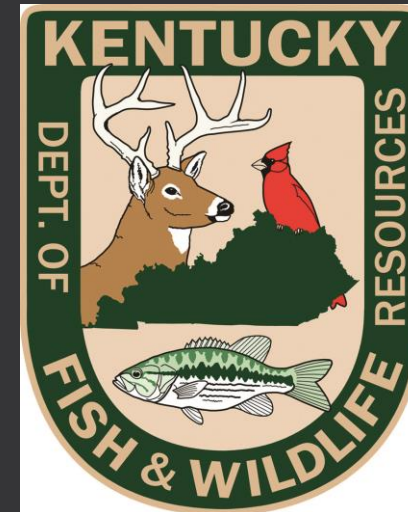


# KY Wetland and Stream Mitigation Program

## Kentucky Department of Fish and Wildlife Resources

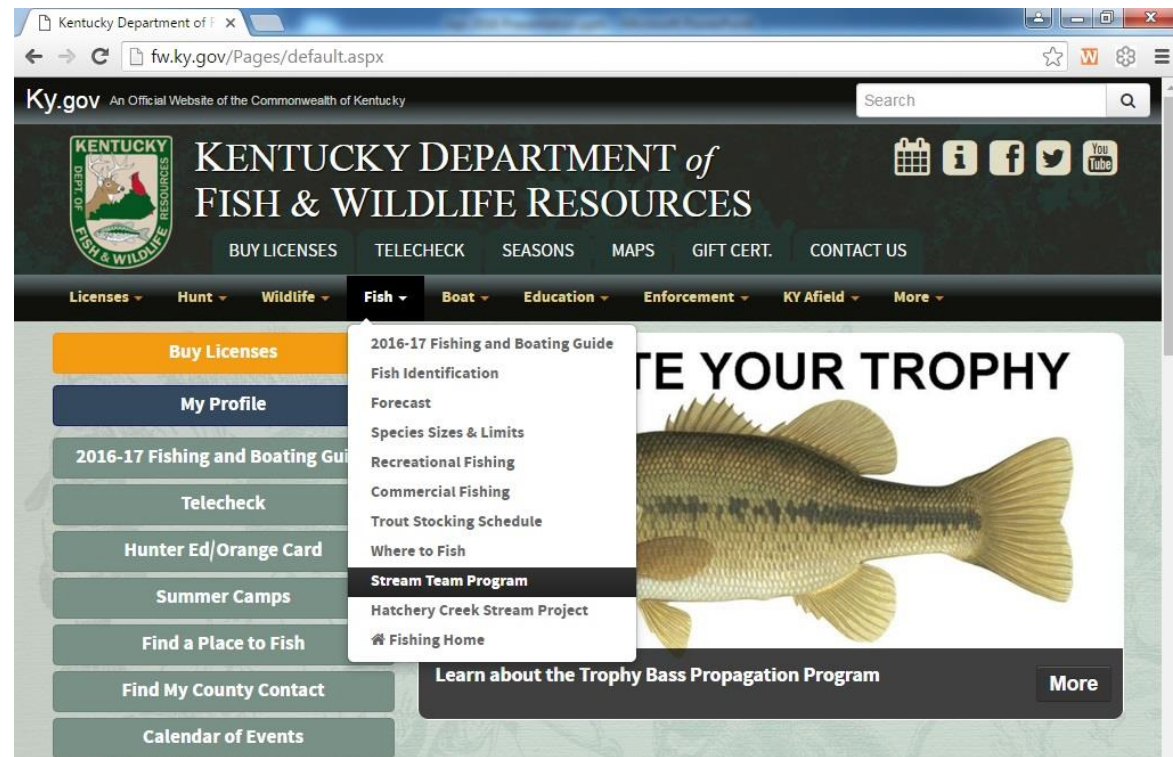
#1 Sportsman's Ln

Frankfort KY 40601



# Who we are

- FILO-*Fees-in-lieu of...*
- Stream Team
- Phase A
  - Site assessments
    - Easements, Fee Simple Purchase, Partners
  - Conceptual Plan
    - Other state and federal entities involved-DECA and RP
- Phase B Mitigation Plan & Design / Consulting Firms
  - Permitting-Regulatory Agencies
  - Construction-Contractors
- Phase C Monitoring & Maintenance-Consulting Firms & KDFWR



# Program History and Operation

- 2000.....State authority KRS 150.255
  - 2002.....U.S. Army Corps Agreement
  - 2003.....IRT Local Procedures
  - 2012.....ILF Modified Instrument
  - 2018-present.....ILF Modified Instrument w/ N. KY Area
- 
- More than \$244,000,000... 2002-present
  - 800,000+ linear feet of stream mitigation
  - 100,000+ linear feet of proposed new projects

# Just what is Mitigation?

- Mitigation =
  - restoring, enhancing, establishing, preserving stream or wetland habitat to compensate for losses
- Other Mitigation Basic Requirements:
  - **Permanent protection**: easement, deed
  - **In-kind** compensation for loss
  - Assurances (financial for ILF & Banks)
  - Long term management

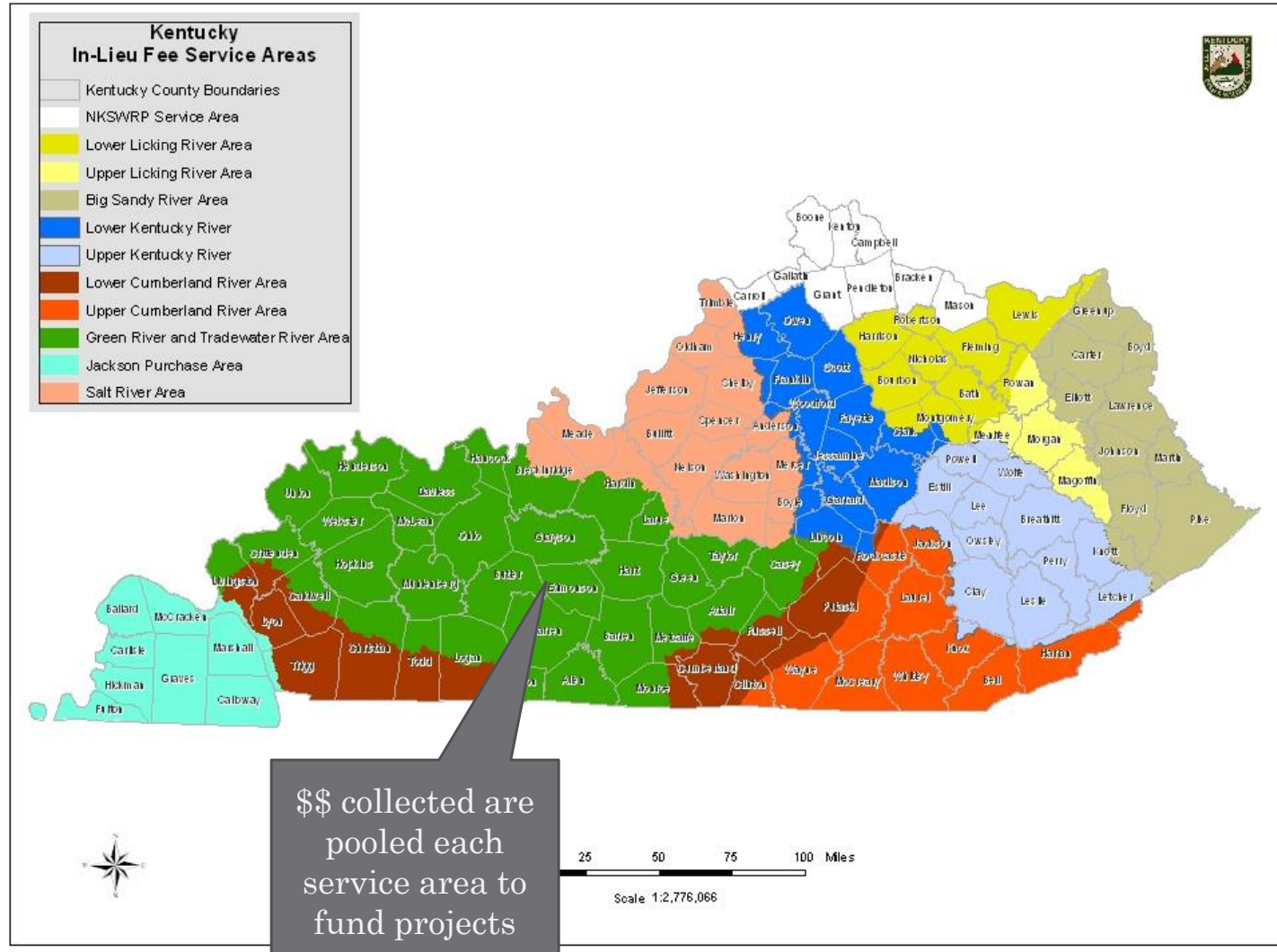
# Activities Requiring Mitigation



Permanent loss of streams: fill from highway construction, development, etc.



# 11 Service Areas

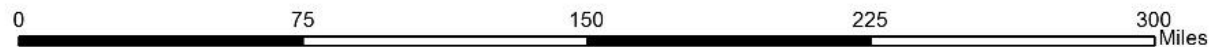
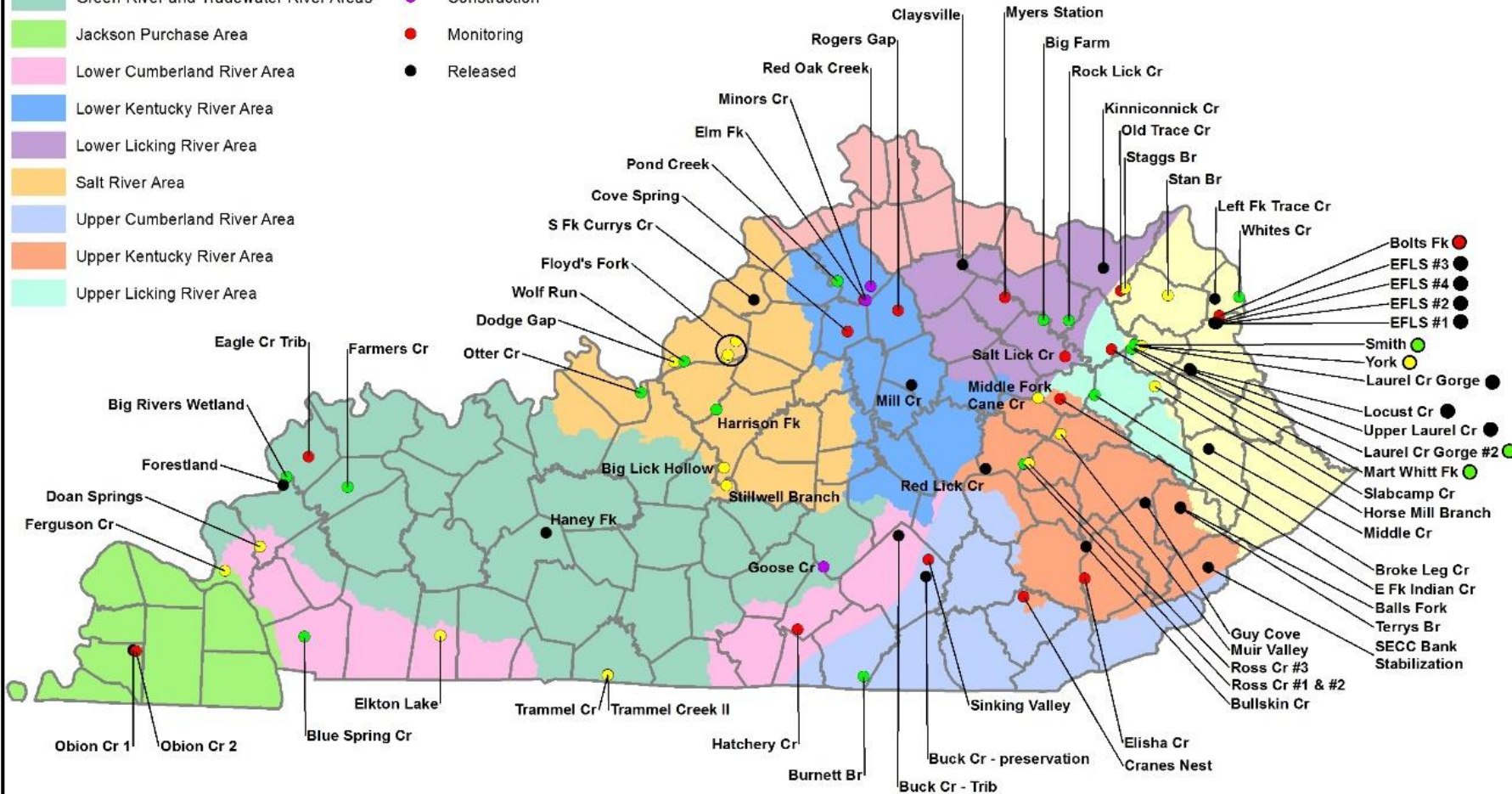


# Kentucky Wetland and Stream Mitigation Program 2018 Project Status

## FILO Service Areas



## Project Status December 2018



# Project Milestones

- Site Selection
- Conceptual Plan Approval (IRT)
- Design and Permitting
- Construction
- Monitoring
- Long Term Maintenance





# Partnerships

- U.S. Army Corps of Engineers
- KY Division of Water
- U.S. EPA
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- U.S. Geological Survey
- Colleges and Universities
- Landowners and Land Trusts
- Local watershed groups
- City and State Parks

- Non-profit Organizations
- Other State Agencies

**HATCHERY CREEK**

**HATCHERY CREEK UPPER REACH**

**HATCHERY CREEK LOWER REACH**

**CAMPGROUND**

**WOLF CREEK NATIONAL FISH HATCHERY**

**CUMBERLAND RIVER**

**FISH MIGRATION BARRIER**  
A waterfall over bedrock separates the upper reach of Hatchery Creek from the lower reach. Although it provides creek banks, it prevents fish from moving upstream. Water downstream of the barrier is so shallow that fish can't swim through to reach the 4-foot ledge from the barrier.

**RIFFLES**  
Riffles were constructed by placing boulders on the streambed to create a gentler slope than the old stream. It has riffles, pools and wetlands. These improvements will significantly reduce erosion into the Cumberland River.

**WETLAND**  
The water channel flows through wetlands, which help control and store the excess flow. Wetlands provide habitat for young trout, crickets and other fish, and store soil that has eroded and grain.

**STEPPED POOL SYSTEM**  
Hatchery Creek descends 12 feet during its first mile. In the past, this steep descent, in places, led to the Cumberland River by a series of steps. These rock steps generate erosion and trap silt which will be migrated from the river into the upper reaches of the stream. The stream now has four pools, one from a dam in each reach making the steep jump.

**WHY RESTORE STREAM AND WETLAND HABITAT ON HATCHERY CREEK?**

Over the years, Hatchery Creek carved a deep gully on its way to the Cumberland River. Dirt washed from the banks blanketed the streambed, eliminating the rocky nooks and crannies that insects need for survival. Erosion and the sediment it carries is Kentucky's leading cause of stream impairment, and a threat to healthy fisheries. The Hatchery Creek Restoration Project is a model of a healthy stream system. It has a gentler slope than the old stream. It has riffles, pools and wetlands. These improvements will significantly reduce erosion into the Cumberland River.

The Hatchery Creek Restoration Project was paid for entirely with monies held in trust for stream and wetland restoration from the Kentucky Wetland and Stream Mitigation Fund, which is sponsored by the Kentucky Department of Fish and Wildlife Resources. No state general funds, tax dollars, or fishing and hunting license fees were used for this project.

The program through an agreement with an interagency review team chaired by the U.S. Army Corps of Engineers in cooperation with the U.S. Fish and Wildlife Service and the Kentucky Division of Water. The program operates statewide, undertaking habitat restoration projects like Hatchery Creek to offset losses and impacts to streams and wetlands.

**Logos:** U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Geological Survey, Kentucky Department of Fish and Wildlife Resources, Kentucky Division of Water.

# A Few Requirements

- **Landowner Cooperation** – Mineral rights attached, easement required: A permanent conservation easement is required of all projects. Still have rights-of-way. Does not grant public access. Provides protection and allows us access for monitoring, maintenance, etc.
- **Stream Size** – watershed size in relation to stream location
- **Project Size** – projects over 2,000 LF
- **Degree of Impairment**
- **Likelihood of Success**
- **Availability of In-Lieu Fees**

# U.S. Forest Service Elisha Creek-Leslie County KY



Before

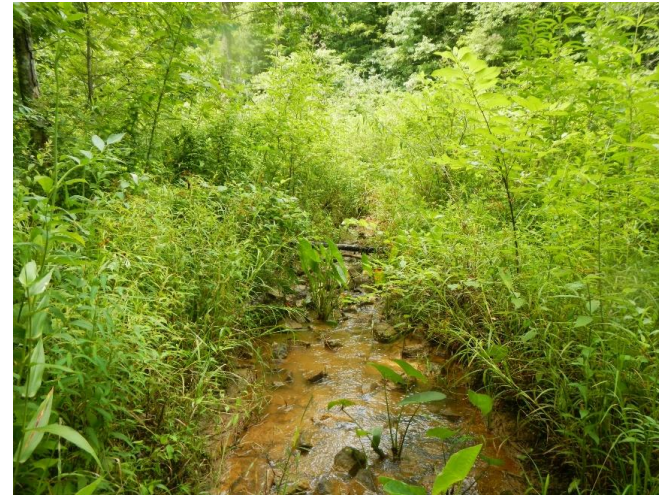


During

# U.S. Forest Service Elisha Creek-Leslie County KY



After



# City of Frankfort Cove Spring Stream and Wetland Restoration Project-Franklin County, KY



Before



After

# City of Frankfort Cove Spring Stream and Wetland Restoration Project-Franklin County, KY



Before



After

# Future Partnerships

- Assistance with site selection-More boots on the ground!
- Round table or working group discussions
- Knowledge of program requirements

