

# SWEETWATER 2020

## SFG – NEWS AND UPDATES

2019 was another great year for Sweetwater Fisheries Group! With a wide variety of projects and activities including enhancements and restorations, we're excited to share a bit about them.

### Fishery Enhancement - Albany County Wyoming

Out on the Laramie Plain, this expansive section of the Laramie River has long served as an agriculture lifeline but was limited in its ability to support quality angling due to the lack of structure, cover and low late season flows.

Sweetwater embarked on the initial two mile phase of a six mile enhancement which included in-stream boulders, pool structures and substantial bank repair and restoration. The results of this effort have been dramatic.

With fish now able to occupy all areas of the river there has been an overwhelming recruitment of fish that would otherwise just be "passing through" and opportunities for the angler from bank to bank, top to bottom.

The photos below show what a difference just a few days can make. In the photo on the left many of the problems are easy to recognize. The bank is highly unstable with turf falling in and the river continuing to widen and degrade with each flow event.



The photo on the right shows the dramatic changes of the structural implementation. Overly dense stands of cottonwoods on this property were thinned to provide all the necessary material to rebuild the bank in a way that provides the ultimate in stability and energy diffusion.

Not obvious in the photos are the log footers, anchor structures, or the new channel we installed under the visible edge of the structure which provides exceptional year round habitat. All of these structures are also planted with willows and alders so as the years go by these structures will only get more and more robust and productive, all without the need for obtrusive and biologically unproductive "hard armor" structures.





## Wetlands Restoration – Jackson County, Colorado

Although sometimes beavers make for quite a nuisance, there are definitely times they are worth their weight in gold. This stream lost its beavers and along with them went the dam maintenance that sustained an entire ecosystem including the excellent fishing above, below and within the beaver ponds.

With the spring runoff breaching all 11 dams in this small reach and draining the adjacent wetlands, Sweetwater was tasked with rebuilding them while making sure that they will be easy for beavers to utilize and maintain as they return.

### SWEETWATER CONSULTING SERVICES

Often times landowners are in search of a way to value or add value to their current amenities or buyers are looking to understand the value of a prospective purchase as well as ways to increase value after purchase.

Sweetwater has extensive experience helping these groups get their arms around these often complex considerations and bringing ideas and realizations that are often overlooked. This trend continued in 2019 with Sweetwater assisting numerous owners and buyers, often working in partnership with their land professionals to provide the information needed to make these big decisions.

## SFG - FISH AND FORAGE

Sweetwater's fish offerings have long been the industry standard for excellence and 2019 is no different. SFG has continued to stay ahead of the curve by making certain we have not only our 14+ pound trophies ready to go, but a full range of sizes to tackle any fish stocking need.

Complimenting our superb fish are the forage bases to match. Often an afterthought, forage is the single most important component next to habitat to ensure a sustainable, high quality fishery. To address this need, SFG offers fathead minnows along with an industry exclusive Freshwater Shrimp (*Gammarus lacustris*) rearing facility to bolster a lagging, mature fishery or accelerate a new property. As always, the SFG fish and forage is in high demand so contact us early for your fishery management needs.



## A QUICK READ ABOUT POND MANAGEMENT

The importance of proactive pond management and aeration are difficult to understate. The benefits of quality aeration are very well established and should be a top priority for pond/lake owners and managers. Many clients each year take the leap and are overjoyed by the results. Their ponds are clearer, fish are healthier, insects are more abundant, winter kill is virtually eliminated and the need for chemicals reduced or eliminated.

We also get calls every Spring from owners who made a different decision and have suffered winterkill, have skinny fish with big heads, a noxious smell from their ponds and later in the season, overwhelming weeds and algae.

While the debate about aeration's effectiveness and the science within has been over for quite some time, a bit of technical information can make the picture more clear for those who may not be familiar with some of the pond cycle processes and how aeration aids in pond prosperity.

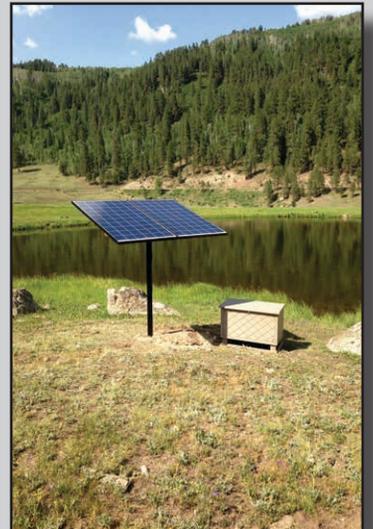
Lake bottom aeration is the process of introducing diffused air to the pond bottom, oxygenating and circulating pond

water. Without proper aeration circulation, ponds and lakes can become stratified,

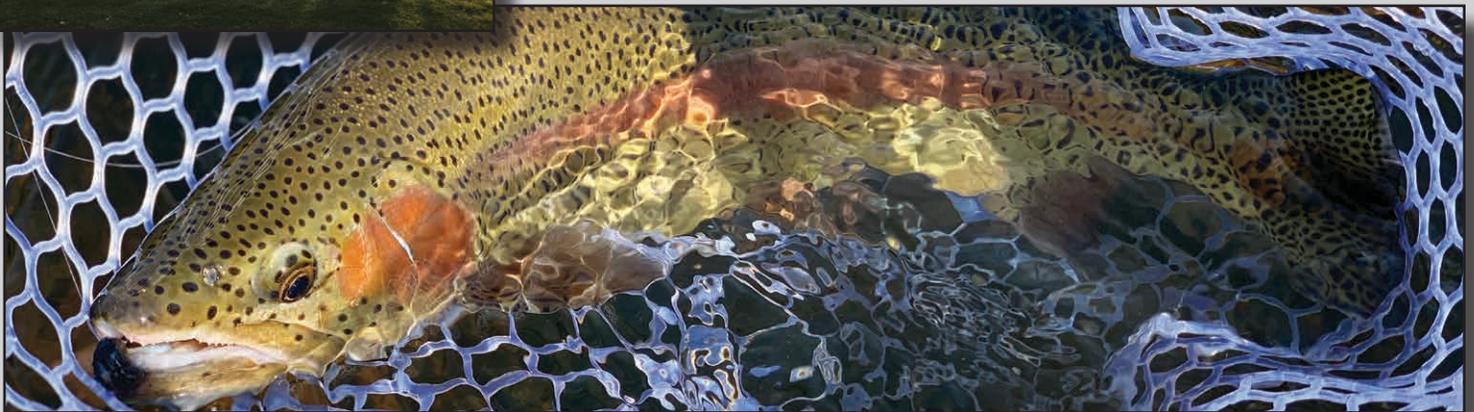


trapping toxic gases (ammonium and nitrogen) as well as decomposing organic matter to the pond bottom. Decomposing matter consumes oxygen through different biological processes, often depleting all available oxygen in this lower layer needed by fish and macroinvertebrates.

In addition to minimizing the effects of trapped toxic gasses, aeration de-stratifies the water column and raises dissolved oxygen. This allows fish and other aquatic inhabitants to occupy all areas of the water column as well as reduce the negative effects of pond turnover.



Aeration, along with SFG's innovative fisheries management techniques, afford our clients a productive and sustainable aquatic ecosystem. ***Contact us to learn how we can help you achieve your fishery goals!***



# SWEETWATER

FISH HABITAT ENHANCEMENT GROUP

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## A LOOK AT SFG SERVICES

### River Restoration:

- Full-scale scientific data collection and CAD based stream design
- U.S. Army Corps and state and federal agency permitting
- Fish and macroinvertebrate habitat improvement
- Structural implementation and construction

### Fisheries Science:

- Electrofishing population surveys and reporting
- Benthic Macroinvertebrate studies and forage base analysis
- Fishery management and consulting

### Stream Corridor Analysis:

- Riparian plant species inventory
- Riparian identification & classification
- Riparian condition assessment
- Wetland delineation

### Stillwater Development:

- Pond engineering and design
- Construction and lining (natural & synthetic)
- Aquatic habitat management
- Custom aeration design & installation

### Fishery Stocking Services:

- Trophy Trout
  - Brown Trout
  - Brook Trout
  - Rainbow Trout (Multiple Species)
  - Cutthroat Trout
- Forage base stockings
  - Freshwater Shrimp (*Gammarus lacustris*)
  - Fathead Minnows (*Pimephales promelas*)



SFG conducting a fish population survey



Detailed stream corridor analysis



SFG's Freshwater Shrimp nursery