

## Chapter XIII. FIELD EQUIPMENT CHECKLIST

<b>Personal Equipment</b>		
	Waders	Essential...our signature piece of equipment
	Rain Gear	Stay Dry...or mostly Dry
	Personal Gear	Luggage, etc.
	Water Bottle	Stay Hydrated!
	Personal First Aid Kit	Small Red Fanny Bags
	Polarized sunglasses	Especially helpful to reduce glare and see under water surface
<b>Weekly Needs</b>		
	GPS Units	Various Garmin Models assigned per jeep (Keep in Camera Bag, Backpack, or Jeep)
	Water Quality Sonde	Various models assigned per jeep; Take inside at end of week; Calibrate at beginning of week or day; Cross-checked Monthly; Keep in Water Lab Jeep Stalls or Sonde Cabinet
	Camera	Various Models assigned per jeep; Take inside at end of week and Keep in Water Lab Jeep Stalls
	Wet Ice	From Ice Machine in the general garage area or buy at store
	95% EtOH	In Cylinder Room
<b>Paperwork and Clipboard Stuff</b>		
	Stream List	Get Assignment from Janice
	Maps	Topographic, WV Gazetteer, WV County Roads
	Habitat Forms	Main WAB Form, Write-In the Rain Version, Front Page only version (for Dry or Access denied sites), Flow Appendix Sheet, Glide/Pool RBP Appendix Sheet, TMDL Forms, Fish Hobo Form; all on the G: drive
	Analysis Request Form with Chain-of-Custody	In the Water Lab Cabinets; Extras in Janice's Office
	WQ Sample Labels	10 Unique WQ Sample Lab IDs per sheet; In the Water Lab Cabinets
	SOP	Get a copy from Janice or the G: drive
	Personal Field Books/Notepads	For the biomorph to write notes on while the Geomorph is away. Extras in Water Lab
	WAB Brochures/Pamphlets	To give to interested parties while in the field
	Data Request Forms	To give to interested parties while in the field; Get from Karen Light
	Clipboards	Assigned to each person
	Pencils and Pens	Get out of our Cabinet in the Mail Room or See Karen Light for Office Supplies
	Compass	To get your North Bearing
	Laptop	Update w/ Maps, WCMS Projects, Shapefiles, DOH County Maps and Database as needed
	Scientific Collection Permit	Obtained yearly by Watershed Assessment Branch from the WVDNR. Janice has original copy.

<b>Jeep Maintenance</b>		
	Fix-A-Flat	Action Packer or under backseat.
	Come-Along	Often stored under backseat.
	Tow Straps	Often stored under backseat.
	Collapsible Shovel	Often stored under backseat.
	Axe	Often stored under backseat.
	Tools	Screwdrivers, wrenches, ratchets, etc.
	Power Inverter	12 Volt DC to AC used to charge Laptops, Drill, etc.
	Flashlight	<b>MANDATORY!</b> In Action Packer?
	Car Phone	Hide in vehicle in console or glove box.
	Lab & Vehicle Phone Number Sheet	Should always stay in vehicle in glove box, middle console, or under sun visor.
<b>Miscellaneous Jeep Stuff (Safety and Backup Supplies)</b>		
	Action Packer	To store seldom used equipment
	First Aid Kit	<b>MANDATORY!</b> Should be checked regularly
	Fire Extinguisher	<b>MANDATORY!</b> Should be checked regularly
	Latex Gloves	To protect hands in nasty looking streams or keep contamination out of samples; Refills kept in Water Lab
	Handi-Wipes	To approximate cleaning of the hands. Refills in Water Lab
	Insect Repellant	DEET works the best; spray clothing only and keep off skin and out of eyes and mouth
	Blaze Orange Vest	Extras in Water Lab
	Life Vest/PFD	
	Machete	To help clear a path thru brush and briars
	Toilet Paper	"Acquire" from bathroom or hotel ☺
	AA Batteries	For GPS and Sonde Units; New ones in Water Lab
	C Cell Batteries	For Sondes; New ones in Water Lab
	D cell Batteries	For Flow Meters; New ones in Water Lab
	pH Standards	To recalibrate or check pH probe in field; In Water Lab
	Conductivity Standards	To recalibrate or check Conductivity probe in field; In Water Lab
	DO Maintenance Kits	To replace a DO membrane in field; Kept with YSI/Hydrolab; Extras In Water Lab
	pH Strips	To test sample fixation; Refills in Water Lab
	Flagging	To mark Transects and sites for easy identification; Extras in Water Lab

<b>Water Quality Sampling (TMDL and WAB)</b>		
	Fecal Coliform Bottles	Stored in Cage #1 in room 1193
	Cubitainers	Stored in Cage #1 in room 1193
	Lids for Cubitainers	Used if Cubitainers do not come with lids; Stored in Cage #1 in room 1193
	HNO <sub>3</sub>	Refills in Water Lab under sinks; One extra in Action packer?
	H <sub>2</sub> SO <sub>4</sub>	Refills in Water Lab under sinks; One extra in Action packer?
	New Filter Apparatus (Primary)	Drill (w/Rechargeable Batteries and Recharger), Peristaltic Pump Board, Tubing, Disc and/or Cartridge Filters; Replacement Tubing and Filters are in the Water Lab
	Plastic File Case	To keep the filter apparatus or supplies clean and dry
	Sharpie	New ones in Water Lab drawers
	Small Zip-Lock Bags	To store individual fecal samples; Refills in Water Lab cabinets; One extra in Action packer?
	Large Zip-Lock Bags	To store multiple fecal samples; Refills in Water Lab cabinets; One extra in Action packer?
	Paper towels	To dab away excess water; "acquire" from janitor's closet ☺.
	Stainless Steel Bucket or Sample Tube	To sample from bridges
	Rope	To sample from bridges; Also part of Jeep Maintenance
	Large Ice Chest	To store samples in field; In Water's Garage Area
	Field Blanks (DI Water)	Get from sealed laboratory boxes, put into 1 gallon cubitainer, and mark with a check
<b>Flow Measurement (TMDL and WAB)</b>		
	Measuring Tape	Marked in tenths of a foot; Do not use metric; New ones in Water Lab
	Flow Rod w/Vector Ribbon	Marked in tenths of a foot; Do not use metric.
	Flow Meter	Numbered per unit
<b>Secchi Depth &amp; Chlorophyll-a (Lakes)</b>		
	Secchi Disk	
	Chlorophyll-a transfer bottle	this can be the amber plastic 2L Nalgene bottle or simply a 1 L cubitainer surrounded by foil. In either case, the <b>container should not be transparent</b> as chlorophyll-a is light-sensitive. This transfer container may be reused from site to site, but should always be rinsed thoroughly with deionized water before sampling
	Van Dorn sampler	for retrieving top and bottom samples from lake (should be pre-rinsed before leaving the vehicle).
	Glass fiber filters	these are GF/F filters (glass fiber – fine) from manufacturers such as Whatman.
	Filtration Apparatus (Vacuum type)	Funnel, Filter Sieve, Flask, Hand Pump, DI Bottle; store in large Zip-Lock; Old extra ones in Water Lab; Make sure DI Bottle is not contaminated-Wash regularly
	Aluminum foil	for wrapping chlorophyll filter samples

<b>Macroinvertebrate Sampling (Mainly Summer WAB)</b>		
Bug Jar Labels	Inner (on waterproof paper) and Outer; on the G: drive	
Surber-on-a-Stick	Remember to check for holes; handle marked with depth increments	
D-Net	Remember to check for holes; handle marked with depth increments	
Brush	To scrape at cobble and boulders; One extra in Action Packer would be a good idea	
Forceps	To pick macroinvertebrates off nets; One extra in Action packer?	
Sieve	To sift through benthic material; Extras in Water Lab; One extra in Action packer?	
Plastic tray or container	To temporarily store organic material until sand is put in bottom of bug jar first	
Wash Bottle	To rinse benthic material; doesn't need to be sterile; also used for Periphyton Sampling; new ones in Water Lab	
Plastic Bucket	To temporarily store benthic material during kicks	
Bug Jars	Large sizes for more permanent storage; In Cylinder Room off main garage	
Old Ice Chest or Box	To store Bug Jars	
Clear Packing Tape & Dispenser	To adhere a label on sample jars; Also used for Periphyton labels; Refills in Storage Cabinet in Water Lab	
Macroinvertebrate Book	Keep in the jeep for field bug reference	
100 m Measuring Tape	Extras stored in Water Lab	
Thalweg Pole with centimeter increments	To measure stream depths for stream reach characterization; also used for Pebble Count Measurement	
<b>Fish Sampling (Mainly Summer WAB)</b>		
Fish Jar Labels	Inner (on waterproof paper) and Outer; on the G: drive	
Backpack Electroshocker	Smith-Root Model 24LR or Model 12 backpack electrofisher; includes the cathode and anode	
Tow barge Electroshocker	Includes a generator, anode pole and cable, GPP electrofisher, and cooler.	
Electrofisher batteries and chargers	Spare batteries should be handy and available to ensure that a site can be electrofished quickly	
Dipnets	1/4" mesh; assorted frame sizes	
Seines/blocknets	1/4 in. mesh; 4'x20' or 4'x30' dimensions	
1 gal. Nalgene jars		
37% Formaldehyde		
Assorted plastic buckets with lids	Used to hold fish between capture and field processing.	
Rubber Gloves	To be worn at all times by electroshockers and netters.	
Measuring board and digital scales		
Hearing protection	Used when using the tow barge/generator.	

<b>Periphyton Sampling (Special Sampling Occasions)</b>		
Periphyton Labels	Same label for inside and out; on the G: drive	
Scraping Tool	To scrape at the rocks; A microspatula or spoon-type instrument; Extras in Water Lab drawer; One extra in Action Packer?	
Small Brush (Toothbrush)	To brush at the rocks; One extra in Action Packer? Change once a week; Refills in Water Lab drawers	
Sample Container	4 oz "specimen jar"; Refills in Water Lab cabinets	
10 % Formalin	In a labeled dropper style bottle: WATCH YOUR EYES! Stored under hooded sink in Water Lab; Recommend double sealing this in a larger container	
Electrical Tape	To seal the periphyton container; Refills in Water Lab drawer	
PVC Ring	To delineate the periphyton sample area on a rock	
Small Ice Chest	To separate periphyton samples (nasty formalin) from the other water samples.	
<b>Golden Algae Sampling (Special Sampling Occasions)</b>		
1-liter cubitainer	Used as a sample container.	
Filtering Equipment	Filter Flask, Filter Funnel, Vacuum Pump, and Vacuum Tubing	
Filters	<i>Whatman</i> Glass microfiber filters GF/F 47 mm diameter with 0.45 $\mu\text{m}$ pore size	
10% Bleach Solution	Stored in lab- for sterilization	
Distilled drinking water and industrial grade deionized (DI) water.	Stored in lab.	
Sterilized stainless steel forceps or sterile plastic forceps		
4" squares of clean aluminum foil	1 square of foil per sample	
Golden Algae Sample Labels		
Golden Algae Analysis Request forms with Chain-of-Custody	Can be obtained from Janice Smithson	
Dry Ice in cooler	Used only if filtering away from lab.	