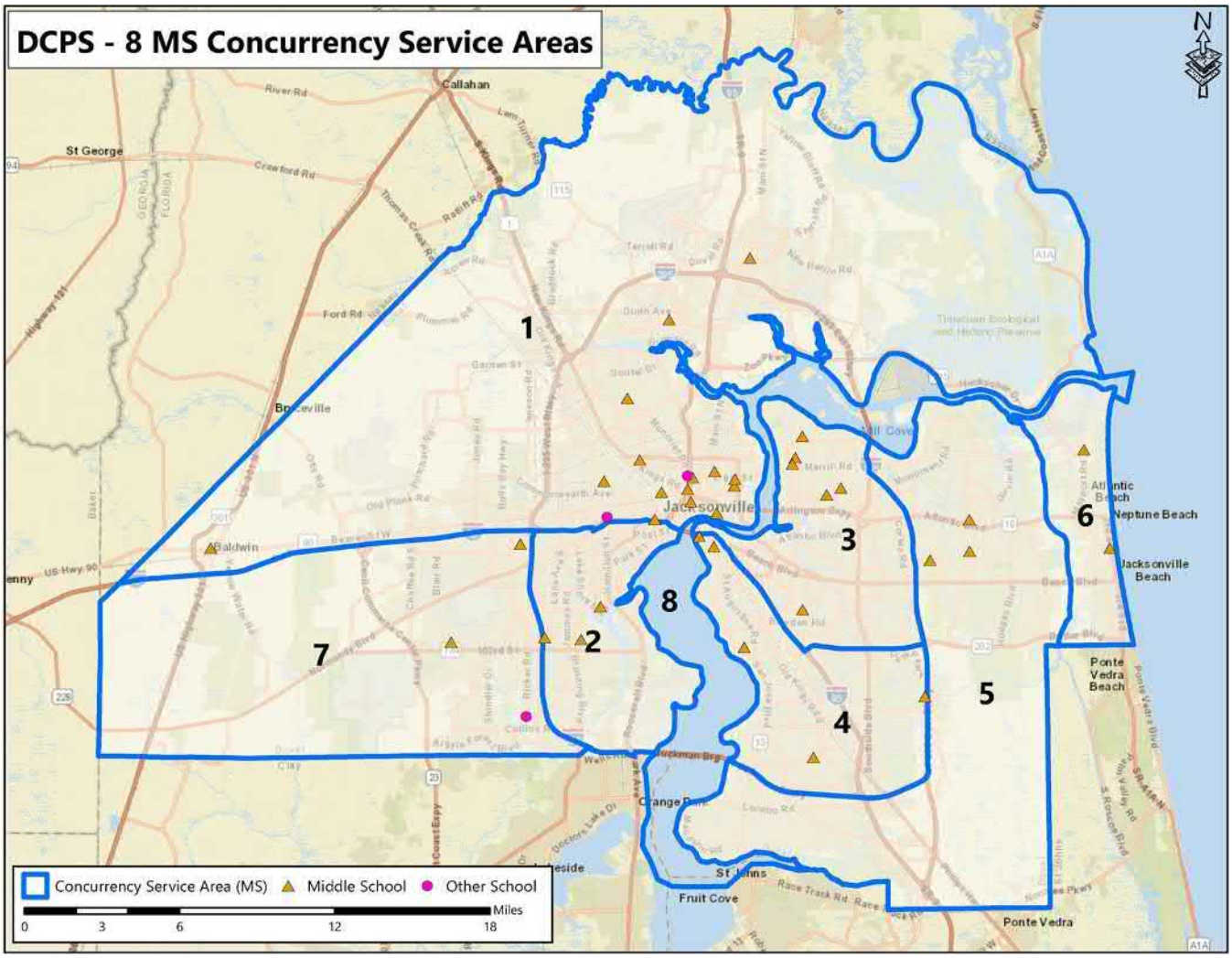
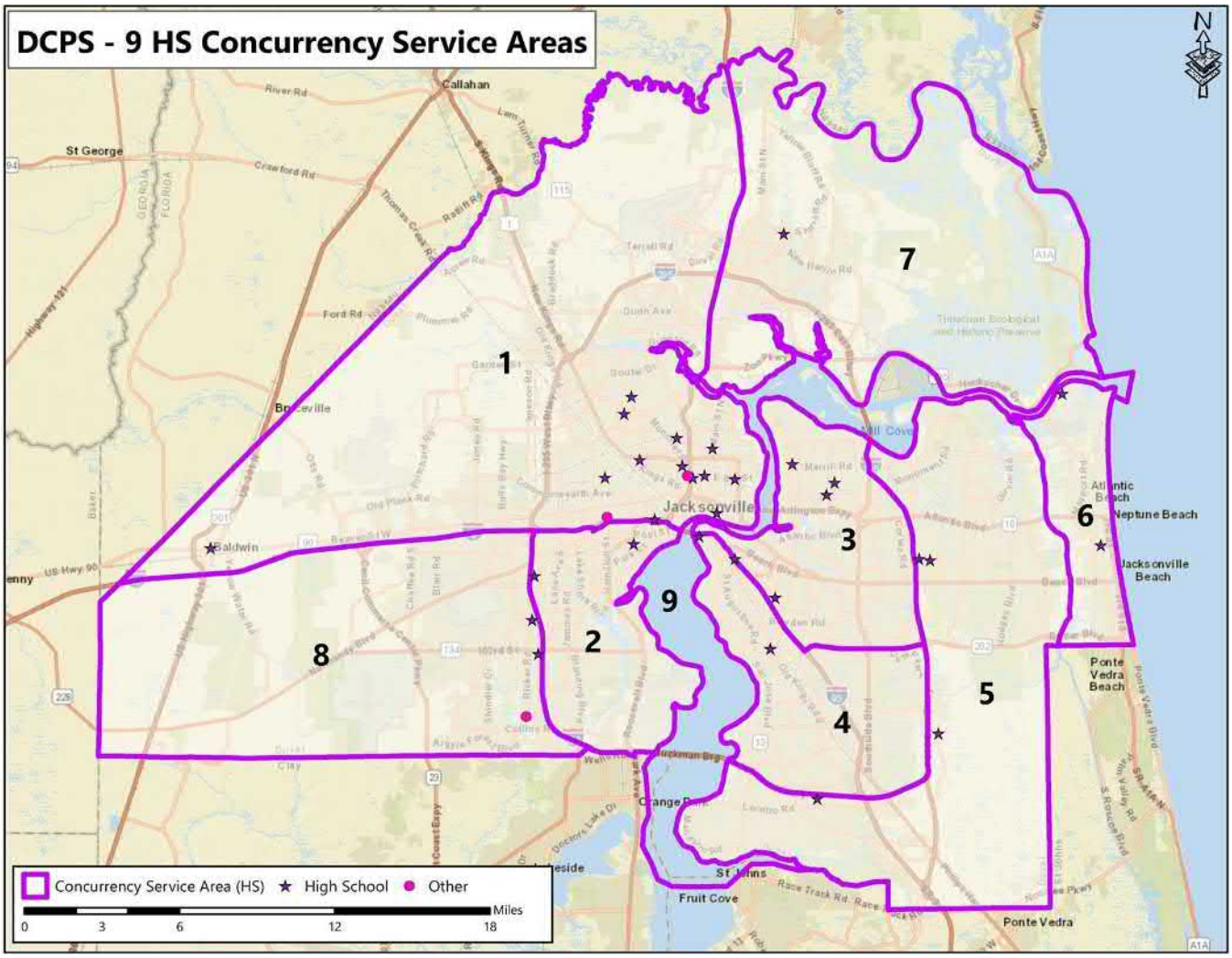


Figure PS-F3: Duval County Public High Schools



The City of Jacksonville Beach's students are currently served by five (5) total public schools, including three (3) elementary schools, one (1) middle school and one (1) high school. The five public schools currently serving Jacksonville Beach comprises only a portion of the entire Duval County School District. Jacksonville Beach Elementary, San Pablo Elementary, Seabreeze Elementary and Fletcher Middle School are located within the City of Jacksonville Beach. Fletcher High School services Jacksonville Beach but is located in Neptune Beach, just north of the Jacksonville Beach city limit. Table PS-T1 identifies the five (5) public schools servicing the City of Jacksonville Beach.

Table PS-T1: Existing Public School Facilities Servicing City of Jacksonville Beach

Type	Education Facility	Facility Located Within Jacksonville Beach	Service Area Includes Other Jurisdictions	Location
Elementary School Facilities SSA	Jacksonville Beach Elementary	Yes	Yes	315 South 10th Street
	San Pablo Elementary	Yes	Yes	801 18th Avenue North
	Seabreeze Elementary	Yes	Yes	1400 Seabreeze Avenue
Middle School Facilities SSA	Fletcher Middle	Yes	Yes	2000 3rd Street
High School Facilities SSA	Fletcher High	No	Yes	700 Seagate Avenue, Neptune Beach

Source: Duval County School Board, 2022

Private, Charter and Other School

A private school is defined in Section 1002.01(2), Florida Statutes, as "an individual, association, co-partnership, or corporation or department, division, or section of such organizations, that designates itself as an educational center that includes kindergarten or a higher grade" and is below the college level. Private elementary and secondary schools in Florida are not licensed, approved, accredited, or regulated by the Florida Department of Education. Private schools are required by statute to complete an annual online survey to gather information for inclusion in a statewide Directory of Private Schools. The Directory of Private Schools is maintained as a service to the public, to governmental agencies, and to other parties that are interested in obtaining information about Florida private schools.

There are 116 Private Schools in Duval County, Florida. In Florida, Duval County is ranked 7th of 67 counties in Private Schools per capita, and 3rd of 67 counties in Private Schools per square mile.

Private schools in the City of Jacksonville Beach have been established with various learning objectives and instructional delivery methods under individual licenses approved by the State of Florida. These schools are funded privately and are monitored by the State for compliance with statutory requirements. There are currently four (4) private schools in the City as shown in Table 8-2 below.

Table PS-T2: Private Schools in the City of Jacksonville Beach

Facility Name	Type
Montessori Tides	Private, Elementary School
Saint Paul's Catholic School	Private, Elementary and Middle School
Beaches Episcopal	Private, Elementary School
Discovery Montessori School	Private, Elementary and Middle School

Source: Florida Department of Education, 2022

Demographics

Population and housing data are used to plan for future public school facility locations and enrollment capacity. Changes in land use that result in increased residential density increase population. Increases in population are not evenly distributed throughout the City of Jacksonville Beach or Duval County and need to be closely evaluated to determine the location or enrollment capacity of a new public school facility.

Historical Population Statistics

Historical population data was taken from the US Census Bureau and Florida Bureau of Economic and Business Research (BEBR). The City of Jacksonville Beach has experienced a continuous increase in population growth. Population totals from 1990, 2000, 2010, and 2020 are listed in **Table 8-3** and can be used to identify historical changes in population growth. As shown in the table, the Census recorded an increase from 1990 to 2000 of 5,976, or 58.5%. The estimated increase from 2010 to 2019 is 3,239, or 15%.

Table PS-T3: Historical Population Growth: City of Jacksonville Beach

1990 Census Population	2000 Census Population	2010 Census Population	2020 Census Population
18,112	20,997	21,362	23,841

Source: United States Census Bureau

School Age Population

When proactively planning for future school needs it is helpful to evaluate the historical trends for school age children within the City. Table PS-T4 identifies the population by age from the 1990, 2000, 2010, and 2020 Census data. School age children ranging from 5 to 18 years old have shown an increase from 1990 to 2020 of 825 children. As shown in the same table, the total population has increased by 5,729 residents during that time period. In 1990, the school age population was 14.4% of the total. In 2020, the school age population was 14.0% of the total population.

Table PS-T4: Population Growth by Age

Age	1990	2000	2010	2020
Under 5 Years	797	924	940	1,049
5-18 Years	2,608	3,023	3,076	3,433
Over 18 Years	14,707	17,050	17,346	19,359
Total Population	**18,112**	**20,997**	**21,362**	**23,841**

Source: United States Census Bureau

Note: Estimations based upon linear regression

Additional housing statistics are detailed in the Housing Element Data Inventory and Analysis. However, given the City of Jacksonville Beach is almost fully built-out, there is not much room for housing growth. The primary increase of housing units would be a result of re-development. It should be noted that the July 1, 2023 enacted Senate Bill 102 (the "Live Local Act") has provided increased opportunity for affordable housing and higher density housing to be developed. At this time (July 2023), it is still unclear how the bill will impact Florida, Duval County, and the City of Jacksonville Beach.

Public School Facility Capacity

The number of students that may be housed in a facility in accordance with the State Department of Education is termed the Florida Inventory of School Houses (FISH) capacity. The permanent FISH capacity is utilized for the LOS determination. The schools that service the City of Jacksonville Beach have been identified and the capacity is shown below in Table PS-T6.

Table PS-T6: Florida Inventory of School Houses (FISH) Permanent Capacity

Type	Education Facility	2021-2022 Enroll 20-Day Count	FISH Capacity	Current Utilization
Elementary School	Jacksonville Beach Elementary	601	591	102%
	San Pablo Elementary	495	513	97%
	Seabreeze Elementary	490	588	83%
Middle School	Fletcher Middle	1,185	1,241	96%
High School	Fletcher High	2,090	2,051	102%

Source: Duval County School Board, 2022

Funding for School Facilities

The Duval County Public Schools District (the "District") must rely on multiple revenue sources to fund new construction, renovation, maintenance, employee salary, and other necessary expenses. DCPS receives funding from federal, state, and local sources. Duval County Public Schools total revenues, transfers and fund/balances/net position for the fiscal year 2022-2023 was 2.68 million. The typical sources of revenue are identified below.

- Federal Direct Sources
- Federal Through State and Local Sources:
    - Individuals with Disabilities Education Act
    - Title I and School Improvement Grants
    - Education Stabilization Funds
- State Sources:
    - Florida Education Finance Program
    - Categorical and Earmarked Programs
    - Other State Sources
- Local Sources
    - Ad Valorem Taxes
    - Interest Income
    - Other Local Sources

The District has an ongoing five-year plan for construction and maintenance projects, which is part of a 15-year Master Facility Plan Implementation. Per the Duval County Public Schools Annual Comprehensive Financial Report (Fiscal Year 2022): "The Plan evaluated enrollment growth, class size reduction, building conditions, and program considerations, and then determined how to best deal with these factors, including improving safety and security of ever school, removing portables, building new schools, major renovations, modernizations, and improving the learning environment of all students. The half-cent sales surtax is the major funding source of the Plan".

The half-cent sales surtax, effective January 1, 2021, was voted on and passed by 67.34% of the City of Jacksonville county-wide vote on November 3, 2020. It is anticipated the half-cent sales surtax will generate approximately 1.5 billion over a 15-year period, with a share also going to Charter Schools. Revenue from the half-cent tax will be used to fund capital projects such as new construction, remodeling projects, land acquisition, repair and renovations, technology hardware and software, and lease payments for education facilities and sites under lease-purchase agreements.

Coordination Mechanisms

As set forth in the 2007 Interlocal Agreement for Public School Facility Planning in Duval County, several committees have been assembled to facilitate coordination between the Duval County School Board, the City of Jacksonville Beach, City of Atlantic Beach and City of Neptune Beach. The Interlocal Agreement (ILA) Team and the Joint Planning Committee are the primary parties responsible for coordination, implementation, review, and consistency. Additional means of coordination include joint meetings, the Annual Statistical Package provided to DCPS by the City of Jacksonville Planning and Development Department, and the DCPS Five-Year Capital Facilities Plan shared with planning officials of each City.

Joint Meetings

The DCPS and the Cities meet on an as needed basis, but maintain a minimum of twice per year. Meetings include discussion regarding coordination of land use and school facilities planning, including population and student growth, development trends, school sitings, school needs, the implementation of school concurrency, co-location and joint use opportunities, and ancillary infrastructure improvements needed to support the schools and ensure safe student access.

The legislative bodies of the Cities and DCPS meet every year in joint workshop or meeting sessions. These meetings provide the means for the involved parties to set direction, discuss issues and reach agreements concerning issues of mutual concern regarding coordination of land use and school facilities planning, including population and student growth, in-county migration, development trends, school needs, off-site improvements, school concurrency, and joint use opportunities.

The DCPS is responsible for arranging all joint meetings, notifying the pertinent parties, and development meeting agendas.

Analysis

Residential development impacts the students and the school facilities because increases in new student enrollment can place demands on school capacity and cause overcrowding of facilities. Therefore, this section focuses on projected school capacity, student enrollment and the ability to accommodate the growth.

Existing Deficiencies

An analysis of existing deficiencies was conducted below by reviewing enrollment capacities and utilization rates.

Enrollment Capacity

To determine the percentage over or under capacity within the City of Jacksonville Beach that a school is currently operating at, the current enrollment is compared to the permanent FISH capacity as shown in **Table 8-7**.

Table PS-T7: Enrollment Surplus/Deficiency

Type of School	Facility Name	Current FISH Capacity	2021-2022 COFTE	Number of Stations (over/under capacity)	Percentage over/under capacity
Elementary School	Jacksonville Beach Elementary	591	601	+10	102%
	San Pablo Elementary	513	495	-18	96%
	Seabreeze Elementary	588	490	-98	83%
Middle School	Fletcher Middle	1,241	1,185	-56	96%
High School	Fletcher High	2,051	2,090	+39	102%

Source: Duval County School Board, 2022

Level of Service

Prior to establishing a LOS standard, DCPS must determine the maximum capacity of the public schools. The current enrollment and capacity for each school is critical in developing a school concurrency system. Public school concurrency should ensure that the capacity of schools is sufficient to support current enrollment and the projected students from future residential development. Current enrollment and school capacity data provide a baseline for developing a financially feasibly LOS standard for public schools.

To establish an acceptable level of service, the DCPS and the local governments must project future demand, identify needed capacity, and determine the level of financial resources available to construct additional capacity. These factors are then used as a basis to establish a LOS standard. The LOS standard controls the maximum utilization of schools. The uniform LOS standards for all Duval County public schools is 105% of the permanent Florida Inventory of School House (FISH) capacity plus portables, based on the utilization rate as established by the State Requirements for Education Facilities (SREF).

Florida law requires that the public school facilities element of a local government comprehensive plan address how the LOS standards will be achieved and maintained. The ability to achieve and maintain the adopted LOS must be based on a financially feasible Five-Year Capital Facilities Plan. Furthermore, the law requires the public school LOS standards be adopted into the local government capital improvement element, and must apply to all schools of the same type (elementary, middle, and high). Initial shortfalls in capacity over the five-year period following adoption may be addressed by adopting a tiered level of service standard along with a concurrency management system.

Future Demand for School Facilities

The projected demand on school facilities in the future is determined by evaluating several factors, such as population projections, enrollment projections and student generator multipliers.

Enrollment Projections

Projections of enrollment for 2023-24 to 2033-34 is prepared by the Florida Department of Education's Capital Outlay Full Time Enrollment (FTE) Forecast. The enrollment projections for the school facilities serving Duval County for the 5-year planning horizon are shown in Student Capital Outlay Full-Time Enrollment Projections (COFTE). The DCPS Capital Outlay FTE Forecast for 2023-24 to 2033-34 shows a decline in projected enrollment for all school levels.

Table PS-T8 Enrollment Projections for Duval County Public Schools by School Year (SY)

School Level	Projected SY 24/25	Projected SY 25/26	Projected SY 26/27
Elementary	48,134	47,689	47,506
Middle	21,098	20,889	20,889
High	29,276	28,814	28,239
Total	98,508	97,392	96,191

Table PS-T9: Proposed Major Renovation, Remodeling and Additions

Project Description	Location	New Construction	Maintenance, Renovation, Security	Demolition Cost	Total	Funded
Security/Safety Upgrades and Deferred Maintenance	Fletcher Middle School	$0	$7,262,325	$0	$7,262,325	Yes
Renovation / 32 Classroom Addition	Fletcher High School	$12,566,362	$11,494,857	$0	$24,061,219	
Security/Safety Upgrades and Deferred Maintenance	Jacksonville Beach Elementary	$0	$4,795,686	$0	$4,795,686	
Renovation / 6 Classroom Addition	San Pablo Elementary	$2,065,565	$2,839,087	$0	$4,904,652	Yes
Replace On-site	Seabreeze Elementary	$20,229,140	$0	$0	$20,229,140	Yes

Student Generation Rates

To determine the impact of proposed residential development and population growth, it is important to determine student generation rates by type of school. As established by the Interlocal Agreement, DCPS calculates the student generation rate on or about June 30th of year. The Student Generation Rate is calculated for each school type by dividing the total number public school students actually enrolled in that school type in Duval County by the number of total housing units for the same year. Table PS-T10 shows the student generation rate for the 2021-2022 school year.

Table PS-T10: Duval County School District Student Generation Rates

School Type	2021-2022 Enrollment	Total Duval County Dwelling Units (2021)	Student Generation Rate
Elementary (PK-5)	48,705	429,495	0.11
Middle	22,043		0.05
High	29,526		0.07

Source: Florida Department of Education COFTE Forecast, US Census American Community Survey (2021)

Financial Feasibility

As required by the state, the DCPS must implement a financially feasible Five-Year Capital Facilities Plan that provides school capacity improvements to accommodate projected student growth. Those improvements which are budgeted and programmed for construction within the first three years of the Plan are considered committed projects for concurrency purposes.

As structured, the public school system consists of students, personnel, schools, and administrative facilities. Residential development impacts the students and school facilities because increases in new student enrollment can place a demand on school capacity and cause overcrowding of facilities. Therefore, accurate inventory of both current and projected school capacity and student enrollment is crucial for school planning.

The 5-Year Capital Improvement Schedule provides the foundation of an annual planning process that allows the School District to effectively address changing enrollment patterns and new development, as well as the facility requirements of a qualitative education system. The School District's capital improvements program does not require county or city funding, however, coordination is critical.

Ultimately the ability of Duval County Public School District to meet the capacity demands of the growing population depends upon the availability of funding for capital improvements and the effective application of these funds. To address new construction and renovation needs of the DCPS Five-Year Capital Improvements Plan, the school district relies on local and state funding.

The City of Jacksonville and the other municipalities coordinate with the Duval County Public Schools District to ensure that population projections and proposed educational facility site plans and off-site impacts are consistent in addressing the need of the County. The Duval County Public Schools District accomplishes this annually by updating the Five-Year Capital Facilities Improvement Plan, identifying the list of projects that will occur over the next five years relating to upgrading, renovating, repairing construction and acquiring of lands for schools. Funding for these projects is allocated from several sources that include:

- 2.0 Mill Property Tax Levy – committed to fund the repayment of Certificate of Participation (COPS) and the payment of Qualified Zone Academy Bonds (QZAB)
- Certificate of Participation (COPS) – Funding for specific projects
- General Obligation Bonds – Currently paying off a 20-year obligation, therefore, there is no funding currently available from this funding source
- Capital Outlay and Debt Service (CO&DS) – District share from sale of State licenses
- Public Education Capital Outlay (PECO) – District share from utility taxes
- Classroom for Kids – Funding for Class Size Amendment compliance, not anticipated to be an annual funding source
- Gas Tax – Fuel rebates for District operated school buses

DCPS Master Facility Plan (2019)

More recently in 2019, the Duval County School Board adopted the "DCPS Master Facility Plan." It is an aggressive plan to ensure "all schools are safe for students and staff to teach and learn." This document is intended to serve as an effort to "engage our community in the conversation about how newer and/or renovated school facilities can help improve learning outcomes for students and ensure the health and wellbeing of both our students and teachers". The plan has five improvements priorities and are as follows:

Priority 1: Mission Critical Systems Deficiencies or conditions that may directly affect a school's ability to remain open or deliver the educational curriculum. These items normally include deficiencies related to fire code, building safety, and severely damaged or failing building components. Example: Fire alarm systems

Priority 2: I;ndirect Impact to Educational Mission Items that may progress to a Priority 1 that are not addressed in the near term. Examples: Roofing that could cause a deterioration of integral building systems and conditions affecting roof and window replacements

Priority 3: Short Term Conditions Deficiencies that are necessary to the mission of the school but may not require immediate attention. These items should be considered necessary improvements in order to maximize efficiency and usefulness of the facility. Examples: Site improvements, plumbing, electrical deficiencies

Priority 4: Long Term Requirements Items or systems which are likely to require attention within the next five years or would be considered an improvement to the instructional environment. The improvements may be aesthetic or may provide greater functionality. Examples: Cabinets, finishes, paving, removal of abandoned equipment, and educational accommodations associated with special programs

Priority 5: Enhancements These items are deficiencies that are aesthetic in nature or are considered enhancements. These items may be optional to a district but are generally included under a comprehensive renovation project plan. Examples: Repainting, recarpeting, improved signage, or other items that provide for an improved facility environment

Co-Location/Community Focal points

The five education facilities that are located within the City's limit, Jacksonville Beach Elementary, San Pablo Elementary, Seabreeze Elementary, Fletcher Middle and Fletcher High School, have basic recreational facilities located on their school sites. An analysis was also conducted to determine the potential for co-locating future school sites in Jacksonville Beach to maximize the quality of education and allow the schools to strategically locate to serve as focal points within the community. The City of Jacksonville Beach has coordinated with the Duval County School Board and there are no plans at this time for the location of future school sites within the City in either the short term or long-term planning horizons. The City will continue to plan for potential future sites. When this occurs, the City will inform the School Board about potential school site opportunities that would be beneficial to the community. Additional intergovernmental coordination and planning is detailed in the Intergovernmental Element and the element's associated data inventory and analysis.

Public Services for Schools

The five education facilities that are located within the City's limit, Jacksonville Beach Elementary, San Pablo Elementary, Seabreeze Elementary, Fletcher Middle and Fletcher High School, have been analyzed regarding any deficiencies related to public services. All of these facilities are served with potable water and sewer. The facilities have sidewalk connections to the adjacent communities; however, additional sidewalk connectivity, bike paths, and urban trail connections are encouraged. There are no apparent drainage problems at any of the facilities. The City's fire department and police department have stations within adequate distance to service these schools regarding any emergencies.

The roads that serve these five schools are currently providing adequate access. The addition of multi-modal transportation options, such as urban trails and bike paths, would help mitigate the peak hour (drop-off and pick-up) automobile school traffic generated. Implementation of the 2022 Urban Trails Master Plan is a great opportunity to increase biking and walking to school as a means of transportation. The federally funded Safe Routes to School (SRTS) program provides resources, funding, and planning assistance for municipalities interested in planning, funding, and promoting safe routes for students to walk and bike to school.

X. Historic Preservation Element

Historic Preservation Element
Data and Analysis

The City of Jacksonville Beach was established with the expansion of the Jacksonville and Atlantic Railway Company's railroad in 1882[1]. Real estate development followed closely after the completion of the railroad. The railway company not only brought the railroad, they developed the first oceanfront property into lots for residential use[2]. The first hotel, the Murray Hall Hotel, was constructed in July of 1886. By 1890, there were at least four more hotels within the City, but all eventually burned down. This growth spurred tourist interest in the beach. The City was originally named Ruby, after William and Eleanor Scull's daughter. Scull was the railroad's surveyor and one of the first permanent residents. In 1886, the name was changed by the railroad developers to Pablo Beach after Pablo Creek. In 1907, Pablo Beach was officially incorporated. The early 1900s set the stage for tourist development in Pablo Beach. A boardwalk was constructed with entertainment venues such as restaurants and amusement rides[3]; similar to Coney Island. In 1925, the City changed its name from Pablo Beach to Jacksonville Beach in order to help identity it with a geographical area. The City's growth has ebbed and flowed since the beginning, but, as similar in other areas of Florida, has been in a consistent grown pattern since the 1950s. As the City grows, it is important to protect its cultural heritage.

The Florida Division of Historical Resources maintains an inventory of historical and cultural resources throughout the state, known as the Florida Master Site File (FMSF). "The criteria for recording a resource on the Florida Master Site File are that it be adequately documented with a State Site Form and that it be approximately 50 years of age or older. In some cases, resources less than 50 years of age may be included in the Site File inventory for planning purposes or for possessing other historical or significance attributes. The Site File is an inventory and not a state historic register. Therefore, there is no historical significance requirement for inclusion in the Site File, although many included properties do possess special significance[4]." The Site File forms can be completed and submitted by anyone, regardless of professional status. Below is a description of the inventory the Site File maintains on the City of Jacksonville Beach (as of October 2022).

Of all the recorded sites within the City, there are two (2) cemeteries.

KIRKLAND, LEE, CEMETERY	Established 1854, Graves = 160
H WARREN SMITH CEMETERY	Established c1888, Graves = 3000

Within the City, there are two (2) known and recorded archaeological sites. To avoid unwanted attention, the locations and specific information on these sites are on a need-to-know basis.

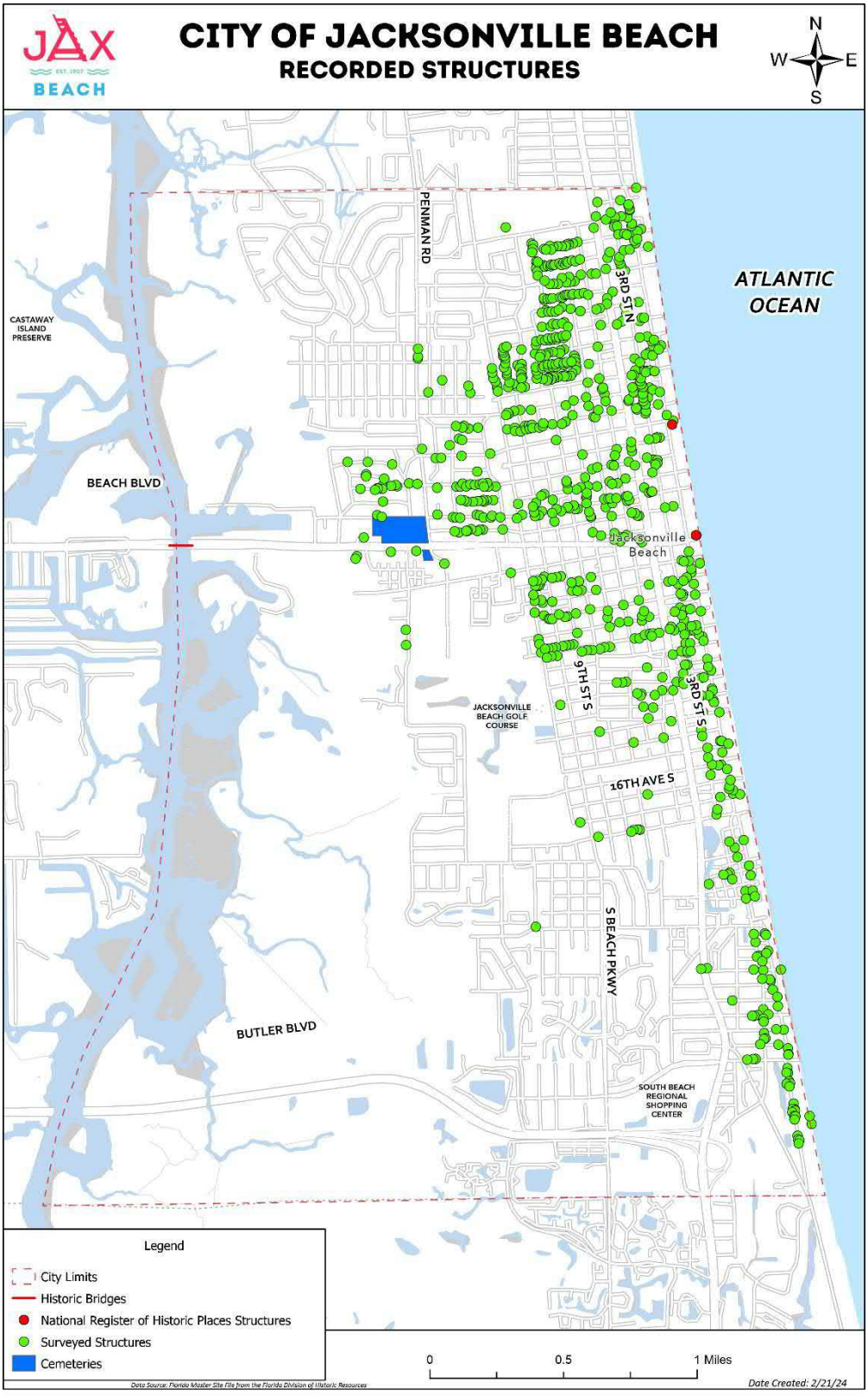
As of October 2022, 515 structures older than fifty (50) years have been recorded within the City. Of those 515, two (2) are listed on the National Register of Historic Places: The Jacksonville Beach Lifeguard

[1] Casa Marina National Register Nomination, 1993, https://catalog.archives.gov/id/77842289
[2] https://www.jacksonvillebeach.org/360/History
[3] *A Brief History of Jacksonville Beach,* The Coastal, March 14, 2019, https://thecoastal.com/flashback/brief-history-jacksonville-beach/ .
[4] Florida Master Site File, *Information for Users*, 2019. https://files.floridados.gov/media/700441/informationforusers.pdf

Station and The Casa Marina Hotel. The list of FMSF recorded structures in the City is attached as Exhibit HP-T1, and Map HP-M1 depicts the recorded structures within the City.

Currently, the City does not have a historic preservation ordinance or a way to protect their historic resources. Therefore, the City must rely on Federal and State programs such as the National Register for Historic Places and Florida Master Site File as a means to recognize, inventory, and protect its cultural and historically significant resources. As a result of this effort, a Historic Preservation Element was drafted to encourage the protection and identification of the City's historic resources. The associated Historic Preservation Element will provide the tools to create a historic preservation ordinance and a City supported board to direct the protection and inventory of the City's cultural heritage.

Map HP-M1: Map of Recorded Structures



AR=2
SS=515
CM=2
RG=0
BR=0
Total=519

Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU00056	AR	NN				
DU01540	SS	FLORIDA EAST COAST RAILROAD	425 BEACH BLVD, JACKSONVILLE	1900 Bungalow		
DU05533	SS	HOMESTEAD RESTURANT	1712 BEACH BLVD, JACKSONVILLE			
DU08113	SS	CASA MARINA HOTEL	691 1st ST, Jacksonville Beach	1924 Mediterranean Revival	Eligible	NR Listed - Sep 02, 1993
DU11045	SS	321 BEACH BLVD.	321 BEACH BLVD, JACKSONVILLE BEACH	c1940 Frame Vernacular	Not Eligible	
DU11046	SS	PABLO BEACH POST OFFICE	409 Beach BLVD, Jacksonville Beach	c1900 Frame Vernacular	Not Eligible	
DU11047	SS	MAYPORT RAILROAD TERMINAL	413 Beach BLVD, Jacksonville Beach	c1900 Frame Vernacular	Not Eligible	
DU11048	SS	SECTION FOREMAN'S HOUSE #93	425 Beach BLVD, Jacksonville Beach	c1900 Frame Vernacular	Not Eligible	
DU11049	SS	LINDBERG MEMORIAL TO CHILDREN	413 Beach BLVD, Jacksonville Beach	1932 No style	Not Eligible	
DU11051	SS	1510 BEACH BLVD.	1510 Beach BLVD, Jacksonville Beach	c1942 Frame Vernacular	Not Eligible	
DU11052	SS	ST. ANDREWS LUTHERAN CHURCH HOUSE	1797 Beach BLVD, Jacksonville Beach	c1905 Frame Vernacular	Not Eligible	
DU11053	SS	HOMESTEAD RESTAURANT	1712 BEACH BLVD, JACSONVILLE BEACH	c1920 Frame Vernacular	Not Eligible	
DU11054	CM	KIRKLAND, LEE, CEMETERY	Jacksonville Beach	Established 1854, Graves = 160		
DU11055	CM	H WARREN SMITH CEMETERY	Jacksonville Beach	Established c1888, Graves = 3000	Eligible	
DU11065	SS	PURE OIL STATION	1402 Beach BLVD, Jacksonville Beach	c1932 Frame Vernacular	Eligible	
DU14692	SS	Jacksonville Beach Lifeguard Station	12 S Ocean Front N, Jacksonville Beach	c1946 Moderne		NR Listed - May 05, 2014
DU14693	SS	20 1st Street South	20 E 1st ST S, Jacksonville Beach	c1939 Masonry Vernacular		
DU14694	SS	134 1st Street South	134 E 1st ST S, Jacksonville Beach	c1922 Frame Vernacular		
DU14695	SS	122 1st Avenue South	122 1st AVE S, Jacksonville Beach	c1922 Frame Vernacular		
DU14696	SS	115 1st Street South	115 W 1st ST S, Jacksonville Beach	c1948 Frame Vernacular		
DU14697	SS	123 1st Avenue South	123 S 1ST ST E, JACKSONVILLE BEACH	c1925 Frame Vernacular	Not Eligible	
DU14698	SS	7 2nd Avenue South	7 W 2nd AVE S, Jacksonville Beach	1909 Frame Vernacular		
DU14699	SS	216 1st Street South	216 1st ST S, Jacksonville Beach	1941 Bungalow		
DU14700	SS	304 1st Street South	304 1st ST S, Jacksonville Beach	c1909 Frame Vernacular		
DU14701	SS	Silver Sea Motel	405 1st ST, Jacksonville Beach	c1953 Moderne		
DU14702	SS	520 1st Street South	520 1st ST S, Jacksonville Beach	c1914 Frame Vernacular		
DU14703	SS	112 5th Avenue South	112 5th AVE S, Jacksonville Beach	c1926 Frame Vernacular		
DU14704	SS	590 1st Street South	590 E 1st ST S, Jacksonville Beach	c1937 Frame Vernacular		
DU14705	SS	610 2nd Street South	610 2nd ST S, Jacksonville Beach	c1938 Frame Vernacular		
DU14706	SS	104 1st Avenue South	104 1st AVE S, Pablo Beach South	c1924 Colonial Revival		
DU14707	SS	120 1st Avenue South	120 N 1st AVE S, Jacksonville Beach	1931 Bungalow		
DU14708	SS	116 2nd Avenue South	116 N 2nd AVE S, Jacksonville Beach	c1937 Frame Vernacular		
DU14709	SS	215 2nd Street South	215 2nd ST S, Jacksonville Beach	1941 Frame Vernacular		
DU14710	SS	135 3rd Avenue South	135 3rd AVE S, Jacksonville Beach	c1941 Frame Vernacular		
DU14711	SS	184-186 3rd Avenue South	184-186 3rd AVE S, Jacksonville Beach	c1937 Frame Vernacular		
DU14712	SS	330 2nd Street South	330 2nd ST S, Jacksonville Beach	c1935 Frame Vernacular		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU14713	SS	Fig Tree Inn	185 4th AVE S, Jacksonville Beach	c1915 Frame Vernacular		
DU14714	SS	413-415 2nd Street South	413-415 W 2nd ST S, Jacksonville Beach	c1940 Frame Vernacular		
DU14715	SS	Donna Marie's	404 E 2nd ST S, Jacksonville Beach	c1922 Frame Vernacular		
DU14716	SS	Erika's Attic	215 4th AVE S, Jacksonville Beach	c1914 Frame Vernacular		
DU14717	SS	Karen McCarty Law Office	432 2nd ST S, Jacksonville Beach	c1921 Bungalow		
DU14718	SS	225 5th Street South	225 5th ST S, Jacksonville Beach	c1947 Frame Vernacular		
DU14719	SS	Julie's Styling	231 S 5th AVE S, Jacksonville Beach	1920 Frame Vernacular		
DU14720	SS	Junktiques	237 5th AVE S, Jacksonville Beach	c1938 Frame Vernacular		
DU14721	SS	128 5th Avenue South	128 N 5th AVE S, Jacksonville Beach	c1921 Bungalow		
DU14722	SS	122 5th Avenue South	122 5th AVE S, Jacksonville Beach	c1921 Bungalow		
DU14723	SS	112-114 5th Avenue South	112-114 N 5th AVE S, Jacksonville Beach	c1921 Bungalow		
DU14724	SS	Sabal Palm Inn Bed & Breakfast	115 S 5th AVE S, Jacksonville Beach	c1910 Frame Vernacular		
DU14725	SS	125 5th Avenue South	125 S 5th AVE S, Jacksonville Beach	1934 Frame Vernacular		
DU14726	SS	514 2nd Street South	514 E 2nd ST S, Jacksonville Beach	c1939 Masonry Vernacular		
DU14727	SS	Sabal Palm	530 2nd ST S, Jacksonville Beach	c1915 Bungalow		
DU14728	SS	214 6th Avenue South	214 6th AVE S, Jacksonville Beach	1940 Frame Vernacular		
DU14729	SS	608 2nd Street South	608 2nd ST S, Jacksonville Beach	1934 Frame Vernacular		
DU14730	SS	Dee Johnson Realty	137 6th AVE S, Jacksonville Beach	c1916 Frame Vernacular		
DU14731	SS	Pier View Apartments	603-615 W 2nd ST S, Jacksonville Beach	c1950 Masonry Vernacular		
DU14732	SS	426 5th Avenue South	426 N 5th AVE S, Jacksonville Beach	c1950 Frame Vernacular		
DU14733	SS	416 5th Avenue South	416 5th AVE S, Jacksonville Beach	c1926 Frame Vernacular		
DU14734	SS	403 5th Avenue South	403 5th AVE S, Jacksonville Beach	c1936 Frame Vernacular		
DU14735	SS	335 5th Avenue South	335 S 5th AVE S, Jacksonville Beach	1947 Frame Vernacular		
DU14736	SS	333 5th Avenue South	333 5th AVE S, Jacksonville Beach	c1942 Frame Vernacular		
DU14737	SS	317 5th Avenue South	317 5th AVE S, Jacksonville Beach	1937 Frame Vernacular		
DU14738	SS	330 5th Avenue South	330 N 5th AVE S, Jacksonville Beach	1933 Frame Vernacular		
DU14739	SS	404-406 4th Avenue South	404-406 N 4th AVE S, Jacksonville Beach	c1947 Frame Vernacular		
DU14740	SS	African American School	331 S 4th AVE S, Jacksonville Beach	1942 Frame Vernacular		
DU14741	SS	Jacksonville Beach Elementary	376 E 4th ST S, Jacksonville Beach	c1939 Masonry Vernacular	Eligible	
DU14742	SS	337 4th Street South	337 W 4th ST S, Jacksonville Beach	c1942 Frame Vernacular		
DU14743	SS	437 4th Avenue	437 4th AVE, Jacksonville Beach	c1934 Frame Vernacular		
DU14744	SS	515 4th Avenue South	515 4th AVE S, Jacksonville Beach	1947 Masonry Vernacular		
DU14745	SS	408 6th Street South	408 E 6th ST S, Jacksonville Beach	1942 Frame Vernacular		
DU14746	SS	314 6th Street	314 E 6th ST, Jacksonville Beach	c1947 Masonry Vernacular		
DU14747	SS	635 3rd Avenue South	635 3rd AVE S, Jacksonville Beach	c1940 Frame Vernacular		
DU14748	SS	302 6th Street South	302 E 6th ST S, Jacksonville Beach	c1952 Masonry Vernacular		
DU14749	SS	438 3rd Avenue South	438 3rd AVE S, Jacksonville Beach	c1952 Frame Vernacular		
DU14750	SS	220 4th Street South	220 4th ST S, Jacksonville Beach	c1947 Masonry Vernacular		
DU14751	SS	Beach Printing	314 N 2nd AVE S, Jacksonville Beach	c1948 International		
DU14752	SS	615 2nd Avenue South	615 S 2nd AVE S, Jacksonville Beaches	c1945 Masonry Vernacular		
DU14753	SS	616 1st Avenue South	616 1st AVE S, Jacksonville Beach	c1952 Masonry Vernacular		
DU14754	SS	Bioguard	313-317 S Beach BLVD, Jacksonville Beach	1952 Masonry Vernacular		
DU14755	SS	126 2nd Avenue South	126 2nd AVE S, Jacksonville Beach	c1941 Unspecified		
DU14756	SS	Mediterranean Designs, Inc.	433 S Pablo AVE, Jacksonville Beach	c1948 Masonry Vernacular		
DU14757	SS	Players by the Sea	106 E 6th ST N, Jacksonville Beach	1945 International		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU14758	SS	St. Paul's Roman Catholic Church	428 2nd AVE S, Jacksonville Beach	1940 Other		
DU14759	SS	St. Paul's Church Rectory	230 5th ST N, Jacksonville Beach	c1945 Frame Vernacular		
DU14760	SS	St. Paul's Church/Parochial School	428 2nd AVE N, Jacksonville Beach	c1949 Masonry Vernacular		
DU14761	SS	First Baptist Church	324 5th ST N, Jacksonville Beach	1941 Mission		
DU14762	SS	St. Paul's Church and Chapel	224 S 5th ST N, Jacksonville Beach	1938 Frame Vernacular		
DU14763	SS	429 2nd Avenue North	429 2nd AVE N, Jacksonville Beach	c1924 Frame Vernacular		
DU14764	SS	417 2nd Avenue North	417 2nd AVE N, Jacksonville Beach	c1936 Frame Vernacular		
DU14765	SS	A1A Lock & Key	333 2nd AVE N, Jacksonville Beach	1947 Masonry Vernacular		
DU14766	SS	Hobbs Industrial	334 N 2nd AVE N, Jacksonville Beach	1937 Masonry Vernacular		
DU14767	SS	CSA Industries	328 N 2nd AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14768	SS	Ribault Masonic Lodge #272	327 2nd AVE N, Jacksonville Beach	c1950 Moderne		
DU14769	SS	333 3rd Avenue North	333 3rd AVE N, Jacksonville Beach	c1939 Frame Vernacular		
DU14770	SS	404 3rd Avenue North	404 3rd AVE N, Jacksonville Beach	c1939 Colonial Revival		
DU14771	SS	421 3rd Avenue North	421 3rd AVE N, Jacksonville Beach	c1950 Masonry Vernacular		
DU14772	SS	First Baptist Church	414 N 3rd AVE N, Jacksonville Beach	c1951 Frame Vernacular		
DU14773	SS	First Baptist Church Sunday School	515 S 3rd AVE N, Jacksonville Beach	1947 Ranch		
DU14774	SS	533-535 3rd Avenue North	533-535 3rd AVE N, Jacksonville Beach	c1948 Frame Vernacular		
DU14775	SS	427 6th Street North	427 W 6th ST N, Jacksonville Beach	c1950 Masonry Vernacular		
DU14776	SS	415 4th Avenue North	415 4th AVE N, Jacksonville Beach	c1942 Frame Vernacular		
DU14777	SS	406 4th Avenue North	406 N 4th AVE N, Jacksonville Beach	c1950 Frame Vernacular		
DU14778	SS	317 4th Avenue North	317 4th AVE N, Jacksonville Beach	c1950 Masonry Vernacular		
DU14779	SS	Moonstruck Futons and Health Techs	433 3rd ST N, Jacksonville Beach	c1937 Masonry Vernacular		
DU14780	SS	Wynken, Blynken & Nod	522 3rd ST N, Jacksonville Beach	c1942 Bungalow		
DU14781	SS	Bug Out Service	530 3rd ST N, Jacksonville Beach	c1942 Masonry Vernacular		
DU14782	SS	Westminster PM Travel Co.	602-604 3rd ST N, Jacksonville Beach	c1939 Frame Vernacular		
DU14783	SS	529 4th Street North	529 4th ST N, Jacksonville Beach	1950 Frame Vernacular		
DU14784	SS	Church of Christ at Jacksovnille Beach	520 E 4th ST N, Jacksonville Beach	c1947 Masonry Vernacular		
DU14785	SS	438-440 7th Avenue North	438-440 7th AVE N, Jacksonville Beach	c1947 Masonry Vernacular		
DU14786	SS	428 7th Avenue North	428 7th AVE N, Jacksonville Beach	1947 Colonial Revival		
DU14787	SS	Beaches Methodist Church	325 S 7th ST N, Jacksonville Beach	1947 Frame Vernacular		
DU14788	SS	Beaches United Methodist Church	435 7th AVE N, Jacksonville Beach	1939 Gothic Revival		
DU14789	SS	902-904 4th Street North	902-904 E 4th ST N, Jacksonville Beach	1950 Frame Vernacular		
DU14792	SS	826 4th Street North	826 4th ST N, Jacksonville Beach	c1946 Minimal Traditional		
DU14793	SS	Donna's Chic Boutique	815 W 3rd ST N, Jacksonville Beach	1942 Frame Vernacular		
DU14794	SS	821 3rd Street North	821 3rd ST N, Jacksonville Beach	1947 Masonry Vernacular		
DU14795	SS	214 7th Avenue North	214 N 214 AVE N, Jacksonville Beach	c1943 Masonry Vernacular		
DU14796	SS	215 7th Avenue North	215 7th AVE N, Jacksonville Beach	1943 Masonry Vernacular		
DU14797	SS	220 7th Avenue North	220 N 7th AVE N, Jacksonville Beach	1943 Masonry Vernacular		
DU14798	SS	221 7th Avenue North	221 S 7th AVE N, Jacksonville Beach	1943 Masonry Vernacular		
DU14799	SS	214 8th Avenue North	214 8th AVE N, Jacksonville Beach	1943 Masonry Vernacular		
DU14801	SS	220 8th Avenue North	220 8th AVE N, Jacksonville Beach	c1943 Masonry Vernacular		
DU14805	SS	828 1st Street North	828 1st ST N, Jacksonville Beach	1925 Frame Vernacular		
DU14806	SS	111 7th Avenue North	111 7th AVE N, Jacksonville Beach	1946 Frame Vernacular		
DU14807	SS	821 2nd Street North	821 2nd ST N, Jacksonville Beach	1946 Masonry Vernacular		
DU14808	SS	The Foundation School	711-715 2st ST N, Jacksonville Beach	1953 International		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU14809	SS	123 5th Avenue North	123 5th AVE N, Jacksonville Beach	1939 Masonry Vernacular		
DU14810	SS	131 5th Avenue North	131 5th AVE N, Jacksonville Beach	1938 Frame Vernacular		
DU14811	SS	135 5th Avenue North	135 5th AVE N, Jacksonville Beach	1937 Frame Vernacular		
DU14812	SS	Bo's Coral Reef Lounge	201 5th AVE N, Jacksonville Beach	1954 Masonry Vernacular		
DU14813	SS	204-208 4th Avenue North	204-208 4th AVE N, Jacksonville Beach	1938 Frame Vernacular		
DU14814	SS	Ace Hardware	217 4th AVE N, Jacksonville Beach	1951 Masonry Vernacular		
DU14815	SS	433 2nd Street North	433 2nd ST N, Jacksonville Beach	c1938 Frame Vernacular		
DU14816	SS	128 4th Avenue North	128 4th AVE N, Jacksonville Beach	1938 Frame Vernacular		
DU14817	SS	422 2nd Street North	422 2nd ST N, Jacksonville Beach	1938 Frame Vernacular		
DU14818	SS	215-217 3rd Avenue North	214-217 3rd AVE N, Jacksonville Beach	1926 Frame Vernacular		
DU14819	SS	311 3rd Street North	311 3rd ST N, Jacksonville Beach	1942 Frame Vernacular		
DU14820	SS	Expresso	229 2nd AVE N, Jacksonville Beach	c1925 Frame Vernacular		
DU14821	SS	223 2nd Avenue North	223 2nd AVE N, Jacksonville Beach	c1935 Frame Vernacular		
DU14822	SS	Seabreeze Hotel	113-121 1st AVE N, Jacksonville Beach	c1946 Moderne		
DU14823	SS	Cinotti's Deli and Sandwich Shop	131-133 1st ST N, Jacksonville Beach	1952 Masonry Vernacular		
DU14824	SS	312 1st Avenue North	312 1st AVE N, Jacksonville Beach	1931 Frame Vernacular		
DU14825	SS	Dayna's Antiques	318 1st AVE N, Jacksonville Beach	1934 Frame Vernacular		
DU14826	SS	319 1st Avenue North	319 1st AVE N, Jacksonville Beach	1937 Masonry Vernacular		
DU14827	SS	Capt'n Sharkeys	331 1st AVE N, Jacksonville Beach	1937 Frame Vernacular		
DU14828	SS	206 6th Street North	206 6th ST N, Jacksonville Beach	1937 Minimal Traditional		
DU14829	SS	212 6th Street North	212 6th ST N, Jacksonville Beach	1913 Frame Vernacular		
DU14830	SS	210 8th Street North	210 8th ST N, Jacksonville Beach	1940 Masonry Vernacular		
DU14831	SS	916 1st Avenue South	916 1st AVE S, Jacksonville Beach	1940 Masonry Vernacular		
DU14832	SS	920 1st Avenue South	920 1st AVE S, Jacksonville Beach	1940 Frame Vernacular		
DU14833	SS	924 1st Avenue South	924 1st AVE S, Jacksonville Beach	1940 Masonry Vernacular		
DU14834	SS	930 1st Avenue South	930 1st AVE S, Jacksonville Beach	1945 Masonry Vernacular		
DU14836	SS	922 2nd Avenue South	922 2nd AVE S, Jacksonville Beach	1933 Frame Vernacular		
DU14837	SS	921 2nd Avenue South	921 2nd AVE S, Jacksonville Beach	1940 Frame Vernacular		
DU14838	SS	935 2nd Avenue South	935 2nd AVE S, Jacksonville Beach	1940 Egyptian Revival		
DU14839	SS	1105 1st Avenue North	1105 1st AVE N, Jacksonville Beach	1941 Frame Vernacular		
DU14840	SS	1153 1st Avenue North	1153 1st AVE N, Jacksonville Beach	1946 Frame Vernacular		
DU14841	SS	1163 1st Avenue North	1163 1st AVE N, Jacksonville Beach	1946 Masonry Vernacular		
DU14842	SS	1168 1st Avenue North	1168 1st AVE N, Jacksonville Beach	1940 Frame Vernacular		
DU14843	SS	1181 1st Avenue North	1181 1st AVE N, Jacksonville Beach	1946 Ranch		
DU14844	SS	1236 1st Avenue North	1236 1st AVE N, Jacksonville Beach	1940 Frame Vernacular		
DU14845	SS	Lions Club of Jacksonville Beaches	319 Penman RD, Jacksonville Beach	1948 Masonry Vernacular		
DU14846	SS	1302 2nd Avenue North	1302 2nd AVE N, Jacksonville Beach	1940 Masonry Vernacular		
DU14847	SS	1236 2nd Avenue North	1236 2nd AVE N, Jacksonville Beach	1940 Masonry Vernacular		
DU14848	SS	1228 2nd Avenue North	1228 2nd AVE N, Jacksonville Beach	1940 Masonry Vernacular		
DU14849	SS	1167 2nd Avenue North	1167 2nd AVE N, Jacksonville Beach	1939 Frame Vernacular		
DU14850	SS	1156 2nd Street North	1156 2nd ST N, Jacksonville Beach	1939 Frame Vernacular		
DU14851	SS	1144 2nd Avenue North	1144 2nd AVE N, Jacksonville Beach	1940 Frame Vernacular		
DU14852	SS	1120 2nd Avenue North	1120 2nd AVE N, Jacksonville Beach	1940 Frame Vernacular		
DU14853	SS	1121 2nd Avenue North	1121 2nd AVE N, Jacksonville Beach	1940 Frame Vernacular		
DU14854	SS	121 10th Street South	121 10th ST S, Jacksonville Beach	1940 Frame Vernacular		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU14855	SS	Seaatlantic Mobile Home Park	1200 Shetter AVE, Jacksonville Beach	c1953 Masonry Vernacular		
DU14856	SS	923 3rd Avenue South	923 3rd AVE S, Jacksonville Beach	1941 Frame Vernacular		
DU14857	SS	916 3rd Avenue South	916 3rd AVE S, Jacksonville Beach	1943 Masonry Vernacular		
DU14858	SS	914 3rd Avenue South	914 3rd AVE S, Jacksonville Beach	c1943 Masonry Vernacular		
DU14859	SS	912 3rd Avenue South	912 3rd AVE S, Jacksonville Beach	1943 Masonry Vernacular		
DU14860	SS	205 9th Street South	205 9th ST S, Jacksonville Beach	1947 Masonry Vernacular		
DU14861	SS	Second Missionary Baptist Church	752 3rd AVE S, Jacksonville Beach	c1947 Masonry Vernacular		
DU14862	SS	Historical First Baptist Church	810 3rd AVE S, Jacksonville Beach	c1949 Gothic Revival		
DU14863	SS	814 3rd Avenue South	814 3rd AVE S, Jacksonville Beach	1946 Frame Vernacular		
DU14864	SS	821 3rd Avenue South	821 3rd AVE S, Jacksonville Beach	1953 Frame Vernacular		
DU14865	SS	402 10th Street South	402 10th ST S, Jacksonville Beach	1948 Masonry Vernacular		
DU14866	SS	414 10th Street South	414 10th ST S, Jacksonville Beach	c1950 Masonry Vernacular		
DU14867	SS	432 10th Street South	432 10th ST S, Jacksonville Beach	c1952 Split Level		
DU14868	SS	260 10th Street South	260 10th ST S, Jacksonville Beach	1944 Frame Vernacular		
DU14869	SS	Carver Memorial Community Center	738 4th AVE S, Jacksonville Beach	c1951 Other		
DU14870	SS	Trends Manufacturing of Am.	922 8th AVE S, Jacksonville Beach	c1950 Industrial Vernacular		
DU14871	SS	632 2nd Avenue North	632 2nd AVE N, Jacksonville Beach	c1940 Frame Vernacular		
DU14872	SS	634 2nd Avenue North	634 2nd AVE N, Jacksonville Beach	c1941 Frame Vernacular		
DU14873	SS	635 2nd Avenue North	635 2nd AVE N, Jacksonville Beach	c1937 Frame Vernacular		
DU14874	SS	706 2nd Avenue North	706 2nd AVE N, Jacksonville Beach	c1942 Frame Vernacular		
DU14875	SS	Ribault Garden Club	705 2nd AVE N, Jacksonville Beach	c1950 Masonry Vernacular		
DU14876	SS	720 2nd Avenue North	720 2nd AVE N, Jacksonville Beach	c1947 Masonry Vernacular		
DU14877	SS	733 2nd Avenue North	733 2nd AVE N, Jacksonville Beach	c1953 Split Level		
DU14878	SS	802 2nd Avenue North	802 2nd AVE N, Jacksonville Beach	c1947 Masonry Vernacular		
DU14879	SS	829 2nd Avenue North	829 2nd AVE N, Jacksonville Beach	c1942 Frame Vernacular		
DU14880	SS	852 2nd Avenue North	852 2nd AVE N, Jacksonville Beach	c1941 Frame Vernacular		
DU14881	SS	902 2nd Avenue North	902 2nd AVE N, Jacksonville Beach	c1944 Frame Vernacular		
DU14882	SS	905 2nd Avenue North	905 2nd AVE N, Jacksonville Beach	c1936 Frame Vernacular		
DU14883	SS	933 2nd Avenue North	933 2nd AVE N, Jacksonville Beach	c1951 Ranch		
DU14884	SS	1010 2nd Avenue North	1010 2nd AVE N, Jacksonville Beach	c1953 Ranch		
DU14885	SS	607 3rd Avenue North	607 3rd AVE N, Jacksonville Beach	c1958 Frame Vernacular		
DU14886	SS	624 3rd Avenue North	624 3rd AVE N, Jacksonville Beach	c1929 Frame Vernacular		
DU14887	SS	635 3rd Avenue North	635 3rd AVE N, Jacksonville Beach	c1948 Frame Vernacular		
DU14888	SS	322 8th Street North	322 8th ST N, Jacksonville Beach	c1950 Frame Vernacular		
DU14889	SS	821 3rd Avenue South	821 3rd AVE S, Jacksonville Beach	c1953 Masonry Vernacular		
DU14890	SS	James & Mary Andrews House	321 8th ST N, Jacksonville Beach	c1948 Ranch		
DU14891	SS	310 9th Street North	310 9th ST N, Jacksonville Beach	c1947 Ranch		
DU14892	SS	327 10th Street North	327 10th ST N, Jacksonville Beach	c1949 Masonry Vernacular		
DU14893	SS	1104 4th Avenue North	1104 4th AVE N, Jacksonville Beach	c1940 Frame Vernacular		
DU14894	SS	1128 4th Avenue North	1128 4th AVE N, Jacksonville Beach	c1940 Ranch		
DU14895	SS	1127 4th Avenue North	1127 4th AVE N, Jacksonville Beach	c1949 Split Level		
DU14896	SS	1240 4th Avenue North	1240 4th AVE N, Jacksonville Beach	c1946 Frame Vernacular		
DU14897	SS	1226 4th Avenue North	1226 4th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14898	SS	1217 4th Avenue North	1217 4th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14899	SS	1210 4th Avenue North	1210 4th AVE N, Jacksonville Beach	c1941 Ranch		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU14900	SS	1169 4th Avenue North	1169 4th AVE N, Jacksonville Beach	c1952 Masonry Vernacular		
DU14901	SS	1156 4th Avenue North	1156 4th AVE N, Jacksonville Beach	c1953 Masonry Vernacular		
DU14902	SS	1143 4th Avenue North	1143 4th AVE N, Jacksonville Beach	c1941 Frame Vernacular		
DU14903	SS	1135 4th Avenue North	1135 4th AVE N, Jacksonville Beach	c1941 Frame Vernacular		
DU14904	SS	1130 4th Avenue North	1130 4th AVE N, Jacksonville Beach	c1940 Ranch		
DU14905	SS	1115 3rd Avenue North	1115 3rd AVE N, Jacksonville Beach	c1941 Ranch		
DU14906	SS	1131 3rd Avenue North	1131 3rd AVE N, Jacksonville Beach	c1940 Ranch		
DU14907	SS	1134 3rd Avenue North	1134 3rd AVE N, Jacksonville Beach	c1941 Frame Vernacular		
DU14908	SS	1141 3rd Avenue North	1141 3rd AVE N, Jacksonville Beach	c1940 Ranch		
DU14909	SS	1147 3rd Avenue North	1147 3rd AVE N, Jacksonville Beach	c1940 Ranch		
DU14910	SS	1157 3rd Avenue North	1157 3rd AVE N, Jacksonville Beach	c1940 Frame Vernacular		
DU14911	SS	1166 3rd Avenue North	1166 3rd AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14912	SS	1202 3rd Avenue North	1202 3rd AVE N, Jacksonville Beach	c1941 Frame Vernacular		
DU14913	SS	1211 3rd Avenue North	1211 3rd AVE N, Jacksonville Beach	c1940 Ranch		
DU14914	SS	1219 3rd Avenue North	1219 3rd AVE N, Jacksonville Beach	c1940 Ranch		
DU14915	SS	USCG Auxillary and Flotilla 14-4	1320 4th AVE N, Jacksonville Beach	c1934 Colonial Revival		
DU14916	SS	412 7th Street North	412 7th ST N, Jacksonville Beach	c1946 Masonry Vernacular		
DU14917	SS	420 7th Street North	420 7th ST N, Jacksonville Beach	c1940 Frame Vernacular		
DU14918	SS	137 3rd Avenue South	137 3rd AVE S, Jacksonville Beach	c1941 Frame Vernacular		
DU14919	SS	708 6th Avenue North	708 6th AVE N, Jacksonville Beach	c1948 Frame Vernacular		
DU14920	SS	933 7th Avenue North	933 7th AVE N, Jacksonville Beach	c1952 Masonry Vernacular		
DU14921	SS	907 7th Avenue North	907 7th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14922	SS	914 7th Avenue North	914 7th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14923	SS	902 7th Avenue North	902 7th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14924	SS	831 7th Avenue North	831 7th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14925	SS	832 7th Avenue North	832 7th AVE N, Jacksonville Beach	c1947 Masonry Vernacular		
DU14926	SS	825 7th Avenue North	825 7th AVE N, Jacksonville Beach	c1949 Other		
DU14927	SS	822 7th Avenue North	822 7th AVE N, Jacksonville Beach	c1949 Masonry Vernacular		
DU14928	SS	817 7th Avenue North	817 7th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14929	SS	814 7th Avenue North	814 7th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14930	SS	802 7th Avenue North	802 7th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14931	SS	622 7th Avenue North	622 7th AVE N, Jacksonville Beach	c1953 Masonry Vernacular		
DU14932	SS	628 7th Avenue North	628 7th AVE N, Jacksonville Beach	c1953 Masonry Vernacular		
DU14933	SS	708 7th Avenue North	708 7th AVE N, Jacksonville Beach	c1949 Masonry Vernacular		
DU14934	SS	728 7th Avenue North	728 7th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14935	SS	729 7th Avenue North	729 7th AVE N, Jacksonville Beach	c1953 Masonry Vernacular		
DU14936	SS	904 5th Street North	904 5th ST N, Jacksonville Beach	c1949 Frame Vernacular		
DU14937	SS	835-837 5th Street North	835-837 5th ST N, Jacksonville Beach	c1947 Frame Vernacular		
DU14938	SS	608 8th Avenue North	608 8th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14939	SS	810 8th Avenue North	810 8th AVE N, Jacksonville Beach	c1950 Masonry Vernacular		
DU14940	SS	835 8th Street North	835 8th ST N, Jacksonville Beach	c1950 Masonry Vernacular		
DU14941	SS	903 8th Avenue North	903 8th AVE N, Jacksonville Beach	c1950 Frame Vernacular		
DU14942	SS	912 8th Avenue North	912 8th ST N, Jacksonville Beach	c1951 Frame Vernacular		
DU14943	SS	926 8th Avenue North	926 8th AVE N, Jacksonville Beach	c1951 Masonry Vernacular		
DU14944	SS	932 8th Avenue North	932 8th AVE N, Jacksonville Beach	c1952 Frame Vernacular		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU14945	SS	1110 Palm Circle North	1110 Palm CIRC N, Jacksonville Beach	c1941 Bungalow		
DU14946	SS	1202 Palm Circle North	1202 Palm CIRC N, Jacksonville Beach	c1941 Bungalow		
DU14947	SS	1213 Palm Circle North	1213 Palm CIRC N, Jacksonville Beach	c1941 Frame Vernacular		
DU14948	SS	1220 Palm Circle North	1220 Palm CIRC N, Jacksonville Beach	c1941 Frame Vernacular		
DU14949	SS	1310 Palm Circle North	1310 Palm CIRC N, Jacksonville Beach	Masonry Vernacular		
DU14950	SS	720 Palm Tree Road	720 Palm Tree RD, Jacksonville Beach	c1952 Masonry Vernacular		
DU14951	SS	1041 6th Avenue North	1041 6th AVE N, Jacksonville Beach	c1946 Frame Vernacular		
DU14952	SS	1218 6th Avenue North	1218 6th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14953	SS	612 Holly Drive	612 Holly DR, Jacksonville Beach	c1941 Colonial Revival		
DU14954	SS	1229 7th Avenue North	1229 7th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14955	SS	1221 7th Avenue North	1221 7th ST N, Jacksonville Beach	c1949 Frame Vernacular		
DU14956	SS	1003 11th Street North	1003 11th ST N, Jacksonville Beach	c1934 Frame Vernacular		
DU14957	SS	1024 11th Street North	1024 11th ST N, Jacksonville Beach	c1938 Frame Vernacular		
DU14958	SS	1633 16th Avenue North	1633 16th AVE N, Jacksonville Beach	c1953 Masonry Vernacular		
DU14959	SS	1619 2nd Avenue North	1619 2nd AVE N, Jacksonville Beach	c1952 Other		
DU14960	SS	1619 3rd Avenue North	1619 3rd AVE N, Jacksonville Beach	c1953 Masonry Vernacular		
DU14961	SS	1419 4th Avenue North	1419 4th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14962	SS	1409 4th Avenue North	1409 4th AVE N, Jacksonville Beach	c1953 Other		
DU14963	SS	1604 Lower 4th Avenue North	1604 Lower 4th AVE N, Jacksonville Beach	c1947 Masonry Vernacular		
DU14964	SS	1527 Lower 4th Avenue North	1527 Lower 4th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14965	SS	1630 Lower 4th Avenue North	1630 Lower 4th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14966	SS	1653 Lower 4th Avenue North	1653 Lower 4th AVE N, Jacksonville Beach	c1947 Masonry Vernacular		
DU14967	SS	1654 Lower 4th Avenue North	1654 Lower 4th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14968	SS	1657 Lower 4th Avenue North	1657 Lower 4th AVE N, Jacksonville Beach	c1947 Frame Vernacular		
DU14969	SS	1658 Lower 4th Avenue North	1658 Lower 4th AVE N, Jacksonville Beach	c1948 Frame Vernacular		
DU14970	SS	1664 Lower 4th Avenue	1664 Lower 4th AVE N, Jacksonville Beach	c1948 Frame Vernacular		
DU14971	SS	1702 Lower 4th Avenue North	1702 Lower 4th AVE N, Jacksonville Beach	c1953 Ranch		
DU14972	SS	1729 Upper 4th Avenue North	1729 Upper 4th AVE N, Jacksonville Beach	c1951 Masonry Vernacular		
DU14973	SS	1629 Upper 4th Avenue North	1629 Upper 4th AVE N, Jacksonville Beach	c1949 Frame Vernacular		
DU14974	SS	1652 Upper 4th Avenue North	1652 Upper 4th AVE N, Jacksonville Beach	c1947 Masonry Vernacular		
DU14975	SS	1605 5th Avenue North	1605 5th AVE N, Jacksonville Beach	c1952 Ranch		
DU14976	SS	1643 5th Avenue North	1643 5th AVE N, Jacksonville Beach	c1952 Ranch		
DU14977	SS	1735 5th Avenue North	1735 5th AVE N, Jacksonville Beach	c1953 Ranch		
DU14978	SS	711 North Penman Road	711 N Penman RD, Jacksonville Beach	c1942 Masonry Vernacular		
DU14981	SS	1016 14th Street North	1016 14th ST N, Jacksonville Beach	c1938 Masonry Vernacular		
DU14983	SS	48 South Penman Road	48 S Penman RD, Jacksonville Beach	c1948 Other		
DU14984	SS	230 15th Street South	230 15th ST S, Jacksonville Beach	c1948 Frame Vernacular		
DU14985	SS	305 15th Street South	305 15th ST S, Jacksonville Beach	c1950 Frame Vernacular		
DU14986	SS	314 6th Street North	314 6th ST N, Jacksonville Beach	c1935 Mission		
DU14987	SS	320 6th Street North	320 6th ST N, Jacksonville Beach	c1930 Frame Vernacular		
DU14988	SS	326 6th Street North	326 6th ST N, Jacksonville Beach	c1932 Frame Vernacular		
DU14989	SS	519 6th Street North	519 6th ST N, Jacksonville Beach	c1953 Masonry Vernacular		
DU14990	SS	802 6th Street North	802 6th ST N, Jacksonville Beach	c1947 Frame Vernacular		
DU14991	SS	Beach Studio Apartments	720 2nd ST N, Jacksonville Beach	c1949 International		
DU14992	SS	Beach Studio Apartments	728 2nd ST N, Jacksonville Beach	c1949 International		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU14993	SS	Beach Studio Apartmnets	802 2nd ST N, Jacksonville Beach	c1948 International		
DU14994	SS	Beach Studio Apartments	810 2nd ST N, Jacksonville Beach	c1948 International		
DU14995	SS	California Apartments	820 2nd ST N, Jacksonville Beach	c1948 International		
DU14996	SS	Rose Apartments	828 2nd ST N, Jacksonville Beach	c1948 International		
DU15011	SS	123 4th Avenue South	123 4th AVE S, Jacksonville Beach	c1939 Frame Vernacular		
DU15015	SS	St Paul's Church	527 Pablo AVE, Jacksonville Beach	c1950 Other		
DU15051	SS	514 4th Avenue North	514 4th AVE N, Jacksonville Beach	c1945 Masonry Vernacular		
DU15067	SS	503 4th Avenue North	503 4th AVE N, Jacksonville Beach	c1949 Masonry Vernacular		
DU15172	SS	904 Barbara Lane	904 Barbara LN, Jacksonville Beach	c1952 Masonry Vernacular		
DU15195	SS	1001 8th Street North	1001 8th ST N, Jacksonville Beach	c1952 Masonry Vernacular		
DU15196	SS	1000 8th Street North	1000 8th ST N, Jacksonville Beach	c1952 Masonry Vernacular		
DU15246	SS	1000 10th Street North	1000 10th ST N, Jacksonville Beach	c1953 Masonry Vernacular		
DU15251	SS	1001 10th Street North	1001 10th ST N, Jacksonville Beach	c1952 Masonry Vernacular		
DU15262	SS	118 1st Avenue South	118 1st AVE S, Jacksonville Beach	c1940 Masonry Vernacular		
DU15263	SS	222 2nd Avenue South	222 2nd AVE S, Jacksonville Beach	c1948 International		
DU15264	SS	204 2nd Avenue South	204 2nd AVE S, Jacksonville Beach	c1948 International		
DU15265	SS	636 1st Street South	636 1st ST S, Jacksonville Beach	c1939 Frame Vernacular		
DU15266	SS	207-211 7th Avenue South	207-211 7th AVE S, Jacksonville Beach	c1934 Frame Vernacular		
DU15267	SS	Caribbean Connection	777 3rd ST S, Jacksonville Beach	c1946 Frame Vernacular		
DU15268	SS	Seaside Playgarden	223 8th AVE S, Jacksonville Beach	c1924 Frame Vernacular		
DU15269	SS	219-221 8th Avenue South	219-221 8th AVE S, Jacksonville Beach	c1942 Frame Vernacular		
DU15270	SS	203 8th Avenue South	203 8th AVE S, Jacksonville Beach	c1928 Frame Vernacular		
DU15271	SS	223 7th Court	223 7th CT, Jacksonville Beach	c1935 Frame Vernacular		
DU15272	SS	833 2nd Street South	833 2nd ST S, Jacksonville Beach	c1936 Frame Vernacular		
DU15273	SS	807-811 2nd Street South	807-811 2nd ST S, Jacksonville Beach	c1941 Frame Vernacular		
DU15274	SS	134 8th Avenue South	134 8 AVE S, Jacksonville Beach	c1942 Frame Vernacular		
DU15275	SS	Ruby Inn by the Sea	802 2 ST S, Jacksonville Beach	c1948 Frame Vernacular		
DU15276	SS	117 8th Avenue South	117 8 AVE S, Jacksonville Beach	c1948 Frame Vernacular		
DU15277	SS	111 8th Avenue South	111 8 AVE S, Jacksonville Beach	c1935 Frame Vernacular		
DU15278	SS	723-725 1st Street South	723-725 1 ST S, Jacksonville Beach	c1935 Masonry Vernacular		
DU15279	SS	706-720 1st Street South	706-720 1 ST S, Jacksonville Beach	c1953 Masonry Vernacular		
DU15280	SS	824 1st Street South	824 1 ST S, Jacksonville Beach	c1924 Frame Vernacular		
DU15281	SS	832 1st Street South	832 1st ST S, Jacksonville Beach	c1938 Frame Vernacular		
DU15282	SS	906 1st Street South	906 1 ST S, Jacksonville Beach	c1939 Frame Vernacular		
DU15283	SS	912 1st Street South	912 1 ST S, Jacksonville Beach	c1953 Frame Vernacular		
DU15284	SS	111 9th Avenue South	111 9 AVE S, Jacksonville Beach	c1924 Bungalow		
DU15285	SS	129 9th Avenue South	129 9 AVE S, Jacksonville Beach	c1939 Frame Vernacular		
DU15286	SS	138 9th Avenue South	138 9 AVE S, Jacksonville Beach	c1940 Frame Vernacular		
DU15287	SS	Nicholson Properties	830 3 ST S, Jacksonville Beach	c1950 Masonry Vernacular		
DU15288	SS	127 10th Avenue South	127 10 AVE S, Jacksonville Beach	c1931 Frame Vernacular		
DU15289	SS	22 10 Avenue South	22 10 AVE S, Jacksonville Beach	c1910 Frame Vernacular		
DU15290	SS	1030 2nd Street	1030 2nd ST, Jacksonville Beach	c1933 Frame Vernacular		
DU15291	SS	1102-1108 2nd Street South	1102-1108 2nd ST S, Jacksonville Beach	c1946 Masonry Vernacular		
DU15292	SS	137 12th Avenue South	137 12th AVE S, Jacksonville Beach	c1926 Frame Vernacular		
DU15293	SS	1132 1st Street South	1132 1st ST S, Jacksonville Beach	c1930 Frame Vernacular		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU15294	SS	1128 1st Street South	1128 1st ST S, Jacksonville Beach	c1931 Frame Vernacular		
DU15295	SS	1123 1st Street South	1123 1st ST S, Jacksonville Beach	c1942 Masonry Vernacular		
DU15296	SS	9-11 12th Avenue South	9-11 12th AVE S, Jacksonville Beach	c1942 Frame Vernacular		
DU15297	SS	1212 1st Street South	1212 1st ST S, Jacksonville Beach	c1919 Frame Vernacular		
DU15298	SS	112 13th Avenue South	112 13th AVE S, Jacksonville Beach	c1935 Frame Vernacular		
DU15299	SS	118 13th Avenue South	118 13th AVE S, Jacksonville Beach	c1924 Frame Vernacular		
DU15300	SS	135-137 13th Avenue South	135-137 13th AVE S, Jacksonville Beach	c1937 Frame Vernacular		
DU15301	SS	1205-1207 2nd Street South	1205-1207 2nd ST S, Jacksonville Beach	c1934 Frame Vernacular		
DU15302	SS	1323 2nd Street South	1323 2nd ST S, Jacksonville Beach	c1937 Frame Vernacular		
DU15303	SS	121 15th Avenue South	121 15th AVE S, Jacksonville Beach	c1947 Masonry Vernacular		
DU15304	SS	1431 1st Street South	1431 1st ST S, Jacksonville Beach	c1932 Frame Vernacular		
DU15305	SS	1427 1st Street South	1427 1st ST S, Jacksonville Beach	c1942 Frame Vernacular		
DU15306	SS	1419-1423 1st Street South	1419-1423 1st ST S, Jacksonville Beach	c1942 Frame Vernacular		
DU15307	SS	1414 1st Street South	1414 1st ST S, Jacksonville Beach	c1929 Frame Vernacular		
DU15308	SS	1410 1st Street South	1410 1st ST S, Jacksonville Beach	c1935 Frame Vernacular		
DU15309	SS	1334 1st Street South	1334 1st ST S, Jacksonville Beach	c1931 Frame Vernacular		
DU15310	SS	1310 1st Street South	1310 1st ST S, Jacksonville Beach	c1933 Frame Vernacular		
DU15311	SS	215 2nd Avenue North	215 2nd AVE N, Jacksonville Beach	c1950 Frame Vernacular		
DU15312	SS	1534 2nd Street South	1534 2nd ST S, Jacksonville Beach	c1922 Masonry Vernacular		
DU15313	SS	1517 2nd Street South	1517 2nd ST S, Jacksonville Beach	c1946 Frame Vernacular		
DU15314	SS	220 6th Street North	220 6th ST N, Jacksonville Beach	c1946 Masonry Vernacular		
DU15315	SS	1902 1st Street South	1902 1st ST S, Jacksonville Beach	c1906 Frame Vernacular		
DU15316	SS	1818 1st Street South	1818 1st ST S, Jacksonville Beach	c1926 Bungalow		
DU15317	SS	1802 1st Street South	1802 1st ST S, Jacksonville Beach	c1928 Frame Vernacular		
DU15318	SS	1801 Ocean Drive South	1801 Ocean DR S, Jacksonville Beach	c1914 Frame Vernacular		
DU15319	SS	2004-2006 Ocean Drive	2004-2006 Ocean DR, Jacksonville Beach	c1946 Frame Vernacular		
DU15320	SS	2120 Ocean Drive	2120 Ocean DR, Jacksonville Beach	c1950 Frame Vernacular		
DU15321	SS	2102 2nd Street	2102 2nd ST, Jacksonville Beach	c1926 Frame Vernacular		
DU15322	SS	204 21st Avenue South	204 21st AVE S, Jacksonville Beach	c1924 Frame Vernacular		
DU15323	SS	208-210 21st Avenue South	208-210 21st AVE S, Jacksonville Beach	c1947 Frame Vernacular		
DU15324	SS	2114 2nd Street South	2114 2nd ST S, Jacksonville Beach	c1929 Frame Vernacular		
DU15325	SS	2223-2225 1st Street South	2223-2225 1st ST S, Jacksonville Beach	c1940 Frame Vernacular		
DU15326	SS	2229-2221 1st Street South	2229-2221 1st ST S, Jacksonville Beach	c1937 Frame Vernacular		
DU15327	SS	2224 Ocean Drive	2224 Ocean DR, Jacksonville Beach	c1937 Frame Vernacular		
DU15328	SS	2230 Ocean Drive South	2230 Ocean DR S, Jacksonville Beach	c1933 Frame Vernacular		
DU15329	SS	84 28th Avenue South	84 28th AVE S, Jacksonville Beach	c1941 Frame Vernacular		
DU15330	SS	2816 1st Street South	2816 1st ST S, Jacksonville Beach	c1948 Colonial Revival		
DU15331	SS	2519 1st Street South	2519 1st ST S, Jacksonville Beach	c1937 Masonry Vernacular		
DU15332	SS	2527 1st Street South	2527 1st ST S, Jacksonville Beach	c1940 Masonry Vernacular		
DU15333	SS	23 26th Avenue South	23 26th AVE S, Jacksonville Beach	c1929 Frame Vernacular		
DU15334	SS	2601 Ocean Drive South	2601 Ocean DR S, Jacksonville Beach	c1954 Masonry Vernacular		
DU15335	SS	2714-2616 Ocean Drive South	2714-2616 Ocean DR S, Jacksonville Beach	c1937 Frame Vernacular		
DU15336	SS	60 28th Avenue South	60 28th AVE S, Jacksonville Beach	c1937 Frame Vernacular		
DU15337	SS	30th Avenue South Beach Approach	30th AVE S, Jacksonville Beach	c1935 Unspecified		
DU15338	SS	2999 1st Street South	2999 1st ST S, Jacksonville Beach	c1945 Frame Vernacular		

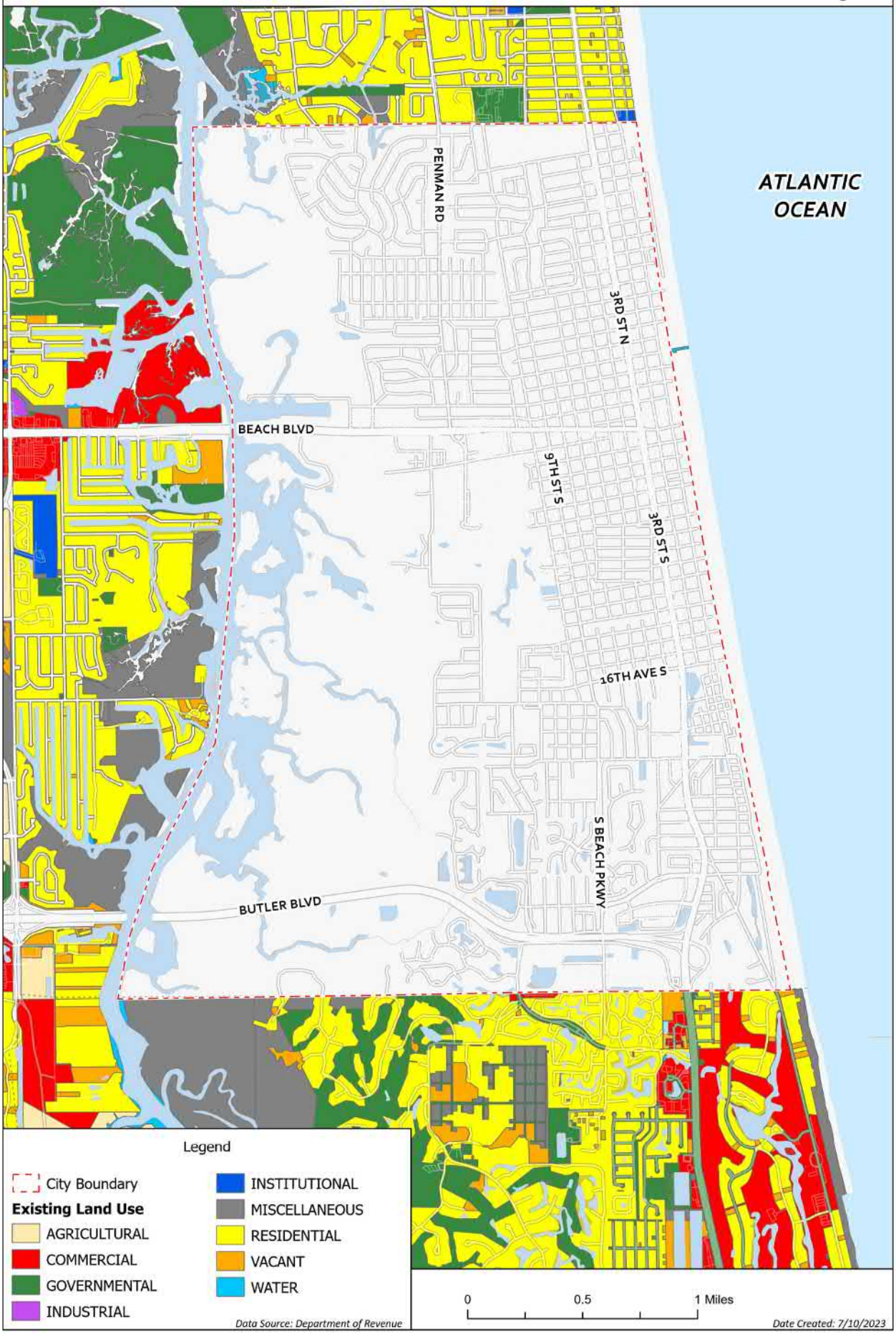
SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU15339	SS	35-37 29th Avenue South	35-37 29th AVE S, Jacksonville Beach	c1953 Masonry Vernacular		
DU15340	SS	24 31st Avenue South	24 31st AVE S, Jacksonville Beach	c1940 Frame Vernacular		
DU15341	SS	11 31st Avenue South	11 31st AVE S, Jacksonville Beach	c1939 Frame Vernacular		
DU15342	SS	27 32nd Avenue South	27 32nd AVE S, Jacksonville Beach	c1942 Masonry Vernacular		
DU15343	SS	3015 1st Street South	3015 1st ST S, Jacksonville Beach	c1950 Masonry Vernacular		
DU15344	SS	3318 1st Street South	3318 1st ST S, Jacksonville Beach	c1942 Frame Vernacular		
DU15345	SS	25 33rd Avenue South	25 33rd AVE S, Jacksonville Beach	c1938 Frame Vernacular		
DU15346	SS	3318 Ocean Drive	3318 Ocean DR, Jacksonville Beach	c1944 Frame Vernacular		
DU15347	SS	3500 Ocean Drive	3500 Ocean DR, Jacksonville Beach	c1937 Frame Vernacular		
DU15348	SS	59 34th Avenue South	59 34th AVE S, Jacksonville Beach	c1938 Colonial Revival		
DU15349	SS	115-117 34th Avenue South	115-117 34th AVE S, Jacksonville Beach	c1942 Frame Vernacular		
DU15350	SS	118 34th Avenue South	118 34th AVE S, Jacksonville Beach	c1953 Masonry Vernacular		
DU15351	SS	124 34th Avenue South	124 34th AVE S, Jacksonville Beach	c1953 Masonry Vernacular		
DU15352	SS	213 33rd Avenue South	213 33rd AVE S, Jacksonville Beach	c1936 Frame Vernacular		
DU15353	SS	3410 1st Street South	3410 1st ST S, Jacksonville Beach	c1948 Masonry Vernacular		
DU15354	SS	3414 1st Street South	3414 1st ST S, Jacksonville Beach	c1948 Masonry Vernacular		
DU15355	SS	3502 1st Street South	3502 1st ST S, Jacksonville Beach	c1939 Frame Vernacular		
DU15356	SS	3515 1st Street South	3515 1st ST S, Jacksonville Beach	c1947 Frame Vernacular		
DU15357	SS	3516 1st Street South	3516 1st ST S, Jacksonville Beach	c1940 Bungalow		
DU15358	SS	39 35th Avenue South	39 35th AVE S, Jacksonville Beach	c1946 Masonry Vernacular		
DU15359	SS	105 36th Avenue South	105 36th AVE S, Jacksonville Beach	c1940 Frame Vernacular		
DU15360	SS	39-41 36th Avenue South	39-41 36th AVE S, Jacksonville Beach	c1939 Masonry Vernacular		
DU15361	SS	3604 Ocean Drive	3604 Ocean DR, Jacksonville Beach	c1951 Frame Vernacular		
DU15362	SS	3622 Ocean Drive	3622 Ocean DR, Jacksonville Beach	c1950 Masonry Vernacular		
DU15363	SS	3624-3626 Ocean Drive	3624-3626 Ocean DR, Jacksonville Beach	c1950 Masonry Vernacular		
DU15364	SS	119 37th Avenue South	119 37th AVE S, Jacksonville Beach	c1953 Other		
DU15365	SS	125 37th Avenue South	125 37th AVE S, Jacksonville Beach	c1949 Frame Vernacular		
DU15366	SS	139 37th Avenue South	139 37th AVE S, Jacksonville Beach	c1950 Frame Vernacular		
DU15367	SS	3717 Duval Drive	3717 Duval DR, Jacksonville Beach	c1948 Masonry Vernacular		
DU15368	SS	3731 Duval Drive	3731 Duval DR, Jacksonville Beach	c1948 Masonry Vernacular		
DU15369	SS	3732 Duval Drive	3732 Duval DR, Jacksonville Beach	c1951 Ranch		
DU15370	SS	3809 Duval Drive	3809 Duval DR, Jacksonville Beach	c1939 Masonry Vernacular		
DU15371	SS	Sunburst Treasures	3815 Duval DR, Jacksonville Beach	c1940 Other		
DU15372	SS	3818 Duval Drive	3818 Duval DR, Jacksonville Beach	c1936 Frame Vernacular		
DU15373	SS	3830 Duval Drive	3830 Duval DR, Jacksonville Beach	c1940 Masonry Vernacular		
DU15374	SS	3935 Duval Drive	3935 Duval DR, Jacksonville Beach	c1941 Frame Vernacular		
DU15375	SS	4003 Duval Drive	4003 Duval DR, Jacksonville Beach	c1942 Frame Vernacular		
DU15376	SS	4004 Duval Drive	4004 Duval DR, Jacksonville Beach	c1950 Other		
DU15377	SS	4009 Duval Drive	4009 Duval DR, Jacksonville Beach	c1942 Frame Vernacular		
DU15378	SS	4012 Duval Drive	4012 Duval DR, Jacksonville Beach	c1940 Colonial Revival		
DU15379	SS	4022 Duval Drive	4022 Duval DR, Jacksonville Beach	c1940 Frame Vernacular		
DU15380	SS	4023 Duval Drive	4023 Duval DR, Jacksonville Beach	c1942 Frame Vernacular		
DU15381	SS	4030 Duval Drive	4030 Duval DR, Jacksonville Beach	c1939 Masonry Vernacular		
DU15382	SS	4134 Duval Drive	4134 Duval DR, Jacksonville Beach	c1951 Other		
DU15383	SS	4138 Duval Drive	4138 Duval DR, Jacksonville Beach	c1940 Masonry Vernacular		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU15384	SS	4145 Duval Drive	4145 Duval DR, Jacksonville Beaqch	c1953 Other		
DU15385	SS	4204 Duval Drive	4204 Duval DR, Jacksonville Beach	c1952 Other		
DU15388	SS	4029 Duval Drive	4029 Duval DR, Jacksonville Beach	c1939 Frame Vernacular		
DU15391	SS	2915 3rd Street South	2915 3rd ST S, Jacksonville Beach	c1948 Frame Vernacular		
DU15392	SS	Village Nursery	3000 3rd ST S, Jacksonville Beach	c1938 Frame Vernacular		
DU15393	SS	714 4th Street South	714 4th ST S, Jacksonville Beach	c1930 Bungalow		
DU15394	SS	818 4th Street South	818 4th ST S, Jacksonville Beach	c1951 Masonry Vernacular		
DU15395	SS	509 Upper 8th Avenue South	509 Upper 8th AVE S, Jacksonville Beach	c1947 Frame Vernacular		
DU15396	SS	538 Upper 8th Avenue South	538 Upper 8th AVE S, Jacksonville Beach	c1948 Frame Vernacular		
DU15397	SS	606 Upper 8th Avenue South	606 8th AVE S, Jacksonville Beach	c1951 Frame Vernacular		
DU15398	SS	439 7th Avenue South	439 7th AVE S, Jacksonville Beach	c1926 Frame Vernacular		
DU15399	SS	415 9th Avenue South	415 9th AVE S, Jacksonville Beach	c1937 Frame Vernacular		
DU15400	SS	420 9th Avenue South	420 9th AVE S, Jacksonville Beach	c1953 Masonry Vernacular		
DU15401	SS	725 10th Avenue South	725 10th AVE S, Jacksonville Beach	c1947 Frame Vernacular		
DU15402	SS	Arbor Cottage Antiques	315 10th AVE S, Jacksonville Beach	c1930 Frame Vernacular		
DU15403	SS	435 10th Place	435 10th PL, Jacksonville Beach	c1942 Frame Vernacular		
DU15404	SS	414 Lower 8th Avenue South	414 Lower 8th AVE S, Jacksonville Beach	c1947 Frame Vernacular		
DU15405	SS	449 Lower 8th Avenue South	449 Lower 8th AVE S, Jacksonville Beach	c1949 Frame Vernacular		
DU15406	SS	450 Lower 8th Avenue South	450 Lower 8th AVE S, Jacksonville Beach	c1952 Masonry Vernacular		
DU15407	SS	467 Lower 8th Avenue South	467 Lower 8th AVE S, Jacksonville Beach	c1953 Masonry Vernacular		
DU15408	SS	550 11th Avenue South	550 11th AVE S, Jacksonville Beach	c1928 Frame Vernacular		
DU15409	SS	401 11th Avenue South	401 11th AVE S, Jacksonville Beach	c1947 Frame Vernacular		
DU15410	SS	516 14th Avenue South	516 14th AVE S, Jacksonville Beach	c1946 Frame Vernacular		
DU15411	SS	923 15th Avenue South	923 15th AVE S, Jacksonville Beach	c1947 Frame Vernacular		
DU15412	SS	609 16th Avenue South	609 16th AVE S, Jacksonville Beach	c1953 Other		
DU15413	SS	615 16th Avenue South	615 16th AVE S, Jacksonville Beach	c1946 Frame Vernacular		
DU15414	SS	621 16th Avenue South	621 16th AVE S, Jacksonville Beach	c1946 Masonry Vernacular		
DU15415	SS	635 16th Avenue South	635 16th AVE S, Jacksonville Beach	c1946 Masonry Vernacular		
DU15416	SS	1291 Osceola Avenue	1291 Osceola AVE, Jacksonville Beach	c1950 Masonry Vernacular		
DU15417	SS	W.W. Cummer & Sons Lumber Co.	413 Beach BLVD, Jacksonville Beach	1911 Unspecified	Not Eligible	
DU15664	SS	Beaches Chapel Christian Church	610 A Florida BLVD, Neptune Beach	c1920 Colonial Revival		
DU15697	SS	1211 1st Avenue North	1211 1st AVE N, Jacksonville Beach	c1940 Frame Vernacular		
DU15922	SS	1214 1st Avenue North	1214 1st AVE N, Jacksonville Beach	c1941 Frame Vernacular		
DU15923	SS	1304 1st Avenue North	1304 1st ST, Jacksonville Beach	c1941 Frame Vernacular		
DU15924	SS	605 2nd Avenue North	605 2nd AVE N, Jacksonville Beach	c1950 Masonry Vernacular		
DU15925	SS	1104 2nd Avenue North	1104 2nd AVE N, Jacksonville Beach	c1940 Ranch		
DU15926	SS	820 8th Street North	820 8th ST N, Jacksonville Beach	c1950 Masonry Vernacular		
DU15927	SS	535 7th Avenue North	535 7th AVE N, Jacksonville Beach	Frame Vernacular		
DU15928	SS	1132 5th Avenue North	1132 5th AVE N, Jacksonville Beach	c1948 Masonry Vernacular		
DU15929	SS	1318 6th Avenue North	1318 6th AVE N, Jacksonville Beach	Ranch		
DU15938	SS	210 7th Street South	210 7 ST S, Jacksonville Beach	Frame Vernacular		
DU15939	SS	Jim Austin's Surf Shop	615 3 ST S, Jacksonville Beach	c1935 Frame Vernacular		
DU15940	SS	111 30th Avenue South	111 30th AVE S, Jacksonville Beach	c1948 Monterey		
DU15941	SS	887 16th Avenue South	887 16th AVE S, Jacksonville Beach	c1957 Frame Vernacular		
DU21352	SS	Jax Beach Water Tank	2120 Gordon AVE, Jacksonville Beach	c1949	Not Eligible	

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DU21930	SS	Oesterreicher-McCormick Cabin	503 Beach BLVD, Jacksonville Beach	c1873 Frame Vernacular		
DU22453	SS	52 9th Street South	52 9th ST S, Jacksonville Beach	c1962 Masonry Vernacular	Not Eligible	
DU22454	SS	807 1st Avenue South	807 1st AVE S, Jacksonville Beach	c1962 Masonry Vernacular	Not Eligible	
DU22455	SS	819 1st Avenue South	819 1st AVE S, Jacksonville Beach	c1962 Masonry Vernacular	Not Eligible	
DU22456	SS	831 1st Avenue South	831 1st AVE S, Jacksonville Beach	c1962 Masonry Vernacular	Not Eligible	
DU22457	SS	911 1st Avenue South	911 1st AVE S, Jacksonville Beach	c1962 Masonry Vernacular	Not Eligible	
DU22458	SS	923 1st Avenue South	923 1st AVE S, Jacksonville Beach	c1962 Masonry Vernacular	Not Eligible	
DU22459	SS	933 1st Avenue South	933 1st AVE S, Jacksonville Beach	c1962 Masonry Vernacular	Not Eligible	
DU22460	SS	123 8th Street South	123 8st ST S, Jacksonville Beach	c1969 Masonry Vernacular	Not Eligible	
DU22461	SS	704 1st Avenue South	704 1st AVE S, Jacksonville Beach	c1969 Masonry Vernacular	Not Eligible	
DU22462	SS	711 2nd Avenue South	711 2nd AVE S, Jacksonville Beach	c1969 Masonry Vernacular	Not Eligible	
DU22463	SS	719 2nd Avenue South	719 2nd AVE S, Jacksonville Beach	c1969 Masonry Vernacular	Not Eligible	
DU22464	SS	720 1st Avenue South	720 1st AVE S, Jacksonville Beach	c1969 Masonry Vernacular	Not Eligible	
DU22465	SS	803 5th Avenue South	803 5th AVE S, Jacksonville Beach	1962 Masonry Vernacular	Not Eligible	
DU22466	SS	815 5th Avenue South	815 5th AVE S, Jacksonville Beach	1962 Masonry Vernacular	Not Eligible	
DU22467	SS	821 5th Avenue South	821 5th AVE S, Jacksonville Beach	1962 Masonry Vernacular	Not Eligible	
DU22468	SS	833 5th Avenue South	833 5th AVE S, Jacksonville Beach	1962 Masonry Vernacular	Not Eligible	
DU22469	SS	903 5th Avenue South	903 5th AVE S, Jacksonville Beach	1962 Masonry Vernacular	Not Eligible	
DU22470	SS	911 5th Avenue South	911 5th AVE S, Jacksonville Beach	1962 Masonry Vernacular	Not Eligible	
DU22471	SS	925 5th Avenue South	925 5th AVE S, Jacksonville Beach	1962 Masonry Vernacular	Not Eligible	
DU22472	SS	931 5th Avenue South	931 5th AVE S, Jacksonville Beach	1962 Masonry Vernacular	Not Eligible	
DU22473	SS	604 5th Avenue South	604 5th AVE S, Jacksonville Beach	1972 Masonry Vernacular	Not Eligible	
DU22474	SS	618 5th Avenue South	618 5th AVE S, Jacksonville Beach	1972 Masonry Vernacular	Not Eligible	
DU22475	SS	630 5th Avenue South	630 5th AVE S, Jacksonville Beach	1960 Commercial	Not Eligible	
DU22476	SS	704 5th Avenue South	704 5th AVE S, Jacksonville Beach	1960 Masonry Vernacular	Not Eligible	
DU22477	SS	718 5th Avenue South	718 5th AVE S, Jacksonville Beach	1972 Masonry Vernacular	Not Eligible	
DU22478	SS	732 5th Avenue South	732 5th AVE S, Jacksonville Beach	1972 Masonry Vernacular	Not Eligible	
DU22479	SS	904 5th Avenue South	904 5th AVE S, Jacksonville Beach	1972 Masonry Vernacular	Not Eligible	
DU22480	SS	918 5th Avenue South	918 5th AVE S, Jacksonville Beach	1972 Masonry Vernacular	Not Eligible	
DU22481	SS	928 5th Avenue South	928 5th AVE S, Jacksonville Beach	1972 Masonry Vernacular	Not Eligible	
SJ00052	AR	NN				
SJ03758	SS	10 PONTE VEDRA CIRCLE	10 Ponte Vedra CIRC, Ponte Vedra Beach	-RESOURCE DESTROYED- c1950		
SJ08212	SS	Bliss House	8 Ponte Vedra CIRC, Ponte Vedra Beach	1950 Ranch		

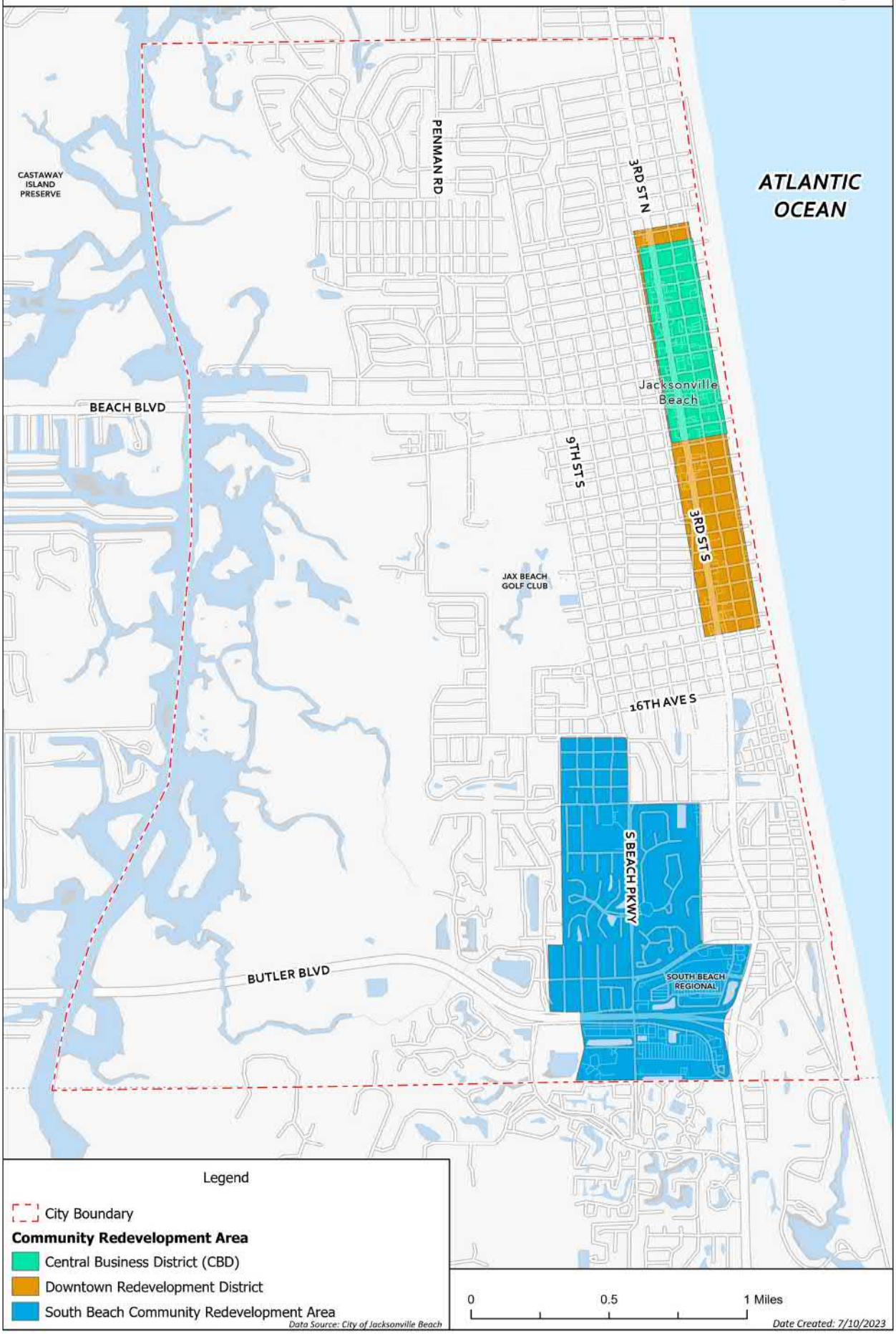
Appendix A
Supporting DIA Maps

CITY OF JACKSONVILLE BEACH
ADJACENT LAND USE



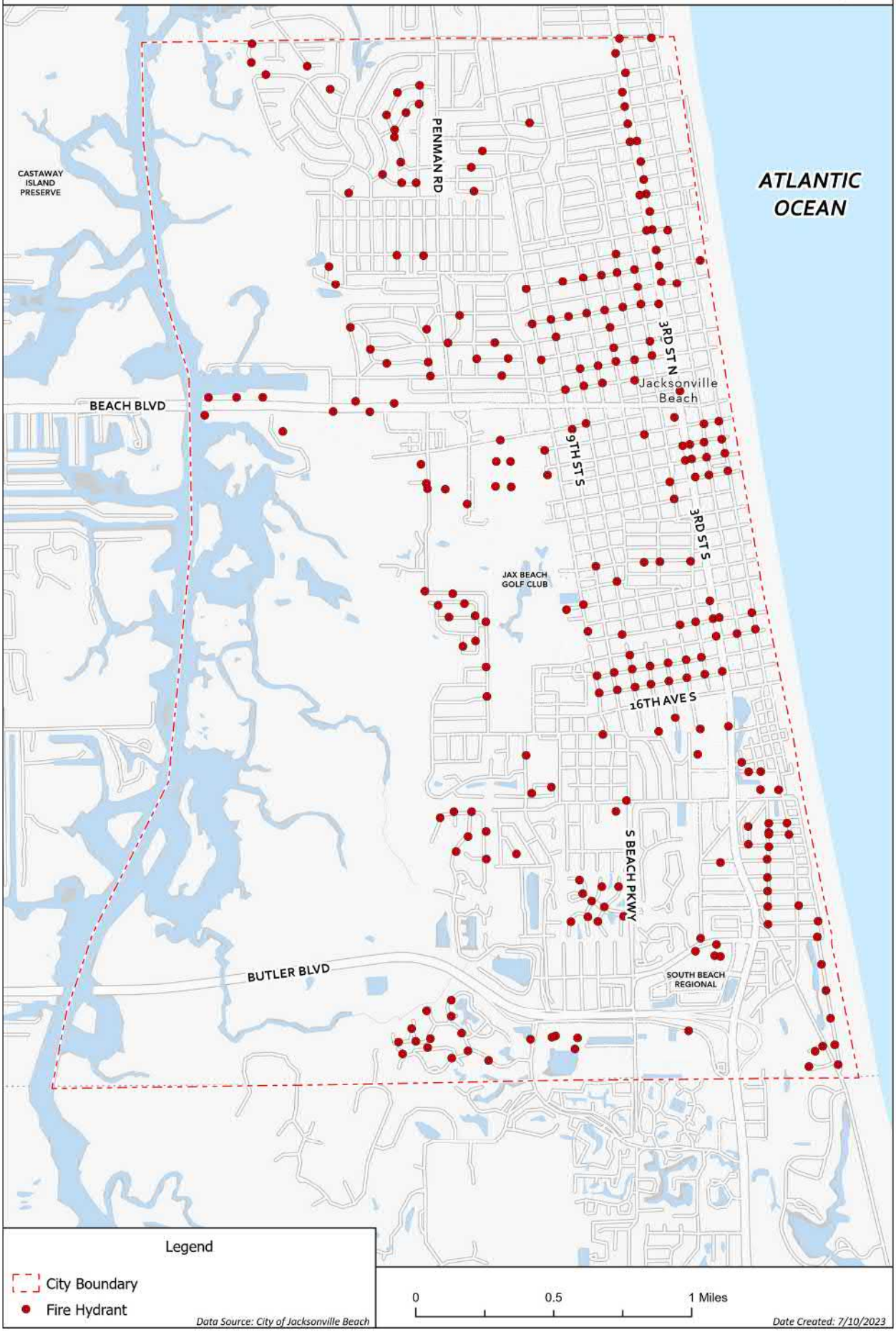
CITY OF JACKSONVILLE BEACH

COMMUNITY REDEVELOPMENT AREA

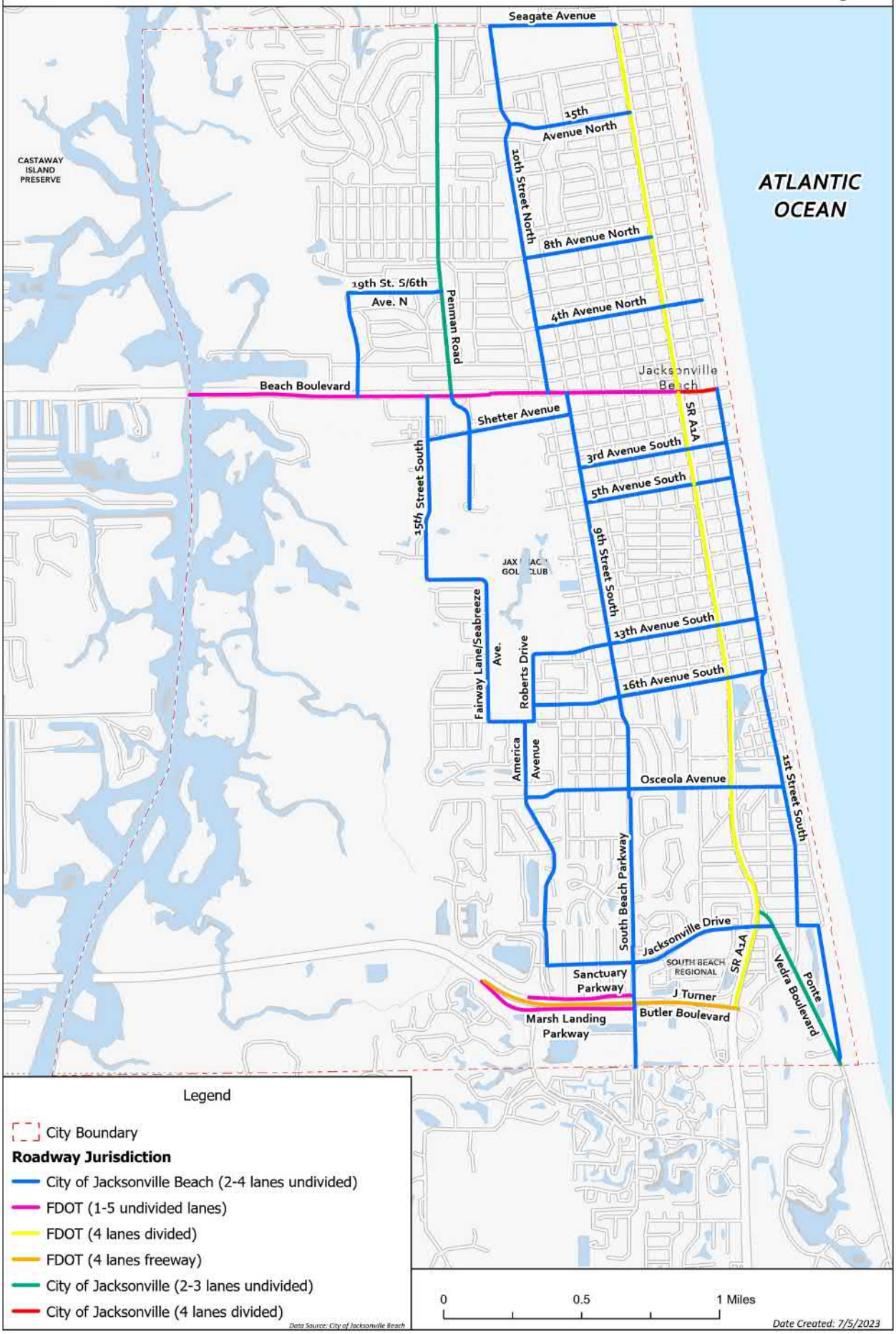


CITY OF JACKSONVILLE BEACH

FIRE HYDRANTS

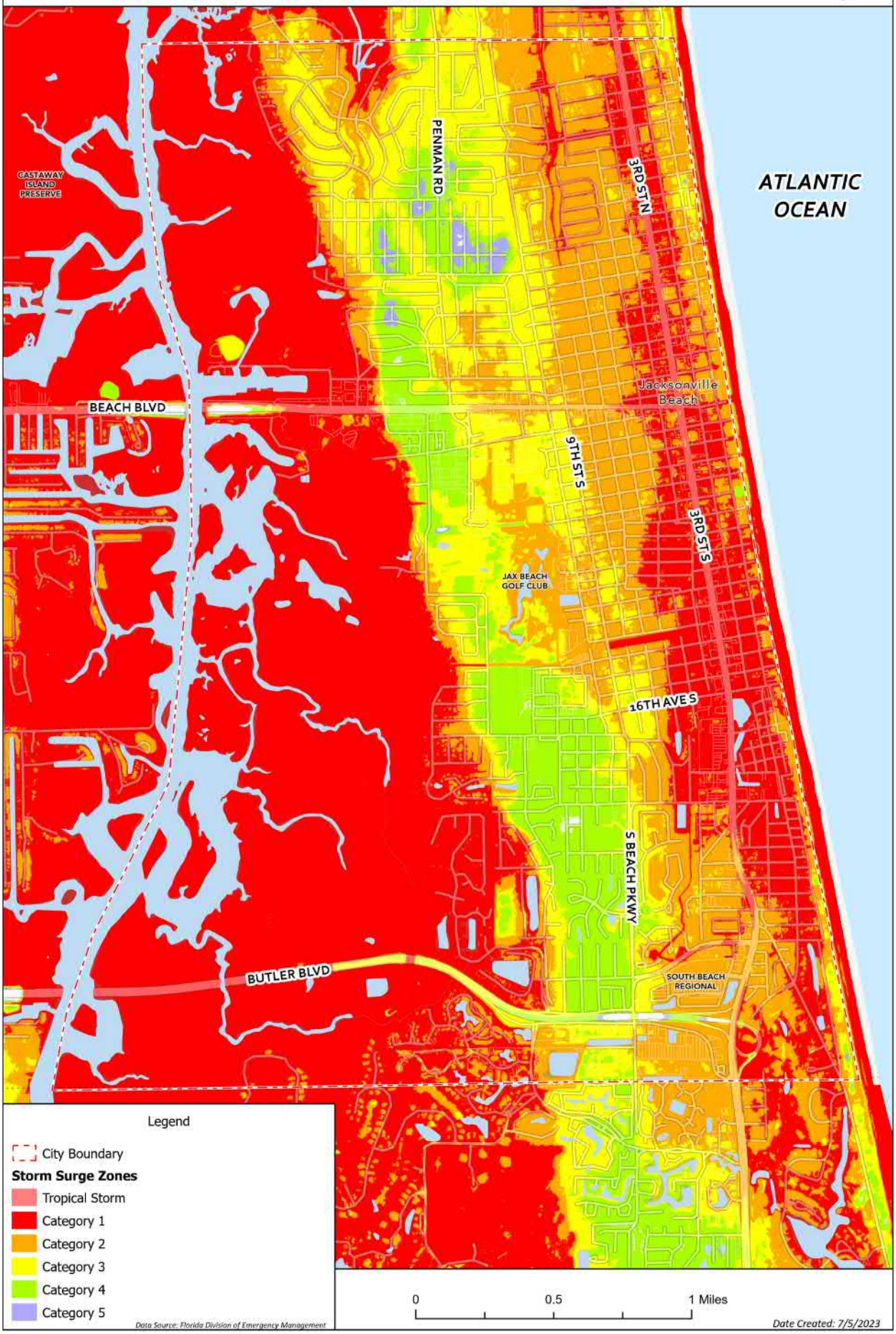


CITY OF JACKSONVILLE BEACH
ROADWAY JURISDICTION



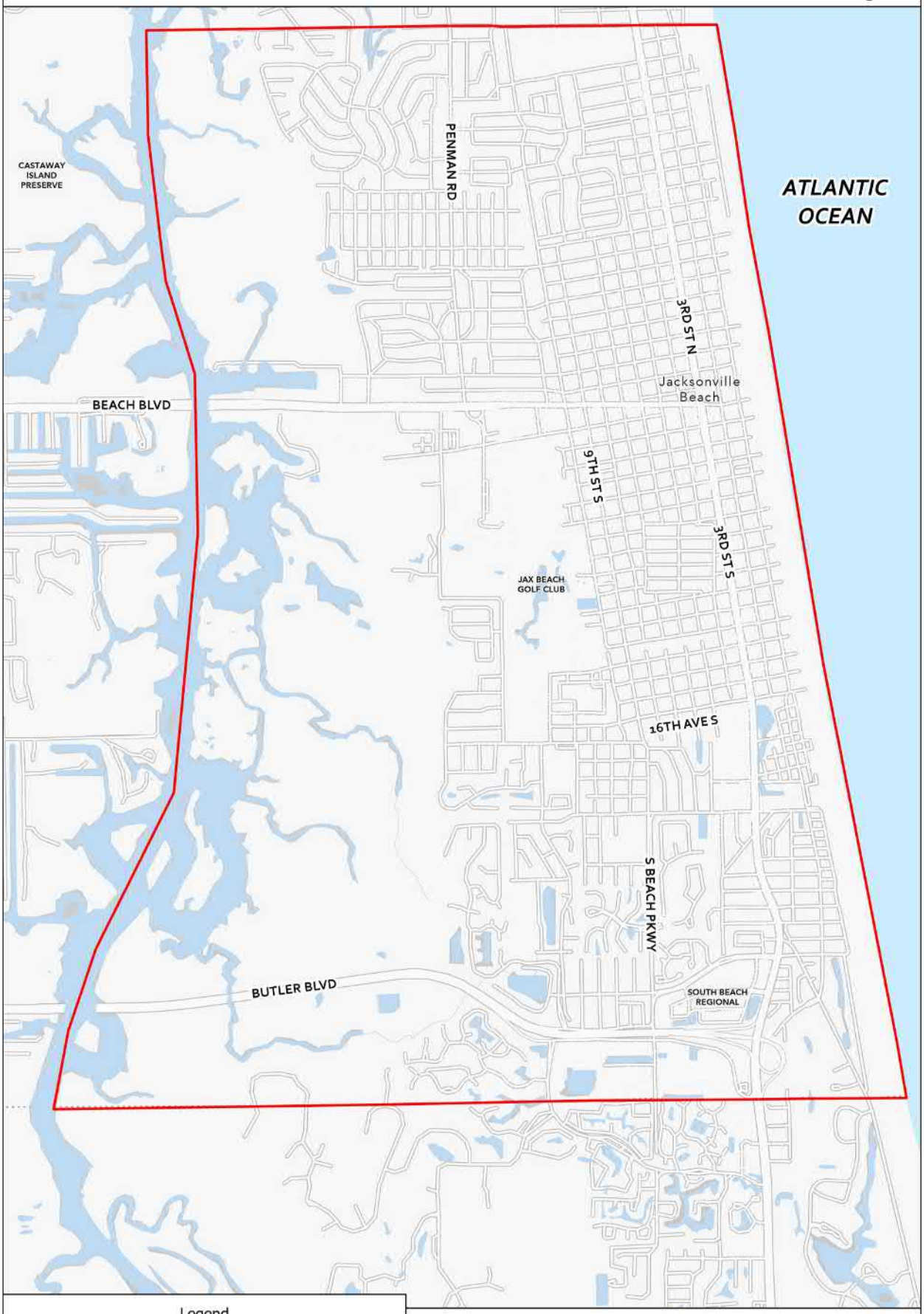
CITY OF JACKSONVILLE BEACH

STORM SURGE ZONES



CITY OF JACKSONVILLE BEACH

TCMA



CITY OF JACKSONVILLE BEACH

ZONING