

District Fish Surveys





Purpose of voluntary fish survey

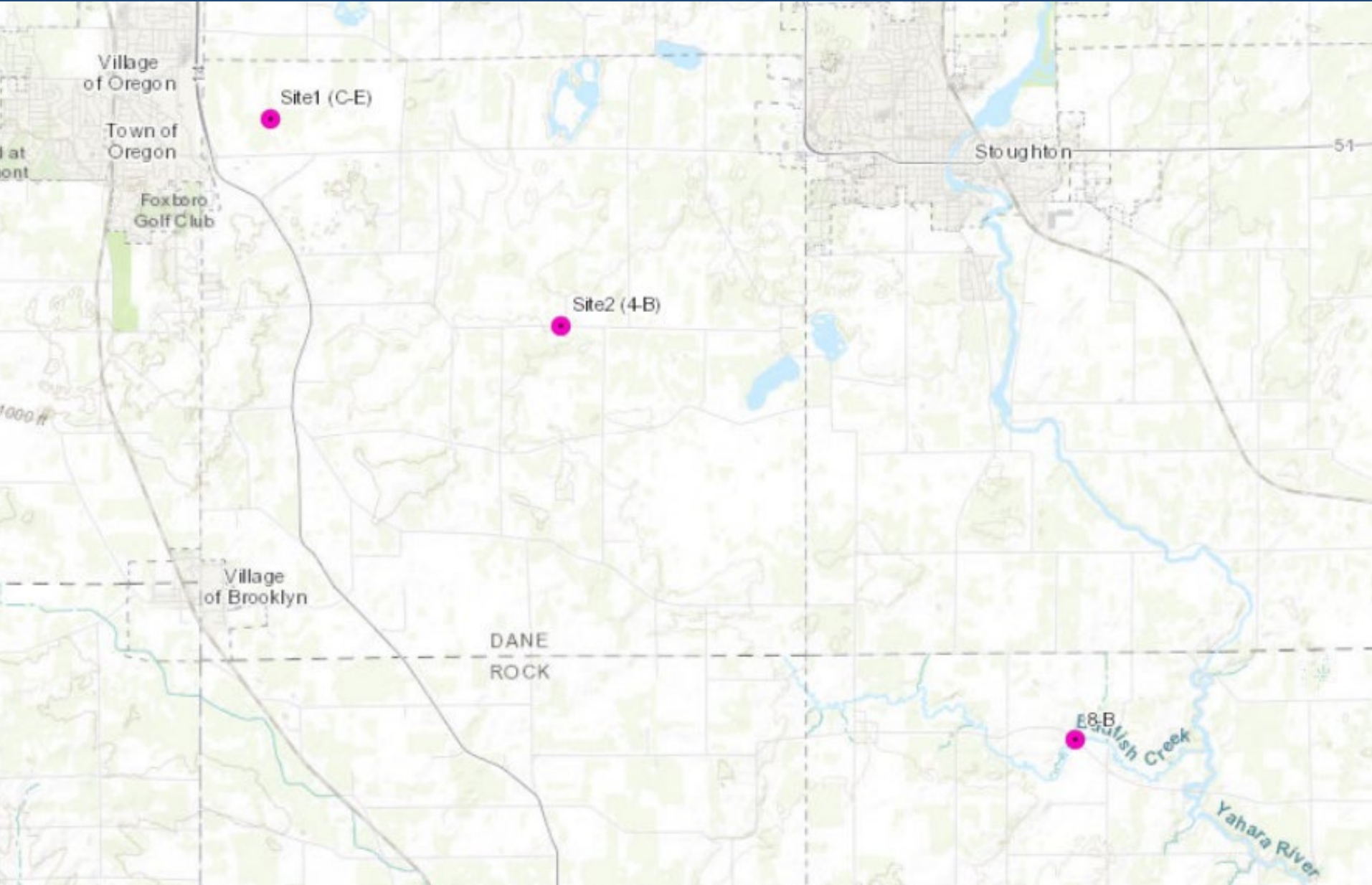
Another measure of water quality besides numeric values measured in the lab

Provides a comprehensive picture of water's ability to support aquatic life over time

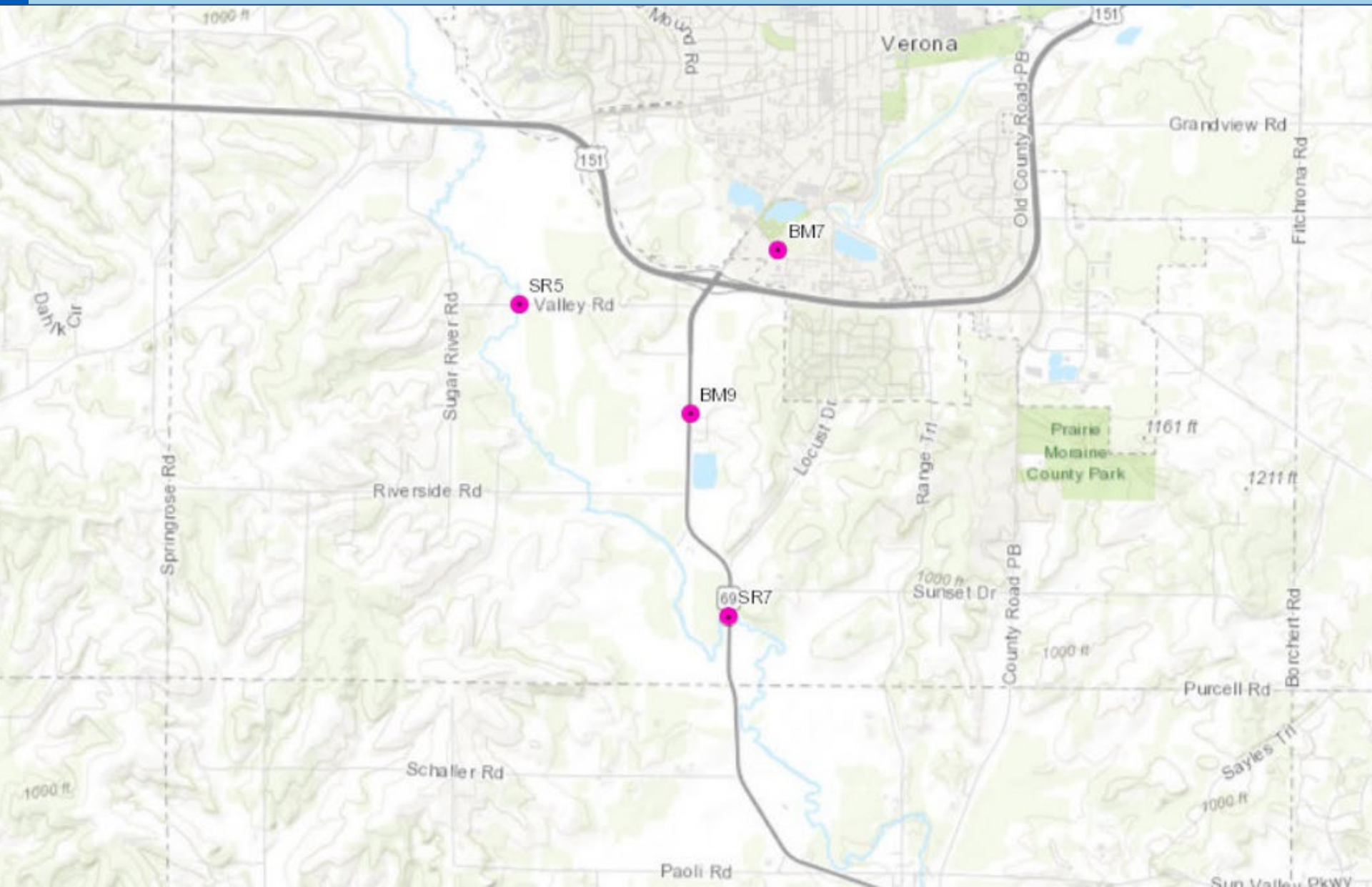
Madison Metropolitan Sewerage District



Badfish Creek sites



Badger Mill/Sugar River Sites



Equipment



- Barge with a generator and “shock box” connected to electrical probes
- Nets to collect stunned fish
- Live wells for holding large and small fish



Electrical current flows between probes in the water



Netters follow the probes to watch for stunned fish as we walk upstream



Current temporarily stuns fish near the probe for netting



Fish are counted/collected in a live well if they're game fish



Small fish are placed in a separate tub for identification later



After ~300 yards, boats are stopped and fish are counted; trout measured





Species counts are recorded

Site	SRW SR-7 (Boat landing)				
Date	7-20-22				
Common Name	Number	Total	Common Name	Number	Total
A. Brook Lamprey			Green Sunfish		
Bigmouth Shiner			Hornyhead Chub		19
Black Bullhead			Hybrid Sunfish		2
Black Crappie		3	Johnny Darter		20
Blacknose Dace			Largemouth Bass		
Blackside Darter			Largescale Stoneroller		
Bluegill		17	Mottled Sculpin		2
Bluntnose Minnow			Northern Hog Sucker		
Bowfin			Northern Pike		
Brassy Minnow			Pumpkinseed		
Brook Silverside			Quillback		
Brook Stickleback		3	Rainbow Trout		
Brown Trout			Sand Shiner		4
Central Mudminnow			Sauger		
Central Stoneroller			Shorthead Redhorse	32	32
Channel Catfish			Silver Redhorse		
Common Carp		3	S. Redbelly Dace		
Common Shiner		10	Spotfin Shiner		
Creek Chub			Stonecat		
Emerald Shiner			Walleye		
Fantail Darter			White Bass		
Fathead Minnow		1	White Crappie	1	1
Freshwater Drum			White Sucker	432+	515
Golden Shiner		4	Yellow-Bullhead		5
Total Species	6		Total Species	7	
Total Collected			Total Collected		

Total Species = 14



COLLECTOR: _____
 PROCESS: _____
 WATER ID: 14237

SITE / SECTION: SR-7
 DATE: 7/20/22

TIME: START 8:30am

SHOULDER POWER: DC _____ FANIN _____

SLIGHT DEPTH: 1' _____ 2' _____ 3' _____

DEPTH: 1' _____ 2' _____ 3' _____

CLIMATE: _____

WEATHER: Cloudy 76°

SPECIES (LBS) (NO) (LBS)

120	20
150	25
160	30
170	35
180	40
190	45
200	50
210	55
220	60
230	65
240	70
250	75
260	80
270	85
280	90
290	95
300	100
310	105
320	110
330	115
340	120
350	125
360	130
370	135
380	140
390	145
400	150
410	155
420	160
430	165
440	170
450	175
460	180
470	185
480	190
490	195
500	200

Fish returned to the stream



Fish survey data turned into report

Table 5. Electrofishing Survey Results for 2022

Family	Common Name	Scientific Name	BFC1	BFC2	BFC4	BM7	SR5	SR7
Cyprinidae	Common Carp	<i>Cyprinus carpio</i>						3
Leuciscidae	Brassy Minnow	<i>Hybognathus hankinsoni</i>				1		
	Common Shiner	<i>Luxilus cornutus</i>	1	4	9			10
	Sand Shiner	<i>Notropis stramineus</i>						4
	Hornyhead Chub	<i>Nocomis biguttatus</i>	9	2		1	2	19
	Golden Shiner	<i>Notemigonus crysoleucas</i>				1		
	Fathead Minnow	<i>Pimephales promelas</i>				2		1
	Western Blacknose Dace	<i>Rhinichthys obtusus</i>			8			
	Creek Chub	<i>Semotilus atromaculatus</i>	1	1		1		
Catostomidae	White Sucker	<i>Catostomus commersonii</i>	31	132	81	127	152	515
	Northern Hog Sucker	<i>Hypentelium nigricans</i>		2	1			
	Shorthead Redhorse	<i>Axostoma macrolepidotum</i>			2			32
Ictaluridae	Black Bullhead	<i>Ameiurus melas</i>			2			
	Yellow Bullhead	<i>Ameiurus natalis</i>			1			
	Stonecat	<i>Noturus flavus</i>			2			
	Channel Catfish	<i>Ictalurus punctatus</i>	2	5	6			
Esocidae	Northern Pike	<i>Esox lucius</i>	1					
Salmonidae	Brown Trout	<i>Salmo trutta</i>	6	14		54	60	18
	Rainbow Trout	<i>Oncorhynchus mykiss</i>					1	
Gasterosteidae	Brook Stickleback	<i>Culaea inconstans</i>				2	1	3



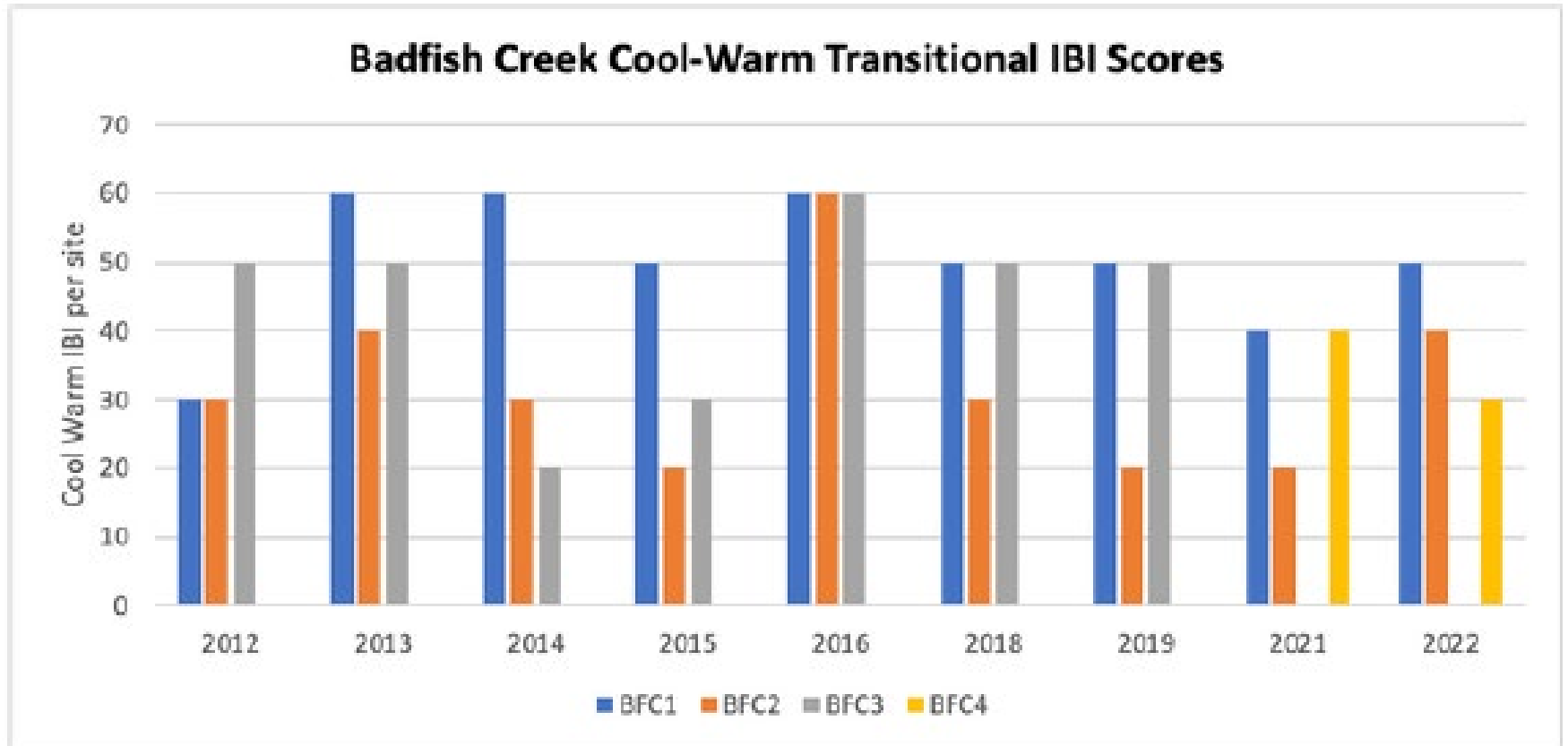


Index of Biological Integrity (IBI)

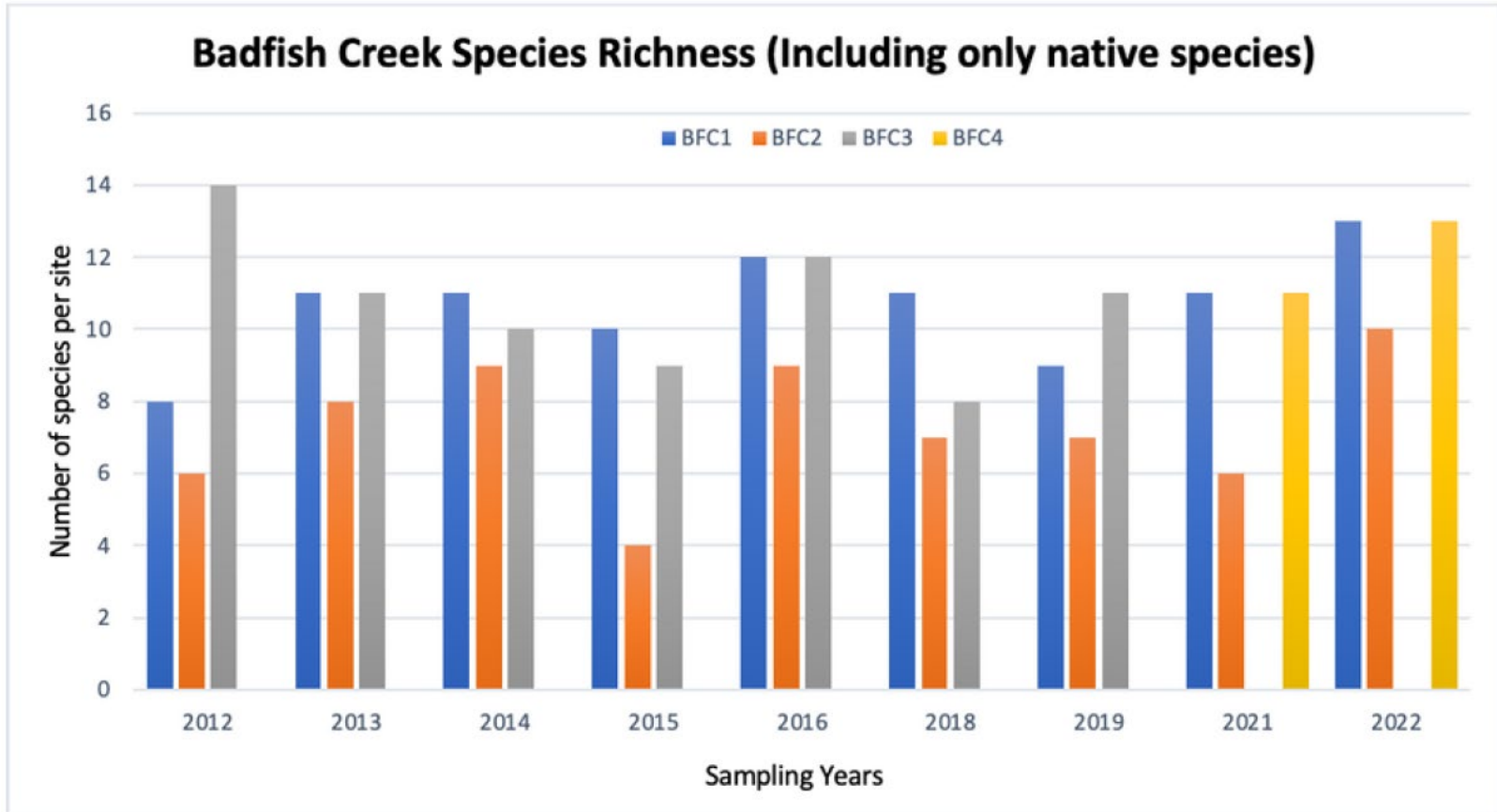
- Tool used to assess the condition of water bodies based on biological indicators
- Can help show trends over long periods



Data compared over time



Data compared over time



2022 survey report discussion

- Health of receiving waters compared to previous years seems stable
- “Overall, the District’s effluent provides a positive influence in creating suitable habitat to support a coolwater, warmwater, and coldwater fishery”

2022 Electrofishing Surveys of Badfish Creek, Badger Mill Creek and Sugar River



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