

Standardizing by Power Data Collection

Purpose: Finding minimum power (voltage and current) levels for effective, successful electrofishing at a sampling site is important for several reasons. Data can be used for establishing a power standardization chart or for determining settings needed for that particular sampling site under the prevailing conditions (water body size, turbidity, conductivity, etc.), and for minimizing fish injury and mortality. *In this exercise, you will use data collected to derive a power, voltage, or current standardization chart.*

Tasks:

1. Choose a waveform (AC, DC, PDC [frequency, duty cycle])
2. Start at a low voltage setting or a high voltage setting (your choice)
3. Begin electrofishing in a representative section of stream or lake
4. Note fish reactions, characterize the sampling as “successful” or “unsuccessful”; describe fish reactions as “escape”, “inhibited swimming”, or “immobilization”
5. If successful, reduce voltage (power) and sample again; follow this procedure until the lowest voltage (power) levels are found that result in successful electrofishing
6. If unsuccessful, you likely will need to increase voltage levels until you find successful electrofishing
7. If you cannot get to successful electrofishing, change waveform type or PDC attributes (frequency or duty cycle) and start over with low or high voltage settings
8. Once you obtain successful electrofishing, record:

Voltage setting

Voltage output on meter (if available)

Current output on meter (if available)

Waveform type and attributes if PDC

Fish capture-prone response (escape, inhibited swimming, immobilization)