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CPA2001-27
BoCC SPONSORED AMENDMENT TO THE

LEE COUNTY COMPREHENSIVE PLAN

THE LEE PLAN

BoCC Adoption Document

Lee County Planning Division
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January 17, 2003

LEE COUNTY
DIVISION OF PLANNING
STAFF REPORT FOR
COMPREHENSIVE PLAN AMENDMENT
CPA2001-00027

☑ **Text Amendment** ☐ **Map Amendment**

	This Document Contains the Following Reviews:
✓	**Staff Review**
✓	**Local Planning Agency Review and Recommendation**
✓	**Board of County Commissioners Hearing for Transmittal**
✓	**Staff Response to the DCA Objections, Recommendations, and Comments (ORC) Report**
✓	**Board of County Commissioners Hearing for Adoption**

STAFF REPORT PREPARATION DATE: July 8, 2002

PART I - BACKGROUND AND STAFF RECOMMENDATION

A. SUMMARY OF APPLICATION

1. APPLICANT:
LEE COUNTY BOARD OF COUNTY COMMISSIONERS
REPRESENTED BY LEE COUNTY DIVISION OF PLANNING

2. REQUEST:
Amend Community Facilities and Services Element, Goal 40: Coordinated Surface Water Management and Land Use Planning on a Watershed Basis to add a new Objective and Policy regarding incorporation of green infrastructure into the surface water management systems of proposed developments, and provide definitions for green infrastructure and flow-way in the Glossary.

B. STAFF RECOMMENDATION AND FINDINGS OF FACT SUMMARY:

1. RECOMMENDATION: Planning staff recommends that Lee Plan Goal 40 be amended to add an Objective and that the Glossary be amended to add definitions for GREEN INFRASTUCTURE and FLOW-WAY as follows:

DEFINITION: **Green Infrastructure:** Surface water management structures that are "soft" structures such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: An area of lower elevation that conveys water or has the potential to convey water. The flow-way may contain uplands, wetlands or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where stormwater moves within variable dimensions instead of a well defined channel. The area of flow in this case has enough general confinement to exhibit stormwater flow characteristics and is evidenced by, but not limited to, drift lines, rack lines, sediment deposits, soils and root scour, and absence of litter or groundcover. A natural flow-way can be a series of lower elevation areas that connect isolated wetlands that interconnect when water levels raise high enough to form a continuous flow path.

A man-made naturalized flow-way is a constructed wetland system (typically a marsh) used for nutrient uptake, stormwater treatment, and/or stormwater conveyance.

A man-made hard structure flow-way is a physical connection between stormwater basins (e.g. canal, culvert, pipeline, or combinations thereof).

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The county encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The county encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The county encourages the preservation of existing flow-ways and the restoration of historic flow-ways.

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

- Benefits of incorporating green infrastructure into the surface water management system include improving water quality, improving air quality, improving water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

- Surface water management systems can be designed to establish the control elevation at a level to insure the correct hydroperiod for incorporation of existing wetlands.

- Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost.

- Green infrastructure can preserve and enhance the natural features and processes of a site.

- Green infrastructure can maximize post-development economic and environmental benefits.

- Green infrastructure, if designed properly, can be less maintenance intensive than conventional stormwater conveyance systems.

- Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them.

- U.S. Fish and Wildlife Service suggest that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

- Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

C. BACKGROUND INFORMATION

Incorporating green infrastructure in the surface water management design provides ecological and aesthetic benefits. The vegetation will uptake nutrients improving water quality and processing carbon dioxide into oxygen improving air quality. These areas provide water storage and water recharge/infiltration. The habitat provides foraging, roosting and nesting opportunities for wetland dependent wildlife. Lee County listed species that may benefit from the green infrastructure include roseate spoonbill, little blue heron, reddish egret, snowy egret, tricolor heron, wood stork, limpkin, Big Cypress fox squirrel, snail kite, American alligator, gopher frog, Everglades mink, Florida sandhill crane, Florida black bear, and Florida panther. Additionally, these areas will provide visual relief within the urban environment, as well as, passive recreational opportunities.

Urban surface water management system design should be a multipurpose, multimeans effort for achieving water quality enhancement, groundwater recharge, recreation, wildlife habitat, wetlands creation, protection of landmarks, control of erosion and sediment deposition, and creation of open spaces. Development sites should be carefully mapped to locate existing natural features so the design can take into consideration the functions within the natural drainage system. The incorporation of "natural" engineering techniques or green infrastructure can preserve and enhance the natural features and processes of a site while maximizing post-development economic and environmental benefits. Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them. [Design and Construction of Urban Stormwater Management Systems, The Urban Water Resources Research Council of the American Society of Civil Engineers and the Water Environment Federation, 1992]

Native plant communities can be incorporated into the surface water management system. The use of existing wetlands within the system design may be achieved by establishing the control elevation at a level that insures the hydroperiod is maintained or improved. The engineering of the surface water management system can provide basins with different control elevations to incorporate a wetland in one portion of the site, while creating a different control elevation in portions that do not utilize the existing wetland system.

"Design of wetland stormwater discharge systems is based primarily on knowledge of the hydrologic limits of various wetland plant communities and the requirements of Chapter 2-25 FAC. Pre-development hydroperiod and maximum flooding depth can be determined by an ecologist familiar with the tolerance limits of Florida wetland plant communities. Sizing of the wetland area, weirs, berms, and pretreatment systems must be based on an analysis of stormwater flows."[Knight, R.L., L. Schwartz & E. Livingston. 1999. *Use of Wetlands for Stormwater and Wastewater Treatment*]

Planning staff have noticed a trend in proposed developments requesting deviations from the indigenous open space requirement to impact isolated wetland systems during the planned development zoning process. The applicants state that the South Florida Water Management District (SFWMD) requires secondary impact mitigation for wetlands incorporated into surface water management systems, and that any wetland under 3 acres in size may be impacted through the SFWMD permitting process. Additionally, the justifications state that the county does not have regulatory authority over wetland systems. The county does not review and permit wetland impacts. However, the county does have indigenous open space requirements per the Land Development Code (LDC) Section 10-415(b). Also, planned development site design is required to not unnecessarily alter or impact natural features of the site per LDC Section 34-9411(g). Incorporation of wetland plant communities should be considered in the development site and surface water management system designs.

PART II - STAFF ANALYSIS

A. STAFF DISCUSSION

Green infrastructure "could well be the next frontier in environmental stewardship" as noted in the August 2000 issue of Planning (p. 14). Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost. This type of design is being applied to large watersheds through public infrastructure such as the South Florida Water Management District's redesign of the Dade County canal system, and within private developments such as the PECO Energy Company in Pennsylvania (Planning, August 2000, p.14-17). Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

The U.S. Fish and Wildlife Service released a report on June 11, 2002 entitled "Geographically Isolated Wetlands: A Preliminary Assessment of Their Characteristics and Status in Selected "Areas of the United States"which indicates isolated wetlands are both exceptionally important and exceptionally vulnerable to destruction. Isolated wetlands are defined as those with no apparent surface water connection to perennial rivers and streams, estuaries, or the ocean. These wetlands perform a number of functions including water storage and gradual release, protection against flooding, filtering of sediment and pollution from runoff, habitat for wildlife, and resources for recreation. The report

suggests that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

The Audubon International Signature Program for golf courses require an environmental assessment of the property prior to designing the golf course. This analysis is done as the first step in the design in order to maximize the retention of natural features, and determine the best surface water management plan. Features of such courses often include preservation of flow-ways, creation of flow-ways, and filtration marshes. This type of design planning would be of benefit to other development sites by fitting the project to the existing conditions of the site.

B. CONCLUSIONS

Lee County continues to grow with approximately 10,000 to 14,000 new residents a year between 1997 and 2001. This steady growth adds pressure to the existing natural systems and water supply. Incorporating green infrastructure and flow-ways into surface water management design will help protect the groundwater and surface water in Lee County. Also, green infrastructure furthers Lee County's efforts in achieving EPA's non-degradation water quality criteria for stormwater discharges to designated Outstanding Florida Waterways and compliance with future total maximum daily loads established for impaired water-bodies. Best Management Practices (BMPs) required under current surface water permitting have variable removal efficiencies for specific pollutants. Green infrastructure, such as filter marshes, have demonstrated significant nutrient reduction capabilities. The Federal government will soon be addressing maximum daily loads of discharge and levels of nutrients within the discharge. Green infrastructure will maximize the onsite retention time, nutrient uptake, nutrient settling, and groundwater recharge thereby reducing the degradation of natural rivers, Estero Bay Aquatic Preserve, and the Gulf of Mexico. The incorporation of green infrastructure and flow-ways into surface water management systems will help development in Lee County to be within the maximum daily loads allowed by Federal regulations.

C. STAFF RECOMMENDATION

Planning staff recommends that the Board of County Commissioners transmit the proposed amendment.

PART III - LOCAL PLANNING AGENCY REVIEW AND RECOMMENDATION

DATE OF PUBLIC HEARING: July 22, 2002

A. LOCAL PLANNING AGENCY REVIEW

One LPA member asked staff why the language only "encourages" instead of stating "must" within policies 40.5.1, 40.5.2, and 40.5.3. The concern was that the language was not strict enough. Staff replied that the Lee Plan sets policy and guidance for development design. Whereas the Land Development Code (LDC) establishes requirements for the permitting of projects.

Public input was then taken. Several developer representatives agreed with the concept of the proposed amendment. However, they expressed a few concerns. First, they requested the proposal be set aside until a workshop could be held with the development community. Another concern was what LDC requirements would result if this amendment is adopted. They also believed these issues are already covered by other agencies. One local land use attorney believed that there was ample language already in the Lee Plan for staff to proceed with drafting LDC standards and requirements for the incorporation of green infrastructure, flow-ways and isolated wetlands. These speakers did agree that a flow-way definition is needed in the Lee Plan, but were concerned with the proposed definition. No suggestions were made on how to revise the flow-way definition. Additionally, the developer representatives raised the issue that the language as proposed encourages the incorporation of both natural and man-made flow-ways into the design of a project. They felt that man-made flow-ways should not be included. One local engineer was also concerned that the use of green infrastructure would increase maintenance costs compared to surface water management systems using hard structures. No analysis was provided to demonstrate the increased cost or maintenance.

There was concern from one member of the LPA that the proposed language may be detrimental to upcoming State and/or Federal regulations with regard to the water quality of Lee County's natural waterways. Staff indicated that the policies would help not hinder future water quality standards.

Another LPA member indicated that he was in support of the concept but felt the proposal was premature.

Some members of the LPA stated the proposed amendment is a good first step towards addressing green infrastructure and protecting flow-ways which is important in southwest Florida. They also indicated there are additional areas the County should address such as improving old infrastructure, updating old developments, and providing incentives to preserve flow-ways on all properties.

Staff was asked to address the concern that the proposed language is redundant with other agencies regulations. Staff stated that the proposed Lee Plan language sets policy. The amendment directs staff and the development community to evaluate the incorporation of flow-ways and green infrastructure into site design. This notifies everyone that the County does want to review these issues and is not deferring to another agency. The language is not regulatory. The Lee Plan addresses the planning stage of development.

The majority of the LPA members stated the importance of including such language in the Lee Plan to demonstrate to State and Federal agencies how Lee County is addressing water conveyance and water quality. They also indicated that the language was soft in that it encourages, rather than requiring, the incorporation of green infrastructure, flow-ways and isolated wetlands into surface water management design.

The LPA directed staff to compile a flow-way map and to involve the development community in any LDC language that would result from this amendment. LPA members stated that incentives should be given when flow-ways are preserved or restored. One LPA member expressed that flow-way protection and restoration is so important that Conservation 2020 should purchase lands containing flow-ways.

B. LOCAL PLANNING AGENCY RECOMMENDATION AND FINDINGS OF FACT SUMMARY

1. **RECOMMENDATION:** The LPA recommended transmittal of the proposed language by the Board of County Commissioners.

2. **BASIS AND RECOMMENDED FINDINGS OF FACT:** The LPA recommended the transmittal of CPA2001-00027 due to the consistency with other Lee Plan language. Members stated the importance of including such language in the Lee Plan to demonstrate to State and Federal agencies that Lee County will be taking an active role in implementing water quality issues that are forthcoming including Total Maximum Daily Loads (TMDL).

C. VOTE:

NOEL ANDRESS	Yes
MATT BIXLER	Yes
SUSAN BROOKMAN	Yes
RONALD INGE	No
GORDON REIGLEMAN	Yes
ROBERT SHELDON	No
GREG STUART	Absent

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR TRANSMITTAL OF PROPOSED AMENDMENT

DATE OF TRANSMITTAL HEARING: September 4, 2002

A. BOARD REVIEW: The Board of County Commissioners took public input regarding the proposal. The development community reiterated their concerns presented to the LPA and detailed under the LPA Review section above. One member of the public spoke in favor of the proposal stating the amendment supports smart growth, enhanced water storage, and better water management systems as Lee County's population continues to grow. He concluded that the proposal is important to the environment and economy of Lee County.

The Board of County Commissioners then discussed the proposal. One board member was concerned with the prematurity of the proposal. Other members responded that they did not understand why there was such opposition, and that this amendment is sorely needed. The Board directed staff to work on mapping flow-ways and modeling techniques. Additionally, the staff was given direction to present a progress report to the Board in January 2003.

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. **BOARD ACTION:** The Board approved transmittal to DCA for their review.

2. **BASIS AND RECOMMENDED FINDINGS OF FACT:** The Board concurred with staff and the LPA's findings.

C. VOTE:

JOHN ALBION	**Yes**
ANDREW COY	**Absent**
BOB JANES	**Yes**
RAY JUDAH	**Yes**
DOUG ST. CERNY	**Yes**

PART V - DEPARTMENT OF COMMUNITY AFFAIRS OBJECTIONS, RECOMMENDATIONS, AND COMMENTS (ORC) REPORT

DATE OF ORC REPORT: November 22, 2002

A. DCA OBJECTIONS, RECOMMENDATIONS AND COMMENTS

DCA had no objections or recommendations to the revised language resulting from a number of meetings.

DCA did comment that Council staff believes that additional green infrastructure can be preserved and that the amendment provides the type of interrelated surface water management/green infrastructure activity that is consistent with and promoted by the Strategic Regional Policy Plan, July 4, 2002.

B. STAFF RECOMMENDATION

County staff held a series of meetings to address concerns raised at the BOCC transmittal hearing. The first meeting took place on September 30, 2002, with the development community and South Florida Water Management District (SFWMD) staff. County staff explained in depth the reasoning behind and intended purpose of the proposed amendment. The development community reiterated many of the same concerns that were raised at the BOCC transmittal hearing. Additionally, it was determined that revisions as a matter of clarification to the proposed language would bring a comfort level to the development community. The group also requested that staff meet with SFWMD and the Florida Department of Environmental Protection (DEP) staff to find out if these State agencies had any objections or recommendations.

County staff met with SFWMD and DEP staff on October 2, 2002. During this meeting county staff explained the proposed amendment and what would be achieved by this amendment. SFWMD and DEP staff agreed with the concept and made recommendations to language revisions to help clarify the amendment and better achieve the objectives. County staff compiled the revised language and sent it to SFWMD and DEP staff for comments. SFWMD and DEP staff supported the revised language (Attachment 1). Additionally, SFWMD staff stated that "it is exciting to be collaborating with the county on these issues."

The revised language resulting from the September 30 and October 2, 2002, meetings was forwarded to interested parties to review and comment. The revised language was forwarded to interested parties on October 14, 2002, with a follow up e-mail on October 25, 2002. A meeting was held on October 29, 2002, with the development community, environmental groups, and State agencies. There was a long discussion which resulted in county staff requesting any recommended language changes be submitted by November 6, 2002, to be compiled for discussion.

The last discussion meeting was held November 12, 2002. Many of the issues appear to be resolved by the revised language, and county staff's commitment to hold similar meetings during the compilation of any subsequent Land Development Code amendments.

DCA staff requested a clarification on how the flow-way definition was compiled, and a history of the meetings subsequent to the BOCC transmittal hearing. County staff forwarded the requested information including the following: The flow-way definition was evolved from the Florida Division

of Forestry definition for Wetland Flow-way, the EPA document for the Indian River Lagoon Restoration Feasibility Study, the South Florida Water Management District's flow-way definition included in "Object-Oriented Routing Model Overview," and consultation with Roland Ottolini, Director Lee County Natural Resources.

A concern raised by the development community was the lack of supporting data and analysis for the proposed amendment. DCA staff indicated that the submitted analysis with the follow up information regarding how the flow-way definition was derived is adequate data and analysis to support the proposal.

County staff recommend the BOCC adopt the revised language as follows:

DEFINITION: Green Infrastructure: Surface water management ~~structures~~ systems that are "soft" ~~structures~~ features such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: ~~An~~ A defined area ~~of lower elevation~~ that ~~historically or currently~~ conveys surface water during typical seasonal weather patterns. ~~or has the potential to convey water~~. The flow-way may contain uplands, wetlands, defined natural or artificial channels, or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where ~~stormwater~~ surface water moves within variable dimensions ~~instead of~~ or a well defined channel. The area of flow in this case has enough general confinement to exhibit ~~stormwater~~ surface water flow characteristics and is ~~evidenced by, but not limited to,~~ determined through reasonable scientific judgment utilizing information such as soils maps, aerial photography, topographic maps, USGS maps, drift lines, rack lines, sediment deposits, soils and root scour, ~~and~~ absence of litter or groundcover, and field verifications. A natural flow-way can be a series of lower elevation upland areas that ~~connect~~ allow otherwise isolated wetlands ~~that~~ to interconnect when surface water levels ~~raise~~ rise high enough during typical high water seasonal level to form a continuous flow path. Natural flow-ways typically include but are not limited to rivers, creeks, streams, sloughs, interconnected wetlands, and associated flood plain.

A man-made naturalized flow-way is a constructed ~~wetland~~ surface water management system ~~(typically a marsh)~~ consisting of soft features used for nutrient uptake, ~~stormwater~~ surface water treatment, and/or ~~stormwater~~ surface water conveyance. Man-made naturalized flow-ways typically include but are not limited to filter marshes, created wetlands, swales planted with native vegetation, created streams/creeks, created pond or lake systems interconnected through native vegetation areas, or combinations thereof.

A man-made ~~hard structure~~ structural flow-way is a physical connection between surface water management ~~stormwater~~ basins ~~(e.g. canal, culvert, pipeline, or combinations thereof)~~. Man-made structural flow-ways typically include but are not limited to culverts, ditches, canals, pipelines, mowed grass swales, rip-rap swales, or combinations thereof. This will not include roadways, fire breaks, or similar man-made structures.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The County encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways.

PART IV - BOARD OF COUNTY COMMISSIONERS HEARING FOR ADOPTION OF PROPOSED AMENDMENT

DATE OF ADOPTION HEARING: January 9, 2003

A. BOARD REVIEW: County staff presented the revised language that was discussed with the DCA, as well as, two additional policies all of which were the result of a series of meetings with the public and state agencies. These meetings took place after the transmittal hearing. County staff summarized the meetings and indicated that there was still some opposition to the amendment being adopted without specific Land Development Code language. Staff noted the importance of adopting a flow-way definition, as the Lee Plan does not currently contain a definition and flow-ways are referred to in a number of areas within the comprehensive plan and land development code.

Public input was taken. Members of the development community stated their discomfort level with the amendment, and would like to defer adoption or implementation of the amendment until Land Development Code language is adopted. The development community agrees with the protection of flow-ways, but is concerned with how the amendment will be applied. Their concerns included:

- how to insure technical/scientific review to determine flow-ways;
- what encourage means;
- broadness of the definition;
- elimination of upland from the definition;
- belief that County staff is working separately from the state agencies and not concurring with these agencies over the delineation of flow ways.

There were members of the community who spoke in support of the amendment. These participants stated that the amendment is important for Smart Growth and sustainable development in Lee County. Their concern is with water quality, flooding, and protection of existing natural flow-ways.

County staff urged the Board to adopt the amendment, and provide direction to staff regarding application of the objective and policies. Staff noted that technical/scientific review is done to determine flow-ways, and that technical/scientific staff from the county, SFWMD and DEP drafted the final definition.

The use of encourage is found elsewhere in the Lee Plan, such as under preservation of native plant communities. The application of encourage ranges from granting a planned development zoning requiring the preservation of unique, critical areas to granting credits for large, contiguous upland preserves. Therefore, encourage will include a range of options to be determined through the Land Development Code language.

Staff noted that the definition is not as broad as the original draft, and does include examples. Flow-ways cannot be defined by a specific width or plant community, therefore the "broadness" of the definition is a result of the myriad of natural flow-ways that exist. Staff believe the definition is adequate as written, and that the inclusion of upland was agreed upon by the County, SFWMD, and DEP staff all of whom are technical/scientific individuals who deal with the protection of flow-ways.

The accusation that County staff is working separately from the state agencies was rebutted, in that staff regularly attend SFMWD interagency meetings and confer with SFWMD staff regarding flow-ways. There has not been disagreement over the location of a flow-way, however, each agency may have different regulations as to how the flow-way must be addressed.

One Commissioner asked if vegetation and hydrology should be included in the determination of a flow-way. Staff responded that inclusion of these items in the flow-way definition would be appropriate. The Assistant County Attorney recommended the following revision to the flow-way definition in response:

> The area of flow in this case has enough general confinement to exhibit surface water flow characteristics and is determined through reasonable scientific judgment utilizing ~~information such as~~ all available information including without limitation a review of all the following: vegetation, hydrology, soils maps, aerial photography, topographic maps, USGS maps, drift lines, rack lines, sediment deposits, soils and root scour, absence of litter or groundcover, and field verifications.

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. **BOARD ACTION:** The Board of County Commissioners voted to adopt the amendment with a minor revision to the flow-way definition as follows:

DEFINITION: Green Infrastructure: Surface water management systems that are "soft" features such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: A defined area that conveys surface water during typical seasonal weather patterns. The flow-way may contain uplands, wetlands, defined natural or artificial channels, or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where surface water moves within variable dimensions or a well defined channel. The area of flow in this case has enough general confinement to exhibit surface water flow characteristics and is determined through reasonable scientific judgment utilizing all available information including without limitation a review of all the following: vegetation, hydrology, soils maps, aerial photography, topographic maps, USGS maps, drift lines, rack lines, sediment deposits, soils and root scour, absence of litter or groundcover, and field verifications. A natural flow-way can be a series of lower elevation upland areas that allow otherwise isolated wetlands to interconnect when surface water levels rise high enough during typical high water seasonal level to form a continuous flow path. Natural flow-ways typically include but are not limited to rivers, creeks, streams, sloughs, interconnected wetlands, and associated flood plain.

A man-made naturalized flow-way is a constructed surface water management system consisting of soft features used for nutrient uptake, surface water treatment, and/or surface water conveyance. Man-made naturalized flow-ways typically include but are not limited to filter marshes, created

wetlands, swales planted with native vegetation, created streams/creeks, created pond or lake systems interconnected through native vegetation areas, or combinations thereof.

A man-made structural flow-way is a physical connection between surface water management basins. Man-made structural flow-ways typically include but are not limited to culverts, ditches, canals, pipelines, mowed grass swales, rip-rap swales, or combinations thereof. This will not include roadways, fire breaks, or similar man-made structures.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention/detention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The County encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways.

POLICY 40.5.4: The County will continue to identify and map flow-ways as part of the Lee County Surface Water Management Plan. The Plan provides a general depiction of watersheds and their trunk and major tributaries and has been expanded to some degree in the DRGR area. As new information is assembled, the Plan will be updated for public use. Due to its magnitude and need for site specific information, not all flow-ways will be shown.

POLICY 40.5.5: The County will continue to coordinate the review of flow-ways with the other regulatory agencies and assist in the development of incentives and /or credits for implementation of regional surface water management systems that address flood protection, water quality/ environmental enhancement and water conservation.

C. VOTE:

JOHN ALBION	**AYE**
ANDREW COY	**AYE**
BOB JANES	**AYE**
RAY JUDAH	**AYE**
DOUG ST. CERNY	**AYE**

ATTACHMENT - 1

SFWMD & DEP Correspondence

Attachment - 2

Other Correspondence Received

ATTACHMENT - 1

SFWMD & DEP Correspondence

From: Carol Wehle <cwehle@sfwmd.gov>
To: "'Kim Trebatoski'" <TREBATKM@leegov.com>, <lucy.blair@dep.state.fl.us>, <rick.cantrell@dep.state.fl.us>, <ECKENRPJ.LEEPO02.LEEDOM1@leegov.com>, <JOYCERK.LEEPO02.LEEDOM1@leegov.com>, <MILLERJM.LEEPO02.LEEDOM1@leegov.com>, <NOBLEMA.LEEPO02.LEEDOM1@leegov.com>, <OCONNOPS.LEEPO02.LEEDOM1@leegov.com>, <OTTOLIRE.LEEPO02.LEEDOM1@leegov.com>, <TREBATKM.LEEPO02.LEEDOM1@leegov.com>, <cpalmer@sfwmd.gov>, <kjohnson@sfwmd.gov>, <rthomps@sfwmd.gov>
Date: 10/3/02 10:11AM
Subject: RE: Flow-way Amendment Language

Thank you so much for all your work. It is exciting to be collaborating with the county on these issues. I have asked Carla Palmer to coordinate all the District's comments so that you have one point of contact. Let me know if you need anything else. Carol

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Wednesday, October 02, 2002 4:36 PM
To: lucy.blair@dep.state.fl.us; rick.cantrell@dep.state.fl.us; ECKENRPJ.LEEPO02.LEEDOM1@leegov.com; JOYCERK.LEEPO02.LEEDOM1@leegov.com; MILLERJM.LEEPO02.LEEDOM1@leegov.com; NOBLEMA.LEEPO02.LEEDOM1@leegov.com; OCONNOPS.LEEPO02.LEEDOM1@leegov.com; OTTOLIRE.LEEPO02.LEEDOM1@leegov.com; TREBATKM.LEEPO02.LEEDOM1@leegov.com; cpalmer@sfwmd.gov; cwehle@sfwmd.gov; kjohnson@sfwmd.gov; rthomps@sfwmd.gov
Subject: Flow-way Amendment Language

Thank you for meeting today. It was very helpful. Please review attached changes to the proposed Lee Plan Amendment regarding flow-ways and green infrastructure. There is a redlined version, and an easier to read revised language version.

Please send any comments, so I can compile the input.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

CC: "'Carla Palmer'" <cpalmer@sfwmd.gov>

From: "Palmer, Carla" <cpalmer@sfwmd.gov>
To: <TREBATKM@leegov.com>
Date: 10/14/02 8:01AM
Subject: Re: Lee Plan Flow-way Language

Kim. We are happy with the wording we discussed at our last meeting. I like what Rick Cantrell wrote and we have nothing further to add at this time. Thanks for all the energy you have put into this. Carla

---

Sent from my BlackBerry Wireless Handheld

SFWMD Wireless Email Solutions

From: "Cantrell, Richard" <Richard.Cantrell@dep.state.fl.us>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 10/25/02 11:20AM
Subject: RE: Lee Plan Flow-way Amendment Meeting

Kim: My concern is that we do not inadvertently include lawns and other developed property which during rainfall events my transport water and that afterwards show rack lines or other listed evidence. My concerns could be addressed under "reasonable scientific judgment" but the suggested clause could provide "intent comfort". I agree that you want to stay away from an engineering event threshold. That is not the intend of my suggestion.

Thanks, Rick

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Friday, October 25, 2002 10:59 AM
To: Cantrell, Richard
Subject: RE: Lee Plan Flow-way Amendment Meeting

Rick - Please explain what you mean by "for sustained periods beyond discreet rainfall events". Roland and I were discussing your recommendation, and each had a different take on the meaning. Also, we were trying to avoid attaching the definition to a certain rainfall event such as 5-year flood elevation.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

>>> "Cantrell, Richard" <Richard.Cantrell@dep.state.fl.us> 10/25/02 10:21AM
>>>
Kim: I have added one suggestion to the overall Flow-way definition (shown as BOLD). The meeting conflicts with a staff meeting but we will try to attend.

Rick

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Friday, October 25, 2002 8:47 AM
To: Amico@abbinc.com; Beeverjw@aol.com; rawessel@att.net; kmarquis@audubonintl.org; smarshall@bankseng.com; CarlB@barraco.net; Kimf@bonitabaygroup.com; mitchh@bonitabaygroup.com; mattb@conservancy.org; Stafford, Heather; Cantrell, Richard; ivincent@dexbender.com; flpnaples@earthlink.net; charles.basinait@henlaw.com; NedDewhirst@hmeng.com; BNH@johnsoneng.com; dvw@johnsoneng.com; Matthew Noble; Roland Ottolini; Wayne Daltry; kenp@passarella.net; stevehartsell@paveselaw.com; jcassani@peganet.com; cpalmer@sfwmd.gov; lbeever@swfrpc.org; keyda@ushome.com; sconnell@worthingtoncommunities.com

Cc: Pete Eckenrode; Rick Joyce; Paul O'Connor; Pam Houck
Subject: Lee Plan Flow-way Amendment Meeting

The second flow-way amendment discussion meeting will be held Tuesday, October 29, 2002 at 11am-noon in Conf. Room 2-C of the Lee County Public Works & Community Development Building.

The revisions to the amendment language as a result of meetings with SFWMD & DEP staff, as well as, input received are attached including a red-lined document and a "cleaned up" version. The revised language is clarification language. The intent of the amendment transmitted to DCA has not been changed.

This meeting is an open discussion. Please forward this message to any interested parties.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
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DEFINITION: Green Infrastructure: Surface water management ~~structures~~ systems that are "soft" ~~structures~~ features such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: ~~An~~ A defined area ~~of lower elevation~~ that ~~historically or currently~~ conveys surface water **for sustained periods beyond discreet rainfall events** during typical seasonal weather patterns. ~~or has the potential to convey water~~. The flow-way may contain uplands, wetlands, defined natural or artificial channels, or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where ~~stormwater~~ surface water moves within variable dimensions ~~instead of~~ or a well defined channel. The area of flow in this case has enough general confinement to exhibit ~~stormwater~~ surface water flow characteristics and is ~~evidenced by, but not limited to,~~ determined through reasonable scientific judgment utilizing information such as soils maps, aerial photography, topographic maps, USGS maps, drift lines, rack lines, sediment deposits, soils and root scour, ~~and~~ absence of litter or groundcover, and field verifications. A natural flow-way can be a series of lower elevation upland areas that ~~connect~~ allow otherwise isolated wetlands ~~that~~ to interconnect when surface water levels ~~raise~~ rise high enough during typical high water seasonal level to form a continuous flow path. Natural flow-ways typically include but are not limited to rivers, creeks, streams, sloughs, interconnected wetlands, and associated floodplain.

A man-made naturalized flow-way is a constructed ~~wetland~~ surface water management system ~~(typically a marsh)~~ consisting of soft features used for nutrient uptake, ~~stormwater~~ surface water treatment, and/or ~~stormwater~~ surface water conveyance. Man-made naturalized flow-ways typically include but are not limited to filter marshes, created wetlands, swales planted with native vegetation, created streams/creeks, created pond or lake systems interconnected through native vegetation areas, or combinations thereof.

A man-made ~~hard structure~~ structural flow-way is a physical connection between surface water management ~~stormwater~~ basins ~~(e.g. canal, culvert, pipeline, or combinations thereof)~~. Man-made structural flow-ways typically include but are not limited to culverts, ditches, canals, pipelines, mowed grass swales, rip-rap swales, or combinations thereof. This will not include roadways, fire breaks, or similar man-made structures.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The County encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways.

Attachment - 2

Other Correspondence Received

From: Roland Ottolini
To: Dist5, Albion
Date: 10/7/02 3:02PM
Subject: flow-ways meetings

Chris,
got your message. we met w/ several consultants (engineering, environmental, and legal) on Monday , Sept 30 at Carl Baracco's office. my understanding Mitch was unable to attend. we drafted some minor revisions to the Plan amendment. also met w/ DEP and SFWMD on Wednesday, Oct 2 and added a few more revisions. will have a follow-up meeting at Carl Baracco's, Tuesday, Oct 29 at noon. anyone who wants to attend should confirm w/ Carl's office.
roland

CC: Daltry, Wayne; Lavender, James; Noble, Matthew; Trebatoski, Kim

From: "Ned Dewhirst" <NedDewhirst@hmeng.com>
To: <TREBATKM@leegov.com>
Date: 10/9/02 4:39PM

Kim: Per our phone discussion, the following are my comments re the flow-way issue. I hope these are not repetitive to your other mtgs/discussions:

1. 2nd paragraph: I like "An area..." rather than "A defined area .." since a lot of times these flow-way areas are not well-defined.
2. 2nd paragraph: .... historically or currently conveys stormwater.
3. Under the 2nd paragraph: "A natural flow-way is an area of lower topographic relief where stormwater flows

within variable dimensions and/or a well defined channel. (Say the case of a creek area with broad banks)

4. Under the 2nd paragraph: " A man-made naturalized flow-way is a constructed wetland/conveyance system used for nutrient uptake, stormwater treatment, and/or stormwater conveyance. This system can be a wetland marsh or forested area in combination with a conveyance or deep water feature." (At The Brooks is where this combination was used to restore a natural flow-way; I know you don't want mostly a lake with a small littoral area but from a conveyance/hydraulic standpoint you need some water volume area also)
5. Below the above sentence, I would delete the definition of man-made hard structure flow-way. First, you do not reference this type flow-way in your objectives/policies. Secondly, this type does not necessarily have to be between stormwater basins. It could be between two lakes within the same basin or as an outfall from the SWM system. I just don't see the purpose for defining. It is sort of a stretch, even for us engineers, to call a pipe a flow-way.
6. Policy 40.5.3: The county encourages the preservation of existing natural flow-ways, the restoration of historic natural flow-ways, and the construction of man-made naturalized flow-ways (where applicable). (You defined man-made naturalized flow-ways but not made any reference in your Objectives/Policies.
7. I would suggest a reference to an incentive for the flow-ways by way of crediting indigenous requirements for both kinds of flow-ways (natural/man-made). Then include the details of the credits within the LDC. In the past, we have had to request deviations for such things during rezonings.

Ned Dewhirst , P.E.
Senior V.P. / Principal

HOLE MONTES
ENGINEERS PLANNERS SURVEYORS

From: Lynda Riley
To: Trebatoski, Kim
Date: 10/14/02 11:24AM
Subject: Re: Flow-way & Green Infrastructure Lee Plan Amendment

The revisions look good to me. Thanks for keeping me in the loop.

>>> Kim Trebatoski 10/14/02 08:18AM >>>
Please see attached revisions to the transmitted Lee Plan Amendment CPA2001-27 regarding flow-ways and green infrastructure. These revisions are a result of meeting held with the development community, and a meeting held with SFWMD and DEP staff. The revisions are clarification language so people better understand the objectives of the amendment.

I have attached a red-line strike thru / underline version so you can see the changes over time, and a "cleaned-up" version which is easier to read. Please forward any comments to me by October 23, so I can compile them for discussion at the October 29th meeting.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

From: Kraig Marquis <kmarquis@audubonintl.org>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 10/15/02 11:11AM
Subject: Re: Flow-way & Green Infrastructure Lee Plan Amendment

Kim,
The revised doc looks good. I didn't have any changes.
Take care,
Kraig

At 08:18 AM 10/14/2002 -0400, you wrote:
>Please see attached revisions to the transmitted Lee Plan Amendment
>CPA2001-27 regarding flow-ways and green infrastructure. These revisions
>are a result of meeting held with the development community, and a meeting
>held with SFWMD and DEP staff. The revisions are clarification language
>so people better understand the objectives of the amendment.
>
>I have attached a red-line strike thru / underline version so you can see
>the changes over time, and a "cleaned-up" version which is easier to
>read. Please forward any comments to me by October 23, so I can compile
>them for discussion at the October 29th meeting.
>
>Kim Trebatoski
>Principal Environmental Planner
>DCD - Planning/Environmental Sciences
>trebatkm@leegov.com
>239-479-8183
>FAX 239-479-8319
>
>

From: "Kim Fikoski" <Kimf@BonitaBayGroup.com>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 10/16/02 4:20PM
Subject: RE: Flow-way & Green Infrastructure Lee Plan Amendment

Can you email me the entire CPA 2001-27 so I better understand the objectives of the ammendment. As far as defintions go, my only comment is that grass swales are a common and effective BMP and planting them with natives is preferable but not necessary for it to be an excellent BMP (40.5.1).

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Monday, October 14, 2002 8:19 AM
To: Beeverjw@aol.com; rawessel@att.net; kmarquis@audubonintl.org; smarshall@bankseng.com; CarlB@barraco.net; Kim Fikoski; Mitch Hutchcraft; mattb@conservancy.org; heather.stafford@dep.state.fl.us; ivincent@dexbender.com; flpnaples@earthlink.net; NedDewhirst@hmeng.com; BNH@johnsoneng.com; dvw@johnsoneng.com; NOBLEMA.LEEPO02.LEEDOM1@leegov.com; RILEYLT.LEEPO02.LEEDOM1@leegov.com; stevehartsell@paveselaw.com; jcassani@peganet.com; cpalmer@sfwmd.gov; dburr@swfrpc.org; lbeever@swfrpc.org; keyda@ushome.com; EdGriffith@wcicommunities.com; sconnell@worthingtoncommunities.com
Cc: OCONNOPS.LEEPO02.LEEDOM1@leegov.com; OTTOLIRE.LEEPO02.LEEDOM1@leegov.com
Subject: Flow-way & Green Infrastructure Lee Plan Amendment

Please see attached revisions to the transmitted Lee Plan Amendment CPA2001-27 regarding flow-ways and green infrastructure. These revisions are a result of meeting held with the development community, and a meeting held with SFWMD and DEP staff. The revisions are clarification language so people better understand the objectives of the amendment.

I have attached a red-line strike thru / underline version so you can see the changes over time, and a "cleaned-up" version which is easier to read. Please forward any comments to me by October 23, so I can compile them for discussion at the October 29th meeting.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

From: "Matt Bixler" <mattb@conservancy.org>
To: "'Kim Trebatoski'" <TREBATKM@leegov.com>
Date: 10/21/02 10:29AM
Subject: RE: Flow-way & Green Infrastructure Lee Plan Amendment

Hello Kim,
The Conservancy is supportive of the current Amendment. We would like to attend the meeting on the 29th in support of the document. Please let me know when and where the meeting will be held.

Also, on a different topic. I saw a public notice in the News Press regarding amendments to the FGCU Plan. The notice said a copy of the amendments is in the Planning Office. What are these amendments regarding? Is it land use or structure of the University?

Thanks,
Matt

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Monday, October 14, 2002 8:19 AM
To: Beeverjw@aol.com; rawessel@att.net; kmarquis@audubonintl.org; smarshall@bankseng.com; CarlB@barraco.net; Kimf@bonitabaygroup.com; mitchh@bonitabaygroup.com; mattb@conservancy.org; heather.stafford@dep.state.fl.us; ivincent@dexbender.com; flpnaples@earthlink.net; NedDewhirst@hmeng.com; BNH@johnsoneng.com; dvw@johnsoneng.com; NOBLEMA.LEEPO02.LEEDOM1@leegov.com; RILEYLT.LEEPO02.LEEDOM1@leegov.com; stevehartsell@paveselaw.com; jcassani@peganet.com; cpalmer@sfwmd.gov; dburr@swfrpc.org; lbeever@swfrpc.org; keyda@ushome.com; EdGriffith@wcicommunities.com; sconnell@worthingtoncommunities.com
Cc: OCONNOPS.LEEPO02.LEEDOM1@leegov.com; OTTOLIRE.LEEPO02.LEEDOM1@leegov.com
Subject: Flow-way & Green Infrastructure Lee Plan Amendment

Please see attached revisions to the transmitted Lee Plan Amendment CPA2001-27 regarding flow-ways and green infrastructure. These revisions are a result of meeting held with the development community, and a meeting held with SFWMD and DEP staff. The revisions are clarification language so people better understand the objectives of the amendment.

I have attached a red-line strike thru / underline version so you can see the changes over time, and a "cleaned-up" version which is easier to read. Please forward any comments to me by October 23, so I can compile them for discussion at the October 29th meeting.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

From: "Stafford, Heather" <Heather.Stafford@dep.state.fl.us>
To: "Paul O'Connor" <OCONNOPS@leegov.com>
Date: 10/23/02 8:48PM
Subject: RE: Greenways Comp Plan Amendment - CPA 2001-27

Please pass on my support of Lee County Comprehensive Plan Amendment - CPA 2001-27 as written. If Lee County is able to encourage developers within the Estero Bay watershed to incorporate these changes to their surface water management systems, the Estero Bay Aquatic Preserve and all residents and visitors in Lee County would benefit.

Heather Stafford, Manager
Estero Bay Aquatic & State Buffer Preserves

-----Original Message-----
From: Paul O'Connor [mailto:OCONNOPS@leegov.com]
Sent: Tuesday, October 01, 2002 4:15 PM
To: beeverjw@aol.com; rawessel@aol.com; mattb@conservancy.org; Stafford, Heather; sbrookperson@earthlink.net; COLLINSD@LCFGW.LCFPO01; Timothy Jones; Roland Ottolini; Brad Vance; Wayne Daltry; jcassani@peganet.com; dburr@swfrpc.org; lbeever@swfrpc.org
Cc: ROSENP@LCFGW.LCFPO01; Ann Polito
Subject: Greenways Comp Plan Amendment - CPA 2001-27

Attached please find an outline that Scott Gilbertson receive from David Graham. The outline calls for the derailing of the so called Greenways Lee Plan Amendment and the establishment of a committee to investigate incentives for flowway preservation.

Also attached is a PDF of the proposed amendment.

Please review these materials and respond as you see fit.

Paul O'Connor, AICP
Director of Planning
Lee County Department of Community Development
1500 Monroe Street
Fort Myers, FL 33901
e mail oconnops@leegov.com
Phone (239) 479-8309; FAX (239) 479-8319

CC: "Lytton, Gary" <Gary.Lytton@dep.state.fl.us>

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ooks & Freund, LLC
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Myers, Florida 33919-0000
an Wunderlich
n Title Insurance, Inc.
0 Colonial Boulevard, Suite 101
Myers, Florida 33907
EDIATE PAST PRESIDENT
y L. Hayden
ida Rock Industries
41 Alico Road
Myers, Florida 33913

LEE COUNTY
RECEIVED

02 OCT 25 PM 4:28

COMM. DEV.
PUB. WRKS. CNTR.
SECOND FLOOR

10/28/02 ✓ Copy to: Paul O. Kim T. Rick T. Mark N.

October 22, 2002

Mr. Charles Gauthier, Bureau Chief
Department of Community Affairs
Bureau of Local Planning
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399

RE: Lee County Comprehensive Plan Amendment
CPA 2001-27 Flow Way and Green Infrastructure

Dear Mr. Gauthier:

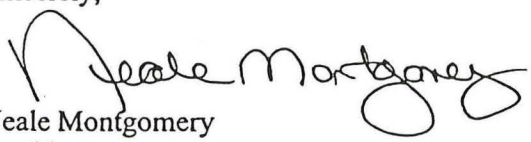
The County recently transmitted the above styled plan amendment to the Department for your review and analysis. On behalf of the Real Estate Investment Society (REIS), and its members, I want to express concerns regarding the amendment. The first concern I want to express is a concern regarding the process. It is herein submitted that the County did not comply with Section 163.3181, F.S. I, as the president of REIS, and several other members, heard that the County was working on what was commonly referred to as the "flow-way amendment." I, and others, were repeatedly advised that it wasn't ready yet, it was still in draft form, and they were still working on the language internally. The language was finally made available to the public less than a week prior to the time the matter was scheduled before the Local Planning Agency. The concerned public did not have sufficient time to review, evaluate and address the proposed amendment. Section 163.3181, F.S. submits that, "It is the intent of the Legislature that the public participate in the comprehensive planning process to the fullest extent possible." When this concern was raised at the transmittal hearing there were indications that the public shouldn't be surprised because the staff had been working on the issue for almost a year. This is probably true, however, the interested public had no access to the drafts during that time frame. The participation in the planning process on this amendment was not effective, broad dissemination did not occur and was not possible due to the very, very short time frame. The flow-way issue is of such importance that public workshops should have been held. The amendments were not available until three working days prior to the LPA hearing.

REIS has concerns about the substance of the amendment. The definition is overly broad, and a landowner reading the definition would not have a clear understanding of whether his land was affected and how his land

was affected. No data and analysis in support of the amendment was provided to the public, and to date I am not certain that any data and analysis was undertaken. The language does not contain measurable standards. As written the County could determine that a flow-way exists if water flowed once during the past fifty years between two isolated wetlands. It is clear that the County definition includes more than wetlands, but what is unclear is the extent of the upland areas that can be considered "flow-ways."

It is herein submitted that the Department in its Official Recommendations and Comments should require a clear and concise definition, adequate public participation, data and analysis, and clear standards which would put a reasonable man on notice of the impact the amendment would have on his property. I appreciate your consideration of this matter.

Sincerely,



Neale Montgomery
President
Real Estate Investment Society

NM:tlb
cc: Roger Wilburn
Bernard Piawah
Mary Gibbs
Larry Johnson
Jake Slot
Donald Brooks
Gerald Hendry
Perry Roberts
Russell Schropp
Bruce Stephan
Stan Stouder
Randy Thibaut
Susan Wunderlich
Fred Burson
Bill Burdette
Tracy Hayden
Charles Basinait
REISFLOW.WPD

From: Wayne Daltry
To: Trebatoski, Kim
Date: 10/29/02 2:23PM
Subject: Re: Lee Plan Flow-way Amendment Meeting

Hellow Kim

You held up to the abuse (no, wait, wrong word, errr challenge, yeah that is it, CHALLENGE) quite well today. You have my admiration.

Here were my concepts set up as "policies" which fit either in Sec 40.5 or some where else (or no where else). Into the Barrel!

40.5.4. By (x date) the County will have established a schedule by which each basin of the County will be reviewed for mapping the flowways necessary for surface water management. The mapping wil depict which flowways are man made strucural, man made naturalized, or natural flowways. Each flowway identified will have either an identified series of management objectives for flow, quality, storage, recharge, or green infrastructure, or a schedule by which these objectives will be established. The mapping may be undertaken in part or in whole as part of the County Mitigation Plan development program.

40.5.5 By (x date) the County will have amended its LDRs to implement Sections 40.5.1-4. Such amendments will include the regulatory components necessary to implement flow requirements, and the appropriate mix of regulations and incentives to implement the quality, storage, recharge and green infrastructure objectives.

40.5.6 The County will explore with the permitting agencies the feasibility of pursuing delegation of part or all delegatable authority for stormwater and flowway management once the mapping and LDR process is completed.

Wayne E. Daltry
Director, Smart Growth Department
wdaltry@leegov.com
239-335-2840
239-335-2262 (fax)

CC: Noble, Matthew; O'Connor, Paul; Ottolini, Roland

From: Kim Trebatoski
To: Vincent, Ian
Date: 10/29/02 4:49PM
Subject: Re: a couple of questions

The county will rely on SFWMD & DEP jurisdictionals for wetland determination.

Having criteria to determine a flow-way rating would sure help. This is one area that we can be discussing and formulating through the land development code revisions to address the policies.

Thank you for continuing participation!

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

>>> "Ian Vincent" <ivincent@dexbender.com> 10/29/02 04:16PM >>>
Again, thanks for taking the time to listen to everybody's ranting. I hope that you don't feel like you're being ganged up on, it's just that we are all trying to foresee how we will be able to address the issue in due diligence. I do have a couple of questions that came to me after I had some time to digest the meeting (as well as my lunch).

1. policy 40.5.2 states that Staff encourages incorporating existing wetland systems. I am curious if Staff is planning to rely on SFWMD for the JD or if the County is going to have their own wetland criteria.

2. Both you and Roland spoke about the flow way issue saying that "critical" flow-ways must be preserved and the less critical would be given less scrutiny. Who will be making the determination as to which flow ways are critical? Do you think it would be feasible for us to work on some kind of quantifiable system for evaluating flow-way function. Something similar to WRAP, but actually scientifically sound?

These are just questions, I'm sure you'll be getting your share and then some over the next few days. You mentioned that you are looking for constructive suggestions. I would be glad to assist in any way that I can.

Ian M. Vincent
W. Dexter Bender & Associates

----- Original Message -----
From: "Kim Trebatoski" <TREBATKM@leegov.com>
To: <bauer606@aol.com>; <rawessel@att.net>; <smarshall@bankseng.com>; <CarlB@barraco.net>; <mitchh@bonitabaygroup.com>; <GaryD@conservancy.org>; <mattb@conservancy.org>; <Richard.Cantrell@dep.state.fl.us>; <ivincent@dexbender.com>; <stevebrookman@earthlink.com>; <sbrookperson@earthlink.net>; <NedDewhirst@holemontes.com>; <dvw@johnsoneng.com>; "Matthew Noble" <NOBLEMA.LEEPO02.LEEDOM1@leegov.com>; "Roland Ottolini" <OTTOLIRE.LEEPO02.LEEDOM1@leegov.com>; "Wayne Daltry" <WDALTRY.LEEPO01.LEEDOM1@leegov.com>; <Raymond.Pavelka@marinerproperties.com>; <stevehartsell@paveselaw.com>; <jcassani@peganet.com>; <cpalmer@sfwmd.gov>; <IBarnett@VANDAY.com>;

<mbracci@VANDAY.com>
Sent: Tuesday, October 29, 2002 4:01 PM
Subject: Next Meeting

Thank you for participating in the discussions regarding the proposed Lee Plan amendment (CPA2001-27) dealing with flow-ways and green infrastructure.

A final meeting will be held Tues, Nov 12 at 11am at the county Public Works/Community Development building in Conference Room 2C. The purpose of this meeting will be to discuss the addition of policies regarding mapping, incentives, measurable standards, and exploring the possibility of agencies delegating some authority to the county.

Please forward any recommended policy language to me by Wed. Nov. 6th. I will compile the recommendations and send a working copy out by Fri. Nov. 8th for discussion on Nov. 12th.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
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FLORIDA AGGREGATES GROUP: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781
FLORIDA ROCK INDUSTRIES INC Mining, Ready Mix Concrete, and Construction Products
Reply to Division Office: 14341 Alico Road, Fort Myers, FL 33913 / (239) 267-1803 ext. 40 / FAX (239) 267-2887

R Prud.
cc: Kim
Nick
Mit

November 5, 2002

Mr. Charles Gauthier, Bureau Chief
Department of Community Affairs
Bureau of Local Planning
2555 Shumard Oak Blvd.
Tallahassee, FL 32399

Via Email, Copy to Follow in Mail

Re: Lee County Comp. Plan Amendment
CPA 2001-27 Flow Way and Green Infrastructure

Dear Mr. Gauthier:

Lee County transmitted the referenced plan amendment to the Department of Community Affairs (DCA) for your review and analysis. Based on the lack of public review and input, and that no data and analysis has been provided in support of this amendment, I object to this Plan Amendment.

I respectfully request that DCA require in its Official Recommendations and Comments adequate public participation and supporting data and analysis.

Thank you for your consideration.

Sincerely,

Tracy L. Hayden
Environmental Manager - South Florida

cc: Roger Wilburn
Bernard Piawah
Mary Gibbs

LEE COUNTY
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PUB. WRKS. CNTR.
SECOND FLOOR

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Environmental Sciences

Vanasse Daylor

Urban Planning
Landscape Architecture
Civil Engineering
Traffic Engineering
Environmental Science
FL 366

MEMORANDUM

To: Kim Trebatoski; Sr. Environmental Planner, Lee County

From: Ilene Barnett; Director, Environmental Sciences

Date: November 6, 2002

Re: Proposed Lee Plan Flow-way Amendments

RECEIVED
NOV 0 8 2002
Environmental Sciences

Thank you for the opportunity to comment on the proposed language for the Lee County Proposed Flow-way Amendment. Below, I have included my recommended revisions for your consideration:

With regards to the definition, this should be coordinated with the South Florida Water Management District's definition and criteria for flow ways. Include parameters such as width, length, capacity and importance of the flow way based on the definition.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments, through a system of appropriate incentives, to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.2: The County encourages new developments, through a system of appropriate incentives, to design their surface water management system to incorporate existing wetland systems. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways, through a system of appropriate incentives. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.4: The County will implement a County-wide water quality and flowway improvement and protection plan, including data collection and analysis; prioritizations and goals; monitoring methods; etc. Plan will provide for such potential activities as retrofitting of existing infrastructure and acquisition and restoration of undeveloped lands where practicable and non-intrusive to private property. Funding for this plan and its implementation shall be

12730 New Brittany Boulevard, Suite 600, Fort Myers, Florida 33907 T 239.437.4601 F 239.437.4636 W vanday.com

through grants, public-private partnership initiatives, and other non-regulatory and non-tax funding sources. Drafting of this plan will allow for extensive collaborative planning and decision making via public input and consensus building in the community.

POLICY 40.5.5: The County will adopt modifications to the Capital Improvements Element that earmarks funding for the necessary upstream and downstream improvements for identified flow ways and drainage basins. This plan should also identify potential creative public/private funding avenues that may be explored in addition to the requisite public funding.

POLICY 40.5.6: The County will amend other sections of the Land Development Code and Lee Plan to assure that they support best management practices for flow way protection. These sections include, but are not limited to Open Space, Housing, Economic Development, and Capital Improvements Elements.

POLICY 40.5.7: The County shall coordinate with and consult with recognized experts from the South Florida Water Management District and the U.S. Army Corps of Engineers with regards to flowway preservation and restoration issues in Lee County, to avoid conflicts and duplication of effort.

End of memorandum

CPA2001-27
BoCC SPONSORED AMENDMENT TO THE

LEE COUNTY COMPREHENSIVE PLAN

THE LEE PLAN

BOCC Public Hearing Document
for the
January 9th, 2003 Adoption Hearing

Lee County Planning Division
1500 Monroe Street
P.O. Box 398
Fort Myers, FL 33902-0398
(239) 479-8585

December 18, 2002

LEE COUNTY
DIVISION OF PLANNING
STAFF REPORT FOR
COMPREHENSIVE PLAN AMENDMENT
CPA2001-00027

☑ **Text Amendment** ☐ **Map Amendment**

	This Document Contains the Following Reviews:
✓	**Staff Review**
✓	**Local Planning Agency Review and Recommendation**
✓	**Board of County Commissioners Hearing for Transmittal**
✓	**Staff Response to the DCA Objections, Recommendations, and Comments (ORC) Report**
	Board of County Commissioners Hearing for Adoption

STAFF REPORT PREPARATION DATE: July 8, 2002

PART I - BACKGROUND AND STAFF RECOMMENDATION

A. SUMMARY OF APPLICATION

1. APPLICANT:
LEE COUNTY BOARD OF COUNTY COMMISSIONERS
REPRESENTED BY LEE COUNTY DIVISION OF PLANNING

2. REQUEST:
Amend Community Facilities and Services Element, Goal 40: Coordinated Surface Water Management and Land Use Planning on a Watershed Basis to add a new Objective and Policy regarding incorporation of green infrastructure into the surface water management systems of proposed developments, and provide definitions for green infrastructure and flow-way in the Glossary.

B. STAFF RECOMMENDATION AND FINDINGS OF FACT SUMMARY:

1. RECOMMENDATION: Planning staff recommends that Lee Plan Goal 40 be amended to add an Objective and that the Glossary be amended to add definitions for GREEN INFRASTUCTURE and FLOW-WAY as follows:

DEFINITION: Green Infrastructure: Surface water management structures that are "soft" structures such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: An area of lower elevation that conveys water or has the potential to convey water. The flow-way may contain uplands, wetlands or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where stormwater moves within variable dimensions instead of a well defined channel. The area of flow in this case has enough general confinement to exhibit stormwater flow characteristics and is evidenced by, but not limited to, drift lines, rack lines, sediment deposits, soils and root scour, and absence of litter or groundcover. A natural flow-way can be a series of lower elevation areas that connect isolated wetlands that interconnect when water levels raise high enough to form a continuous flow path.

A man-made naturalized flow-way is a constructed wetland system (typically a marsh) used for nutrient uptake, stormwater treatment, and/or stormwater conveyance.

A man-made hard stucture flow-way is a physical connection between stormwater basins (e.g. canal, culvert, pipeline, or combinations thereof).

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The county encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The county encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The county encourages the preservation of existing flow-ways and the restoration of historic flow-ways.

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

- Benefits of incorporating green infrastructure into the surface water management system include improving water quality, improving air quality, improving water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

- Surface water management systems can be designed to establish the control elevation at a level to insure the correct hydroperiod for incorporation of existing wetlands.

- Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost.

- Green infrastructure can preserve and enhance the natural features and processes of a site.

- Green infrastructure can maximize post-development economic and environmental benefits.

- Green infrastructure, if designed properly, can be less maintenance intensive than conventional stormwater conveyance systems.

- Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them.

- U.S. Fish and Wildlife Service suggest that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

- Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

C. BACKGROUND INFORMATION

Incorporating green infrastructure in the surface water management design provides ecological and aesthetic benefits. The vegetation will uptake nutrients improving water quality and processing carbon dioxide into oxygen improving air quality. These areas provide water storage and water recharge/infiltration. The habitat provides foraging, roosting and nesting opportunities for wetland dependent wildlife. Lee County listed species that may benefit from the green infrastructure include roseate spoonbill, little blue heron, reddish egret, snowy egret, tricolor heron, wood stork, limpkin, Big Cypress fox squirrel, snail kite, American alligator, gopher frog, Everglades mink, Florida sandhill crane, Florida black bear, and Florida panther. Additionally, these areas will provide visual relief within the urban environment, as well as, passive recreational opportunities.

Urban surface water management system design should be a multipurpose, multimeans effort for achieving water quality enhancement, groundwater recharge, recreation, wildlife habitat, wetlands creation, protection of landmarks, control of erosion and sediment deposition, and creation of open spaces. Development sites should be carefully mapped to locate existing natural features so the design can take into consideration the functions within the natural drainage system. The incorporation of "natural" engineering techniques or green infrastructure can preserve and enhance the natural features and processes of a site while maximizing post-development economic and environmental benefits. Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them. [Design and Construction of Urban Stormwater Management Systems, The Urban Water Resources Research Council of the American Society of Civil Engineers and the Water Environment Federation, 1992]

Native plant communities can be incorporated into the surface water management system. The use of existing wetlands within the system design may be achieved by establishing the control elevation at a level that insures the hydroperiod is maintained or improved. The engineering of the surface water management system can provide basins with different control elevations to incorporate a wetland in one portion of the site, while creating a different control elevation in portions that do not utilize the existing wetland system.

"Design of wetland stormwater discharge systems is based primarily on knowledge of the hydrologic limits of various wetland plant communities and the requirements of Chapter 2-25 FAC. Pre-development hydroperiod and maximum flooding depth can be determined by an ecologist familiar with the tolerance limits of Florida wetland plant communities. Sizing of the wetland area, weirs, berms, and pretreatment systems must be based on an analysis of stormwater flows."[Knight, R.L., L. Scwartz & E. Livingston. 1999. *Use of Wetlands for Stormwater and Wastewater Treatment*]

Planning staff have noticed a trend in proposed developments requesting deviations from the indigenous open space requirement to impact isolated wetland systems during the planned development zoning process. The applicants state that the South Florida Water Management District (SFWMD) requires secondary impact mitigation for wetlands incorporated into surface water management systems, and that any wetland under 3 acres in size may be impacted through the SFWMD permitting process. Additionally, the justifications state that the county does not have regulatory authority over wetland systems. The county does not review and permit wetland impacts. However, the county does have indigenous open space requirements per the Land Development Code (LDC) Section 10-415(b). Also, planned development site design is required to not unnecessarily alter or impact natural features of the site per LDC Section 34-9411(g). Incorporation of wetland plant communities should be considered in the development site and surface water management system designs.

PART II - STAFF ANALYSIS

A. STAFF DISCUSSION

Green infrastructure "could well be the next frontier in environmental stewardship" as noted in the August 2000 issue of Planning (p. 14). Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost. This type of design is being applied to large watersheds through public infrastructure such as the South Florida Water Management District's redesign of the Dade County canal system, and within private developments such as the PECO Energy Company in Pennsylvania (Planning, August 2000, p.14-17). Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

The U.S. Fish and Wildlife Service released a report on June 11, 2002 entitled "Geographically Isolated Wetlands: A Preliminary Assessment of Their Characteristics and Status in Selected "Areas of the United States"which indicates isolated wetlands are both exceptionally important and exceptionally vulnerable to destruction. Isolated wetlands are defined as those with no apparent surface water connection to perennial rivers and streams, estuaries, or the ocean. These wetlands perform a number of functions including water storage and gradual release, protection against flooding, filtering of sediment and pollution from runoff, habitat for wildlife, and resources for recreation. The report

suggests that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

The Audubon International Signature Program for golf courses require an environmental assessment of the property prior to designing the golf course. This analysis is done as the first step in the design in order to maximize the retention of natural features, and determine the best surface water management plan. Features of such courses often include preservation of flow-ways, creation of flow-ways, and filtration marshes. This type of design planning would be of benefit to other development sites by fitting the project to the existing conditions of the site.

B. CONCLUSIONS

Lee County continues to grow with approximately 10,000 to 14,000 new residents a year between 1997 and 2001. This steady growth adds pressure to the existing natural systems and water supply. Incorporating green infrastructure and flow-ways into surface water management design will help protect the groundwater and surface water in Lee County. Also, green infrastructure furthers Lee County's efforts in achieving EPA's non-degradation water quality criteria for stormwater discharges to designated Outstanding Florida Waterways and compliance with future total maximum daily loads established for impaired water-bodies. Best Management Practices (BMPs) required under current surface water permitting have variable removal efficiencies for specific pollutants. Green infrastructure, such as filter marshes, have demonstrated significant nutrient reduction capabilities. The Federal government will soon be addressing maximum daily loads of discharge and levels of nutrients within the discharge. Green infrastructure will maximize the onsite retention time, nutrient uptake, nutrient settling, and groundwater recharge thereby reducing the degradation of natural rivers, Estero Bay Aquatic Preserve, and the Gulf of Mexico. The incorporation of green infrastructure and flow-ways into surface water management systems will help development in Lee County to be within the maximum daily loads allowed by Federal regulations.

C. STAFF RECOMMENDATION

Planning staff recommends that the Board of County Commissioners transmit the proposed amendment.

PART III - LOCAL PLANNING AGENCY REVIEW AND RECOMMENDATION

DATE OF PUBLIC HEARING: July 22, 2002

A. LOCAL PLANNING AGENCY REVIEW

One LPA member asked staff why the language only "encourages" instead of stating "must" within policies 40.5.1, 40.5.2, and 40.5.3. The concern was that the language was not strict enough. Staff replied that the Lee Plan sets policy and guidance for development design. Whereas the Land Development Code (LDC) establishes requirements for the permitting of projects.

Public input was then taken. Several developer representatives agreed with the concept of the proposed amendment. However, they expressed a few concerns. First, they requested the proposal be set aside until a workshop could be held with the development community. Another concern was what LDC requirements would result if this amendment is adopted. They also believed these issues are already covered by other agencies. One local landuse attorney believed that there was ample language already in the Lee Plan for staff to proceed with drafting LDC standards and requirements for the incorporation of green infrastructure, flow-ways and isolated wetlands. These speakers did agree that a flow-way definition is needed in the Lee Plan, but were concerned with the proposed definition. No suggestions were made on how to revise the flow-way definition. Additionally, the developer representatives raised the issue that the language as proposed encourages the incorporation of both natural and man-made flow-ways into the design of a project. They felt that man-made flow-ways should not be included. One local engineer was also concerned that the use of green infrastructure would increase maintenance costs compared to surface water management systems using hard structures. No analysis was provided to demonstrate the increased cost or maintenance.

There was concern from one member of the LPA that the proposed language may be detrimental to upcoming State and/or Federal regulations with regard to the water quality of Lee County's natural waterways. Staff indicated that the policies would help not hinder future water quality standards.

Another LPA member indicated that he was in support of the concept but felt the proposal was premature.

Some members of the LPA stated the proposed amendment is a good first step towards addressing green infrastructure and protecting flow-ways which is important in southwest Florida. They also indicated there are additional areas the County should address such as improving old infrastructure, updating old developments, and providing incentives to preserve flow-ways on all properties.

Staff was asked to address the concern that the proposed language is redundant with other agencies regulations. Staff stated that the proposed Lee Plan language sets policy. The amendment directs staff and the development community to evaluate the incorporation of flow-ways and green infrastructure into site design. This notifies everyone that the County does want to review these issues and is not deferring to another agency. The language is not regulatory. The Lee Plan addresses the planning stage of development.

The majority of the LPA members stated the importance of including such language in the Lee Plan to demonstrate to State and Federal agencies how Lee County is addressing water conveyance and water quality. They also indicated that the language was soft in that it encourages, rather than requiring, the incorporation of green infrastructure, flow-ways and isolated wetlands into surface water management design.

The LPA directed staff to compile a flow-way map and to involve the development community in any LDC language that would result from this amendment. LPA members stated that incentives should be given when flow-ways are preserved or restored. One LPA member expressed that flow-way protection and restoration is so important that Conservation 2020 should purchase lands containing flow-ways.

B. LOCAL PLANNING AGENCY RECOMMENDATION AND FINDINGS OF FACT SUMMARY

1. **RECOMMENDATION:** The LPA recommended transmittal of the proposed language by the Board of County Commissioners.

2. **BASIS AND RECOMMENDED FINDINGS OF FACT:** The LPA recommended the transmittal of CPA2001-00027 due to the consistency with other Lee Plan language. Members stated the importance of including such language in the Lee Plan to demonstrate to State and Federal agencies that Lee County will be taking an active role in implementing water quality issues that are forthcoming including Total Maximum Daily Loads (TMDL).

C. VOTE:

NOEL ANDRESS	Yes
MATT BIXLER	Yes
SUSAN BROOKMAN	Yes
RONALD INGE	No
GORDON REIGLEMAN	Yes
ROBERT SHELDON	No
GREG STUART	Absent

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR TRANSMITTAL OF PROPOSED AMENDMENT

DATE OF TRANSMITTAL HEARING: September 4, 2002

A. BOARD REVIEW: The Board of County Commissioners took public input regarding the proposal. The development community reiterated their concerns presented to the LPA and detailed under the LPA Review section above. One member of the public spoke in favor of the proposal stating the amendment supports smart growth, enhanced water storage, and better water management systems as Lee County's population continues to grow. He concluded that the proposal is important to the environment and economy of Lee County.

The Board of County Commissioners then discussed the proposal. One board member was concerned with the prematurity of the proposal. Other members responded that they did not understand why there was such opposition, and that this amendment is sorely needed. The Board directed staff to work on mapping flow-ways and modeling techniques. Additionally, the staff was given direction to present a progress report to the Board in January 2003.

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. **BOARD ACTION:** The Board approved transmittal to DCA for their review.

2. **BASIS AND RECOMMENDED FINDINGS OF FACT:** The Board concurred with staff and the LPA's findings.

C. VOTE:

JOHN ALBION	**Yes**
ANDREW COY	**Absent**
BOB JANES	**Yes**
RAY JUDAH	**Yes**
DOUG ST. CERNY	**Yes**

PART V - DEPARTMENT OF COMMUNITY AFFAIRS OBJECTIONS, RECOMMENDATIONS, AND COMMENTS (ORC) REPORT

DATE OF ORC REPORT: November 22, 2002

A. DCA OBJECTIONS, RECOMMENDATIONS AND COMMENTS

DCA had no objections or recommendations to the revised language resulting from a number of meetings.

DCA did comment that Council staff believes that additional green infrastructure can be preserved and that the amendment provides the type of interrelated surface water management/green infrastructure activity that is consistent with and promoted by the Strategic Regional Policy Plan, July 4, 2002.

B. STAFF RECOMMENDATION

County staff held a series of meetings to address concerns raised at the BOCC transmittal hearing. The first meeting took place on September 30, 2002, with the development community and South Florida Water Management District (SFWMD) staff. County staff explained in depth the reasoning behind and intended purpose of the proposed amendment. The development community reiterated many of the same concerns that were raised at the BOCC transmittal hearing. Additionally, it was determined that revisions as a matter of clarification to the proposed language would bring a comfort level to the development community. The group also requested that staff meet with SFWMD and the Florida Department of Environmental Protection (DEP) staff to find out if these State agencies had any objections or recommendations.

County staff met with SFWMD and DEP staff on October 2, 2002. During this meeting county staff explained the proposed amendment and what would be achieved by this amendment. SFWMD and DEP staff agreed with the concept and made recommendations to language revisions to help clarify the amendment and better achieve the objectives. County staff compiled the revised language and sent it to SFWMD and DEP staff for comments. SFWMD and DEP staff supported the revised language (Attachment 1). Additionally, SFWMD staff stated that "it is exciting to be collaborating with the county on these issues."

The revised language resulting from the September 30 and October 2, 2002, meetings was forwarded to interested parties to review and comment. The revised language was forwarded to interested parties on October 14, 2002, with a follow up e-mail on October 25, 2002. A meeting was held on October 29, 2002, with the development community, environmental groups, and State agencies. There was a long discussion which resulted in county staff requesting any recommended language changes be submitted by November 6, 2002, to be compiled for discussion.

The last discussion meeting was held November 12, 2002. Many of the issues appear to be resolved by the revised language, and county staff's commitment to hold similar meetings during the compilation of any subsequent Land Development Code amendments.

DCA staff requested a clarification on how the flow-way definition was compiled, and a history of the meetings subsequent to the BOCC transmittal hearing. County staff forwarded the requested information including the following: The flow-way definition was evolved from the Florida Division

of Forestry definition for Wetland Flow-way, the EPA document for the Indian River Lagoon Restoration Feasibility Study, the South Florida Water Management District's flow-way definition included in "Object-Oriented Routing Model Overview," and consultation with Roland Ottolini, Director Lee County Natural Resources.

A concern raised by the development community was the lack of supporting data and analysis for the proposed amendment. DCA staff indicated that the submitted analysis with the follow up information regarding how the flow-way definition was derived is adequate data and analysis to support the proposal.

County staff recommend the BOCC adopt the revised language as follows:

DEFINITION: Green Infrastructure: Surface water management ~~structures~~ systems that are "soft" ~~structures~~ features such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: ~~An~~ A defined area ~~of lower elevation~~ that ~~historically or currently~~ conveys surface water during typical seasonal weather patterns. ~~or has the potential to convey water~~. The flow-way may contain uplands, wetlands, defined natural or artificial channels, or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where ~~stormwater~~ surface water moves within variable dimensions ~~instead of~~ or a well defined channel. The area of flow in this case has enough general confinement to exhibit ~~stormwater~~ surface water flow characteristics and is ~~evidenced by, but not limited to,~~ determined through reasonable scientific judgment utilizing information such as soils maps, aerial photography, topographic maps, USGS maps, drift lines, rack lines, sediment deposits, soils and root scour, ~~and~~ absence of litter or groundcover, and field verifications. A natural flow-way can be a series of lower elevation upland areas that ~~connect~~ allow otherwise isolated wetlands ~~that~~ to interconnect when surface water levels ~~raise~~ rise high enough during typical high water seasonal level to form a continuous flow path. Natural flow-ways typically include but are not limited to rivers, creeks, streams, sloughs, interconnected wetlands, and associated floodplain.

A man-made naturalized flow-way is a constructed ~~wetland~~ surface water management system ~~(typically a marsh)~~ consisting of soft features used for nutrient uptake, ~~stormwater~~ surface water treatment, and/or ~~stormwater~~ surface water conveyance. Man-made naturalized flow-ways typically include but are not limited to filter marshes, created wetlands, swales planted with native vegetation, created streams/creeks, created pond or lake systems interconnected through native vegetation areas, or combinations thereof.

A man-made ~~hard structure~~ structural flow-way is a physical connection between surface water management ~~stormwater~~ basins ~~(e.g. canal, culvert, pipeline, or combinations thereof)~~. Man-made structural flow-ways typically include but are not limited to culverts, ditches, canals, pipelines, mowed grass swales, rip-rap swales, or combinations thereof. This will not include roadways, fire breaks, or similar man-made structures.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The County encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways.

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR ADOPTION OF PROPOSED AMENDMENT

DATE OF ADOPTION HEARING: _____

A. BOARD REVIEW:

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. BOARD ACTION:

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

C. VOTE:

	_____
JOHN ALBION	_____
ANDREW COY	_____
BOB JANES	_____
RAY JUDAH	_____
DOUG ST. CERNY	_____

ATTACHMENT - 1

SFWMD & DEP Correspondence

From: Carol Wehle <cwehle@sfwmd.gov>
To: "'Kim Trebatoski'" <TREBATKM@leegov.com>, <lucy.blair@dep.state.fl.us>, <rick.cantrell@dep.state.fl.us>, <ECKENRPJ.LEEPO02.LEEDOM1@leegov.com>, <JOYCERK.LEEPO02.LEEDOM1@leegov.com>, <MILLERJM.LEEPO02.LEEDOM1@leegov.com>, <NOBLEMA.LEEPO02.LEEDOM1@leegov.com>, <OCONNOPS.LEEPO02.LEEDOM1@leegov.com>, <OTTOLIRE.LEEPO02.LEEDOM1@leegov.com>, <TREBATKM.LEEPO02.LEEDOM1@leegov.com>, <cpalmer@sfwmd.gov>, <kjohnson@sfwmd.gov>, <rthomps@sfwmd.gov>
Date: 10/3/02 10:11AM
Subject: RE: Flow-way Amendment Language

Thank you so much for all your work. It is exciting to be collaborating with the county on these issues. I have asked Carla Palmer to coordinate all the District's comments so that you have one point of contact. Let me know if you need anything else. Carol

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Wednesday, October 02, 2002 4:36 PM
To: lucy.blair@dep.state.fl.us; rick.cantrell@dep.state.fl.us; ECKENRPJ.LEEPO02.LEEDOM1@leegov.com; JOYCERK.LEEPO02.LEEDOM1@leegov.com; MILLERJM.LEEPO02.LEEDOM1@leegov.com; NOBLEMA.LEEPO02.LEEDOM1@leegov.com; OCONNOPS.LEEPO02.LEEDOM1@leegov.com; OTTOLIRE.LEEPO02.LEEDOM1@leegov.com; TREBATKM.LEEPO02.LEEDOM1@leegov.com; cpalmer@sfwmd.gov; cwehle@sfwmd.gov; kjohnson@sfwmd.gov; rthomps@sfwmd.gov
Subject: Flow-way Amendment Language

Thank you for meeting today. It was very helpful. Please review attached changes to the proposed Lee Plan Amendment regarding flow-ways and green infrastructure. There is a redlined version, and an easier to read revised language version.

Please send any comments, so I can compile the input.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

CC: "'Carla Palmer'" <cpalmer@sfwmd.gov>

From: "Palmer, Carla" <cpalmer@sfwmd.gov>
To: <TREBATKM@leegov.com>
Date: 10/14/02 8:01AM
Subject: Re: Lee Plan Flow-way Language

Kim. We are happy with the wording we discussed at our last meeting. I like what Rick Cantrell wrote and we have nothing further to add at this time. Thanks for all the energy you have put into this. Carla

---

Sent from my BlackBerry Wireless Handheld

SFWMD Wireless Email Solutions

From: "Cantrell, Richard" <Richard.Cantrell@dep.state.fl.us>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 10/25/02 11:20AM
Subject: RE: Lee Plan Flow-way Amendment Meeting

Kim: My concern is that we do not inadvertently include lawns and other developed property which during rainfall events my transport water and that afterwards show rack lines or other listed evidence. My concerns could be addressed under "reasonable scientific judgment" but the suggested clause could provide "intent comfort". I agree that you want to stay away from an engineering event threshold. That is not the intend of my suggestion.

Thanks, Rick

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Friday, October 25, 2002 10:59 AM
To: Cantrell, Richard
Subject: RE: Lee Plan Flow-way Amendment Meeting

Rick - Please explain what you mean by "for sustained periods beyond discreet rainfall events". Roland and I were discussing your recommendation, and each had a different take on the meaning. Also, we were trying to avoid attaching the definition to a certain rainfall event such as 5-year flood elevation.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

>>> "Cantrell, Richard" <Richard.Cantrell@dep.state.fl.us> 10/25/02 10:21AM >>>
Kim: I have added one suggestion to the overall Flow-way definition (shown as BOLD). The meeting conflicts with a staff meeting but we will try to attend.

Rick

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Friday, October 25, 2002 8:47 AM
To: Amico@abbinc.com; Beeverjw@aol.com; rawessel@att.net; kmarquis@audubonintl.org; smarshall@bankseng.com; CarlB@barraco.net; Kimf@bonitabaygroup.com; mitchh@bonitabaygroup.com; mattb@conservancy.org; Stafford, Heather; Cantrell, Richard; ivincent@dexbender.com; flpnaples@earthlink.net; charles.basinait@henlaw.com; NedDewhirst@hmeng.com; BNH@johnsoneng.com; dvw@johnsoneng.com; Matthew Noble; Roland Ottolini; Wayne Daltry; kenp@passarella.net; stevehartsell@paveselaw.com; jcassani@peganet.com; cpalmer@sfwmd.gov; lbeever@swfrpc.org; keyda@ushome.com; sconnell@worthingtoncommunities.com

Cc: Pete Eckenrode; Rick Joyce; Paul O'Connor; Pam Houck
Subject: Lee Plan Flow-way Amendment Meeting

The second flow-way amendment discussion meeting will be held Tuesday, October 29, 2002 at 11am-noon in Conf. Room 2-C of the Lee County Public Works & Community Development Building.

The revisions to the amendment language as a result of meetings with SFWMD & DEP staff, as well as, input received are attached including a red-lined document and a "cleaned up" version. The revised language is clarification language. The intent of the amendment transmitted to DCA has not been changed.

This meeting is an open discussion. Please forward this message to any interested parties.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

DEFINITION: Green Infrastructure: Surface water management ~~structures~~ systems that are "soft" ~~structures~~ features such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: ~~An~~ A defined area ~~of lower elevation~~ that ~~historically or currently~~ conveys surface water **for sustained periods beyond discreet rainfall events** during typical seasonal weather patterns. ~~or has the potential to convey water~~. The flow-way may contain uplands, wetlands, defined natural or artificial channels, or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where ~~stormwater~~ surface water moves within variable dimensions ~~instead of~~ or a well defined channel. The area of flow in this case has enough general confinement to exhibit ~~stormwater~~ surface water flow characteristics and is ~~evidenced by, but not limited to,~~ determined through reasonable scientific judgment utilizing information such as soils maps, aerial photography, topographic maps, USGS maps, drift lines, rack lines, sediment deposits, soils and root scour, ~~and~~ absence of litter or groundcover, and field verifications. A natural flow-way can be a series of lower elevation upland areas that ~~connect~~ allow otherwise isolated wetlands ~~that~~ to interconnect when surface water levels ~~raise~~ rise high enough during typical high water seasonal level to form a continuous flow path. Natural flow-ways typically include but are not limited to rivers, creeks, streams, sloughs, interconnected wetlands, and associated floodplain.

A man-made naturalized flow-way is a constructed ~~wetland~~ surface water management system ~~(typically a marsh)~~ consisting of soft features used for nutrient uptake, ~~stormwater~~ surface water treatment, and/or ~~stormwater~~ surface water conveyance. Man-made naturalized flow-ways typically include but are not limited to filter marshes, created wetlands, swales planted with native vegetation, created streams/creeks, created pond or lake systems interconnected through native vegetation areas, or combinations thereof.

A man-made ~~hard structure~~ structural flow-way is a physical connection between surface water management ~~stormwater~~ basins ~~(e.g. canal, culvert, pipeline, or combinations thereof)~~. Man-made structural flow-ways typically include but are not limited to culverts, ditches, canals, pipelines, mowed grass swales, rip-rap swales, or combinations thereof. This will not include roadways, fire breaks, or similar man-made structures.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The County encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways.

Attachment - 2

Other Correspondence Received

From: Roland Ottolini
To: Dist5, Albion
Date: 10/7/02 3:02PM
Subject: flow-ways meetings

Chris,
got your message. we met w/ several consultants (engineering, environmental, and legal) on Monday , Sept 30 at Carl Baracco's office. my understanding Mitch was unable to attend. we drafted some minor revisions to the Plan amendment. also met w/ DEP and SFWMD on Wednesday, Oct 2 and added a few more revisions. will have a follow-up meeting at Carl Baracco's, Tuesday, Oct 29 at noon. anyone who wants to attend should confirm w/ Carl's office.
roland

CC: Daltry, Wayne; Lavender, James; Noble, Matthew; Trebatoski, Kim

From: "Ned Dewhirst" <NedDewhirst@hmeng.com>
To: <TREBATKM@leegov.com>
Date: 10/9/02 4:39PM

Kim: Per our phone discussion, the following are my comments re the flow-way issue. I hope these are not repetitive to your other mtgs/discussions:

1. 2nd paragraph: I like "An area..." rather than "A defined area .." since a lot of times these flow-way areas are not well-defined.
2. 2nd paragraph: .... historically or currently conveys stormwater.
3. Under the 2nd paragraph: "A natural flow-way is an area of lower topographic relief where stormwater flows

within variable dimensions and/or a well defined channel. (Say the case of a creek area with broad banks)

4. Under the 2nd paragraph: " A man-made naturalized flow-way is a constructed wetland/conveyance system used for nutrient uptake, stormwater treatment, and/or stormwater conveyance. This system can be a wetland marsh or forested area in combination with a conveyance or deep water feature." (At The Brooks is where this combination was used to restore a natural flow-way; I know you don't want mostly a lake with a small littoral area but from a conveyance/hydraulic standpoint you need some water volume area also)
5. Below the above sentence, I would delete the definition of man-made hard structure flow-way. First, you do not reference this type flow-way in your objectives/policies. Secondly, this type does not necessarily have to be between stormwater basins. It could be between two lakes within the same basin or as an outfall from the SWM system. I just don't see the purpose for defining. It is sort of a stretch, even for us engineers, to call a pipe a flow-way.
6. Policy 40.5.3: The county encourages the preservation of existing natural flow-ways, the restoration of historic natural flow-ways, and the construction of man-made naturalized flow-ways (where applicable). (You defined man-made naturalized flow-ways but not made any reference in your Objectives/Policies.
7. I would suggest a reference to an incentive for the flow-ways by way of crediting indigenous requirements for both kinds of flow-ways (natural/man-made). Then include the details of the credits within the LDC. In the past, we have had to request deviations for such things during rezonings.

Ned Dewhirst , P.E.
Senior V.P. / Principal

HOLE MONTES
ENGINEERS PLANNERS SURVEYORS

From: Lynda Riley
To: Trebatoski, Kim
Date: 10/14/02 11:24AM
Subject: Re: Flow-way & Green Infrastructure Lee Plan Amendment

The revisions look good to me. Thanks for keeping me in the loop.

>>> Kim Trebatoski 10/14/02 08:18AM >>>
Please see attached revisions to the transmitted Lee Plan Amendment CPA2001-27 regarding flow-ways and green infrastructure. These revisions are a result of meeting held with the development community, and a meeting held with SFWMD and DEP staff. The revisions are clarification language so people better understand the objectives of the amendment.

I have attached a red-line strike thru / underline version so you can see the changes over time, and a "cleaned-up" version which is easier to read. Please forward any comments to me by October 23, so I can compile them for discussion at the October 29th meeting.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

From: Kraig Marquis <kmarquis@audubonintl.org>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 10/15/02 11:11AM
Subject: Re: Flow-way & Green Infrastructure Lee Plan Amendment

Kim,
The revised doc looks good. I didn't have any changes.
Take care,
Kraig

At 08:18 AM 10/14/2002 -0400, you wrote:
>Please see attached revisions to the transmitted Lee Plan Amendment
>CPA2001-27 regarding flow-ways and green infrastructure. These revisions
>are a result of meeting held with the development community, and a meeting
>held with SFWMD and DEP staff. The revisions are clarification language
>so people better understand the objectives of the amendment.
>
>I have attached a red-line strike thru / underline version so you can see
>the changes over time, and a "cleaned-up" version which is easier to
>read. Please forward any comments to me by October 23, so I can compile
>them for discussion at the October 29th meeting.
>
>Kim Trebatoski
>Principal Environmental Planner
>DCD - Planning/Environmental Sciences
>trebatkm@leegov.com
>239-479-8183
>FAX 239-479-8319
>
>

From: "Kim Fikoski" <Kimf@BonitaBayGroup.com>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 10/16/02 4:20PM
Subject: RE: Flow-way & Green Infrastructure Lee Plan Amendment

Can you email me the entire CPA 2001-27 so I better understand the objectives of the ammendment. As far as defintions go, my only comment is that grass swales are a common and effective BMP and planting them with natives is preferable but not necessary for it to be an excellent BMP (40.5.1).

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Monday, October 14, 2002 8:19 AM
To: Beeverjw@aol.com; rawessel@att.net; kmarquis@audubonintl.org; smarshall@bankseng.com; CarlB@barraco.net; Kim Fikoski; Mitch Hutchcraft; mattb@conservancy.org; heather.stafford@dep.state.fl.us; ivincent@dexbender.com; flpnaples@earthlink.net; NedDewhirst@hmeng.com; BNH@johnsoneng.com; dvw@johnsoneng.com; NOBLEMA.LEEPO02.LEEDOM1@leegov.com; RILEYLT.LEEPO02.LEEDOM1@leegov.com; stevehartsell@paveselaw.com; jcassani@peganet.com; cpalmer@sfwmd.gov; dburr@swfrpc.org; lbeever@swfrpc.org; keyda@ushome.com; EdGriffith@wcicommunities.com; sconnell@worthingtoncommunities.com
Cc: OCONNOPS.LEEPO02.LEEDOM1@leegov.com; OTTOLIRE.LEEPO02.LEEDOM1@leegov.com
Subject: Flow-way & Green Infrastructure Lee Plan Amendment

Please see attached revisions to the transmitted Lee Plan Amendment CPA2001-27 regarding flow-ways and green infrastructure. These revisions are a result of meeting held with the development community, and a meeting held with SFWMD and DEP staff. The revisions are clarification language so people better understand the objectives of the amendment.

I have attached a red-line strike thru / underline version so you can see the changes over time, and a "cleaned-up" version which is easier to read. Please forward any comments to me by October 23, so I can compile them for discussion at the October 29th meeting.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

From: "Matt Bixler" <mattb@conservancy.org>
To: "'Kim Trebatoski'" <TREBATKM@leegov.com>
Date: 10/21/02 10:29AM
Subject: RE: Flow-way & Green Infrastructure Lee Plan Amendment

Hello Kim,
The Conservancy is supportive of the current Amendment. We would like to attend the meeting on the 29th in support of the document. Please let me know when and where the meeting will be held.

Also, on a different topic. I saw a public notice in the News Press regarding amendments to the FGCU Plan. The notice said a copy of the amendments is in the Planning Office. What are these amendments regarding? Is it land use or structure of the University?

Thanks,
Matt

-----Original Message-----
From: Kim Trebatoski [mailto:TREBATKM@leegov.com]
Sent: Monday, October 14, 2002 8:19 AM
To: Beeverjw@aol.com; rawessel@att.net; kmarquis@audubonintl.org; smarshall@bankseng.com; CarlB@barraco.net; Kimf@bonitabaygroup.com; mitchh@bonitabaygroup.com; mattb@conservancy.org; heather.stafford@dep.state.fl.us; ivincent@dexbender.com; flpnaples@earthlink.net; NedDewhirst@hmeng.com; BNH@johnsoneng.com; dvw@johnsoneng.com; NOBLEMA.LEEPO02.LEEDOM1@leegov.com; RILEYLT.LEEPO02.LEEDOM1@leegov.com; stevehartsell@paveselaw.com; jcassani@peganet.com; cpalmer@sfwmd.gov; dburr@swfrpc.org; lbeever@swfrpc.org; keyda@ushome.com; EdGriffith@wcicommunities.com; sconnell@worthingtoncommunities.com
Cc: OCONNOPS.LEEPO02.LEEDOM1@leegov.com; OTTOLIRE.LEEPO02.LEEDOM1@leegov.com
Subject: Flow-way & Green Infrastructure Lee Plan Amendment

Please see attached revisions to the transmitted Lee Plan Amendment CPA2001-27 regarding flow-ways and green infrastructure. These revisions are a result of meeting held with the development community, and a meeting held with SFWMD and DEP staff. The revisions are clarification language so people better understand the objectives of the amendment.

I have attached a red-line strike thru / underline version so you can see the changes over time, and a "cleaned-up" version which is easier to read. Please forward any comments to me by October 23, so I can compile them for discussion at the October 29th meeting.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

From: "Stafford, Heather" <Heather.Stafford@dep.state.fl.us>
To: "Paul O'Connor" <OCONNOPS@leegov.com>
Date: 10/23/02 8:48PM
Subject: RE: Greenways Comp Plan Amendment - CPA 2001-27

Please pass on my support of Lee County Comprehensive Plan Amendment - CPA 2001-27 as written. If Lee County is able to encourage developers within the Estero Bay watershed to incorporate these changes to their surface water management systems, the Estero Bay Aquatic Preserve and all residents and visitors in Lee County would benefit.

Heather Stafford, Manager
Estero Bay Aquatic & State Buffer Preserves

-----Original Message-----
From: Paul O'Connor [mailto:OCONNOPS@leegov.com]
Sent: Tuesday, October 01, 2002 4:15 PM
To: beeverjw@aol.com; rawessel@aol.com; mattb@conservancy.org; Stafford, Heather; sbrookperson@earthlink.net; COLLINSD@LCFGW.LCFPO01; Timothy Jones; Roland Ottolini; Brad Vance; Wayne Daltry; jcassani@peganet.com; dburr@swfrpc.org; lbeever@swfrpc.org
Cc: ROSENP@LCFGW.LCFPO01; Ann Polito
Subject: Greenways Comp Plan Amendment - CPA 2001-27

Attached please find an outline that Scott Gilbertson receive from David Graham. The outline calls for the derailing of the so called Greenways Lee Plan Amendment and the establishment of a committee to investigate incentives for flowway preservation.

Also attached is a PDF of the proposed amendment.

Please review these materials and respond as you see fit.

Paul O'Connor, AICP
Director of Planning
Lee County Department of Community Development
1500 Monroe Street
Fort Myers, FL 33901
e mail oconnops@leegov.com
Phone (239) 479-8309; FAX (239) 479-8319

CC: "Lytton, Gary" <Gary.Lytton@dep.state.fl.us>

LEE COUNTY
RECEIVED
02 OCT 25 PM 4:28
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SECOND FLOOR

10/28/02 ✓ Copy to: Paul O. Kim T. Rick J. Matt D.

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Pavese, Haverfield, Dalton, Harrison & Jensen, L.L.P.
P.O. Drawer 1507
Fort Myers, Florida 33902-1507

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Fort Myers, Florida 33912

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REALTOR Association of Greater Fort Myers and the Beach, Inc.
2840 Winkler Avenue
Fort Myers, Florida 33916

SECRETARY
Donald E. Brooks
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3281 Metro Plantation Road
Fort Myers, Florida 33912-1260

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Susan Wunderlich
Ream Title Insurance, Inc.
1820 Colonial Boulevard, Suite 101
Fort Myers, Florida 33907

IMMEDIATE PAST PRESIDENT
Tracy L. Hayden
Florida Rock Industries
4341 Alico Road
Fort Myers, Florida 33913

October 22, 2002

Mr. Charles Gauthier, Bureau Chief
Department of Community Affairs
Bureau of Local Planning
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399

RE: Lee County Comprehensive Plan Amendment
CPA 2001-27 Flow Way and Green Infrastructure

Dear Mr. Gauthier:

The County recently transmitted the above styled plan amendment to the Department for your review and analysis. On behalf of the Real Estate Investment Society (REIS), and its members, I want to express concerns regarding the amendment. The first concern I want to express is a concern regarding the process. It is herein submitted that the County did not comply with Section 163.3181, F.S. I, as the president of REIS, and several other members, heard that the County was working on what was commonly referred to as the "flow-way amendment." I, and others, were repeatedly advised that it wasn't ready yet, it was still in draft form, and they were still working on the language internally. The language was finally made available to the public less than a week prior to the time the matter was scheduled before the Local Planning Agency. The concerned public did not have sufficient time to review, evaluate and address the proposed amendment. Section 163.3181, F.S. submits that, "It is the intent of the Legislature that the public participate in the comprehensive planning process to the fullest extent possible." When this concern was raised at the transmittal hearing there were indications that the public shouldn't be surprised because the staff had been working on the issue for almost a year. This is probably true, however, the interested public had no access to the drafts during that time frame. The participation in the planning process on this amendment was not effective, broad dissemination did not occur and was not possible due to the very, very short time frame. The flow-way issue is of such importance that public workshops should have been held. The amendments were not available until three working days prior to the LPA hearing.

REIS has concerns about the substance of the amendment. The definition is overly broad, and a landowner reading the definition would not have a clear understanding of whether his land was affected and how his land

was affected. No data and analysis in support of the amendment was provided to the public, and to date I am not certain that any data and analysis was undertaken. The language does not contain measurable standards. As written the County could determine that a flow-way exists if water flowed once during the past fifty years between two isolated wetlands. It is clear that the County definition includes more than wetlands, but what is unclear is the extent of the upland areas that can be considered "flow-ways."

It is herein submitted that the Department in its Official Recommendations and Comments should require a clear and concise definition, adequate public participation, data and analysis, and clear standards which would put a reasonable man on notice of the impact the amendment would have on his property. I appreciate your consideration of this matter.

Sincerely,

Neale Montgomery
President
Real Estate Investment Society

NM:tlb
cc: Roger Wilburn
Bernard Piawah
Mary Gibbs
Larry Johnson
Jake Slot
Donald Brooks
Gerald Hendry
Perry Roberts
Russell Schropp
Bruce Stephan
Stan Stouder
Randy Thibaut
Susan Wunderlich
Fred Burson
Bill Burdette
Tracy Hayden
Charles Basinait
REISFLOW.WPD

From: Wayne Daltry
To: Trebatoski, Kim
Date: 10/29/02 2:23PM
Subject: Re: Lee Plan Flow-way Amendment Meeting

Hellow Kim

You held up to the abuse (no, wait, wrong word, errr challenge, yeah that is it, CHALLENGE) quite well today. You have my admiration.

Here were my concepts set up as "policies" which fit either in Sec 40.5 or some where else (or no where else). Into the Barrel!

40.5.4. By (x date) the County will have established a schedule by which each basin of the County will be reviewed for mapping the flowways necessary for surface water management. The mapping wil depict which flowways are man made strucural, man made naturalized, or natural flowways. Each flowway identified will have either an identified series of management objectives for flow, quality, storage, recharge, or green infrastructure, or a schedule by which these objectives will be established. The mapping may be undertaken in part or in whole as part of the County Mitigation Plan development program.

40.5.5 By (x date) the County will have amended its LDRs to implement Sections 40.5.1-4. Such amendments will include the regulatory components necessary to implement flow requirements, and the appropriate mix of regulations and incentives to implement the quality, storage, recharge and green infrastructure objectives.

40.5.6 The County will explore with the permitting agencies the feasibility of pursuing delegation of part or all delegatable authority for stormwater and flowway management once the mapping and LDR process is completed.

Wayne E. Daltry
Director, Smart Growth Department
wdaltry@leegov.com
239-335-2840
239-335-2262 (fax)

CC: Noble, Matthew; O'Connor, Paul; Ottolini, Roland

From: Kim Trebatoski
To: Vincent, Ian
Date: 10/29/02 4:49PM
Subject: Re: a couple of questions

The county will rely on SFWMD & DEP jurisdictionals for wetland determination.

Having criteria to determine a flow-way rating would sure help. This is one area that we can be discussing and formulating through the land development code revisions to address the policies.

Thank you for continuing participation!

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

>>> "Ian Vincent" <ivincent@dexbender.com> 10/29/02 04:16PM >>>
Again, thanks for taking the time to listen to everybody's ranting. I hope that you don't feel like you're being ganged up on, it's just that we are all trying to foresee how we will be able to address the issue in due diligence. I do have a couple of questions that came to me after I had some time to digest the meeting (as well as my lunch).

1. policy 40.5.2 states that Staff encourages incorporating existing wetland systems. I am curious if Staff is planning to rely on SFWMD for the JD or if the County is going to have their own wetland criteria.

2. Both you and Roland spoke about the flow way issue saying that "critical" flow-ways must be preserved and the less critical would be given less scrutiny. Who will be making the determination as to which flow ways are critical? Do you think it would be feasible for us to work on some kind of quantifiable system for evaluating flow-way function. Something similar to WRAP, but actually scientifically sound?

These are just questions, I'm sure you'll be getting your share and then some over the next few days. You mentioned that you are looking for constructive suggestions. I would be glad to assist in any way that I can.

Ian M. Vincent
W. Dexter Bender & Associates

----- Original Message -----
From: "Kim Trebatoski" <TREBATKM@leegov.com>
To: <bauer606@aol.com>; <rawessel@att.net>; <smarshall@bankseng.com>; <CarlB@barraco.net>; <mitchh@bonitabaygroup.com>; <GaryD@conservancy.org>; <mattb@conservancy.org>; <Richard.Cantrell@dep.state.fl.us>; <ivincent@dexbender.com>; <stevebrookman@earthlink.com>; <sbrookperson@earthlink.net>; <NedDewhirst@holemontes.com>; <dvw@johnsoneng.com>; "Matthew Noble" <NOBLEMA.LEEPO02.LEEDOM1@leegov.com>; "Roland Ottolini" <OTTOLIRE.LEEPO02.LEEDOM1@leegov.com>; "Wayne Daltry" <WDALTRY.LEEPO01.LEEDOM1@leegov.com>; <Raymond.Pavelka@marinerproperties.com>; <stevehartsell@paveselaw.com>; <jcassani@peganet.com>; <cpalmer@sfwmd.gov>; <IBarnett@VANDAY.com>;

<mbracci@VANDAY.com>
Sent: Tuesday, October 29, 2002 4:01 PM
Subject: Next Meeting

Thank you for participating in the discussions regarding the proposed Lee Plan amendment (CPA2001-27) dealing with flow-ways and green infrastructure.

A final meeting will be held Tues, Nov 12 at 11am at the county Public Works/Community Development building in Conference Room 2C. The purpose of this meeting will be to discuss the addition of policies regarding mapping, incentives, measurable standards, and exploring the possibility of agencies delegating some authority to the county.

Please forward any recommended policy language to me by Wed. Nov. 6th. I will compile the recommendations and send a working copy out by Fri. Nov. 8th for discussion on Nov. 12th.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com
239-479-8183
FAX 239-479-8319

FLORIDA AGGREGATES GROUP: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781
FLORIDA ROCK INDUSTRIES INC Mining, Ready Mix Concrete, and Construction Products
Reply to Division Office: 14341 Alico Road, Fort Myers, FL 33913 / (239) 267-1803 ext. 40 / FAX (239) 267-2887



To Pres.
cc: Kim
Rick J
Mit

November 5, 2002

Mr. Charles Gauthier, Bureau Chief
Department of Community Affairs
Bureau of Local Planning
2555 Shumard Oak Blvd.
Tallahassee, FL 32399

Via Email, Copy to Follow in Mail

Re: Lee County Comp. Plan Amendment
CPA 2001-27 Flow Way and Green Infrastructure

Dear Mr. Gauthier:

Lee County transmitted the referenced plan amendment to the Department of Community Affairs (DCA) for your review and analysis. Based on the lack of public review and input, and that no data and analysis has been provided in support of this amendment, I object to this Plan Amendment.

I respectfully request that DCA require in its Official Recommendations and Comments adequate public participation and supporting data and analysis.

Thank you for your consideration.

Sincerely,

Tracy L. Hayden
Environmental Manager - South Florida

cc: Roger Wilburn
Bernard Piawah
Mary Gibbs

LEE COUNTY
RECEIVED
02 NOV -7 PM 2:43
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SECOND FLOOR

NOV 0 8 2002

Environmental Sciences

Vanasse Daylor

MEMORANDUM

To: Kim Trebatoski; Sr. Environmental Planner, Lee County

From: Ilene Barnett; Director, Environmental Sciences

Date: November 6, 2002

Re: Proposed Lee Plan Flow-way Amendments

RECEIVED

NOV 0 8 2002

Environmental Sciences

Urban Planning
Landscape Architecture
Civil Engineering
Traffic Engineering
Environmental Science
FL 366

Thank you for the opportunity to comment on the proposed language for the Lee County Proposed Flow-way Amendment. Below, I have included my recommended revisions for your consideration:

With regards to the definition, this should be coordinated with the South Florida Water Management District's definition and criteria for flow ways. Include parameters such as width, length, capacity and importance of the flow way based on the definition.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments, through a system of appropriate incentives, to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.2: The County encourages new developments, through a system of appropriate incentives, ~~-~~to design their surface water management system to incorporate existing wetland systems. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways, through a system of appropriate incentives. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.4: The County will implement a County-wide water quality and flowway improvement and protection plan, including data collection and analysis; prioritizations and goals; monitoring methods; etc. Plan will provide for such potential activities as retrofitting of existing infrastructure and acquisition and restoration of undeveloped lands where practicable and non-intrusive to private property. Funding for this plan and its implementation shall be

12730 New Brittany Boulevard, Suite 600, Fort Myers, Florida 33907 T 239.437.4601 F 239.437.4636 W vanday.com

through grants, public-private partnership initiatives, and other non-regulatory and non-tax funding sources. Drafting of this plan will allow for extensive collaborative planning and decision making via public input and consensus building in the community.

POLICY 40.5.5: The County will adopt modifications to the Capital Improvements Element that earmarks funding for the necessary upstream and downstream improvements for identified flow ways and drainage basins. This plan should also identify potential creative public/private funding avenues that may be explored in addition to the requisite public funding.

POLICY 40.5.6: The County will amend other sections of the Land Development Code and Lee Plan to assure that they support best management practices for flow way protection. These sections include, but are not limited to Open Space, Housing, Economic Development, and Capital Improvements Elements.

POLICY 40.5.7: The County shall coordinate with and consult with recognized experts from the South Florida Water Management District and the U.S. Army Corps of Engineers with regards to flowway preservation and restoration issues in Lee County, to avoid conflicts and duplication of effort.

End of memorandum

CPA2001-27
BoCC SPONSORED AMENDMENT TO THE

LEE COUNTY COMPREHENSIVE PLAN

THE LEE PLAN

DCA Transmittal Document

Lee County Planning Division
1500 Monroe Street
P.O. Box 398
Fort Myers, FL 33902-0398
(239) 479-8585

September 18, 2002

LEE COUNTY
DIVISION OF PLANNING
STAFF REPORT FOR
COMPREHENSIVE PLAN AMENDMENT
CPA2001-00027

☑ **Text Amendment** ☐ **Map Amendment**

	This Document Contains the Following Reviews:
✓	**Staff Review**
✓	**Local Planning Agency Review and Recommendation**
✓	**Board of County Commissioners Hearing for Transmittal**
	Staff Response to the DCA Objections, Recommendations, and Comments (ORC) Report
	Board of County Commissioners Hearing for Adoption

STAFF REPORT PREPARATION DATE: July 8, 2002

PART I - BACKGROUND AND STAFF RECOMMENDATION

A. SUMMARY OF APPLICATION

1. APPLICANT:
LEE COUNTY BOARD OF COUNTY COMMISSIONERS
REPRESENTED BY LEE COUNTY DIVISION OF PLANNING

2. REQUEST:
Amend Community Facilities and Services Element, Goal 40: Coordinated Surface Water Management and Land Use Planning on a Watershed Basis to add a new Objective and Policy regarding incorporation of green infrastructure into the surface water management systems of proposed developments, and provide definitions for green infrastructure and flow-way in the Glossary.

B. STAFF RECOMMENDATION AND FINDINGS OF FACT SUMMARY:

1. RECOMMENDATION: Planning staff recommends that Lee Plan Goal 40 be amended to add an Objective and that the Glossary be amended to add definitions for GREEN INFRASTUCTURE and FLOW-WAY as follows:

DEFINITION: **Green Infrastructure:** Surface water management structures that are "soft" structures such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: An area of lower elevation that conveys water or has the potential to convey water. The flow-way may contain uplands, wetlands or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where stormwater moves within variable dimensions instead of a well defined channel. The area of flow in this case has enough general confinement to exhibit stormwater flow characteristics and is evidenced by, but not limited to, drift lines, rack lines, sediment deposits, soils and root scour, and absence of litter or groundcover. A natural flow-way can be a series of lower elevation areas that connect isolated wetlands that interconnect when water levels raise high enough to form a continuous flow path.

A man-made naturalized flow-way is a constructed wetland system (typically a marsh) used for nutrient uptake, stormwater treatment, and/or stormwater conveyance.

A man-made hard stucture flow-way is a physical connection between stormwater basins (e.g. canal, culvert, pipeline, or combinations thereof).

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The county encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The county encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The county encourages the preservation of existing flow-ways and the restoration of historic flow-ways.

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

- Benefits of incorporating green infrastructure into the surface water management system include improving water quality, improving air quality, improving water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

- Surface water management systems can be designed to establish the control elevation at a level to insure the correct hydroperiod for incorporation of existing wetlands.

- Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost.

- Green infrastructure can preserve and enhance the natural features and processes of a site.

- Green infrastructure can maximize post-development economic and environmental benefits.

- Green infrastructure, if designed properly, can be less maintenance intensive than conventional stormwater conveyance systems.

- Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them.

- U.S. Fish and Wildlife Service suggest that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

- Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

C. BACKGROUND INFORMATION

Incorporating green infrastructure in the surface water management design provides ecological and aesthetic benefits. The vegetation will uptake nutrients improving water quality and processing carbon dioxide into oxygen improving air quality. These areas provide water storage and water recharge/infiltration. The habitat provides foraging, roosting and nesting opportunities for wetland dependent wildlife. Lee County listed species that may benefit from the green infrastructure include roseate spoonbill, little blue heron, reddish egret, snowy egret, tricolor heron, wood stork, limpkin, Big Cypress fox squirrel, snail kite, American alligator, gopher frog, Everglades mink, Florida sandhill crane, Florida black bear, and Florida panther. Additionally, these areas will provide visual relief within the urban environment, as well as, passive recreational opportunities.

Urban surface water management system design should be a multipurpose, multimeans effort for achieving water quality enhancement, groundwater recharge, recreation, wildlife habitat, wetlands creation, protection of landmarks, control of erosion and sediment deposition, and creation of open spaces. Development sites should be carefully mapped to locate existing natural features so the design can take into consideration the functions within the natural drainage system. The incorporation of "natural" engineering techniques or green infrastructure can preserve and enhance the natural features and processes of a site while maximizing post-development economic and environmental benefits. Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them. [Design and Construction of Urban Stormwater Management Systems, The Urban Water Resources Research Council of the American Society of Civil Engineers and the Water Environment Federation, 1992]

Native plant communities can be incorporated into the surface water management system. The use of existing wetlands within the system design may be achieved by establishing the control elevation at a level that insures the hydroperiod is maintained or improved. The engineering of the surface water management system can provide basins with different control elevations to incorporate a wetland in one portion of the site, while creating a different control elevation in portions that do not utilize the existing wetland system.

"Design of wetland stormwater discharge systems is based primarily on knowledge of the hydrologic limits of various wetland plant communities and the requirements of Chapter 2-25 FAC. Pre-development hydroperiod and maximum flooding depth can be determined by an ecologist familiar with the tolerance limits of Florida wetland plant communities. Sizing of the wetland area, weirs, berms, and pretreatment systems must be based on an analysis of stormwater flows."[Knight, R.L., L. Scwartz & E. Livingston. 1999. *Use of Wetlands for Stormwater and Wastewater Treatment*]

Planning staff have noticed a trend in proposed developments requesting deviations from the indigenous open space requirement to impact isolated wetland systems during the planned development zoning process. The applicants state that the South Florida Water Management District (SFWMD) requires secondary impact mitigation for wetlands incorporated into surface water management systems, and that any wetland under 3 acres in size may be impacted through the SFWMD permitting process. Additionally, the justifications state that the county does not have regulatory authority over wetland systems. The county does not review and permit wetland impacts. However, the county does have indigenous open space requirements per the Land Development Code (LDC) Section 10-415(b). Also, planned development site design is required to not unnecessarily alter or impact natural features of the site per LDC Section 34-9411(g). Incorporation of wetland plant communities should be considered in the development site and surface water management system designs.

PART II - STAFF ANALYSIS

A. STAFF DISCUSSION

Green infrastructure "could well be the next frontier in environmental stewardship" as noted in the August 2000 issue of Planning (p. 14). Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost. This type of design is being applied to large watersheds through public infrastructure such as the South Florida Water Management District's redesign of the Dade County canal system, and within private developments such as the PECO Energy Company in Pennsylvania (Planning, August 2000, p.14-17). Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

The U.S. Fish and Wildlife Service released a report on June 11, 2002 entitled "Geographically Isolated Wetlands: A Preliminary Assessment of Their Characteristics and Status in Selected "Areas of the United States"which indicates isolated wetlands are both exceptionally important and exceptionally vulnerable to destruction. Isolated wetlands are defined as those with no apparent surface water connection to perennial rivers and streams, estuaries, or the ocean. These wetlands perform a number of functions including water storage and gradual release, protection against flooding, filtering of sediment and pollution from runoff, habitat for wildlife, and resources for recreation. The report

suggests that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

The Audubon International Signature Program for golf courses require an environmental assessment of the property prior to designing the golf course. This analysis is done as the first step in the design in order to maximize the retention of natural features, and determine the best surface water management plan. Features of such courses often include preservation of flow-ways, creation of flow-ways, and filtration marshes. This type of design planning would be of benefit to other development sites by fitting the project to the existing conditions of the site.

B. CONCLUSIONS

Lee County continues to grow with approximately 10,000 to 14,000 new residents a year between 1997 and 2001. This steady growth adds pressure to the existing natural systems and water supply. Incorporating green infrastructure and flow-ways into surface water management design will help protect the groundwater and surface water in Lee County. Also, green infrastructure furthers Lee County's efforts in achieving EPA's non-degradation water quality criteria for stormwater discharges to designated Outstanding Florida Waterways and compliance with future total maximum daily loads established for impaired water-bodies. Best Management Practices (BMPs) required under current surface water permitting have variable removal efficiencies for specific pollutants. Green infrastructure, such as filter marshes, have demonstrated significant nutrient reduction capabilities. The Federal government will soon be addressing maximum daily loads of discharge and levels of nutrients within the discharge. Green infrastructure will maximize the onsite retention time, nutrient uptake, nutrient settling, and groundwater recharge thereby reducing the degradation of natural rivers, Estero Bay Aquatic Preserve, and the Gulf of Mexico. The incorporation of green infrastructure and flow-ways into surface water management systems will help development in Lee County to be within the maximum daily loads allowed by Federal regulations.

C. STAFF RECOMMENDATION

Planning staff recommends that the Board of County Commissioners transmit the proposed amendment.

PART III - LOCAL PLANNING AGENCY REVIEW AND RECOMMENDATION

DATE OF PUBLIC HEARING: July 22, 2002

A. LOCAL PLANNING AGENCY REVIEW

One LPA member asked staff why the language only "encourages" instead of stating "must" within policies 40.5.1, 40.5.2, and 40.5.3. The concern was that the language was not strict enough. Staff replied that the Lee Plan sets policy and guidance for development design. Whereas the Land Development Code (LDC) establishes requirements for the permitting of projects.

Public input was then taken. Several developer representatives agreed with the concept of the proposed amendment. However, they expressed a few concerns. First, they requested the proposal be set aside until a workshop could be held with the development community. Another concern was what LDC requirements would result if this amendment is adopted. They also believed these issues are already covered by other agencies. One local landuse attorney believed that there was ample language already in the Lee Plan for staff to proceed with drafting LDC standards and requirements for the incorporation of green infrastructure, flow-ways and isolated wetlands. These speakers did agree that a flow-way definition is needed in the Lee Plan, but were concerned with the proposed definition. No suggestions were made on how to revise the flow-way definition. Additionally, the developer representatives raised the issue that the language as proposed encourages the incorporation of both natural and man-made flow-ways into the design of a project. They felt that man-made flow-ways should not be included. One local engineer was also concerned that the use of green infrastructure would increase maintenance costs compared to surface water management systems using hard structures. No analysis was provided to demonstrate the increased cost or maintenance.

There was concern from one member of the LPA that the proposed language may be detrimental to upcoming State and/or Federal regulations with regard to the water quality of Lee County's natural waterways. Staff indicated that the policies would help not hinder future water quality standards.

Another LPA member indicated that he was in support of the concept but felt the proposal was premature.

Some members of the LPA stated the proposed amendment is a good first step towards addressing green infrastructure and protecting flow-ways which is important in southwest Florida. They also indicated there are additional areas the County should address such as improving old infrastructure, updating old developments, and providing incentives to preserve flow-ways on all properties.

Staff was asked to address the concern that the proposed language is redundant with other agencies regulations. Staff stated that the proposed Lee Plan language sets policy. The amendment directs staff and the development community to evaluate the incorporation of flow-ways and green infrastructure into site design. This notifies everyone that the County does want to review these issues and is not deferring to another agency. The language is not regulatory. The Lee Plan addresses the planning stage of development.

The majority of the LPA members stated the importance of including such language in the Lee Plan to demonstrate to State and Federal agencies how Lee County is addressing water conveyance and water quality. They also indicated that the language was soft in that it encourages, rather than requiring, the incorporation of green infrastructure, flow-ways and isolated wetlands into surface water management design.

The LPA directed staff to compile a flow-way map and to involve the development community in any LDC language that would result from this amendment. LPA members stated that incentives should be given when flow-ways are preserved or restored. One LPA member expressed that flow-way protection and restoration is so important that Conservation 2020 should purchase lands containing flow-ways.

B. LOCAL PLANNING AGENCY RECOMMENDATION AND FINDINGS OF FACT SUMMARY

1. **RECOMMENDATION:** The LPA recommended transmittal of the proposed language by the Board of County Commissioners.

2. **BASIS AND RECOMMENDED FINDINGS OF FACT:** The LPA recommended the transmittal of CPA2001-00027 due to the consistency with other Lee Plan language. Members stated the importance of including such language in the Lee Plan to demonstrate to State and Federal agencies that Lee County will be taking an active role in implementing water quality issues that are forthcoming including Total Maximum Daily Loads (TMDL).

C. VOTE:

NOEL ANDRESS	Yes
MATT BIXLER	Yes
SUSAN BROOKMAN	Yes
RONALD INGE	No
GORDON REIGLEMAN	Yes
ROBERT SHELDON	No
GREG STUART	Absent

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR TRANSMITTAL OF PROPOSED AMENDMENT

DATE OF TRANSMITTAL HEARING: September 4, 2002

A. BOARD REVIEW: The Board of County Commissioners took public input regarding the proposal. The development community reiterated their concerns presented to the LPA and detailed under the LPA Review section above. One member of the public spoke in favor of the proposal stating the amendment supports smart growth, enhanced water storage, and better water management systems as Lee County's population continues to grow. He concluded that the proposal is important to the environment and economy of Lee County.

The Board of County Commissioners then discussed the proposal. One board member was concerned with the prematurity of the proposal. Other members responded that they did not understand why there was such opposition, and that this amendment is sorely needed. The Board directed staff to work on mapping flow-ways and modeling techniques. Additionally, the staff was given direction to present a progress report to the Board in January 2003.

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. **BOARD ACTION:** The Board approved transmittal to DCA for their review.

2. **BASIS AND RECOMMENDED FINDINGS OF FACT:** The Board concurred with staff and the LPA's findings.

C. VOTE:

JOHN ALBION	**Yes**
ANDREW COY	**Absent**
BOB JANES	**Yes**
RAY JUDAH	**Yes**
DOUG ST. CERNY	**Yes**

PART V - DEPARTMENT OF COMMUNITY AFFAIRS OBJECTIONS, RECOMMENDATIONS, AND COMMENTS (ORC) REPORT

DATE OF ORC REPORT:

A. DCA OBJECTIONS, RECOMMENDATIONS AND COMMENTS

B. STAFF RECOMMENDATION

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR ADOPTION OF PROPOSED AMENDMENT

DATE OF ADOPTION HEARING: _____

A. BOARD REVIEW:

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. BOARD ACTION:

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

C. VOTE:

	_____
JOHN ALBION	_____
ANDREW COY	_____
BOB JANES	_____
RAY JUDAH	_____
DOUG ST. CERNY	_____

INTEROFFICE MEMORANDUM
FROM
PUBLIC WORKS
NATURAL RESOURCES MANAGEMENT

COPY

Date: July 10, 2002

TO: Local Planning Agency

From: Roland Ottolini, P.E.
Director

SUBJECT: CPA2001-27 Amendment to the Lee Plan – Greenway Infrastructure

Our office has reviewed the proposed Lee Plan Amendment and supports its adoption. Preservation, restoration and/or the creation of greenways and flow-way corridors further Lee County's efforts in meeting water quality standards established by the USEPA and FDEP. In the near future, Lee County will be subject to meeting Total Maximum Daily Loads (TMDLs) criteria for impaired water bodies. We are also required to meet non-degradation standards for waters discharging to Outstanding Florida Waters (OFW). Greenway infrastructure and flow-way corridors help achieve these goals by providing an efficient means of reducing total suspended solids, nutrients and metals from our surface waters.

xc: Jim Lavender, Director, Public Works
Paul O'Connor, Director, Planning

LEE COUNTY
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MEMORANDUM
FROM
DEPARTMENT OF COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL SCIENCES

Date: July 22, 2002

FILE COPY

To: LPA Members
From: Kim Trebatoski, Principal Environmental Planner

Re: CPA2001-00027
Lee Plan Consistency

The proposed amendment to Goal 40 regarding flow-ways and green infrastructure is consistent with the following Lee Plan Goals, Objectives and Policies:

I. VISION STATEMENT

page I-1 second bullet: The county will protect its natural resource base in order to maintain a high quality of life for its residents and visitors.

II. FUTURE LAND USE

Objective 1.4: Non-Urban Areas

Policy 1.4.1(1)(c): Where feasible, open space areas will be designed so as to provide connections between wetlands, preserve areas, and buffer on the Property.

Objective 1.5: Wetlands

Policy 1.5.1: Permitted land uses in Wetlands consist of very low density residential uses and recreational uses that will not adversely affect the ecological functions of wetlands.

Goal 4: Development Design. To maintain innovative land development regulations which encourage creative site designs.

Policy 4.1.1: Development designs will be evaluated to ensure that land uses and structures are well integrated, properly oriented, and functionally related to the topographic and natural features of the site.

Goal 6: Commercial Land Uses.

Policy 6.1.3: Commercial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as commercial planned developments

designed to arrange uses in an integrated and cohesive unit in order to protect natural resources.

Goal 7: Industrial Land Uses.

Policy 7.1.2: Industrial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as planned developments designed to arrange uses in an integrated and cohesive unit in order to protect natural resources.

Policy 7.1.3: Industrial land uses must be located in areas appropriate to their special needs and constraints, including, but not limited to, considerations of: topography and water quality.

Standard 11.4: ENVIRONMENTAL REVIEW FACTORS. In any case where there exists or there is the probability of environmentally sensitive areas (as identified by Lee County, the Corps of Engineers, Department of Environmental Protection, South Florida Water Management District, or other applicable regulatory agency), the developer/applicant must prepare an environmental assessment that examines the existing conditions, addresses the environmental problems, and proposes means and mechanisms to protect, conserve, or preserve the environmental and natural resources.

Goal 16: Private Recreational Facilities in the DR/GR

Policy 16.4.6: The surface water management system design must incorporate natural flowway corridors, cypress heads, natural lakes, and restore impacted natural flowway corridors.

Policy 16.4.6(2): The development must maintain the function and integrity of local and regional flowways. Flowways are precluded from being primary surfacewater treatment areas.

[Goal 18: University Community. Note Stewart Slough flowway]

III. TRANSPORTATION

Goal 26: Community and Environmental Impacts [Transportation]

Objective 26.2: ENVIRONMENTAL IMPACTS. New and expanded transportation facilities will continue to be aligned and designed to protect environmentally sensitive areas and rare and unique habitats.

IV. COMMUNITY FACILITIES AND SERVICES

Policy 39.1.6 : The county will, through appropriate regulations, continue to provide standards for construction of artificial drainageways compatible with natural flow ways and otherwise provide for the reduction of the risk of flood damage to new development.

Goal 40 : COORDINATED SURFACE WATER MANAGEMENT AND LAND USE PLANNING ON A WATERSHED BASIS. To protect or improve the quality of receiving waters and surrounding natural areas and the functions of natural groundwater aquifer recharge areas while also providing flood protection for existing and future development.

Policy 40.2.1 : The Surface Water Management Master Plan will identify those basins (or sub-basins) which may be most suitable for basin-wide surface water management, based on :

- natural flow ways and drainage patterns ;
- existing development patterns ;
- land ownership patterns ; and
- development potential based on the Future Land Use element of this plan.

Policy 40.3.1(D) : Development must be designed to minimize increases of discharge to public water management infrastructure (or to evapotranspiration) that exceed historic rates, to approximate the natural surface water systems in terms of rate, hydroperiod, basin and quality, and to eliminate the disruption of wetlands and flow-ways, whose preservation is deemed in the public interest.

Policy 40.3.4 : Water management projects will be evaluated and ranked according to the priorities adopted in this plan. Major emphasis will be given to improving existing drainage facilities in and around future urban areas as shown on the Future Land Use Map, and to enhancing or restoring environmental quality.

Goal 41 : PROTECTION OF WATER RESOURCES. To protect the county's water resources through the application of innovative and sound methods of surface water management and by ensuring the public and private construction, operation, and maintenance of surface water management systems are consistent with the need to protect receiving waters.

Objective 41.2: MIMICKING THE FUNCTIONS OF NATURAL SYSTEM: Support a surface water management strategy that relies on natural features (flow ways, sloughs, strands, etc.) and natural systems to receive and otherwise manage storm and surface water.

Policy 41.2.1: All development proposals outside the future urban areas must recognize areas where soil, vegetation, hydrogeology, topography, and other factors indicate that water flows or ponds; and require that these areas be used to the maximum extent possible, without significant structural alteration, for on-site stormwater management; and require that these areas be integrated into area – wide coordinated stormwater management schemes.

Policy 41.2.2: Where no natural features of flow or ponding exist on a site outside the future urban areas, the county will require the water management structures be

designed and constructed in such a manner as to mimic the functions of natural systems.

Policy 41.2.4: Where feasible within future urban areas, surface water management plans are encouraged that mimic the functions of natural systems.

Objective 41.3: GENERAL SURFACE WATER MANAGEMENT STANDARDS. Lee County will continue to provide sufficient performance and/or design standards for development protective of the function of natural drainage systems.

Policy 41.3.11: Runoff must be routed through retention or detention areas and vegetated swales in order to reduce flow velocity, allow for percolation, and trap and remove suspended solids and pollutants.

VII. CONSERVATION AND COASTAL MANAGEMENT

Goal 77: RESOURCE PROTECTION. To manage the county's wetland and upland ecosystems so as to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics.

Objective 77.1: RESOURCE MANAGEMENT PLAN. The county will continue to implement a resource management program that ensures the long-term protection and enhancement of the natural upland and wetland habitats through the retention of interconnected, functioning, maintainable hydroecological systems where the remaining wetlands and uplands function as a productive unit resembling the original landscape.

Policy 77.1.1: County agencies implementing the natural resources management program will be responsible for the following:

1. Identifying upland and wetland habitat/systems most suitable for protection, enhancement, reclamation and conservation.

2. Recommending standards to the Board of County Commissioners approval for development and conservation that will protect and integrate wetlands and significant Rare and Unique upland habitats.

6. Compiling, maintaining and regularly updating county mapping of vegetation communities; listed species habitat and sitings; and water resources including watersheds, floodplains, wetlands, aquifers, and surface water features.

7. Coordinating in the preparation of plans with the municipalities, South Florida Water Management District, and Southwest Florida Water Management District to better control flows of freshwater and reduce pollutant discharges into Lee County coastal waters.

Policy 77.2.2: Continue to provide regulations and incentives to prevent incompatible development in and around environmentally sensitive lands.

Policy 77.2.3: Prevent water management and development projects from altering or disrupting the natural function of significant natural systems.

Policy 77.2.4: Encourage the protection of viable tracts of sensitive or high-quality natural plant communities within developments.

Policy 77.2.6: Avoid needless destruction of upland vegetation communities including coastal and interior hammocks through consideration during the site plan review process of alternative layouts of permitted uses.

GOAL 78: ESTUARINE WATER QUALITY. To manage estuarine ecosystems so as to maintain or improve water quality and wildlife diversity; to reduce or maintain current pollution loading and system imbalances to conserve estuarine productivity; and to provide the best use of estuarine areas.

Objective 78.2: WATERSHED MANAGEMENT PLANS. By 1996, establish procedures for reviewing all new upland development in terms of its impacts on estuarine systems. Prepare estuarine watershed management plans which maximize stormwater retention and treatment, with priority to the Estero Bay watershed.

GOAL 84: WETLANDS. To maintain and enforce a regulatory program for development in wetlands that is cost-effective, complements federal and state permitting processes, and protects the fragile ecological characteristics of wetland systems.

Objective 84.1: The natural functions of wetlands and wetland systems will be protected and conserved.

Policy 84.1.2(4): Every reasonable effort will be required to avoid or minimize adverse impacts on wetlands through the clustering of development and other site planning techniques.

GOAL 85: WATER QUALITY AND WASTEWATER. To ensure that water quality is maintained or improved for the protection of the environment and people of Lee County.

Objective 85.1: Maintain high water quality, meeting or exceeding state and federal water quality standards.

Policy 85.1.2: New development and additions to existing development must not degrade surface and ground water quality.

Policy 85.1.3: The design, construction, and maintenance of artificial drainage systems must provide for retention or detention areas and vegetated swale systems that minimize nutrient loading and pollution of freshwater and estuarine systems.

GOAL 87: WATER RESOURCES. To conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability.

Objective 87.1: WATER SUPPLIES. Insure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems.

Policy 87.1.1: Natural water system features which are essential for retention, detention, purification, runoff, recharge, and maintenance of stream flows and groundwater levels shall be identified, protected, and managed.

Policy 87.1.1: Development designs must provide for maintaining surface water flows, groundwater levels, and lake levels at or above existing conditions.

XI. ECONOMIC ELEMENT

Objective 110.1: Lee County will encourage the conservation and enhancement of those natural resources that represent the foundation of the county's existing retirement, recreation, and tourist oriented economy.

Policy 110.1.7: Lee County will encourage the preservation of sensitive natural resources, Including beaches, wetlands, estuaries, clean air and water, historic resources, scenic vistas and other unique natural resources through public acquisition and/or regulatory protection.

From: Wayne Daltry
To: Trebatoski, Kim
Date: 7/18/02 3:02PM
Subject: Re: Lee Plan Amendment

Dear Kim:

I have reviewed the proposed Plan amendment and have concluded that this is a necessary component of the evolving smart growth strategy of defining our communities boundaries with functional green space. As of tnow, though, this is one perons's opinion, since this has not yet been declared as a policy.

However, I am a member of the Working Group of the Everglades Restoration. Let me make a number of statements in regard to how this proposal furthers that effort and, in my opinion, fulfills the policy direction needed for the issues becoming increasingly more evident in permit agency reviews.

First. Lee County is the Lead agent for NPDES permitting for almost all of the public agencies in Lee County. Green Infrastructure is an increasingly important component in water quality attainment. A coherent system or network of green infrastructure enables the County to take the lead in demonstrating how to achieve its NPDES responsibilities.

Second. Green Infrastructure adds an additional limited component to Lee County's flood protection capabilities.

Third. Green Infrastructure adds an additional limited component to the County's water storage and rehydration capabilities

Fourth. Green Infrastructure adds an additional limited component to the County's habitat capabilities.

All four aspects are components of Everglades Restoration. Water quality, storage/rehyddration, and habitat are also part of the County's commitments to the Charlotte harbor National Estuary Program.

Fifth. Permit agencies are increasingly concerned with the cumulative and secondary impact of development. For that reason, it is critical to have a county wide program that accumulates the individual impacts into a coherent areawide mitigation and restoration program.

For that reason, I recommend -if they do not exist already-a series of maps that cover the county that depict existing flowways, and areas where flowways are deficient. Where flowways exist, maps should indicate which ones need remediation. Where they do not exist-within the built environment- a somewhat broader strategy to be coordinated with Public Works/Natural Resources Department to provide them.
I also recommend that a policy be in place-if it does not already exist- to evaluate funding approaches (including private participation and incentives) for expansion of flowways and their Operation, Maintenance, and Monitoring.

Thank you for the opportunity to refview this amendment.

>>> Kim Trebatoski 07/18/02 01:45PM >>>
Dear Mr. Daltry,
Please review the attached Lee Plan Amendment addressing flow-ways and green infrastructure that is proposed by staff. This amendment will be presented at the LPA on Monday, July 22, 2002. Any comments regarding how this amendment relates to Smart Growth would be highly appreciated. An e-mail response will be great.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com

From: Kraig Marquis <kmarquis@audubonintl.org>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 7/21/02 10:22PM
Subject: Re: Green Infrastructure

Kim,
The Audubon International team took a look at the Green Infrastructure and Flow-way plan and thought the intent was very positive. Some points that were brought up for you to consider are:

1. Encourage a number of BMPs in sequence or a "treatment train" system instead of one type of BMP. For instance, a swale that discharges to a created wetland would be more effective than a swale alone.
2. Identify management zones on the property and dictate what can and can't be done. For instance, we set up no spray zones (25 ft from water edge) around each waterbody and wetland.
3. We advocate a written management plan for each property so that the "do's and don'ts" are clearly defined and new property managers or staff can utilize it as a reference.

Hope this helps!
Kraig Marquis
Audubon International

P.S. In reference to the Audubon International Signature Program requiring site review prior to golf course design efforts...we
only get into pre-design efforts in the "Gold" Signature Program or the Sustainable Development Program.

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>Kim Trebatoski
>Principal Environmental Planner
>DCD - Planning/Environmental Sciences
>trebatkm@leegov.com
>239-479-8183
>FAX 239-479-8319
>

From: <Beeverjw@aol.com>
To: <TREBATKM@leegov.com>
Date: 7/22/02 2:44PM
Subject: Re: Lee Plan Amendment-reply

The amendment is consistent with the goals of the EBABM. It would be good to better define the dimensions of man made flow-ways so that canals and canal-like structures are not included. Jim Beever

CC: <dburr@swfrpc.org>, <jcassani@peganet.com>

ECOSYSTEM SPECIALISTS
PO Box 713 Ft. Myers, FL 33902
Tel: 239.731.7559 Fax: 239.731.3779

September 3, 2002

Commissioner Bob Janes
Commissioner Douglas St. Cerney
Commissioner Andrew Coy
Commissioner Ray Judah
Commissioner John Albion

COPY

TRANSMITTED BY FAX

Re: Comp Plan Amendment
Amendment CPA 2001-27

Dear Commissioners;

Please accept these written comments concerning the above Comprehensive Plan Amendment, as I will be unable to appear in person to voice my support for and encourage the County's commitment to a Coordinated Surface Water Management goal.

Water quality and quantity have become and will continue to be even more important limiting issues for the economy and quality of our community and the greater South Florida region. The planning associated with the Comprehensive Everglades Restoration Project (CERP) as well as our local interest in addressing point source and non-point source storm water discharges to surface waters acknowledges our concern and commitment to these and numerous other ongoing public projects concerning water. One of the basic planning tools that is currently used to address these issues for State permitting purposes is the creation of green infrastructure into the surface water management systems of proposed developments to address the quality and quantity of our water resources.

The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment. These principals have been the basis of the Water Management Districts SWIM plans for years. SWIM projects provide the proof that simple water management guidelines, incorporated equally by all developments which alter the land surface and add impervious surfaces, improve water quality and quantity and provide the water in a localized setting.

It makes great sense then for the County to Amend the Community Facilities and Services Element, Goal 40: Coordinated Surface Water Management and Land Use Planning on a Watershed Basis to add a new Objective and Policy regarding incorporation of green infrastructure into the surface water management systems of proposed developments, and provide definitions for green infrastructure and flow-way

into the glossary. This will help to address the issue for smaller sites that may not fall within State permitting guidelines.

Professionally and personally I am very supportive of this amendment to encourage new developments and capital improvement projects alike to design their surface water management systems to incorporate green infrastructure such as vegetated filter marshes, flow ways, and effective pond and lake systems complete with littoral zones vegetated with native, wetland trees and herbaceous cover, not turf grass.

The actions we take today with the science that we do have and understand will save money and our quality of life for the future. I encourage you to support this amendment. Thank you.

Sincerely,

Rae Ann Wessel
Consulting Ecologist
Public Citizen

JOHNSON ENGINEERING

SINCE 1946

Lee Comp Plan

To: Kim

LEE COUNTY RECEIVED
02 SEP 10 AM 8:56
COMM. DEV/ PUB. WRKS. CNTR. 2ND FLOOR

September 6, 2002

RECEIVED
SEP 10 2002
Environmental Sciences

Commissioner Andrew Coy
District 4
Post Office Box 398
Fort Myers, Florida 33902-398

Re: Flowways

Dear Commissioner Coy:

The issue of flowway protection still requires some additional work. The present combination of definition and policies protect every ditch and pipe in unincorporated Lee County.

The major problem is that every pipe, ditch or canal is protected to the same degree as a historical natural flowway. This places the planning staff in a very powerful position of being able to dictate that one of these manmade conveyances must be saved and restored. It is my understanding that the environmental staff only wanted to protect the natural flowways and that was the reason for breaking the definition into three categories.

I look forward to working with your staff to bring this to a conclusion that is workable for the whole community.

Very truly yours,

JOHNSON ENGINEERING, INC.

Andrew D. Tilton, P. E.
For The Firm

ADT/smd

CC: BOCC
Paul O'Connor
Matt Doyle
Tim Jones
Roland Ottolini
Steve Boutwell

2158 Johnson Street ▪ Post Office Box 1550 ▪ Fort Myers, Florida 33902-1550
(239) 334-0046 ▪ Fax (239) 334-3661

CPA2001-27
BoCC SPONSORED AMENDMENT TO THE

LEE COUNTY COMPREHENSIVE PLAN

THE LEE PLAN

BoCC Transmittal Document
for the
September 4, 2002 Public Hearing

Lee County Planning Division
1500 Monroe Street
P.O. Box 398
Fort Myers, FL 33902-0398
(239) 479-8585

August 8, 2002

LEE COUNTY
DIVISION OF PLANNING
STAFF REPORT FOR
COMPREHENSIVE PLAN AMENDMENT
CPA2001-00027

☑ **Text Amendment** ☐ **Map Amendment**

	This Document Contains the Following Reviews:
✓	**Staff Review**
✓	**Local Planning Agency Review and Recommendation**
	Board of County Commissioners Hearing for Transmittal
	Staff Response to the DCA Objections, Recommendations, and Comments (ORC) Report
	Board of County Commissioners Hearing for Adoption

STAFF REPORT PREPARATION DATE: July 8, 2002

PART I - BACKGROUND AND STAFF RECOMMENDATION

A. SUMMARY OF APPLICATION

1. APPLICANT:
LEE COUNTY BOARD OF COUNTY COMMISSIONERS
REPRESENTED BY LEE COUNTY DIVISION OF PLANNING

2. REQUEST:
Amend Community Facilities and Services Element, Goal 40: Coordinated Surface Water Management and Land Use Planning on a Watershed Basis to add a new Objective and Policy regarding incorporation of green infrastructure into the surface water management systems of proposed developments, and provide definitions for green infrastructure and flow-way in the Glossary.

B. STAFF RECOMMENDATION AND FINDINGS OF FACT SUMMARY:

1. RECOMMENDATION: Planning staff recommends that Lee Plan Goal 40 be amended to add an Objective and that the Glossary be amended to add definitions for GREEN INFRASTUCTURE and FLOW-WAY as follows:

DEFINITION: Green Infrastructure: Surface water management structures that are "soft" structures such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: An area of lower elevation that conveys water or has the potential to convey water. The flow-way may contain uplands, wetlands or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where stormwater moves within variable dimensions instead of a well defined channel. The area of flow in this case has enough general confinement to exhibit stormwater flow characteristics and is evidenced by, but not limited to, drift lines, rack lines, sediment deposits, soils and root scour, and absence of litter or groundcover. A natural flow-way can be a series of lower elevation areas that connect isolated wetlands that interconnect when water levels raise high enough to form a continuous flow path.

A man-made naturalized flow-way is a constructed wetland system (typically a marsh) used for nutrient uptake, stormwater treatment, and/or stormwater conveyance.

A man-made hard stucture flow-way is a physical connection between stormwater basins (e.g. canal, culvert, pipeline, or combinations thereof).

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The county encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The county encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The county encourages the preservation of existing flow-ways and the restoration of historic flow-ways.

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

- Benefits of incorporating green infrastructure into the surface water management system include improving water quality, improving air quality, improving water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

- Surface water management systems can be designed to establish the control elevation at a level to insure the correct hydroperiod for incorporation of existing wetlands.

- Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost.

- Green infrastructure can preserve and enhance the natural features and processes of a site.

- Green infrastructure can maximize post-development economic and environmental benefits.

- Green infrastructure, if designed properly, can be less maintenance intensive than conventional stormwater conveyance systems.

- Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them.

- U.S. Fish and Wildlife Service suggest that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

- Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

C. BACKGROUND INFORMATION

Incorporating green infrastructure in the surface water management design provides ecological and aesthetic benefits. The vegetation will uptake nutrients improving water quality and processing carbon dioxide into oxygen improving air quality. These areas provide water storage and water recharge/infiltration. The habitat provides foraging, roosting and nesting opportunities for wetland dependent wildlife. Lee County listed species that may benefit from the green infrastructure include roseate spoonbill, little blue heron, reddish egret, snowy egret, tricolor heron, wood stork, limpkin, Big Cypress fox squirrel, snail kite, American alligator, gopher frog, Everglades mink, Florida sandhill crane, Florida black bear, and Florida panther. Additionally, these areas will provide visual relief within the urban environment, as well as, passive recreational opportunities.

Urban surface water management system design should be a multipurpose, multimeans effort for achieving water quality enhancement, groundwater recharge, recreation, wildlife habitat, wetlands creation, protection of landmarks, control of erosion and sediment deposition, and creation of open spaces. Development sites should be carefully mapped to locate existing natural features so the design can take into consideration the functions within the natural drainage system. The incorporation of "natural" engineering techniques or green infrastructure can preserve and enhance the natural features and processes of a site while maximizing post-development economic and environmental benefits. Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them. [Design and Construction of Urban Stormwater Management Systems, The Urban Water Resources Research Council of the American Society of Civil Engineers and the Water Environment Federation, 1992]

Native plant communities can be incorporated into the surface water management system. The use of existing wetlands within the system design may be achieved by establishing the control elevation at a level that insures the hydroperiod is maintained or improved. The engineering of the surface water management system can provide basins with different control elevations to incorporate a wetland in one portion of the site, while creating a different control elevation in portions that do not utilize the existing wetland system.

"Design of wetland stormwater discharge systems is based primarily on knowledge of the hydrologic limits of various wetland plant communities and the requirements of Chapter 2-25 FAC. Pre-development hydroperiod and maximum flooding depth can be determined by an ecologist familiar with the tolerance limits of Florida wetland plant communities. Sizing of the wetland area, weirs, berms, and pretreatment systems must be based on an analysis of stormwater flows."[Knight, R.L., L. Scwartz & E. Livingston. 1999. *Use of Wetlands for Stormwater and Wastewater Treatment*]

Planning staff have noticed a trend in proposed developments requesting deviations from the indigenous open space requirement to impact isolated wetland systems during the planned development zoning process. The applicants state that the South Florida Water Management District (SFWMD) requires secondary impact mitigation for wetlands incorporated into surface water management systems, and that any wetland under 3 acres in size may be impacted through the SFWMD permitting process. Additionally, the justifications state that the county does not have regulatory authority over wetland systems. The county does not review and permit wetland impacts. However, the county does have indigenous open space requirements per the Land Development Code (LDC) Section 10-415(b). Also, planned development site design is required to not unnecessarily alter or impact natural features of the site per LDC Section 34-9411(g). Incorporation of wetland plant communities should be considered in the development site and surface water management system designs.

PART II - STAFF ANALYSIS

A. STAFF DISCUSSION

Green infrastructure "could well be the next frontier in environmental stewardship" as noted in the August 2000 issue of Planning (p. 14). Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost. This type of design is being applied to large watersheds through public infrastructure such as the South Florida Water Management District's redesign of the Dade County canal system, and within private developments such as the PECO Energy Company in Pennsylvania (Planning, August 2000, p.14-17). Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

The U.S. Fish and Wildlife Service released a report on June 11, 2002 entitled "Geographically Isolated Wetlands: A Preliminary Assessment of Their Characteristics and Status in Selected "Areas of the United States"which indicates isolated wetlands are both exceptionally important and exceptionally vulnerable to destruction. Isolated wetlands are defined as those with no apparent surface water connection to perennial rivers and streams, estuaries, or the ocean. These wetlands perform a number of functions including water storage and gradual release, protection against flooding, filtering of sediment and pollution from runoff, habitat for wildlife, and resources for recreation. The report

suggests that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

The Audubon International Signature Program for golf courses require an environmental assessment of the property prior to designing the golf course. This analysis is done as the first step in the design in order to maximize the retention of natural features, and determine the best surface water management plan. Features of such courses often include preservation of flow-ways, creation of flow-ways, and filtration marshes. This type of design planning would be of benefit to other development sites by fitting the project to the existing conditions of the site.

B. CONCLUSIONS

Lee County continues to grow with approximately 10,000 to 14,000 new residents a year between 1997 and 2001. This steady growth adds pressure to the existing natural systems and water supply. Incorporating green infrastructure and flow-ways into surface water management design will help protect the groundwater and surface water in Lee County. Also, green infrastructure furthers Lee County's efforts in achieving EPA's non-degradation water quality criteria for stormwater discharges to designated Outstanding Florida Waterways and compliance with future total maximum daily loads established for impaired water-bodies. Best Management Practices (BMPs) required under current surface water permitting have variable removal efficiencies for specific pollutants. Green infrastructure, such as filter marshes, have demonstrated significant nutrient reduction capabilities. The Federal government will soon be addressing maximum daily loads of discharge and levels of nutrients within the discharge. Green infrastructure will maximize the onsite retention time, nutrient uptake, nutrient settling, and groundwater recharge thereby reducing the degradation of natural rivers, Estero Bay Aquatic Preserve, and the Gulf of Mexico. The incorporation of green infrastructure and flow-ways into surface water management systems will help development in Lee County to be within the maximum daily loads allowed by Federal regulations.

C. STAFF RECOMMENDATION

Planning staff recommends that the Board of County Commissioners transmit the proposed amendment.

PART III - LOCAL PLANNING AGENCY REVIEW AND RECOMMENDATION

DATE OF PUBLIC HEARING: July 22, 2002

A. LOCAL PLANNING AGENCY REVIEW

One LPA member asked staff why the language only "encourages" instead of stating "must" within policies 40.5.1, 40.5.2, and 40.5.3. The concern was that the language was not strict enough. Staff replied that the Lee Plan sets policy and guidance for development design. Whereas the Land Development Code (LDC) establishes requirements for the permitting of projects.

Public input was then taken. Several developer representatives agreed with the concept of the proposed amendment. However, they expressed a few concerns. First, they requested the proposal be set aside until a workshop could be held with the development community. Another concern was what LDC requirements would result if this amendment is adopted. They also believed these issues are already covered by other agencies. One local landuse attorney believed that there was ample language already in the Lee Plan for staff to proceed with drafting LDC standards and requirements for the incorporation of green infrastructure, flow-ways and isolated wetlands. These speakers did agree that a flow-way definition is needed in the Lee Plan, but were concerned with the proposed definition. No suggestions were made on how to revise the flow-way definition. Additionally, the developer representatives raised the issue that the language as proposed encourages the incorporation of both natural and man-made flow-ways into the design of a project. They felt that man-made flow-ways should not be included. One local engineer was also concerned that the use of green infrastructure would increase maintenance costs compared to surface water management systems using hard structures. No analysis was provided to demonstrate the increased cost or maintenance.

There was concern from one member of the LPA that the proposed language may be detrimental to upcoming State and/or Federal regulations with regard to the water quality of Lee County's natural waterways. Staff indicated that the policies would help not hinder future water quality standards.

Another LPA member indicated that he was in support of the concept but felt the proposal was premature.

Some members of the LPA stated the proposed amendment is a good first step towards addressing green infrastructure and protecting flow-ways which is important in southwest Florida. They also indicated there are additional areas the County should address such as improving old infrastructure, updating old developments, and providing incentives to preserve flow-ways on all properties.

Staff was asked to address the concern that the proposed language is redundant with other agencies regulations. Staff stated that the proposed Lee Plan language sets policy. The amendment directs staff and the development community to evaluate the incorporation of flow-ways and green infrastructure into site design. This notifies everyone that the County does want to review these issues and is not deferring to another agency. The language is not regulatory. The Lee Plan addresses the planning stage of development.

The majority of the LPA members stated the importance of including such language in the Lee Plan to demonstrate to State and Federal agencies how Lee County is addressing water conveyance and water quality. They also indicated that the language was soft in that it encourages, rather than requiring, the incorporation of green infrastructure, flow-ways and isolated wetlands into surface water management design.

The LPA directed staff to compile a flow-way map and to involve the development community in any LDC language that would result from this amendment. LPA members stated that incentives should be given when flow-ways are preserved or restored. One LPA member expressed that flow-way protection and restoration is so important that Conservation 2020 should purchase lands containing flow-ways.

B. LOCAL PLANNING AGENCY RECOMMENDATION AND FINDINGS OF FACT SUMMARY

1. **RECOMMENDATION:** The LPA recommended transmittal of the proposed language by the Board of County Commissioners.

2. **BASIS AND RECOMMENDED FINDINGS OF FACT:** The LPA recommended the transmittal of CPA2001-00027 due to the consistency with other Lee Plan language. Members stated the importance of including such language in the Lee Plan to demonstrate to State and Federal agencies that Lee County will be taking an active role in implementing water quality issues that are forthcoming including Total Maximum Daily Loads (TMDL).

C. VOTE:

NOEL ANDRESS	Yes
MATT BIXLER	Yes
SUSAN BROOKMAN	Yes
RONALD INGE	No
GORDON REIGLEMAN	Yes
ROBERT SHELDON	No
GREG STUART	Absent

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR TRANSMITTAL OF PROPOSED AMENDMENT

DATE OF TRANSMITTAL HEARING: September 4, 2002

A. BOARD REVIEW:

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. BOARD ACTION:

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

C. VOTE:

	_____
JOHN ALBION	_____
ANDREW COY	_____
BOB JANES	_____
RAY JUDAH	_____
DOUG ST. CERNY	_____

PART V - DEPARTMENT OF COMMUNITY AFFAIRS OBJECTIONS, RECOMMENDATIONS, AND COMMENTS (ORC) REPORT

DATE OF ORC REPORT:

A. DCA OBJECTIONS, RECOMMENDATIONS AND COMMENTS

B. STAFF RECOMMENDATION

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR ADOPTION OF PROPOSED AMENDMENT

DATE OF ADOPTION HEARING: _____

A. BOARD REVIEW:

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. BOARD ACTION:

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

C. VOTE:

	_____
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BOB JANES	_____
RAY JUDAH	_____
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INTEROFFICE MEMORANDUM
FROM
PUBLIC WORKS
NATURAL RESOURCES MANAGEMENT

Date: July 10, 2002

TO: Local Planning Agency

From: Roland Ottolini, P.E.
Director

SUBJECT: CPA2001-27 Amendment to the Lee Plan – Greenway Infrastructure

Our office has reviewed the proposed Lee Plan Amendment and supports its adoption. Preservation, restoration and/or the creation of greenways and flow-way corridors further Lee County's efforts in meeting water quality standards established by the USEPA and FDEP. In the near future, Lee County will be subject to meeting Total Maximum Daily Loads (TMDLs) criteria for impaired water bodies. We are also required to meet non-degradation standards for waters discharging to Outstanding Florida Waters (OFW). Greenway infrastructure and flow-way corridors help achieve these goals by providing an efficient means of reducing total suspended solids, nutrients and metals from our surface waters.

xc: Jim Lavender, Director, Public Works
Paul O'Connor, Director, Planning

LEE COUNTY
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02 JUL 11 AM 11:24
COMM. DEV./
PUB. WRKS. CNTR.
SECOND FLOOR

FILE COPY

From: Wayne Daltry
To: Trebatoski, Kim
Date: 7/18/02 3:02PM
Subject: Re: Lee Plan Amendment

Dear Kim:

I have reviewed the proposed Plan amendment and have concluded that this is a necessary component of the evolving smart growth strategy of defining our communities boundaries with functional green space. As of tnow, though, this is one perons's opinion, since this has not yet been declared as a policy.

However, I am a member of the Working Group of the Everglades Restoration. Let me make a number of statements in regard to how this proposal furthers that effort and, in my opinion, fulfills the policy direction needed for the issues becoming increasingly more evident in permit agency reviews.

First. Lee County is the Lead agent for NPDES permitting for almost all of the public agencies in Lee County. Green Infrastructure is an increasingly important component in water quality attainment. A coherent system or network of green infrastructure enables the County to take the lead in demonstrating how to achieve its NPDES responsibilities.

Second. Green Infrastructure adds an additional limited component to Lee County's flood protection capabilities.

Third. Green Infrastructure adds an additional limited component to the County's water storage and rehydration capabilities

Fourth. Green Infrastructure adds an additional limited component to the County's habitat capabilities.

All four aspects are components of Everglades Restoration. Water quality, storage/rehyddration, and habitat are also part of the County's commitments to the Charlotte harbor National Estuary Program.

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Thank you for the opportunity to refview this amendment.

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Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com

From: Kraig Marquis <kmarquis@audubonintl.org>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 7/21/02 10:22PM
Subject: Re: Green Infrastructure

Kim,
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Hope this helps!
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Audubon International

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>Kim Trebatoski
>Principal Environmental Planner
>DCD - Planning/Environmental Sciences
>trebatkm@leegov.com
>239-479-8183
>FAX 239-479-8319
>

From: <Beeverjw@aol.com>
To: <TREBATKM@leegov.com>
Date: 7/22/02 2:44PM
Subject: Re: Lee Plan Amendment-reply

The amendment is consistent with the goals of the EBABM. It would be good to better define the dimensions of man made flow-ways so that canals and canal-like structures are not included. Jim Beever

CC: <dburr@swfrpc.org>, <jcassani@peganet.com>

MEMORANDUM
FROM
DEPARTMENT OF COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL SCIENCES

Date: July 22, 2002

To: LPA Members
From: Kim Trebatoski, Principal Environmental Planner

Re: CPA2001-00027
Lee Plan Consistency

The proposed amendment to Goal 40 regarding flow-ways and green infrastructure is consistent with the following Lee Plan Goals, Objectives and Policies:

I. VISION STATEMENT

page I-1 second bullet: The county will protect its natural resource base in order to maintain a high quality of life for its residents and visitors.

II. FUTURE LAND USE

Objective 1.4: Non-Urban Areas

Policy 1.4.1(1)(c): Where feasible, open space areas will be designed so as to provide connections between wetlands, preserve areas, and buffer on the Property.

Objective 1.5: Wetlands

Policy 1.5.1: Permitted land uses in Wetlands consist of very low density residential uses and recreational uses that will not adversely affect the ecological functions of wetlands.

Goal 4: Development Design. To maintain innovative land development regulations which encourage creative site designs.

Policy 4.1.1: Development designs will be evaluated to ensure that land uses and structures are well integrated, properly oriented, and functionally related to the topographic and natural features of the site.

Goal 6: Commercial Land Uses.

Policy 6.1.3: Commercial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as commercial planned developments

designed to arrange uses in an integrated and cohesive unit in order to protect natural resources.

Goal 7: Industrial Land Uses.

Policy 7.1.2: Industrial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as planned developments designed to arrange uses in an integrated and cohesive unit in order to protect natural resources.

Policy 7.1.3: Industrial land uses must be located in areas appropriate to their special needs and constraints, including, but not limited to, considerations of: topography and water quality.

Standard 11.4: ENVIRONMENTAL REVIEW FACTORS. In any case where there exists or there is the probability of environmentally sensitive areas (as identified by Lee County, the Corps of Engineers, Department of Environmental Protection, South Florida Water Management District, or other applicable regulatory agency), the developer/applicant must prepare an environmental assessment that examines the existing conditions, addresses the environmental problems, and proposes means and mechanisms to protect, conserve, or preserve the environmental and natural resources.

Goal 16: Private Recreational Facilities in the DR/GR

Policy 16.4.6: The surface water management system design must incorporate natural flowway corridors, cypress heads, natural lakes, and restore impacted natural flowway corridors.

Policy 16.4.6(2): The development must maintain the function and integrity of local and regional flowways. Flowways are precluded from being primary surfacewater treatment areas.

III. TRANSPORTATION

Goal 26: Community and Environmental Impacts [Transportation]

Objective 26.2: ENVIRONMENTAL IMPACTS. New and expanded transportation facilities will continue to be aligned and designed to protect environmentally sensitive areas and rare and unique habitats.

IV. COMMUNITY FACILITIES AND SERVICES

Policy 39.1.6 : The county will, through appropriate regulations, continue to provide standards for construction of artificial drainageways compatible with natural flow ways and otherwise provide for the reduction of the risk of flood damage to new development.

Goal 40 : COORDINATED SURFACE WATER MANAGEMENT AND LAND USE PLANNING ON A WATERSHED BASIS. To protect or improve the quality of receiving waters and surrounding natural areas and the functions of natural groundwater aquifer recharge areas while also providing flood protection for existing and future development.

Policy 40.2.1 : The Surface Water Management Master Plan will identify those basins (or sub-basins) which may be most suitable for basin-wide surface water management, based on :

- natural flow ways and drainage patterns ;
- existing development patterns ;
- land ownership patterns ; and
- development potential based on the Future Land Use element of this plan.

Policy 40.3.1(D) : Development must be designed to minimize increases of discharge to public water management infrastructure (or to evapotranspiration) that exceed historic rates, to approximate the natural surface water systems in terms of rate, hydroperiod, basin and quality, and to eliminate the disruption of wetlands and flow-ways, whose preservation is deemed in the public interest.

Policy 40.3.4 : Water management projects will be evaluated and ranked according to the priorities adopted in this plan. Major emphasis will be given to improving existing drainage facilities in and around future urban areas as shown on the Future Land Use Map, and to enhancing or restoring environmental quality.

Goal 41 : PROTECTION OF WATER RESOURCES. To protect the county's water resources through the application of innovative and sound methods of surface water management and by ensuring the public and private construction, operation, and maintenance of surface water management systems are consistent with the need to protect receiving waters.

Objective 41.2: MIMICKING THE FUNCTIONS OF NATURAL SYSTEM: Support a surface water management strategy that relies on natural features (flow ways, sloughs, strands, etc.) and natural systems to receive and otherwise manage storm and surface water.

Policy 41.2.1: All development proposals outside the future urban areas must recognize areas where soil, vegetation, hydrogeology, topography, and other factors indicate that water flows or ponds; and require that these areas be used to the maximum extent possible, without significant structural alteration, for on-site stormwater management; and require that these areas be integrated into area – wide coordinated stormwater management schemes.

Policy 41.2.2: Where no natural features of flow or ponding exist on a site outside the future urban areas, the county will require the water management structures be designed and constructed in such a manner as to mimic the functions of natural systems.

Policy 41.2.4: Where feasible within future urban areas, surface water management plans are encouraged that mimic the functions of natural systems.

Objective 41.3: GENERAL SURFACE WATER MANAGEMENT STANDARDS. Lee County will continue to provide sufficient performance and/or design standards for development protective of the function of natural drainage systems.

Policy 41.3.11: Runoff must be routed through retention or detention areas and vegetated swales in order to reduce flow velocity, allow for percolation, and trap and remove suspended solids and pollutants.

VII. CONSERVATION AND COASTAL MANAGEMENT

Goal 77: RESOURCE PROTECTION. To manage the county's wetland and upland ecosystems so as to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics.

Objective 77.1: RESOURCE MANAGEMENT PLAN. The county will continue to implement a resource management program that ensures the long-term protection and enhancement of the natural upland and wetland habitats through the retention of interconnected, functioning, maintainable hydroecological systems where the remaining wetlands and uplands function as a productive unit resembling the original landscape.

Policy 77.1.1: County agencies implementing the natural resources management program will be responsible for the following:

1. Identifying upland and wetland habitat/systems most suitable for protection, enhancement, reclamation and conservation.

2. Recommending standards to the Board of County Commissioners approval for development and conservation that will protect and integrate wetlands and significant Rare and Unique upland habitats.

6. Compiling, maintaining and regularly updating county mapping of vegetation communities; listed species habitat and sitings; and water resources including watersheds, floodplains, wetlands, aquifers, and surface water features.

7. Coordinating in the preparation of plans with the municipalities, South Florida Water Management District, and Southwest Florida Water Management District to better control flows of freshwater and reduce pollutant discharges into Lee County coastal waters.

Policy 77.2.2: Continue to provide regulations and incentives to prevent incompatible development in and around environmentally sensitive lands.

Policy 77.2.3: Prevent water management and development projects from altering or disrupting the natural function of significant natural systems.

Policy 77.2.4: Encourage the protection of viable tracts of sensitive or high-quality natural plant communities within developments.

Policy 77.2.6: Avoid needless destruction of upland vegetation communities including coastal and interior hammocks through consideration during the site plan review process of alternative layouts of permitted uses.

GOAL 78: ESTUARINE WATER QUALITY. To manage estuarine ecosystems so as to maintain or improve water quality and wildlife diversity; to reduce or maintain current pollution loading and system imbalances to conserve estuarine productivity; and to provide the best use of estuarine areas.

Objective 78.2: WATERSHED MANAGEMENT PLANS. By 1996, establish procedures for reviewing all new upland development in terms of its impacts on estuarine systems. Prepare estuarine watershed management plans which maximize stormwater retention and treatment, with priority to the Estero Bay watershed.

GOAL 84: WETLANDS. To maintain and enforce a regulatory program for development in wetlands that is cost-effective, complements federal and state permitting processes, and protects the fragile ecological characteristics of wetland systems.

Objective 84.1: The natural functions of wetlands and wetland systems will be protected and conserved.

Policy 84.1.2(4): Every reasonable effort will be required to avoid or minimize adverse impacts on wetlands through the clustering of development and other site planning techniques.

GOAL 85: WATER QUALITY AND WASTEWATER. To ensure that water quality is maintained or improved for the protection of the environment and people of Lee County.

Objective 85.1: Maintain high water quality, meeting or exceeding state and federal water quality standards.

Policy 85.1.2: New development and additions to existing development must not degrade surface and ground water quality.

Policy 85.1.3: The design, construction, and maintenance of artificial drainage systems must provide for retention or detention areas and vegetated swale systems that minimize nutrient loading and pollution of freshwater and estuarine systems.

GOAL 87: WATER RESOURCES. To conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability.

Objective 87.1: WATER SUPPLIES. Insure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems.

Policy 87.1.1: Natural water system features which are essential for retention, detention, purification, runoff, recharge, and maintenance of stream flows and groundwater levels shall be identified, protected, and managed.

Policy 87.1.1: Development designs must provide for maintaining surface water flows, groundwater levels, and lake levels at or above existing conditions.

XI. ECONOMIC ELEMENT

Objective 110.1: Lee County will encourage the conservation and enhancement of those natural resources that represent the foundation of the county's existing retirement, recreation, and tourist oriented economy.

Policy 110.1.7: Lee County will encourage the preservation of sensitive natural resources, Including beaches, wetlands, estuaries, clean air and water, historic resources, scenic vistas and other unique natural resources through public acquisition and/or regulatory protection.

CPA2001-27
BoCC SPONSORED AMENDMENT TO THE

LEE COUNTY COMPREHENSIVE PLAN

THE LEE PLAN

LPA Public Hearing Document
for the
July 22nd, 2002 Public Hearing

Lee County Planning Division
1500 Monroe Street
P.O. Box 398
Fort Myers, FL 33902-0398
(941) 479-8585

July 10, 2002

LEE COUNTY
DIVISION OF PLANNING
STAFF REPORT FOR
COMPREHENSIVE PLAN AMENDMENT
CPA2001-00027

☑ **Text Amendment** ☐ **Map Amendment**

	This Document Contains the Following Reviews:
✓	**Staff Review**
	Local Planning Agency Review and Recommendation
	Board of County Commissioners Hearing for Transmittal
	Staff Response to the DCA Objections, Recommendations, and Comments (ORC) Report
	Board of County Commissioners Hearing for Adoption

STAFF REPORT PREPARATION DATE: July 8, 2002

PART I - BACKGROUND AND STAFF RECOMMENDATION

A. SUMMARY OF APPLICATION

1. **APPLICANT:**
   LEE COUNTY BOARD OF COUNTY COMMISSIONERS
   REPRESENTED BY LEE COUNTY DIVISION OF PLANNING

2. **REQUEST:**
   Amend Community Facilities and Services Element, Goal 40: Coordinated Surface Water Management and Land Use Planning on a Watershed Basis to add a new Objective and Policy regarding incorporation of green infrastructure into the surface water management systems of proposed developments, and provide definitions for green infrastructure and flow-way in the Glossary.

B. STAFF RECOMMENDATION AND FINDINGS OF FACT SUMMARY:

1. RECOMMENDATION: Planning staff recommends that Lee Plan Goal 40 be amended to add an Objective and that the Glossary be amended to add definitions for GREEN INFRASTUCTURE and FLOW-WAY as follows:

DEFINITION: **Green Infrastructure:** Surface water management structures that are "soft" structures such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: An area of lower elevation that conveys water or has the potential to convey water. The flow-way may contain uplands, wetlands or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where stormwater moves within variable dimensions instead of a well defined channel. The area of flow in this case has enough general confinement to exhibit stormwater flow characteristics and is evidenced by, but not limited to, drift lines, rack lines, sediment deposits, soils and root scour, and absence of litter or groundcover. A natural flow-way can be a series of lower elevation areas that connect isolated wetlands that interconnect when water levels raise high enough to form a continuous flow path.

A man-made naturalized flow-way is a constructed wetland system (typically a marsh) used for nutrient uptake, stormwater treatment, and/or stormwater conveyance.

A man-made hard stucture flow-way is a physical connection between stormwater basins (e.g. canal, culvert, pipeline, or combinations thereof).

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The county encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The county encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The county encourages the preservation of existing flow-ways and the restoration of historic flow-ways.

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

- Benefits of incorporating green infrastructure into the surface water management system include improving water quality, improving air quality, improving water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

- Surface water management systems can be designed to establish the control elevation at a level to insure the correct hydroperiod for incorporation of existing wetlands.

- Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost.

- Green infrastructure can preserve and enhance the natural features and processes of a site.

- Green infrastructure can maximize post-development economic and environmental benefits.

- Green infrastructure, if designed properly, can be less maintenance intensive than conventional stormwater conveyance systems.

- Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them.

- U.S. Fish and Wildlife Service suggest that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

- Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

C. BACKGROUND INFORMATION

Incorporating green infrastructure in the surface water management design provides ecological and aesthetic benefits. The vegetation will uptake nutrients improving water quality and processing carbon dioxide into oxygen improving air quality. These areas provide water storage and water recharge/infiltration. The habitat provides foraging, roosting and nesting opportunities for wetland dependent wildlife. Lee County listed species that may benefit from the green infrastructure include roseate spoonbill, little blue heron, reddish egret, snowy egret, tricolor heron, wood stork, limpkin, Big Cypress fox squirrel, snail kite, American alligator, gopher frog, Everglades mink, Florida sandhill crane, Florida black bear, and Florida panther. Additionally, these areas will provide visual relief within the urban environment, as well as, passive recreational opportunities.

Urban surface water management system design should be a multipurpose, multimeans effort for achieving water quality enhancement, groundwater recharge, recreation, wildlife habitat, wetlands creation, protection of landmarks, control of erosion and sediment deposition, and creation of open spaces. Development sites should be carefully mapped to locate existing natural features so the design can take into consideration the functions within the natural drainage system. The incorporation of "natural" engineering techniques or green infrastructure can preserve and enhance the natural features and processes of a site while maximizing post-development economic and environmental benefits. Good surface water management designs improve the effectiveness of natural systems, rather than negate, replace or ignore them. [Design and Construction of Urban Stormwater Management Systems, The Urban Water Resources Research Council of the American Society of Civil Engineers and the Water Environment Federation, 1992]

Native plant communities can be incorporated into the surface water management system. The use of existing wetlands within the system design may be achieved by establishing the control elevation at a level that insures the hydroperiod is maintained or improved. The engineering of the surface water management system can provide basins with different control elevations to incorporate a wetland in one portion of the site, while creating a different control elevation in portions that do not utilize the existing wetland system.

"Design of wetland stormwater discharge systems is based primarily on knowledge of the hydrologic limits of various wetland plant communities and the requirements of Chapter 2-25 FAC. Pre-development hydroperiod and maximum flooding depth can be determined by an ecologist familiar with the tolerance limits of Florida wetland plant communities. Sizing of the wetland area, weirs, berms, and pretreatment systems must be based on an analysis of stormwater flows."[Knight, R.L., L. Scwartz & E. Livingston. 1999. *Use of Wetlands for Stormwater and Wastewater Treatment*]

Planning staff have noticed a trend in proposed developments requesting deviations from the indigenous open space requirement to impact isolated wetland systems during the planned development zoning process. The applicants state that the South Florida Water Management District (SFWMD) requires secondary impact mitigation for wetlands incorporated into surface water management systems, and that any wetland under 3 acres in size may be impacted through the SFWMD permitting process. Additionally, the justifications state that the county does not have regulatory authority over wetland systems. The county does not review and permit wetland impacts. However, the county does have indigenous open space requirements per the Land Development Code (LDC) Section 10-415(b). Also, planned development site design is required to not unnecessarily alter or impact natural features of the site per LDC Section 34-9411(g). Incorporation of wetland plant communities should be considered in the development site and surface water management system designs.

PART II - STAFF ANALYSIS

A. STAFF DISCUSSION

Green infrastructure "could well be the next frontier in environmental stewardship" as noted in the August 2000 issue of Planning (p. 14). Both public and private entities are designing surface water management systems that incorporate existing and created native habitats as a means to increase water storage and quality while reducing cost. This type of design is being applied to large watersheds through public infrastructure such as the South Florida Water Management District's redesign of the Dade County canal system, and within private developments such as the PECO Energy Company in Pennsylvania (Planning, August 2000, p.14-17). Land use regulations should be designed to allow and encourage the use of the growing list of best management practices for surface water management.

The U.S. Fish and Wildlife Service released a report on June 11, 2002 entitled "Geographically Isolated Wetlands: A Preliminary Assessment of Their Characteristics and Status in Selected "Areas of the United States"which indicates isolated wetlands are both exceptionally important and exceptionally vulnerable to destruction. Isolated wetlands are defined as those with no apparent surface water connection to perennial rivers and streams, estuaries, or the ocean. These wetlands perform a number of functions including water storage and gradual release, protection against flooding, filtering of sediment and pollution from runoff, habitat for wildlife, and resources for recreation. The report

suggests that areas with a high proportion of isolated wetland acres may need to take special steps to protect these important resources.

The Audubon International Signature Program for golf courses require an environmental assessment of the property prior to designing the golf course. This analysis is done as the first step in the design in order to maximize the retention of natural features, and determine the best surface water management plan. Features of such courses often include preservation of flow-ways, creation of flow-ways, and filtration marshes. This type of design planning would be of benefit to other development sites by fitting the project to the existing conditions of the site.

B. CONCLUSIONS

Lee County continues to grow with approximately 10,000 to 14,000 new residents a year between 1997 and 2001. This steady growth adds pressure to the existing natural systems and water supply. Incorporating green infrastructure and flow-ways into surface water management design will help protect the groundwater and surface water in Lee County. Also, green infrastructure furthers Lee County's efforts in achieving EPA's non-degradation water quality criteria for stormwater discharges to designated Outstanding Florida Waterways and compliance with future total maximum daily loads established for impaired water-bodies. Best Management Practices (BMPs) required under current surface water permitting have variable removal efficiencies for specific pollutants. Green infrastructure, such as filter marshes, have demonstrated significant nutrient reduction capabilities. The Federal government will soon be addressing maximum daily loads of discharge and levels of nutrients within the discharge. Green infrastructure will maximize the onsite retention time, nutrient uptake, nutrient settling, and groundwater recharge thereby reducing the degradation of natural rivers, Estero Bay Aquatic Preserve, and the Gulf of Mexico. The incorporation of green infrastructure and flow-ways into surface water management systems will help development in Lee County to be within the maximum daily loads allowed by Federal regulations.

C. STAFF RECOMMENDATION

Planning staff recommends that the Board of County Commissioners transmit the proposed amendment.

PART III - LOCAL PLANNING AGENCY REVIEW AND RECOMMENDATION

DATE OF PUBLIC HEARING: July 22, 2002

A. LOCAL PLANNING AGENCY REVIEW

B. LOCAL PLANNING AGENCY RECOMMENDATION AND FINDINGS OF FACT SUMMARY

1. RECOMMENDATION:

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

C. VOTE:

NOEL ANDRESS	_____
MATT BIXLER	_____
SUSAN BROOKMAN	_____
BARRY ERNST	_____
RONALD INGE	_____
GORDON REIGLEMAN	_____
GREG STUART	_____

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR TRANSMITTAL OF PROPOSED AMENDMENT

DATE OF TRANSMITTAL HEARING:

A. BOARD REVIEW:

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. BOARD ACTION:

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

C. VOTE:

	_____
JOHN ALBION	_____
ANDREW COY	_____
BOB JANES	_____
RAY JUDAH	_____
DOUG ST. CERNY	_____

PART V - DEPARTMENT OF COMMUNITY AFFAIRS OBJECTIONS, RECOMMENDATIONS, AND COMMENTS (ORC) REPORT

DATE OF ORC REPORT:

A. DCA OBJECTIONS, RECOMMENDATIONS AND COMMENTS

B. STAFF RECOMMENDATION

PART IV - BOARD OF COUNTY COMMISSIONERS
HEARING FOR ADOPTION OF PROPOSED AMENDMENT

DATE OF ADOPTION HEARING: _____

A. BOARD REVIEW:

B. BOARD ACTION AND FINDINGS OF FACT SUMMARY:

1. BOARD ACTION:

2. BASIS AND RECOMMENDED FINDINGS OF FACT:

C. VOTE:

	_____
JOHN ALBION	_____
ANDREW COY	_____
BOB JANES	_____
RAY JUDAH	_____
DOUG ST. CERNY	_____

INTEROFFICE MEMORANDUM
FROM
PUBLIC WORKS
NATURAL RESOURCES MANAGEMENT

Date: July 10, 2002

TO: Local Planning Agency

From: Roland Ottolini, P.E.
Director

SUBJECT: CPA2001-27 Amendment to the Lee Plan – Greenway Infrastructure

Our office has reviewed the proposed Lee Plan Amendment and supports its adoption. Preservation, restoration and/or the creation of greenways and flow-way corridors further Lee County's efforts in meeting water quality standards established by the USEPA and FDEP. In the near future, Lee County will be subject to meeting Total Maximum Daily Loads (TMDLs) criteria for impaired water bodies. We are also required to meet non-degradation standards for waters discharging to Outstanding Florida Waters (OFW). Greenway infrastructure and flow-way corridors help achieve these goals by providing an efficient means of reducing total suspended solids, nutrients and metals from our surface waters.

xc: Jim Lavender, Director, Public Works
Paul O'Connor, Director, Planning

LEE COUNTY
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LOCAL PLANNING AGENCY

LEE COUNTY, FLORIDA

Transcript of proceedings had at the public hearings conducted by the Local Planning Agency, Lee County, Florida, at Board of County Commission Chambers, Lee County Courthouse, Fort Myers, Florida, on July 22, 2002, commencing at 8:30 a.m.

MEMBERS OF THE BOARD:

Ronald Inge, Chairman
Gordon Reigelman
Susan Brookman
Robert Sheldon
Noel Andress
Matt Bixler

ALSO PRESENT:

Timothy Jones, Assistant County Attorney
Joan Henry, Assistant County Attorney
Paul O'Connor, Director of Planning Division
Rick Burris, Planner
Peter Blackwell, Planner
Robert Irving, Planner
Dave Loveland, DOT

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THE CHAIRMAN: Good morning, everyone. Let's call the July 22nd, 2002, Local Planning Agency meeting to order.

Mr. Jones, do we have public notice of the meeting?

MR. JONES: Yes, sir.

Timothy Jones, Assistant County Attorney.

I have reviewed the affidavit of publication and find it to be sufficient as to form and content and am providing the original to your clerk at this time.

THE CHAIRMAN: Thank you very much, Mr. Jones.

I would like everyone to please join me in standing and reciting the pledge of allegiance, please.

(Whereupon, the pledge of allegiance was recited.)

THE CHAIRMAN: Thank you.

The next item on the agenda -- actually, there's a missing item. We normally have a public forum at this time.

Is there anyone in the audience that would like to address the LPA on items other than those that are on the agenda? We'll have plenty of

time to talk about those, but would anyone care to address the LPA on any items other than those on the agenda? Please come forward at this time if you would like.

Okay, seeing none, we'll move on to the agenda.

Anyone on the board have any comments?

THE CHAIRMAN: Okay. The first item is CPA2001-12, modify Policy 1.3.8 to create specific access management plans for Alico Road, Bonita Beach Road and Luckett Road in the vicinity of I-75.

Mr. Jones -- or, excuse me, Mr. O'Connor.

MR. O'CONNOR: Good morning, Mr. Chairman, members of the LPA.

This amendment -- I believe at this point in time I would like to ask for a motion to place this on next month's agenda packet. I have spoken with Dave Loveland. Some of the property owners had requested additional time to review this amendment and Dave asked that I ask you to do that.

THE CHAIRMAN: Okay. Thank you.

Would anyone in the audience care to address CPA2001-12? That's to create specific access management plans for three road segments, Alico Road, Bonita Beach and Luckett Road in the vicinity of I-75.

There's been a request to delay this or defer this until next month's agenda, so we'll have a public hearing in August on this topic; but would anyone care to address the LPA on

CPA2001-12? Please come forward.

Okay, seeing none, what's the board's pleasure?

MR. REIGELMAN: Sounds reasonable.

THE CHAIRMAN: We have a motion.

Paul, did you ask for a continuance of this until the August agenda?

MR. O'CONNOR: Until the August agenda, yes.

THE CHAIRMAN: Do we have a motion for that?

MR. REIGELMAN: I make a motion that we carry it over until next month.

THE CHAIRMAN: Motion by Mr. Reigelman. A second?

MS. BROOKMAN: Second.

THE CHAIRMAN: Second by Ms. Brookman.

We have a motion and a second. Discussion?

All in favor say aye.

BOARD MEMBERS: Aye.

THE CHAIRMAN: And that carries six to none. That will be carried over until the August agenda.

THE CHAIRMAN: Next Item is CPA2001-15, amend the future land use map series, Map 1, by updating the conservation land use categories.

Yes, sir.

MR. IRVING: For the record, Robert Irving with Lee County Environmental Sciences.

This amendment is to include lands owned by Lee County through Conservation 2020 program, the Calusa Land Trust lands and also lands purchased by the Trustees for Internal Improvement Trust Fund and Charlotte Harbor purchased through the Florida Forever program. There's also a parcel which is being removed from the conservation lands category and placed into public facilities. It's a property owned by the Trustees for Internal Improvement Trust Fund, but it's utilized by FDOT as a stockpile area so was not something that was consistent with the conservation lands category.

If you turn to the map, I do want to address one issue. Through the Conservation Lands Acquisition Stewardship Committee, they requested that Nomination 59 and Nomination 154 be removed from this amendment for the -- the reasons listed was that those properties are in process of -- 59

is Bunche Beach; and, as you know, the federal government promised to contribute $3 million towards the purchase of this property and it was County Lands' opinion that if we did place it in the conservation lands category that it would devalue the property and possibly devalue how much money we would get back from federal government. One fifty-four has a possibility of being sold to the water management district, and so they also recommended that that parcel also be removed from this amendment. It is shown on the map just for purposes of discussion; but the rest of the properties, as you can see, are listed as in the tables following this map. The one parcel to be removed is off of State Road 80 just north of Orange River and that's the FDOT parcel. That's the one being utilized by FDOT.

THE CHAIRMAN: That's about 18 acres, did you say?

MR. IRVING: Yes, I believe it's about 18 acres.

THE CHAIRMAN: Parcel 154, is that about five acres or so? It's very hard to see on the scale of this map. I know it's not included.

MR. IRVING: One fifty-four is about 15

acres.

THE CHAIRMAN: All right. Thank you.

Questions, Matt?

MR. BIXLER: Have there been other pieces of property that have been bought for conservation in the last -- I guess since August 1st, 2001, that aren't included in this through CREW and other programs or is this everything?

MR. IRVING: No. The only targeted area that we looked at or that was purchased by the Florida Forever program was the Charlotte Harbor flatwoods region. Hopefully, next year we'll be able to bring in the parcels purchased around the CREW area and other areas that have been purchased by the state.

MR. O'CONNOR: And, Matt, it was our intention to show other conservation lands within this category; but when we first adopted the future land use category for conservation lands, we had -- we struggled with what kind of uses would be allowed within these and so we ended up with just really doing public kinds of conservation property as opposed to private lands with conservation easements on it.

MR. BIXLER: Okay.

MR. O'CONNOR: Some day we would like to at least have the ability to map all of those, if not include them in the comprehensive plan.

THE CHAIRMAN: Further questions?

Okay. Thank you, sir. There may be some from the audience, so stay handy.

This is a public hearing on CPA2001-15, amend the future land use map series, Map 1, by updating the conservation land use category. Would anyone in the audience care to speak on this particular item at this time? Please come forward. CPA2001-15.

Seeing none, we'll close the public hearing. What's the pleasure of the board?

MS. BROOKMAN: I would like to move that we recommend transmittal of this amendment to the future land use map series, Map 1, by updating the conservation land categories as proposed.

THE CHAIRMAN: We have a motion by Ms. Brookman. Do we have a second?

MR. ANDRESS: Second.

MR. SHELDON: Second.

THE CHAIRMAN: Second by several folks. Mr. Andress was the first, but I heard Mr. Sheldon also.

Okay, discussion. Now, the recommendation is to specifically exclude Parcels 59 and 154 as part of the recommendation; is that correct?

MR. O'CONNOR: Yes, that's correct.

MR. IRVING: Yes. It wasn't included in the staff report, 59. If you look at the table, Attachment 2, you will see that 154 and 59 are excluded in the table.

THE CHAIRMAN: So you don't need us to specifically state that they are excluded. They are for purposes --

MR. O'CONNOR: Well, I think if you are recommending staff's recommendation, they are excluded.

THE CHAIRMAN: Okay, I believe that's the motion.

Any further discussion?

Okay, we have a motion and a second. All in favor, please say aye.

BOARD MEMBERS: Aye.

THE CHAIRMAN: Opposed?

That carries six to zero.

THE CHAIRMAN: The next item is CPA2001-22, amend the future land use map series, Map 12, the water dependent overlay zones, by evaluating and updating the status of the overlay areas and the goals, objectives and policies that pertain to the water dependent overlays.

Yes, sir.

MR. BLACKWELL: Good morning. This is CPA2001-22. This is a Board of County Commissioners sponsored amendment to the Lee Plan.

Map 12, the water dependent overlay zones map, does not reflect current conditions in many of the WDO zones or past changes in their boundaries. Some of the WDO zones have undergone significant development since their creation.

This amendment proposes six changes to Map 12. The remaining WDO zones do not present compelling reasons for amendment.

This amendment addresses Map 12 only. The WDO zones on San Carlos Island are addressed by Map 2 and therefore are not included in this amendment. Likewise, ongoing marina issues on Pine Island are beyond the scope of this amendment.

The proposed amendment will clarify and update the water dependent overlay zones in Lee County. It will correct scrivener's errors and remove inconsistencies and outdated information from Map 12. The amendment will also help preserve increasingly rare water access and water dependent land uses within the county.

As currently codified, the Lee Plan goals, objectives and policies, i.e., the text portions, sufficiently address water dependent overlay zones.

Planning staff recommends that the Board of County Commissioners transmit the proposed plan amendment.

And I know some of you got this late, so if you have any questions --

MR. O'CONNOR: Peter, would you put your name on the record.

MR. BLACKWELL: Pete Blackwell, Division of Planning.

THE CHAIRMAN: Questions of Mr. Blackwell?

MS. BROOKMAN: This basically looks like it's cleaning up.

MR. BLACKWELL: It's a technical amendment, and it really just reflects changes in land

development.

THE CHAIRMAN: Further questions?

All right. Thank you, sir.

This is a public hearing. Would anyone in the audience care to address CPA2001-22, amendment of the future land use map series, Map 12, water dependent overlay zones. If you'd care to address CPA2001-22, please come forward at this time.

No takers on that one.

Okay, close the public hearing. What's the pleasure of the LPA?

MR. ANDRESS: I recommend that we transmit the proposed plan amendment to BOCC.

THE CHAIRMAN: We have a motion for transmittal by Mr. Andress.

MR. BIXLER: Second.

THE CHAIRMAN: Second by Mr. Bixler. We have a motion and second to transmit CPA2001-22. Any discussion?

All in favor say aye.

BOARD MEMBERS: Aye.

THE CHAIRMAN: Opposed?

That carries six-zero.

THE CHAIRMAN: The next item is CPA2001-23, evaluate and amend the future land use map series, Map 20, the agricultural overlay, and Goal 9, agricultural land uses, and its subsequent objectives and policies.

Rick.

MR. BURRIS: For the record, Rick Burris, Lee County Division of Planning.

As you just explained, the proposed CPA2001-23 is an amendment to Goal 9 and Map 20 of the Lee Plan, which is the agricultural overlay.

This amendment began with the staff's desire to replace the existing black and white map in the plan which no one could read, and finding the original map proved fruitless. Staff began to just try to recreate the map rather than doing an amendment and in our initial review we determined that recreating that map was going to just produce a map that was out of date. There were a number of areas that were included on the existing overlay that had either been changed by taking them out of agricultural uses, such as The Brooks development, with all this -- was all shown on that overlay, or other areas were being

included on the overlay that were no longer in a nonurban category, which would include the properties north of Alico Road which are now designated airport commerce.

Staff also began looking at the language and found some conflicts there in the language. One of them was the map refers to parcels over a hundred acres in nonurban future land use categories and the Objective 9.1 refers to areas outside the future urban area of the Lee Plan.

We also realized that the future urban area does not -- there are actually six categories in the Lee Plan. The future urban area does not include lands designated airport, airport commerce, new community, all the interchange areas. Those are listed under a different heading, so those wouldn't necessarily meet that definition of being in the future urban area, so we wanted to clarify that language.

And also the language was not exactly clear as to what parcels would be included in the overlay, whether it was only parcels that exceeded a hundred acres in size or, if you combined the parcels that were abutting parcels, that they would then meet this criteria.

So we have tried to clarify some of those issues so that now, if you have ten, for example, ten AG parcels that are ten acres in size that are neighboring parcels, they would be included in the overlay; however, if you had a 75-acre parcel that stood alone, it would not be included in the overlay.

That's basically housecleaning, just to get the map, an informational map to put people on notice that AG operations do exist in these areas, in nonurban areas.

If you have any questions --

THE CHAIRMAN: Questions of Mr. Burris?

Rick, I have one.

I know you probably don't have parcel specific information available, but I'm puzzled as to why one particular half section was deleted out east of Alico Road. I'm fairly familiar with that piece and I know that it's primarily lake at this point, but it's used to provide water for agricultural operations and I'm not sure why it was deleted.

Again, I know you don't have it by strap number or anything -- or not likely, anyway.

MR. BURRIS: Not with me. I do in the

office. I can answer that question probably if you had that parcel -- I could answer it after I got back, but -- yeah, we did look at the -- what the Property Appraiser had assessed everything, using their assessment, basically considering them the expert on what's an AG piece of property.

THE CHAIRMAN: If you look on Attachment 1 -- I don't know if you have got that handy there -- I'll tell you which one it is.

See the -- where Alico Road bends and goes south?

MR. BURRIS: Yes.

THE CHAIRMAN: Further east and north there's a kind of a hole in a doughnut. It's about a half section there.

MR. BURRIS: If you continue Alico out, it would still be south?

THE CHAIRMAN: Yes, right here, that piece right there. It's kind of in the middle of all these AG zones, but now it's removed. I'm puzzled by that. That's the one I was mentioning.

MR. BURRIS: I'll circle that and verify it.

Like I said, these are draft maps. We've

had some technical difficulties, especially over the weekend, trying to get these maps finalized; and before we send them -- the packet to the board, we're going to verify to make sure that we don't have any areas that are less than a hundred acres and we'll check some of these holes that -- because I don't like having the holes in the map either.

THE CHAIRMAN: Okay. Noel?

MR. ANDRESS: I also have a question concerning a property out on Luckett Road east of the interstate, a little bit east of Staley Road on Luckett Road. I notice in your Attachment 1 you do have the -- it's a 320-acre parcel? I do see that included here on Attachment 1, but I don't see where you added it on Attachment 3-A or subtracted it on Attachment 3-B.

MR. BURRIS: That might be it was either already on the map -- that would mean that it was already designated on the overlay.

MR. ANDRESS: So the important map is the Attachment 1?

MR. BURRIS: Yes. I'm not sure how familiar you are with -- this is the existing map that's in the plan. Basically between the -- showing

the nonurban areas and the hatching and recopies of copies, you can't read anything on that map.

THE CHAIRMAN: Any further questions of Mr. Burris?

MS. BROOKMAN: I have some parcel specific questions, too; but I guess -- because they are very small, and this is in terms of something being removed when it looks like the area surrounding is agricultural, so if I read this right, that has been converted to some other use that is not at all in the future urban category; is that correct?

MR. BURRIS: In order to be on the map, that Attachment 1, you would have to be designated as an agricultural piece of property by the Property Appraiser's Office. You would need to be in one of the nonurban categories of rural, rural community preserve, open lands, DRGR; and your specific property or collection of properties would have to be greater than a hundred acres in size. Some of those little holes in the map that are like five to ten acres, they may just be a single family home which the people no longer use for agricultural purposes.

THE CHAIRMAN: Mr. Burris, if you could

maybe educate us for a couple of minutes and tell us what is the purpose of the agricultural overlay per se. We understand it's to identify agricultural lands, but what is the overriding secondary purpose for that?

MR. BURRIS: The main reason for having this overlay included in the comp plan was to put future development on notice that these areas were actively being used for agricultural purposes and were -- we expected them to continue their use into the future. That's why we limit it to the nonurban areas. It doesn't state that it's not intended to mean that these properties are required to remain AG in the future, it's just to let someone know if you come in with a single family subdivision in the rural land use category and you're located next to an area in this overlay that you know there's going to be AG operations existing next door to you.

THE CHAIRMAN: Thank you.

Further questions of Mr. Burris?

Thank you, Rick.

This is a public hearing. Would anyone in the audience care to address CPA2001-23, the evaluation amendment of the future land use map

series, Map 20, to the agricultural overlay and Goal 9, agricultural land uses.

Mitch, please come forward.

MR. HUTCHCRAFT: Good morning. For the record, my name is Mitch Hutchcraft. I'm with the Bonita Bay Group. I'm here to speak just briefly on 2001-23.

This morning is the first time that I have had a chance to pick this up and read through it.

I guess I don't have any immediate concerns based on the explanation that Mr. Burris gave; but I do want to confirm for the record that it's really more of a public notice type map, that if you do come in and you develop a piece of property and there is agricultural, it's just to put you on notice that there are agricultural uses going on in the area. If that's the extent of the intent of this map, I'm comfortable with that; but if it's somehow to imply some regulatory authority over the use of that, I would rather know that now because it would have an impact on our company's response to it.

Also, particularly, I have got a couple of questions about the map -- I guess it was the Overlay 1 or the Attachment 1 that shows the

aggregated agricultural areas exceeding a hundred acres. There is one area in particular off of East Bonita Beach Road that I know that there are multiple development applications in the process right now. I don't know whether it makes sense to pull those properties off now or leave them on; and, again, I think it would be based on what the actual intent of this map is, so with that background, I guess I would like some confirmation what the actual intent -- and I understand what he said was to put people on notice of the existing use, and if that's what it is, you know, I think I'm comfortable with that.

And then I would just ask the county to evaluate the three sections on East Bonita Beach Road in light of that and determine whether it's appropriate for those to remain on the map or come off the map.

THE CHAIRMAN: It seems that, at least, if I read between the lines, part of the key to this is that it has an existing AG exemption from the Property Appraiser; and that may be why it appeared on there.

Rick, you may want to comment on that.

MR. BURRIS: For the record, Rick Burris.

That is true. Right now those three sections south of Bonita Beach Road are currently in -- they currently have an AG exemption today. That's why they are still included on the map.

Yeah, they are going through the development process. I'm not sure exactly where they are in the process. We did exclude the area where the mall down on Estero is being -- along 41, which would be in between The Brooks and 41. It does meet the acreage size and currently it still has AG exemptions, but we did leave that one off because it would kind of create a little island of AG uses there. This one was sort of contiguous with some uses to the north and before we dropped off all the older ones that were now being used for conservation purposes, there's a lot more AG over there north of Bonita Beach Road. So that's part of the reason why those are still left on there.

MR. O'CONNOR: And, for the record, I would like to assure Mr. Hutchcraft that this is not a regulatory map in any way. It's an informational map.

MR. SHELDON: I was just going to ask a confirming response from you.

On Page 2, Objective 9.1 as amended states that the biannual review of this map will be conducted to track changes in the inventory of agriculturally used land in the nonurban areas of Lee County. Do I understand that that is the purpose of this and the only purpose?

MR. O'CONNOR: Well, that's certainly one of the purposes is really to track over time what is happening with AG in Lee County.

MR. SHELDON: Is there another purpose or is it more of an intelligence gathering, as I'm understanding it to be?

MR. O'CONNOR: It's an intelligence gathering.

MR. ANDRESS: So if I'm understanding you correctly, then if someone owns a hundred-acre or larger agricultural tract, this is not going to have any impact at all on their tax classification?

MR. O'CONNOR: Well, this map certainly has nothing to do with the tax classification. It's an informational map.

MR. ANDRESS: Okay.

THE CHAIRMAN: Susan ?

MS. BROOKMAN: In reading the proposed

revisions to Objective 9.1, though, I am reading that these have an agricultural exemption and are located outside of areas anticipated for urban use during the life of the plan, so when I read that, I see this as being used as a planning tool as well as just clarifying to neighbors that there will be AG possibly going on here, because when I read that future, it's not anticipated for urban use, I'm seeing --

MR. O'CONNOR: Well, what that phrase is indicating is that this includes future land use categories that are not considered to urbanize within the life or the planning horizon of the plan.

MR. BURRIS: The old language had stated specifically outside of future urban areas; and if you look at your plan, there's like I'm saying, six headings, so the old language would state that the AG uses that are occurring in airport commerce would still be in the overlay, should still be designated in the overlay versus things that are in rural and outer islands overlay.

THE CHAIRMAN: They would still be in the overlay because they are still being used for

agricultural uses?

MR. O'CONNOR: It's more of a technical thing. The first objective under Goal 1 is identified as future urban areas; and it includes intensive development, central urban, urban community, suburban and outlying suburban. And then you get into another objective which then goes into like the airport commerce and the I-75 interchange area. So they are not technically in the plan listed as future urban areas, but they are certainly areas that are expected for urban development, so we have changed the language in this policy to indicate that it's not just within those five or six land use categories that we're not showing this, it's within the airport commerce, the interchange categories and the other categories that are designated for urban development.

It's really just a technical thing. To tell you the truth, I didn't realize myself that under the term future urban areas didn't include, for instance, interchange categories; but if you look at a technical reading of the plan, it doesn't.

THE CHAIRMAN: Can a parcel make the map if it doesn't have an AG exemption from the Property

Appraiser's office but it's still used in AG?

MR. O'CONNOR: No. That's our criteria is that it needs the recognition by the Property Appraiser's Office in order to make it on this map. Otherwise, we really wouldn't have a criteria for that.

I mean we could have done a map of all AG-zoned property, assuming if you have AG zoning you're in an AG use; but we didn't choose to do that. We're looking for parcels that are specifically identified by the Property Appraiser as bona fide agriculture.

THE CHAIRMAN: Okay. So that the reason -- presumably, they've done site review to verify that it is an AG use and therefore that would be accurate because they've done a field survey?

MR. O'CONNOR: That's correct.

THE CHAIRMAN: I disagree with their findings on -- that's the last one. Nevertheless -- any other questions of staff?

Gordon?

MR. REIGELMAN: The land that has been deleted from this category, is that by request of the property owner or is that by a site survey and possibly a nonqualified agricultural use or a

combination of that?

MR. BURRIS: It was a site survey, not a physical site survey, but using the data that we have through the Property Appraiser's office and using aerials, you know, checking to make sure that the properties were still in the -- you know, one of the rural classifications, if it was zoned AG, you know, all of those, going through the criteria, basically, to see if the property met -- was still meeting that criteria. We took out a number of properties that no longer had AG exemptions because they had been purchased for conservation purposes, for one thing. That would be the area north of Cape Coral. That all used to pretty much be in the overlay and now it's been taken out.

MR. REIGELMAN: That's all I have.

THE CHAIRMAN: Any further questions?

MR. BIXLER: Actually, I have one more site specific question.

The parcel just west of 75 between Daniels and Alico, it doesn't seem to be in a -- not -- it seems to be in an urban area, not a nonurban area. Is there any reason why that's on there if that is a nonurban area?

MR. O'CONNOR: That is designated as rural on the future land use map. The outlying suburban goes down about a mile south of Daniels Road and the industrial category comes up about a mile and those lands along I-75 there are designated as rural.

MR. BIXLER: Okay.

THE CHAIRMAN: Any further questions?

MR. SHELDON: I think he's accomplished a lot. We now have more intelligence ourselves about what is going on.

MR. O'CONNOR: And the data base that goes along with this map is a useful tool for us.

THE CHAIRMAN: Thank you.

This is a public hearing. Would anyone in the audience care to address the LPA on CPA2001-23, which is an evaluation amendment of the future land use map series, Map 20, the agricultural overlay, and Goal 9, agricultural land uses? Please come forward at this time.

No one else other than Mitch? All right, close the public hearing.

What is the LPA's pleasure?

MR. REIGELMAN: I would make the motion that we transmit or recommend for transmittal

CPA2001-23 to the Board of County Commissioners.

THE CHAIRMAN: We have a motion for transmittal by Mr. Reigelman. Do we have a second?

MS. BROOKMAN: I second.

THE CHAIRMAN: Discussion?

All in favor say aye.

BOARD MEMBERS: Aye.

THE CHAIRMAN: Opposed?

That carries six-zero.

THE CHAIRMAN: Next item is CPA2001-24, update Table 2(b), recommended operational improvements on constrained roads.

Mr. Loveland.

MR. LOVELAND: Good morning. For the record, David Loveland, Lee County DOT.

I'm here to present a relatively straightforward item. It's an update of Table 2(b) in the Lee Plan, which is a list of operational improvements on constrained roads. The constrained roads are identified in Table 2(a); and as referenced in the write-up, those are roads that the county is determined won't be widened for particular reasons, community impacts, aesthetics, environmental impacts, those sort of things; and so by virtue of that, because we're not talking about major widenings, we do have this list of operational improvements, smaller scale type improvements, that could perhaps been done to tweak the capacity of the roadway and allow development to continue.

As a general format change, one thing I'm proposing to the table, previously the table just identified those constrained roads that we had some specific improvements identified on; and I

think it might have been a little confusing compared to the larger list of overall constrained roads, so I'm updating Table 2(b) to include all of the constrained roads, whether we have a specific improvement identified at this time or not; and we've added a note that says no specific operational improvement identified at this time for those roads that we don't have improvements identified for, but operational improvements may still be possible and warranted in relation to development approval requests.

We want to make clear that this table reflects our thinking at the time of putting it together. We may get more data as a specific development proposal comes in along a roadway and they have to do particular types of analysis and that may call for some additional operational type improvement in order for that development to move forward.

I have gone through the list of each constrained road in the table. We're identifying a specific improvement here.

Captiva Road, we don't have any identified at this time. Recently we've done some paved shoulder improvement out there.

Daniels Parkway is already six lanes. We did recently do -- have a consultant do an access management study along Daniels; and based on the recommendations that came out of that study, those types of improvements and particular locations are reflected in the table now.

Estero Boulevard, we don't have any operational improvements identified at this time; but that is one of those roads that seems to be perpetually under study as to what might be able to happen there. I know the Town of Fort Myers Beach has actually got a consultant looking at some tolling and mass transit options along there; and we did just add some paved shoulders down there at the town's request.

Hickory Boulevard, other than a turn lane at the new Lovers Key park, we don't have any additional operational improvements identified at this time.

McGregor Boulevard, the addition of turn lanes or the two-way left turn lanes has been completed, basically, so that's been taken off the table.

There is one additional improvement that's under consideration right now, adding or

extending a right turn lane as you're going northbound approaching Colonial Boulevard because we're getting significant backups at that Royal Palm -- from that Royal Palm signal to Colonial signal. That is going to require some additional right-of-way and it would actually be considered as a major improvement in the MPO planning process.

Pine Island Road, Matlacha, the only thing we have identified there is an item that's actually referenced in the plan under Policy 14.2.3, which is actually being changed under the Pine Island community plan proposal that's under consideration in this cycle or the previous cycle. They all start to run together.

They were eliminating the reference to a continuous left turn lane through Matlacha, but they left some language in there about left turns at key locations there, so in order to be consistent, we're reflecting that potential improvement on the operational improvement list as well.

San Carlos Boulevard, which is the approach to Fort Myers Beach, we have referenced the possible improvement that may be coming. There

hasn't been a determination yet about the alternating approach signal to the bridge, which is something we've been testing and have seen perhaps some favorable results, but that's still under evaluation.

41 south of Daniels, we basically took out the improvements that have been completed. We don't have anything additional identified except maintaining the signal progression, signal timing progression, through that stretch and the installation of sidewalks and bike paths, which is actually identified in another part of the plan, Map 3D.

Old 41 we're actually going to end up taking off the list in Bonita Springs because that's now a City of Bonita Springs road. It's not maintained by the county any longer.

Estero Boulevard is a road, a constrained road, which we need to continue to maintain even though it's under another jurisdiction. We've left it on the list even though our regulatory level of service standards don't really apply in those situations because the city is the one approving the building permits and determining whether they are going to continue to allow that

to happen. We leave it on our constrained list in part because it makes it clear from the county's standpoint we won't be widening those roads.

Old 41 no longer fits in that category because it's now maintained by the city and it's going to be the city's determination as to what the future of that is. I don't think they intend to do any widening in there, however.

Then the Gulf Boulevard in Boca Grande, we don't have any improvements identified at this time, although we do have some drainage improvements coming up there.

Any questions on --

THE CHAIRMAN: Dave, I have one real quick. You touched on it, but I wanted to go back to it real quick.

On McGregor Boulevard from Colonial to Winkler Road, the staff report says it calls for adding a northbound right turn lane approaching Colonial Boulevard. Is that a right turn lane off of McGregor onto Colonial to go past the overpass, traffic will have two lanes going through there?

MR. LOVELAND: Yes.

THE CHAIRMAN: Further questions of Mr. -- Mr. Andress?

MR. ANDRESS: I have a question about the Matlacha road improvements. What's your time frame for doing that?

MR. LOVELAND: We don't have a specific time frame associated with these improvements. Some of these may be done by the county over the course of time through our major intersection CIP projects. More likely, they may end up being done by developers if they are proposing to do a development along one of these constrained roads. It identifies some options for some improvements that could help the capacity if there's some additional development.

MR. ANDRESS: Have you identified any roads in the Matlacha area where you would construct these turn lanes?

MR. LOVELAND: The Greater Pine Island community plan update referenced the one major roadway just west of the bridge. I don't remember --

MR. ANDRESS: Island Avenue?

MR. LOVELAND: Island Avenue, yes. That's a likely location, although I'm not sure because of

the proximity of the bridge whether we can get left turn lanes in both directions. That's something we would have to evaluate.

MR. SHELDON: I apologize if everybody knows the answer to this, but why isn't Sanibel Causeway considered a constrained road? I see the other approaches like to Estero are. What is the difference? Is it a policy thing?

MR. LOVELAND: It's a policy call. The county hasn't determined that it won't widen Sanibel Causeway at this point in time, at least forever.

MR. SHELDON: These are forever by contrast?

MR. LOVELAND: Well, in essence, it's the county policy. I mean they are forever until the plan changes and they are removed.

THE CHAIRMAN: Temporarily forever?

MR. SHELDON: I think I heard a Catch 22.

MR. LOVELAND: Everything in our plan represents current policy, but it's always subject to change.

MR. O'CONNOR: David, maybe if you'd just explain a little bit why we came up with this table way back when as part of the settlement in 1990.

MR. LOVELAND: Okay. That's going back a ways; but the identification of constrained roads actually came out of the comprehensive plan settlement process with DCA in 1990, 1991, where we indicated there were certain roads we didn't want to have widened, so recognition of that by DCA and it allows a higher level of congestion on those roadways.

But there was some recognition that even without major improvements there still might be some more minor improvements that could be done to improve the situation on a particular roadway, particularly as additional development may come in along those roadways, so that was the basis for establishing this table in the first place, whether improvements can be done short of actually widening to help the level of service situation on that particular roadway.

MR. SHELDON: So whereas lane changing during peak -- lane shifting during peak hours might work at Matanzas Pass Bridge, it would be considered something that might work on the causeway?

MR. LOVELAND: It isn't something we've really evaluated in relation to the causeway at

this point in time. It's something that's we haven't even determined for sure is going to work for the Fort Myers Beach approach. It's still being evaluated.

MR. SHELDON: Just personal observation, seems like people do it on their own now.

MR. LOVELAND: When I first came here, I was working downtown and living in southeast Cape Coral and using the two-lane Cape Coral Bridge every day, which had -- it was a single lane westbound, had two lanes approaching it; and you sort of got that voluntary alternating effect, although some people were more voluntary than others.

MR. SHELDON: Is there any process where you can add or -- how do you add or subtract to this?

MR. LOVELAND: The LPA can certainly suggest potential additions and we can add them or evaluate -- we can provide additional evaluation to see if we think that's reasonable and come back to you on that.

MR. SHELDON: I'm not suggesting that at this time, but I would like to learn more about this process.

I know you have nothing but time on your

hands, so maybe we can talk about that, bring that up in the future.

Thank you.

MR. LOVELAND: You're welcome.

THE CHAIRMAN: Further questions of Mr. Loveland?

MR. REIGELMAN: Is Old 41 in Bonita classified as an arterial or a feeder road, and why is the City of Bonita Springs and the City of Fort Myers Beach treated dissimilarly in this?

MR. LOVELAND: Well, I wouldn't say they are being treated dissimilarly. There are other roads within the City of Bonita Springs that the county maintains. There's only one in Fort Myers Beach. There's only one major road in Fort Myers Beach.

MR. REIGELMAN: Because it is arterial?

MR. LOVELAND: Yes. And Old 41 is considered an arterial as well, but it's less of an arterial than some of the other roadways.

The county maintains Bonita Beach Road still through the City of Bonita Springs; the Three Oaks and Livingston corridors, we're going to continue to maintain those as they come into the Town of Fort Myers Beach.

MR. REIGELMAN: Does the City of Bonita Springs understand and wish this?

MR. LOVELAND: Yes. This was established by virtue of an interlocal agreement. When the city incorporated, we executed an interlocal agreement indicating which roads the county was going to continue to maintain and which roads then would become city responsibility, so that was done by virtue of an interlocal agreement.

We have never actually executed an interlocal agreement along those lines with the Town of Fort Myers Beach.

MR. REIGELMAN: I can see why you would have more interest in arterial roads than ones that were mere feeders.

MR. LOVELAND: And that's not to rule out that potentially Estero Boulevard might be turned over to the Town of Fort Myers Beach. That is an issue that's discussed from time to time; and from the county's point of view, it would have to be matched by the City of Bonita Springs agreeing to take all of Hickory Boulevard as well. There's no point in cutting out one piece of it. And possibly we might even give the City of Bonita Springs Bonita Beach Road as well if we do

that. It would be up to the city to determine whether they want to take on that road.

One issue we always have when we face that is who gets the Big Carlos Pass Bridge to maintain, Fort Myers Beach or City of Bonita Springs.

THE CHAIRMAN: Yes.

MR. LOVELAND: Or do you divide it down the middle.

THE CHAIRMAN: Further questions of Mr. Loveland?

Thanks, Dave.

This is a public hearing on CPA2001-24, update Table 2(b), recommended operational improvements on constrained roads. Would anyone in the audience care to address the LPA on CPA2001-24? Please come forward.

Seeing none, we'll close the public hearing.

What is the pleasure of the LPA?

MR. BIXLER: I'll make a motion that we recommend transmittal of this amendment.

THE CHAIRMAN: We have a motion for transmittal by Mr. Bixler. Do we have a second?

MR. ANDRESS: Second.

THE CHAIRMAN: Second by Mr. Andress.

Discussion?

All in favor say aye.

BOARD MEMBERS: Aye.

THE CHAIRMAN: Opposed?

Carries six-zero.

THE CHAIRMAN: Next item, CPA2001-27, amend community facilities and service element, Goal 40, to coordinate -- coordinated surface water management and land use planning on a watershed basis.

Ms. Trebatoski.

MS. TREBATOSKI: For the record, I'm Kim Trebatoski with the Division of Environmental Sciences.

Initially I would like to hand out a couple of packets of information to the LPA which includes a memorandum citing different parts of the Lee Plan that this plan is consistent with and e-mail from Audubon International and their review of the plan and their support of it and an e-mail from Mr. Daltry, our Smart Growth director, with his comments in support.

THE CHAIRMAN: Kim, the highlighting here, these aren't additions or subtractions, they are just highlighted items?

MS. TREBATOSKI: Yeah, those -- well, we had some difficulty with our network this morning, so you have got my copy; but that actually I think will help you see as you glance through it how often either flow-ways, water quality,

infrastructure that are talking about grass swales and stuff are mentioned from the vision statement to the future land use section, to the environmental reviews, to transportation, to community facilities, to our water management and coastal conservation management, and even within the economic element it talks about conserving our natural resources.

I do want to point out with the e-mail that I received from Audubon International a slight correction in my analysis. On Page 6 of 11 I had indicated that the Audubon International Signature program for golf courses requires an environmental assessment of the property prior to designing the golf course; and, as Mr. Marquis points out in his postscript on the e-mail, that that is only required when someone wants to get the Gold Signature program or the sustainable development program, which are their higher -- there's more steps that you need to take to reach that. So I just wanted to clarify that so that there wasn't a misunderstanding.

And I also wanted to let you know that Mr. Ottolini and Mr. Daltry would have liked to have been here today, but they are at Regional

Planning Council this morning with the Everglades Restoration program meeting. And I believe in your packet you have a copy of Mr. Ottolini's memo.

The amendment before you provides two definitions, one for green infrastructure and one for flow-way. To our surprise, recently we realized that flow-way is mentioned throughout the Lee Plan but there was no definitionm2 and this has been a point in some project reviews, so we thought it was best to provide a definition for flow-way.

And then the objectives being proposed for addition is to incorporate green infrastructure into surface water management systems, including existing flow-ways, restoring flow-ways and the value of including existing wetlands systems when possible.

All the language has "encourage" in it. There's nothing within this language that says it must be done. We're trying to get people to take a look at their natural features and to also have an avenue where the county when reviewing a project has the ability to point out that a flow-way is significant to an area, whether it's

a local flow-way or a regional flow-way. Regional flow-ways are often taken care of through DRI processes, but more localized flow-ways are not.

A couple of things just to highlight -- to highlight my highlights.

There may be a question as to if this is more stringent than the South Florida Water Management District, and it can be, it may be, but under Objective 85.1 the Lee Plan states to maintain high water quality, meeting or exceeding state and federal quality standards, so there is a level that the county can up the regulations if they deem it necessary.

I think you will see in Mr. Ottolini's memo that there's more scrutiny coming over our water quality right now. You have probably read about it in the newspaper, that the state is going to be testing all the water quality in our waterways, as it appears that it's below where it should be. Mr. Ottolini believes that this amendment emphasizes the importance of green infrastructure and that through green infrastructure you are retaining water on sites, allowing for infiltration, allowing for nutrient

uptake and such.

So what we're really asking is for people to take a look at how they can reduce the hard structures, the piping and such, so that it improves the water quality coming off the site; and in Mr. Daltry's memo it points out how this is consistent with the overall Everglades Restoration plan.

So I'm here for any questions that you have.

THE CHAIRMAN: Questions of Ms. Trebatoski? Noel?

MR. ANDRESS: I'm just curious as to why we're saying at this stage in our water management for Lee County, we're saying "encourage". To me it should be an integral part of any submittal that if there's a natural flow-way there, there should be some provision made to retain that flow-way rather than say we want to encourage retaining that flow-way.

MS. TREBATOSKI: That's a good point. I think that at this point we were looking at direction language in here and then taking -- if this goes through, to then look at the LDC and see if flow-ways and such are that important should we be giving open space credits, should we

be giving other kind of credits in order to encourage it or is it something that should be a must; and that's why we're here, for direction and comments.

MR. ANDRESS: I think it should be a must and I think people should be given credits for the land that they use to retain the flow-ways. We've got to come up with a better way to store the water that's here rather than letting the water -- when we have excessive periods of rainfall like we have now, letting that water go to tide. I think those days are gone if we're going to be able to sustain the existing population and also provide water for the population to continue to grow as it has in the past.

We can't be coming up with plans that just encourage people to do it. They need to -- it needs to be definite language in here that says that that will be looked at as a part of the review of the plan, and I feel strongly about that.

MS. TREBATOSKI: Thank you.

THE CHAIRMAN: Any further comments? Susan.

MS. BROOKMAN: To follow up on what Noel

said, Objective 40.5 that we're looking at is basically addressing new development; and I would like to echo what I think I'm reading in Mr. Daltry's comments as well as what I think I heard Noel say, that Lee County needs to look not just at new developments, but also at existing properties that may have flow-ways, that property owners could be encouraged somehow, whether through incentives or some other type of program, to restore or maintain the flow-ways on areas that aren't necessarily slated for development at this time.

THE CHAIRMAN: Further questions? Bob.

MR. SHELDON: I just have a concern, I guess.

It seems like the language in here is tending toward the proscriptive rather than the suggestive and the encouragement; and maybe I'm just not reading it right. Maybe you could help me out.

On Page 3, Policy 41.2.1, I see the words, "require that these areas are to be used to the maximum extent possible".

Now, that's kind of a hard target to hit if you're a developer. Who decides what's the

maximum extent? Are we going to rack or backpack the EPA theory here? Are we technology forcing? Who's the expert in the county that tells these people that what they are doing isn't the maximum that they could do?

MS. TREBATOSKI: Okay. I think that Mr. Sheldon is referring to my memo on the Lee Plan consistency, some of the language that's already part of the Lee Plan?

MR. SHELDON: Yes.

MS. TREBATOSKI: To answer your question, that's done mostly through the rezoning process; and it's a number of levels of people from environmental sciences to natural resources to development services who are reviewing the surface water management in the zoning process.

MR. SHELDON: Well, I'm kind of familiar with how DRI's and wetland permitting goes; but I'm not sure what we're adding if we put another layer of multiple agency at the local level review on top of that. I'm not sure how that works.

MS. TREBATOSKI: I can give some examples of why the county at certain points have requested additional preservation over what the water

management district has.

MR. SHELDON: I'm sorry. I understand the exceptions. I'm trying to deal with the rule here.

It seems like again, coming back to my comment, when I read these things, I believe, as Noel does, that we should encourage and try to push as best we can, people take advantage of the natural site; but when it comes to defining something like a flow-way on a technical basis, I have a problem with somebody trying to put that term to code because, depending on how you look at it, all of Sanibel could be a flow-way, various parts of it. It all depends on what's going on.

Usually what you try to do is try to overcome some of the vagaries of Mother Nature because there's not much really natural out there in reclaimed farm lands, for example. It's not truly natural like something in the Everglades. And you're out there trying to fix something that a farmer may have done a long time ago and established some sort of a flow-way. Now you're coming along with an overall plan that on balance is the most cost effective, reasonable way to

control storm water runoff, meet all the criteria; and I don't know how we can come along and say all flow-ways must be protected. I just -- it seems like an overreaching kind of a program at this point.

MS. TREBATOSKI: The proposed language doesn't say that all flow-ways need to be protected. It encourages the analysis there of them and that there are going to be certain flow-ways that the county, the Natural Resources Department, feels are critical.

What you will find both through mining and agricultural uses, flow-ways are typically preserved during that time and it's when the projects come up for additional redevelopment into a more urban use that the question arises as to is this a flow-way and is it still necessary to protect.

MR. SHELDON: Isn't it also necessary to have the pre and post runoff conditions protected?

MS. TREBATOSKI: And that is part of your surface water management permit from the district.

The county looks at it as a number of

levels, not just the surface water management quality. There's water storage, there's water recharge, there's habitat value, there's relief within the urban environment, so the county does have levels of review that are beyond that of just managing your water flow through the site, which is what the water management district does.

MR. SHELDON: Thank you.

THE CHAIRMAN: Further questions of Ms. Trebatoski.

MR. REIGELMAN: Is there a map up here along with this? Has this ever been mapped?

MS. TREBATOSKI: No, and right now I do know that Mr. Ottolini has an intern that's working on more precise mapping. There was some flow-way mapping done when the density reduction/groundwater recharge land use category came through. Those were large major flow-ways. I know that right now we do have a person working on mapping more, but some of the -- I don't know how narrow that's going to get. I don't think that we're at a point where we want to just adopt a flow-way map and say these are the only flow-ways in Lee County because the time that it would take to map every single flow-way, by that

point we may, you know, have already impacted some if we're waiting for a map.

If there's some interest in mapping or such, I need to have that direction from you.

MR. REIGELMAN: It just seems like it would be a logical extension of this to see where our water is coming from and going in preparation for that hundred-year storm.

MS. TREBATOSKI: And I can check with Mr. Ottolini to see what kind of detail that mapping is being done in at this point.

I know that they're using the arc view system as the aerial's overlaid and are doing some field verification as well, so that map may be available in the near future. I have to find out the time frame on that.

MR. ANDRESS: I think we definitely need to look at some type of mapping because I think the 2020 funds should be used to acquire lands that are in these flow-ways; and if they are out buying land and they don't have any idea as to where these flow-ways are, then how are they going to make the best type of purchases to preserve the flow-ways?

So I think that just for -- to give the

staff some direction as to areas that are more critical, the flow-ways are the more critical for the county so that the purchases can be made in those areas.

THE CHAIRMAN: Further questions?

MR. SHELDON: Just if you could clarify the distinction we're drawing between this memorandum with this highlighted language in it and this that we have before us. What is the difference?

MS. TREBATOSKI: This is the proposed language that's in front of you now, the CPA and the memorandum, because the LPA determines whether this new language is consistent with the Lee Plan or not, is to point out how many places throughout the Lee Plan protection of natural resources and flow-ways and surface water management, water quality had been noted, so you're really taking all of this that's spread out throughout the Lee Plan and condensing it down to where -- when giving some direction at your surface water management plan section of it.

So this is just to point out consistency with the plan.

THE CHAIRMAN: Kim, I have a couple questions.

What process did you go through to come up with the suggested language? Did you discuss it with any of the various committees or any of the firms that typically deal with this that come in through the permitting process? Did you solicit their input?

MS. TREBATOSKI: Actually, the flow-way definition itself was brought into a zoning case where -- from a private firm because there was an issue of what is a flow-way and there wasn't a definition; and it was taken from a number of different sources. And I had worked with -- after that hearing had worked with that consultant and asked questions about it and if he felt that it was appropriate for me to be able to use his research and come up with that.

And we did not go to additional committees for input. Mr. Ottolini reviewed it and gave input and some recommended changes. You have the input from Mr. Daltry and from Mr. Marquis. I did send it to the Charlotte Harbor National Estuary Preserve and Estuary Program and to the Estero Aquatic Preserve and to the agency of Bay Management. I haven't received formal input back from them yet, but I'm hoping to before the Board

meeting.

THE CHAIRMAN: On Page 5, I have a concern similar to Mr. Sheldon earlier in that, you know, where are we really heading with this. We have on Page 5 in a couple places some discussions about isolated wetlands and how efforts need to be made to bring those into systems, et cetera; and that may very well be the case on a case-by-case basis. I'm concerned with if we adopt these broad standards that we're going to start working into the Land Development Code the preservation of all isolated wetlands as an extreme.

I know that obviously that has to be reviewed and will go through some discussion because we're starting to cite U. S. Fish and Wildlife Service reports that say isolated wetlands have this and that benefit, and arguably many do; but I think a couple years ago we went through the kind of opposite side where we said it doesn't make a lot of sense to leave an isolated wetland in the middle of a paved parking lot at Walmart. And are we shifting back the other way to where we're going to have to start entering into that debate again on isolated

wetlands and hence have another layer of analysis and review for wetlands through this policy?

MS. TREBATOSKI: I would say that the objective of the county staff is not to now take a step into the LDC and require preservation of all isolated wetlands. That would be remiss on our part if we did that because you need site specific look at a project to determine if it's appropriate or not.

We did have a couple of cases that have gone in front of the Board where cypress heads were proposed to be eliminated from the site; however, staff felt that there was a benefit to include those in the site. They were off to the sides of this site, they were avoidable, they were something that could add to the quality of development and actually maintain the wetlands in a healthy state.

At that point, after going through those processes and having the Board support us, the Board did give us some direction to take a look at adding language to the Lee Plan that will allow staff to review on a project-by-project basis isolated wetlands, so that some of the argument will be avoided at zoning time.

THE CHAIRMAN: Thank you.

MR. ANDRESS: I'm concerned that there's not some type of credit system built into the mechanism here for where you review a project and you determine there are some advantages to the public to maintain flow-ways and wetlands on the site if there's not some credit system built in to encourage the developer to want to retain this.

MS. TREBATOSKI: That would be addressed at the LDC level, and there is some ongoing discussion as to how that -- you know, what type of credits and incentives could be given.

We had some comments from various people that, you know, open space credits, density credits, maybe even tax exemption type incentives, that if it's that important, is there a way to lower the taxes on that portion.

I don't know, I don't know the legal means; but those are the things that we'll need to look at, take it the next step, to the LDC. The Lee Plan itself doesn't outline incentives.

MR. ANDRESS: Is that something that we'll be seeing in the future?

MS. TREBATOSKI: Any Land Development Code

change that would pertain to this would come in front of you; and at this point, if you have any direction as to where those credits should be taken or if you come up with something later that you would like us to look into, just let us know.

THE CHAIRMAN: Any further questions?

Thank you, Kim.

This is a public hearing on CPA2001-27, amendment of the community facilities and services element, Goal 40, coordinated surface water management and the land use planning on a watershed basis to add new objectives and policies.

Would anyone in the audience care to speak?

Mr. Hutchcraft.

MR. HUTCHCRAFT: Good morning. For the record, I am Mitch Hutchcraft and I'm with the Bonita Bay Group.

I would like to address CPA2001-27. Just want to give you a big picture perspective first and then I'll get into some of my specific comments.

I think that when you read the language that's been proposed, I think everybody generally agrees with the concept. We ought to be

incorporating these natural areas and we ought to be doing a good job of protecting the natural areas. And I don't think anybody disagrees with that.

And when for the most part you read the language that's being proposed in the comp plan, the first reaction is probably pretty positive; and from Bonita Bay's group, I would say that the initial reaction of that language is pretty positive.

The problem is that the devil's in the details, and I'll get into that in a little bit.

I also do want to briefly touch on Bonita Bay's background just so that you understand where we're coming from. I think we have got more Audubon Gold courses -- or actually we've got one course that's got 36 holes of Audubon Gold and in the background it identified the Audubon program as being a beneficial program.

That 36-hole facility that's gold on one site was the first in the world; and I think that our company probably has more Audubon courses, the gold, silver, platinum, than any other company in the world. So we have adopted that philosophy and really embraced it.

To go beyond that and take a look at The Brooks, which was a project that we worked closely with the water management district to restore and recreate a flow-way that brought water from the east side of I-75 and reconnected it to its natural outfalls.

Our other projects, we have significant setbacks and have preserved flow-ways through our projects, so I do want you to understand where I'm coming from before I start making my comments.

I think that it's also important to understand that these proposed languages -- this proposed language really only affects new development. It doesn't -- I thought that was a great point. It doesn't really do anything to go back and address San Carlos Park or San Carlos Estates or Cape Coral or Lehigh, where probably 90 percent of the impact was created; and what it's doing is it's trying to solve the problem on the ten percent of the new development that is coming through.

I think we obviously need to do our part and maybe even a little more, but there needs to be some effort that's being made to go back and

address those other areas, and this doesn't do that.

Getting to the specifics of this, my first comment -- and, Ron, I appreciate you bringing it up -- was I would encourage you to understand that this is a good concept and let's take a look at it and if we're going to do it, let's do it right. I'm a part of the development community and our company this will have an impact on. I'm not saying it's bad. I'm saying that we have not had the opportunity to look at this. I got this information on Wednesday. Nobody contacted us, nobody asked us. I don't think that the county staff talked with any of their consultants that they hired to actually do the basin studies on the county's behalf.

And I appreciate Kim's comment about the definition. Unfortunately, that was a case that I was a participant in and I'm very familiar with the details of that and what I can tell you is that in -- there are essence of the definition that are included in the staff's write-up that did include some of what we proposed; but it also drops out some very significant criteria. It added man-made components into the flow-way. It

removed a storm event that would enable you to define what the boundaries are. We really focused more on wetland connections than upland connections. So there are components in there that did reflect the comments that we had made during our rezoning, but I don't think that it's fair and I don't want you to get the impression that it was endorsed by us or that consultant, and I do have an e-mail from that consultant that kind of talks about the differences of the definition that we presented and what was in staff's.

And I don't want to get into that because I don't want to point fingers. I think that this is an admirable effort; but I think that it hasn't really been inclusive, it hasn't included the people that it's going to affect the most.

I was a little disappointed when I got here this morning and I hear that, you know, Audubon has had -- Audubon International has had a chance to review it, Wayne Daltry has a chance to review it, but to my knowledge nobody from the development community has. We've been working pretty closely with the county and the development group for probably the last six or

nine months; and while that's not specifically targeted to address these kinds of things, I think it's a great opportunity. Let's open up the lines of communication between the development community and staff and see if we can't come together and create a workable solution. We're doing something very similar to that in the open space requirements.

Now I do want to get into some of the very specifics of the amendment and then we can go from there.

One, I feel that this amendment is a little light on data and analysis. There's not a lot included in here that specifically identifies the benefits that are created directly from this amendment. I think there ought to be some more data and analysis that's included in it and I think that ought to be done in conjunction with the development community.

When you look at the definition, and Mr. Sheldon brought up a point, that this definition could essentially mean all of Sanibel, the definition includes natural flow-ways, it includes naturalized flow-ways and it includes man-made flow-ways. The question that I have for

you is say that you are a farmer and you've got a property and it's got a ditch that connects two low areas and that in two months out of the year there's water that kind of goes back and forth between that. That's now a flow-way under this definition, so you qualify under the amendment that's being proposed.

The scary thing for me is we don't know what the land development regulations are going to be. We get this definition included in the comp plan, we get this goals, objectives and policies included in the comp plan, and in a year they'll come back with the Land Development Code amendments that say you know what, if you have a flow-way, you can't alter it and you have to preserve X amount of feet on either side of it and you're -- you can't have any direct flow into that flow-way. We don't know what those requirements are and that concerns me.

I think that what you have seen over the last couple of years as the private sector starts doing amendments, you see more and more detail up front. If it works for the private sector, I think it's only fair that we get to see some of the details up front or at least have the

opportunity to be included in the discussion so that we know where we're going to land at the end of the day. That's a concern for me.

Another one of the comments in the amendment is it talks about the restoration of historic flow-ways. We don't know where any of those are. Nothing has been mapped, and that's a concern for us. There's no assurance, there's nothing that you can rely on that you know, okay, I'm going to have to preserve that.

And Kim brought up the DRGR amendment. I think that's a perfect example because we worked very closely with staff and, okay, we committed that when we do golf courses or private recreational facilities in the DRGR, we were going to restore historic flow-ways, so we went with county staff and we identified what the majority of those flow-ways were, so we knew going in up front what we were going to need to protect. And we're thrilled to death to do that because we know what it is and we understand it up front.

This definition doesn't give you the ability to know, A, what's going to be required to be protected; B, how big it is; and, C, we don't

know what the Land Development Code requirements are, so we don't know what we're going to have to do with this once it's identified. That's a concern for me.

Again, the mapping issue is a very big concern. I think that it would benefit the county to take the time and effort to identify the significant ones. And Kim is right. There's no way in the world that you're going to be able to identify all of the flow-ways; and I think, okay, you identify 95 percent of the significant ones and 25 percent of the minor ones and you get those protected, you have done a great job. The rest of them you can address through the zoning phase.

One of the other comments that's included in the amendment was that there is a trend lately for people to come in and request reductions in the amount of indigenous, so that this was an opportunity to go ahead and insure that that amount of indigenous was provided. If what we're talking about is meeting the indigenous requirements, let's enforce the indigenous requirements. It's already in the comp plan, already in the Land Development Code. Let's

enforce them. We don't need to adopt a new flow-way green space amendment to adopt or enforce existing regulations.

So just that as a background, I think it's important for you to understand that there's not a lot for us to rely on. There's nothing -- we don't know what the result of this is going to be at the end of the day. I agree with the direction. I think the direction is laudable and we would like to be a part in crafting what actually gets done. We would also like to make sure that that's done in a manner that doesn't duplicate or even conflict with existing regulations, which I think this has a great possibility of winding up doing.

So with that, I guess what I would request is that perhaps you find out what the time frame is, what schedule this amendment is on; and if there's an opportunity, rather than taking action on it today, maybe encourage the county staff to work a little more closely with the development community and bring it back in two months and maybe they'll have some more unanimous support and some of the details could be worked out on that.

So I do appreciate staff for making the effort. I think it's a laudable goal, but there's a lot of the details in here that make me very nervous. We don't know what direction it's going to go. There's a potential for it conflicting with existing regulations and I don't think it really does much to address the 90 percent impact that's already been done.

So I appreciate your time on this. I know I spoke for a long time, but I would ask you to consider that. If you have any questions, I would be happy to answer any.

THE CHAIRMAN: Bob.

MR. SHELDON: If you had an ideal scenario for how to work jointly with the county to kind of come forward and come back to us with a consensus, how would you see that happening?

MR. HUTCHCRAFT: Well, there's a good example, and I don't know how well it worked because it hasn't happened yet, but there was open space amendments that went to the Board and the development community kind of said, you know, we weren't a part of that, we would like to have input into that. The Board suggested that that go back to a series of workshops, and the first

workshop on that is actually tomorrow.

These are the kinds of amendments that really do have a very big impact on the development community more than anybody else. If you're a farmer, it probably doesn't impact you today; but it might when you go to sell your land. If you build shopping centers, it probably doesn't impact you. It's us that really has a big impact. And I think that the environmental community ought to be at the table, too.

I would suggest a series of workshops to identify what the goals are, kind of do an evaluation of what's out there and how we can connect it; and integral in that, look at the existing impacts and how we might come up with a solution. The work efforts, water restoration -- I can't remember all the details.

I have proposed some modifications to the Ten Mile Canal, how they can improve water quality going through that. It's a public/private effort.

I would suggest a couple of workshops with staff and the private sector, and that would be a good start.

MR. SHELDON: I just had another question.

What is your feeling about how this might interact or interfere with the NBL?

MR. HUTCHCRAFT: Well, there are probably other people that can speak better to the specifics of that. My understanding of that, those regulations aren't adopted yet. We don't know what the standards are, so it's one of those, you know, we want you to hit the target but we don't know where it is, we don't know how big it is and we don't know what direction, but go ahead and start shooting at it.

I agree we ought to be doing what we can to improve water quality. You're not hearing any complaints from me on that. But to base it on we've got to do this to be able to comply with the NBL's, I don't know we can say that because we don't know what they are.

THE CHAIRMAN: Further questions of Mr. Hutchcraft?

Mitch, remember the Greenways Committee that went on for some time until I guess it got criticized by the press?

MR. HUTCHCRAFT: Absolutely.

THE CHAIRMAN: Whatever happened to that? Is this somewhat similar to where they were

heading? I think they were trying to look at an incentive base system to compensate property owners for the acquisition of these flow-ways.

MR. HUTCHCRAFT: And I think that's a good comparison. The Greenways study was really kind of targeted more to the DRGR area, but it was more of a comprehensive approach. You know, hey, let's identify the areas; let's target them as something that we ought to preserve; let's build in an incentive in how we can encourage people who want to participate in it and let's do it comprehensively so that we know that everything is going to connect and at the end of the day we're going to have a positive impact.

And it was a water management, a wildlife, an open space, a greenway, all kind of combined into one; and while I think the language in here talks about that, I really see it being implemented in a segmented manner, so you might do a great job on this project, but off and on the project it doesn't connect to anything. So I think that as a model is a great model. Maybe we ought to open it up countywide and let's take a look at where the flow-ways are and how we can connect them and how we can encourage people to

participate in that program; and if you identify that up front, developers are going to -- okay, I can figure out what my costs are going to be, they are going to move in that direction. So I think that's a good comparison.

THE CHAIRMAN: Whatever happened with that effort?

MR. HUTCHCRAFT: I think it was partly that there was kind of misunderstanding of what the real intent of it was. It didn't get a warm reception in the paper. And that's right about the time when the discussion about, you know, what's everybody's interest and let's do full disclosures and so everybody said, you know what, it's just -- this is -- we're trying to do a good thing and we're getting black eyes left and right, let's just let it slide.

So that's my perception.

MR. ANDRESS: It was really a Smart Growth takeoff. The Greenways Committee made a presentation to the Smart Growth, asked them to incorporate that in their final Smart Growth plan.

THE CHAIRMAN: That makes sense because I think that was a pretty comprehensive effort that

addressed some of the questions that you raised in your earlier comments about incentives and future planning and connecting and those type of things.

Thank you, Mitch.

MR. HUTCHCRAFT: Thank you.

THE CHAIRMAN: Would anyone else in the audience care to address the LPA on CPA2001-27? I won't read the description of it again, but it's surface water management land use planning on a watershed basis.

Sam.

MR. MARSHALL: Good morning. My name is Sam Marshall. I'm with Banks Engineering. I just want to talk a little bit about this.

To start with, on the definition of flow-way, I realize it's an important thing. It's sprinkled throughout the Lee Plan. It's about time we defined it. I know flood protection is an important part of development in this community, especially at this time of year.

As far as the definition of flow-way shown here, like many of the others here, I have not had enough time to look at this and see how it's -- compare the definition with each time

it's listed in the Lee Plan and see how appropriate it is, so I'm really not going to talk much about that except that I think it is an important time to look at that. I think we need a little bit of time to analyze it and see if it's appropriate.

As far as the objectives, I would like to just kind of go down the list; and a lot of this sounds very good and I do commend staff for being involved in this. And it does sound good, but that's kind of on the surface.

What I'm looking at is a lot of it is already regulated, and I'll just make some specific points. I'll try and be brief and specific.

As to Objective 40.5, incorporation of green infrastructure, the why, which is listed in the sentence following, is basically water source and water quality are already defined, qualified and governed by the water management district.

Air quality, I'm not an expert and I can't really speak to that.

Water recharge and infiltration, if the green infrastructure includes wetlands, a lot of wetlands are existing on clay layers, which is

why they stay wet. There's really no infiltration value to them. Some of the flow-ways, if they are not from sandy areas, sure, they would have a value to recharge.

As to habitat, that's governed elsewhere also, Fish and Wildlife, Game and Fish; and that's for recreational opportunities. Most of these flow-ways are going to be placed in conservation areas or conservation easements. I don't see a lot of opportunity for public. Maybe a nature trail, I don't know. But a lot of that is typically put into a conservation easement and activity by humans is restricted or forbidden.

Policy 40.5.1, best management practices, that is also governed by the water management district. We're talking a lot about water quality today, I have got more to say about that; but that's quantified by the water management district, governed by them, which criteria you have got to meet. And there's options, there's different ways you've got to do it, so you've got flexibility in the design of your projects to meet water quality standards in many different ways, not just one -- a narrow channel, no pun intended, a narrow channel of ways to do it,

but -- that's all I have got to say on 40.5.1.

On 40.5.2, encourage new developments to design their surface water management systems to incorporate existing wetland systems. That is a good thing. It's also governed by other agencies and currently you can use wetlands as indigenous open space.

What I guess I would not want to do is not give the client or developer, my clients, the right to pick which open space they want to be indigenous and preserve. There may be uplands that have higher value. Rather than the staff deciding or enforcing what we want to preserve, I want to be able to let my clients look at it, hire consultants and they're going to decide which areas are better. They're also going to have to do habitat studies and decide which ones have a higher priority. It may be the wetlands, it may not be the wetlands.

I think on -- I'll move to 40.5.3, encouraging preservation of existing flow-ways and the restoration of historic flow-ways. Going back to flood protection, that's a very important issue; and I think words that are missing are capacities of existing flow-ways.

If you -- in a lot of cases, if you brought a historic flow-way back to its historic condition, whatever historic flow-way is, whatever we decide it's going to be, you could have a severe detrimental impact on people who have developed. The county's built roads which have been bermed, the county and private landowners have built ditches, so a lot of historic flow-ways have either been bisected or bermed or diverted and there are people who have developed homes and neighborhoods and communities in areas that if you do reconnect to historic flow-way you're going to damage, you're going to flood them out.

And if you look -- do a quick scan on some of the existing policies and, for example, 41.3.4, which you probably don't have in front of you, you may, I'll just kind of paraphrase that, talks about natural flow patterns being restored where it is of significant public or environmental benefit and where it's feasible. I think that's good language, where it's feasible and where there is a significant public environmental benefit. There are places where I don't think it would be, so just to say flat out

we're going to restore all historic flow-ways without a study or any information, I think it's kind of shortsighted.

In general I do see a lot of redundant regulation here and I think that's going to restrict a lot of the flexibility of developers. I would like to see that flexibility remain.

As far as water quality, and we're talking a lot about water quality today and that drives a lot of what we're doing here, and I think it is good that the county is involved in and monitors water quality as it's enforced by the water management district. One thing that I know is that most of the water quality problems are not caused by development that's being permitted today. Most of the water quality problems are caused by development that occurred prior to the rules that are established and are adhered to today. I think you're going to penalize developers today and I think you're going to reduce their options.

And, as a footnote to that, water quality is through the NPDS program regulated by DEP, sort of a progressive enforcement. They are starting to look at existing sites; going to go

back and look at existing sites, smaller and smaller; sort of broad-brushed large communities and now starting to go into small sites. That's something that I think is also going to be addressed by another agency.

So I guess a common theme here, I see a lot of good intention, I think a lot of effort, good effort; and I think we do need to monitor it because I think it's important the county monitors it to make sure none of the other agencies which are responsible for it lets it slip. Until that happens, I really don't see any need to reregulate here.

That's it.

THE CHAIRMAN: Questions of Mr. Marshall?

MR. SHELDON: I just have one.

I'll ask you the same question. If you had an ideal way to proceed from here with dispatch to get back with another round of review by public and private people, how would you see that happening? Do you see it happening quickly or is it something that might get dragged out? Because I don't think any of us wants to do that.

MR. MARSHALL: I think it needs to be addressed pretty quickly; and I think at this

time of year it's a very appropriate time of year to talk about flood protection. I also -- I guess one also general theme, I think flood protection needs to be separated out from preservation of wetlands or uplands or habitat. I think flood protection needs to be addressed very quickly.

I think it can be done quickly. I think a series of workshops, quick, public involvement. I don't know how much of the public has seen this, but I certainly know it's a hot topic and everybody wants to be involved. I think also a series of workshops. Further than that, I'm open to any format.

MR. SHELDON: Thanks.

THE CHAIRMAN: Thank you, Sam.

Yes, sir. Please come forward.

MR. EVANS: Good morning. My name is Josh Evans. I'm an engineer with Wilson-Miller.

I had two quick points to make in reference to this.

I certainly want to commend staff for working on it. Kim and I have been working on a separate zoning petition on the definition -- not specifically on the definition of flow-way, but

the agreement or disagreement of whether an area is a flow-way which is on our property.

I think Mitch had a good point by stating that the devil's in the details. The two points that I want to make are one specifically to the restoration of historic flow-ways. These historic flow-ways possibly could have been bisected 50, 60 years ago. Sam made the same point. My concern is if we do a broad spectrum restoration of historic flow-ways, you have got to look at the downstream effects of these flow-ways.

One particular project I'm looking at right now, there's a two-feet difference in average wet season water table from the upstream side of the wetlands to the downstream side of the wetlands that we are looking at possibly restoring. We haven't gotten to the county level and submitted anything yet. But two feet difference in elevation of water is going to cause a significant amount of flow to go down this flow-way that hasn't gone down this flow-way in this particular case in 37 years, so it's going to take a pretty broad spectrum review and analysis of the downstream components, including

roadway culverts, swales and canals to make sure that we don't impact those downstream properties; and if it's a broad spectrum requirement, then that scares me a little bit as the engineer that signs and seals the plans that connects those two flow-ways.

My second point that I want to make -- well, actually, let me go back to that other point.

In Collier County I worked on a project where the South Lee County Watershed Management Plan addressed flow-ways; and in a project that I worked on there, that study identified a flow-way; and also as a follow-up to that study, it identified downstream improvements to the Cocohatchee Canal that should be made prior to the restoration of that flow-way. Those Coco improvements, what they determined, through the Big Cypress basin, are complete; and through this project were restoring 150 CFS flow through our project to that canal.

And that was a very positive experience. We're in the process of permitting right now with the agencies and the county and the residents of Bonita Springs to alleviate some of the flooding problems that they have in the Imperial River

basin.

So I think for us to proceed, I think it would be my suggestion you continue with a site space study to look at the hydrology, look at the impacts of reconnecting these flow-ways and proposed improvements to improve downstream plans for the restoration of flow-ways.

And my second point that I wanted to make is for Section -- or for Policy 40.5.2. In some cases it's great to incorporate the flow-way into the water management system; but in other cases that might conflict with requirements of higher agencies or other agencies, for example, the EPA. You know that we have removal efficiencies that are kind of a moving target we're going to have to start incorporating in the next couple of years and methodologies to go and get those removal efficiencies; and my fear is, being that we don't know what those are, that in some cases we may not be able to incorporate the flow-ways into the water management system. In some cases you might have to go to a zero discharge situation where the water stays in your lake until it gets to a 25-year elevation. If you incorporate that flow-way into your water

management system, it essentially allows not untreated but maybe not the attenuation that we would like to have before getting into the flow-way; and if a flow-way is connected, that is your outfall because water is going to be leaving your site through that flow-way.

That's all the points I have. Thank you for your time.

THE CHAIRMAN: Any questions of Mr. Evans? Thank you very much.

MR. EVANS: Thank you.

THE CHAIRMAN: Would anyone else care to address?

Please come forward, Mr. Hartsell.

MR. HARTSELL: Good morning. I'm Steve Hartsell with the Pavese law firm. I'm here on behalf of the Real Estate Investment Society. I have been asked to address some of these issues from REAS's standpoint; and I confess, as the other gentlemen before you have, that I have only seen these for a very short period of time and that's I think really part of the concerns that all of us are facing right now is that we really haven't had an opportunity to look at these and to analyze the impacts of the regulations.

One of the questions that comes to mind when I have kind of scanned through them is why these regulations in the comp plan are really necessary. And we just kind of look at them quickly.

If you look at Objective 40.5 -- and I will concede that there is apparently no definition of flow-way in the Lee Plan and that that probably needs to be addressed; but if you look at Objective 40.5, it says incorporation of green infrastructure into the surface water management system. Well, recognizing that surface water management is already addressed by South Florida Water Management District as well as to some extent DEP and the Corps of Engineers and Fish and Wildlife, what this really says is into the wetlands monitoring and management system, what we're talking about is incorporating green infrastructure or, rather, expanding the wetland regulatory system outside of the wetlands themselves.

That brings to mind the old resource protection areas, transition zones, that we originally started with but came back to look, what we're talking about here are wetlands,

that's what needs to be regulated. So it's just -- seems to me that Objective 40.5 is really talking about expanding the wetland regulatory system outside of wetlands themselves.

If you look at Policy 40.1 or 40.5.1, it says the county encourages new developments to design surface water management systems to incorporate best management practices, including but not limited to a number of things there. As was pointed out by I believe Sam Marshall, best management practices are determined and dictated by South Florida Water Management District and are already required. I would say that it's become standard practice over the years to incorporate best management practices into storm water management systems. The fact is that what Policy 40.5.1 encourages is already required by other regulations.

If you look at 40.5.2, the county encourages new developments to design their surface water management system to incorporate existing wetland systems. Again, it's a laudable goal and it's already part of the existing regulatory environment. This doesn't need to be incorporated into the Lee Plan. Doesn't add

anything that's new.

Then you get down to Policy 40.5.3, where the county encourages preservation of existing flow-ways and restoration of historic flow-ways. I think really what it comes down to is all of these definitions and this objective and these three policies in a nutshell are here for the purpose of incorporating this one statement: The encouragement of preservation of existing flow-ways and restoration of historic flow-ways.

It seems to me that the Lee Plan is not the place where this has to be done. The concerns have been expressed about what is going to be the impact when the Land Development Code regulations get adopted. Really, that's what everybody is concerned about, it seems to me. The Land Development Code is the appropriate place and it's also the place where the specifics of these regulations would be hashed out. It seems that the Land Development Code would really be the better place for this and you could really get into the details and that the existing -- Kim passed out a handout, which I haven't seen, but I think I saw the beginnings of it with regard to flow-ways and where they are mentioned in the Lee

Plan already. It seems like the Lee Plan already requires consideration of flow-ways to the extent that it's sufficient for the Land Development Code to adopt regulations on it.

I would concur with the comments that have been made about these regulations haven't been subject to enough community input from the development community in particular and I would suspect from the rest of the public. Just the fact that you don't see very many people here today is indicative of that.

I think there are significant and far-reaching impacts that we haven't even considered yet. Particularly we're talking about new development and the impacts on -- or the contrast between what's already occurred, the old development and the problems from that, and the fact that this will only apply to new development. Well, that's new development, which includes a lot of infill development, and we're trying to encourage infill development, but I suspect that these particular regulations may have a negative impact on infill development.

The regulations actually mimic and reiterate those that are already in place, as I pointed

out. There are other regulatory agencies that deal with the same thing that these particular regulations address. I think Lee County is stepping back into the wetland regulatory arena and it's already occupied. It's already occupied by agencies that are not easily satisfied in terms of wetland regulations.

The other thing I think that is important to recognize is that what we're talking about doing is stepping into this arena that's already occupied by others who are doing it relatively effectively at a time when Lee County is understaffed and overworked; and that causes some real concern from the development industry side of it because, frankly, we recognize how overworked staff is and how frankly overwhelmed in many cases they are with the work that's already there. To open up kind of a whole new area for them to have to deal with and have to get involved with right now doesn't seem to make sense from a staffing side of it.

The staff report notes in the -- Page 5, I believe it is -- yes, in the staff discussion, that green infrastructure could well be the next frontier in environmental stewardship. It's

something that ought to be addressed. It's something that needs consideration. I would submit to you, though, that it's not an emergency that needs to be pushed through quickly; and that seems to be what is happening right now. The regulations have come to you, you're getting information kind of handed to you even as we look at it today. There seems to be a rush toward we have to get these adopted, and I would submit to you that there isn't a rush to get these adopted. There's no emergency that's out there. This is the beginning of something that's new, that ought to be considered; but it ought to be considered by all the participants and not just from a staff or from an environmental perspective.

Consequently, we would urge you to take the time, to encourage staff to take the time to meet with the community, to develop definitions, to consider the regulations that are already in place; and anticipating the question, I believe that the proper way to do it is through the workshop process. It's a place that gets all of the public involved and gives everybody an opportunity to take the time to consider these and to debate it among themselves.

As Mitch pointed out, the development community has already initiated discussions with the county on various permitting issues; and, frankly, this would have been a perfect issue for that group to be considering. But we would encourage you to postpone the adoption of these regulations or at least to recommend the postponement of the adoption of these regulations.

Thanks very much.

THE CHAIRMAN: Questions of Mr. Hartsell?

Thank you, Steve.

Would anyone else in the audience care to address the LPA on CPA2001-27? Please come forward at this time.

MR. WINTER: Kevin Winter with Johnson Engineering.

In order to save time, I would state that our company has looked at these regulations and policies. We are very much in agreement with the previous statements already mentioned.

Two quick things I wanted to mention. One was the cost of this, the maintenance cost for this infrastructure, the green infrastructure. It's stated that it could actually be cheaper

than harder infrastructure, and we strongly disagree with that. It's a maintenance intensive type infrastructure and costs will go up substantially, we believe. And, secondly, just some language, there's mention of retention lakes and it's actually detention lakes, so there's some language that needs to be worked on before any of this goes further; and our recommendation would be to table it and work on it more with the public.

Thank you.

THE CHAIRMAN: Any questions of Mr. Winter?

Thank you.

Would anyone else in the audience care to address the LPA on CPA2001-27? Please come forward. Anyone care to address the LPA on this topic?

Okay. Thank you. We'll close the public hearing.

Kim, you have had several recommendations on workshopping this. What's your thoughts on that?

MS. TREBATOSKI: Well, first of all, we've been working on this for over a year and a half. Last year we were going to bring it forward in the summer session in June to the LPA but

realized that it needed more thorough background work, and so we've been working on it for a long time. I would like to note that the people that we have input from in the e-mails received the information last Thursday and found time to comment, so they didn't have any longer pertain to review it than the people who are here today.

I know that there's been ongoing discussions through numerous zoning hearings and outside of zoning hearings with various attorneys, planning people and environmental people. I think that everyone was well aware that this project was underway. We did not receive any input from anybody. We didn't receive any direction or thought for a workshop until today.

I would say that we have the Board of County Commissioners hearing coming up in September. I would be more than happy to meet with people between now and then. Then there's time once it goes off to the state for a while for review to come back, there's time for us to be working on it; but to table it I think is inappropriate at this time. This is the review process that has been established that the development community had asked for previously.

I do have some other comments in regard to the comments that were received.

THE CHAIRMAN: Please go ahead.

MS. TREBATOSKI: This amendment does not just address flow-ways and it does not just address wetlands. There are areas within flow-ways that are not necessarily wetland by state definition. We are also addressing how the overall surface water management system is designed. We do see choices to pipe through hard structures versus meandering flow-ways on the surface. This is not a new area of review. We've been reviewing these issues at zoning time. We have had disagreement with applicants over whether they should incorporate these areas or not. We have had situations where the water management district has permitted the impact to an isolated wetland that the county staff felt was a benefit to the county.

Something to realize is that nearly any wetland that's three acres or less that's isolated will be allowed to be impacted by the water management district even if this is the only indigenous area on the site, even if it is in the corner of the site.

These are the type of issues that the county staff has been dealing with.

It is important to move forward on a flow-way definition. There's been a lot of debate at public hearing time over what a flow-way is and what a flow-way isn't. The definition that is in front of you is partially from the information that I received during the one hearing from a consultant. We have expanded it to include man-made flow-ways so that people would clearly know what is a natural flow-way versus a man-made flow-way. Man-made flow-ways are not the objective for the county to preserve. It's the natural flow-ways.

It would be remiss on the county's part not to recognize that there are multiple levels of flow-ways if people are going to define a flow-way as a water conveyance. There are different ways to convey water.

And the storm event was removed from the definition under the guidance of Roland Ottolini. He believed it would be very difficult to use that as a means of marking where the edge of a flow-way is.

The Natural Resource Department has been

involved in the zoning process when we have issues such as flow-ways involved. So, again, it is not a new area. It's an area that's important to the county.

The county does look at if restoring a flow-way would impact other development in the area. Mr. Ottolini and his group are the people who get called when someone's property is flooding. But there may be opportunities where a flow-way was cut off during an agricultural process or some other process that now we can open that flow-way back up and relieve some flooding problems that we have in areas. That's one example of something that could happen.

As far as concerns over what will happen when we move forward with LDC language, that, too, will go through public review. It doesn't just happen overnight. It doesn't happen without going through numerous committees and time; and with regard to the comments regarding the NPDS permits, the county actually has some authority over enforcing that and some obligation through a general permit, so it is not just DEP that is working with this.

I think that the time is right to be moving

forward, with letting people know that are going forward with development, and perhaps we should add in there redevelopment like we have in other areas in the Lee Plan. Those are points in time where the county has some authority and jurisdiction over a site. If a site has been developed and has received its certificate of compliance and such, for us to go back in and demand them to do something different I think may be overstepping our bounds; but at the time of new development or redevelopment, we can do better than what has been done in the past; and that's what the county is trying to do right now.

THE CHAIRMAN: Thank you, Kim.

Matt.

MR. BIXLER: Obviously, I think this is a good first step towards protecting green infrastructure and protecting flow-ways which are important to this area. You have Estero Bay and its tributaries, flooding in different parts of the county; and I think something like this will help alleviate some of those problems.

I think it is a first step. I think it gives direction, it encourages, doesn't require anything. I think there's other things the

county can look at, such as looking at old infrastructure or old developments, entire projects, in the way of incorporating those into a bigger picture and not just looking at new development, but looking at the big picture and looking at other aspects as well.

I also think that through the LDC process where the details are really worked out, that would be a good place to have consultations from other groups and maybe have a process similar to what the open space amendment is going through. That's another LDC amendment that's going through the process of having other groups involved. Because that's where the details are really worked out. And I think that's a lot of concerns expressed today are looking at what details are going to come out of this. I think that's what's going to be carried out in the LDC process and that might be a good time to have a consultation process similar to the workshop that's happening tomorrow with the open space amendment.

So I think this is a good first step, but I think there's also important steps that need to follow this as well.

THE CHAIRMAN: Thank you. Any other

comments?

MR. SHELDON: My big concern is the big gorilla that's coming down the pike, the amendments; and everything else is going to pale. And we need to not constrain the ability of developers to meet those because that's where your water quality criteria are in the final analysis; and anything that is layered on top in advance of knowing where we're going, what goals we're going to have to meet worries me.

MR. BIXLER: I think this is more -- I don't see this as requiring anything. It's encouraging and it's a way to meet these. I know what you're saying. I think this is more of an encouragement. I don't see this as a requirement at this point.

MR. SHELDON: If it was limited to an encouragement and it was clearly understood in the language that this is nothing proscriptive about this, that's one thing; but I read it somewhat different from my limited knowledge of these historical objectives that I wasn't involved with. It seems to require that these areas be used.

I see these languages in other goals and

objectives here that tie together with this and I'm concerned about a slippery slope here, of getting developers and everybody tangled up into yet another way of geometrically configuring waterways when the idea is to detain water, to increase residence time, to meet these TDML's. At the same time we're telling them no, you've got to have this certain flow velocity maintained over a certain amount of time; and that's very difficult to do. That's my concern.

I appreciate that we ought to be looking forward and trying to come up with comprehensive approaches to managing water quality, but I hear in the real world out there the problems that people have when they get these sort of, well, we're going to start thinking about -- we're going to be reviewing your plans in the future, we want you to try to do this. That's a very powerful statement when it comes from someone from the county. Doesn't have to be written. They never say no, they just never say yes; and that's the concern I have. That's why I was pushing to see if we could get a consensus so that we all felt a little bit more comfortable with the development community and the engineers

that represent them, who are environmentalists in their own right. They can come back and tell us yeah, we think we've worked out something here that's going to not curtail our ability to meet the TDML and bigger problems that we're facing in terms of managing water quality down the road.

That's all.

MS. TREBATOSKI: If I may, Mr. Sheldon, just refer you to Roland Ottolini's memo that's on the last sheet of the CPA2001-27, because he does address the total maximum daily loads and indicates that the greenway infrastructure and flow-way corridors help achieve these goals by providing an efficient means of reducing total suspended solids, nutrients and metals from our surface water, that it's not going to be detrimental. If anything, you're going to have improved water quality.

MR. SHELDON: Physically, if you take up space that you could be using to store water and instead that low-lying area has to be used to transmit water, I don't concur with that.

MS. TREBATOSKI: Well, this surface water management system amendment isn't strictly dealing with just keeping the water flowing.

It's also dealing with making sure that the water management system on site uses the best management practices to the best extent possible; and best management practices do include grassed swaleways and filtration marshes. And we see these on some developments, but we don't see them on a readily regular basis; and that's why I think the staff through some direction from the Board had decided that it's time to notify people that we really want this looked at.

MR. SHELDON: I appreciate that, but my -- I appreciate all those good things about wastewater treatment and wetlands, but the keystone is like fostering some things and finding out filter systems don't work very well; and they are concerned about going back and having to store water for periods of time; and that's going to upset natural flow-ways. That's just the way it is.

All I'm saying is I think we should take a look at this as a community, developer community, engineers. I would be happy to participate and learn what I can about this, and I don't think it would take too long. I would feel much more comfortable in passing something along after I

have had that exposure.

THE CHAIRMAN: Noel, did you have anything to add?

MR. ANDRESS: Right now the DEP is looking at the impaired waters rule. They are trying to adopt different parameters to measure when a water body is polluted, considered to be polluted. There's been a great deal of discussion about when the water comes in, if you have a historic flow-way, the water comes into your property, what are you going to be required to do to the water when it leaves your property, are you going to be required to remove the stuff that's coming in from up above, are you going to be able to restore it there for a certain period of time and then release it, and if you release it what level of -- what's your output going to be. Then we're looking at TMDL's. All the water bodies are being classified right now as to what their nutrient loads are. DEP is going to be putting up parameters on the different water bodies as to what will be their TMDL.

So we are looking at all of this stuff right now; and I think in view of that, I think Lee County is being very timely in proposing this

type of an amendment to the Lee Plan so that we can be in place.

I would be in opposition to this, I guess, at this time if we were any more detailed in terms of the word "encouraged". In the beginning today of this discussion, I thought we needed to actually make this a part of it, but I can see that there really isn't enough known to not say the word "encourage"; and I would support that language at this time and -- but we do need to move forward with some type of change in the Lee Plan so that the other agencies know that when all of the different parameters are put in place that they are going to have local support of these issues.

THE CHAIRMAN: Thank you.

Susan, Gordon, anything you have to add?

MR. REIGELMAN: Not so much disagreement on something I think reasonable people, including developers, fundamentally do agree on; and I think all Southwest Florida, too. I do agree with Matt that it seems like the language is in baby steps; and "encourage" does not require, mandate, must or possibly even should. And so I think the language is soft enough and is tempered

within this that it does not require mandate or must.

But also in hearing from the developers and their agents that this was not inclusive, it's kind of surprising that if it's been worked on for a year and a half, why is it not more -- has it not been more of an inclusive process? We ask that of the people who bring us amendments, and it appears that for some reason this has been failed here. Why are the developers and their agents coming out today apparently so ignorant of what this is? Should they have recognized that the train was coming down the track or should we have told them to look out for it and got their buy-in on it?

I believe it's somewhat namby-pamby policies, unless I'm reading it wrong; but the inclusion wasn't there either.

THE CHAIRMAN: Susan, anything to add?

MS. BROOKMAN: Well, I just wanted to ask Paul and Kim maybe if they would respond to a couple of things.

One is related to what Gordon just said. When the board directs the staff to review some things and come up with proposed policies, what

is the typical route that you take? Do you normally notify parties of various interests?

And then my other question is: How do you address the concerns that have been expressed stating that Policies 40.5.1 and 5.2 are redundant with the South Florida Water Management District?

MR. O'CONNOR: Let me try and answer your two questions.

When staff through time with our ear to the railroad track try and glean new policy direction from Board actions, and the Local Planning Agency is out of the zoning loop and they really don't see and hear what we see and hear through that process, and over time these issues come up, as Kim has indicated, over and over again on proposed developments and we have received direction, we believe, from the Board to try and address some of these issues by putting written policy into the plan. And it was two years ago when the language that outlines the basic proposal here, the language that's on your agenda, went in front of both the LPA and the Board of County Commissioners as here's a proposed plan amendment and we're basically

asking for direction from the Board as to whether or not this is an issue that they want staff to spend some time on. And they have approved that amendment. They approved it two years ago to be in the cycle. We could not complete it in time for last year's cycle, so we put it again on the list and the Board again proved it last September for staff to work on this issue.

So that's where we get the direction more or less from the Board. We try and listen and then we try and gel it down and then put it in the list in front of the Board as these are the issues that we're going to be looking at as far as the comprehensive plan for the next year.

As far as being inclusionary, I heard a lot today about problems with what's going to be in the details on this; and I think it's important to recognize that staff and the Local Planning Agency are bringing forth new policy direction as we make certain amendments to the comprehensive plan.

Now, Mr. Hartsell referred to these as regulations. I don't see the proposed policies as regulation at all. I see them as giving clear direction to both the county staff and to the

development community that, hey, these are issues that we're going to be looking at when you bring your development proposals in, here's where the county stands. And I also agree that this is only a first step. Staff did not want to dive in with both feet into this. We're testing the waters, we're seeing if we're moving in the right direction; and I will admit that we are moving the pendulum back a little bit in the direction. Staff sees that all these existing regulatory agencies as they go through their permitting process -- and it is not planning, it is permitting that they are going through -- that it doesn't really work as well as it could and to just defer all the impacts in the county's wetlands to the water management district or to DEP or to somebody else is wrong in our opinion as staff. We believe that the county needs to be involved in those decision-making processes and not just defer it completely off to other agencies.

This is not proposing that we get back into totally regulating wetlands as we did a dozen years ago in Lee County; but it is moving us a little bit back into the direction, basically

saying we think it could be done a little bit better and we want to get our ability to look at it and do it.

So we're establishing policy that we have gleaned through basically our interactions with the Board of County Commissioners and with many, many, many zoning cases that have gone in front of them.

So that's where we're coming from.

Now, as far as -- I believe Mitch asked about a scheduling. This is scheduled to go in front of the Board of County Commissioners September 4th. That meeting will be a transmittal hearing and it will then be sent if the Board so wishes along to the State Department of Community Affairs for their review. They have two to three months to complete that review. They will send back their comments to us and at that point in time the county has 60 days to adopt or not adopt or adopt with modifications those informations that were sent up to DCA for their review. So there's at least six months before this will be part of the comprehensive plan.

And I heard concern that, you know, no one

knew what the LDC changes were going to be from this. Well, that's the process that we're in. We establish policy, we place it into the comprehensive plan. That then gives us direction to make amendments to our Land Development Code in order to implement that policy, and we have committee upon committee upon committee that reviews any and all changes to the Land Development Code. There's the Executive Regulatory Oversight Committee, there's the Land Development Code Advisory Committee, there's the Local Planning Agency. There's, you know, a lot of additional work that's going to be done as we move forward in implementing this policy into our Land Development Code. And to criticize it now as saying well, we don't know what the end result is going to be, that's the way the system works. You set up generalized policy and then you implement that policy.

And just as one last point -- and, Mr. Sheldon, I'm on the conveyance issue -- basically what we're proposing with this policy is we're not saying that you have got to convey more water through your property after this is adopted than before it is. What we're saying is we would

rather see it go through natural systems rather than a pipe. And we're not mandating that additional flows be transmitted across properties; we're just saying let's do it with green infrastructure instead of with concrete pipes.

THE CHAIRMAN: Thank you, Mr. O'Connor.

MS. BROOKMAN: Thank you for your answers.

That said, I'm comfortable with it as it is. I think it is policy; and, as Paul said, there's a difference between planning and permitting and so I think that those issues need to be separated. And I think it's perfectly appropriate for this county to be steering people in this direction; and then again I'm all for what Matt says in regards to hashing out the details through the Land Development Code and making sure that at that point in time everybody who has a concern can speak and help formulate those.

THE CHAIRMAN: I think I agree with all the other speakers in that this is a good idea. I don't think anyone opposes the concept. My concern is based on a couple points that were raised by some of the speakers.

One is that the definition of flow-way excludes some items that might should be in there. And I don't profess to be an expert on flow-ways, but I would think that a workshop would be appropriate so as to allow those people who are better versed than what I am have some input into what the definition should be.

Mr. Andress made a point earlier about some incentives and how those might come into play. I thought that the effort to try to address greenways in the DRGR area and then hopefully expand it there after had merit because it was going to be on an incentive basis and try to accomplish a laudable goal. Someone also said that that effort has been undertaken or taken up by the Smart Growth committee and they may still look at it, so my thoughts are that this is premature at this point. We should wait and see what the results of those efforts are and decide whether they come up with some effort or some definition, some information we can include. Barring that, we should at least have some of the folks that are experts in this area be involved in some workshopping to come back with their thoughts on it, because I did not hear anyone say

that they are very comfortable at all with how this works; and these are the folks who represent folks to get things done through the system. So I can't support it at this time.

Any other further comments?

Okay. Do we have any action by the board?

MR. ANDRESS: I move that we transmit the proposed amendment CPA2001-27 to the Board of County Commissioners.

MR. BIXLER: Second.

THE CHAIRMAN: We have a motion by Mr. Andress, a second by Mr. Bixler.

Discussion?

MR. REIGELMAN: Could we add a provision to this or another policy that would require a workshop be set up between the county and the interested parties to look at the details on this?

MR. ANDRESS: Well, my thinking on that is that any further discussion of this is going to be a very detailed discussion involving many workshops with the LDC and so there's going to be more than ample opportunity for everyone to be a part of any final rule making that comes out of this policy.

THE CHAIRMAN: You can certainly propose that as an amendment, obviously.

MR. REIGELMAN: I'm also of the agreement that this -- the language here is rather soft and it's not "must," it's "encourage."

THE CHAIRMAN: Any further action? Comments?

We have a motion for transmittal by Mr. Andress, second by Mr. Bixler. All in favor, please say aye.

MR. ANDRESS: Aye.

MR. BIXLER: Aye.

MS. BROOKMAN: Aye.

MR. REIGELMAN: Aye.

THE CHAIRMAN: All opposed?

MR. SHELDON: Aye.

THE CHAIRMAN: Aye.

So that passes four to two, Mr. Inge and Mr. Sheldon voting no.

Let's take about a five-minute recess. We'll reconvene. Come back at ten till.

(Whereupon, a brief recess was taken.)

THE CHAIRMAN: We'll call the meeting back to order. Everyone ready to go?

All right. The next item on the agenda is CPA2001-28, amend the capital improvements element, Tables 3 and 4, to reflect the latest adopted capital improvement program.

MR. BLACKWELL: Peter Blackwell, Division of Planning.

CPA2001-28 is also a Board of County Commissioners sponsored amendment to the Lee Plan. The proposed amendment is to amend Tables 3 and 4 of the capital improvements element to reflect the latest adopted capital improvements program.

As this amendment progresses, planning staff will be using the latest available budget information during this adoption process to reflect the current state of the CIP. Due to updated information from the budget services staff, the tables attached to the staff report contain information all the way up to the June, 2002, CIP workshop.

Staff recommends that the Board transmit the updated CIP for fiscal years FY2002-03 to FY06-07.

THE CHAIRMAN: Thank you, Peter.

Is this essentially or have there been changes since the CIP that we reviewed last month?

MR. BLACKWELL: No, I don't believe so.

THE CHAIRMAN: The last one we disapproved the CIP. This is to be included in the plan.

MR. BLACKWELL: Right. June was the latest change that's reflected here.

THE CHAIRMAN: So, Paul, do you know if it's the same one we looked at last month?

MR. O'CONNOR: I'm really not sure. I know that the Board has conducted a workshop since you saw it. I think they were doing a workshop the next day after you looked at it, and I didn't attend the workshop and I don't know --

UNIDENTIFIED SPEAKER: There's been no changes.

MR. O'CONNOR: Okay. I have been told there's no changes.

THE CHAIRMAN: So this is the -- this is the one we approved last month.

MR. O'CONNOR: And, actually, this has not been totally adopted by the Board yet. It will be adopted by the Board before the end of

September when they do the budget and that time it'll be the latest -- we're really half a step ahead of the game in this is the proposed CIP, but by the time this gets transmitted, it will probably be the final CIP.

THE CHAIRMAN: So assuming that the LPA authorizes transmittal today, if there are changes as the Board goes forward, those would be included before it's forwarded to DCA?

MR. O'CONNOR: If there are; and if that doesn't happen and changes happen after transmittal by the Board, we will substitute the new CIP when we go through the adoption hearing.

THE CHAIRMAN: All right. Very good. Thank you.

This is a public hearing, CPA2001-28, amend the capital improvements elements, Tables 3 and 4, to reflect the latest adopted capital improvements program. Would anyone in the audience care to address the LPA on this topic? Please come forward.

Seeing none, what is the pleasure of the LPA?

MS. BROOKMAN: I move we recommend transmittal of CPA2001-28.

THE CHAIRMAN: We have a motion by Ms. Brookman for transmittal. Do we have a second?

MR. REIGELMAN: Second.

THE CHAIRMAN: Second by Mr. Reigelman.

Discussion?

All in favor, please say aye.

BOARD MEMBERS: Aye.

THE CHAIRMAN: Opposed?

That passes six to zero.

Thank you very much.

(Proceedings concluded.)

STATE OF FLORIDA)

COUNTY OF LEE)

I, John F. Martina, Jr., Notary Public and Contract Court Reporter for the Circuit Court of the 20th Judicial Circuit of the State of Florida, do hereby certify that I was authorized to and did stenographically report the foregoing proceedings and that the typewritten transcript, consisting of pages numbered 1 through 123, inclusive, is a true record.

IN WITNESS WHEREOF, I have hereunto set my hand this 5TH day of AUGUST, 2002.

John F. Martina, Jr., Notary Public, State of Florida at Large.

John F. Martina, Jr.
MY COMMISSION # CC997664 EXPIRES
March 3, 2005
BONDED THRU TROY FAIN INSURANCE, INC.

12/30/02 Copy to: Matt N. Kim T. Rick J. Roland O. Jim Jones Paul O.

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02 DEC 30 PM 1:12

COMM. DEV./
PUB. WRKS. CNTR.
SECOND FLOOR

December 27, 2002

Mr. Andrew W. Coy
P.O. Box 398
Fort Myers, FL 33902

Re: Lee County Comprehensive Plan Amendment
CPA 2001-27 – Flow Way and Green Infrastructure

Dear Commissioner Coy:

Over the last several months, Lee County has been proceeding with the adoption of CPA 2001-27, which addresses "Green Infrastructure" and "Flow ways". While the building and development community support the general concept of protecting flow ways, the members of the Economic Development Coalition of Lee County have significant concerns with the approach that is being proposed. In light of our concerns, we strongly request that you defer the adoption of this amendment, and establish a taskforce to bring forward a complete recommendation that is based in science and built on a foundation of open communication and a true public/private partnership.

Our specific concerns with the current amendment are based on four key shortcomings, which are outlined below.

1.) A failure on Lee County's part to solicit any public input during the drafting of this amendment.

2.) A vague definition, which provides limited guidance on the identification of flow ways, and that includes man-made structures such as agricultural ditches. While staff has been incorporating modifications to this amendment, the only definition that has been reviewed by the LPA, the Board of County Commissioner's and DCA is simply unacceptable.

3.) There are no measurable standards or defined criteria, meaning there are no answers to the following questions:

- How wide is a flow way? Are there required buffers?
- What are the standards for protection or enhancement? How do you measure success?
- Where are these flow ways? Are there any maps? Has the County done any scientific analysis to determine what areas need enhancement? Which flow ways require protection? Are there flow ways that don't require protection? To what extent is the County going to partner in these activities?
- What is required if existing development upstream and downstream have cut off the water flow to property? Has the county set aside any funds to make upstream or downstream improvements? During what process is a flow way determination made?
- While the county submits that they will "encourage" the protection of flow ways, are they really going to adopt new regulations? Will these regulations exceed SFWMD regulations? Will these regulations result in an additional layer of regulation on water

Bruce Sicliano, AICP
Chairman
(337-3111)

❖ John Musser, P.E.
President
(278-1992)

❖ Patrick Day, P.E.
Vice President
(278-1992)

❖ Jeff Jenkins, AICP
Secretary/Treasurer
(437-4601)

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ECONOMIC DEVELOPMENT COALITION OF LEE COUNTY, INC

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management, wetland protection and habitat protection?

- Can a flow way be crossed by a road? Can passive recreational uses be included within a flow way? Does a flow way include uplands or just wetlands? To what storm event are we protecting?

4.) Missed opportunities. By proceeding with the current amendment, the County may be missing a great opportunity to develop a grass roots, incentive based system, which addresses not only flow ways, but wetland preservation, open space set-asides, water quality enhancements and public/private funding opportunities. SWFTI has been so successful because it has a plan. It knows what work needs to get done, and it has the buy-in of the public and private sectors. It allows for aggressive funding requests, and focuses the improvements in areas where they have the biggest benefit. These same opportunities exist for flow ways, but they are being missed because you have not brought the public along in the creation of these regulations, and there is no overall plan.

To this end, we are requesting that you do not adopt CPA 2001-27 when it comes before you on January 8. Alternatively, we ask that you set up a public/private task force with the following mission:

1.) Review all existing studies and maps
2.) Identify areas with water quality or quantity deficiencies
3.) Map "key" flow ways, based on the previous work that has been completed.
4.) Conduct public outreach meetings for input on approach
5.) Prioritize flow way preservation or enhancement projects
6.) Identify opportunities for public private partnerships
7.) Develop incentives that encourage the preservation of key flow ways, native habitat, or other water quality enhancement activities.
8.) Establish a County program for implementing a flow way improvement program
9.) Develop the LDC regulations concurrent with new Comprehensive Plan Amendment.
10.) Conduct public outreach on Drafts of the LDC and Comp. Plan Amendments.
11.) Consider potential funding opportunities, including State and Federal Grants, EPA and Water Management District funds, public private partnerships, MSBU/TU's, and County Tax dollars.

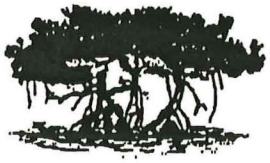
Thank you for your consideration of these comments and potential remedies what we believe are shortcomings in the existing amendment. We look forward to the County committing to work cooperatively with the private sector on this important and unique opportunity.

Respectfully,
Economic Development Coalition of Lee County

Patrick Day, P.E.
Vice President

Cc: Ms. Mary Gibbs

Bruce Sicliano, AICP, Chairman (337-3111) ❖ John Musser, P.E., President (278-1992) ❖ Patrick Day, P.E., Vice President (278-1992) ❖ Jeff Jenkins, AICP, Secretary/Treasurer (437-4601)



ECOSYSTEM SPECIALISTS

PO Box 713 Ft. Myers, FL 33902
Tel: 239.731.7559 Fax: 239.731.3779



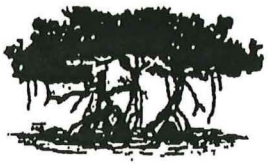
FAX TRANSMITTAL

To:	Commissioner Bob Janes	**Fax Number:** 335.2355
	Commissioner Douglas St. Cerney	335.2599
	Commissioner Andrew Coy	477.2054
	Commissioner Ray Judah	335.2321
	Commissioner John Albion	335.2892
From:	Rae Ann Wessel	
Date:	January 8, 2003	
Re:	Comp Plan Amendment CPA 2001-27	**No. of Pages:** 3 (inclusive)

THIS TRANSMISSION IS INTENDED ONLY FOR THE PARTY NAMED ABOVE. IT MAY CONTAIN PRIVILEDGED OR CONFIDENTIAL INFORMATION. UNAUTHORIZED DISCLOSURE IS STRICTLY PROJIBITED. IF THIS TRANSMISSION HAS BEEN RECEIVED IN ERROR, PLEASE NOTIFY US AT 239.731.7559 AND DESTROY THE ORIGINAL. THANK YOU.

Please hand deliver to each Commissioner, thank you.

CPA 2001-27
M. Dixler
01/09/2003



ECOSYSTEM SPECIALISTS
PO Box 713 Ft. Myers, FL 33902
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January 8, 2003

Commissioner Bob Janes
Commissioner Douglas St. Cerney
Commissioner Andrew Coy
Commissioner Ray Judah
Commissioner John Albion

TRANSMITTED BY FAX

Re: Comp Plan Amendment
Amendment CPA 2001-27

Dear Commissioners;

Please accept these written comments concerning the above Comprehensive Plan Amendment, as I will be unable to appear in person to voice my support for and encourage the County's commitment to a Coordinated Surface Water Management goal.

This plan amendment serves to provide clear, sound planning guidance to both the County and the public by clarifying and clearly defining flowways and formally recognizing the beneficial values and economic benefits associated with primary protection of critical natural resources and water quality.

This plan amendment enhances and reinforces the commitment the County has already made to resource based planning in the form of Smart growth and Stormwater Utility programs, to name a few. A good planning effort defines and promotes sound design guidelines for use by the public in making decisions on planned development and the County in reviewing plans. This amendment provides that level of clarity, which is currently vague, undefined and left to interpretation.

Furthermore, this amendment reinforces and supports the basic guidelines used by the State for permitting purposes. The suggestion to wait and further review this plan is an effort to undermine a good planning tool.

The suggestion that this amendment gives County staffers too much power is misguided as such an amendment, clearly defined and written reduces the potential for interpretation and makes clear guidelines for public and staff.

Water quality and quantity will continue to be important limiting issues for the economy and quality of our community. The planning associated with the Comprehensive Everglades Restoration Project (CERP) as well as our local interest in addressing point source and non-point source storm water discharges to surface waters

acknowledges our concern and commitment to these and numerous other ongoing public projects concerning water.

The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment. These principals are proven planning tools that provide the proof that simple water management guidelines, incorporated equally by all developments which alter the land surface and add impervious surfaces, improve water quality and quantity and provide the water in a localized setting.

It makes great sense then for the County to Amend the Community Facilities and Services Element, Goal 40: Coordinated Surface Water Management and Land Use Planning on a Watershed Basis to add a new Objective and Policy regarding incorporation of green infrastructure into the surface water management systems of proposed developments, and provide definitions for green infrastructure and flow-way into the glossary. This will help to address the issue for smaller sites that may not fall within State permitting guidelines.

Professionally and personally I am very supportive of this amendment to encourage new developments and capital improvement projects alike to design their surface water management systems to incorporate green infrastructure such as vegetated filter marshes, flow ways, and effective pond and lake systems complete with littoral zones vegetated with native, wetland trees and herbaceous cover, not turf grass.

In an area experiencing exponential growth the benefits of a planning tool such as this cannot be overstated. The actions we take today will save money and provide for the quality of life in our community for the future. I encourage you to support this amendment. Thank you.

Sincerely,

Rae Ann Wessel
Consulting Ecologist
Public Citizen

File: CPA2001-27

Watershed Council
Southwest Florida Watershed Council, Inc.
P.O. Box 61063, Fort Myers, FL 33906-1063
www.swfwc.org

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JAN 27 2003
COMMUNITY DEVELOPMENT

January 23, 2003

Mr. Ray Judah, Chairman
Lee Board of County Commissioners
P.O. Box 398
Fort Myers, FL 33902

Dear Commissioner Judah,

Congratulations on your recent decision to amend the Lee County Comprehensive Plan to include with policies regarding flow-ways and green infrastructure.

This amendment is encouraging in that it promotes increased stormwater infiltration -- a very important process since much of the natural wetland resources have been lost from this region. Restoration of historic natural flow-ways is another policy included in the amendment that has great potential for alleviating conditions that promote flooding and hydrologic alterations to receiving waters.

We look forward to working with Lee County staff members to develop amendments to the Land Development Code related to implementation of this new component of the Comprehensive Plan. In addition, we feel privileged to have the opportunity to be working with Lee County staff members from both the Natural Resources and Planning offices in regard to public outreach and education on this topic, especially as it applies to our initiative to develop a nutrient management partnership for the Estero Bay Watershed.

Again, we congratulate and thank you for your support of this new Lee Plan initiative. We hope that it leads to better stormwater management and improved conditions in the important surface water resources of Lee County.

Sincerely,

Michael R. Bauer, J.D., Ph.D.
Chairman

Copy: Mr. Paul O'Connor, Mr. Roland Ottolini

The mission of the Southwest Florida Watershed Council is to protect, conserve, manage and/or restore the land and water resources of the Caloosahatchee and Big Cypress Watersheds through participation and cooperation of all stakeholders in consensus building, planning, and decision making to meet the economic, natural and cultural needs for this and succeeding generations.

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Lee sets planning policy to protect flow-ways, orders staff to define flow-ways

Friday, January 10, 2003

By CHARLIE WHITEHEAD, ckwhitehead@naplesnews.com

Developers and environmentalists alike agreed that flow-ways are important and worthy of preservation, but they will continue to haggle over exactly what a flow-way is.

Lee County commissioners adopted a planning policy Thursday that includes a 276-word definition of flow-ways and encourages development to retain and preserve them. They then instructed their environmental staff to conduct a series of public workshops over the next six months to create standards to determine what is and is not a flow-way.

Generally speaking, a flow-way is an area where water flows when it rains.

A series of land-use attorneys and local planners urged commissioners to reject the growth management plan amendment, claiming the definition is too broad and gives county planners too much leeway.

"The problem is the subjectivity of the definition," said attorney Steve Hartsell. "A flow-way, at that level of detail, becomes what it is in the eye of the beholder."

"We like to have defined ways of figuring out what we're dealing with," said Pat Day, incoming president of the county's Economic Development Coalition. "We cannot have non-technical people determining what a flow-way is."

The assurance that the policy would "encourage" rather than "require" the incorporation of flow-ways into development plans was no assurance at all.

"We've already seen instances where 'encourage' meant 'require'," said Ilene Barnett, environmental services manager for the planning firm Vanasse Daylor.

Environmentalists, however, said the policy is long overdue.

"Protecting green infrastructure is integral to the pursuit of smart growth," said Matt Bixler, representative of The Conservancy of Southwest Florida and a member of the county's Local Planning Agency, which already reviewed and approved the new policy. "Every year that passes, we lose more green infrastructure."

John Cassani, resource manager for Lee County Hyacinth Control and a founder of the local Watershed Council, said a watershed begins to suffer water quality problems if 10 to 15 percent of it is paved over or built upon.

"Every subwatershed west of (U.S.) 41 is now at or above 10 percent," he said. "That's a sobering fact."

Commissioners said they were ready to approve the policy and leave the details to be worked out when the county's Land Development Code, the set of rules that implements the policies, is amended later this year.

"The problem is this is a relatively new subject that needs to be fleshed out," Commissioner Bob Janes said. "It needs to be fleshed out in the LDC."

Commissioner John Albion said it's obvious the developers and the county planners involved don't trust each other.

"There's a real distrust existing with the staff and the development community and the development community and the staff," he said.

"The main problem with the mistrust is there's no definition," Commissioner Andy Coy said. "Nobody knows where anybody is coming from. If we mean 'require,' we need to say 'require.' And if we mean 'encourage,' we need to show some benefit."

County land-use attorney Jim Jones said it's interesting that developers are now complaining about the definition.

"For two years developers have complained that staff is implementing (flow-way preservation) without a definition of flow-way," he said. "Now we have a definition."

Roland Ottolini, the county's natural resources director, said that with new federal water pollution standards coming down the pike and state impaired water body rules likely to touch several Estero Bay tributaries, the county will find itself facing a major challenge.

"We at Lee County will ultimately be responsible for reducing those pollutant loads," he said. "We're going to need all the tools we can get."

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From: Wayne Daltry
To: Trebatoski, Kim
Date: 7/18/02 3:02PM
Subject: Re: Lee Plan Amendment

Dear Kim:

I have reviewed the proposed Plan amendment and have concluded that this is a necessary component of the evolving smart growth strategy of defining our communities boundaries with functional green space. As of tnow, though, this is one perons's opinion, since this has not yet been declared as a policy.

However, I am a member of the Working Group of the Everglades Restoration. Let me make a number of statements in regard to how this proposal furthers that effort and, in my opinion, fulfills the policy direction needed for the issues becoming increasingly more evident in permit agency reviews.

First. Lee County is the Lead agent for NPDES permitting for almost all of the public agencies in Lee County. Green Infrastructure is an increasingly important component in water quality attainment. A coherent system or network of green infrastructure enables the County to take the lead in demonstrating how to achieve its NPDES responsibilities.

Second. Green Infrastructure adds an additional limited component to Lee County's flood protection capabilities.

Third. Green Infrastructure adds an additional limited component to the County's water storage and rehydration capabilities

Fourth. Green Infrastructure adds an additional limited component to the County's habitat capabilities.

All four aspects are components of Everglades Restoration. Water quality, storage/rehyddration, and habitat are also part of the County's commitments to the Charlotte harbor National Estuary Program.

Fifth. Permit agencies are increasingly concerned with the cumulative and secondary impact of development. For that reason, it is critical to have a county wide program that accumulates the individual impacts into a coherent areawide mitigation and restoration program.

For that reason, I recommend -if they do not exist already-a series of maps that cover the county that depict existing flowways, and areas where flowways are deficient. Where flowways exist, maps should indicate which ones need remediation. Where they do not exist-within the built environment- a somewhat broader strategy to be coordinated with Public Works/Natural Resources Department to provide them.
I also recommend that a policy be in place-if it does not already exist- to evaluate funding approaches (including private participation and incentives) for expansion of flowways and their Operation, Maintenance, and Monitoring.

Thank you for the opportunity to refview this amendment.

>>> Kim Trebatoski 07/18/02 01:45PM >>>
Dear Mr. Daltry,
Please review the attached Lee Plan Amendment addressing flow-ways and green infrastructure that is proposed by staff. This amendment will be presented at the LPA on Monday, July 22, 2002. Any comments regarding how this amendment relates to Smart Growth would be highly appreciated. An e-mail response will be great.

Kim Trebatoski
Principal Environmental Planner
DCD - Planning/Environmental Sciences
trebatkm@leegov.com

239-479-8183
FAX 239-479-8319

CC: lbeever@swfrpc.org; Ottolini, Roland

From: Kraig Marquis <kmarquis@audubonintl.org>
To: "Kim Trebatoski" <TREBATKM@leegov.com>
Date: 7/21/02 10:22PM
Subject: Re: Green Infrastructure

Kim,
The Audubon International team took a look at the Green Infrastructure and Flow-way plan and thought the intent was very positive. Some points that were brought up for you to consider are:

1. Encourage a number of BMPs in sequence or a "treatment train" system instead of one type of BMP. For instance, a swale that discharges to a created wetland would be more effective than a swale alone.
2. Identify management zones on the property and dictate what can and can't be done. For instance, we set up no spray zones (25 ft from water edge) around each waterbody and wetland.
3. We advocate a written management plan for each property so that the "do's and don'ts" are clearly defined and new property managers or staff can utilize it as a reference.

Hope this helps!
Kraig Marquis
Audubon International

P.S. In reference to the Audubon International Signature Program requiring site review prior to golf course design efforts...we only get into pre-design efforts in the "Gold" Signature Program or the Sustainable Development Program.

only had a few At 01:58 PM 7/18/2002 -0400, you wrote:
>Kraig - County staff is proposing an amendment to the Lee County
>Comprehensive Plan (Lee Plan) that defines flow-way and green
>infrastructure. The amendment also encourages development design to
>utilize green infrastructure, and incorporate flow-ways and isolated
>wetlands into the surface water management design. This proposal goes to
>public hearing on Monday for discussion at the Lee Plan Advisory
>Committee. (The public hearing at the Board of County Commissioners is
>scheduled for September 4th.) Please review the attached report, and
>comment on if this amendment is consistent with the goals of Audubon
>International Sanctuary Programs. Sorry for the short time frame. Any
>input, comments, recommendations will be highly appreciated. Responding
>via e-mail would be great.
>
>Kim Trebatoski
>Principal Environmental Planner
>DCD - Planning/Environmental Sciences
>trebatkm@leegov.com
>239-479-8183
>FAX 239-479-8319
>

FLORIDA AGGREGATES GROUP: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781
FLORIDA ROCK INDUSTRIES INC Mining, Ready Mix Concrete, and Construction Products
Reply to Division Office: 14341 Alico Road, Fort Myers, FL 33913 / (239) 267-1803 ext. 40 / FAX (239) 267-2887

To Pond O.
cc: Kim
Rick T
Mt

November 5, 2002

Mr. Charles Gauthier, Bureau Chief
Department of Community Affairs
Bureau of Local Planning
2555 Shumard Oak Blvd.
Tallahassee, FL 32399

Via Email, Copy to Follow in Mail

Re: Lee County Comp. Plan Amendment
CPA 2001-27 Flow Way and Green Infrastructure

Dear Mr. Gauthier:

Lee County transmitted the referenced plan amendment to the Department of Community Affairs (DCA) for your review and analysis. Based on the lack of public review and input, and that no data and analysis has been provided in support of this amendment, I object to this Plan Amendment.

I respectfully request that DCA require in its Official Recommendations and Comments adequate public participation and supporting data and analysis.

Thank you for your consideration.

Sincerely,

Tracy L. Hayden
Environmental Manager - South Florida

cc: Roger Wilburn
Bernard Piawah
Mary Gibbs

LEE COUNTY
RECEIVED
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Enviromental Sciences

Vanasse Daylor

Urban Planning
Landscape Architecture
Civil Engineering
Traffic Engineering
Environmental Science
FL 366

MEMORANDUM

To: Kim Trebatoski; Sr. Environmental Planner, Lee County

From: Ilene Barnett; Director, Environmental Sciences

Date: November 6, 2002

Re: Proposed Lee Plan Flow-way Amendments

Thank you for the opportunity to comment on the proposed language for the Lee County Proposed Flow-way Amendment. Below, I have included my recommended revisions for your consideration:

With regards to the definition, this should be coordinated with the South Florida Water Management District's definition and criteria for flow ways. Include parameters such as width, length, capacity and importance of the flow way based on the definition.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments, through a system of appropriate incentives, to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.2: The County encourages new developments, through a system of appropriate incentives, to design their surface water management system to incorporate existing wetland systems. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways, through a system of appropriate incentives. This policy is not intended to promulgate additional regulatory criteria for new development.

POLICY 40.5.4: The County will implement a County-wide water quality and flowway improvement and protection plan, including data collection and analysis; prioritizations and goals; monitoring methods; etc. Plan will provide for such potential activities as retrofitting of existing infrastructure and acquisition and restoration of undeveloped lands where practicable and non-intrusive to private property. Funding for this plan and its implementation shall be

through grants, public-private partnership initiatives, and other non-regulatory and non-tax funding sources. Drafting of this plan will allow for extensive collaborative planning and decision making via public input and consensus building in the community.

POLICY 40.5.5: The County will adopt modifications to the Capital Improvements Element that earmarks funding for the necessary upstream and downstream improvements for identified flow ways and drainage basins. This plan should also identify potential creative public/private funding avenues that may be explored in addition to the requisite public funding.

POLICY 40.5.6: The County will amend other sections of the Land Development Code and Lee Plan to assure that they support best management practices for flow way protection. These sections include, but are not limited to Open Space, Housing, Economic Development, and Capital Improvements Elements.

POLICY 40.5.7: The County shall coordinate with and consult with recognized experts from the South Florida Water Management District and the U.S. Army Corps of Engineers with regards to flowway preservation and restoration issues in Lee County, to avoid conflicts and duplication of effort.

End of memorandum

Janet Miller - Lee County Comp Plan Amendment

From: Tracy Hayden <Tracyh@flarock.com>
To: <Charles.Gauthier@dca.state.fl.us>, <Roger.Wilburn@dca.state.fl.us>, <Bernard.Piawah@dca.state.fl.us>
Date: 11/5/2002 4:03 PM
Subject: Lee County Comp Plan Amendment
CC: "Mary Gibbs (E-mail)" <GibbsMX@leegov.com>

Gentlemen:
Please find the attached correspondence addressing the Lee County Comprehensive Plan Amendment CPA 2001-27 Flow Way and Green Infrastructure.
A copy will be mailed.

Tracy L. Hayden
Florida Rock Ind., Inc.
<<DCA flowway ltr.doc>>

FLORIDA AGGREGATES GROUP: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781
FLORIDA ROCK INDUSTRIES INC Mining, Ready Mix Concrete, and Construction Products
Reply to Division Office: 14341 Alico Road, Fort Myers, FL 33913 / (239) 267-1803 ext. 40 / FAX (239) 267-2887

November 5, 2002

Mr. Charles Gauthier, Bureau Chief
Department of Community Affairs
Bureau of Local Planning
2555 Shumard Oak Blvd.
Tallahassee, FL 32399

Via Email, Copy to Follow in Mail

Re: Lee County Comp. Plan Amendment
CPA 2001-27 Flow Way and Green Infrastructure

Dear Mr. Gauthier:

Lee County transmitted the referenced plan amendment to the Department of Community Affairs (DCA) for your review and analysis. Based on the lack of public review and input, and that no data and analysis has been provided in support of this amendment, I object to this Plan Amendment.

I respectfully request that DCA require in its Official Recommendations and Comments adequate public participation and supporting data and analysis.

Thank you for your consideration.

Sincerely,

Tracy L. Hayden

Tracy L. Hayden
Environmental Manager - South Florida

cc: Roger Wilburn
Bernard Piawah
Mary Gibbs

LEE COUNTY
RECEIVED
02 OCT 25 PM 4:28
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PUB. WRKS. CNTR.
SECOND FLOOR

10/28/02 Copy to: Paul O. Kim T. Rick T. Mary H.

2002 OFFICERS:

PRESIDENT
Neale Montgomery
Pavese, Haverfield, Dalton,
Harrison & Jensen, L.L.P.
P.O. Drawer 1507
Fort Myers, Florida 33902-1507

VICE PRESIDENT
Larry Johnson
Old Florida Bank
6321 Daniels Parkway
Fort Myers, Florida 33912

TREASURER
Jake Slot
REALTOR Association of Greater
Fort Myers and the Beach, Inc.
2840 Winkler Avenue
Fort Myers, Florida 33916

SECRETARY
Donald E. Brooks
Brooks & Freund, LLC
6281 Metro Plantation Road
Fort Myers, Florida 33912-1260

BOARD OF GOVERNORS:

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W. Michael Maxwell & Associates Inc.
2550 First Street
Fort Myers, Florida 33901-2431

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SunTrust Bank
12751 New Brittany Boulevard
Fort Myers, Florida 33907-3694

Russell P. Schropp
Henderson, Franklin, Starnes & Holt
P.O. Box 280
Fort Myers, Florida 33902-0280

Bruce A. Stephan, M.A.I.
Stephan & Associates
1919 Courtney Drive, Suite 9
Fort Myers, Florida 33901-9029

stan stouder, CCIM
CB Richard Ellis
12651 McGregor Boulevard, Suite 1-101
Fort Myers, Florida 33919-4467

Randy E. Thibaut
Land Solutions
8660 College Parkway, Suite 160
Fort Myers, Florida 33919-0000

Susan Wunderlich
Team Title Insurance, Inc.
1820 Colonial Boulevard, Suite 101
Fort Myers, Florida 33907

IMMEDIATE PAST PRESIDENT

Tracy L. Hayden
Florida Rock Industries
14341 Alico Road
Fort Myers, Florida 33913

October 22, 2002

Mr. Charles Gauthier, Bureau Chief
Department of Community Affairs
Bureau of Local Planning
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399

RE: Lee County Comprehensive Plan Amendment
CPA 2001-27 Flow Way and Green Infrastructure

Dear Mr. Gauthier:

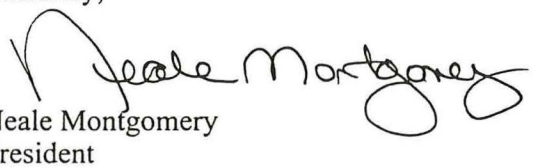
The County recently transmitted the above styled plan amendment to the Department for your review and analysis. On behalf of the Real Estate Investment Society (REIS), and its members, I want to express concerns regarding the amendment. The first concern I want to express is a concern regarding the process. It is herein submitted that the County did not comply with Section 163.3181, F.S. I, as the president of REIS, and several other members, heard that the County was working on what was commonly referred to as the "flow-way amendment." I, and others, were repeatedly advised that it wasn't ready yet, it was still in draft form, and they were still working on the language internally. The language was finally made available to the public less than a week prior to the time the matter was scheduled before the Local Planning Agency. The concerned public did not have sufficient time to review, evaluate and address the proposed amendment. Section 163.3181, F.S. submits that, "It is the intent of the Legislature that the public participate in the comprehensive planning process to the fullest extent possible." When this concern was raised at the transmittal hearing there were indications that the public shouldn't be surprised because the staff had been working on the issue for almost a year. This is probably true, however, the interested public had no access to the drafts during that time frame. The participation in the planning process on this amendment was not effective, broad dissemination did not occur and was not possible due to the very, very short time frame. The flow-way issue is of such importance that public workshops should have been held. The amendments were not available until three working days prior to the LPA hearing.

REIS has concerns about the substance of the amendment. The definition is overly broad, and a landowner reading the definition would not have a clear understanding of whether his land was affected and how his land

was affected. No data and analysis in support of the amendment was provided to the public, and to date I am not certain that any data and analysis was undertaken. The language does not contain measurable standards. As written the County could determine that a flow-way exists if water flowed once during the past fifty years between two isolated wetlands. It is clear that the County definition includes more than wetlands, but what is unclear is the extent of the upland areas that can be considered "flow-ways."

It is herein submitted that the Department in its Official Recommendations and Comments should require a clear and concise definition, adequate public participation, data and analysis, and clear standards which would put a reasonable man on notice of the impact the amendment would have on his property. I appreciate your consideration of this matter.

Sincerely,



Neale Montgomery
President
Real Estate Investment Society

NM:tlb
cc: Roger Wilburn
Bernard Piawah
Mary Gibbs
Larry Johnson
Jake Slot
Donald Brooks
Gerald Hendry
Perry Roberts
Russell Schropp
Bruce Stephan
Stan Stouder
Randy Thibaut
Susan Wunderlich
Fred Burson
Bill Burdette
Tracy Hayden
Charles Basinait
REISFLOW.WPD

JOHNSON ENGINEERING

LeeComp Plan

SINCE 1946

September 6, 2002

LEE COUNTY
RECEIVED
02 SEP 10 AM 8:58
COMM. DEV/
PUB. WRKS. CNTR.
SECOND FLOOR

Commissioner Andrew Coy
District 4
Post Office Box 398
Fort Myers, Florida 33902-398

Re: Flowways

Dear Commissioner Coy:

The issue of flowway protection still requires some additional work. The present combination of definition and policies protect every ditch and pipe in unincorporated Lee County.

The major problem is that every pipe, ditch or canal is protected to the same degree as a historical natural flowway. This places the planning staff in a very powerful position of being able to dictate that one of these manmade conveyances must be saved and restored. It is my understanding that the environmental staff only wanted to protect the natural flowways and that was the reason for breaking the definition into three categories.

I look forward to working with your staff to bring this to a conclusion that is workable for the whole community.

Very truly yours,

JOHNSON ENGINEERING, INC.

Andrew D. Tilton, P. E.
For The Firm

ADT/smd

CC: BOCC
Paul O'Connor
Matt Noble
Tim Jones
Roland Ottolini
Steve Bourrell

2158 Johnson Street ▪ Post Office Box 1550 ▪ Fort Myers, Florida 33902-1550
(239) 334-0046 ▪ Fax (239) 334-3661

REVISED CPA2001-27 LANGUAGE PER MEETINGS HELD 9/30/02 & 10/2/02:

DEFINITION: Green Infrastructure: Surface water management systems that are "soft" features such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: A defined area that conveys surface water during typical seasonal weather patterns. The flow-way may contain uplands, wetlands, defined natural or artificial channels, or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where surface water moves within variable dimensions or a well defined channel. The area of flow in this case has enough general confinement to exhibit surface water flow characteristics and is determined through reasonable scientific judgment utilizing information such as soils maps, aerial photography, topographic maps, USGS maps, drift lines, rack lines, sediment deposits, soils and root scour, absence of litter or groundcover, and field verifications. A natural flow-way can be a series of lower elevation upland areas that allow otherwise isolated wetlands to interconnect when surface water levels rise high enough during typical high water seasonal level to form a continuous flow path. Natural flow-ways typically include but are not limited to rivers, creeks, streams, sloughs, interconnected wetlands, and associated floodplain.

A man-made naturalized flow-way is a constructed surface water management system consisting of soft features used for nutrient uptake, surface water treatment, and/or surface water conveyance. Man-made naturalized flow-ways typically include but are not limited to filter marshes, created wetlands, swales planted with native vegetation, created streams/creeks, created pond or lake systems interconnected through native vegetation areas, or combinations thereof.

A man-made structural flow-way is a physical connection between surface water management basins. Man-made structural flow-ways typically include but are not limited to culverts, ditches, canals, pipelines, mowed grass swales, rip-rap swales, or combinations thereof. This will not include roadways, fire breaks, or similar man-made structures.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

POLICY 40.5.1: The County encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention

lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

POLICY 40.5.2: The County encourages new developments to design their surface water management system to incorporate existing wetland systems.

POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways.

DEFINITION: Green Infrastructure: Surface water management ~~structures~~ systems that are "soft" ~~structures~~ features such as preserved/restored flow-ways, created flow-ways, lakes with littoral plantings, swales planted with native grasses, filtration marshes, preserved/restored wetlands, created wetlands, or other similar design features.

Flow-way: ~~An~~ A defined area ~~of lower elevation~~ that ~~historically or currently~~ conveys surface water during typical seasonal weather patterns. ~~or has the potential to convey water~~. The flow-way may contain uplands, wetlands, defined natural or artificial channels, or a combination thereof. A flow-way may be natural or man-made.

A natural flow-way is an area of lower topographic relief where ~~stormwater~~ surface water moves within variable dimensions ~~instead of~~ or a well defined channel. The area of flow in this case has enough general confinement to exhibit ~~stormwater~~ surface water flow characteristics and is ~~evidenced by, but not limited to,~~ determined through reasonable scientific judgment utilizing information such as soils maps, aerial photography, topographic maps, USGS maps, drift lines, rack lines, sediment deposits, soils and root scour, ~~and~~ absence of litter or groundcover, and field verifications. A natural flow-way can be a series of lower elevation upland areas that ~~connect~~ allow otherwise isolated wetlands ~~that~~ to interconnect when surface water levels ~~raise~~ rise high enough during typical high water seasonal level to form a continuous flow path. Natural flow-ways typically include but are not limited to rivers, creeks, streams, sloughs, interconnected wetlands, and associated floodplain.

A man-made naturalized flow-way is a constructed ~~wetland~~ surface water management system ~~(typically a marsh)~~ consisting of soft features used for nutrient uptake, ~~stormwater~~ surface water treatment, and/or ~~stormwater~~ surface water conveyance. Man-made naturalized flow-ways typically include but are not limited to filter marshes, created wetlands, swales planted with native vegetation, created streams/creeks, created pond or lake systems interconnected through native vegetation areas, or combinations thereof.

A man-made ~~hard structure~~ structural flow-way is a physical connection between surface water management ~~stormwater~~ basins ~~(e.g. canal, culvert, pipeline, or combinations thereof)~~. Man-made structural flow-ways typically include but are not limited to culverts, ditches, canals, pipelines, mowed grass swales, rip-rap swales, or combinations thereof. This will not include roadways, fire breaks, or similar man-made structures.

OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM. The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment.

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POLICY 40.5.3: The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways.

Executive Outline:

Alternative Comprehensive Approach to the Flow Way Amendment

CPA 2001-27

9-26-2002

Requested Action:
As concerned and affected interests, we support this general concept, but are concerned about some critical deficiencies in the proposed amendment. We request that the Board of County Commissioners vote to withdraw CPA 2001-27, in favor of a more comprehensive approach, which is based on a defendable groundwork of data and analysis, and that affords other regulatory agencies and affected parties the opportunity to participate in the development of the "Green Infrastructure" concept. We submit that this approach include the concepts and approaches established under the Greenways working group, as well as work compatibly with the SFWMD's programs and regulations.

Specifically, we request the following:

- **That the Board of County Commissioner's withdraw CPA 2001-27, or apply it to the portions of the County where the necessary work has already been completed (South East DRGR Area)**

- **That the Board of County Commissioner's convene a working group consisting of County representatives, SFWMD, DEP and interested private entities. This working group should consider a comprehensive, incentive based approach to addressing the protection of flow ways, water quality, and open space – similar to the "Greenways" recommendations presented to the Smart Growth Committee.**

- **That the Board of County Commissioners consider retaining an independent third party to guide this smart growth study.**

These recommendations are presented because of significant concerns with the existing amendment. While conceptually there is wide support for this type of goal, the rapid approval process, and lack of defined terms, relationship to other Comprehensive Plan elements, data and analysis, mapping, funding considerations, priorities and consideration of private incentives, result in a significant lack of public support.

Instead, a coalition of public and private groups is forming to request that the County consider a Smart Growth approach, that is comprehensive, innovative, and incentive based. To this end, we outline the following requests:

a. **Need proactive, comprehensive ideas**
The County needs to focus on proactive solutions that address our County's key issues. These need to be processed as a package, and with the input of the greater community, rather than just in-house staff. This comprehensive package should include recommendations on the following:

- Incentives for the protection of key Flow Ways
- Incentives for the enhancement of existing water management systems
- Incentives for preservation of open space and indigenous areas
- Incentives for the development of alternative sources of potable water and irrigation

- Incentives for the implementation of energy and resource efficient development practices
- An integrated Best Management Practices program
- Incentives for the conversion or redevelopment of vast areas of un-built, platted lands.
- Guidelines for development within Rural Communities, which are consistent with State Guidelines.
- Incentives for the Transfer of Development Rights from environmentally sensitive areas.
- Incentives for true mixed use developments
- Incentives for higher density projects in urban areas

NOTE: Many of these concepts were contained in the Greenways proposal circulated several years ago. It is important to note that many of these concepts are inherent in the new recommendations proposed by Sarasota and Collier County, both of which are receiving acknowledgement for their "eloquent" and creative approach to incentive based community planning.

b. Ensure that new regulations are consistent with and compatible with the regulations of other agencies.
The flow way amendment contains the opportunity to preclude or interfere with other flow way priorities that have been established by the SFWMD through detailed studies and economic planning.

c. Evaluate LDC for Smart Growth Compatibility
The current LDC contains a number of regulations that discourage Smart Growth (ROW widths, uniform buffer requirements, uniform open space requirements, uniform landscaping requirements, compatibility requirements even internal to projects, parking standards, signage requirements, etc.). The LDC should be thoroughly evaluated by an independent third party consultant to provide recommendations on how to recreate an LDC that encourages the type of development that the County desires and doesn't unintentionally deter it by outdated regulations.

d. Community Plans
Continue to encourage community based planning, but require that regional components such as drainage, open space and transportation be adequately addressed in each proposed amendment.

Conclusion:
We believe that with the support of the County Commissioners, a collaborative group can be convened that will provide innovative recommendations, which achieve the County's goals while generating significant support from other regulatory agencies, as well as private organizations.

PER BRAD VANCE 2001

FLOW WAY DEFINITION

TYPE	DEPTH	TOP WIDTH	DEPTH TO WSWT
SWALE	≤ 2	≥ 10 < 20	> WSWT
DITCH	≤ 4	< 10	> WSWT
CONVEYANCE	< 8	< 100	~~$\leq$~~ 4' WSWT
CANAL	≥ 8	< 100	~~$\geq$~~ 4' WSW
S.W. (2) POND	≤ 12	≥ 100	>10' WSW
LAKE	> 12	> 300	N/A

(1) By ~~LCNRD~~ WSWT MAP ~~SEE SCOTT/AMANDA~~

(2) Length $< 300'$

Sign In Sheet

Mowways
To: Matt
File: CPA 2001-27

Name	Representing	Phone
Paul O'Connor	Lee Co.	479-8309
RICK JOYCE	"	479-8182
Richard Cantrell	DEP	332-6975
Carla Palmer	SFWMD	338-2929
ROLAND OTTOLINI	LCDNR	479-8127
PETE ECKENRODE	LCDCD	479-8348
Richard Thompson	SFWMD	338-2929
Karen Johnson	SFWMD	338-2929
Lucy Blair	DEP	332-6975
Merle Miller	DEP	332 6975
Matt Noble	L.C. Div. of Planning	479-8548
Kim Trebatoski	LC Div. Env Sciences	479-8183

Email:

trebatkm@leegov.com
noblema@leegov.com
mark.miller@dep.state.fl.us
Rick[redacted].Cantrell@dep.state.fl.us
Lucy.Blair@DEP.STATE.FL.US
Kjohnson@sfwmd.gov
rthomps@sfwmd.gov
cwehle@sfwmd.gov
Cpalmer@sfwmd.gov

Flowways Oct 2 '02

SFWMD
DEP

JOHNSON ENGINEERING

SINCE 1946

LeeComp Plan

To: Kim

LEE COUNTY RECEIVED
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September 6, 2002

RECEIVED
SEP 10 2002
Environmental Sciences

Commissioner Andrew Coy
District 4
Post Office Box 398
Fort Myers, Florida 33902-398

Re: Flowways

Dear Commissioner Coy:

The issue of flowway protection still requires some additional work. The present combination of definition and policies protect every ditch and pipe in unincorporated Lee County.

The major problem is that every pipe, ditch or canal is protected to the same degree as a historical natural flowway. This places the planning staff in a very powerful position of being able to dictate that one of these manmade conveyances must be saved and restored. It is my understanding that the environmental staff only wanted to protect the natural flowways and that was the reason for breaking the definition into three categories.

I look forward to working with your staff to bring this to a conclusion that is workable for the whole community.

Very truly yours,

JOHNSON ENGINEERING, INC.

Andrew D. Tilton, P. E.
For The Firm

ADT/smd

CC: BOCC
Paul O'Connor
Matt Noble
Tim Jones
Roland Offdirk
Steve Boutwell

2158 Johnson Street ▪ Post Office Box 1550 ▪ Fort Myers, Florida 33902-1550
(239) 334-0046 ▪ Fax (239) 334-3661

JOHNSON
ENGINEERING

SINCE 1946

To: M. Noble

LEE COUNTY
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RECEIVED
SEP 09 '02
BOB JAMES

September 5, 2002

Chairman Robert Janes
Commissioner for District 1
Post Office Box 398
Fort Myers, Florida 33902-398

Re: Flowways

Dear Commissioner Janes:

Thank you for your time yesterday in the meeting about the flowway definition being added to the Lee County Comprehensive Plan. This issue still requires some additional work. The present combination of definition and policies protect every ditch and pipe in unincorporated Lee County.

The major problem is that every pipe, ditch or canal is protected to the same degree as a historical natural flowway. This places the planning staff in a very powerful position of being able to dictate that one of these manmade conveyances must be saved and restored. It is my understanding that the environmental staff only wanted to protect the natural flowways and that was the reason for breaking the definition into three categories.

I look forward to working with your staff to bring this to a conclusion that is workable for the whole community.

Very truly yours,

JOHNSON ENGINEERING, INC.

Andrew D. Tilton, P. E.
For The Firm

ADT/smd

cc: Boce 2, 3, 4, 5
Paul O'Connor
Tom Jones

2158 Johnson Street ▪ Post Office Box 1550 ▪ Fort Myers, Florida 33902-1550
(239) 334-0046 ▪ Fax (239) 334-3661

ECOSYSTEM SPECIALISTS

PO Box 713 Ft. Myers, FL 33902
Tel: 239.731.7559 Fax: 239.731.3779

September 3, 2002

Commissioner Bob Janes
Commissioner Douglas St. Cerney
Commissioner Andrew Coy
Commissioner Ray Judah
Commissioner John Albion

COPY

TRANSMITTED BY FAX

Re: Comp Plan Amendment
Amendment CPA 2001-27

Dear Commissioners;

Please accept these written comments concerning the above Comprehensive Plan Amendment, as I will be unable to appear in person to voice my support for and encourage the County's commitment to a Coordinated Surface Water Management goal.

Water quality and quantity have become and will continue to be even more important limiting issues for the economy and quality of our community and the greater South Florida region. The planning associated with the Comprehensive Everglades Restoration Project (CERP) as well as our local interest in addressing point source and non-point source storm water discharges to surface waters acknowledges our concern and commitment to these and numerous other ongoing public projects concerning water. One of the basic planning tools that is currently used to address these issues for State permitting purposes is the creation of green infrastructure into the surface water management systems of proposed developments to address the quality and quantity of our water resources.

The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment. These principals have been the basis of the Water Management Districts SWIM plans for years. SWIM projects provide the proof that simple water management guidelines, incorporated equally by all developments which alter the land surface and add impervious surfaces, improve water quality and quantity and provide the water in a localized setting.

It makes great sense then for the County to Amend the Community Facilities and Services Element, Goal 40: Coordinated Surface Water Management and Land Use Planning on a Watershed Basis to add a new Objective and Policy regarding incorporation of green infrastructure into the surface water management systems of proposed developments, and provide definitions for green infrastructure and flow-way

into the glossary. This will help to address the issue for smaller sites that may not fall within State permitting guidelines.

Professionally and personally I am very supportive of this amendment to encourage new developments and capital improvement projects alike to design their surface water management systems to incorporate green infrastructure such as vegetated filter marshes, flow ways, and effective pond and lake systems complete with littoral zones vegetated with native, wetland trees and herbaceous cover, not turf grass.

The actions we take today with the science that we do have and understand will save money and our quality of life for the future. I encourage you to support this amendment. Thank you.

Sincerely,

Rae Ann Wessel
Consulting Ecologist
Public Citizen

From: <Beeverjw@aol.com>
To: <TREBATKM@leegov.com>
Date: 7/22/02 2:44PM
Subject: Re: Lee Plan Amendment-reply

The amendment is consistent with the goals of the EBABM. It would be good to better define the dimensions of man made flow-ways so that canals and canal-like structures are not included. Jim Beever

CC: <dburr@swfrpc.org>, <jcassani@peganet.com>

MEMORANDUM
FROM
DEPARTMENT OF COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL SCIENCES

Date: July 22, 2002

To: LPA Members
From: Kim Trebatoski, Principal Environmental Planner

Re: CPA2001-00027
Lee Plan Consistency

The proposed amendment to Goal 40 regarding flow-ways and green infrastructure is consistent with the following Lee Plan Goals, Objectives and Policies:

I. VISION STATEMENT

page I-1 second bullet: The county will protect its natural resource base in order to maintain a high quality of life for its residents and visitors.

II. FUTURE LAND USE

Objective 1.4: Non-Urban Areas

Policy 1.4.1(1)(c): Where feasible, open space areas will be designed so as to provide connections between wetlands, preserve areas, and buffer on the Property.

Objective 1.5: Wetlands

Policy 1.5.1: Permitted land uses in Wetlands consist of very low density residential uses and recreational uses that will not adversely affect the ecological functions of wetlands.

Goal 4: Development Design. To maintain innovative land development regulations which encourage creative site designs.

Policy 4.1.1: Development designs will be evaluated to ensure that land uses and structures are well integrated, properly oriented, and functionally related to the topographic and natural features of the site.

Goal 6: Commercial Land Uses.

Policy 6.1.3: Commercial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as commercial planned developments

designed to arrange uses in an integrated and cohesive unit in order to protect natural resources.

Goal 7: Industrial Land Uses.

Policy 7.1.2: Industrial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as planned developments designed to arrange uses in an integrated and cohesive unit in order to protect natural resources.

Policy 7.1.3: Industrial land uses must be located in areas appropriate to their special needs and constraints, including, but not limited to, considerations of: topography and water quality.

Standard 11.4: ENVIRONMENTAL REVIEW FACTORS. In any case where there exists or there is the probability of environmentally sensitive areas (as identified by Lee County, the Corps of Engineers, Department of Environmental Protection, South Florida Water Management District, or other applicable regulatory agency), the developer/applicant must prepare an environmental assessment that examines the existing conditions, addresses the environmental problems, and proposes means and mechanisms to protect, conserve, or preserve the environmental and natural resources.

Goal 16: Private Recreational Facilities in the DR/GR

Policy 16.4.6: The surface water management system design must incorporate natural flowway corridors, cypress heads, natural lakes, and restore impacted natural flowway corridors.

Policy 16.4.6(2): The development must maintain the function and integrity of local and regional flowways. Flowways are precluded from being primary surfacewater treatment areas.

III. TRANSPORTATION

Goal 26: Community and Environmental Impacts [Transportation]

Objective 26.2: ENVIRONMENTAL IMPACTS. New and expanded transportation facilities will continue to be aligned and designed to protect environmentally sensitive areas and rare and unique habitats.

IV. COMMUNITY FACILITIES AND SERVICES

Policy 39.1.6 : The county will, through appropriate regulations, continue to provide standards for construction of artificial drainageways compatible with natural flow ways and otherwise provide for the reduction of the risk of flood damage to new development.

Goal 40 : COORDINATED SURFACE WATER MANAGEMENT AND LAND USE PLANNING ON A WATERSHED BASIS. To protect or improve the quality of receiving waters and surrounding natural areas and the functions of natural groundwater aquifer recharge areas while also providing flood protection for existing and future development.

Policy 40.2.1 : The Surface Water Management Master Plan will identify those basins (or sub-basins) which may be most suitable for basin-wide surface water management, based on :

- natural flow ways and drainage patterns ;
- existing development patterns ;
- land ownership patterns ; and
- development potential based on the Future Land Use element of this plan.

Policy 40.3.1(D) : Development must be designed to minimize increases of discharge to public water management infrastructure (or to evapotranspiration) that exceed historic rates, to approximate the natural surface water systems in terms of rate, hydroperiod, basin and quality, and to eliminate the disruption of wetlands and flow-ways, whose preservation is deemed in the public interest.

Policy 40.3.4 : Water management projects will be evaluated and ranked according to the priorities adopted in this plan. Major emphasis will be given to improving existing drainage facilities in and around future urban areas as shown on the Future Land Use Map, and to enhancing or restoring environmental quality.

Goal 41 : PROTECTION OF WATER RESOURCES. To protect the county's water resources through the application of innovative and sound methods of surface water management and by ensuring the public and private construction, operation, and maintenance of surface water management systems are consistent with the need to protect receiving waters.

Objective 41.2: MIMICKING THE FUNCTIONS OF NATURAL SYSTEM: Support a surface water management strategy that relies on natural features (flow ways, sloughs, strands, etc.) and natural systems to receive and otherwise manage storm and surface water.

Policy 41.2.1: All development proposals outside the future urban areas must recognize areas where soil, vegetation, hydrogeology, topography, and other factors indicate that water flows or ponds; and require that these areas be used to the maximum extent possible, without significant structural alteration, for on-site stormwater management; and require that these areas be integrated into area – wide coordinated stormwater management schemes.

Policy 41.2.2: Where no natural features of flow or ponding exist on a site outside the future urban areas, the county will require the water management structures be designed and constructed in such a manner as to mimic the functions of natural systems.

Policy 41.2.4: Where feasible within future urban areas, surface water management plans are encouraged that mimic the functions of natural systems.

Objective 41.3: GENERAL SURFACE WATER MANAGEMENT STANDARDS. Lee County will continue to provide sufficient performance and/or design standards for development protective of the function of natural drainage systems.

Policy 41.3.11: Runoff must be routed through retention or detention areas and vegetated swales in order to reduce flow velocity, allow for percolation, and trap and remove suspended solids and pollutants.

VII. CONSERVATION AND COASTAL MANAGEMENT

Goal 77: RESOURCE PROTECTION. To manage the county's wetland and upland ecosystems so as to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics.

Objective 77.1: RESOURCE MANAGEMENT PLAN. The county will continue to implement a resource management program that ensures the long-term protection and enhancement of the natural upland and wetland habitats through the retention of interconnected, functioning, maintainable hydroecological systems where the remaining wetlands and uplands function as a productive unit resembling the original landscape.

Policy 77.1.1: County agencies implementing the natural resources management program will be responsible for the following:

1. Identifying upland and wetland habitat/systems most suitable for protection, enhancement, reclamation and conservation.

2. Recommending standards to the Board of County Commissioners approval for development and conservation that will protect and integrate wetlands and significant Rare and Unique upland habitats.

6. Compiling, maintaining and regularly updating county mapping of vegetation communities; listed species habitat and sitings; and water resources including watersheds, floodplains, wetlands, aquifers, and surface water features.

7. Coordinating in the preparation of plans with the municipalities, South Florida Water Management District, and Southwest Florida Water Management District to better control flows of freshwater and reduce pollutant discharges into Lee County coastal waters.

Policy 77.2.2: Continue to provide regulations and incentives to prevent incompatible development in and around environmentally sensitive lands.

Policy 77.2.3: Prevent water management and development projects from altering or disrupting the natural function of significant natural systems.

Policy 77.2.4: Encourage the protection of viable tracts of sensitive or high-quality natural plant communities within developments.

Policy 77.2.6: Avoid needless destruction of upland vegetation communities including coastal and interior hammocks through consideration during the site plan review process of alternative layouts of permitted uses.

GOAL 78: ESTUARINE WATER QUALITY. To manage estuarine ecosystems so as to maintain or improve water quality and wildlife diversity; to reduce or maintain current pollution loading and system imbalances to conserve estuarine productivity; and to provide the best use of estuarine areas.

Objective 78.2: WATERSHED MANAGEMENT PLANS. By 1996, establish procedures for reviewing all new upland development in terms of its impacts on estuarine systems. Prepare estuarine watershed management plans which maximize stormwater retention and treatment, with priority to the Estero Bay watershed.

GOAL 84: WETLANDS. To maintain and enforce a regulatory program for development in wetlands that is cost-effective, complements federal and state permitting processes, and protects the fragile ecological characteristics of wetland systems.

Objective 84.1: The natural functions of wetlands and wetland systems will be protected and conserved.

Policy 84.1.2(4): Every reasonable effort will be required to avoid or minimize adverse impacts on wetlands through the clustering of development and other site planning techniques.

GOAL 85: WATER QUALITY AND WASTEWATER. To ensure that water quality is maintained or improved for the protection of the environment and people of Lee County.

Objective 85.1: Maintain high water quality, meeting or exceeding state and federal water quality standards.

Policy 85.1.2: New development and additions to existing development must not degrade surface and ground water quality.

Policy 85.1.3: The design, construction, and maintenance of artificial drainage systems must provide for retention or detention areas and vegetated swale systems that minimize nutrient loading and pollution of freshwater and estuarine systems.

GOAL 87: WATER RESOURCES. To conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability.

Objective 87.1: WATER SUPPLIES. Insure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems.

Policy 87.1.1: Natural water system features which are essential for retention, detention, purification, runoff, recharge, and maintenance of stream flows and groundwater levels shall be identified, protected, and managed.

Policy 87.1.1: Development designs must provide for maintaining surface water flows, groundwater levels, and lake levels at or above existing conditions.

XI. ECONOMIC ELEMENT

Objective 110.1: Lee County will encourage the conservation and enhancement of those natural resources that represent the foundation of the county's existing retirement, recreation, and tourist oriented economy.

Policy 110.1.7: Lee County will encourage the preservation of sensitive natural resources, Including beaches, wetlands, estuaries, clean air and water, historic resources, scenic vistas and other unique natural resources through public acquisition and/or regulatory protection.

INTEROFFICE MEMORANDUM
FROM
PUBLIC WORKS
NATURAL RESOURCES MANAGEMENT

Date: July 10, 2002

TO: Local Planning Agency

From: Roland Ottolini, P.E.
Director

SUBJECT: CPA2001-27 Amendment to the Lee Plan – Greenway Infrastructure

Our office has reviewed the proposed Lee Plan Amendment and supports its adoption. Preservation, restoration and/or the creation of greenways and flow-way corridors further Lee County's efforts in meeting water quality standards established by the USEPA and FDEP. In the near future, Lee County will be subject to meeting Total Maximum Daily Loads (TMDLs) criteria for impaired water bodies. We are also required to meet non-degradation standards for waters discharging to Outstanding Florida Waters (OFW). Greenway infrastructure and flow-way corridors help achieve these goals by providing an efficient means of reducing total suspended solids, nutrients and metals from our surface waters.

xc: Jim Lavender, Director, Public Works
Paul O'Connor, Director, Planning

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