

**A GUIDE TO THE DATA AND ANALYSIS TO SUPPORT COMPREHENSIVE PLAN  
AMENDMENTS**

Florida Department of Economic Opportunity  
Division of Community Development  
Bureau of Community Planning

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## **I. INTRODUCTION**

Section 163.3167(9), Florida Statutes (F.S.), requires each local government to address in its comprehensive plan the water supply sources necessary to meet and achieve the existing and projected water use demand for the established planning period considering the applicable Water Management District's regional water supply plan developed pursuant to Section 373.709, F.S. To this end, the comprehensive plan and plan amendments must be based on appropriate data and analysis to demonstrate the availability of water supplies and water supply facilities necessary to accommodate existing and anticipated water use demand. [Section 163.3177(6)(a)2.d., F.S.]

This guidebook is prepared as a technical document to assist local governments with the preparation of water supply and facilities data and analysis to support proposed comprehensive plan amendments, particularly those that would change the Future Land Use Map (FLUM) to significantly increase density or intensity of development and demand for water. Four basic water related issues with proposed FLUM changes are described in this guidebook:

1. The calculation of the amount of potable water needed to support the proposed amendment, both for the short-term and long-term planning periods, based on development potential
2. The determination of whether the local government has adequate supplies of potable water to meet the estimated demand from the proposed land use change
3. The determination of whether the local government has adequate water supply facilities to support the proposed land use change<sup>1</sup>
4. The demonstration of the availability of adequate water supplies and facilities to meet the projected need for the proposed development through its buildout.

[Note: The Department has prepared a separate technical assistance guide to assist local governments with the preparation of the 10-year water supply facilities work plan pursuant to Section 163.3177(c)3, F.S., entitled *A Guide to the Preparation of the Water Supply Facilities Work Plan* ([hyperlink](#)).]

## **II. DATA AND ANALYSIS TO SUPPORT A PROPOSED LAND USE CHANGE**

### **A. Potable Water Supplies and Treatment Facilities**

The data and analysis supporting the proposed amendment should indicate how potable water will be provided to the site of the proposed land use change, as well as the availability of water supplies. The level of data and analysis to be provided will depend upon factors such as the scale of development, the growth rate, whether the local government has adopted its 10-year

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<sup>1</sup> The term "water supply facilities" means a system of infrastructure designed to collect, treat, and distribute water, and includes water wells, treatment plants, reservoirs, distribution mains, and reuse facilities.

water supply facilities work plan, and whether the local government is subject to a regional water supply plan.

Two permits are involved in determining whether adequate water supply will be available to serve the proposed land use. The first permit regulates the withdrawal of raw water from a groundwater source, surface water source or an alternative water source. The second permit regulates the operating capacity of the treatment facility that provides the finished water. Through the issuance of a water use or consumptive use permit (CUP), the water management districts (WMDs) regulate the amount of raw water that can be withdrawn from a water source for treatment and distribution as finished water. Raw water is processed in a water treatment facility designed and built to treat a specific quantity of water. The Florida Department of Environmental Protection (DEP) regulates the operating capacity of each water treatment facility, which may be owned and operated by a local government utility or another public or private utility.

The amount of finished water produced by a treatment facility is not necessarily equal to the amount of raw water withdrawn from the permitted source, because some volume may be lost during treatment. In many cases, the difference is not big enough to warrant consideration in the review of comprehensive plan amendments. A differential of 5 percent or more is significant, however, and should be taken into account when determining the amount of finished water that will be available. If the treatment loss is 5 percent or more, three separate calculations should be included in the information submitted with the proposed land use amendment: the raw water supply calculation, the finished water supply calculation, and the water treatment facility operating capacity calculation.

The following information is necessary for determining available water supplies and treatment facility capacity:

- The amount of water that can be withdrawn from the source identified in the facility provider's CUP (including any timing and limiting conditions)
- The amount of water being withdrawn to meet current demand (including all distribution system losses)
- The total permitted operating capacity of the water treatment facility
- The amount of finished water currently being delivered from the facility.

If the amendment site is located within a utility service area of a water supplier other than the local government itself, then the amendment must include a letter from the water supplier, demonstrating commitment to provide the services, along with supporting documentation confirming the availability of adequate sources and the necessary infrastructure to serve the projected water demand.

## **B. Calculation of Potable Water Demand for a Proposed Land Use Change**

The local government should provide the following data and analysis to support a proposed land use change:

- The adopted level of service (LOS) standard for potable water
- The amount of additional development the land use amendment will allow
- The net increase in the water demand. When calculating the water use demand for a proposed land use change, the local government should review its reserved and planned water supply and facility capacities to determine whether the existing land use and the proposed change are already covered by its raw water allocations and planned facilities capacity. An increase in development density or intensity on a site that already has water service reserved must only account for the increase in water demand created by the land use change. For example, if water supply and facility capacity have been reserved for a 200-acre parcel approved for 5 dwelling units per acre and the proposed land use change will increase the density to 10 units per acre, the data and analysis should demonstrate the availability of water supply and facilities to meet the demand created by the additional 1,000 residential units rather than the entire 2,000 units being proposed
- For a proposed FLUM change involving annexation, the data and analysis must demonstrate that adequate water supply and facility capacity are available or are planned to be available to serve the parcel to be annexed even if the density and intensity of development on the site remain unchanged after annexation. If the annexed property is already located within the City's utility service area and water and facility capacity has been reserved for the site prior to annexation, then data and analysis must only demonstrate the availability of adequate capacity to meet the additional demand due to the land use change.

### **B.1 Calculation of Water Demand for Residential Land Use Change**

- Multiply the residential development potential by the adopted potable water LOS standard, assuming that the established standard is on a per-residential-unit basis. If the adopted LOS standard is on a per-capita basis, the standard must first be multiplied by the number of persons per household (to obtain the demand for each residential unit), then multiplied by the total number of residential units

### **B.2 Calculation of Water Demand for Non-Residential Land Use Change**

- Multiply the non-residential square feet by the potable water LOS standard for the non-residential land use category to determine the total water demand for that land use category. If potable water LOS standards for each non-residential land use type have not been adopted by the comprehensive plan, appropriate standards based on utility rates for the land use types may be used as the best available data

### C. Calculation of Reserved Allocations and Projected Growth

When evaluating whether adequate water supply will be available to serve a proposed land use change, the local government should account for the amount of water supply reserved for developments that have been approved but not yet built, as well as the projected water needs for the remaining long-term planning time frame established in the comprehensive plan. The amount of reserved water is the sum of:

1. Existing water demand, including allocation commitments under the local government's concurrency management system, and
2. Other service encumbrances or commitments for approved site plans, subdivisions and other developments (including developments of regional impact) considering the timeframes covered by those commitments

The local government must also account for the water demand projected to occur within its long-term planning period but not otherwise accounted for in the reserved water calculation. Those projected water use demand can be calculated on the basis of growth projections for residential and non-residential development reflected in the local government's comprehensive plan for the 5-year and 10-year planning periods (or for a longer planning time frame established in the comprehensive plan).

### D. Basic Calculations of the Availability of Potable Water Supply and Facilities to Support a Proposed Land Use Change

**D.1 Raw Water Calculation:** The availability of adequate raw water supply to serve a proposed land use change can be determined by completing the following calculation (using consistent units such as gallons/day):

- |  |       |
|--|-------|
| 1. Current water use allocation (CUP issued by the WMD):       | _____ |
| 2. Plus any raw water purchased from other suppliers:          | _____ |
| 3. Less current demands, including distribution system losses: | _____ |
| 4. Less allocation(s) committed to other water suppliers:      | _____ |
| 5. Less reserved allocations:                                  | _____ |
| 6. Less projected growth demand:                               | _____ |
| 7. Equals amount available for proposed land use change:       | _____ |

Reserved allocations (Line 5) is the amount of water supply set aside for approved development but not yet built, such as committed water service guaranteed through an enforceable development agreement and committed water service for any additional development not included in Line 6. Projected demand (Line 6) is the water supply needed to meet anticipated growth based upon projections of residential and nonresidential development for both the short-term and the long-term planning periods established in the local comprehensive plan.

[Note: If the projected demand (Line 6) includes water supply to serve the site at the existing density or intensity, then the amount of water available for the proposed land use change (Line 7)

only needs to apply to the increased demand created by the increase in density or intensity by the proposed land use change.]

**D.2 Finished Water Calculation:** The availability of finished water facility capacity to serve a proposed land use change can be calculated using the following formula:

1. Current water treatment facility permitted capacity: \_\_\_\_\_
2. Plus any finished water purchased from other suppliers: \_\_\_\_\_
3. Less amount of finished water allocated to existing development: \_\_\_\_\_
4. Less quantity of finished water committed to other water suppliers: \_\_\_\_\_
5. Less quantity of finished water reserved for approved development: \_\_\_\_\_
6. Less quantity of finished water for project growth demand: \_\_\_\_\_
7. Equals amount of finished water facility capacity available: \_\_\_\_\_

Each FLUM amendment being proposed by the local government in the amendment package should be similarly evaluated, as well as an assessment of their cumulative impacts on water supply and water supply facilities. If it is determined that there will not be sufficient water supply or facility capacity to serve the proposed land use change, then the local government must explain how both raw and finished water supplies will be made available to meet the projected demand associated with the proposed amendment. In such instances, the proposed amendment must include the strategies to increase the supply of water and facilities to meet the projected demand. Those strategies may include:

1. Development of new sources of water supply (including alternative sources)
2. Utilization of reclaimed water and reuse
3. Increased water conservation measures
4. Capital improvements to increase treatment plant capacity (as established in a 5-year schedule of capital improvements) or through an enforceable development agreement

If the utility service area is within an area addressed by a Water Management District's Regional Water Supply Plan, then the latest Regional Water Supply Plan update provides an important starting place to identify potential water supply sources and projects that could be utilized to meet those demands. Most of these strategies will require amending the adopted 10-year water supply facilities work plan. The work plan should be updated to reflect the aforementioned strategies, projects, change in water demand and demonstration of water supply to meet the change in demand. This update can be adopted at any time by the local government; however, the update is not statutorily required until 18 months after the applicable Water Management District adopts an update to its Regional Water Supply Plan that affects the local government.

If the local government cannot demonstrate that sufficient water supply and water treatment facility capacity will be available to support the proposed land use change, it should not adopt the amendment authorizing the land use change as proposed. The local government may revise the amendment to allow for an amount of development that could be supported by the available water supplies and facilities; or may revise the amendment to include meaningful and predictable strategies to ensure that both the short-term and long-term demand for water and facilities is met,

such as adoption of a phasing schedule for the proposed development so that the necessary water supply and facilities would be planned to coincide with the demand at each phase.

However, a local government can also provide data and analysis, based upon professionally acceptable and applied methodologies, to demonstrate that water supplies and facilities are (or will be) available due to a change in any of the following:

- Growth projections
- The evaluation of the impacts of the proposed land use change over the long-term planning period of the comprehensive plan
- Any phasing of the project necessary to coincide with the availability of the water supply and facilities, including planned capital improvements.

#### **IV. Examples of Water Supply Data and Analysis to Support Land Use Amendments**

Three examples are provided here. The first example (Example IV.A) is a hypothetical one intended to demonstrate how to determine whether adequate water supplies and water facilities will be available to serve a proposed land use change. The next two examples (Example IV.B and Example IV.C) are actual examples of water supply and facilities data and analysis supporting land use amendments. Example IV.B is a mixed-use land use change adopted by Volusia County (Amendment No. 11-R1) known as the “Farmton Local Plan”; and Example IV.C is a Development of Regional Impact (DRI)-related land use amendment adopted by St. Johns County (Amendment No. 04-D1) known as “RiverTown DRI”.

##### **Example IV.A [Hypothetical]**

##### **Water Supply and Facilities Availability Analysis for Residential Land Use Change**

Using the 200-acre property example in **Section B**, the proposed land use change is from Low Density Residential (5 dwelling units/acre) to Medium Density Residential (10 dwelling units/acre). The water supply and facility availability analysis is based on the following information:

- The potable water LOS standard is 300 gallons per day (gpd) per dwelling unit
- The CUP allows an annual average daily water withdrawal of 6.00 million gallons per day (mgd) and the current average daily withdrawal is 5.50 mgd
- Water treatment facilities permitted capacity is 10.00 mgd
- The concurrency management system indicates that 0.20 mgd has been committed for approved developments over the next two years
- Water demand to meet the 10-year growth projection is 0.16 mgd
- There are no existing agreements to obtain water from or to provide water to other utilities
- Water demand from the proposed land use change, assuming the projected long-term water supply demand (Line 6) included the existing land use designation, is 0.30 mgd (i.e., 1,000 dwelling units x 300 gpd)

### Step 1 Calculation of Raw Water Availability

1. Current water use allocation (CUP):	6.00 mgd
2. Plus any raw water purchased from other suppliers:	+0.00 mgd
3. Less current daily withdrawal, including system losses:	- 5.50 mgd
4. Less allocation(s) committed to other water suppliers:	- 0.00 mgd
5. Less reserved allocations:	- 0.20 mgd
6. Less 10-year projected demand:	- 0.16 mgd
7. Equals amount available for proposed land use change:	= 0.14 mgd

The analysis shows that there is not sufficient water supply available to meet the additional increase in demand (i.e., 0.30 mgd) created by the proposed land use change.

### Step 2 Calculation of Water Facilities Capacity Availability

Using the information above, the maximum permitted water withdrawal (CUP) is 6.00 mgd, and the treatment facilities permitted capacity is 10.0 mgd. The current average daily amount of finished water produced at the facilities is 5.50 mgd, which is the same amount of raw water withdrawn under the CUP per day. Under these conditions, the available treated water for the proposed land use change is calculated as follows:

1. Current water treatment facility permitted capacity:	10.00 mgd
2. Plus any finished water purchased from other suppliers:	+ 0.00 mgd
3. Less amount of finished water allocated to existing development:	- 5.50 mgd
4. Less quantity of finished water committed to other water suppliers:	- 0.00 mgd
5. Less quantity of finished water reserved for approved development:	- 0.20 mgd
6. Less quantity of finished water for projected demand:	- 0.16 mgd
7. Equals amount of finished water facility capacity available:	= 4.14 mgd

The analysis shows that the local government has adequate water treatment facilities but not adequate water supplies to meet the water needs of the proposed land use change. In this case, the amendment should include an explanation of how adequate water supplies will be made available to meet the projected demand associated with the proposed amendment, which may necessitate an update to the 10-year Water Supply Plan.

### Example IV.B Volusia County Adopted Amendment 11-R1 [The Farmton Local Plan]

The amendment applies to approximately 47,000 acres located in south-central unincorporated Volusia County. The amendment changed the future land use designation of the property from Agricultural Resource (2309 acres, 1 du/10 acres; 0.10 FAR), Environmental Systems Corridor (22,344 acres, 1 du/25 acres; 0.10 FAR), and Forestry Resource (22,294 acres, 1 du/20 acres; 0.10 FAR) to a mixed-use land use plan. The map amendment was accompanied by project-specific policies, which establish the development standards including the densities and intensities for each land use allowed in the proposed mixed-use development. The development, known as the Farmton Local Plan, will be completed in two phases, Phase 1 (2025) and Phase 2 (2060). Phase 1 is limited to 2,287 dwelling units and 820,217 square feet of non-residential



uses. Phase 2 is limited to 23,100 dwelling units and 4.7 million square feet of non-residential uses, plus associated institutional uses (see Table IV.B1).

**Table IV.B1 Volusia County Amendment 11-1R Farmton Local Plan  
Approved Land Uses & Maximum Development by Phase**

Land Use	Number of Units	
	Phase 1 (2025)	Phase 2 (2060)
Single Family	2,287 du	23,100 du
Retail	273,000 sf	1,422,776 sf
Office	318,395 sf	1,938,097 sf
Hotel	120 rooms	240 rooms
Industrial	156,822 sf	1,180,727 sf
Institutional		50,000 sf
Schools		
4 Elementary		2,908 students
2 Middle		2,512 students
2 High		5,266 students
Hospital		160 beds

**Calculation of Water Demand:** Water demand calculations for the Farmton Local Plan for each phase of the project are shown in Tables IV.B2 and IV.B3.

**Table IV.B2 Volusia County Amendment 11-1R Farmton Local Plan  
Potable Water Demand through 2025**

Phase 1 (2025)			
Phase/Land Use	Number of Units	Water Use GPD/Unit <sup>2</sup>	Potable Water Demand MGD
Single Family	2,287 du	175 gpd/du	0.400
Retail	273,000 sf	0.15 gpd/sf	0.041
Office	318,395 sf	0.15 gpd/sf	0.048
Hotel	120 rooms	100 gpd/room	0.012
Industrial	156,822 sf	0.10 gpd/sf	0.016
<b>Total</b>			<b>0.517</b>

The potable water demand for Phase 1 is estimated to be 0.517 million gallons per day (mgd).

<sup>2</sup> The potable water demand rates for the residential and non-residential uses are professionally acceptable to the St. Johns River Water Management District. Whereas the adopted LOS standard for Potable Water within the County's Southeast Service Area is 200 gpd/du, the water demand rate of 175 gpd/du used for this amendment is due to the demand being offset by special water conservation and reuse measures incorporated into the Farmton Local Plan.

**Table IV.B3 Volusia County Amendment 11-1R Farmton Local Plan  
Potable Water Demand through 2060**

Phase 2 (2060)			
Land Use	Number of Units	Water Use GPD/Unit	Potable Water Demand MGD
Single Family	23,100 du	175 gpd/du	4.043
Retail	1,422,776 sf	0.15 gpd/sf	0.213
Office	1,938,097 sf	0.15 gpd/sf	0.291
Hotel	240 rooms	100 gpd/room	0.024
Industrial	1,180,727 sf	0.10 gpd/sf	0.118
Institutional	50,000 sf	0.10 gpd/sf	0.005
Schools			
4 Elementary	2,908 students	20 gpd/student	0.058
2 Middle	2,512 students	25 gpd/student	0.063
2 High	5,266 students	25 gpd/student	0.132
Hospital	160 beds	250 gpd/bed	0.040
<b>Total</b>			<b>4.986</b>

The potable water demand for Phase 2 is estimated to be 4.986 mgd.

[Note: Non-potable water demand through 2060 is estimated to be 5.55 mgd. A reclaimed water project is proposed for the Farmton Local Plan for irrigation, which is estimated to produce about 4.47 mgd of available reclaimed water for irrigation, leaving a balance of 1.08 mgd irrigation water demand. Thus, the total potable and non-potable water demand is estimated to be approximately 6.6 mgd.]

**Demonstration of the Availability of Adequate Water Supplies and Facilities:** The total average daily potable water demand for the Farmton Local Plan through 2060 is estimated to be 5.503 mgd<sup>3</sup>. A portion of the amendment site lies within the City of Edgewater Utility Service Area, with a daily average demand estimated to be 0.624 mgd. The remainder of the site will be served by Farmton Water Services (FWS), a private utility and a subsidiary of Miami Corporation which is the applicant of the Farmton Local Plan amendment. FWS will construct, operate and maintain water supply facilities and will be responsible for all permitting and delivery of water supply for the area outside of the City of Edgewater Utility Service Area. The City of Edgewater has adequate capacity for Phase I and planned improvements to increase capacity to meet the water demand for the project site within its service area through the project's buildout period. The City has provided a letter which indicates the City's willingness to provide water, wastewater and water reuse to the portion of the site lying within its service area. In addition, the FWS has provided information demonstrating the availability of adequate

<sup>3</sup> Using the 200 gpd/unit LOS standard established by the Volusia County Comprehensive Plan, the total potable water demand through 2060 is estimated to be 6.140 mgd. Applying either 200 gpd or 175 gpd, the data and analysis shows the availability of adequate potable water sources, estimated to be about 9.6 mgd, to meet the long-term water demand under the land use change.

water supplies, both traditional and alternative supplies, to meet the estimated demand it is responsible for. Under the project-specific policies adopted into the Volusia County Comprehensive Plan, the County will not issue any development orders or development permits for development within the Farmton Local Plan until there is a demonstration of adequate water supplies and facilities concurrent with the needs of the development.

In addition, the project-specific policies require:

- Coordination of the water suppliers with St. Johns River Water Management District, regarding the application for consumptive use permit and the availability of water supply sources, both traditional and alternative sources
- Updates to Volusia County and the City of Edgewater 10-year Water Supply Facilities Work Plans to include Farmton Water Resources Service Area and description of projects needed to provide potable and non-potable water to the project site
- Landowners and developers to coordinate with the water providers to develop an integrated water resources plan, including a long range waste water plan, for implementation of the needed water supply projects; and enter into agreements as are necessary to accommodate that plan for up to 50 years.

#### **Example IV.C St. Johns County Adopted Amendment 04-D1 [RiverTown DRI]**

The amendment changed the future land use map designation for a 4,170-acre property from Rural/Silviculture and Residential B land use categories to Residential B, Residential C, Community Commercial, Mixed Use District, and Parks and Open Space land use categories (see Table IV.C1). The land use map change is accompanied by project-specific policies. St. Johns County approved a development order concurrently with the adoption of the comprehensive plan amendment which authorized the property to be developed as a development of regional impact (DRI), known as the RiverTown DRI. The owner is St. Joe/Arvida Company, LP. The project is located in the northwest of unincorporated St. Johns County, along SR 13 and the St. Johns River, between Greenbriar Road to the north and CR 210 to the south. The RiverTown DRI was approved in 2004 and to be built in two phases: Phase 1 (2005-2011) and Phase 2 (2012-2016), and to consist of 3,700 single family dwelling units, 800 multi-family dwelling units, 300,000 square feet of retail, 125,000 square feet of office, 100,000 square feet of light industrial, 18 holes of golf course, a 30-acre community park, a 65-acre regional park, 2 elementary schools and 1 middle school (see Table IV.C2).

**Table IV.C1 St. Johns County Amendment 04-D1 RiverTown DRI  
Approved Land Uses by Acreage**

Previous FLUM Designation	Adopted FLUM Designation	Size
Rural/Silviculture & Residential-B	Residential-B	3,886 acres
Rural/Silviculture	Residential-C	170 acres
Residential-B	Community Commercial	16 acres
Rural/Silviculture	Mixed Use District	40 acres
Rural/Silviculture	Parks and Open Space	58 acres
<b>Total</b>		<b>4,170 acres</b>

**Table IV.C2 St. Johns County Amendment 04-D1 RiverTown DRI  
Approved Land Uses & Maximum Development by Phase**

Land Use	Number of Units		Total
	Phase 1 2005-2011	Phase 2 2012-2016	
Residential Single Family	2,200 du	1,500 du	3,700 du
Residential Multi-Family	400 du	400 du	800 du
Retail	50,000 sf	250,000 sf	300,000 sf
Office	50,000 sf	50,000 sf	100,000 sf
Light Industrial	50,000 sf	50,000 sf	100,000 sf
Golf Course	18 holes	0	18 holes
Community/Neighborhood Parks	186 acres	0	186 acres
Riverfront Park	58 acres	0	58 acres
Elementary School (2)	700 students	700 students	1,400 students
Middle School (1)	1,000 students	0	1,000 students

**Table IV.C3 St. Johns County Amendment 04-D1 RiverTown DRI  
Potable Water Demand for Phase 1 (2005-2011)**

Phase/Land Use	Number of Units	Water Use GPD/Unit <sup>4</sup>	Potable Water Demand MGD
Single Family	2,200 du	350 gpd/du	0.770
Multi-Family	400 du	300 gpd/du	0.120
Retail	50,000 sf	0.15 gpd/sf	0.008
Office	50,000 sf	0.15 gpd/sf	0.008
Light Industrial	50,000 sf	0.10 gpd/sf	0.005
Golf Course	18 holes	25,000 gpd/hole	0.025
Schools			
1 Elementary	700 students	20 gpd/student	0.014
1 Middle	1,000 students	25 gpd/student	0.025
<b>Total</b>			<b>0.975</b>

<sup>4</sup> Potable water demand rates for non-residential land uses are based on Chapter 64E-6.008, F.A.C.

**Table IV.C4 St. Johns County Amendment 04-D1 RiverTown DRI  
Potable Water Demand for Phase 2 (2012-2016)**

Phase/Land Use	Number of Units	Water Use GPD/Unit <sup>5</sup>	Potable Water Demand MGD
Single Family	1,500 du	350 gpd/du	0.525
Multi-Family	400 du	300 gpd/du	0.120
Retail	250,000 sf	0.15 gpd/sf	0.037
Office	50,000 sf	0.15 gpd/sf	0.008
Light Industrial	50,000 sf	0.10 gpd/sf	0.005
Schools			
1 Elementary	700 students	20 gpd/student	0.014
<b>Total</b>			<b>0.709</b>

The total average daily potable water demand for the St. Johns County Amendment 04-DI (RiverTown DRI) is estimated to be 1.684 mgd. Non-potable water demand through 2016 is estimated to be 1.564 mgd. Thus, total potable and non-potable water demand is estimated to be 3.248 mgd through 2016.

**Demonstration of the Availability of Adequate Water Supplies and Facilities:** The subject property is located within the utility service area of St. Joe Utility Company. Internal potable water service will be provided by St. Joe Utility Company through a bulk water purchase agreement with Jacksonville Electric Authority (JEA). Water availability letter from JEA has been provided demonstrating the availability of adequate supply and commitment to provide potable water through the project’s buildout period. JEA’s letter also identifies the necessary facility improvements it plans to undertake in order to provide the service. Non-potable water demand will be addressed through a combination of reuse water and service water withdrawals from on-site retention and detention ponds, particularly for irrigation for the golf course and common open areas. Reduction in water demand will be accomplished by the use of low plumbing fixtures, the use of xeriscape and drought resistant native vegetation for landscaping. Irrigation systems on residential and commercial parcels will be owned and maintained by the individual owners. Irrigation systems within common areas will be owned and maintained by homeowners associations or by community development districts.

[Note: The examples included in this guide (Example IV.B and Example IV.C) represent typical situations that may apply to a broad range of local governments. If a local government encounters a situation that is not addressed in these examples, we recommend you contact the Department or the appropriate Water Management District for assistance. Also, if a local government submits data and analysis that refers to supporting materials, copies of the referenced materials should be provided upon request of either the Department or the Water Management District.]

<sup>5</sup> Potable water demand rates for non-residential land uses are based on Chapter 64E-6.008, F.A.C.

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