



Federal Interagency Sedimentation Project

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Federal Interagency Sedimentation Project (FISP) Technical Committee Memorandum 2008.01

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Subject: Use of Brass Nozzles in FISP US Series Suspended-Sediment Samplers

At the October 25-26, 2005 Federal Interagency Sedimentation Project Technical Committee meeting, the committee approved the transition from plastic to brass nozzles for sediment-only samplers. The sediment-only samplers include the US DH-48, US DH-59, US D-74, US DH-76, US P-61, US P-63, and the US P-72.

Prior to 1980, all the FISP approved suspended-sediment samplers listed above used sampler-specific brass nozzles. The nozzles were similar in design and appearance which led to the possibility of improper use. In 1980, the Quality of Water Branch issued Technical Memorandum No. 80.06 which mandated a change to plastic color-coded nozzles. Each sampler was fitted with a colored button indicating which color nozzle to use with the sampler.

After several years of production and use of the plastic nozzles, it became apparent that the original brass nozzles had several advantages over the plastic nozzles. Brass nozzles were easier to machine and could be machined to better tolerances than plastic. Brass nozzles maintained dimensions and shape better and were not subject to water absorption as were the plastic nylon nozzles. The threads on brass nozzles were easier to maintain and not as subject to galling as the threads on plastic nozzles. After continued use, brass nozzles maintained the integrity of the nozzle opening. Plastic nozzles tended to develop "fuzz" in the opening after continued use. For these reasons, the FISP Technical Committee approved the transition back to brass nozzles.

The identification problem associated with brass nozzles which led to the transition to plastic nozzles has been solved by engraving the sampler designation and nozzle internal diameter directly on the nozzle.

The transition to brass nozzles will take place over time so that samplers will initially continue to be shipped with plastic nozzles, unless there is a special request for brass. However, when the supply of plastic nozzles reaches a level estimated to be equivalent to two years worth of orders, new samplers will be shipped with brass nozzles. Plastic nozzles will be available for specific requests until the supply is depleted.

Color-coded plastic nozzles in use will continue to be acceptable for use.

The transition to brass nozzles for the sediment-only samplers does not affect the supply and use of plastic (Delrin) and TFE nozzles for the combination suspended-sediment/water-quality samplers (US DH-81, US DH-95, US D-95, US D-96, US D-96-A1, US D-99, and US DH-2).

Nozzles are available from the Hydrologic Instrumentation Facility (HIF).