



Federal Interagency Sedimentation Project



Waterways Experiment Station
3909 Halls Ferry Road
Vicksburg, Mississippi 39180-6199

December 17, 2003

John R. Gray
Chair, Subcommittee on Sedimentation
U.S. Geological Survey
Mail Stop 415
415 National Center
12201 Sunrise Valley Drive
Reston, VA 20192

Dear John,

The Federal Interagency Sedimentation Project (FISP) Technical Committee (TC) met on October 28-30, 2003 in Vicksburg, Mississippi. During this meeting the TC considered three items referred to the TC by the Subcommittee on Sedimentation (SOS).

Item No. 1 - Reference: Letter dated April 9, 2003 from SOS to TC.

“The Technical Committee should prepare an action plan to redefine the mission, function, requisite skills, and location for the R&D activities of the FISP to be completed on or before March 17, 2004, given the focus on new sediment technologies.”

Response:

The TC has taken the previously proposed mission statement and revised it to reflect current and future developments in sediment transport technology (see attached mission statement). The TC also recognized the continued relevance of Section III. A. 1. a. of the Prospectus of the Subcommittee on Sedimentation for the Years 2002-2006 in preparation of this response. The TC response to the function, skills, and location for the R&D activities is found in the following sections, which are modifications and enhancements of information presented in the Prospectus.

Function and Skills: *The FISP was originally created to standardize sediment sampling equipment and procedures to insure the accuracy of data collected and reported by the various Federal agencies active in the water resources arena. The FISP has been most successful in meeting that intended purpose and in providing equipment and repairs to the participating agencies at a reasonable cost. The current needs of the member agencies are shifting from primarily collection of physical samples to in-situ, near real-time measurement of various sediment properties.*

U.S. Geological Survey
U.S.D.I. Bureau of Reclamation

U.S. Army Corps of Engineers
U.S.D.A. Forest Service
U.S. Environmental Protection Agency

U.S.D.A. Agricultural Research Service
U.S. Bureau of Land Management

Because of the wide range of types of equipment required to meet the agency needs, it is unlikely that full-time Project staff will have the breadth of experience needed to effectively develop or evaluate all future equipment. Contracting with individual agencies or private organizations will probably be necessary to provide the technical expertise required to meet the FISP's mission.

The anticipated technical expertise includes but is not limited to:

- *Sediment transport*
- *Hydraulics*
- *Geomorphology*
- *Electrical engineering/ electronics*
- *Instrumentation*
- *Mechanical engineering*
- *Physics (acoustics, optics)*
- *Mathematics and statistics*
- *Experimental design*
- *Field data collection experience*
- *Laboratory data collection and procedure experience*
- *Computer aided design*
- *Computer science*
- *Information technology*
- *Remote sensing*

Because of the need for a broad range of highly specialized expertise, the FISP staff will also become more involved in coordinating and reviewing the results of equipment and methods development projects. The anticipated management skills of the FISP include, but are not limited to:

- *Communication*
- *Project management*
- *Technical writing*
- *Budget management*
- *Program planning*
- *Leadership*
- *Salesmanship*
- *Interpersonal*
- *Property management*
- *Contract management*
- *Procurement/COTR/CO training/authority*

The future FISP level of function and staffing will be dependent upon the level of funding available from the participating agencies and whether or not some of the research and

development activities are done by contract. Member agencies should cooperatively fund and conduct those projects for which they have the greatest need and/or expertise.

Location: *In 1992, the FISP was relocated to the Corps of Engineers Waterways Experiment Station (WES). This relocation resulted in a significant cost savings to the Project due to reduced space costs and access to the wide range of laboratory and shop facilities at WES. The administrative costs are reduced due to the use of existing Engineering Research and Development Center (ERDC) staff on a less than full time basis for some functions. The WES location meets all requirements for research and development work, as well as, calibration and repair. The TC discussed FISP location and concluded there are no compelling reasons to move the research, development, and evaluation portion of FISP from its present location. Warehousing and sales functions for FISP products are currently being transferred to the USGS Hydrologic Instrumentation Facility (HIF).*

Item No. 2 - Reference: Memorandum dated October 3, 2003 from SOS to TC

“The Chair, SOS, is to advise the Technical Committee that the SOS supports development and standardization of the next generation of sediment analysis and measurement methodologies not only within the FISP and the USGS’s Hydrologic Instrumentation Facility, but also among other Federal and non-federal organizations.”

Response:

The TC agrees with the SOS’s position. This agreement is reflected in the TC response to Item No. 1 and in the priorities set by the TC at the October 2003 meeting.

Item No. 3 - Reference: Memorandum dated October 3, 2003 from SOS to TC

“The Chair, SOS, should forward, ‘Attributes for a Sediment Monitoring Instrument and Analysis Research Program,’ by J.R. Gray and G.D. Glysson (http://water.usgs.gov/osw/techniques/sediment/sedsurrogate2003workshop/gray_glysson.pdf) for consideration in the Technical Committee’s deliberations on the [above-mentioned] action plan.”

Response:

The TC agreed that everything proposed in the Gray and Glysson paper was within the mission of FISP and that FISP is a logical group to implement the proposed actions. The TC, however, feels that funding is potentially a big obstacle to the success of the outlined effort. Cost of instruments to be tested are not trivial and some new technologies are much more complicated than isokinetic sampling. Therefore, it is anticipated that academia and other outside assistance will be needed to properly evaluate some of the instruments. Given the current funding and staffing levels of the FISP there are no funds

available to cover these potential costs. However, the TC has adjusted FISP priorities and assigned tasks intended to initiate the activities described in the Gray and Glysson paper.

Sincerely,

David S. Mueller

David S. Mueller
Chair, FISP Technical Committee

cc: Chief, FISP – O’Neal
FISP TC members
SOS members
USGS - Blanchard

Attachment

Federal Interagency Sedimentation Project (FISP)
Revised Mission Statement
December 9, 2003

MISSION

Provide, identify, and evaluate tools and techniques for accurate, standardized, calibrated, cost-efficient, and safe measurement and analysis of fluvial sediment properties and transport.

VISION

FISP is the national leader in the identification, evaluation, and development of standardized, calibrated equipment and methods for consistent, accurate quantification and analysis of sediment characteristics and transport in surface waters, which support the proper characterization and management of natural resources.

SCOPE

Activities focus on measurement and analysis of suspended sediment, bedload sediment, bed material, bed topography, adsorbed constituents, and sediment characteristics and surrogates for their measure.

PURPOSE AND NEED

The Nation faces critical water resources concerns that include the influence of fluvial sediment on the navigation of rivers, reservoir storage, aquatic environments, municipal water treatment, streambed and bank stability, and flood impacts. Accurate knowledge of sediment characteristics and transport vitally affects the ability of public agencies to properly respond to sediment related impacts.

FISP identifies and seeks solutions to tractable sediment measurement and analysis problems common to participating Federal agencies. Sponsoring agencies and the public gain a distinct advantage from cooperative action that leverages resources and leads to common standards, methods, equipment, and procedures for the measurement and analysis of sediment characteristics and transport.

GUIDING PRINCIPLES

- Works under the guidance of the FISP Technical Committee (TC), a working group of the Advisory Committee on Water Information (ACWI) Subcommittee on Sedimentation (SOS), comprised of representatives from participating Federal agencies.
- Serves as the primary Federal resource for quality-assured equipment and techniques for acquiring sediment and sediment-based water-quality data
 - Develops standardized, calibrated sediment samplers and associated equipment that are non-contaminating and suitable for water-quality sampling
 - Identifies emerging direct or indirect measurement technologies and provides recommendations to the TC regarding their applicability to mission goals and agency needs
 - Based on the priorities set by the TC, tests selected promising sediment sampling and analysis technologies using standardized criteria under laboratory and field conditions, and recommends appropriate use
- Interacts with other organizations including academia and private industry on research and development to improve the quality and cost effectiveness of sediment-based data
- Builds and maintains institutional knowledge and expertise through staff development, publication of technical reports and user's manuals, and public technology transfer