



## Conservation, Open Space & Groundwater Recharge Element

### Evaluation and Appraisal

#### Major Issues Assessment

##### **Issue 2: Establish Policies for the Reduction of Greenhouse Gases within the City.**

The Comprehensive Plan has long-standing policies that address issues related to greenhouse gas reduction. These policies include but are not limited to the promotion of transportation choice (including transit, walking, and bicycling), compact development, infill and redevelopment, mixed-use development, higher residential densities and non-residential intensities in and near neighborhood (activity) centers and within transit corridors, and preservation of the urban forest.

Comprehensive energy legislation passed by the state legislature in 2008 requires (among other requirements) that greenhouse gas reduction strategies be included in comprehensive plans. Assessment needs to be made in the EAR as to what comprehensive plan policy amendments and additions are needed regarding greenhouse gas reduction. Gainesville is in the fortuitous position of having both a very successful mass transit system and electric utility under its ownership and control, which bodes well for the City to be a leader in greenhouse gas reduction.

##### Analysis of Existing Objectives and Policies

Policies that address greenhouse gas reduction are not a new concept for the Comprehensive Plan. The City has long focused on walkable land use patterns, transportation choice, and environmental conservation as key goals. With public awareness of climate change ever increasing, the existing policies need to be strengthened and explicitly linked to the larger issue of greenhouse gas reduction and long term sustainability.

The objectives and policies of the Conservation, Open Space & Groundwater Recharge Element that pertain to Issue 2 are as follows:

- Encouraging transportation choice in Policy 2.5.2. The emphasis on bicycle and pedestrian modes as an air quality measure is also part of the overall strategy to reduce auto dependence, which contributes to a reduction in greenhouse gases.
- Policy 2.6.2. Re: establishment of Green Building Program to encourage environmentally friendly and energy-efficient construction.

- Tree planting requirements in Policy 3.1.1 for the City and tree planting goals for developers and others.

See Table 1. The listed policies have been achieved and are on-going; the recommendation is to revise these policies to more explicitly state their relationship to greenhouse gas reduction, and add new policies that expand the City's commitment to sustainability.

### **Issue 8: Strengthen Natural Resource Protection.**

The Comprehensive Plan includes numerous policies with respect to the protection of natural resources, but the Uplands map in the Environmentally Significant Land & Resources map series merits review for inclusion of additional significant uplands. Assessment should be made in the EAR regarding the need for comprehensive plan amendments pertaining to the protection of other natural resources, particularly considering that additional environmental protections have been proposed for the City's land development regulations. Similarly, determination should be made in the EAR as to the need to amend the comprehensive plan to provide protection for annexed land with Alachua County Strategic Ecosystem designation.

There is considerable concern about the long-term water supply for our region. The St. Johns River Water Management District conducts water supply assessments to identify areas where projected future uses cannot be sustained by proposed water resources without unacceptable impacts to water resources and related natural systems of the region. Such areas are designated as Priority Water Resource Caution Areas (PWRCA's).

Prior to the Water Management District's draft 2008 Water Supply Assessment (WSA), the City and Alachua County were not identified as a Priority Water Resource Caution Areas. However, the draft WSA identifies most of the District, including the Gainesville area, as a *Potential* PWRCA. As of September 2009 the District was continuing to refine the groundwater flow simulation models used in the WSA. Once model review/refinement model is complete, the District will publish the final 2008 WSA, which will include PWRCA designations. It is not certain at this time whether or not the Gainesville area will be in a PWRCA, but the determination is expected to be made. The PWRCA designation would require amendments to Gainesville's comprehensive plan within 18 months after the District approves (expected in December 2010) the 2010 Water Supply Plan. Such amendments could include increased water conservation measures, greater expansion of reclaimed water service, and possibly development of alternative water supplies.

Whether or not the City is designated as a Priority Water Resource Caution Area, assessment should be made in the EAR as to whether current policies in the Comprehensive Plan need to be amended to meet updated statutory requirements pertaining to water supply. In addition, assessment should be made in the EAR as to whether current comprehensive plan policies need to be updated regarding water conservation, including the use of reclaimed water. Assessment should also be made in the EAR as to whether the comprehensive plan should address Low-impact development

(LID), which is a set of stormwater management features and practices that mimic natural hydrologic functions on developed land and that are intended to conserve natural systems. LID addresses both water quantity and water quality.

#### Analysis of Existing Objectives and Policies

The Conservation, Open Space & Groundwater Recharge Element has largely succeeded in protecting Gainesville's natural resources during the planning period of 2000-2010.

The objectives and policies of the Conservation, Open Space & Groundwater Recharge Element that pertain to Issue 8 are as follows:

- The 2010 environmental update currently under consideration by the City identifies and protects Alachua County's strategic ecosystems, which until recently were not recognized by the City on annexed land. This represents a key improvement in the City's environmental regulation.
- Additional protection is also extended to significant plant and wildlife habitats, significant uplands, listed plant and animal species, high aquifer recharge areas, and archaeological and geologic features as a result of the 2010 environmental update.

The other Major Issues, which follow, are not applicable to the EAR assessment of the:

- Issue 1: Clarify Activity Center, Mixed-use, and Urban Design Requirements;
- Issue 3: Encourage Livable Neighborhoods for People of All Ages;
- Issue 4: Fund Transportation Choice;
- Issue 5: Amend Future Land Use Map as Justified by Data and Analysis;
- Issue 6: Encourage Infill and Redevelopment in Central and East Gainesville; and
- Issue 7: Navigate the New Economy.

#### **Unforeseen or Unanticipated Changes**

Energy and environmental issues have risen to the forefront in the past decade. This is reflected in the City's identification of greenhouse gas reduction and natural resource protection as two of its eight major issues. The City is also responding to the State's passage of HB 697, which modifies F.S. 163.3177(6)(d) to require comprehensive plan policies addressing energy conservation. New policies are recommended in Table 1 below to address these issues.

Alachua County's Strategic Ecosystems program was codified during this planning period to provide additional protection to sensitive lands. Land development regulations to accommodate and protect annexed Strategic Ecosystems are currently under consideration, and will result in increased protection for annexed Strategic Ecosystems. The LDC update will require some changes to the Comprehensive Plan, referred to throughout the EAR as the '2010 environmental update'.

Another unforeseen issue is potential changes in Gainesville's water supply planning. In 2010 the City may be designated as Priority Water Resource Caution Area (PWRCA), which will require Comprehensive Plan changes in the 2011-2012 timeframe. In advance

of this determination, the City's existing policies regarding water conservation should be assessed.

### **Recommended Changes**

The recommended changes that are needed to address Issue 2, Establish Policies for the Reduction of Greenhouse Gases within the City, are as follows:

- Add new and strengthen existing policies that refer to energy conservation and greenhouse gas reduction in response to HB 697 adopted by the State of Florida in 2008.
- Add a policy to address the relationship between Gainesville's tree canopy and solar electrical energy generation.
- In Policy 3.1.1, consider increasing both the number of trees to be planted annually by the City, and the number of trees that are encouraged to be planted and by developers and others.

The recommended changes that are needed to address Issue 8, Strengthen Natural Resource Protection, are as follows:

- Revise Policy 1.1.1 f. to provide more specific guidance for protection of uplands.
- Revise Policy 4.2.2 to address a wider range of potential pollutants (e.g., coliform bacteria, nitrogen, and phosphorus) that impair water quality.
- Update various policies to reflect the stronger natural resource protections expected with the adoption of the 2010 environmental update.
- Add policies to address potential changes to water supply planning that will be determined in late 2010.

| <p align="center"><b>Table 1</b><br/> <b>Major Issues Evaluation Matrix – Conservation, Open Space &amp; Groundwater Recharge Element</b><br/> <b>Issue 2: Establish Policies for the Reduction of Greenhouse Gases within the City</b></p>  |                      |                               |   |
|--|----------------------|-------------------------------|---|
| Objective or Policy  | Measurable Target    | Objective or Policy Achieved? | Recommended Changes   |
| <b>New Goal</b>  | To be developed      |                               | A new goal with associated objectives and policies needs to be developed to address the City's commitment to reducing of greenhouse gas emissions.  |
| <b>New Goal</b>  | To be developed      | N/A                           | <p>A new goal needs to be developed in the Conservation, Open Space &amp; Groundwater Recharge Element to include factors that affect energy conservation. This is due to changes to F.S. 163.3177 (6) (d) that were made by HB 697 in 2008.</p> <p>Conservation strategies to address greenhouse gas reduction may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>▪ Continue to aggressively pursue urban forestry and tree-planting programs</li> <li>▪ Continue to coordinate with Alachua County's land conservation efforts</li> <li>▪ Continue to discourage sprawling land use patterns</li> </ul> |
| <b>New Policy</b>  | To be developed      |                               | Add policy to address the relationship between Gainesville's tree canopy and solar electrical energy generation.  |
| <b>Policy 2.5.2</b><br>The City shall encourage transportation choice by adopting new programs and strategies as may be needed to encourage public transit use, bicycling, walking, and higher urban development densities near neighborhood centers.  | Regulations adopted. | Yes, on-going.                | Revise to also encourage greenhouse gas reduction.  |
| <b>Objective 2.6</b> The City shall continue to promote and practice natural resource conservation and pollution prevention in order to reduce negative impacts on the environment. To accomplish this, the City shall continue to incorporate natural resource-saving and pollution prevention policies in this Element and other elements of the Comprehensive Plan (such as Solid Waste, Future Land Use, and Transportation Mobility). |                      | Yes, on-going                 | Revise to address greenhouse gas reduction.   |

| <p align="center"><b>Table 1</b><br/> <b>Major Issues Evaluation Matrix – Conservation, Open Space &amp; Groundwater Recharge Element</b><br/> <b>Issue 2: Establish Policies for the Reduction of Greenhouse Gases within the City</b></p>  |   |                               |   |
|--|---|-------------------------------|---|
| Objective or Policy  | Measurable Target                                   | Objective or Policy Achieved? | Recommended Changes   |
| <p><b>Policy 2.6.2</b><br/>                     The City shall establish by 2003 a Green Building Program in order to encourage environmentally friendly and energy-efficient construction.</p>  | <p>Green Building Program adopted by ordinance.</p> | <p>Yes.</p>                   | <p>Revise to address greenhouse gas reduction, to state the City's commitment to energy efficiency, and to reflect the fact that the Green Building ordinance has been adopted.</p> |
| <p><b>Policy 3.1.1</b><br/>                     The City shall continue to plant at least 400 trees (or 650 inch-diameters at chest height) within City limits annually, and encourage developers and citizens to plant at least 600 trees annually. At least 75 percent of the trees should be native to north Florida.</p> |   | <p>Yes, and on-going.</p>     | <p>Consider increasing the number of trees to be planted annually.</p>  |

**Table 1**  
**Major Issues Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element**

**Issue 8: Strengthen Natural Resource Protection**

| Objective or Policy   | Measurable Target                  | Objective or Policy Achieved?  | Recommended Changes  |
|---|------------------------------------|--|--|
| <b>New Policies</b>   | To be developed                    |  | While the 2010 environmental update implemented some policies of the Conservation, Open Space & Groundwater Recharge Element, it also generated some new policy direction that should be incorporated into the Comprehensive Plan, including Alachua County strategic ecosystems, significant plant and wildlife habitat, significant uplands, listed plant and animal species, high aquifer recharge areas, and archaeological and geologic features. |
| <b>New Policies</b>   | To be developed                    |  | Add policies to address potential changes to water supply planning that will be determined in late 2010.   |
| <b>Policy 1.1.1.f.</b><br>Upland Areas: Developments within an area identified as Upland must submit an ecological inventory of the parcel. Based on the inventory, development may be allowed on up to the maximum of 75 percent of the parcel.  |                                    | The definition of upland is very narrow so that protection is very limited.  | Revise policy to provide more specific guidance for implementation.  |
| <b>Policy 1.1.2</b><br>The City shall use the environmentally significant properties inventory/ranking report to identify viable populations of native plant and animal species, environmentally significant areas, and unique geological or historic features that should be preserved, and show connectivity with other public lands and environmentally significant areas that should be maintained. |                                    | The inventory/ranking report is outdated, and has been superseded by the 2010 environmental update (in progress), which requires site-specific natural resource inventories. | After adoption of the 2010 environmental code update, revise this policy to reflect the LDC.   |
| <b>Policy 3.1.1</b><br>The City shall continue to plant at least 400 trees (or 650 inch-diameters at chest height) within City limits annually, and encourage developers and citizens to plant at least 600 trees annually. At least 75 percent of the trees should be native to north Florida.   |                                    | Yes, and on-going.   | Consider increasing the number of trees to be planted annually.  |
| <b>Policy 4.2.2</b><br>The City shall continue to explore projects for improving  | Water quality projects identified. | FDOT has addressed the problem at NW 34th Street via the   | Revise to address a wider range of potential pollutants (e.g., coliform bacteria, nitrogen,  |

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|--|--|---|---|
| <p>water quality, including the study of sedimentation problems, in the Hogtown Creek watershed with the goal of reducing sediment accumulation in the vicinity of NW 34th Street by 2010.</p> |  | <p>construction of sediment removal facilities put in to protect their bridges.</p> | <p>and phosphorus) that impair water quality. Expanded policy language will provide needed flexibility to pursue these other issues in consideration of the changing water management regulatory environment.</p> |
|--|--|---|---|



## **Conservation, Open Space & Groundwater Recharge Element Evaluation and Appraisal**

### **Element Assessment**

#### **Key Findings for the Conservation, Open Space & Groundwater Recharge Element**

- The City of Gainesville has substantially met the goals, objectives, and policies of the Conservation, Open Space & Groundwater Recharge Element.
- The Land Development Code (LDC) has incorporated protections for creeks, wetlands, lakes, wellfields, and groundwater recharge areas as prescribed by the Comprehensive Plan. However, wetland acreage and function have been lost within the city limits (see Shortcomings for further explanation, below).
- City staff has effectively coordinated with Alachua County and the water management districts to preserve and protect water quality and quantity, plant and animal habitat, and natural resources.

#### **Successes**

- Wetland, flood channel, and lake buffers have been adopted in the LDC and implemented in the development review process.
- The City is in the process of considering a major update to the LDC that implements Objective 2.4. Adoption of the ordinance is expected in 2010, and will result in increased protection for annexed Strategic Ecosystems, significant plant and wildlife habitat, significant uplands, listed plant and animal species, high aquifer recharge areas, and archaeological and geologic features. The LDC update will require some changes to the Comprehensive Plan, referred to throughout the EAR as the '2010 environmental update'.
- The City and private developers have succeeded in planting trees at a rate exceeding what is required by the comprehensive plan.
- The City has adopted a Green Building ordinance that incentivizes LEED-certified buildings for private development, and requires it for City-constructed buildings. To date, the City has begun planning or construction of five buildings that achieve at least LEED Silver certification.

#### **Shortcomings**

- While the City has provided protection to wetland areas and required mitigation for wetlands that have been impacted (lost), the definition and appropriate protection of significant upland areas is insufficient.
- Basin management plans have not been developed. Preparation of these plans is outside the scope of City staff, so staff will continue to rely on County and water

management district information. Should the City delete the requirement of developing basin management plans, wetland mitigation will continue to occur as it now does, within the listed mitigation basins.

- The goal of mitigating the loss of wetland function within the same basin has been met through implementation of the State of Florida's UMAM (Universal Mitigation Assessment Methodology) requirements. However, the basins extend outside the political boundaries of the City, and wetland acreage and function have been lost within city limits. Since April 2004, at least 21.5 acres of wetlands have been lost within the listed basins, and at least 9 acres of wetlands have been created, for an overall loss of 12.5 acres (\*). Losses of acreage within City limits are allowed by our comprehensive plan, but not within the listed basins (although it is allowed by UMAM). If the City wishes to reduce the area of wetland loss in the listed basins, then it may wish to adopt restrictions on impact and mitigation similar to those in Alachua County's Land Development Code, section 406.47. The County Code permits mitigation only if four criteria are met. The most restrictive criterion requires that development must not impact more than ½ acre of wetland for every 10 acres of wetland on the development site. Alternatively, the city may wish to delete the requirement for preservation of the existing level of wetland acreage in the listed basins. (\* One development project with wetland impacts is Gainesville Auto Town Center, which removed five acres of wetlands on site (within the Hogtown Creek basin) yet preserved approximately 25 acres of existing wetlands off site (within the Newnan's Lake basin). Another example is Gatorland Toyota, which removed approximately 11 acres of wetlands, created nearly 11 acres of wetlands on site, and preserved an 80-acre natural area (that includes approximately 54 acres of wetlands) adjacent to Newnan's Lake.)

### **Impact of Rule Changes on the Conservation, Open Space & Groundwater Recharge Element**

There are changes to Chapter 163 and the Strategic Regional Policy Plan (SRPP) that impact the Conservation, Open Space & Groundwater Recharge Element.

Changes to Chapter 163 F.S.:

- 163.3177(6)(d), adopted in 2002, requires the consideration of a regional water supply plan in the preparation of the Conservation, Open Space & Groundwater Recharge Element.
- 163.3191(2)(l), adopted in 2005: the Evaluation and Appraisal Report must determine whether the local government has been successful in identifying alternative water supply projects, including conservation and reuse, needed to meet projected demand. Also, the Report must identify the degree to which the local government has implemented its 10-year water supply workplan.
- 163.3177(6)(d) The Conservation, Open Space & Groundwater Recharge Element must include factors that affect energy conservation. Ch. 2008-191, LOF.

Changes to the SRPP:

The SRPP contains one updated policy that is applicable to the City of Gainesville Comprehensive Plan:

**Policy 4.2.9.** Ensure that local government comprehensive plans, DRIs, and requests for federal and state funds for development activities reviewed by the Council include adequate provisions for the protection of the Floridan aquifer, Areas of High Recharge Potential to the Floridan aquifer, the Ichetucknee Trace, as well as Stream-to-Sink Watersheds and Sinks which have been identified and mapped in the regional plan as Natural Resources of Regional Significance.

Updated Policy 4.2.9 has not been the basis for an objection by the Regional Planning Council to any Gainesville comprehensive plan amendments, but EAR assessment of pertinent comprehensive plan elements will include a determination as to whether updates are needed to the adopted Environmentally Significant Land and Resources (which include the Floridan Aquifer Recharge map) to be consistent with this policy of the NCF SRPP.

#### **Recommended Changes**

The following changes that are recommended for the Conservation, Open Space, and Groundwater Recharge element, and that are unrelated to Major Issues are:

- Update the Wetland Mitigation Basins map to reflect a new basin that has been annexed (Policy 1.1.1(b)(5)).
- Throughout the element, use consistent terminology for general references to targeted resources. The recommended terminology is “significant plant and wildlife habitat” to replace such terms as “environmentally significant resources” and “significant natural communities”. This affects Policies 2.4.1, 2.4.2, 2.4.4, 2.4.7, 2.4.9, 2.4.11, and 2.4.12.
- Revise Policy 1.1.1(b)(2) to reflect statutory changes to the use of mitigation ratios.
- Delete Policy 1.1.3, which is made obsolete by the adoption of the 2010 environmental update.
- Delete Policy 1.1.5 (requires basin management plans) which cannot be met with the City’s current staff resources.
- Objective 2.1 (requires wetland acreage and function to be maintained in the listed basins) should be either be revised so that the acreage requirement can be met, or it should be revised by deleting the wetland acreage requirement. The City Plan Board at its May 12, 2010 EAR workshop expressed concern over wetland losses and recommended that this objective be revised so that the wetland acreage requirement can be met.
- Revise Policy 2.1.1 to show that the City does not have its own wetlands inventory, but uses inventories from outside agencies.
- Remove the words “and the Central City District” from Policy 2.2.1.

- Policy 2.2.2 re: impervious parking surface area needs minor revision.
- Policy 2.2.4 needs minor revision to better reflect how the Alachua County Hazardous Materials Management Code and the Alachua County Murphree Wellfield Protection Code are implemented.
- In Policy 2.2.5, delete sub-policies (b) and (f) since they have not been adopted in the LDC, and are intended only as supplemental to existing water management district policies.
- Revise Objective 2.3 to clarify language and reflect policy changes.
- Revise Policy 2.3.4 to address water conservation policies without requiring a water conservation 'plan.'
- Revise Policy 2.3.5 to refer to Alachua County's map of prime groundwater recharge areas.
- Delete Policy 2.3.6; it is obsolete if 2.3.5 is completed.
- Revise Policy 2.4.1 to clarify language and to state that regulations apply whether or not a resource is mapped.
- Remove the words 'environmentally significant' from Policy 2.4.6 to indicate protection for all wetlands, lakes, and regulated creeks.
- Revise date in Objective 2.5.
- Revise Policy 2.5.1 to reflect that the recommended regulations have been adopted, and that the adopted policy should be retained.
- Revise Policy 2.6.2 to reflect that the Green Building ordinance has been adopted.
- Update Objective 3.1 to show that a new tree inventory was completed in 2005. on advice from the City Arborist, change policy to require that the total percentage of tree canopy be within 5 percent of the baseline.
- In Policy 3.1.1, consider increasing the annual number of trees to be planted.
- Remove "that are not subject to development plan approval" from Policy 3.1.3.
- Review Policy 3.1.4 after adoption of the updates to the landscaping code, which are currently under consideration and expected to be adopted in 2010.
- Remove Policy 3.1.6; it is redundant.
- Update Policy 3.1.7 to state the City's commitment to protection for all trees and special protection for heritage and champion trees.
- Delete Objective 4.1 and Policy 4.1.1; they are redundant with the on-going work of City and County environmental programs.
- Update dates in Policy 4.2.1, and revise to show that the NPDES permit needs to be periodically updated.
- Revise Policy 4.2.4 to provide continuing support for Depot Park and other Sweetwater Branch stormwater projects.

**Table 2  
Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element**

| Objective or Policy   | Measurable Target   | Objective or Policy Achieved? | Recommended Changes |
|---|---|-------------------------------|---------------------|
| <p><b>Objective 1.1</b><br/>Upon adoption of this Plan, the City shall protect all significant environmentally lands and resources identified in the Environmentally Significant Land and Resources map series within the Future Land Use Map Series. The City shall continue to identify environmentally significant open space and recreation sites for acquisition.</p>  | <p>Implementation of Policies 1.1.1 and 1.1.2.</p>                            |                               | <p>None.</p>        |
| <p><b>Policy 1.1.1</b><br/>At a minimum the following standards and guidelines shall be used to protect environmentally sensitive resources identified in the Environmentally Significant Land and Resources map series within the Future Land Use Map Series. The City shall develop and adopt land development regulations that establish criteria for expansion of the minimum standards addressed below.</p>  | <p>Adopt Land Development Regulations to implement the subpolicies below.</p> |                               | <p>None.</p>        |
| <p>a. Creeks: Between 35 and 150 feet from the break in slope at the top of the bank, there is a rebuttable presumption that development is detrimental to the regulated creek. Development must conform to applicable provisions of the land development regulations which prohibit development within a minimum of 35 feet of the break in slope at the top of the bank of any regulated creek</p>  |   | <p>Yes</p>                    | <p>None.</p>        |
| <p>b. Wetlands: Developments containing wetlands must avoid loss of function or degradation of wetland habitat and/or wetland hydrology as the highest priority. Degradation or loss of function that is unavoidable shall be minimized, and the applicant must demonstrate that the project is clearly in the public interest, with final administrative approval by the city commission on appeal, if necessary. The City shall develop and implement land development regulations that at a minimum:</p> |   | <p>Yes</p>                    | <p>None.</p>        |
| <p>1. Establish criteria that are at least consistent with the relevant criteria of Section 373.414(1), F.S. for determining whether the project is clearly in the public interest.</p>   |   | <p>Yes<br/>30-302.1(e)(1)</p> | <p>None.</p>        |

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**Table 2  
Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element**

| Objective or Policy  | Measurable Target | Objective or Policy Achieved?   | Recommended Changes        |
|--|-------------------|---|----------------------------|
| <p>2. Establish mitigation ratios for wetland preservation, enhancement, restoration and creation. The mitigation ratios shall be at least 5:1 (acreage of mitigation area to impacted area) for impacts to natural wetlands or wetlands created as part of a mitigation project; and shall be at least 1:1 for impacts to created wetlands (e.g., livestock watering ponds, borrow pits, drainage ditches, etc.) that were not created as part of a mitigation project. Should there be irreconcilable differences between the mitigation required by the City and that required by the state (water management district or FDEP), then the mitigation requirements of the state will prevail where there are irreconcilable differences.</p> |                   | <p>Mitigation ratios have been made obsolete by state law (F.S. 62-345).</p>  | <p>Revise per statute.</p> |
| <p>3. Wetland creation is presumed to be the least desirable mitigation strategy.</p>  |                   | <p>Yes. Land development regulations reflect the City's priorities as preservation of wetlands first; restoration, enhancement, and improvement second; and mitigation third.</p> | <p>None.</p>               |
| <p>4. Establish bonding, long-term monitoring and enforceable long-term maintenance requirements for wetland mitigation projects to ensure that all the negative impacts have been mitigated. Monitoring should be reviewed by the Alachua County Environmental Protection Department, the appropriate water management district, the University of Florida, or other appropriate monitoring agency or reviewing entity, with regulatory fees paid by the permitted applicant. The mitigation plan must be approved prior to the initiation of the project.</p>  |                   | <p>Yes. Monitoring is reviewed by the St. Johns River Water Management District.</p>  | <p>None.</p>               |

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Table 2

Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element

| Objective or Policy  | Measurable Target | Objective or Policy Achieved? | Recommended Changes  |
|--|-------------------|-------------------------------|--|
| <p>5. Require off-site mitigation to be performed within the same sub-basin and basin (the basins are depicted on the map entitled Wetland Mitigation Basins that is on file with the Community Development Department and is in the Data &amp; Analysis section of this comprehensive plan element) in which the impact occurred, unless it is shown that mitigation outside the sub-basin is more appropriate. The order of preference for the location of the mitigated area(s) in relation to the impacted areas will be established in the land development regulations (LDRs).</p> |                   | <p>Yes, on-going.</p>         | <p>Update map and LDC to reflect new basin that has been annexed. Projects with larger wetland impacts tend to mitigate these impacts outside the city limits, resulting in a loss of wetland acreage and function within the city limits. If the City wishes to maintain wetland acreage and function within the city limits, it may wish to consider restrictions on the location of mitigation.</p> |
| <p>6. Require that development shall not cause hydrological or wetland impacts off-site;</p>   |                   | <p>Yes, on-going.</p>         | <p>None.</p>   |
| <p>7. A minimum buffer distance of 35 ft. and an average buffer distance of 50 feet shall be required between the landward extent of any wetland or surface water and the developed area. Larger buffers may be warranted. The criteria for buffer expansion will be developed in the land development regulations;</p>  |                   | <p>Yes, on-going.</p>         | <p>None.</p>   |
| <p>8. Specify that the protections for wetlands shall be extended to all wetlands delineated in accordance with Section 62-340, F.A.C., regardless of whether they are currently mapped by the City of Gainesville;</p>  |                   | <p>Yes</p>                    | <p>None.</p>   |
| <p>9. Require review and approval of wetland mitigation projects by qualified professionals.</p>   |                   | <p>Yes</p>                    | <p>None.</p>   |
| <p>10. Outstanding Florida Waters, as listed in Section 62-302.700, F.A.C., shall have a minimum buffer of 200 feet. The City shall develop and implement land development regulations that establish appropriate setbacks for wetlands containing listed plant or animal species. Where these distance requirements preclude all economic development of a parcel, exceptions can be made upon approval by a majority of the city commission and with appropriate mitigation of wetland loss</p>  |                   | <p>Yes</p>                    | <p>None.</p>   |

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**Table 2  
Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element**

| Objective or Policy   | Measurable Target | Objective or Policy Achieved?                              | Recommended Changes  |
|---|-------------------|--|--|
| <p>11. Wetlands damaged on or subsequent to the effective date of this policy shall either be restored to their original function and condition prior to such damage, at the owner's expense or mitigated for, pursuant to the mitigation requirements of this comprehensive plan element.</p>  |                   | Yes  | None.  |
| <p>c. Lakes: Developments containing or adjacent to a natural lake (or lakes) must not adversely impact the condition of the lake. Dredge and fill shall be prohibited. Development shall be prohibited within 75 feet of the landward extent of a lake.</p>  |                   | Yes  | None.  |
| <p>d. Wellfields: Development must be consistent with Policies 2.3.2 and 2.3.3 of this Element.</p>   |                   |  | None, update policy numbers if needed.   |
| <p>e. Major Natural Groundwater Recharge Areas: Development within this area must be consistent with Policies 2.3.3 and 2.3.5 of this Element.</p>  |                   |  | None, update policy numbers if needed.   |
| <p>f. Upland Areas: Developments within an area identified as Upland must submit an ecological inventory of the parcel. Based on the inventory, development may be allowed on up to the maximum of 75 percent of the parcel.</p>  |                   | See Table 1, Major Issue 8                                 |  |
| <p><b>Policy 1.1.2</b><br/>The City shall use the environmentally significant properties inventory/ranking report to identify viable populations of native plant and animal species, environmentally significant areas, and unique geological or historic features that should be preserved, and show connectivity with other public lands and environmentally significant areas that should be maintained.</p> |                   | See Table 1, Major Issue 8                                 | 091043B  |
| <p><b>Policy 1.1.3</b><br/>The City shall keep in force land development regulations that require new developments to dedicate land and easements, within federal constitutional guidelines, particularly for the creation of buffers along and around surface waters and natural reservations and to facilitate the development of greenways and other open space.</p>   |                   | Yes. Provisions for this are in the subdivision ordinance. | Delete policy. Need for policy obviated by the 2010 environmental code update. |



**Table 2  
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| Objective or Policy   | Measurable Target   | Objective or Policy Achieved?  | Recommended Changes   |
|---|---|--|---|
| <p><b>Policy 1.1.4</b><br/>The City shall allocate a minimum of \$300,000 per year for the purchase and/or management of environmentally significant open space and of active and passive recreation sites.</p>   | <p>The City's budget reflects minimum allocation.</p>             | <p>Yes.</p>  | <p>None.</p>  |
| <p><b>Policy 1.1.5</b><br/>The City shall work with local, regional and state environmental agencies (including Alachua County and the St. Johns and Suwannee River Water Management Districts) to develop basin management plans, which shall identify wetlands of special concern, disturbed wetlands, and appropriate sites for mitigation. The plans shall also consider those factors affecting the structure and functions of wetlands.</p> | <p>Basin management plans are not adopted.</p>                    | <p>Basin management plans are outside the scope of the City's current environmental staff.</p> | <p>The city may wish to delete this requirement. Deleting this requirement will mean that wetland mitigation will occur project by project, as it does now, within one of the listed mitigation basins.</p> |
| <p><b>Objective 1.2</b> The City shall coordinate with Alachua County on the Alachua County Forever program, and with other potential funding sources for land acquisition for environmental and open space protection.</p>   | <p>A relationship with Alachua County Forever is established.</p> | <p>Yes, on-going.</p>  | <p>None.</p>  |
| <p><b>Policy 1.2.1</b><br/>The City shall seek to maximize the protection of environmentally sensitive lands through the nomination of properties for acquisition with Alachua County Forever and other relevant funds.</p>   | <p>Environmentally valuable lands have been nominated.</p>        | <p>Yes, on-going.</p>  | <p>None.</p>  |

Table 2

Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element

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| Objective or Policy   | Measurable Target  | Objective or Policy Achieved?  | Recommended Changes   |
|---|--|--|---|
| <p><b>Objective 2.1</b> Upon adoption of this Plan, existing levels of wetland acreage and functions within the listed basins (shown on the map entitled Wetland Mitigation Basins that is on file with the Community Development Department and is in the Data &amp; Analysis section of this comprehensive plan element) shall be maintained to the extent feasible through the year 2010.</p>  | <p>2010 levels of wetland acreage are comparable to levels present at the time of plan adoption.</p> | <p>This objective has not been achieved. Wetland acreage has been lost within the listed basins. Since April 2004, at least 21.5 acres of wetlands have been lost within City limits, and at least 9 acres of wetlands have been created, for an overall loss of 12.5 acres. However, the State of Florida's UMAM (Universal Mitigation Assessment Methodology) requirements for wetland mitigation have been met.</p> | <p>If the City wishes to reduce the area of wetland loss in the listed basins, then it may wish to adopt restrictions on impact and mitigation similar to those in Alachua County's Land Development Code, section 406.47. This code permits mitigation only if four criteria are met. The most restrictive criterion requires that development must not impact more than 1/2 acre of wetland for every 10 acres of wetland on the development site.<br/>Alternatively, the city may wish to delete the requirement for preservation of the existing level of wetland acreage in the listed basins. The City Plan Board at its May 12, 2010 EAR workshop expressed concern over wetland losses and recommended that this objective be revised so that the wetland acreage requirement can be met.</p> |
| <p><b>Policy 2.1.1</b><br/>The City shall continue to update, augment and maintain an inventory of wetlands, and adopt land development regulations designed to conserve wetland acreage and preserve natural functions within the listed basins (shown on the map entitled Wetland Mitigation Basins that is on file with the Community Development Department and is in the Data &amp; Analysis section of this comprehensive plan element). When wetlands are unavoidably lost to development, mandatory mitigation shall be required to ensure no net loss of acreage and functions occurs. Mitigation location protocol shall follow Policy 1.1.1 b.5.</p> | <p>On-going maintenance of inventory.</p>  | <p>The City does not have its own wetlands inventory, but uses wetlands information from outside agencies and provides information to keep these inventories up to date. Development activity has resulted in a net loss of wetland acreage. See above comments on Objective 2.1.</p>  | <p>Revise to reflect the fact that the City does not have its own wetlands inventory.</p>   |

**Table 2  
Evaluation Matrix -- Conservation, Open Space & Groundwater Recharge Element**

| Objective or Policy   | Measurable Target   | Objective or Policy Achieved?  | Recommended Changes   |
|---|---|--|---|
| <p><b>Policy 2.1.2</b><br/>Each basin management plan shall include, if technically and scientifically justifiable, the creation of one or more local mitigation banks or offsite regional mitigation areas in accordance with Section 373.4135, F.S.</p>   | <p>Completed basin management plan.</p>                                 | <p>No.</p>   | <p>See Policy 1.1.1(b)(5)</p>   |
| <p><b>Objective 2.2</b> The City shall improve the quality of stormwater entering City lakes and creeks by requiring development and redevelopment to meet the adopted water quality standards of this Element and the Stormwater Management Element.</p>   | <p>Implementation of policies 2.2.1 through 2.2.6 below.</p>            | <p>See below.</p>  | <p>None.</p>  |
| <p><b>Policy 2.2.1</b><br/>The City shall continue to require stormwater quality treatment facilities for redevelopment of non-residential sites and the Central City District, particularly within stream-to-sink basins.</p>  | <p>Adopted regulations</p>  | <p>Yes, adopted regulations apply to all non-residential development but do not specify the Central City District.</p>   | <p>Delete reference to Central City District.</p>   |
| <p><b>Policy 2.2.2</b><br/>The City shall adopt land development regulations that reduce the amount of impervious parking surface allowed within any environmentally significant area, as compared to impervious allowances outside these areas.</p>  | <p>Adopted regulations</p>  | <p>Yes.</p>  | <p>Revise to reflect that such land development regulations are adopted and in effect.</p>                                  |
| <p><b>Policy 2.2.3</b><br/>The City shall continue to have land development regulations that meet or exceed best management practices for stormwater management.</p>  | <p>Adopted regulations</p>  | <p>Yes, on-going</p>   | <p>None.</p>  |
| <p><b>Policy 2.2.4</b><br/>The City shall adopt land development regulations that require the handling of hazardous materials in such a way as to prevent degradation of the natural environment. At a minimum, this shall be achieved by complying with the Alachua County Hazardous Materials Management Code and the Alachua County Murphree Wellfield Protection Code, which:</p> | <p>Adopted regulations (sub-policies simply summarize County code).</p> | <p>The City does not have its own hazardous materials regulations, but complies with the County's code. However, the City's land development code requires a wellfield protection permit or a wellfield special use permit for new or existing development within the Murphree Wellfield Protection Zones that will intensify, expand or modify a use directly associated with the storage of hazardous materials.</p> | <p>This policy needs to be revised to better reflect how these County Codes are addressed.</p> <p align="right">091043B</p> |
| <p>a. Prohibit certain new, hazardous materials facilities and underground storage tank systems from siting within the unconfined zone of the Floridan aquifer;</p>   |   |  |   |

Table 2

Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element

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| Objective or Policy  | Measurable Target  | Objective or Policy Achieved?   | Recommended Changes   |
|--|--|---|---|
| <p>b. Prohibit new, hazardous materials facilities from siting within the primary and secondary wellfield protection zones of the Murphree wellfield, and establish requirements for siting of hazardous materials facilities within the tertiary protection zones of the Murphree wellfield. Within the secondary zone, vehicular fuel storage subject to Florida Statutes 376.317 may be allowed.</p>  |  |   |   |
| <p>c. Require new, Class C and D hazardous materials facilities as identified in the Alachua County Hazardous Materials Management Code to maintain large setbacks from surface waters, wells, and floodplains; and require stringent hazardous materials storage and containment designs, periodic monitoring, inspections, a management plan, fees, and penalties for non-compliance.</p>  |  |   |   |
| <p><b>Policy 2.2.5</b><br/>The City shall continue to have land development regulations that supplement the standards of the applicable Water Management District to promote the natural cleansing of water in creeks. Such standards include:<br/>a. Limiting creek dredging;<br/>b. Prohibiting channelization;<br/>c. Requiring sedimentation controls during and after construction;<br/>d. Protecting creek banks and vegetation;<br/>e. Requiring treatment of the first "one inch" of runoff;<br/>f. Restoring previously channelized creeks identified for restoration by the City, when feasible.</p> |  | <p>Items b. and f. have not been adopted in the City's LDRs. However, these items are intended as supplemental to Water Management District requirements, so water quality is not affected.</p> | <p>Delete sub-policies b. and f.</p>                            |
| <p><b>Policy 2.2.6</b><br/>The City shall maintain an inventory of altered creek segments suitable for restoration to a more natural condition.</p>  | <p>Completed inventory</p>                                   | <p>The City maintains an inventory of all waterways, both natural and altered. Altered segments may be considered for restoration as funding is available.</p>                                  | <p>None.</p>  |
| <p><b>Objective 2.3</b> The City shall only permit activities that maintain drinking water resources to meet the demands of population projected for the year 2010.</p>  | <p>Implementation of Policies 2.3.1 through 2.3.8 below.</p> |   | <p>Revise to clarify language and summarize policies below.</p> |

Table 2

Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element

| Objective or Policy  | Measurable Target   | Objective or Policy Achieved?   | Recommended Changes                                    |
|--|---|---|--|
| <p><b>Policy 2.3.1</b><br/>The City shall continue to cooperate with the Alachua County Environmental Protection Department, the Florida Department of Environmental Protection (FDEP), the Water Management Districts, and the Environmental Protection Agency (EPA) and shall support the appropriate agencies with efforts to accomplish the following:</p> <ul style="list-style-type: none"> <li>a. Identify areas of pollution to surface waters and groundwater;</li> <li>b. Establish a monitoring program that provides an annual report describing present environmental conditions and cleanup status;</li> <li>c. Identify parties responsible for polluted areas, and require such parties to mitigate pollution problems.</li> </ul> | <p>Relationships with County and other governmental entities are established.</p>                           | <p>Yes, the City is part of the Clean Water Partnership that includes the City (both GRU and general government), Alachua County and FDOT which is dedicated to working with the Gainesville community for healthy waterways.</p> | <p>None.</p>   |
| <p><b>Policy 2.3.2</b><br/>The City shall allow land uses and facility design within wellfield protection zones (and other "community water system" cones of influence as defined by Fla. Administrative Code Chapter 62.550.200 (Drinking Water Standards, Monitoring, and Reporting, Definitions for Public Water Systems) and Chapter 9J-5.003(27) (Definitions, "cone of influence") and identified in the Environmentally Significant Land and Resources map series within the Future Land Use Map Series, that are in compliance with the Murphree Wellfield Protection Code.</p>  | <p>Regulations adopted to address development within the Murphree Wellfield Protection Code.</p>            | <p>Yes</p>  | <p>None.</p>   |
| <p><b>Policy 2.3.3</b><br/>The City shall only allow new development in commercial, institutional, and industrial districts to place septic tanks:</p> <ul style="list-style-type: none"> <li>a. In compliance with Division 3., Wellfield Protection Special Use Permit of the City's Land Development Code, and if the development is in compliance with the Alachua County Hazardous Materials Management Code.</li> <li>b. In areas not shown as regulated creek, lake, and wetland areas identified in the Environmentally Significant Land and Resources map series of the Future Land Use Map Series.</li> </ul>  | <p>Relationships established with identified agencies.<br/>Programs initiated to address items a and b.</p> | <ul style="list-style-type: none"> <li>a. Yes.</li> <li>b. Yes. New septic tanks have to be at least 150 feet from wetlands, creeks, or lakes.</li> </ul>   | <p>None.</p> <p style="text-align: right;">091043B</p> |

Table 2

Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element

| Objective or Policy   | Measurable Target   | Objective or Policy Achieved?  | Recommended Changes   |
|---|---|--|---|
| <p><b>Policy 2.3.4</b><br/>The City shall continue to have a water conservation plan consistent with the Water Management Districts' plans (Sec. 373.175 &amp; 373.246, F.S., and Chap. 40C-21, F.A.C.). The plan shall include strategies to deal with emergency conditions, implement public education campaigns regarding the nature of groundwater resources and the need to protect and conserve them, provide a public information program on water reuse systems, and develop potable water rate structures to encourage water conservation.</p> | <p>Water conservation plan adopted.</p>   | <p>GRU does not have a formalized water conservation plan document, but has several conservation programs. These include public education, inverted block conservation rates, and rebates for irrigation audits &amp; rain sensor replacements. Also, GRU is actively expanding the water reuse distribution system, does public outreach for reuse at various events, and has a water reuse brochure.</p> | <p>Revise to address water conservation activities without requiring a 'plan.'</p>  |
| <p><b>Policy 2.3.5</b><br/>Pursuant to Section 373.0395, F.S., Water Management Districts are to map "prime" groundwater recharge areas within the County. Should such areas be identified within City limits, the areas will be mapped and included in the adopted comprehensive plan, and City land development regulations shall be amended to protect such areas if they are not already protected by existing regulations and programs.</p>  | <p>Adopted map and regulations that reflect groundwater recharge areas, when available from water management districts.</p> | <p>This map only became available in 2009.</p>   | <p>Revise to refer to Alachua County's map of prime groundwater recharge areas.</p> |
| <p><b>Policy 2.3.6</b><br/>Until such time as prime recharge areas are mapped, the City shall use the Floridan Aquifer recharge maps prepared by the St. Johns River Water Management District and the Suwannee River Water Management District (see Environmentally Significant Land and Resources map series within the Future Land Use Map Series). City land development regulations shall be amended to protect such areas if existing regulations and programs do not already protect them.</p>   |   | <p>Yes.</p>  | <p>Delete. Obsolete if 2.3.5 is completed.</p>                                      |
| <p><b>Policy 2.3.7</b><br/>Final development orders shall require compliance with septic tank rules (Chapter 64E-6, F.A.C.).</p>  |   | <p>Yes, on-going.</p>  | <p>None.</p>  |
| <p><b>Policy 2.3.8</b><br/>The City shall inform the public of the requirements of Section 373.62, Florida Statutes, regarding automatic lawn sprinkler systems.</p>  | <p>Public information campaign underway.</p>  | <p>The City Commission recently adopted a resolution allowing Alachua County to enforce the SJRWMD watering restriction within the City limits.</p>  | <p>None.</p>  |

0910438

**Table 2  
Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element**

| <b>Objective or Policy</b>  | <b>Measurable Target</b>                                | <b>Objective or Policy Achieved?</b>  | <b>Recommended Changes</b>                            |
|---|---|---|---|
| <p><b>Objective 2.4</b> The City shall amend its land development regulations as necessary to conserve environmentally significant surface waters; major natural groundwater recharge areas; threatened or endangered or listed (or candidates for being listed) plants, animals and habitats; and prevent the spread of invasive vegetation. The adopted regulations shall be designed to maintain viable populations of these existing plant and animal species and allow development activities which are compatible with identified environmentally significant lands and resources. (See Environmentally Significant Land and Resources map series within the Future Land Use Map Series.)</p> | <p>Implementation of Policies 2.4.1 through 2.4.12.</p> | <p>Yes. Met by a combination of adopted regulations and additional regulations (2010 environmental update, landscape plan update) now under consideration.</p>                  | <p>None.</p>  |
| <p><b>Policy 2.4.1</b><br/>The City shall maintain an updated inventory of identified environmentally significant resources identified in the Environmentally Significant Land and Resources map series within the Future Land Use Map Series. If additional resources are identified, these properties shall be subject to regulations keyed to the resource present at the site. The Future Land Use Map Series shall be amended to include these properties.</p>   |   | <p>Yes, on-going.</p>   | <p>Revise to clarify language.</p>                    |
| <p><b>Policy 2.4.2</b><br/>The City shall adopt land development regulations that protect identified threatened or endangered or listed (or candidates for being listed) plants, animals or habitats. These regulations shall require developments of parcels within the environmentally significant areas to submit an ecological inventory of the parcel.</p>   |   | <p>Yes, on-going. Sec. 30-309 (Significant ecological communities district) was adopted in 2004, and will be replaced once the 2010 environmental code update is completed.</p> | <p>Revise language to use consistent terminology.</p> |
| <p><b>Policy 2.4.3</b><br/>The City shall continue to have guidelines for the design of stormwater basins that require the use of native vegetation and basin slopes suitable for stormwater treatment that promote highly diverse plant and animal habitats, particularly within stream-to-sink basins, and that enhance the hydrological and ecological functions of related wetland areas.</p>   |   | <p>Yes, on-going.</p>   | <p>None.</p>  |

0910408

Table 2

Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element

| Objective or Policy   | Measurable Target | Objective or Policy Achieved?   | Recommended Changes   |
|---|-------------------|---|---|
| <p><b>Policy 2.4.4</b><br/>Future road alignments shall minimize their impact on environmentally significant animal habitats.</p>   |                   | Yes, on-going   | Revise language from “environmentally significant animal habitats” to “significant plant and wildlife habitat”.                     |
| <p><b>Policy 2.4.5</b><br/>The City shall continue to require construction design consistent with existing terrain by discouraging contouring, cut and fill, or other practices where they might be shown to cause soil erosion.</p>  |                   | Yes, on-going.  | None.   |
| <p><b>Policy 2.4.6</b><br/>The City shall continue to have land development regulations for environmentally significant wetlands, lakes and regulated creeks that require:<br/>a. Setbacks from regulated creeks, lakes and wetlands;<br/>b. Prohibition of development that would cause erosion and sediment pollution to regulated creeks, lakes and wetlands;<br/>c. No net increase in the rate of runoff from development sites adjacent to regulated creeks, lakes and wetlands;<br/>d. Retention or detention of the first inch of runoff of developments adjacent to regulated creeks, lakes and wetlands, through on-site filtration;<br/>e. Retention of vegetation integral to the ecological value of regulated creeks, lakes and wetlands;<br/>f. Compliance with the City’s adopted criteria for controlling sediment and erosion;<br/>g. Allowance of a transfer of development intensity and density from lower to higher elevations of a site; and<br/>h. Prohibition on the installation of all septic tanks.</p> |                   | Yes, items a through h are implemented in the LDC.  | Revise language to remove ‘environmentally significant’ so as to indicate protection for all wetlands, lakes, and regulated creeks. |
| <p><b>Policy 2.4.7</b><br/>The City shall periodically conduct an inventory of environmentally significant plants, animals, and habitats within at least two city-owned parks or open space parcels; prepare a list of plants, animals, and habitats to protect; and prepare a plan for the maintenance of viable populations of these plants and animals.</p>  |                   | Yes, on-going. This function is provided by the Natural Resources Management division of the Parks and Recreation Department. | None.   |

091043B



Table 2

Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element

091043B

| Objective or Policy  | Measurable Target | Objective or Policy Achieved? | Recommended Changes  |
|--|-------------------|-------------------------------|--|
| <p><b>Policy 2.4.8</b><br/>Chemical control efforts by the City to manage pest species shall only include use of chemicals that are safe for wildlife and public health. Chemical control will be used only when non-chemical controls do not abate the pest problem.</p>  |                   | Yes, on-going.                | None.  |
| <p><b>Policy 2.4.9</b><br/>The City shall coordinate with Alachua County, FDEP and the Water Management Districts to conserve environmentally significant plant communities by submitting relevant land development proposals for review to the Alachua County Environmental Protection Department, the applicable Water Management District, and FDEP for comment and recommendation.</p>   |                   | Yes, on-going.                | Revise to refer to "significant plant and wildlife habitat". The proposed environmental ordinance uses this terminology, as does the County. |
| <p><b>Policy 2.4.10</b><br/>The City shall protect floodplains through existing land development regulations that at a minimum:<br/>                     a. Prohibit development within the flood channel or floodplain without a City permit;<br/>                     b. Prohibit filling in the flood channel by junk, trash, garbage, or offal;<br/>                     c. Prohibit permanent structures in the flood channel, except for those necessary for flood control, streets, bridges, sanitary sewer lift stations, and utility lines;<br/>                     d. Prohibit the storage of buoyant, flammable, explosive, toxic or otherwise potentially harmful materials in the flood channel;<br/>                     e. Prohibit development within the floodplain that would reduce the capacity of the floodplain;<br/>                     f. Prohibit development that would cause or create harmful soil erosion, stagnant water, and irreversible harmful impacts on existing flora and fauna;<br/>                     g. Limit flood channel uses to agriculture, recreation, lawns, gardens, and parking areas; and<br/>                     h. Limit floodplain uses to launching areas for boats and structures at least one foot above the 100-year flood elevation, in addition to those allowed in the flood channel.</p> |                   | Yes, on-going.                | None.  |

**Table 2  
Evaluation Matrix -- Conservation, Open Space & Groundwater Recharge Element**

| Objective or Policy   | Measurable Target                                     | Objective or Policy Achieved? | Recommended Changes   |
|---|---|-------------------------------|---|
| <p><b>Policy 2.4.11</b><br/>The City's land development regulations shall protect environmentally significant lands and resources by:</p> <ul style="list-style-type: none"> <li>a. Controlling permissible uses through regulatory overlay districts;</li> <li>b. Providing opportunities for alternative and innovative site development;</li> <li>c. Providing setback and parking standards;</li> <li>d. Providing mandatory mitigation to ensure no net loss of acreage and functions when wetlands are unavoidably lost;</li> <li>e. Allowing for, or requiring the clustering of development away from environmentally significant resources; and</li> <li>f. Restricting on-site waste disposal systems.</li> </ul> |   | Yes, on-going.                | Revise to refer to "significant plant and wildlife habitat". Such revision will provide clear, standardized terminology for targeted resources. |
| <p><b>Policy 2.4.12</b><br/>At a minimum, conservation strategies for significant natural communities shall include:</p> <ul style="list-style-type: none"> <li>a. Required conservation of native upland natural communities;</li> <li>b. Installation of native vegetation landscaping and removal of invasive trees and shrubs; and</li> <li>c. Setbacks.</li> </ul>   |   | Yes, on-going.                | Revise to refer to "significant plant and wildlife habitat". Such revision will provide clear, standardized terminology for targeted resources. |
| <p><b>Objective 2.5</b> The City shall continue existing programs and institute new programs as necessary to maintain air quality levels which comply with county, state and national ambient air quality standards through the year 2010.</p>  | Implementation of Policies 2.5.1 through 2.5.2 below. | Yes.                          | Revise date.  |
| <p><b>Policy 2.5.1</b><br/>Adopt citywide regulations restricting or prohibiting the burning of plastics, particularly with regard to local government, institutional, or commercial incineration.</p>  | Regulations adopted.                                  | Yes, on-going.                | Revise to reflect that this is adopted policy, and that the revised policy should be retained.  |
| <p><b>Policy 2.5.2</b><br/>The City shall encourage transportation choice by adopting new programs and strategies as may be needed to encourage public transit use, bicycling, walking, and higher urban development densities near neighborhood centers.</p>   | Regulations adopted.                                  | Yes, on-going.                | None  |

0910488

**Table 2  
Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element**

| Objective or Policy   | Measurable Target                                   | Objective or Policy Achieved?            | Recommended Changes  |
|---|---|--|--|
| <p><b>Objective 2.6</b> The City shall continue to promote and practice natural resource conservation and pollution prevention in order to reduce negative impacts on the environment. To accomplish this, the City shall continue to incorporate natural resource-saving and pollution prevention policies in this Element and other elements of the Comprehensive Plan (such as Solid Waste, Future Land Use, and Transportation Mobility).</p> |   | <p>See <i>Table 1, Major Issue 2</i></p> |  |
| <p><b>Policy 2.6.1</b><br/>The City shall continue to provide customers with education and incentive programs to encourage natural resource conservation and pollution prevention.</p>  | <p>Education and incentive programs in place.</p>   | <p>Yes, on-going</p>                     | <p>None</p>  |
| <p><b>Policy 2.6.2</b><br/>The City shall establish by 2003 a Green Building Program in order to encourage environmentally friendly and energy-efficient construction.</p>  | <p>Green Building Program adopted by ordinance.</p> | <p>See <i>Table 1, Major Issue 2</i></p> |  |
| <p><b>Objective 3.1</b> The total percentage of tree canopy coverage within the City shall not fall below the 1994 percentage of tree canopy, as estimated by the City Manager or designee, except in the event of natural catastrophe.</p>   |   | <p>Yes, on-going.</p>                    | <p>Update to reflect new tree canopy inventory completed in 2005.<br/>Revise to require total percentage to be within 5 percent of baseline.</p> |
| <p><b>Policy 3.1.1</b><br/>The City shall continue to plant at least 400 trees (or 650 inch-diameters at chest height) within City limits annually, and encourage developers and citizens to plant at least 600 trees annually. At least 75 percent of the trees should be native to north Florida.</p>   |   | <p>See <i>Table 1, Major Issue 8</i></p> |  |

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**Table 2  
Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element**

| <b>Objective or Policy</b>   | <b>Measurable Target</b><br>Implementation of the following sub-policies: | <b>Objective or Policy Achieved?</b>   | <b>Recommended Changes</b>  |
|--|---|--|---|
| <p><b>Policy 3.1.2</b><br/>The City shall adopt land development regulations for new development that require the following:<br/>a. Use of native and drought-tolerant plants (“xeriscape”) and a reduction in allowable turf area;<br/>b. Energy conservation through tree and shrub canopy requirements in the Land Development Code that result in shade for buildings and pavement;<br/>c. Species diversity in new plantings (no more than 50 percent of any one genus on any site plan except those within airport flight paths, or except for street tree plantings, which, on a given street should be uniform with respect to genus, size and shape; however, street tree diversity is to be attained citywide, even though it may not be attained on an individual street) to reduce the effect of loss of a tree species due to insect or disease outbreaks; and<br/>d. A plan for the removal of invasive trees and shrubs shall be submitted at the time of final development review.</p> |   | Yes.   | None.   |
| <p><b>Policy 3.1.3</b><br/>The City shall continue to require that removal of regulated trees that are not subject to development plan approval shall be mitigated by on or off-site tree planting (or an equivalent exaction of fees).</p>  | Adopted regulation  | Yes  | Revise to remove ‘that are not subject to development plan approval’.   |
| <p><b>Policy 3.1.4</b><br/>By 2003, the City shall prepare tree-lined streetscape guidelines which require the preservation and establishment of tree-lined streets and compatibility with existing infrastructure. In order to promote compatibility with infrastructure, strategies such as placing overhead utilities underground, using aerial (or tree) cabling, planting trees that are compatible with overhead utilities and reserving street right-of-way for trees shall be implemented, when economically feasible. All trimming within the public right-of-way shall use the National Arborist Association’s approved tree-pruning practices to minimize the physical and aesthetic harm to trees that must be pruned.</p>   | Streetscape guidelines adopted  | Yes, the City Beautification Board adopted street design guidelines in 2003. | Review this policy and associated guidelines after adoption of the landscaping code update, which is currently under consideration. |

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Table 2

Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element

091043B

| Objective or Policy  | Measurable Target              | Objective or Policy Achieved?  | Recommended Changes   |
|--|--------------------------------|--|---|
| <p><b>Policy 3.1.5</b><br/>The City shall continue to remove invasive trees and shrubs from its rights-of-way and property and to inform private property owners of the benefits of removing invasive vegetation.</p>  |                                | Yes, on-going.   | None.   |
| <p><b>Policy 3.1.6</b><br/>The City shall continue to exclude invasive vegetation from plant material permitted in landscape plans.</p>  |                                |  | This policy is redundant and should be removed.   |
| <p><b>Policy 3.1.7</b><br/>The City shall continue to have land development regulations that protect heritage and champion trees as an important community resource. The regulation at a minimum shall include:<br/>a. Variances from land development regulations to save and preserve trees;<br/>b. Levy of fines for the unlawful removal of trees as provided by the Code of Ordinances; and<br/>c. Setback requirements to protect trees before, during and after construction.</p> | Adoption of regulations below: | Yes.   | Update language to delineate protection for all trees and special protection for heritage and champion trees. |
| <p><b>Objective 4.1</b> The City shall participate in an environmental monitoring program designed to identify problems and trends in local air, surface water, groundwater, and plant and animal habitat quality. This program shall also be used to evaluate the effectiveness of protective regulations.</p>  |                                | This was not implemented, and is redundant with the on-going work of the City and County environmental programs. | Delete policy.  |
| <p><b>Policy 4.1.1</b><br/>The City shall work with the Alachua County Environmental Protection Department and other appropriate organizations to design and implement a comprehensive and on-going monitoring program for Gainesville's environmental resources. This program should have at least an urban area scope and shall produce a "state of the environment" report at least every five years.</p>   |                                | This was not implemented, and is redundant with the on-going work of the City and County environmental programs. | Delete policy.  |

**Table 2  
Evaluation Matrix – Conservation, Open Space & Groundwater Recharge Element**

| <b>Objective or Policy</b>   | <b>Measurable Target</b>  | <b>Objective or Policy Achieved?</b>  | <b>Recommended Changes</b>   |
|--|---|---|--|
| <p><b>Objective 4.2</b> The City shall identify pollution problems and parties responsible, and establish strategies to mitigate, remediate, or assist in the mitigation or remediation of these problems in all watersheds within Gainesville's city limits. In consideration of the importance of water quality of the creeks in our community, priority shall be given to improving the quality of water entering Sweetwater Branch, Tumbler Creek and Hogtown Creek.</p> | <p>Implementation of Policies 4.2.1 through 4.2.5 below.</p>                      | <p>As stated below, yes.</p>  | <p>None.</p>   |
| <p><b>Policy 4.2.1</b><br/>By 2003, the City shall submit a National Pollutant Discharge Elimination System (NPDES) permit application to FDEP in order to improve surface water quality.</p>  | <p>Permit application complete.</p>   | <p>Yes, the permit was submitted in 2003 and renewed in 2007. The current permit will run through 2012.</p> | <p>Revise language to indicate need to periodically renew permit.</p>  |
| <p><b>Policy 4.2.2</b><br/>The City shall continue to explore projects for improving water quality, including the study of sedimentation problems, in the Hogtown Creek watershed with the goal of reducing sediment accumulation in the vicinity of NW 34th Street by 2010.</p>   | <p>Water quality projects identified.</p>   | <p>See Table 1, Major Issue 8</p>   | <p>None.</p>   |
| <p><b>Policy 4.2.3</b><br/>The City shall continue to explore projects for improving water quality in Tumbler Creek that are identified in the City of Gainesville Master Stormwater Plan.</p>   | <p>Master stormwater basin constructed.</p>                                       | <p>This project is underway.</p>  | <p>Revise language to provide continuing support for the Depot Park and any other Sweetwater Branch stormwater projects.</p> |
| <p><b>Policy 4.2.4</b><br/>To enhance the quality of water entering Sweetwater Branch, the city will construct a master stormwater basin to treat flow from downtown Gainesville.</p>  | <p>Relationships with County and other governmental entities are established.</p> | <p>Yes, on-going.</p>   | <p>None.</p>   |
| <p><b>Policy 4.2.5</b><br/>The City shall coordinate with the Alachua County Environmental Protection Department and other governmental entities in identifying pollution problems and providing documentation and other relevant assistance as appropriate and feasible towards the mitigation and remediation of pollution problems, including assistance as necessary in cases where sanctions may be imposed for violations of applicable environmental regulations.</p> | <p>Relationships with County and other governmental entities are established.</p> | <p>Yes, on-going.</p>   | <p>None.</p>   |

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