### PERSONAL PROTECTIVE EQUIPMENT REQUIRED: List Type

- Electrical - Properly rated rubber gloves and rubber boots
- Eyes/Face - Polaroid sunglasses
- Foot - Rubber boots with felt soles can be worn. Chest waders optional
- Hand - Properly rated rubber gloves
- Head -
- Leg -
- Body/Other – Insect repellent and sunscreen

### QUALIFICATIONS, EXPERIENCE, OR TRAINING REQUIRED:

- All personnel must follow procedures outlined in 241 FW 6. Team leaders must be certified by completing the NTC course Principles & Techniques of Electrofishing (FIS2201). Team leaders must train all crew in EF equipment components and procedures, hazards in EF and safe operation of EF equipment. Personnel must be trained on task specific job hazard assessments (JHA) for Electrofishing at: [http://policy.fws.gov/241fw6.html](http://policy.fws.gov/241fw6.html). Two members of the team (including team leader) must be trained in First Aid/CPR. No one under the age of 18 will be a member of the crew. See Service guidelines for other specifics.

### BASIC JOB STEPS | HAZARDS | SAFE JOB PROCEDURE
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Break work down to basic elements (such as remove, lift, carry, stop, start, apply, return, squeeze, weld, saw, walk, hold, grind, place, etc.). Describe what is done, not how it is done. | For each job step, state what accident could occur and/or what hazard is present. To determine this, ask yourself, “can the person fall; overexert; be exposed to burns, fumes, rays, gas, etc.; hit against; be struck by; in contact with; be caught in, on, or between?” | State how each element of work should be performed to prevent the accident or avoid the hazard. What should the person do or not do? Be specific. What precautions should be taken? Ask yourself, “What can I do to eliminate, modify, guard, identify, or protect against the potential hazard or accident, including such things as how the worker stands, holds, uses, carries, dresses, etc.?”
Prepare equipment. | Musculoskeletal strain | Go through inspection checklist of equipment, brief crew on safety procedures.
Shocking specimens for collection | Electric shock, Drowning, Noise, UV Radiation, Repetitive strain, Heat Stress, Falling, overexertion | Use two person lift if equipment is too heavy for one person. Use proper lifting techniques (bend at the knees).
| | | Wear ear plugs and/or muffs for hearing protection (See 242 FW 3) during noise generating operations (i.e., generator operated units).
| | | Wear polarized sun glasses (UVA/UVB protection). **Note:** The purchase of sound powered headphones is authorized through station funding.
| | | Wear appropriate SPF level sunscreen.
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| Shocking specimens for collection (cont.) | Electric shock, Drowning, Noise, UV Radiation, Repetitive strain, Heat Stress, Falling, overexertion | Review all operational procedures approved under 241 FW 6 (especially operation of safety switches). Wear the following PPE:  
(a) Hip boots will be worn so they can be easily removed in case the boat capsizes.  
(b) Rubber chest waders can also be worn, when necessary, in order to remain dry as well as protection against electrical shock (preferably not the “breathable” style). **NOTE:** Any straps for hip boots or chest waders must be put on over the PFD so they can be released in an emergency.  
(c) Rubber gloves that are rated above the voltage being used will be worn (e.g. neoprene). These will be inspected before each use and replaced at adequate intervals.  
(d) Polaroid-type sunglasses will be worn to reduce glare from the water.  
(e) Consider the use of suspender type personal flotation devices for protection against deep pool hazards. Use short handled nets to capture fish to ease strain on arms, elbows and shoulders. Drink fluids frequently and take breaks as needed. **Instruction Sheets.** For electrofishing equipment, boats and operational procedures, instruction sheets will be enclosed in waterproof plastic and be readily available for reference at all times during the electrofishing operation. |
| Pushing a tow-barge     | Drowning, Noise, UV Radiation, Repetitive strain, Heat Stress, Falling, overexertion | Same as above. Consider the use of personal flotation devices for protection against deep pool hazards. |