





OUR MISSION

At Friends of the Teton River our mission is to restore and conserve the Teton River Watershed, ensuring a lasting legacy of **clean water, healthy streams, and a vibrant wild fishery.**

We implement programs and projects founded on sound science, community education, and cooperation with landowners, citizens and agency partners.



FRIENDS OF THE TETON RIVER

Strategic Plan 2021-2025

The **mission** of Friends of the Teton River is to restore and conserve the Teton River Watershed, ensuring a lasting legacy of clean water, healthy streams, and a thriving wild fishery. We implement programs and projects founded on sound science, community education, and cooperation with landowners, citizens, and agency partners.

WATER QUALITY

Restore and conserve surface and groundwater quality in the Teton Watershed.

- Maintain science-based accurate data collection programs to help with improving watershed health.
- Perform projects that restore, maintain, or enhance water quality in priority reaches of the Teton River, tributary streams, and the Teton Valley aquifer.
- Monitor local environmental changes that may affect water quality.

EDUCATION

Provide watershed education to promote community engagement

- Offer youth and teachers watershed science field and classroom programs through the Teton Watershed Schools.
- Offer watershed science workshops, classes, and events to engage watershed citizens.
- Provide opportunities for FTR members to connect with FTR's work.
- Create and distribute media, including digital content, that reaches a wide range of audiences.

STREAM CHANNELS

Protect and restore healthy, functioning stream channels, floodplains, riparian areas, and natural wetlands in the Teton Watershed.

- Work with community partners to develop, prioritize and implement integrated stream restoration and stream flow restoration projects.
- Develop and implement monitoring and assessment metrics to assess the efficacy of restoration projects and prioritize future projects.
- Monitor local environmental changes affecting stream, floodplain, riparian, and wetland function and water quantity.

FISHERIES

Protect and restore Yellowstone Cutthroat Trout in the Teton Watershed.

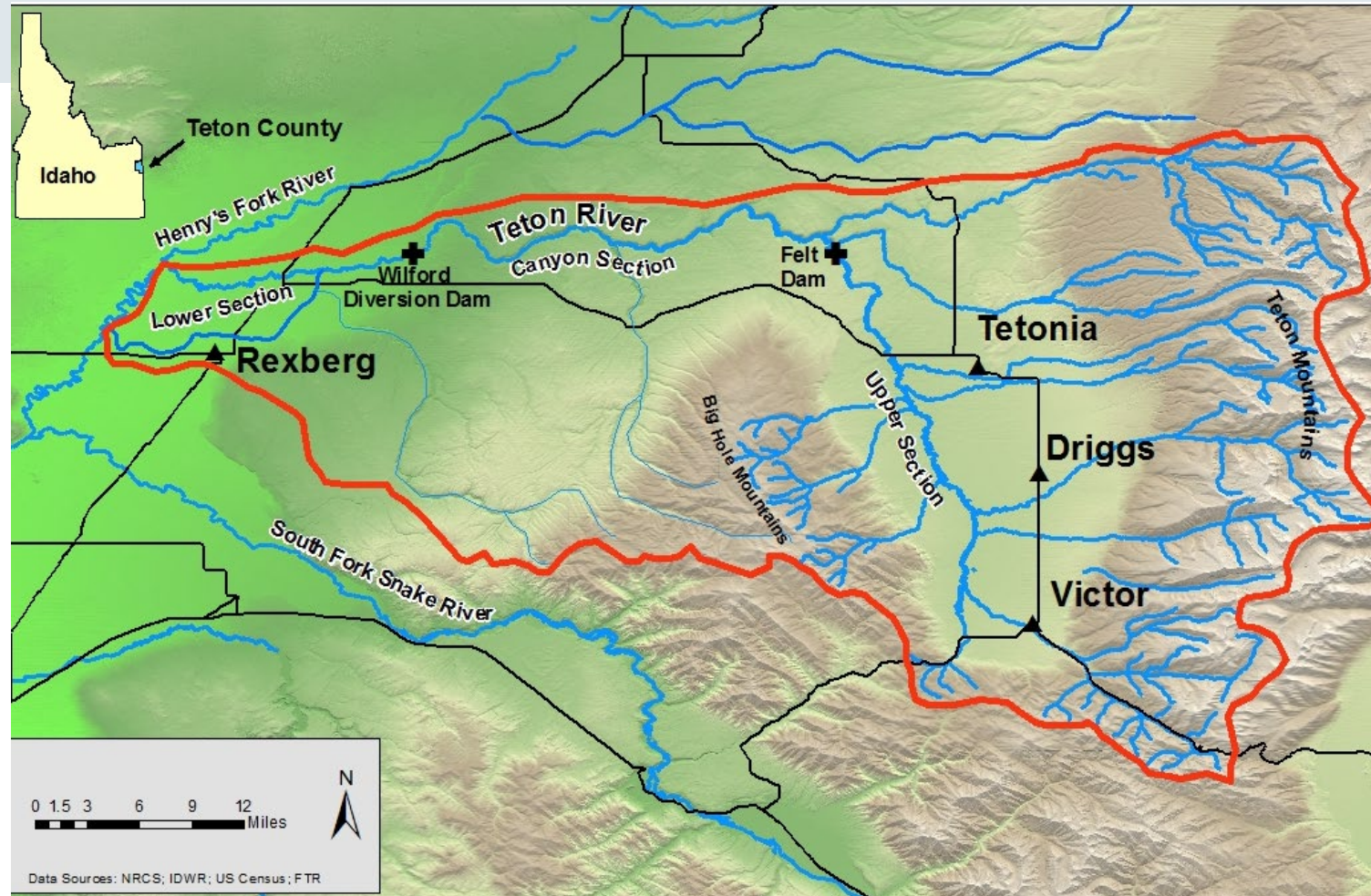
- Monitor the status and health of the Teton Watershed fishery.
- Restore fish passage in high priority locations.
- Maintain appropriate existing fish barriers and screens. Evaluate new construction options based on the best available science.
- Engage in local and regional partnerships for YCT conservation initiatives and policies.
- Maintain and enhance stream flows in priority reaches of the Teton River and tributaries.
- Improve native fish habitat in priority areas.

PARTNERSHIPS

Establish and maintain partnerships to protect and restore watershed health.

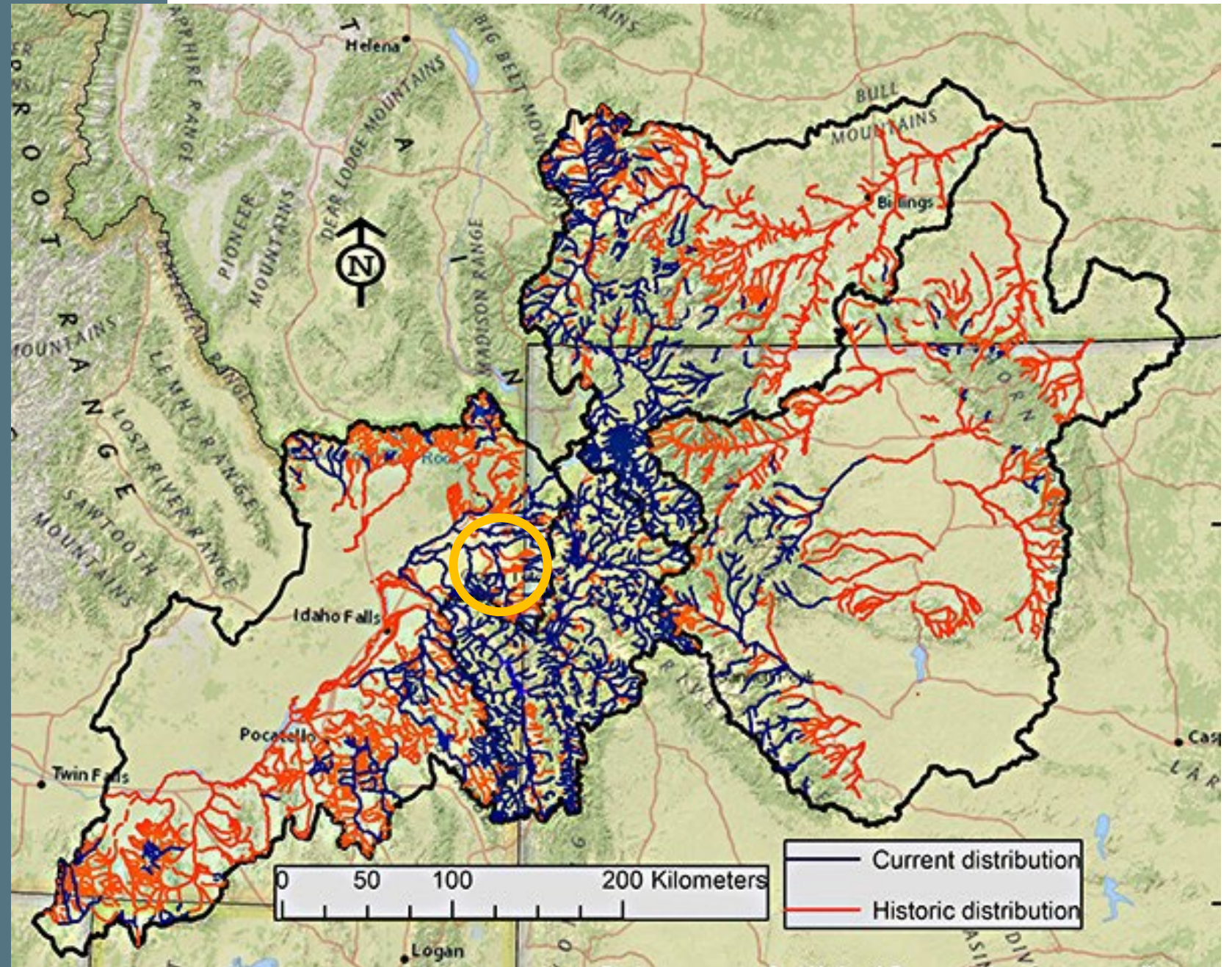
- Work with producers to implement mutually-beneficial best management practices that improve watershed health.
- Engage with stakeholders to inform community growth in a manner that protects and restores watershed health and honors regional heritage.
- Support policies and practices that recognize that a healthy Teton Watershed is dependent on mutual understanding, respect, and cooperation.
- Share scientific data to help local governments develop sound water-use policies.
- Address growing recreational use of the Teton River with science-based analyses, and suggest measures to provide a sustainable, high-quality experience for people while protecting water, fish, and wildlife health.

TETON RIVER WATERSHED



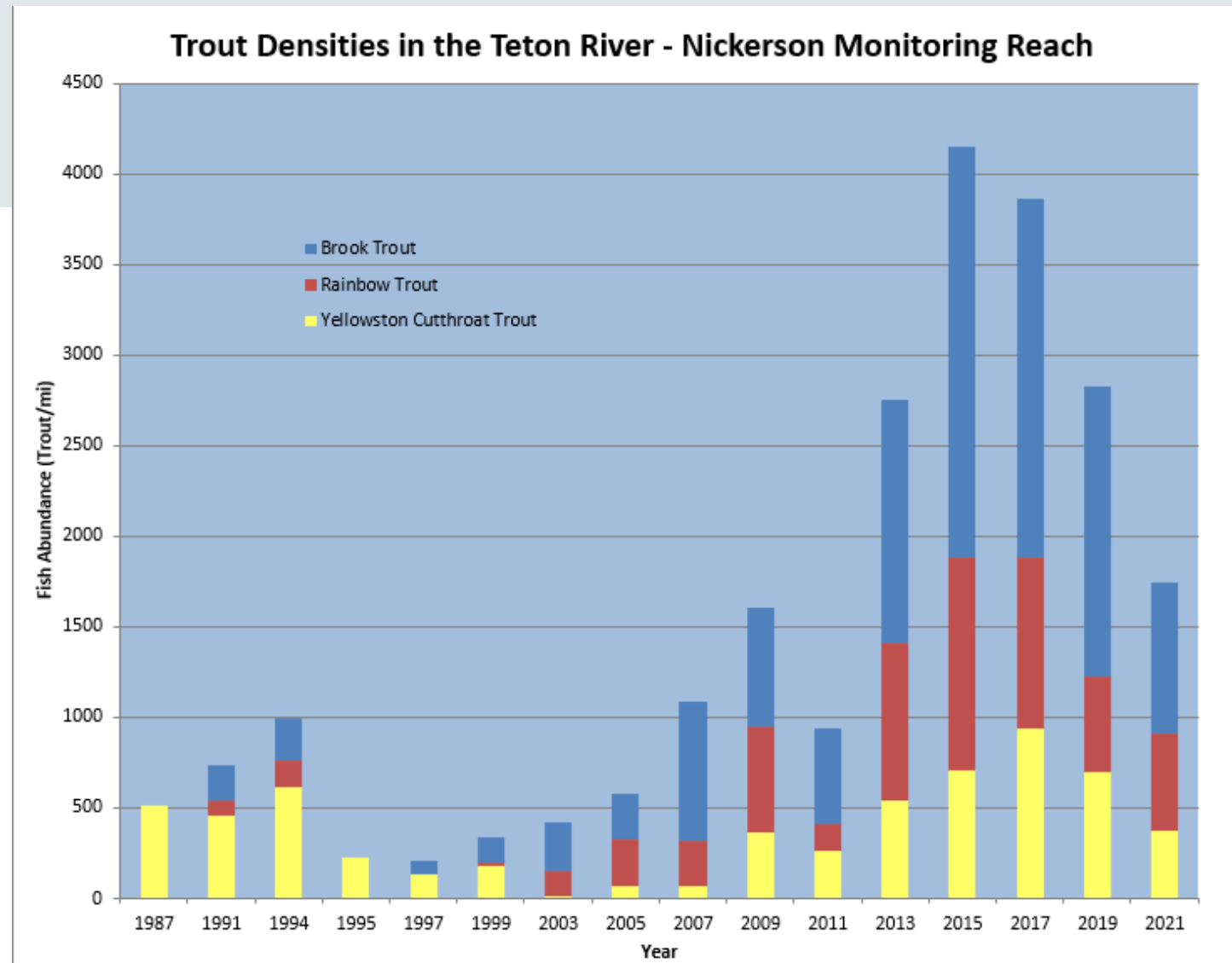
Current Extent of Yellowstone Cutthroat Trout

- 43% of historic range is currently occupied
- 23% of the current distribution is genetically unaltered





HISTORIC SPECIES COMPOSITION



The data and data analysis in this graphic was created by the Idaho Fish and Game Department.

FTR'S FISHERIES PROGRAM GOALS

Determine long-term trout population trends

Provide the agencies with additional data on the Teton River watershed

Identify, prioritize and design YCT conservation projects

Monitor the efficacy of conservation projects



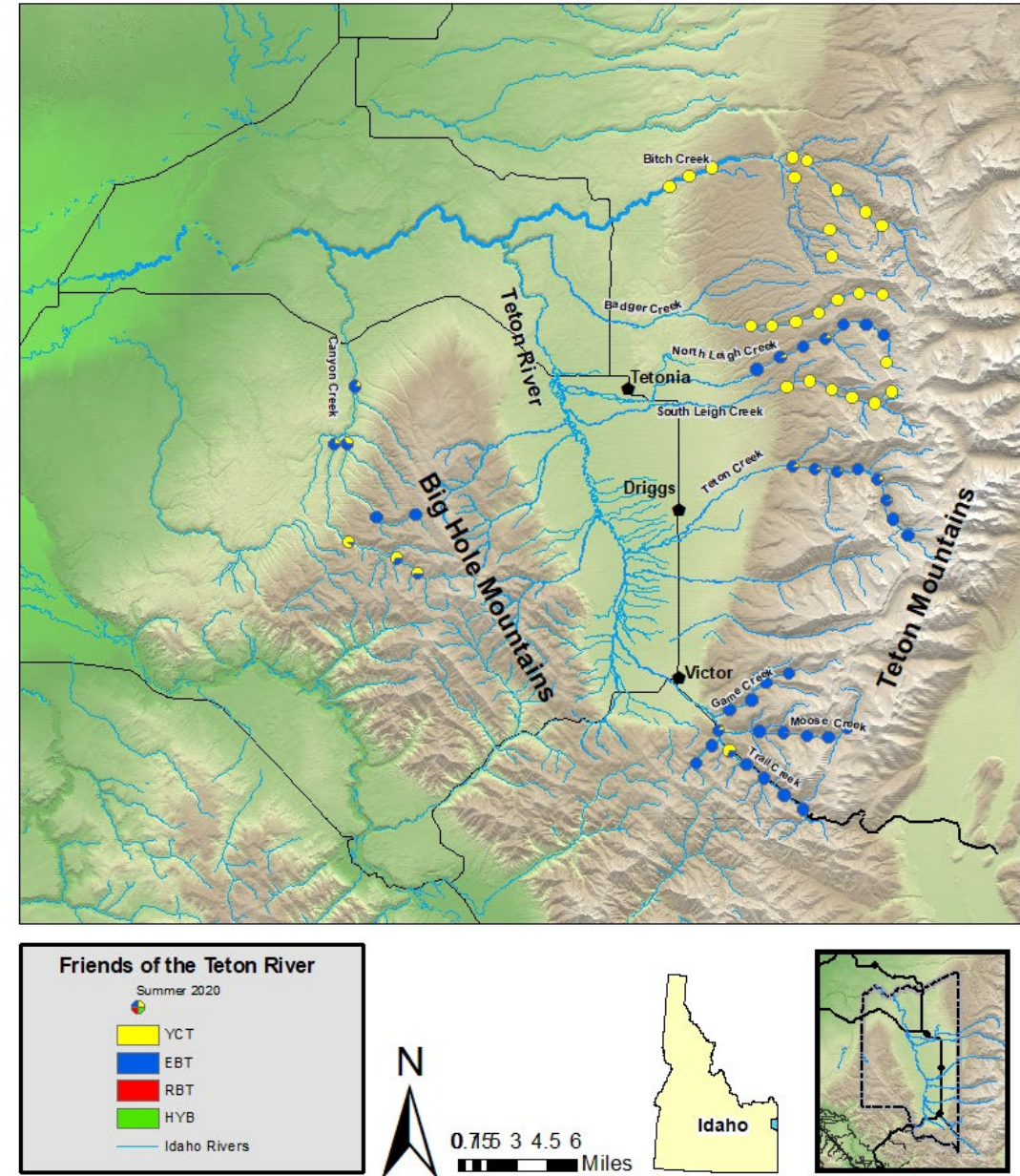
BASIN WIDE ELECTROFISHING SURVEY



2020 Teton Tributary Trout Assessment Survey

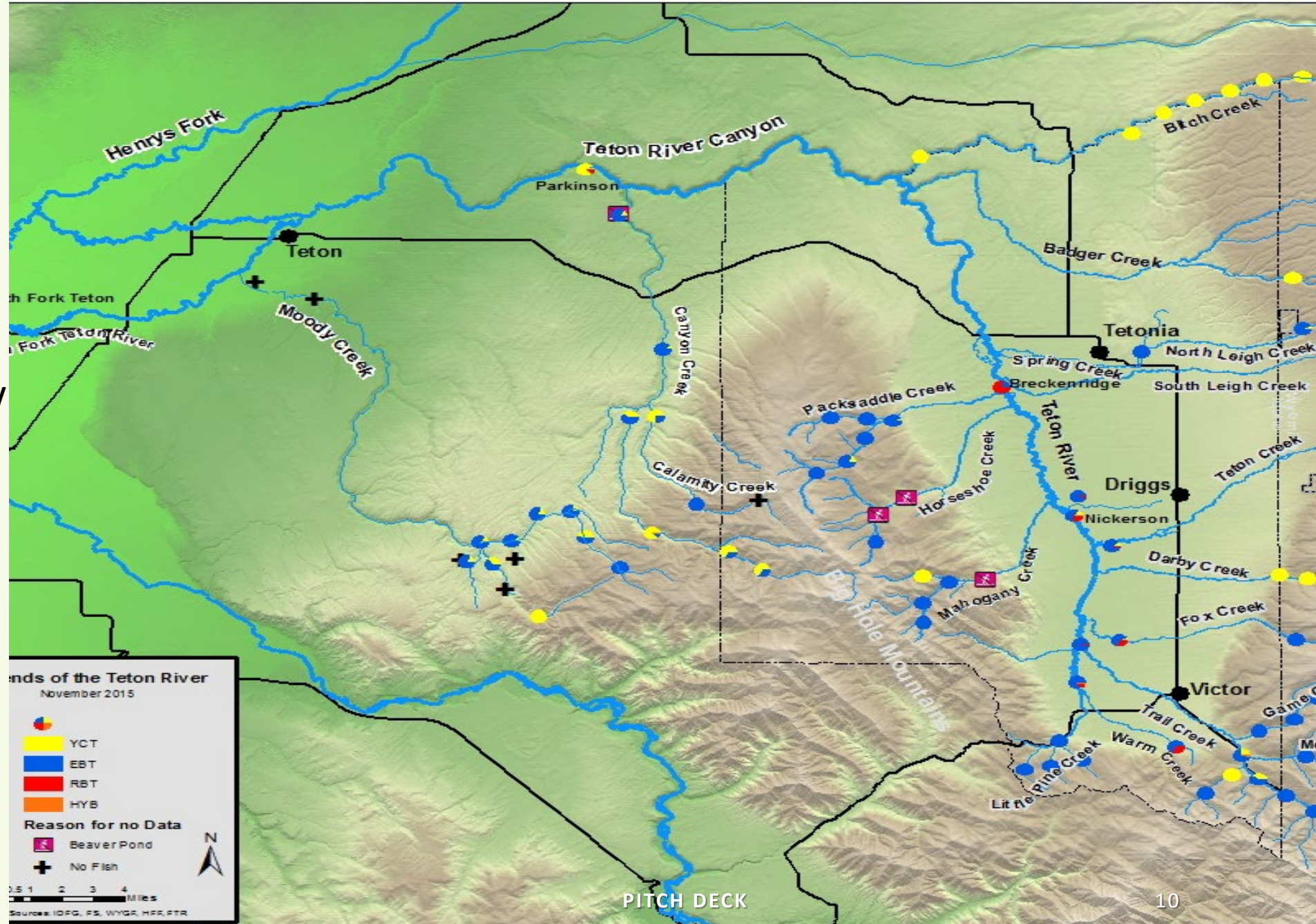
- 68, 100 M sites surveyed
- Survey sites on Trail, Teton, South Leigh, North Leigh, Game, Canyon, Calamity, Bitch and Badger Creeks

2020 Teton Watershed Trout Composition



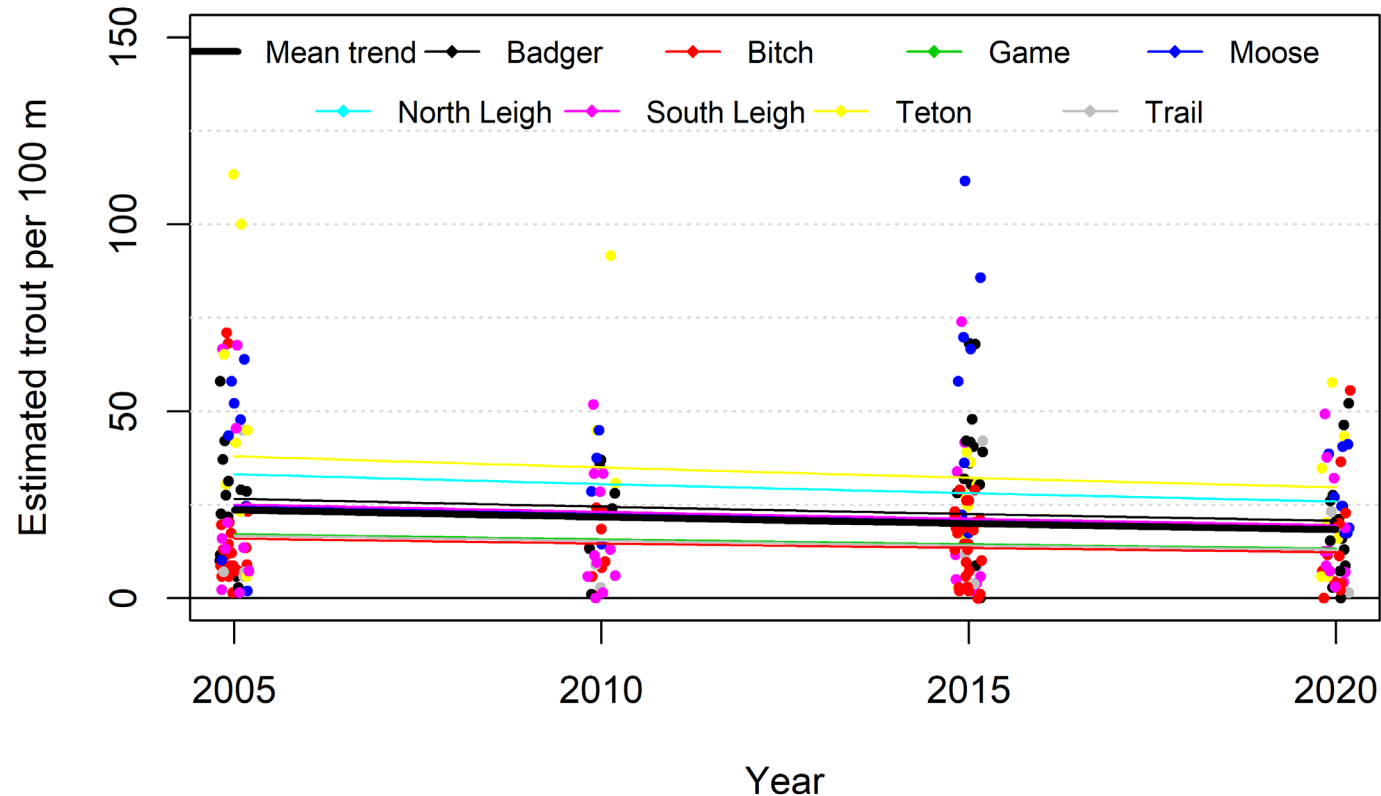
Teton Trout Population Survey Sites 2015

Teton Trout Population Survey Sites





Trout Abundance: Streams Sampled in All Years



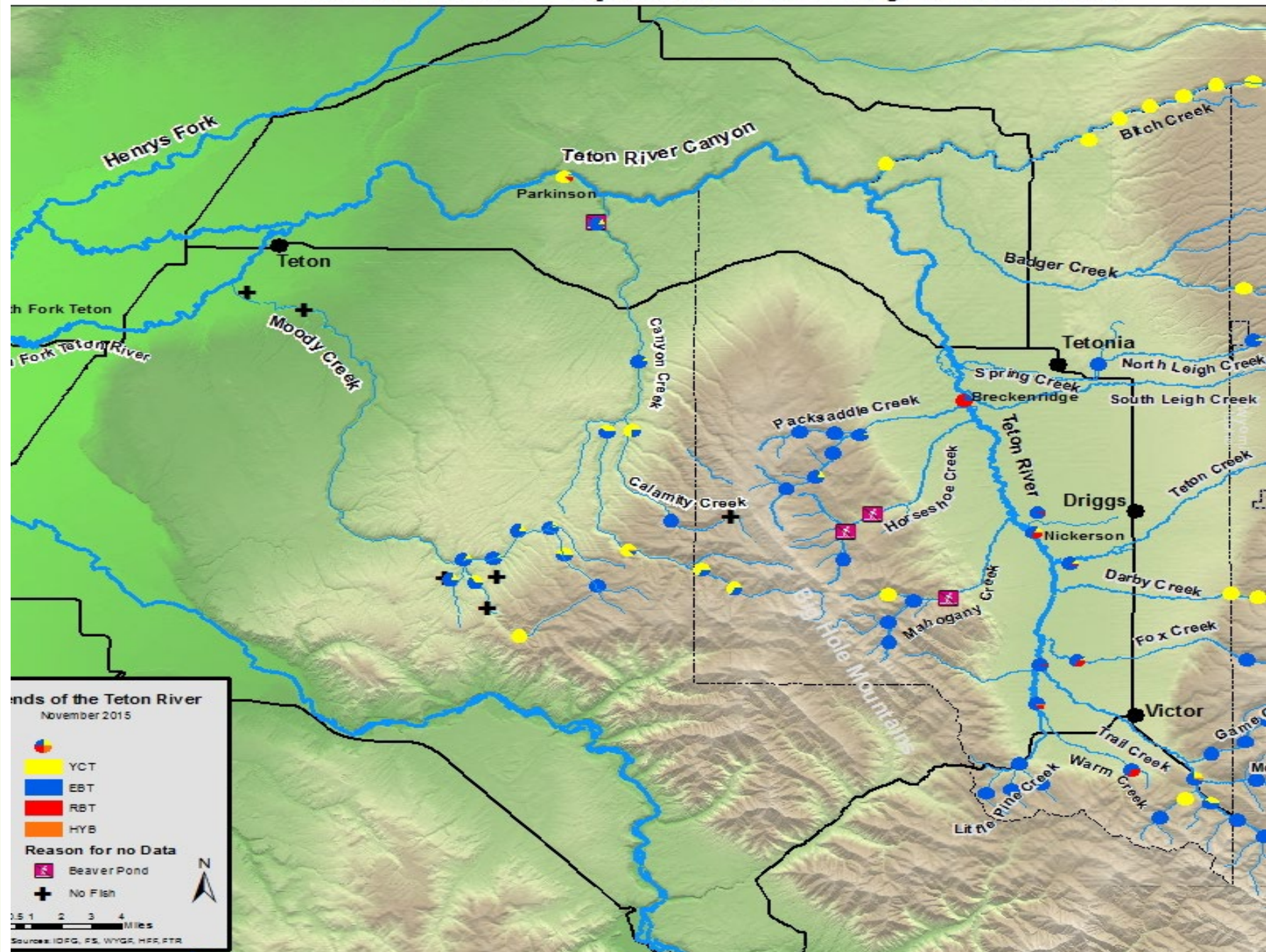
This graph and supporting statistical analysis was created by Rob Van Kirk of the Henrys Fork Foundation

2020 Tributary Trout Assessment Survey Results

- 15 years of data reveal an annual 2% decrease in trout abundance
- Over time YCT have stayed stable at 45% of trout captured

Teton Trout Population Survey Sites 2015

IDAHO FISH AND GAME TETON RIVER POPULATION ESTIMATES



SOUTH FORK OF THE TETON RIVER POPULATION ESTIMATE

ORANGE BRIDGE (REXBURG) TETON RIVER TO THE HENRY'S FORK

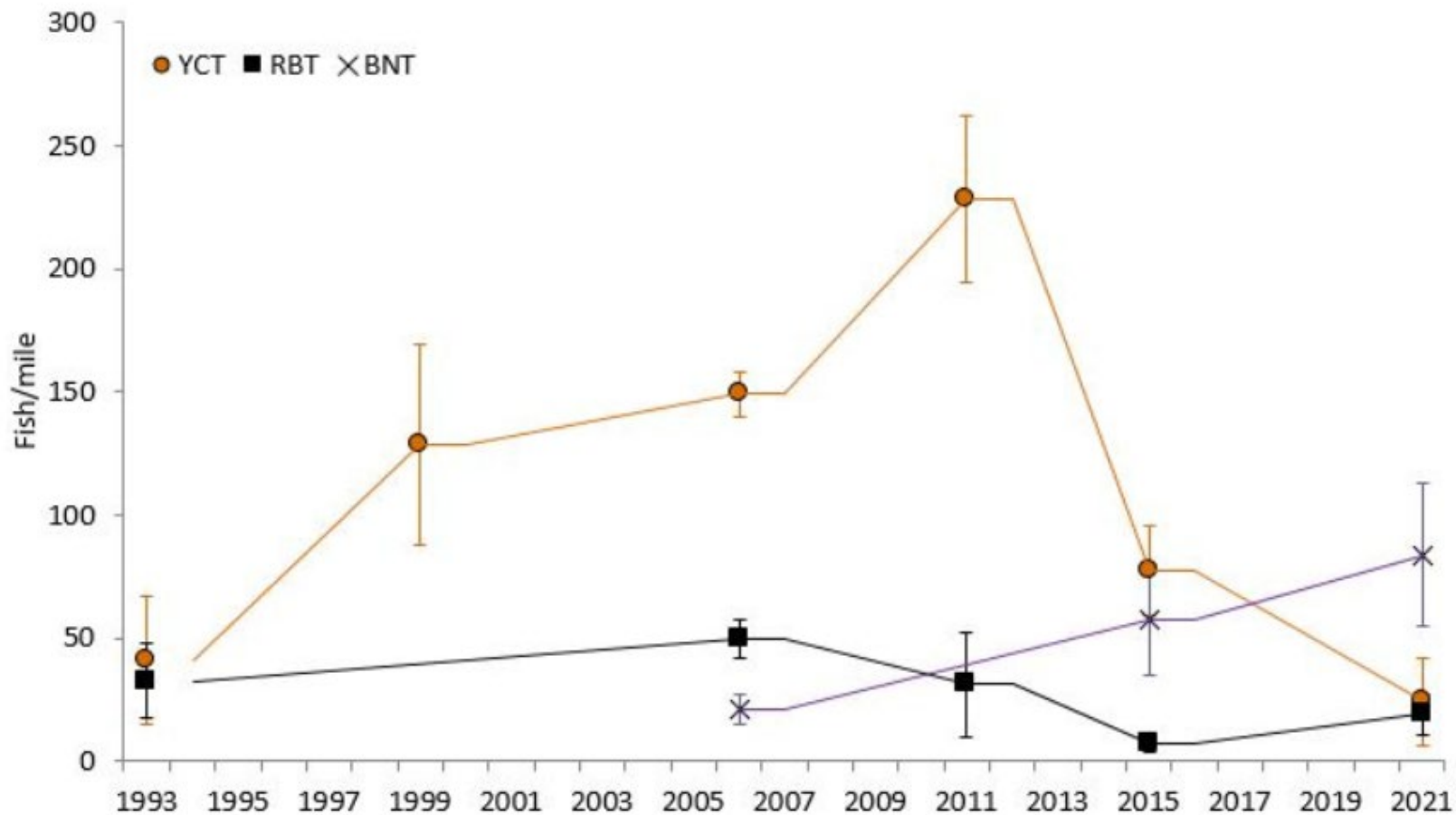
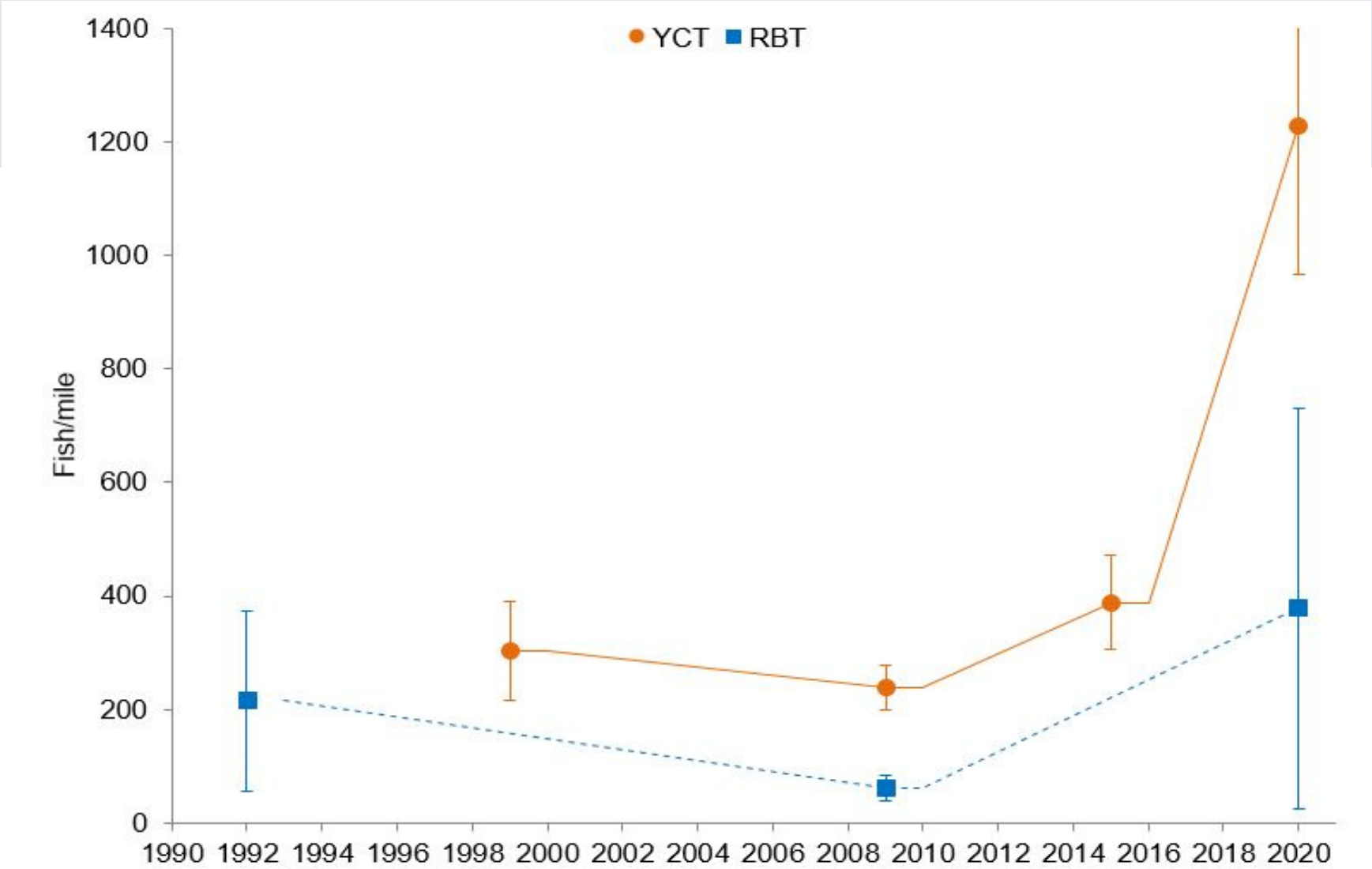


Figure 3. Abundance estimates and 95% confidence intervals from 1993 through 2021 for trout in the South Fork Teton River monitoring reach. YCT = Yellowstone Cutthroat Trout, RBT = Rainbow Trout, and BNT = Brown Trout.



PARKINSON REACH POPULATION ESTIMATE

HOG HOLLOW TO THE FELT DAM, TETON RIVER



The data, graph, and data analysis in this graphic was created by the Idaho Fish and Game Department.

NICKERSON REACH POPULATION ESTIMATE

SOUTH BATES TO BATES, TETON RIVER

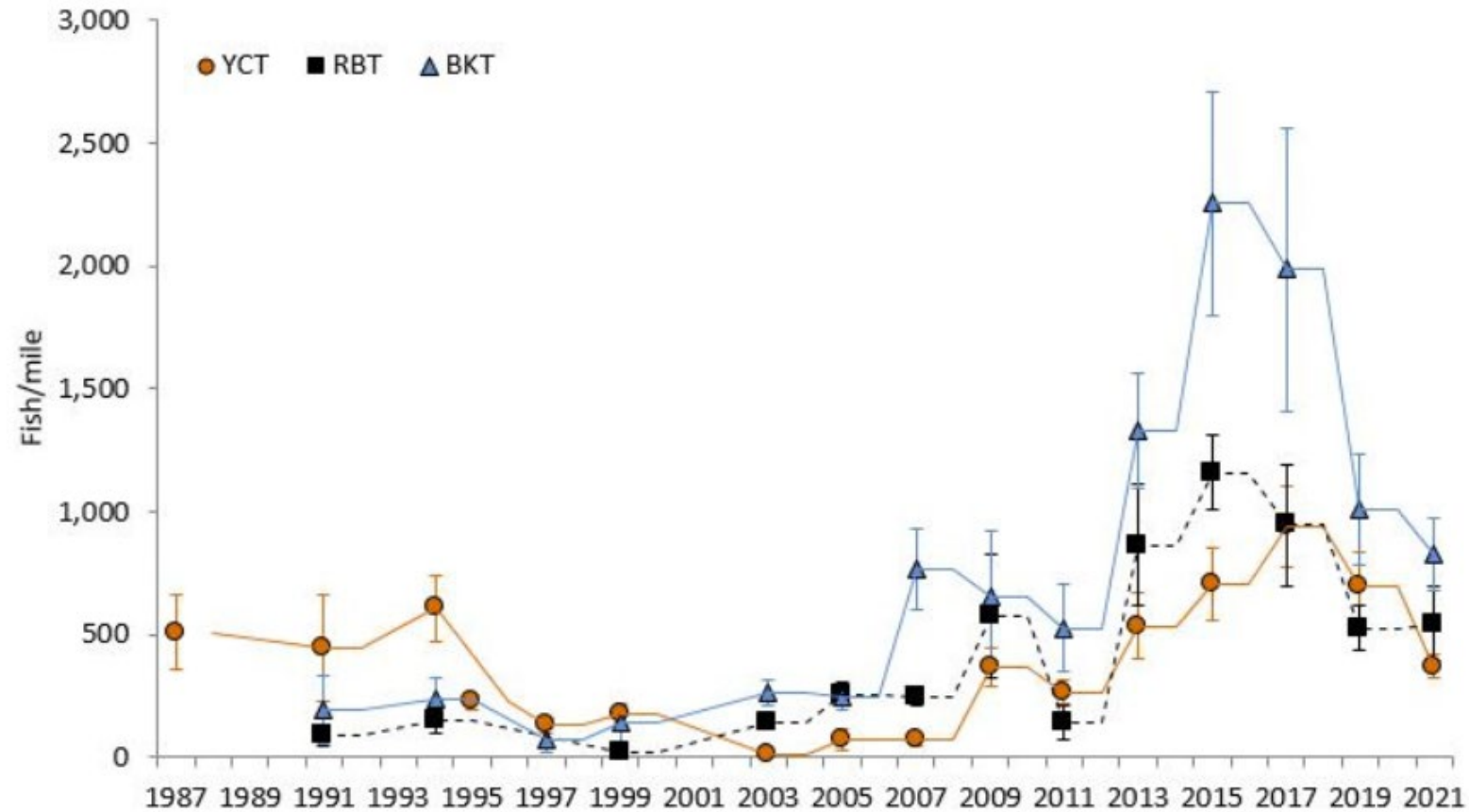


Figure 1. Abundance estimates and 95% confidence intervals from 1987 through 2021 for trout in the Nickerson monitoring reach, Teton River. YCT = Yellowstone Cutthroat Trout, RBT = Rainbow Trout, and BKT = Brook Trout.

BRECKENRIDGE REACH POPULATION ESTIMATE

PACKSADDLE TO HARROPS BRIDGES, TETON RIVER

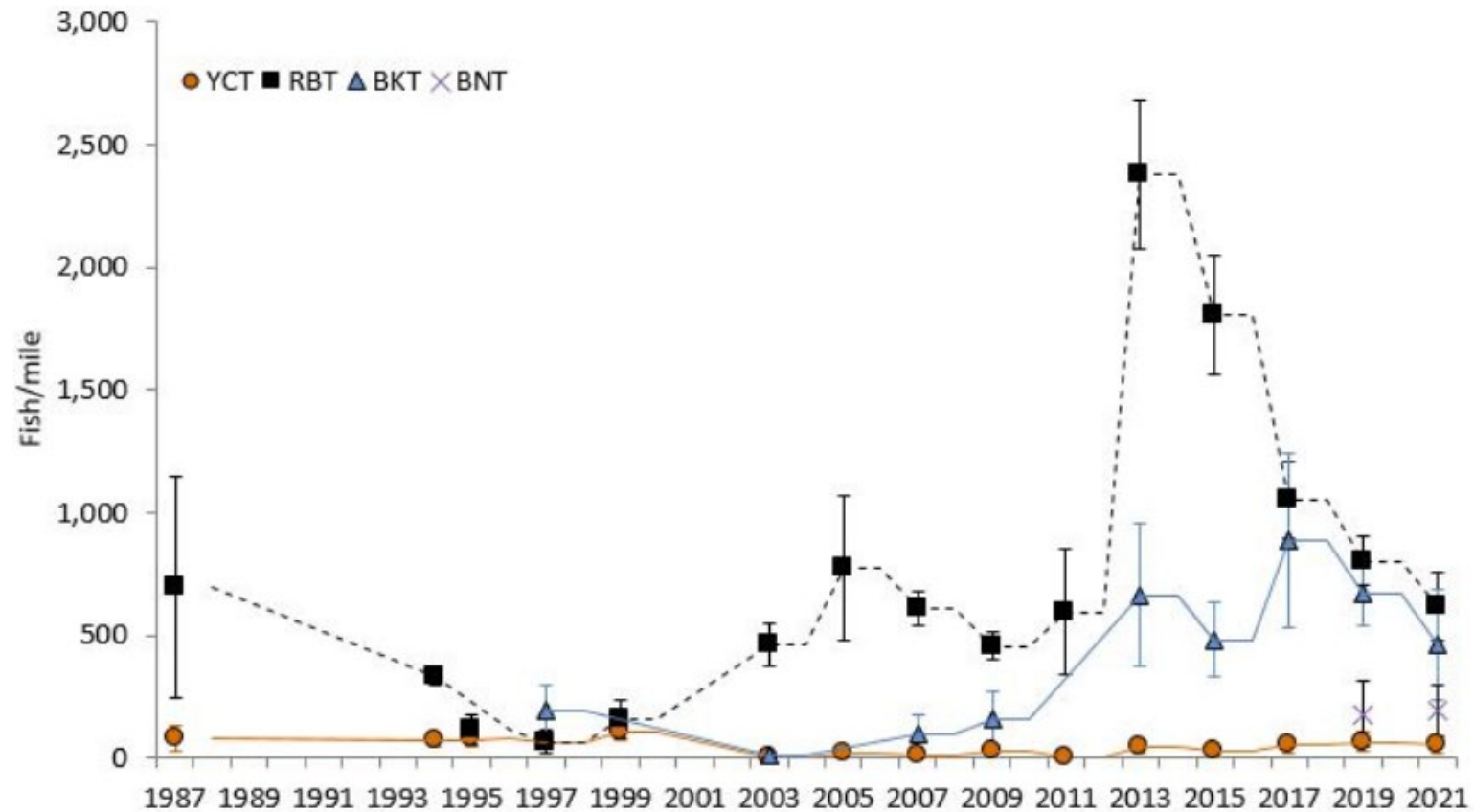
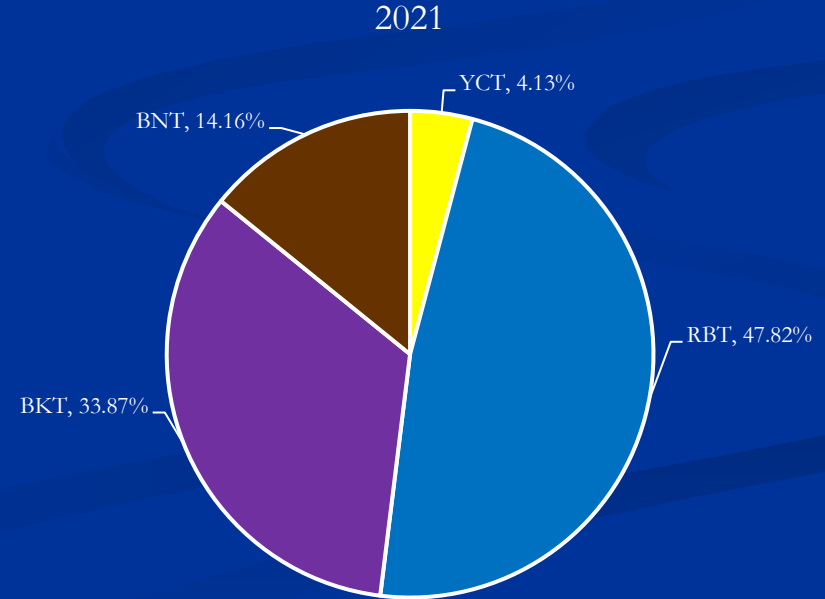
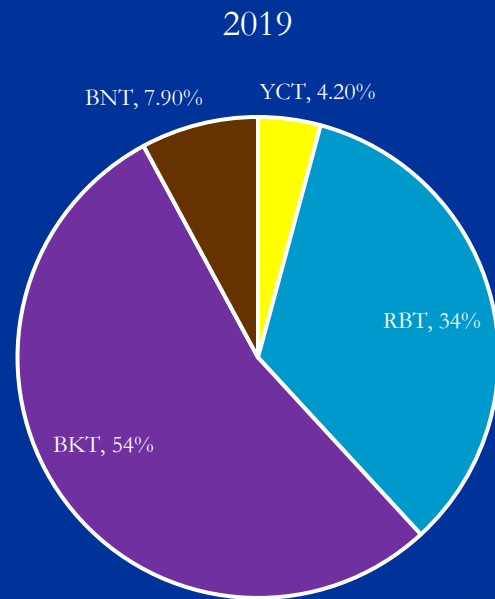
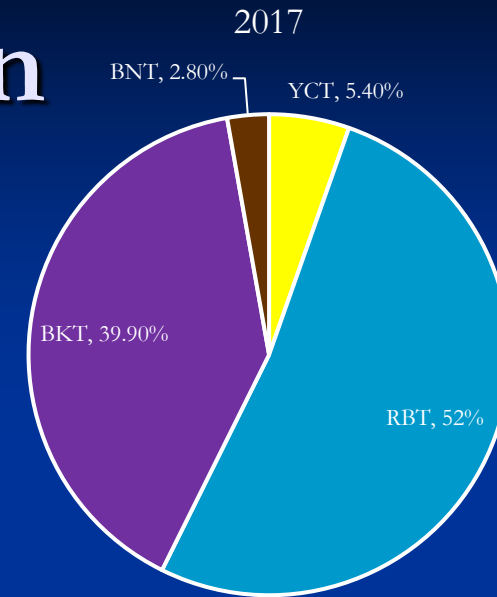
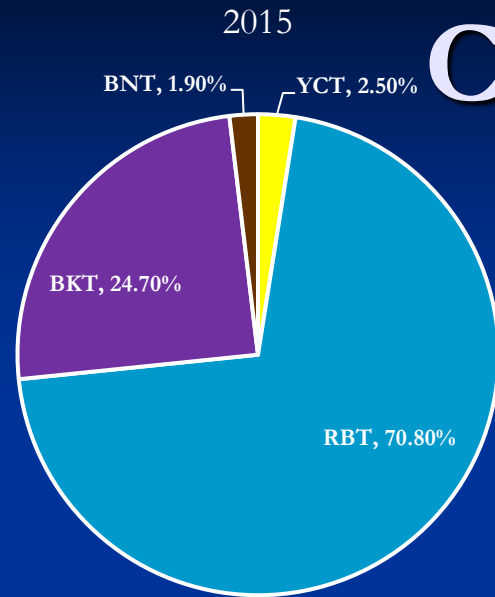


Figure 2. Abundance estimates and 95% confidence intervals from 1987 through 2021 for trout in the Breckenridge monitoring reach, Teton River. YCT = Yellowstone Cutthroat Trout, RBT = Rainbow Trout, BKT = Brook Trout, and BNT = Brown Trout.



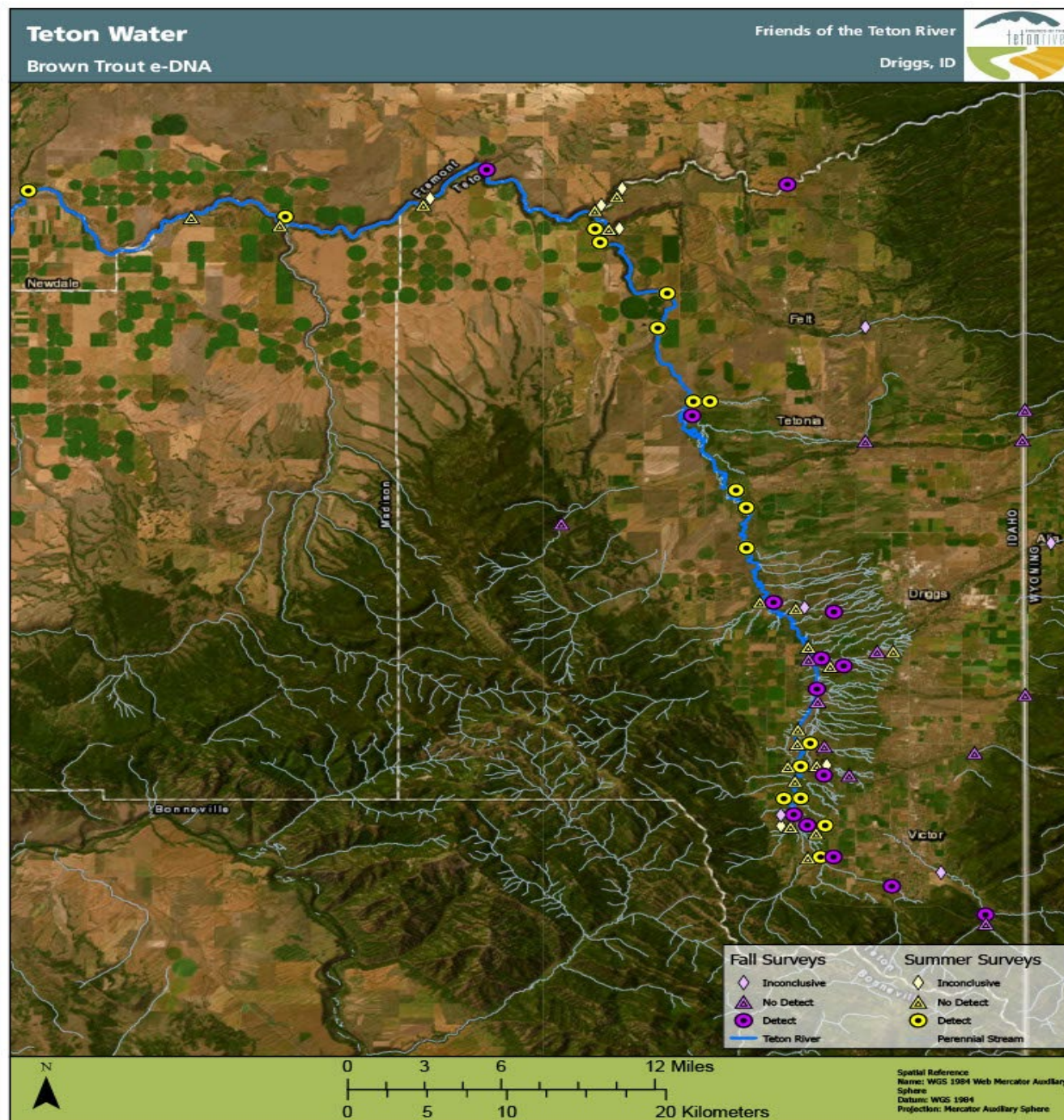
Breckenridge Species Composition



The data, and data analysis in this graphic was created by the Idaho Fish and Game Department.

In October of 2021 and 2022 FTR conducted our first successful raft based BNT redd survey between Rainey (Big Eddy) and Packsaddle Bridge

2022 BROWN TROUT E-DNA PRELIMINARY RESULTS



Annual Monitoring

- Fluvial trout PIT tagging
- PIT tag array maintenance
- YCT redd surveys
- Water quality monitoring
- Temperature monitoring
- Fish screen operation and maintenance



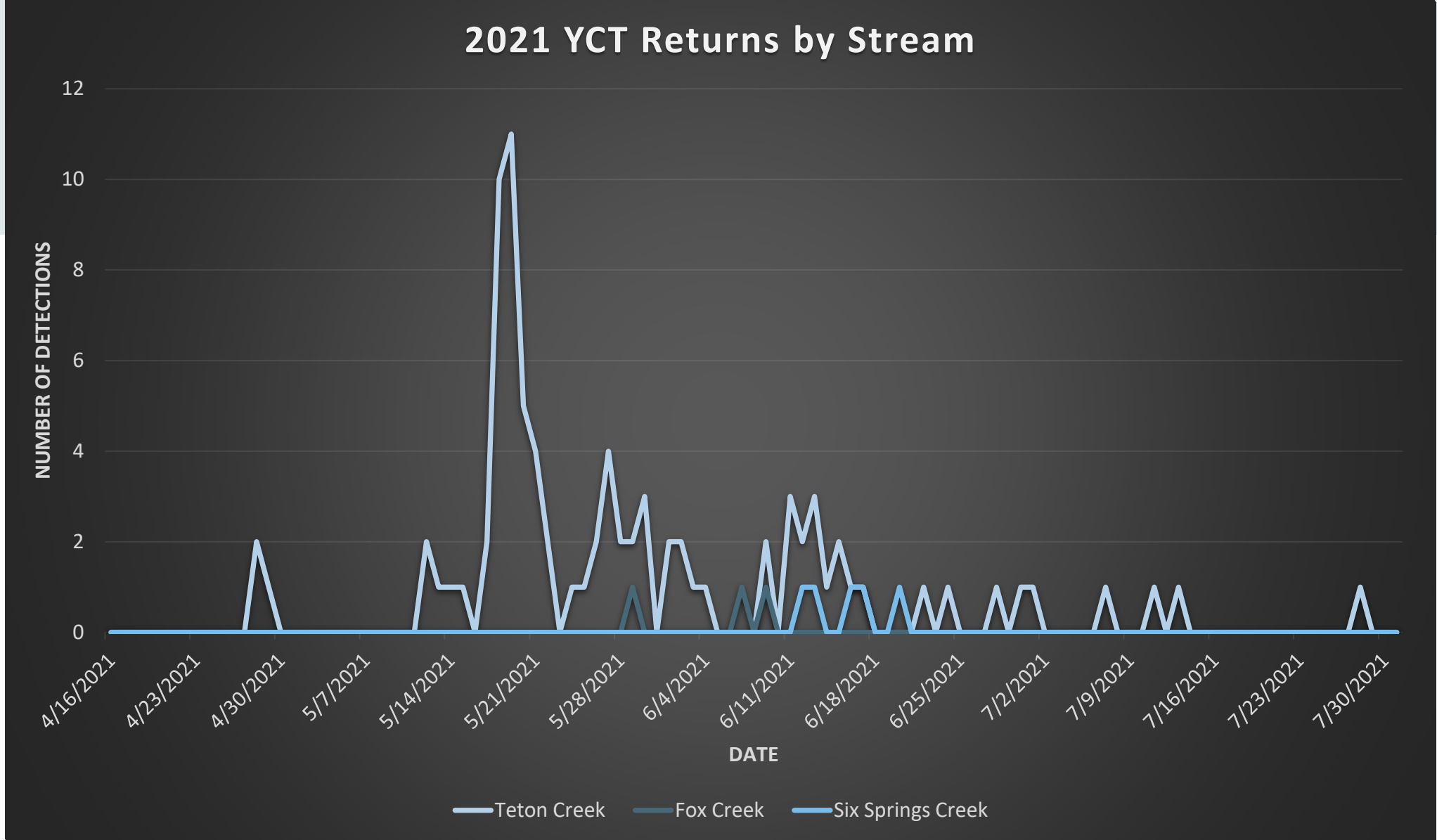
PIT TAGGING

- Over 5,000 fish have been PIT tagged in the watershed
- Tags monitor fish movements and effectiveness of watershed restoration
- 471 Trout tagged in 2021
- 0 Trout tagged in 2022



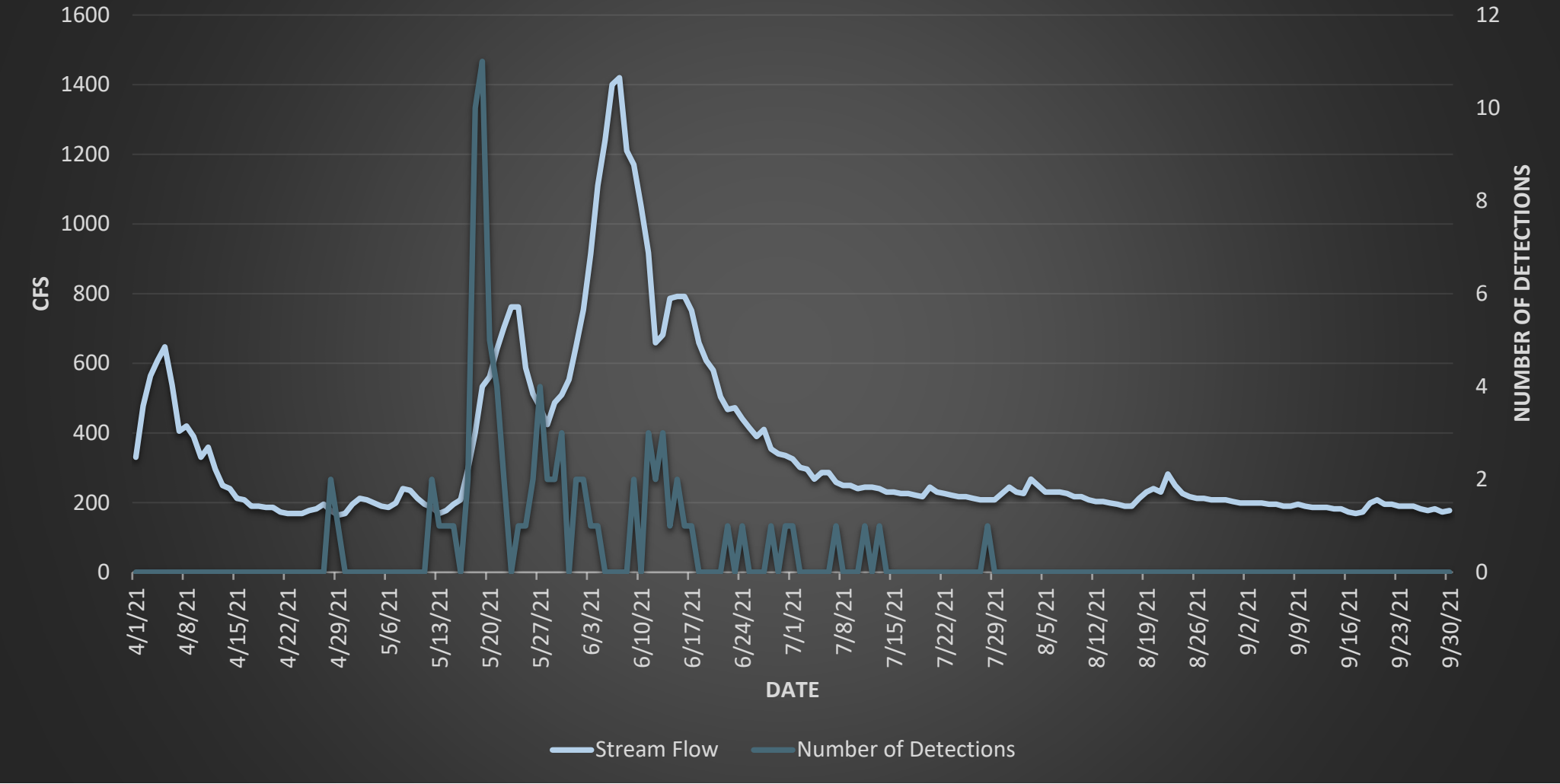
PIT TAG ARRAY MAINTENANCE

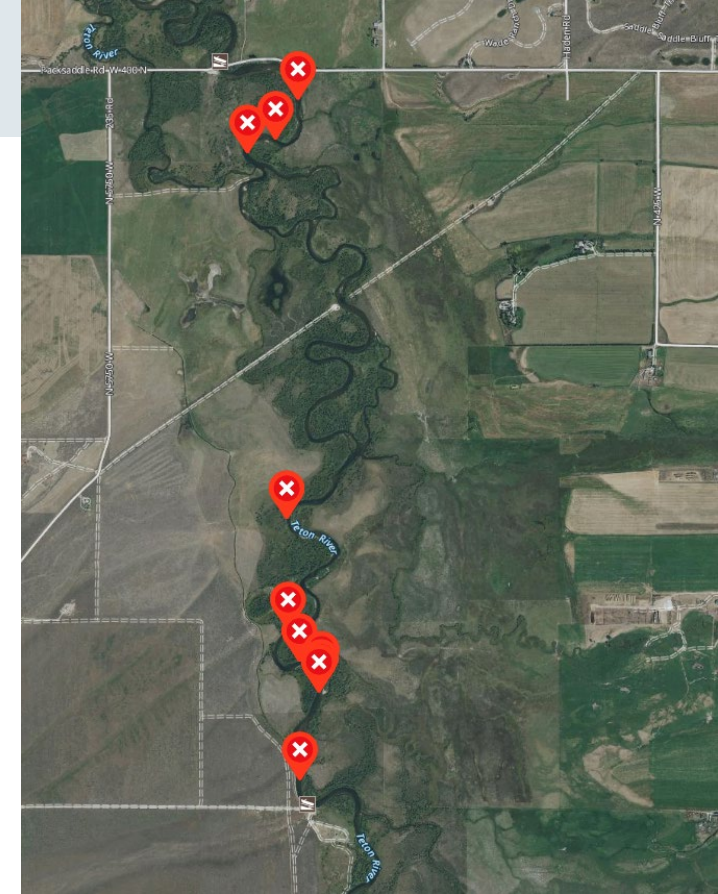
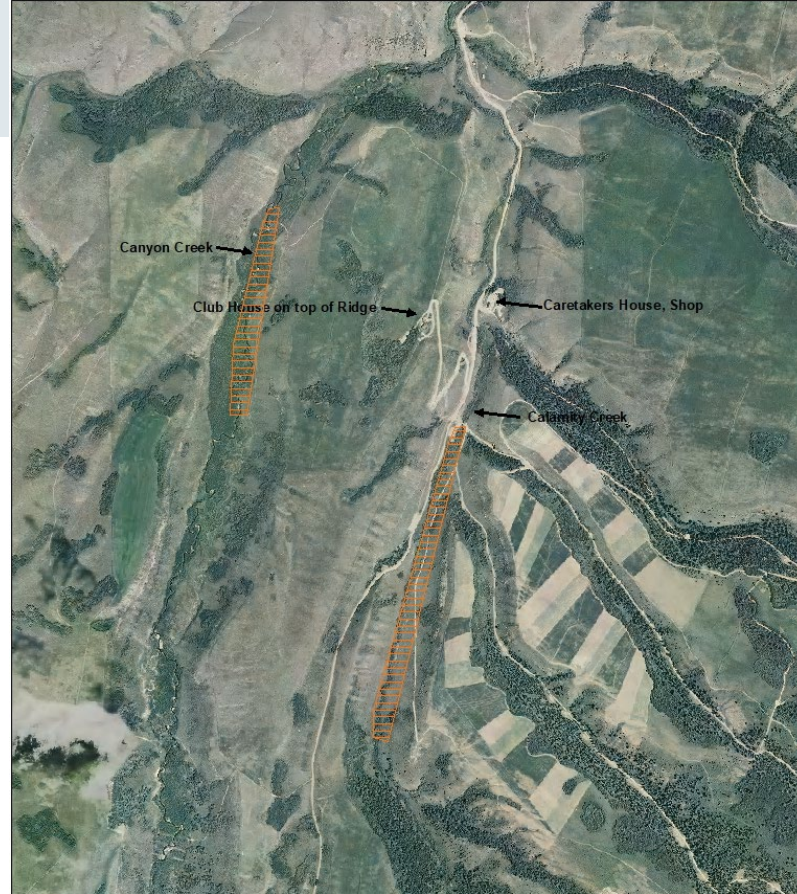






2021 Teton Creek YCT Returns Vs. Teton River Flows





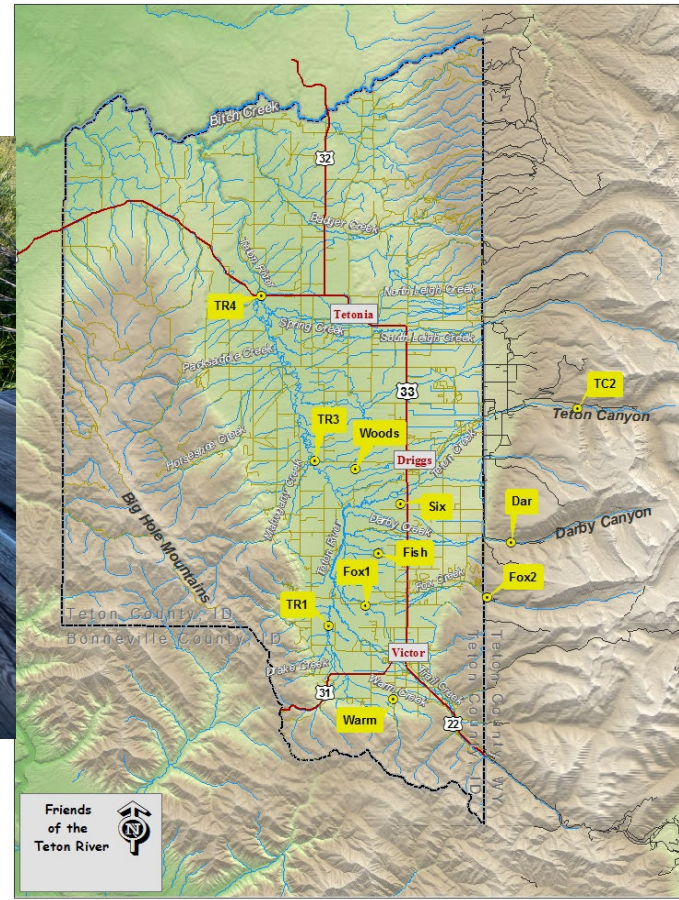
FISH PASSAGE AND RESTORATION



- 2,200 feet of streambank restored in 2021/2022
- Irrigation diversion screening infrastructure improvements



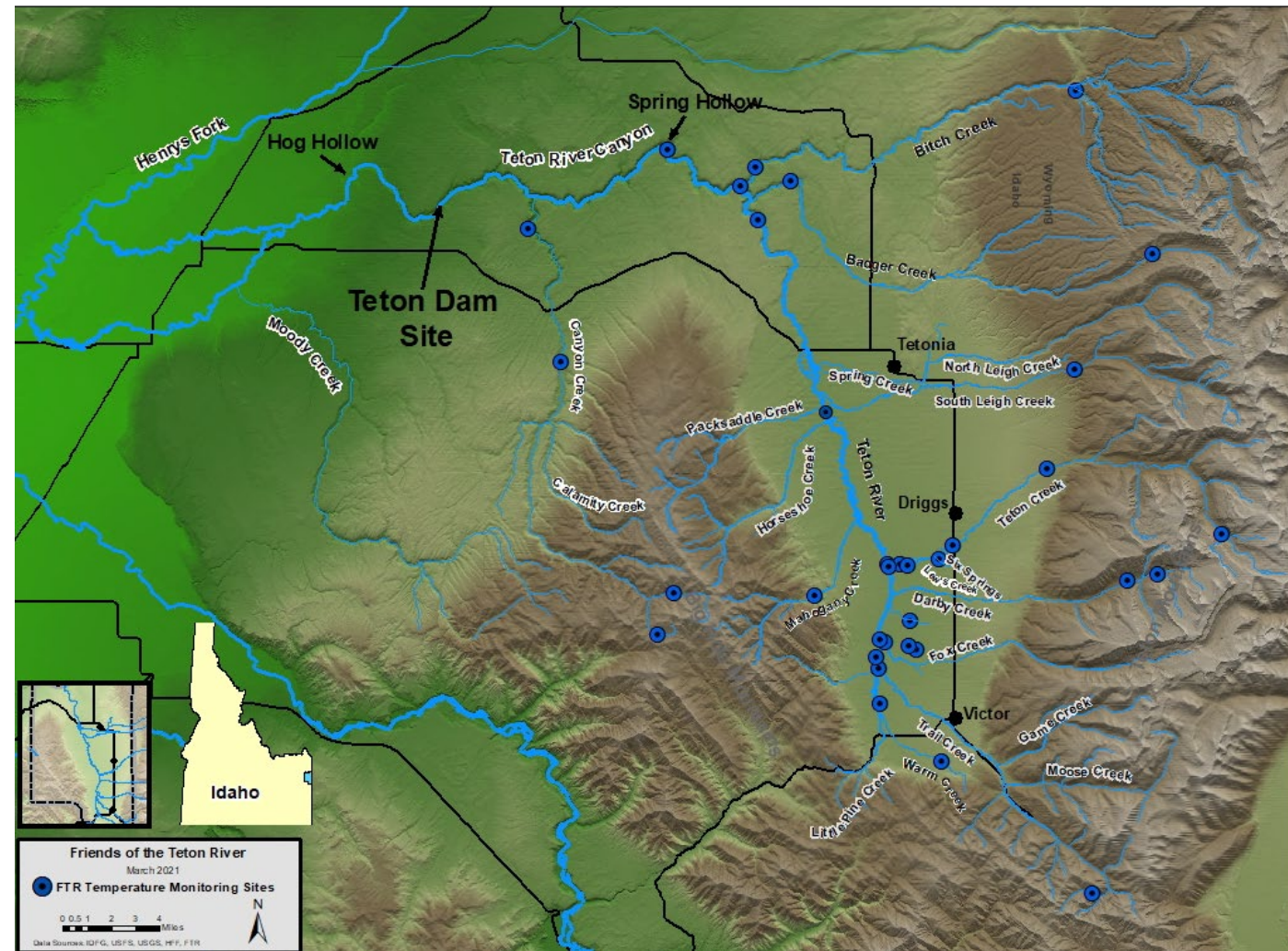
WATER QUALITY MONITORING



Background image courtesy of the Environmental Management Research Center. Other Data Sources: US Census and Friends of the Teton River. Map Design: Doug Self



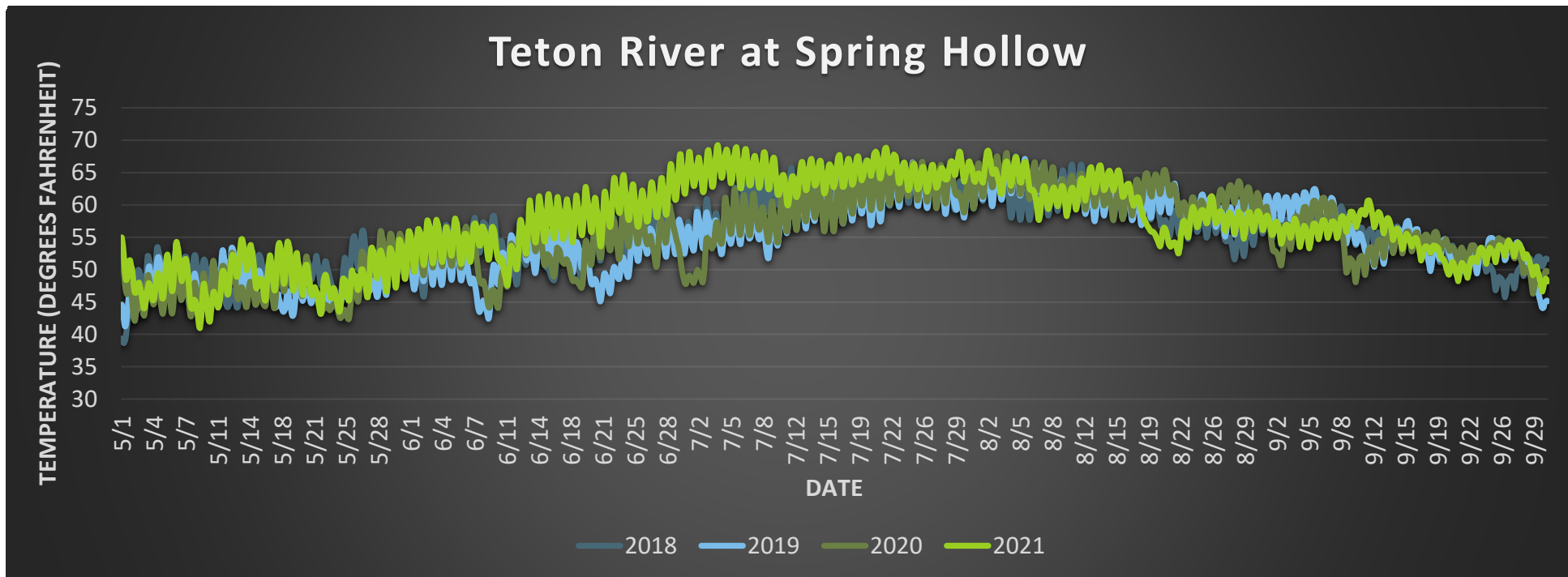
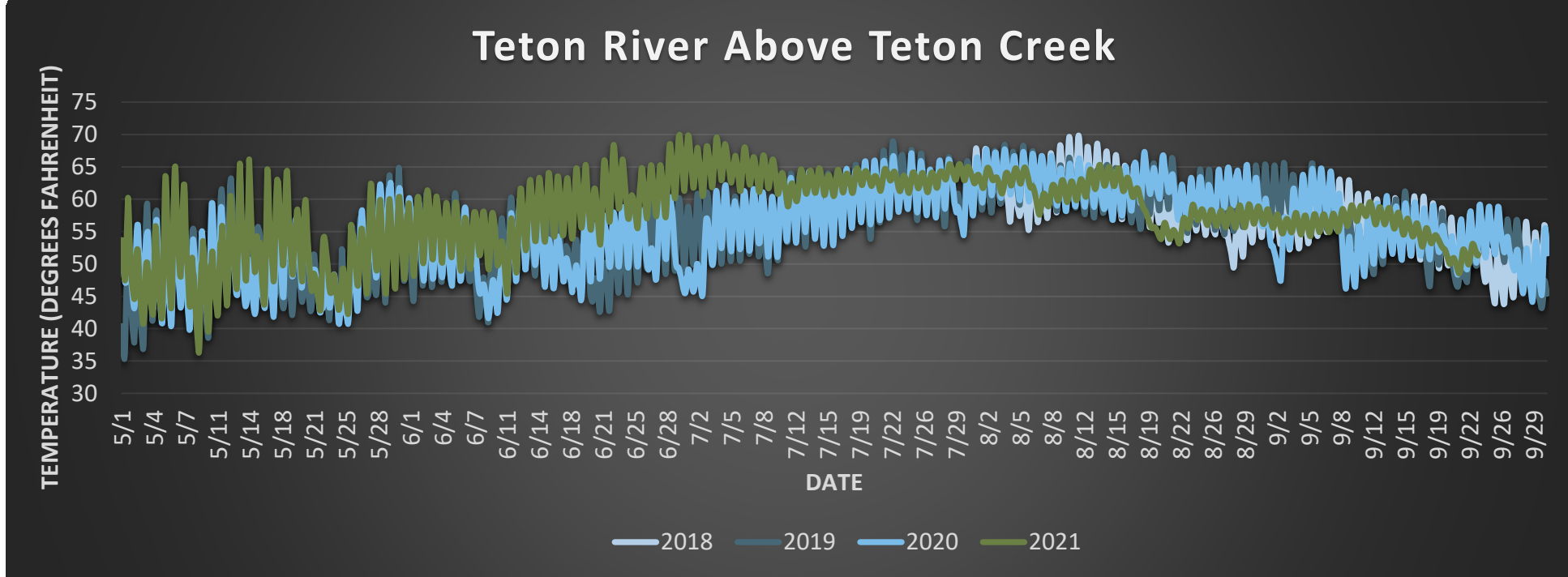
STREAM TEMPERATURE MONITORING



- FTR maintains 36 loggers in the watershed
- Temperature is recorded once an hour, year round



ABOVE AVERAGE
STREAM
TEMPERATURES IN
JUNE AND JULY,
2021





@CamrinDengle

Teton Valley Aquifer Recharge Project

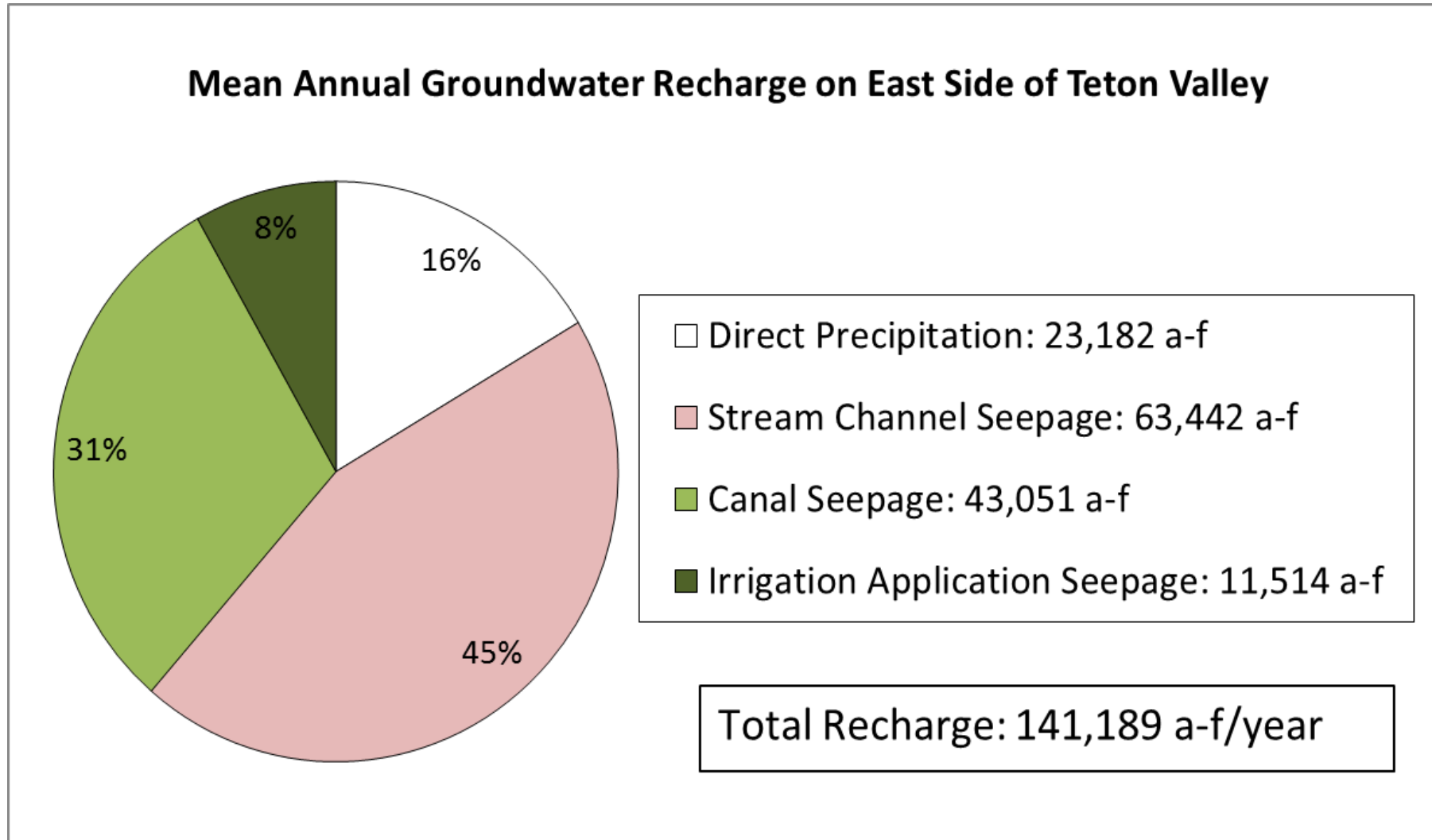


Group Vision:

- Keep working lands working by securing and maintaining a reliable and affordable supply of water to sustain agriculture
- Protect and restore stream flows and water quality in the Teton River and its tributaries, for the benefit of people, wildlife, and fish
- Secure and maintain a safe, affordable, and high-quality water supply for municipalities and residential water users



Irrigation Canals Play an important role in recharging Teton Valley's Aquifer



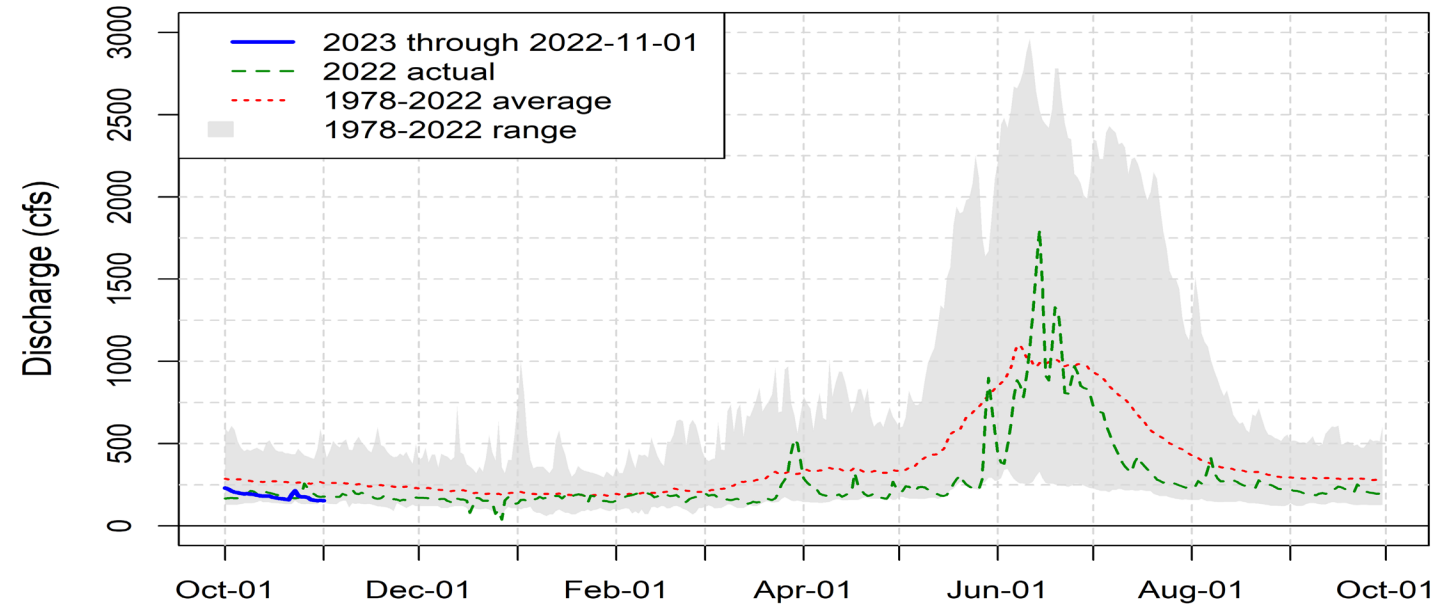
Van Kirk et al, "Conservation of surface and ground water in a Western watershed experiencing rapid loss of irrigated agricultural land to development" www.humboldt.edu/henrysfork



STREAMFLOW DATA TO DATE

- Earlier than average peak streamflow predicted with climate change, which could provide advantages to RBT

Teton River ab. South Leigh Creek



November 28, 2022		Weekly change in SWE (in)		Water-year to date accumulated snow-water equivalent (in)				
Site	Elev. (ft)	Current	Mean	Current	Median	Percentile	Mean	% Mean
Grand Targhee	9,260	1.2	2.4	12.3	11.9	59	12.0	102
Phillips Bench	8,200	0.9	1.4	5.6	5.0	65	5.0	112
Pine Creek Pass	6,720	0.6	0.8	4.3	2.2	88	2.4	179
TETON RIVER		0.9	1.5	7.4	6.4	74	6.5	114
Lewis Lake Divide	7,850	1.4	1.4	7.2	6.0	71	6.1	118
Grassy Lake	7,265	1.0	1.5	5.9	5.4	53	5.6	105
FALL RIVER		1.2	1.5	6.6	5.7	65	5.8	114
Black Bear	8,170	1.6	1.8	9.4	7.7	71	8.3	113
White Elephant	7,710	1.1	1.2	7.8	4.7	88	4.9	159
Crab Creek	6,860	0.1	0.6	4.3	1.5	94	2.0	215
Island Park	6,290	0.5	0.7	3.7	2.0	88	2.2	168
UPPER HENRY'S		0.8	1.1	6.3	3.9	88	4.3	147
HF WATERSHED		0.9	1.3	6.7	5.2	82	5.4	124

2023 SCOPE OF WORK

Annual Monitoring:

- Water Quality
- Temperature monitoring
- PIT tag site operation and improvement
- YCT and BNT redd surveys
- Fish screen operation and maintenance

2023 Projects:

- YCT and RBT genetic data collection
- E-DNA sampling event:
Determining the extent of BNT
- On-going restoration projects
to improve habitat



Summary and Take-home Messaging!

- FTR will continue to monitor the fishery, collect temperature and water quality data.
- Continue with meaningful restoration projects using the best available science.
- Our mission is to keep a thriving population of Yellowstone Cutthroat Trout! We are and will try to do everything we can to achieve that goal.
- There are a lot of places in this country and the world for that matter, where one can catch a Brown Trout or Rainbow Trout. However, this ecosystem is the only place in the world you can still catch native Yellowstone Cutthroat Trout!
- When YCT numbers decline, we've seen elk calve numbers decline simultaneously due to higher-than-normal predation from bears in the spring because of a lack of high-quality proteins and fat that the fish provides
- Finally!!! Collaboration is our key to success! We can't do it without the help and partnerships we have and the ones yet to come.



SUPPORT FISHERIES WORK AT FTR

Scan the QR codes to donate or visit our website

www.tetonwater.org



**ANNUAL FUND
CAMPAIGN**

Reach out to Brian Van
Winkle, Fisheries
Program Manager, at
brian@tetonwater.org



**eDNA
CAMPAIGN**