

Standard Operating Procedure (SOP) 4.9.1.3

New Instruction Label for a Seventeen Point Spherical Convex Densiometer

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1.0 INTRODUCTION

The labels placed on spherical densiometers contain instructions that do not apply to a modified seventeen point spherical convex densiometer. It is suggested that the original instruction label be replaced with new instructions for the modified densiometer.

2.0 EQUIPMENT

- 17-point modified convex spherical densitometer (Strickler 1959), See Figure 1
- Scissors
- Instruction label for using a modified 17-point spherical convex densiometer
- Adhesive (glue stick, photo mount spray adhesive)

3.0 PROCEDURE

Language for modified 17-point modified convex spherical densiometer instruction labels:

Using a Modified 17-Point Spherical Convex Densiometer

- Hold the densiometer far enough away from your body so that your head is just outside the grid (12-18" away) and 0.3 m (1 foot) above the water surface with your face just below the apex of the "V" Concentrate on the 17 points of grid intersection on the densiometer that lie within the "V" area not covered with tape.
- Each point represents an area of canopy opening (sky...) or canopy cover (vegetation...). Count the number of canopy covered points. Take and record four 17-point readings. These are all taken from the center of each transect facing upstream, facing downstream, facing the left bank, and facing the right bank

4.0 PROCEDURE

Remove (Fig.2) and replace or cover old instructions on the inside cover of the densiometer with new instructions (Figure 3). The new instructions (Label 1) can be printed onto waterproof paper and glued onto the underside of the densiometer's cover. Be sure to place it in an upright direction so that the operator can read it when taking measurements.



Figure 1. Modified Densimeter with Old Instructions



Figure 2. Modified Densimeter with Instructions Removed



Figure 3. Modified Densimeter with New Instructions

Using a Modified 17-Point Spherical Convex Densimeter

- Hold the densimeter far enough away from your body so that your head is just outside the grid (12-18" away) and 0.3 m (1 foot) above the water surface with your face just below the apex of the "V" Concentrate on the 17 points of grid intersection on the densimeter that lie within the "V" area not covered with tape.
- Each point represents an area of canopy opening (sky...) or canopy cover (vegetation...). Count the number of canopy covered points. Take and record four 17-point readings. These are all taken from the center of each transect facing upstream, facing downstream, facing the left bank, and facing the right bank

Label 1. Instruction Label for a Modified Spherical Convex Densimeter, Actual Size

Using a Modified 17-Point Spherical Convex Densiometer

- Hold the densiometer far enough away from your body so that your head is just outside the grid (12-18" away) and 0.3 m (1 foot) above the water surface with your face just below the apex of the "V" Concentrate on the 17 points of grid intersection on the densiometer that lie within the "V" area not covered with tape.
- Each point represents an area of canopy opening (sky...) or canopy cover (vegetation...). Count the number of canopy covered points. Take and record four 17-point readings. These are all taken from the center of each transect facing upstream, facing downstream, facing the left bank, and facing the right bank

Label 2. Instruction Label for a Modified Spherical Convex Densiometer for Photocopier Copying/Reduction for Custom Fitting

5.0 REFERENCE

Ode, Pete 2007 Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California. State Water Resources Control Board, Surface Water Ambient Monitoring Program. 48pp.

Strickler, Gerald S., 1959. Use of the densiometer to estimate density of forest canopy on permanent sample plots. USDA Forest Service, Pacific Northwest Forest and Range Exp. Sta. Research Note 180, Portland, Oregon, 5 pp.