

## Examples of Future Growth Strategies – Rainbow Springs Basin Management Action Plan (BMAP)

Local land development regulations, comprehensive plans, ordinances, incentives, best management practices (BMPs), and environmental resource permit (ERP) requirements provide mechanisms for protecting water resources and reducing the impact of new development and other land use changes as they occur. They are the primary mechanisms available to address additional nitrogen loadings from urban and agricultural growth. Future agricultural operations will be subject to the same requirements as existing operations with regard to the implementation of FDACS-adopted BMPs. The Rainbow Springs BMAP recognizes the local protections described in this section as an important component of the BMAP and encourages local governments to further strengthen local watershed protection frameworks.

**Table 1. Excerpt of Future Growth Strategies by Stakeholder in Rainbow Springs BMAP**

| Strategy Type           | Title                                              | Lead Entity       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Start Date | Status  |
|-------------------------|----------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|
| Plan                    | 2013-2017 Springs Management Plan                  | SWFWMD            | The plan summarizes the vision, issues, and solutions that SWFWMD will address over the next five years to manage and protect springs. Through strategic investments and partnerships, SWFWMD is implementing projects to conserve and restore the ecological balance of our spring systems, thereby supporting regional economies and quality of life.                                                                                                     | 2013       | Ongoing |
| Comprehensive Plan      | Marion County Transfer of Development Rights (TDR) | Marion County     | The TDR Program is designed to protect natural resources including, but are not limited to, the preservation of high water recharge and underground drainage basins, springs, karst areas, sinkholes, sinks, sinkhole ponds, and other karst features. The land from which development rights are transferred is subject to a conservation easement.                                                                                                        | 2000       | Ongoing |
| Comprehensive Plan      | Marion County Rural Community Land Use Designation | Marion County     | The comprehensive plan establishes the Rural Community future land use designation to provide for clustered urban-density development patterns in the Rural designated lands while requiring permanent open spaces reserved from development and complete urban services (e.g., central water, central sewer, and designed/constructed stormwater systems) that comply with Marion County's design and development standards, including Springs Protection. | 2000       | Ongoing |
| Regulation or Ordinance | Marion County Springs Protection Zones (SPOZ)      | Marion County     | Resolution 05-R-106 establishes SPOZs and development standards. Comprehensive Plan Future Land Use Element Objective 7.2 identifies the extent of the primary and secondary zones along with other design and development standards. Articles 5 and 6 of the land development code set forth the specific design and development criteria related to the applicable SPOZ.                                                                                  | 2005       | Ongoing |
| Regulation or Ordinance | River Protection Corridors                         | City of Dunnellon | The city established river protection corridor areas for both the Rainbow and Withlacoochee Rivers. The corridor extends 150 feet from the ordinary high water line and implements specific development standards for development.                                                                                                                                                                                                                          | 2008       | Ongoing |

## Examples of Protection through Land Conservation – Rainbow Springs Basin Management Action Plan (BMAP)

Maintaining land at lower intensity uses through land purchases or easements for conservation and recreational use is one strategy for reducing water quality impacts to Rainbow Springs, the Upper Floridan aquifer, and Rainbow River. Rainbow Springs State Park encompasses the Rainbow Springs group and a large portion of the east bank of the Rainbow River. Table 2 identifies acquisition targets that have been added to the Florida Forever project list since 2000. The project costs are taken from the project Florida Forever descriptions.

**Table 2. Excerpt of Conservation Land Purchases in the Rainbow Springs BMAP**

| Title                   | Lead Entity | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Partners                                                     | Acreage Acquired / Year Acquired | Cost         |
|-------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------|--------------|
| Rainbow River Corridor  | DEP         | The Rainbow River Corridor project is designed to protect most of the undeveloped or minimally developed private land remaining along the Rainbow River. The southern parcels bring a remaining large portion of undeveloped shoreline along the eastern side of the river into state ownership, and provide a connection to the southern end of the Rainbow Springs State Park. In addition, the potential restoration of altered habitats would help restore and maintain water quality and habitat along one of Florida's largest spring-run streams. | City of Dunnellon, Marion County, Rainbow River Conservation | 32 acres / 2008                  | \$3,200,000  |
| Carr Farm/Price's Scrub | DEP         | This property is in southwestern Alachua County and northwestern Marion County and includes scrub, upland mixed forest, scrubby flatwoods, wet flatwoods, depression marsh, marsh lake, and sinkhole lake. 962 acres were acquired in Marion County in 2001.                                                                                                                                                                                                                                                                                             | N/A                                                          | 962 acres / 2001                 | \$2,061,144  |
| South Goethe            | DEP         | This acquisition will provide a corridor from the Goethe State Forest to the Marjorie Harris Carr Cross Florida Greenway State Recreation and Conservation Area along the Withlacoochee River and will also form a linkage to the Etoniah Cross Florida Greenway Florida Forever project.                                                                                                                                                                                                                                                                | N/A                                                          | -                                | \$11,574,303 |
| Bear Hammock            | DEP         | Acquisition of this property in southern Marion County would provide a connector between Goethe State Forest and the Marjorie Harris Carr Cross Florida Greenway, creating a continuity of more than 200,000 acres.                                                                                                                                                                                                                                                                                                                                      | N/A                                                          | -                                | \$32,576,529 |

## Projects and Strategies for Springs Coast BMAPs

Note: This handout contains feedback received to date from stakeholders. Thank you to Brooksville, Hernando County, and UF/IFAS for providing information.

### Education Projects - OSTDS

| BMAP | Lead Entity               | Priority Ranking | Project Number | Project Name                                  | Description                                                                                     | Project Type | Estimated Nutrient Load Reduction | Milestone (5-, 10-, or 15-year) | Cost Estimate (planning-level) | Funding |           | Status (Underway, Planned, or Completed) | Estimated Completion Date |
|------|---------------------------|------------------|----------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------|--------------|-----------------------------------|---------------------------------|--------------------------------|---------|-----------|------------------------------------------|---------------------------|
|      |                           |                  |                |                                               |                                                                                                 |              |                                   |                                 |                                | Source  | Amount    |                                          |                           |
| WW   | City of Brooksville (COB) | High             |                | Public Service Announcements (PSAs)           | Include FDOH PSAs on septic systems in utility bills twice per year                             | Public Educ. |                                   | 5                               | \$5,000                        | COB     | \$5,000   | Planned                                  | 2017                      |
| WW   | COB                       | High             |                | Think About Personal Pollution (TAPP) Program | Transfer or deploy City of Tallahassee TAPP Program in Brooksville                              | Public Educ. |                                   | 5                               | \$5,000                        | COB     | \$5,000   | Planned                                  | 2018                      |
| WW   | COB                       | High             |                | City Website                                  | Post springs-related and OSTDS-related information on city website                              | Public Educ. |                                   | 5                               | \$5,000                        | COB     | \$5,000   | Planned                                  | 2017                      |
| WW   | Hernando County (HC)      |                  |                | OSTDS Enhancement Education Campaign          | Develop education campaign in conjunction with identified partners on OSTDS enhancement options | Public Educ. |                                   | 5                               | \$50,000                       | Unknown | \$50,000  | Planned                                  | 2021                      |
| WW   | HC                        |                  |                | Drainfield Enhancement Demonstration Project  | Implement drainfield enhancement demonstration project on public property                       | Public Educ. |                                   | 10                              | \$250,000                      | Unknown | \$250,000 | Planned                                  | 2025                      |

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| BMAP     | Lead Entity | Priority Ranking | Project Number | Project Name                                              | Description                                                              | Project Type | Estimated Nutrient Load Reduction | Milestone (5-, 10-, or 15-year) | Cost Estimate (planning-level) | Funding |        | Status (Underway, Planned, or Completed) | Estimated Completion Date |
|----------|-------------|------------------|----------------|-----------------------------------------------------------|--------------------------------------------------------------------------|--------------|-----------------------------------|---------------------------------|--------------------------------|---------|--------|------------------------------------------|---------------------------|
|          |             |                  |                |                                                           |                                                                          |              |                                   |                                 |                                | Source  | Amount |                                          |                           |
| CR/KB WW | UF/IFAS     | High             |                | Outstanding Florida Springs (OFS) OSTDS Campaign, Phase 1 | Implement social marketing campaign that links septic systems to springs | Public Educ. |                                   | 5                               | \$60,000                       | Pending |        | Planned                                  | 2018                      |
| CR/KB WW | UF/IFAS     | High             |                | OFS OSTDS Campaign, Phase 2                               | On-line clearinghouse of fact sheets, videos, PSAs                       | Public Educ. |                                   | 5                               | \$7,000                        | Pending |        | Planned                                  | 2018                      |
| CR/KB WW | UF/IFAS     | High             |                | OFS OSTDS Campaign, Phase 3                               | Presentations to realtors and distribution of info. kits for home buyers | Public Educ. |                                   | 5                               | \$10,000                       | Pending |        | Planned                                  | 2018                      |
| CR/KB WW | UF/IFAS     | High             |                | OFS OSTDS Campaign, Phase 4                               | Six to eight septic system workshops for elected officials               | Public Educ. |                                   | 5                               | \$5,000                        | Pending |        | Planned                                  | 2018                      |
| CR/KB WW | UF/IFAS     | High             |                | OFS OSTDS Campaign, Phase 5                               | Homeowner workshops with field demonstrations                            | Public Educ. |                                   | 5                               | \$25,000                       | Pending |        | Planned                                  | 2018                      |

## Projects and Strategies for Springs Coast BMAPs

### Education Projects – Urban Turf Fertilizer

| BMAP | Lead Entity | Priority Ranking | Project Number | Project Name                                  | Description                                                                                                                | Project Type | Estimated Nutrient Load Reduction | Milestone (5-, 10-, or 15-year) | Cost Estimate (planning-level) | Funding                            |                     | Status (Underway, Planned, or Completed) | Estimated Completion Date |
|------|-------------|------------------|----------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------|---------------------------------|--------------------------------|------------------------------------|---------------------|------------------------------------------|---------------------------|
|      |             |                  |                |                                               |                                                                                                                            |              |                                   |                                 |                                | Source                             | Amount              |                                          |                           |
| WW   | COB         | High             |                | Think About Personal Pollution (TAPP) Program | Transfer or deploy City of Tallahassee TAPP Program in Brooksville                                                         | Public Educ. |                                   | 5                               | \$5,000                        | COB                                | \$5,000             | Planned                                  | 2018                      |
| WW   | COB         | High             |                | Public Service Announcements (PSAs)           | Include PSAs on fertilizer use in utility bills twice per year                                                             | Public Educ. |                                   | 5                               | \$5,000                        | COB                                | \$5,000             | Planned                                  | 2017                      |
| WW   | COB         | High             |                | City Website                                  | Post springs-related and fertilizer-related information on city website                                                    | Public Educ. |                                   | 5                               | \$5,000                        | COB                                | \$5,000             | Planned                                  | 2017                      |
| WW   | HC          | High             |                | Fertilizer Survey                             | Mass mailing to single family residences with request to take on-line survey regarding fertilizer ordinance and activities | Public Educ. |                                   | 5                               | \$16,844                       | Fish & Wildlife Found. Grant<br>HC | \$14,511<br>\$2,333 | Underway                                 | 2017                      |
| WW   | HC          |                  |                | Stormwater Nutrient Reduction Education       | Stormwater education per NPDES permit requirements                                                                         | Public Educ. |                                   | 5                               | \$15,000/yr                    | HC FDOT                            | \$15,000            | Underway                                 | Ongoing since 2012        |
| WW   | HC          |                  |                | Hernando County Groundwater Guardians         | Annual public workshop on water quality and water resources                                                                | Public Educ. |                                   | 5                               | \$2,000                        | HC                                 | \$2,000             | Planned                                  | 2017                      |

## Projects and Strategies for Springs Coast BMAPs

| BMAP     | Lead Entity | Priority Ranking | Project Number | Project Name                                       | Description                                                                                              | Project Type | Estimated Nutrient Load Reduction | Milestone (5-, 10-, or 15-year) | Cost Estimate (planning-level) | Funding |           | Status (Underway, Planned, or Completed) | Estimated Completion Date |
|----------|-------------|------------------|----------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------|-----------------------------------|---------------------------------|--------------------------------|---------|-----------|------------------------------------------|---------------------------|
|          |             |                  |                |                                                    |                                                                                                          |              |                                   |                                 |                                | Source  | Amount    |                                          |                           |
| WW       | HC          |                  |                | Fertilizer Ordinance Education                     | Public education campaign on existing fertilizer ordinance                                               | Public Educ. |                                   | 10                              | \$30,000                       | Unknown | \$30,000  | Planned                                  | 2025                      |
| WW       | HC          |                  |                | Public Outreach on Fertilizer Use                  | Outreach by County Extension staff and the Florida-Friendly Landscaping Program                          | Public Educ. |                                   | 5                               | Unknown                        | HC      | Unknown   | Planned                                  | 2020                      |
| WW       | HC          |                  |                | Update "Water's Journey" Public Education Campaign | Potential multi-partner and multi-jurisdiction effort to update existing "Water's Journey" campaign      | Public Educ. |                                   | 10                              | \$100,000                      | Unknown | \$100,000 | Planned                                  | 2027                      |
| CR/KB WW | UF/IFAS     | High             |                | Social Marketing Campaign                          | Campaign to increase awareness of local fertilizer ordinances and to encourage good fertilizer practices | Public Educ. |                                   | 5                               | \$50,000                       | Pending |           | Planned                                  | 2018                      |
| CR/KB WW | UF/IFAS     | Medium           |                | Florida-Friendly Workshops                         | "Landscaping for springs" Florida-friendly workshops and demonstrations                                  | Public Educ. |                                   | 5, 10, 15                       | \$25,000                       | Pending |           | Planned                                  | 2030                      |

## Projects and Strategies for Springs Coast BMAPs

### OSTDS Projects

| BMAP | Lead Entity | Priority Ranking | Project Number | Project Name                      | Description                                                                                                          | Project Type              | Estimated Nutrient Load Reduction | Milestone (5-, 10-, or 15-year) | Cost Estimate (planning-level) | Funding                            |           | Status (Underway, Planned, or Completed) | Estimated Completion Date |
|------|-------------|------------------|----------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------|---------------------------------|--------------------------------|------------------------------------|-----------|------------------------------------------|---------------------------|
|      |             |                  |                |                                   |                                                                                                                      |                           |                                   |                                 |                                | Source                             | Amount    |                                          |                           |
| WW   | COB         | High             |                | Septic to Sewer Conversion        | Connect approx. 75 septic systems to city sewer                                                                      | Wastewater Infrastructure |                                   | 5                               | \$1.4 million                  | COB<br>DEP                         |           | Planned                                  | 2019                      |
| WW   | COB         | Medium           |                | Septic to Sewer Conversion        | Connect approx. 300 septic systems to city sewer                                                                     | Wastewater Infrastructure |                                   | 10                              | \$6 million                    | COB<br>DEP                         |           | Planned                                  | 2027                      |
| WW   | HC          |                  |                | Drainfield Enhancement Rulemaking | Monitor and coordinate on FDOH rule development of drainfield enhancement requirements                               | Interagency Coordination  |                                   | 5                               | N/A                            | N/A                                | N/A       | Underway                                 | 2018                      |
| WW   | HC          |                  |                | Wastewater Service Area Expansion | Planning of wastewater service area expansion to identify target areas for septic to sewer conversion (30,000 OSTDS) | Wastewater Infrastructure |                                   | 5                               | \$240,000                      | HC<br>Fish & Wildlife Found. Grant | \$138,000 | Underway                                 | 2018                      |

## Projects and Strategies for Springs Coast BMAPs

### Urban Turf Fertilizer Projects

| BMAP | Lead Entity | Priority Ranking | Project Number | Project Name         | Description                                          | Project Type | Estimated Nutrient Load Reduction | Milestone (5-, 10-, or 15-year) | Cost Estimate (planning-level) | Funding |         | Status (Underway, Planned, or Completed) | Estimated Completion Date |
|------|-------------|------------------|----------------|----------------------|------------------------------------------------------|--------------|-----------------------------------|---------------------------------|--------------------------------|---------|---------|------------------------------------------|---------------------------|
|      |             |                  |                |                      |                                                      |              |                                   |                                 |                                | Source  | Amount  |                                          |                           |
| WW   | COB         | High             |                | Fertilizer Ordinance | Regulate proper use of fertilizer within city limits | Regulation   |                                   | 5                               | Unknown                        | COB     | Unknown | Underway                                 | 2018                      |
|      |             |                  |                |                      |                                                      |              |                                   |                                 |                                |         |         |                                          |                           |
|      |             |                  |                |                      |                                                      |              |                                   |                                 |                                |         |         |                                          |                           |

### Sports Turfgrass Fertilizer Projects

| BMAP | Lead Entity | Priority Ranking | Project Number | Project Name | Description | Project Type | Estimated Nutrient Load Reduction | Milestone (5-, 10-, or 15-year) | Cost Estimate (planning-level) | Funding |        | Status (Underway, Planned, or Completed) | Estimated Completion Date |
|------|-------------|------------------|----------------|--------------|-------------|--------------|-----------------------------------|---------------------------------|--------------------------------|---------|--------|------------------------------------------|---------------------------|
|      |             |                  |                |              |             |              |                                   |                                 |                                | Source  | Amount |                                          |                           |
|      |             |                  |                |              |             |              |                                   |                                 |                                |         |        |                                          |                           |
|      |             |                  |                |              |             |              |                                   |                                 |                                |         |        |                                          |                           |
|      |             |                  |                |              |             |              |                                   |                                 |                                |         |        |                                          |                           |

### Agricultural Sources Projects

**RELYING ON FDACS; NO LOCAL STAKEHOLDER PROJECTS**

### WWTF Projects

| BMAP | Lead Entity | Priority Ranking | Project Number | Project Name | Description | Project Type | Estimated Nutrient Load Reduction | Milestone (5-, 10-, or 15-year) | Cost Estimate (planning-level) | Funding |        | Status (Underway, Planned, or Completed) | Estimated Completion Date |
|------|-------------|------------------|----------------|--------------|-------------|--------------|-----------------------------------|---------------------------------|--------------------------------|---------|--------|------------------------------------------|---------------------------|
|      |             |                  |                |              |             |              |                                   |                                 |                                | Source  | Amount |                                          |                           |
|      |             |                  |                |              |             |              |                                   |                                 |                                |         |        |                                          |                           |
|      |             |                  |                |              |             |              |                                   |                                 |                                |         |        |                                          |                           |
|      |             |                  |                |              |             |              |                                   |                                 |                                |         |        |                                          |                           |

## Projects and Strategies for Springs Coast BMAPs

### Future Growth Management Strategies

| BMAP | Strategy Type | Title | Lead Entity | Description | Start Date | Status |
|------|---------------|-------|-------------|-------------|------------|--------|
|      |               |       |             |             |            |        |
|      |               |       |             |             |            |        |
|      |               |       |             |             |            |        |

### Protection of Sources through Land Conservation

| BMAP | Title | Lead Entity | Description | Partners | Acreage Acquired /<br>Year Acquired | Cost |
|------|-------|-------------|-------------|----------|-------------------------------------|------|
|      |       |             |             |          |                                     |      |
|      |       |             |             |          |                                     |      |
|      |       |             |             |          |                                     |      |