Collection methods - fish

Unlike the bugs, the fish methods are similar enough across organizations to allow for pooling of data and development of one regional BCG model (versus separate models for each state method).

The Great Plains fish BCG model was calibrated with data collected using the following methods.

Index_Name	Fish Collection and Processing Protocols
GP_Fish_BCG	Iowa Department of Natural Resources (DNR)
GP_Fish_BCG	Kansas Department of Wildlife, Parks and Tourism (KDWPT)
GP_Fish_BCG	Missouri Department of Conservation (MDC)
GP_Fish_BCG	Nebraska Department of Environmental Quality (DEQ)
GP_Fish_BCG	Oklahoma Conservation Commission (OCC) & Water Resources Board (OWRB)
GP_Fish_BCG	Minnesota Pollution Control Agency (MPCA)
GP_Fish_BCG	EPA National Rivers and Streams Assessment (NRSA)

See below for more detailed information on each method.

Summary of the regional fish collection methods.

Entity	Gear	Habitat	Number of passes	Reach length	Sampling duration	# people shocking, # people netting	Target # individs	Index Period
Iowa DNR wadeable	live wells, dip nets, backpack, barge, or boat shockers	all available, limited only by equipment currently being used (ex. deep holes while backpack electrofishing)	Single	30x wetted channel width (min 150 m, max 350 m)	unlimited, as long as it takes to cover the reach	1-3 shockers, depending on stream size, ~1 probe every 15 feet. one netter for every shocker		Most are Jul 15 - Oct 15, headwaters project includes spring as well (May 15-Jun 30)
Nebraska	backpack or barge electroshocking, rarely a seine.	all available, focus on banks in wide and shallow systems		40X stream width, min 150m max 300m.	Not a standard duration, but duration is recorded	1 shocker, 2 netters		June 15 - September 30
Kansas KDWPT	backpack or barge electroshocking, and seine			40X stream width, min 150m to max 300m.	Methods are timed (but duration is not specified)	Crew of five - not specific on roles		May - October
Missouri MDC	electroshocking, seine, hand-towed trawl depending on habitat and depth			40X stream width, min 150m; no max	Time and percent of area sampled are recorded	1-2 shockers, depending on stream size; for seine, 1-2 kickers and 1-2 hold seine		1 June and 15 September

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Entity	Gear	Habitat	Number of passes	Reach length	Sampling duration	# people shocking, # people netting	Target # individs	Index Period
Oklahoma Conservation Commission (OCC) & Water Resources Board (OWRB)	electroshocking or seine	all available	Single	OCC - 400-m reach; OWRB - 40x stream width. Wadeables min 150m, max 2,000m. Boatable max reach length 4000m	OWRB- min 500 sec, max 4,500 sec	At minimum, crew of two - not specific on roles		May 15 to October 31
MPCA	DC backpack, stream-shocker, mini-boom, or boom-shocker, depending on stream width, depth, and accessibility	All available habitat types, sampled in the approximate proportion that they occur.	Single	Single pass over a reach length of 35 times the mean stream width (MSW). Sampling time is recorded.			All fish observed that are greater than 25 mm in total length	Summer index period (mid-June through mid-September), streams are at or near base-flow.
EPA NRSA	backpack or barge electroshocking, rarely a seine.	all available		small wadeable: 40X stream width, min 150m; no max large wadeable: minimum 20x stream width	Button time should range from 500 to 700 sec per subreach. Actual time will depend upon water conditions, habitat complexity, and on fish density		500 individuals or entire sampling reach	Beginning of June through end of September for most regions