New Jersey Highlands Council
Geographic Information Systems
Technical Advisory Committee
Meeting Summary
July 13, 2005

Summary:

On July 13, 2005 the Geographic Information Systems Technical Advisory Committee (TAC) held a meeting at the New Jersey Highlands Council office in Chester, New Jersey. Notice of the meeting was provided to the public on the Highlands Council's web site. Adam Zellner, Executive Director of the Highlands Council, welcomed the members of the Technical Advisory Committee and thanked them for their willingness to offer their expertise to the Council in preparation of the Regional Master Plan. Council staff members present at the meeting were: Steve Balzano, Tom Borden, Maryjude Haddock-Weiler, Chris Danis, and Aaron Kardon. Technical advisors present at the meeting included: Russ Davis (via conference call), Frederick A. Douthitt, Dom Elefante, Mark Gatti, Steve Karp, Roger Keren, Michael Kruge, David Manhardt, Adrian Molato, Jason Patrick (via conference call), Geoffrey Price, Steve Rice, Tanya Rohrback, Rob Sparks, and Jen Zhang

Introduction and overview was provided by Steve Balzano, Director of Science and Planning, explaining the TAC purpose and the role of the committee in helping with the development of the master plan by June 2006 and beyond. Aaron Kardon, GIS Coordinator, described the status of the current Council GIS database and coordination efforts, particularly the nature of the parcel data that is available within the Highlands. The Council is focusing on gathering parcel data for all 88 municipalities that can be utilized in a consistent data format for the Highlands and also be readily understood by agency, county and local data users.

The Committee then discussed data standards and limitations and approaches for the best way to utilize data and standardize the information into a useful format. The committee suggested that the Department of Environmental Protection layers meet many of the national standards for data management and are documented well in terms of the keeping up with the Metadata. However, they are not always up to date and agency, county and local entities may have more up to date data that is pertinent for their work. It is important to define how the Council will share data and gather data in order to keep pace with others.

The Committee discussed methods for approaching and designing a data management system. Many of the Committee members suggested that Council utilize an Enterprise Data Management System using ESRI's ARC SDE Advanced Spatial Data Server, in order to have a centralized resource that can process large amounts of data that will be needed for the construction of the Master Plan. This approach allows for a system that can reserve the integrity of the base data, and updates made to the system will be official

updates that will prevent others from uploading unverified data. Another advantage of the enterprise data base is that data can be developed for certain departments and organized effectively. The Committee advised the Council to set up a specific system and utilize consultant resources to assist in the process.

The Committee then noted that in order to effectively construct a Master Plan that the Council define the data needs and identify the data gaps that are associated with obtaining those layers and information. The Council has been gathering GIS data for several months and has been working closely with the state, counties, universities, non-profits and others to identify the realm of GIS data available. One layer which the staff identified as a priority layer is the municipal parcel base and linking that data to the MOD IV information. Many Committee members provided some pitfalls to gathering parcel layers as there are issues related to parcel data including edge matching issues, and gaps between certain municipalities. However, the Committee recognized that the Council may be in a position where it may need to utilize the best available data even though it may not be perfect.

On the topic of maintenance of data, the Committee advised that it will be very cumbersome for one person, or even one office, to oversee all of the towns and it is best to create a collaborative effort with the towns and counties to access the data. However, other regional planning entities warned that the overlay coverage needs consistency. Therefore although the data may be generated by specific sources, the Council needs to develop a data dictionary as a means to provide consistency and define the parameters of the data sharing protocols.

Highlands Council Action Items:
- Establish a Standard Municipal Boundary for Highlands Towns
- Establish a PIN for Highlands data so that it can easily merge and work with a variety of data sources
- Develop a Quality Assurance and Quality Control program and a data dictionary in support of Enterprise System

Data Analysis Methods/Existing Tools/Data Layers:
- Stream Coverage's - Best sources are from USGS maps, however buffers are required and it is difficult to address buffer specifics due to stream centerline drawings.
- Water/Sewer Service Areas - Use water bills and parcel data to determine the service areas. The pipes in the ground information exists in many different formats and generated by a variety of applications (CADD drawings, Paper Maps, etc.). From experience the Committee indicated that it is not worth the effort to digitize this data, the billing information and address matching is a better approach.
- Integration of MOD IV into Parcel Coverage – A difficult process with many inherent inconsistencies. Burlington County translated it; Mark Remsa is a good contact for translating data. Morris County Planning has a system that is readily updated via MOD IV. There are a variety of processing engines to solve issues

related to decimal places and inconsistent data values within the data. The Committee members will forward what protocols they are currently using as examples.

- Build Out Analyses:
  >DVRPC Method: Not utilizing GIS
  >Raritan Basin: Build out method pre and post Highlands used 300 foot buffers, steep slopes. Will forward information
  >Environmental Defense: Approach was to reach out to municipalities for actual zoning to create build out based on zoning to increase understanding of local decision making.
  >Hunterdon County: Build out performed using zoning
  >Somerset County: Build out performed using zoning applied Community Viz software
  >Pinelands is working on build out, based on parcel and zoning. The Committee asked that Pinelands provide an overview of the approach and identification of the constraint layers being utilized in the build out.
  >Raritan Highlands Compact is in the process of performing a build out model.
- Open Space was determined to be a difficult layer to get consistent information on. The data is being tracked on a variety of levels, state, county, local, non-profits and typically the DEP layer is out of date.

TAC Deliverables:
Please forward to Aaron Kardon (Aaron.Kardon@highlands.state.nj.us):

- New Jersey Water Supply Authority will forward the white paper on build out (received 7/14/05).
- Pinelands will forward the PEMS parcel ID system number and data management system for parcels.
- Morris County Planning will forward parcel and MOD IV data procedure as example as well as internal GIS quality assurance protocols.
- Somerset County will forward examples of GIS communication tools and parcel and MOD IV format.
- Many Committee members promised to forward data structure models and GIS communication protocols to assist in the development of an effective Highlands Council Information System.

Committee members were asked to forward any comments to the following questions to Aaron Kardon (Aaron.Kardon@highlands.state.nj.us):

1. Are there any other key experts who should serve on this TAC?

2. What are the key databases, reports, etc., that address these issues?

3. Which of these issues can most readily be solved during a six to eight month process, primarily using assessments of available data?

4. Which of these issues must be addressed over a longer schedule, and which of those must be based on newly acquired data?

5. Which longer-term issues will pose the greatest constraints on having a complete and defensible Regional Master Plan adopted by June 2006?

<u>Distribution:</u>

All TAC members and Highlands Council website (www.highlands.state.nj.us)