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December 7, 2001

OFFICE OF SURFACE WATER MEMORANDUM

From: J. Michael Norris */signed/*
Acting Chief, Office of Surface Water

SUBJECT: National Coordination and Support for Hydroacoustic Activities

The purpose of this memorandum is to describe the mission and activities of the Hydroacoustics Work Group (HAWG) and to encourage communication with the HAWG regarding the application of acoustics to hydrologic measurements such as streamflow, velocity profiles, etc. Since 1995, the role of the HAWG has expanded to include support and guidance to users of all acoustic instruments used for velocity and discharge measurements within the USGS. The coordination and support for hydroacoustic activities through HAWG is part of OSW's ongoing support of new technologies for Water Discipline programs.

Office of Surface Water (OSW) Technical Memorandum 97.02 describes national coordination and support activities for acoustic profilers and makes reference to the Hydroacoustics Work Group (then known as the ADCP Work Group). This memo provides updated information regarding the membership, role, and activities of the HAWG.

Purpose and Composition of Work Group

The HAWG is sponsored by the OSW to assist in providing operational guidance to users of acoustic Doppler current profilers (ADCP's) and other acoustics devices used for hydrologic measurements. The term ADCP generally is used to describe instruments produced by a number of manufacturers with the common purpose of measuring 3-dimensional current velocities using acoustic methods.

The chair of HAWG and national coordinator of hydroacoustic activities for the OSW is Kevin Oberg. Kevin is OSW's primary contact for technical support, training, and quality assurance of hydroacoustics. In addition to chairing HAWG, he currently serves as the OSW representative on the USGS Instrumentation Committee (ICOM) and is a member of the ASCE Technical Committee on Hydraulic Measurements and Experimentation. HAWG members have a wide range of experience covering many aspects of data collection and analysis with acoustic instruments. The HAWG includes members from Environment Canada and the South Florida Water Management District (SFWMD). Current HAWG members are listed below.

Paul-Emile Bergeron	Environment Canada, Ottawa, Ont.	Paul-Emile.Bergeron@ec.gc.ca
Jeffrey Gartner	NRP, Menlo Park, CA	jgartner@usgs.gov
John Goodson	SFWMD, West Palm Beach, FL	john.goodson@sfwmd.gov
Victor Levesque	Florida District, Tampa, FL	levesque@usgs.gov
Brian Loving	Kansas, District, Lawrence, KS	bloving@usgs.gov
Scott Morlock	Indiana District, Indianapolis, IN	smorlock@usgs.gov
David Mueller	Kentucky District, Louisville, KY	dmueller@usgs.gov
Kevin Oberg	OSW, Urbana, IL	kaoberg@usgs.gov
Mike Simpson	California District, Sacramento, CA	msimpson@usgs.gov
Kirk Thibodeaux	OSW South, Bay St. Louis, MS	kgthibod@usgs.gov
Phil Zrymiak	Environment Canada, Ottawa, Ont.	Phil.Zrymiak@ec.gc.ca

Work Group Activities

Kevin Oberg currently maintains Web pages for support of hydroacoustic applications (<http://hydroacoustics.usgs.gov/>). These pages, created with the assistance of the HAWG, include extensive information on application of hydroacoustic techniques with emphasis on discharge measurements. The Web pages include: descriptions of specialized field applications; lists of contacts, references, and vendors; class outlines and schedules; photographs of ADCP boats and mounts; OSW Technical Memoranda; and the ADCP quality-assurance plan. A mailing list also has been created for exchanging information on hydroacoustics. Personnel can subscribe to the mailing list by sending email to completing the form at the following url: <http://hydroacoustics.usgs.gov/cgi-bin/lwgate/acoustics@simon.er.usgs.gov/subscribe.html>. Once subscribed, email can be sent to all members on the list by addressing email to acoustics@simon.er.usgs.gov. For more information on the mailing list and help regarding ADCP's and hydroacoustics, and an HTML archive of the mailing list, refer to <http://hydroacoustics.usgs.gov/help.html>.

HAWG members also are responsible for the completion of various high priority ICOM hydroacoustic projects. These include the Tethered and Remote Boat project (David Mueller and Mike Rehmel, Indiana District), the Hydroacoustic Wading Discharge Measurements project (Scott Morlock), and the Next Generation ADCP project (Kevin Oberg). For more information on these projects, please view the OSW ADCP Support pages (<http://hydroacoustics.usgs.gov/>).

The HAWG has produced reports and documents including a quality-assurance plan and an operational manual for one of the widely used acoustic instruments. The quality-assurance plan has been published as Open-File Report 95-701, "Quality Assurance Plan for Discharge Measurements Using Broadband Acoustic Doppler Current Profilers," by Stephen W. Lipscomb. The quality-assurance plan is presently under revision and a new report is planned to be distributed early in Fiscal Year 2003. The operational manual will be made available shortly as a pdf document. Other reports are listed on the OSW ADCP Support pages (<http://hydroacoustics.usgs.gov/>).

The HAWG conducts ongoing basic and advanced training classes and an internationally attended Hydroacoustics Workshop, which has been held every other year. For more information on training classes and the Hydroacoustics Workshop see <http://hydroacoustics.usgs.gov/training/>. Other HAWG activities include: assisting with development of new acoustic applications and projects; development of testing and quality assurance procedures; test and evaluation of software; and representing the USGS in meetings with other agencies and companies.

If you would like to contact the HAWG, please send email to adcpc@simon.er.usgs.gov or contact Kevin Oberg (217-344-0037 ext. 3004).

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