U.S. EPA SCIENCE ADVISORY BOARD
Ecological Processes and Effects Committee
Geographic Information System Screening Tool Review Panel
EPA Region 6 Conference Center – Oklahoma Room
U.S. EPA Region 6 Office, 12th Floor, Fountain Place
1445 Ross Avenue, Dallas, Texas 75202-2733

December 7-8, Public

PRELIMINARY AGENDA

I. Review of the Geographic Information System Screening Tool (GISST)

Wednesday, December 7, 2005

8:30 - 8:40 a.m.	**Meeting Convened by the Designated Federal Officer** Dr. Thomas Armitage EPA Science Advisory Board Staff Office
8:40 – 8:55 a.m.	**Welcome and Introductory Remarks** Dr. Anthony Maciorowski, Associate Director for Science EPA Science Advisory Board Staff Office EPA Region 6 Representatives
8:55 - 9:10 a.m.	**Purpose of the Meeting and Review of the Agenda** Dr. Virginia Dale, Chair
9:10 – 10:10 a.m.	**Overview of the GISST Framework, Methodology, and Uses** Dr. Sharon Osowski, U.S. EPA Region 6
10:10 – 10:25 a.m.	BREAK
10:25 – 11:00 a.m.	**Case Study: Application of GISST in Decision-Making** Dr. Sharon Osowski, U.S. EPA Region 6
11:00 – 11:10 a.m.	**Public Comments**
11:10 – 12:15 p.m.	**Panel Discussion of Charge Question 1 - GISST Methodology and Framework** **Dr. Virginia Dale and Panel** Charge Question 1.1: The GISST mathematical algorithm (presented in Chapter 3 of the GISST User's Manual) for determining the "potential for significant environmental risk" of projects is a multiplicative formula using the watershed as the base

unit. Please comment on the reasonableness and appropriateness of using this algorithm for conducting screening level evaluations as described in the GISST User's Manual.

In the Interstate Highway 69 case study, the GISST algorithm was not used because it was not beneficial to obtain one cumulative vulnerability score for the entire highway corridor. Instead, vulnerability within the corridor was evaluated by summing the scores of vulnerability criteria within1 km^2 areas in a grid system. Please comment on the reasonableness and appropriateness of this method for conducting an intial screening level evaluation.

Charge Question 1.2: Appendix A of the GISST User's Manual identifies the impact and vulnerability criteria that are used in the GISST to evaluate environmental impact and vulnerability. A subset [1] of these criteria is frequently used by EPA Region 6 to conduct GISST evaluations. Are the criteria in this subset reasonable and appropriate for use in GISST evaluations of the potential degree of vulnerability of a project area and the potential degree of impact produced by a proposed project? Please provide similar comments for the other criteria in Appendix A. Are there additional categories of criteria that should be developed for use in GISST evaluations?

Charge Question 1.3: The GISST uses data sets (in AppendixA) with different coverages generated for different purposes (e.g., point sampling of water quality, census data, and land cover data gathered by satellite). Is the GISST 1 – 5 scoring scale on these coverages and datasets reasonable for developing an initial assessment of the potential cumulative impacts of proposed projects.

12:15 – 1:15 p.m LUNCH

1:15 – 2:15 p.m. **Panel Discussion of Charge Question 1 - GISST Methodology and Framework (continued)**

[1] The subset of criteria most frequently used in GISST evaluations includes: Stream Density (surface water quantity), Population Density, Minority (environmental justice), Economic (environmental justice), Agricultural Lands, Density of Managed Lands, Hazardous Waste (Other Industries or Pollution Sources), Impaired Stream Segments (Clean Water Act 303(d) Segments), Wetlands, Floodplain, Ozone Nonattainment, Texas Ecological Assessment Protocol (TEAP) Diversity, TEAP Rarity, TEAP Sustainability, TEAP Composite, Wildlife Habitat, Federally-listed Species, and State-listed Species, and Ecologically Significant Stream Segments. The TEAP criteria were derived using a tool developed by EPA Region 5, the Critical Ecosystem Assessment Model (CREAM). The SAB has reviewed the CREAM. The SAB report on the CREAM is available at: http://www.epa.gov/sab/pdf/cream_sab-05-011.pdf

2:15 – 3:30 p.m.	**Panel Discussion of Charge Question 2 - Application of the GISST to Environmental Decision-Making** Dr. Virginia Dale and Panel Charge Question 2.1: EPA intends to use the GISST in the NEPA process as an initial screening tool to prioritize potential single, direct, and cumulative environmental impacts of projects for more detailed analyses. Please comment on the strengths and limitations of the GISST as it applies to this purpose. Charge Question 2.2: EPA also intends to use the GISST in the NEPA process to evaluate environmental impacts of project alternatives to help inform decision-making. Please comment on the usefulness of the GISST as a tool for this use.
3:30 – 3:45 p.m.	BREAK
3:45 – 4:45 p.m.	**Panel Discussion of Charge Question 3 – GISST Documentation** Dr. Virginia Dale and Panel Charge Question 3.1: Please provide recommendations on steps that can be taken to enhance the usability of the GISST User's manual and documentation.
4:45 – 5:00 p.m.	**Summary of Day One Discussion and Expectations for the Following Day** Dr. Virginia Dale and Panel
5:00 p.m.	**RECESS FOR THE DAY**

Thursday, December 8, 2005

8:30 – 10:30 a.m.	**Writing Session to Develop Responses to Charge Questions**
10:30 – 11:45 a.m.	**Review of Draft Responses to the Charge Questions** Dr. Virginia Dale and Panel
11:45 – 12:00 p.m.	**Summary of GISST Discussion and Next Steps** Dr. Virginia Dale

II. Other Ecological Processes and Effects Committee Business

12:00 – 1:00 p.m.	**Discussion of Upcoming SAB Ecological Risk Assessment Workshop**

Dr. Virginia Dale and Panel

1:00 p.m. **ADJOURN MEETING**