

ADOPT-A-STREAM MONITORING EQUIPMENT BUILDING INSTRUCTIONS

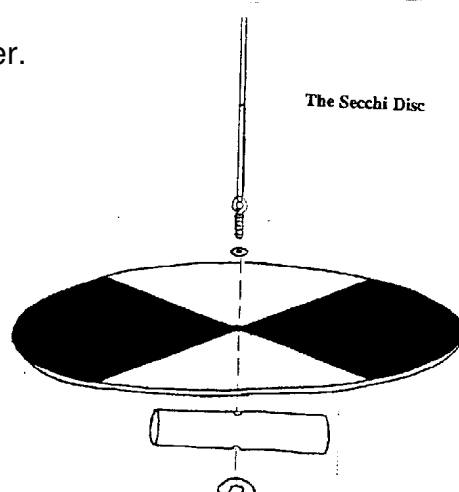
PHYSICAL PARAMETER SAMPLING

THE SECCHI DISC

Used to measure the turbidity of water.

Materials:

1	Nylon line	1/4" x 50'
1	Hard plastic or beaver board	20 cm x 20 cm
1	Eye bolt	1/4" x 2"
2	Washers for bolt	
1	Wing nut for bolt	
1	Pipe	1" x 6"
1	Black enamel paint	Pint
1	White enamel paint*	pint



*White paint is needed only if the wood is used.

Building instructions:

1. Cut the plastic or plywood into a circle with a 20 cm diameter. This is a standard for this piece of equipment since discs with different dimensions could give different readings.
2. In the center of the circle, drill a 1/4" hole.
3. Using a clamp, secure the 6" pipe and drill a 1/4" hole through the center of it. This hole should go all the way through the pipe.
4. Paint the entire disc with white enamel (if wood or if a color of plastic other than white is used).
5. Mark one side into quarters. Using masking tape, edge the lines of two of the quarters. These quarters should be opposite from each other.
6. Paint them black and allow to dry. The disc should now have one side painted with alternating black and white quarters and the other side entirely white.
7. Place a washer on the eyebolt and place the eyebolt with the eye on the black and white side through the 1/4" hole in the center of the disc. Then place the pipe on the end of the bolt and secure the washer and wing nut.
8. Tie the line onto the disc using the eye of the bolt. Mark off the remaining length of line into foot lengths using a permanent marking pen.

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PHYSICAL PARAMETER SAMPLING

THE SECCHI DISC (continued)

PROCEDURE:

The Secchi disc can give a general indication of the transparency of the water caused by suspended particulate matter such as algae and soil from runoff. Secchi disc transparency measurements can vary from a few centimeters in very turbid lakes to over 40m in clear waters. Usually lakes fall within a range of 2 to 10m.

Since the weather can effect the depth at which you can see the disc, Secchi readings should be taken when the weather is clear, with little wind to disturb the water surface, at a time when the sun is high (not at dawn or dusk). Take Secchi readings in the shade or on the shady side of a boat to minimize glare.

Remove your sunglasses and:

1. Slowly lower the disc into the water until it can no longer be seen.
2. Mark the rope at the water level with a clothespin.
3. Lower the disc further into the water. Slowly raise the disc. When the disc reappears, mark the rope at the water level with your fingers.
4. Form a loop between the clothespin and your fingers. Slide the clothespin to the center of the loop (this marks an average depth reading) and haul in the disc.
5. Carefully count the number of meters from the disk until you reach the clothespin.
6. Record the measurement. _____

