SOUTH MIAMI-DADE WATERSHED STUDY TECHNICAL REVIEW COMMITTEE (TRC)

Summary Outline of TRC Comments: Meeting Six July 22, 2005

TRC Meeting Overview

TRC Moderator Jim Murley began the day with noting that this is the sixth of what is now seven meetings of the TRC. Miami-Dade County's and the SFRPC's desire to have an additional TRC meeting underscores the value of the TRC to the Watershed Study. Murley next introduced Charles LaProdd, Miami-Dade County's Agricultural Manager, an important new county position that creates a model for the Treasure Coast and South Florida region. Murley then reviewed the TRC's role, which is to review and test the soundness of the consultant's approach, assumptions, and data and to bring unbiased scientific information to the study process. The TRC's job, Murley noted, is to raise issues and concerns with the work products presented, so that when the study is completed and the process moves to the policy stage, the work products will be valid and defensible. Murley closed his comments with a review of structure of the day: the morning was to be focused on the test scenario impact assessment results, and the afternoon a time for discussion of the implications of the assessment results and the design of the Preferred Alternative Scenario, followed by public comments.

Watershed Study Advisory Committee Chair Roger Carlton followed Murley's comments. Carlton highlighted the importance of the Watershed Study and noted that it is one of the largest watershed studies in an urban area in the country. He then thanked the TRC members for their significant contributions to the study process and noted that the TRC plays a critical role in the study process by enabling decisions based on objective scientific thought and analysis. The Watershed Study, Carlton concluded, is more important every day with the growth pressures and high rate of population growth.

Updates

Watershed Study Project Manager

John Hulsey, Watershed Study Project Manager and Senior Planner with the South Florida Regional Planning Council (SFRPC), updated the TRC on events since the last TRC meeting. Highlights of his comments follow:

- Three Developments of Regional Impact (DRIs) are under review by the SFRPC. They are Providence, Florida City Commons, and Parkland. Together, these projects would result in 17,678 dwelling units, 960,000 sq.ft. of retail, 440,000 sq.ft. of office, 33 acres of industrial uses, 240 hotel rooms, 80 hospital beds, 1,800 movie theater seats, three high schools, and three elementary/middle schools. All three DRIs are outside of the current Urban Development Boundary (UDB).
- Miami-Dade County has received nine applications (six in the Watershed Study area) to amend the Comprehensive Plan to expand the UDB that are not related to a DRI. Together, these applications would expand the UDB by 710 acres.
- The Biscayne Bay Regional Restoration Coordinating Team (BBRRCT) has completed its Action Plan.

- As recommended in the County's *Agriculture and Rural Land Study* (Ag Study), the position of Agriculture Manager has been filled by Charles LaPradd.
- The County has retained Jim Nicholas with the University of Florida to develop its Transfer of Development Rights ordinance to help implement the Ag Study.
- A General Obligation Bond was passed in November, 2004 that designated $30 million for a Purchase of Development Rights program to help implement the Ag Study, and $40 million to purchase Environmentally Endangered Lands, both of which will help implement the Watershed Study.
- The Miami-Dade Board of County Commissioners has requested an "unbiased, scientifically sound" UDB Study to determine the need for an expansion of the UDB.
- The Department of Defense is finishing a Request for Proposals to conduct a Joint Land Use Study to determine the most appropriate uses for the land surrounding the Homestead Air Reserve Base. The study should be finished by June 2006.

Keith and Schnars

Michael Davis from Keith and Schnars updated the TRC on public outreach activities. He also updated the TRC on the status of the Watershed Study: tasks one and two have been completed and task three is now in process. Davis then reviewed Keith and Schnars' response to the TRC's meeting five comments and noted that the primary purpose of the morning part of the July 22 meeting was to obtain the TRC's comments on the results of the scenario assessments. Those assessments had analyzed the five topical categories of the parameters and thresholds: Land Use and Economics, Infrastructure, Natural Communities, Water Resources, and Property Rights. He then reviewed the test scenarios themselves. In response to this review, a TRC member observed that it was important to make sure that the proposed density assumptions were realistic, based on what is being built, and commented that the plan needed to have some flexibility built in to be able to respond to market changes over time.

Part One: Keith and Schnars' Presentation and TRC Response

Keith and Schnars' presentation focused on Subtasks 3.1-3.5. The following summarizes the TRC's comments on these presentations.

Subtask 3.1: Land Use and Economic Assessment

The TRC offered a number of comments on agriculture and its future role in the Study area.

- Look at innovative ways to maintain agriculture in urban and rural areas, not as an artifact, but as a viable industry.
- Show where agriculture should be retained and how (e.g., through use of purchase and transfer of development rights programs).
- Recognize that the type of agriculture will change over time in response to changing market conditions.
- The agricultural employment figures are very low. There are 2,000 farms today (15,000 in Miami-Dade County).

Other TRC comments included the following.

- Consider strategies that encourage density on transit corridors, particularly at transit stops, which create opportunities for development nodes.

- Identify the percent of impervious surface in the scenarios and the related impact on each sub-watershed area. This information, along with information on improved water quality treatment, is critically important to the Biscayne Bay (the Bay). Also look at greater use of resued water in the scenarios.

- The methodology looks a lot at the human impacts of population growth and changes in land use, but does not adequately look at the impacts on the Bay and the natural environment. It also does not adequately look at how growth could be limited or restructured by natural resource impacts. It is important to give equal attention both to natural resources, and to recreational and conservation uses, since these are the drivers behind the economic success of the Study area. The study should more fully consider the interdependence of the human and natural systems.

- TRC members offered several comments on the housing model assumptions. The model should consider that the area will experience different types of household compositions and sizes by 2050. The model also should not assume that people will move out of the Study area under different housing type assumptions, and should consider the impacts of different housing type assumptions on the natural environment impacts.

- Look at why housing costs are increasing in the scenarios. For example, the analysis shows housing costs going up with more multifamily units, including rental units. Usually more multifamily units result in lower costs.

- Recognize that Regional Economic Models, Inc. (REMI) uses a non-spatial model and, therefore, it is very limited in what it can do to understand housing cost impacts, for example.

- Clarify where construction related employment is included in the analysis.

In other comments, a TRC member noted several unexpected results in its analysis of land use. Examples include that Scenario 3B had agricultural lands but did not have the mixed uses and density anticipated, and that there is a lack of agricultural land on the eastern side of the Study area when the input had been that agriculture was a good buffer to protect the Bay. More agricultural lands should be on the eastern side of the Study area and less lands should be on the west side.

Subtask 3.2: Infrastructure Assessment

TRC comments on the assessment of infrastructure included the following:

- Factor in the costs of the impacts of human growth on the environment as part of the infrastructure assessment.

- Display the impacts of the scenarios in ways that make it easier to compare among the scenarios at the same time. This can be done by using a different color to denote each scenario. Also use different colors to show the differences among the changes in each scenario. Good communication is important to understanding the data.

- Look at reflecting changes in attitude in the analysis assumptions – e.g., if more people were to choose to use transit as traffic congestion and transit opportunities increase.

- The analysis should reflect the different types of water demand by different agricultural sectors. The analysis should also take into account changes in the type of agriculture in the Study area. It is inaccurate to treat all agriculture the same.

Subtask 3.3: Natural Communities Assessment

The TRC discussion of the Natural Communities Assessment included the following:

- Correct problems from using the Florida Land Use Category Classification System (FLUCCS) Map, which under estimates impacts on wetlands. Better baseline data is needed, particularly for natural communities.
- Re-look at the assumptions about what natural areas will be protected. The only areas that are protected with certainty are publicly owned**.** Remove these from the comparative scenario analysis.
- Examine the results of the scenarios' impact on wetlands. Contrary to expectation, the compact scenarios do not appear to have less impact on wetlands.
- Develop a better way to analyze the natural community parcels and to create greater connectivity between parcels. Too many parcels of high natural community value are not included in the current analysis. Also, explain the "hump" in the data.
- Reflect that existing policies do not prevent obtaining a permit to develop wetlands.

Subtask 3.4: Water Resources Analysis

Keith and Schnars noted that the Water Resources Analysis was not ready for TRC review and that individual TRC members would be asked to comment on the Water Resources Analysis once it is completed. In a general discussion of the Water Resources Analysis, the TRC offered the following comments.

- Present the Water Resources Aanalysis to stakeholders in a meaningful way that clearly calls out the key results and what the results mean.
- Show what the water is loaded with, where it ends up, the related impacts on the Bay, and how the impacts translate into risk and consequences. The Bay is a very important natal area, which makes understanding the impacts all the more essential.
- Show the location of potentially impaired waters and the cost of reducing the impairment in the scenarios. Use a scenario to improve impaired waters. One problem is that there is no official impaired water list for Miami-Dade County.
- Re-look at the sources of water contamination.
- Analyze and show the percent of impervious areas in the scenarios, as well as the impacts of stormwater.

In their closing comments about the Water Resources Analysis, TRC members noted the importance of making clear, and proving, which scenario is the best for the environment. If all the scenarios have about the same impacts, the TRC observed, then there is not enough distinction among the scenarios. An alternative to this type of analysis is to compare the results of continuing with current practices with those of a change in practices. The TRC also recommended putting the conclusions of each parameter into the full study area context. It is important not to bog down with the results of the separate parameters, TRC members observed. The parameters should be viewed in an integrated context.

Subtask 3.5: Property Rights Evaluation

Think about how to package the study as part of the Comprehensive Plan, the TRC observed.

Part Two: TRC Discussion

The afternoon part of the TRC meeting focused on an evaluation of the study process and a discussion of the implications of the assessments' results and how those implications should be used in designing the Preferred Alternative Scenario. The TRC also discussed information needs for the final TRC meeting. Their comments are summarized below.

Crafting the Preferred Scenario

General Comments:

- Add a discussion of uncertainties in the output of the models and differences among the scenarios. For example, if the level of output uncertainty is high enough, the percentage difference among the scenarios will not be that significant. The difference between five and six percent is not important. A multi-attribute utility analysis tool could be used to address this problem.
- Address the TRC concern that there are not enough differences in the impacts of the scenarios. The data, for example, makes the sprawl scenario impacts look acceptable. This means that the analysis is questionable.
- Clarify the quality of life indicators and use them to craft the preferred scenario, to show that it will achieve the desired quality of life. To do this, pick and chose the elements from each scenario that yield the desired outcomes. Also, show total costs of each scenario.
- Show the underlying differences in the scenarios through different spatial arrangements. This will require using indicators that are sensitive to spatial arrangement differences. Using different spatial arrangements is the best way to demonstrate impacts, especially impacts on natural resources and the environment, and to identify the scenarios with the greatest net benefits.
- Use the study funding allocated for the cost benefit analysis for something else. The problem with the cost benefit analysis is that it is prepared for a particular scenario, so that there is nothing to compare the analysis to.
- Consider not using the school data. There are not enough differences among the scenarios.
- Recognize that defining a desirable community character is subjective and will be different for each community – e.g., Florida City's desired community character would be different from Coral Gables'.

Displaying the information for public use and understanding:

- Map the impacts of the parameter assessments in relation to the Study goals. Without doing this display, there will be a disconnect between the data and the goals. Showing the impacts of the parameter assessments is essential to addressing the central questions at the end of the study.
- Show what makes the Study area so unique to help residents understand the preferred scenario. Use features that residents identify with.
- Anchor the preferred scenario with current key features of the Study area today. In addition to the Bay and Biscayne National Park (both access points to the Everglades), these features should include, for example, the transit system, nuclear power plant, and Homestead Air Reserve Base. Use the preferred scenario to support these public investments that are on the ground today.

Transportation and land use:

- Emphasize the transportation nodes and describe them as walkable and interesting places.
- Pack all or most of future development into the nodes. Concentrating development will keep more land available for future agricultural uses, including growing some of the food consumed in the region, and will better protect the natural environment.
- Plan small parks in higher density areas and wherever possible, link the small parks to the larger green network.
- Protect a buffer around the nuclear power plant and the Homestead Air Reserve Base and link them to pieces of land to be protected.
- Examine what land uses should and should not go around Homestead Air Reserve Base.

Economic:

- Recognize the importance of the fisheries in the study area to Florida's tourism industry. The analysis to date does not make this connection.
- Do not use REMI. It is too limited, not useful, and confuses the issues. Water quality is the most important factor; followed by infrastructure issues, such as transportation.
- Throw out the employment and income data. The differences among the scenarios are not that great and the outcomes are not that important to the Bay. Not all parameters are equal. An alternative would be not to throw out the economic data, but to change the data that is shown. For example, show the location of jobs based on the economic revitalization potential of an area.
- Check the wages shown in the analysis. The wages do not appear to make sense. Also, re-look at the wages used for agriculture. Because so much of Miami-Dade County's jobs are service jobs, the wages for the county should not be that different from wages for agriculture.

Water quality:

- Develop an indicator for the desired water quality, and then judge the size of the population that can be accommodated by analyzing the impacts of population growth on that indicator. Water quality data is needed to understand the best scenario for the Bay, which is what the Study is all about.
- Recognize in the analysis that the water quality of the Bay has direct economic impacts on the Study area. To understand these impacts, the big framework picture is needed – a picture that shows how each parameter relates to the other parameters and to the long-term impacts on the Bay.
- Explain the limits of what the water model is saying. The water modeling results are so uncertain regarding impacts on the Bay that they are not very useful.

Agricultural lands:

- Take a more proactive approach to designating agricultural areas that should be maintained; the current approach is to make the areas left in agriculture an after thought – the default outcome. Deciding where agriculture should remain should be based upon where it has the most benefit – for example, creating a transition area between development and wetlands and distributing agriculture and open space uses as buffers around the urban edges.
- Identify in the scenarios the priority agricultural lands that are the most important to protect and set them aside in order to have a minimum number of acres in the future. This is the approach taken by communities that have successfully retained farmland. Lancaster County, Pennsylvania is an example. Combine this strategy with incentives, such as Purchase and Transfer of Development Rights programs.
- Recognize that it is not realistic to think that 37,000 acres of agricultural land can be retained over time is not realistic, especially when most of the land shown in agriculture is zoned for five-acre lot sizes. A Purchase of Development Rights (PDR) program can be used to help maintain agricultural land in these areas. However, with the cost of land, recognize that a PDR program will not be able to protect everything. Either more funding will be needed or selective sacrifice will be required.
- Use agriculture to buffer between development and Biscayne Bay National Park.
- Recognize the impacts of foreign trade policies on agriculture. Agriculture is a very dynamic industry. The types of agriculture in the future will impact the number of acres used. For example, row crops require less land.

Public Comments

Moderator Murley called for public comments on the Study process and TRC observations. No public comments were offered.

Closing TRC Comments and Next Steps

TRC Concluding Observations

TRC Moderator Jim Murley thanked the TRC members for contributing their time and insights. He also noted that a representative of Keith and Schnars might be contacting TRC members prior to the next meeting to discuss the planning principles and alternative future scenarios. It is up to those contacted whether or not they provide additional assistance between meetings.

Following these comments, Murley asked each TRC member to offer a closing comment. The comments are highlighted below.

- *Data:* Look at layering local government census data into the analysis of the scenarios, and do not be afraid to not use a set of analyses, if it is not very helpful. Incorporate earlier suggestions about the uncertainty of some of the data sets when constructing the preferred scenario. Also, incorporate the suggestion that analysis results be displayed in ways that make the meaning of the information clearer and easier to understand.

- *Agricultural Land:* Consider identifying agricultural areas that may need to be the focus of selective sacrifice. Start with the agricultural lands inside the UDB, which will have higher land values. Also, decide on the minimum number of acres that is needed to maintain an agricultural industry in the Study area. For example, the goal may be 35,000 acres in 2025 and 30,000 acres in 2050. Maintaining agriculture and reducing the amount of impervious surfaces are important to water quality.

- *Study Goals:* Show the impact of each scenario on the Study goals and more clearly define the preferred scenario. Also, implement early in the process the observation about the importance of using the preferred scenario to support and enhance key community features on the ground (the Bay, etc.).

- *Water Quality:* Emphasize throughout the analysis that this is a watershed study and that the water quality of the Bay is the focus. A water quality management approach is needed. Just assessing loads going into the Bay is not necessarily showing the important impacts on the Bay.

- *Bay Users and Economic Contribution:* Show the scenario impacts on users of the Bay – for example, on popular bone and sea trout fishing. This type of information is missing in the current analysis. Also missing is the economic contribution that the Bay makes to the county. The Bay is a major economic engine for Miami-Dade County. The study has generated a lot of data (for example on schools), but it has not produced information on the Bay and its economic contribution. New residents to the Study area may use the Bay and buy a boat, for example.

- *Security:* Address the impacts of an increased population on hurricane evacuation.

Watershed Study staff also offered some closing comments. One set of comments highlighted the valuable role of the TRC has played in validating the study results and in helping the project consulting team and staff to see where the study needed to go and how. Another set of comments underscored the importance of using a nodal approach to development and of setting aside a minimum number of agricultural acres to protect (40,000-50,000 acres countywide). The scenarios should be built around these two core concepts.

In closing, TRC moderator Jim Murley thanked the TRC members for their unbiased, independent, and scientific contributions to the study process. He also noted that the next TRC meeting will be in the fall of 2005. The focus of that meeting will be the selected preferred alternative future scenario.

Addendum: July 22, 2005 TRC Meeting Summary

The following summarizes the comments of David Barth, a TRC member who could not attend the July 22 TRC meeting. The comments were offered in a post-TRC conference call on August 11. In addition to Barth, call participants included Eric Silva, Keith and Schnars; John Hulsey, South Florida Regional Planning Council; and Jean Scott, TRC Coordinator.

Preparation of the preferred scenario:

- Consider developing a set of guiding principles to use in analyzing the impacts of the scenarios. Guiding principles are particularly important to understanding the impacts of land development patterns on habitat and open space systems, and can be used to show what a study is aiming for – the ultimate goals. Guiding principles will "make the miracle happen," by enabling subjective, versus strictly quantitative, decisions.
- Start making judgments about which scenario elements will achieve study goals. Stakeholder weighted values should be used to make these decisions.
- Ask stakeholders what the preferred scenario needs to accomplish. Also ask stakeholders to weight the parameters, using, for example, a rank of one to ten, with ten the most important. In one visioning project, participants ranked the parameters individually. The individual rankings were then averaged and participants viewed and commented on the accuracy of the combined rankings.
- Create compelling graphics that show what lands should be preserved and how. The vision of what needs to be protected will emerge from these graphics.

Habitat connectivity:

- Collier County is a good example of a county that developed a plan to create greater habitat connectivity. Remember, however, that connectivity needs to be carefully planned – e.g., if the connections become a point for exotics to travel to other areas, connectivity is not good. To require connectivity, champions are needed.
- The habitat areas to be protected and restored should be based on the values of the community, as defined through the type of weighting exercise described above. Different species will require different types of connecting corridors. Surface water availability will depend on the type of habitat to be protected.
- A comprehensive ecosystem plan should be developed, which will answer the question about what habitat areas should be protected and restored. The plan should include a map that shows what pieces of habitat should be connected as part of the vision for the area. Flow ways and drainage patterns can be used as the backbone structure to identify corridors to preserve.

APPENDIX : Participants in Meeting Four of the Technical Review Committee

Technical Review Committee (TRC)

Liz Abbott
Jerry Ault
Mahadev Bhat
Robert Burchell
David Chin
Tom Daniels
Gerrit Knaap
Joe Kohl
Susan Markley
Steve Nix
Donald Pybas
Roy Rogers
Ed Stacker
Joel Trexler
(Absent: Dave Barth and John Volin)

Other Meeting Participants

Keith and Schnars
John Abbott
Juan Carrizo
Robert Cruz
Michael Davis
Ian Miller
Fadi Nassar
Eric Silva

Miami-Dade County
Kevin Asher
Subrata Basu
Sarah Belmund
Chuck Blowers
Tony Cotarelo
Cindy Dwyer
Carlos Espinosa
Charles La Pradd
Alissa Turtletaub
Maria Valdes

South Florida Regional Planning Council
John Hulsey

South Florida Water Management District
Evan Skornick

Catanese Center for Urban and Environmental Solutions
Patricia Bryk
Angela Grooms
Jim Murley
Jean Scott