APPENDIX A
LIST OF EQUIPMENT AND MATERIALS

(Items in italics are for estuarine waters)

Flow Measurement

- Flow meter
- Top-setting wading rod
- 100 ft tape measure (marked in tenths of a foot increments)
- Hip and chest waders
- Calculator
- Flow measurement recording forms
- *Boat*
- *Long rope*
- *Rangefinder*

Fish Sampling

- TPWD Scientific Collection Permit
- Boat-mounted electrofisher
- Backpack electrofisher—Smith Root Type VII or equivalent (for waters where conductivity allows use) and extra battery
- Non-conductive dip nets (both medium and small mesh sizes)
- Battery charger
- Seines (30' or 15' x 6' x 1/4" mesh, 15' or 6' x 6' x 3/16" mesh, and 6' x 6' x 1/8" mesh)
- *Seines 10', 15' or 30' long with 3/16" mesh (height and length determinations are per site requirements)*
- *Experimental gill nets (graduated mesh sizes)*
- Two holding buckets or tanks with aerators (one for in boat or in-stream while sampling, and one for maintaining fish on bank while sampling)
- 5-gallon plastic buckets
- Fish measuring board
- 1 L plastic wide-mouth containers with screw top lids
- Preservative—10% formalin and 70% ethanol
- Sample labeling materials
- Electrical safety gloves
- Chest waders for electrofishing
- Personal floatation device
- Fish identification manuals (for field and laboratory identification use, see Quality Assurance chapter)
- Stereo dissecting microscope
- *Trawl*
- Scale
- Data recording form(s)

Benthic Macroinvertebrate Sampling

- D-frame kicknet (mesh size 595 µm) or Surber sampler
- Sorting trays and subsampling mechanism (for example, a Mason jar lid)
- Screen sieves (U.S. std. sieve no. 30, 595 µm)
- Jeweler’s forceps
- Magnifying glass
- Petri dishes
- Sample jars (wide mouth) and vials (2 drams)
- Preservative—70% ethanol and 10% formalin
- Sample labeling material
- Hip and chest waders

- Benthic macroinvertebrate identification manuals (for field and laboratory identification use, see the “Quality Assurance” chapter)
- Stereo dissecting microscope
- Compound binocular microscope (10X and 15X eyepieces; 4X, 10X, 20X, and 45X objectives)
- Lopping shears for snag samples
- Surber sampler
- Ekman dredge
- Data recording form(s)

Benthic Algae Sampling

- Pocket knife or other scraping device
- Pipettes
- Sample collection jars (60 mL glass snap caps)
- Preservative (glutoraldehyde or formalin)
- Compound microscope
- Glass slides and coverslips
- Hot plate
- Mounting media
- Data recording form(s)

Plankton Sampling

- Plankton net
- Sample jars
- Lugol’s solution
- Compound microscope
- Glass slides and coverslips
- Sedgewick-Rafter counting chamber
- Data recording form(s)

Physical Stream Habitat Measurements

- 50 m tape measure (minimum)
- Clinometer (degrees and percent)
- Densiometer (convex)
- Metric survey rod
- Hip and chest waders
- Rangefinder or hip chain (metric)
- Survey tape or flags
- Floatation tube, small boat
- Tag line or sturdy rope (metric)
- Metal stakes or fence posts
- Mallet
- Data recording form(s)

Other Equipment

- Field logbook and pencil
- GPS equipment (real-time correction mode capabilities preferred)
- 7.5 minute series topographic maps for sampling area
- Digital camera or camera with film
- Volume I of the SWQM Procedures (RG-415, 12/2003) for water chemistry, flow measurement, field parameters (including 24-hour DO), and tissue sampling
- Necessary laboratory forms (for submitting water chemistry samples)
- Winch