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

Summary Outline of TRC Comments: Meeting Five, January 31, 2005

The following outline summarizes the comments.

TRC Meeting Overview

The day began with a welcome, introductions, and review of the TRC's role by Jim Murley, TRC Moderator and Director of the Center for Urban and Environmental Solutions at Florida Atlantic University. The role of the TRC is to review and test the soundness of the consultant's approach, assumptions, and data and bring unbiased scientific information to the study process. Members of the TRC were selected for their expertise in their respective subject and for their neutrality and objectivity.

Murley then reviewed the structure of the day:

- Updates on related planning and a review of the project consultant's response to TRC Meeting Four comments;
- Keith and Schnars' Presentation and TRC Comments, Assessment of Test Scenarios One and Three;
- Keith and Schnars' Presentation and TRC Comments, Construction of the Preferred Scenario;
- Closing comments and next steps;
- Public comments.

Murley reminded the TRC that, when making comments, members should keep in mind the purpose of the study: the Biscayne Bay. He also highlighted the materials that the TRC received for the meeting:

- Consultant response to TRC Meeting Four comments;
- Methodology for Forming the Test Scenarios;
- Test Scenario Assessment Results;
- Draft Fiscal Impact Results.

Murley introduced Evan Skornick, a Senior Planner with the South Florida Water Management District, who is joining the TRC Management Committee that provides oversight for the TRC process. Skornick is replacing Liz Abbott on the Management Committee.

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.

First, the Watershed Study Advisory Committee (WSAC) accepted the documents from Task 1, including the Parameters and Thresholds, and Task 2.1, Opportunities and Constraints. The WSAC has also been briefed on Test Scenarios 1 and 3. Related to the scenarios, the scope of work was

changed to develop and model Test Scenarios 1 and 3, and then use the results to define Test Scenario 2. Noting the importance of the work yet to be done, Hulsey stated that there may be an opportunity for an additional, seventh, TRC meeting to review and comment on the scenarios and implementation strategies.

Second, Hulsey updated the TRC on the acceleration of CERP (Comprehensive Everglades Restoration Plan) and on several applications for Developments of Regional Impact in the study area, raising awareness of the need to act soon to conserve land because of increasing land costs. Those land costs, Hulsey observed, are rising more rapidly than at any other point in history. This makes public acquisition for CERP more costly and raises concerns about the availability of affordable housing.

Keith and Schnars

Eric Silva updated the TRC on recent events in the study process. Public meetings have been held in different parts of the study area, and Keith and Schnars has provided information at key stakeholder events in the area. Silva also noted that the TRC had received a report summarizing how the TRC Meeting Four comments had been addressed. The TRC had no comments on how Keith and Schnars had addressed their comments.

Silva then highlighted the information the TRC would be receiving during the course of the day. The main purpose of the January 31 meeting, Silva noted, is to discuss the scenario assessment findings, identify assessment adjustments that may be necessary to better understand the potential impacts of future developments, and outline the process for creating the Preferred Scenario.

Keith and Schnars' Presentation and TRC Response

Methodology for Forming Test Scenarios One and Three

Eric Silva reviewed the test scenarios and explained how the Keith and Schnars team will construct the Preferred Scenario that will be tested against the Thresholds and Parameters. TRC comments about the test scenarios included the following.

- Clarify the definition of current development practices, particularly the density assumptions.
- Restructure the presentation of the scenarios so that the existing and desired density within the Urban Development Boundary (UDB) and the amount of development anticipated to occur in rural areas are clear.
- Emphasize the importance of getting the land use right, particularly the amount of commercial development. The worst outcome, for example, is if too much commercial space is provided for because of increased residential units. Related comments included the importance of:
    - Looking again at the calculations for the amount of commercial space needed, with the note that the assumption of doubling the amount looks too high;
    - Building neighborhood commercial development into the scenarios to reduce traffic.
- Look at intensifying land uses for industrial land to help absorb residential uses.

- Keep households and jobs as a constant across scenarios and clarify that acreage is not a constant in all the scenarios. Points related to this comment included the following:
    - The number of acres used in each scenario should be shown.
    - People and jobs should be the constants driving the scenarios. The amount of commercial space can be a variable.
    - Employment should be a fixed figure, so that the number of acres can change under different assumptions.
- Clarify how a continuation of current practices (trend) was analyzed. A number of comments were made about analyzing trend:
    - Include the 20,000+/- dwelling units (generally built at one unit per five acres) located outside the Urban Development Boundary (UDB) on the ground today. These units are important to consider when projecting trends.
    - Restructure Test Scenarios 1 and 3 to identify the current capacity in the UDB, given trend densities. From that figure, determine how much capacity is needed and of that capacity, how much can go outside the UDB.
- Show the zoning and use for vacant land.
- Clarify the rules for how Test Scenarios 1 and 3 were developed, including how much is subjective (the art) and how much is scientific.
- Make the analysis of the test scenarios very transparent so that residents of the study area understand it.
- Develop a concept (a picture) that depicts what should be achieved in each scenario first, and then develop data. That is, do not let the data lead the process.
- Remember that "the planning process should always go back to the Biscayne Bay and to jobs."

Test Scenario Assessment

The Parameters and Thresholds are used to test the scenarios, Keith and Schnars reported. The parameter categories are water resources, natural systems, land use and community character, employment and economy, and infrastructure.

Land Use and Community Character

To evaluate land use and community character, Keith and Schnars compared the development pattern for each scenario to that of the others and to existing development patterns (urban, suburban, ex-urban, and rural). In their discussion of land use and community character, the TRC raised the following points.

- Clarify the difference between urban and suburban. This should include clarifying the line between rural and exurban.
- Review density assumptions to make sure that they are realistic and will be accepted. The differences between the Smart Growth scenarios and trend densities are extraordinary and will result in two to three times more people in the corridors. Portland is an example of community that successfully planned for higher densities (an average of 12 dwelling units per acre) to support transit.

- Check the suburban areas shown as having water and sewer to make sure that the information is correct and address how the data were determined. Also, show the fiscal impacts of providing sewer as development intensifies.

- Clarify the decision to remove large areas of environmentally important land and show that trend development would result in the development of these areas.

- Make sure that the table showing the number of acres of agricultural land lost in Test Scenario 3, versus trend development, is accurate and works. This is particularly true for calculating density, which must be based on market realities. People must be willing to live at the densities provided for. Related to this, calculate the current densities and project the number of residential units needed per acre.

- Look at measures to support transit. For example, look at the use of parcels within a half mile of transit corridors and at possible transit roles of the Florida Turnpike. In addition to evaluating transit opportunities, Miami-Dade County's long-range transportation plan should be reviewed. Some elements of the plan appear to be missing.

- Look at the level of service change projected for parks, including the number of park acres allocated per 1,000 people. Lifestyle preferences should be used to determine the size of parks. For example, if the population of an area has a high number of elderly residents, parks need to be smaller.

The TRC also discussed the importance of moving agricultural products, as well as people, and the impact of changes in the agricultural economy as operations become smaller. For example, agricultural warehouses are now being converted to other uses. The problem is that warehousing capacity would be lost if large-scale agriculture comes back because of shifts in economic policy,.

The TRC was then asked to respond to a specific set of issues related to land use and community character.

1. Does intensifying development in an already urban area change the community character of an area? TRC responses included:

    - Visually capture the differences in the test scenarios. For example, in Test Scenario 3, it is still possible to enjoy an agricultural, rural character. In Test Scenario 1, that character is greatly reduced.

    - Recognize that the design of development is important to increasing densities. California, for example, developed before and after design images to help promote density. Downtown Kendall/Dadeland is a good examples of developing at greater densities.

    - Re-examine the assumptions regarding the number of multifamily versus single-family units. The number of multifamily units appears to go against market preferences and would require significant lifestyle changes, as noted earlier. The differences in the type of dwelling units would also have very different scientific impacts.

2. Is it reasonable to intensify densities in Test Scenario 3 around transit corridors to preserve some agricultural land inside the UDB, or should it be assumed that all agricultural land inside the UDB is developed for urban uses? TRC comments included:

    - Market pressure on agricultural land within the UDB will be so intense that is unrealistic to think that it would not convert to development. An exception to this could be agriculture-related industrial uses.

- The end question for an agricultural operation is an economic one – what is the land most valuable for?

3. What are some incentives and/or implementation strategies for attracting developers to infill parcels on the transit corridor? TRC members had several points on incentives and strategies to promote infill. An overall comment was that there is a substantial amount of literature on this topic. There are also good examples in the region, including West Palm Beach, where a recent transit-oriented development charrette examined a full array of incentives. Other points included:

    - Demonstrate what is meant by community character, something that is hard to do at this scale.
    - Address workforce housing in transit corridors.
    - Allow vertical landscaping and reduce parking requirements.
    - Look at ways to subsidize land costs as an incentive. An example is the role of the community land trust in Overtown.
    - Be sure to have the best information possible on trends for infill and redevelopment and structured (versus ground) parking.
    - Apply to this question, the same ideas articulated earlier in the meeting:
        - Lay out now what the desired "end in mind" is and make sure that the desired end will meet the test of market realities as they change over time.
        - Keep the Biscayne Bay out in front at all times.
    - Related to the previous point, examine how proposed development patterns translate into impervious surface, using as a measure, what makes the Bay better (or worse). This means that a scientific set of rules is needed to determine the impact of alternative scenarios on the Bay.

Infrastructure

To evaluate infrastructure, Keith and Schnars used population projections to calculate system demands for the years 2025 and 2050. TRC members offered the following observations about the assessment of infrastructure. Most of the comments focused on water, in response to the question: Do land use patterns play a role in determining the success of water conservation efforts?

- Changes in residential densities will result in major changes in the way wastewater is treated, which means that the type of wastewater (e.g., septic tanks or sewer) treatment cannot be a constant in the test scenarios.
- Look at greater re-use of grey water, for example, for irrigation. Use of grey water will be important, given the population growth projected for the study area and the related demands on water. However, if the presence of agriculture continues to decline, it is unlikely that there will be enough demand to make a full grey water system practical.
- Obtain information about the Miami-Dade County Department of Water and Sewer's update of its re-use of water study.
- Consider the influence that the type of development has on water demand. Smaller houses and fewer lawns means less lawns that will require water.

- Look at the impacts of water conservation on water demands. This can include use of xeriscaping landscaping and Best Management Practices (BMP). More water can be saved with BMP than through conservation.
- Quantify the amount of water needed to water lawns and for irrigation in both urban and suburban areas.
- Learn from the experiences of communities that have conserved water. For example, the city of Pembroke Pines has significantly reduced water consumption through regulations that require water conservation techniques, such as use of rain gauges and low-flush toilets. The Florida Yard and Neighborhood program is also looking at measures to conserve water.

Economics

The assessment of economic conditions is still in progress. The cost of housing and the mix of wages are two of the economic conditions being analyzed. The TRC discussion of these factors included the following:

- Look again at income and wage levels, which do not seem to change among the different scenarios, and assess the impact at the municipal level.
- Sift off the cost of residential and non-residential development and do not use only the valuation technique. The result will be too little cost in one sector and too much cost in another sector. Also, be careful when using a 16 year-old study to assess whether a scenario is better than trend.
- Add municipal tax rates and costs to get a layered rate. Layer in all the costs and population for an urban area and see where the breaks come. The impact will be positive, which means lower tax rates.
- Do not assume fixed costs throughout the scenarios, e.g., that compact development will result in lower costs for schools. Actually layer in the data and experience the costs. It is not the type of dwelling units that is important, but the number of people and households.
- Parse out the initial and ongoing costs. For example, parks have the ongoing costs of maintenance, in addition to the initial capital cost of acquisition and installation.
- Be sure that school costs are not assigned to the non-residential sector – that is, there are no student-producing impacts of non-residential development. Likewise, the student-producing impacts will be different in agricultural areas.

Water Resources

Keith and Schnars' first step to assess water infrastructure (still in process) is to translate population growth and development to water demand in the study area. A number of the TRC's comments on the assessment of water resources focused on the canals.

- Clarify that the data for C-102 are a composite of all nodes, and obtain information about the elevation of ground water at the nodes, including the encroachment onto adjacent ground. Also, re-examine the data on the C-102 canal, particularly the amount of nitrates.

- Groundwater elevations near the canals are important to understanding flooding conditions. These elevations are also important to understanding the impacts of sub-surface flooding on tree crops.
- Re-examine the decision to show the percentage increase in water quality impact on a specific canal, because it is the Biscayne Bay that is important.
- Provide more information about the source of the data related to water resources.

The TRC was then asked to address the following question: Are the water resources assessment results consistent with initial expectations of the scenario impacts? TRC members made the following responses:

- There are not enough data to answer the question. Also, re-examine the phosphate and nitrate levels. It seems that these levels should go down, not up.
- Determine the base load that the Biscayne Bay can take, and use this figure to calculate the land use. It is important to do more analysis of the Bay and less on the landside. (It was noted that there is no model yet to do this type of analysis, which means that impact assessments need to be more general.)

Natural Communities

The assessment of natural communities relies on the evaluation of the spatial extent of tidal wetlands, freshwater wetlands, and remnant natural forests. The TRC made a number of comments about wetlands.

- Clarify what wetlands are already removed from consideration (e.g., because they are part of a mitigation bank or are degraded areas that are already compromised). If this is not done, it will appear that the scenarios have very little environmental impact.
- Look at the sub-categories of jurisdictional wetlands that are the most environmentally sensitive. Also, rather than look at the total number (quantity) of acres lost, look at the quality of the acres lost.
- Assess which wetlands (both pristine and transitional) are being impacted because that is important to understanding the consequences of different scenarios.

Construction of the Preferred Scenario

Two consistent themes emerged from the TRC discussion of the Preferred Scenario. One was the need for an end vision – i.e., how Keith and Schnars plans to get from the test scenarios to the Preferred Scenario. As one TRC member observed: "Where does the miracle occur?" The second theme was what the TRC viewed as the lack of data and time to make good decisions about the Preferred Scenario. Other comments included:

- Clarify where a cost-benefit analysis is used. It is not possible to do a creditable cost-benefit analysis of the three test scenarios.
- Recognize that the Preferred Scenario is more about art than science. Also recognize that the TRC can comment on the technical side, but not on the qualitative side (e.g., if housing costs are more important than having pristine water).
- Look at the Sarasota 2050 plan, which concentrates development and protects the rest of the land.

- Recognize that it is hard to do a full fiscal impact analysis and that land uses may be more important. Consequently, consider reviewing the parameters to see if participants in public hearings identified values of the area that they like and want to keep.
- Tighten the thresholds. For example, all of the test scenarios have some loss of wetlands; therefore, it is important to tighten the threshold to clarify what is an acceptable level of loss.
- Develop more data on the number of dwelling units inside and outside the UDB in the Preferred Scenario.
- Make some assumptions on how to present the Preferred Scenario, e.g., if it should be presented within the context of the Comprehensive Plan. As a part of this, look at how the Preferred Scenario can support and enhance the Miami-Dade County Transit Corridor and other existing policies.

Closing 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 comment on how they felt the study process and work products were going – are they satisfied to date, and if they are not satisfied, what concerns still need to be addressed? The comments of the individual TRC members are summarized below. As with the discussion of the Preferred Scenario, many of the comments note the need for an overriding vision and for more data. The comments began with the observation that the work is on the right track, assuming the TRC's comments are incorporated.

- Develop a vision of the desired end outcome and do not make the study process just a data computing exercise. This could include, for example, a vision design of a corridor.
- Assign value to agriculture for providing wildlife habitat, including natural corridors.
- Look at similar studies and plans as the Preferred Scenario is developed. Examples include the Portland 2040 study, the Sarasota 2050 plan, and a plan developed by the Southern California Council of Governments.
- Develop a vision, which has not been done yet. For example, "improve the quality of Biscayne Bay and the overall quality of life of this part of the county." In addition to developing the vision, the study process should include some simple method to assess the water quality of the Bay. Without water quality information about the Bay, it will be a flawed study. Also, tighten up some parameters and thresholds.
- Add the ingredient of passion and vision and address how the process will handle qualitative assumptions about quality of life. This means that the TRC should be hearing Keith and Schnars' judgments about the scenarios, not just the numbers.
- Look at using a water quality-based land use approach to planning. That is, begin with the water quality that is considered acceptable and work back to the land use. Also, consider the economic impacts of the Biscayne Bay, such as the fisheries. In addition,

recognize that the Bay is an estuary. This means that what is in the Bay remains for a long time, important in understanding the impact of the scenarios on the Bay. A model of the Bay and how the Bay relates to land use is essential. Also develop a timeline for looking at impacts on the canals.

- Add a lot more information about the science side of choosing a scenario. That is, the process has focused a lot on human models, but not, for example, on the nutrient impacts and the interface between economic impact and human demography. The lack of these data is very important, particularly with only one planned TRC meeting left in the study process: "We've found ourselves pinched here." Additional data should include information about the impacts of increased loading on the Bay and the related cost of mitigation. Scenario data should also be developed as to the importance of agriculture in providing wildlife habitat and the role of agro-eco systems in the region's landscape.

- The TRC brings value to the process, helping Keith and Schnars present information to the policy makers in a way that the choices are clear and understandable and that is certain that the data are correct. The TRC comments on the importance of developing a vision should be followed; however, the process is currently not constructed to do either – show clear choices or a vision. It is also important to recognize that all the measures have not yet been developed (e.g., the earlier comment about addressing the quality and connectivity of wetlands, not just the number of acres, which by itself, is not very helpful). In addition, it is important to show what additional treatment will be needed on the land side to address impacts of the scenarios on to the Bay: "The information should be as good as it can be."

- Look at the comprehensive plans as the baseline and build on them. Also, the data developed to date are not specific enough to understand impacts. An additional TRC meeting is needed to understand the impacts. There is not the information yet to make the decisions the TRC is supposed to make.

- Additional time is needed to understand data on water resources. The data at this point are very preliminary, which means that decisions based on these data can lead to misconceptions about the ultimate truth.

- The Watershed Study is an exceptionally important study for Miami-Dade County, and the TRC has taken on a critical role in the study process – to review and verify the science, which is important to the credibility of the study.

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 during the course of the discussions, he had heard the need for an additional TRC meeting. Murley also emphasized the consistent comment that everything goes back to the Bay. "People," he noted, "will love the Bay – they won't love the UDB."

Next Meeting Dates

The next TRC Meeting (meeting six) will be in fall of 2005, unless the decision is made to have an additional TRC meeting in the early summer.

Public Comments

Sarah Bellmund, an ecologist with the Biscayne National Park, made a number of comments:

- Beef up the analysis of run-off characteristics and the impacts of changes in topography from development. For example, some of the agricultural lands are low-lying. If they develop, a lot of fill will be required.
- Development in an historic slough, which is a former swamp, is not good for the slew slough? or for development.
- Look at the economic impacts of the Bay, e.g., of off-shore fisheries.
- Quantify decisions and the rules followed in making decisions: "Even in art, there are rules."

Matthew Kaskel also offered several observations and recommendations:

- Look again at the 500' buffer designed to keep the natural forest communities intact, which is not sufficient. In addition, require that development cannot impair national forest communities.
- Look at the compatibility of adjacent land uses.
- Focus on best practices from other areas as part of developing the Preferred Scenario.

At the close of public comments, Jim Murley again thanked the TRC for their invaluable comments and ended with the comment that the support of the TRC was an important part of "making the miracle occur." He then adjourned the meeting.

APPENDIX A: Participants in Meeting Four of the Technical Review Committee

Technical Review Committee (TRC)

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

Other Meeting Participants

Catanese Center for Urban and Environmental Solutions

Patricia Bryk
Angela Grooms
Jim Murley (TRC Moderator)
Jean Scott

Keith and Schnars

John Abbott
Alice Bojanowski
Juan Carrizo
Robert Cruz
Michael Davis
Sean Ebersold
Samantha Horowitz
Ian Miller
Michael Phelps
Eric Silva

Miami-Dade County
Chuck Blowers
Maria Valdes
Virginia Walsh

South Florida Regional Planning Council
John Hulsey

South Florida Water Management District
Evan Skornick