

SWEETWATER 2019

SFG – NEWS AND UPDATES

Over the last several years Sweetwater has written numerous times about small stream owners and livestock operations adding, converting and employing previously underutilized water resources to obtain maximum intrinsic and financial value. Goals range from simply improving and maximizing land use efficiency to full-scale fishery and wildlife enhancements. 2018 was another year in this continuing and positive trend with the full range of needs and goals once again represented. Read on to check out a couple of examples from 2018!

Fishery Creation and Enhancement - Larimer County Colorado

Northwest of Fort Collins, Trail and Pratt Creeks are small fisheries with big potentials. These two streams served exclusively as irrigation sources for hay and livestock operations which left them completely untended and severely overgrown.



Pratt, which is a tributary to Trail, is the kind of small stream which is often dismissed as not being capable of supporting a quality fishery.

Trail Creek is several times larger but also suffered from many of the same deficiencies as Pratt. Severely overgrown, a lack of holding water and almost no in-stream structure were the dominant limiting factors.

Sweetwater started by opening up the corridor with fishing beats while maintaining the excellent shade character and vegetated fringe. Following that came the installation of holding structures, pooling and low water structures, fish passage efforts and random placements for habitat diversity.

Fishery Enhancement, Creation and Propagation – Williamson County, Tennessee

Located a little south of Nashville, this fishery is a spring fed paradise. Ownership on this property wanted to take their fishery to the next level and also wanted to try their hand at trout propagation as well. The main fishery is fed by a robust cold-water spring which flows a short distance before being captured by a six acre reservoir.

With propagation one of the primary client goals, Sweetwater consulted on the construction of the





rearing units to ensure successful results with the given resources. Following that Sweetwater was granted a special exemption by the state of Tennessee and proceeded to stock the forage base. The forage base is rich with freshwater shrimp, mayflies, caddisflies and others, making certain our trout are willing and skilled at preying on naturals.

The final step on this client's road to fishery success was Sweetwater introducing a variety of trout sizes along with plenty of trophies for the existing fishery.

Stillwater Fishery Creations

2018 found Sweetwater designing, permitting and constructing multiple ponds throughout Colorado and Wyoming.

Sites ranged from mountains to plains and sizes from 1/4 acre to more than six acres. With such varied sites, Sweetwater had to take multiple approaches for project success.



A common thread throughout however was the installation of quality aeration and advanced water level control structures. Just by making use of these two technologies alone, our clients are spending more time enjoying their amenity and minimizing time spent with water quality and other pond maintenance tasks. Check out the next page for a more thorough explanation of the importance of aeration!

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

Innovation in Fisheries Stewardship and Management

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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