

Fort Leonard Wood

Directorate of Public Works (DPW)
Environmental Division
Natural Resources Branch (NRB)

Sport Fisheries Management Summary 2023



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Picture: Scott (Marty) Patrick holding a Spotted Sucker sampled in Gravel Pit Pond.

Abstract:

Fort Leonard Wood (FLW) Military Installation provides angling opportunities in 18 impoundments, two streams (Big Piney River and Roubidoux Creek), and Stone Mill Spring Branch. In 2023, 4,183 angling trips were recorded through the iSportsman Portal, but more trips likely took place that were not reported. A total of 474 harvested fish were reported including sunfish, channel catfish, black bass, and crappie. Fisheries outreach in 2023 included our annual Youth Trout and Catfish derbies along with Earth Day participation, and we appreciated the help from multiple entities. Four priority impoundments (Bloodland Lake, Penn's Pond, Bloodland Pond, and Lower Indiana Pond) were sampled along with impoundments on sampling rotation. Fisheries management goals for 2023 included sampling crappie in two impoundments, improving angler access by reducing nuisance vegetation, and complete one dual purpose project to increase littoral zone and angler access.

Introduction:

Recreational fisheries "improves the quality of life" for military personnel and families under the *Department of Defense (DoD) Biodiversity Management Strategy* (DoD 1996) to support the military mission, and as part of Fort Leonard Wood, this is our goal for recreational fisheries. Specific goals and objectives for recreational angling on FLW can be viewed in the Integrated Natural Resources Management Plan (INRMP) that is updated annually by the Natural Resources Branch (NRB).

It is likely that the number of fishing trips and fish harvested are low estimates because iSportsman was not required to be used by anglers until fall 2019, but to our knowledge, iSportsman check-ins are improving. Although data from iSportsman is not ideal, it provides data for relative use of impoundments and harvest.

Angling:

From January through November 2023, a total of 4,183 fishing trips were recorded in iSportsman recreation portal (Table 1), and 474 fish were reported as harvested (Figure 1). The top five visited impoundments are prioritized for management efforts, and in 2023 these included Bloodland Lake, Training Area (TA) 250 Lake, Penn's Pond, Indiana Avenue Ponds, Bloodland Pond, and TA 228 Pond (Table 1). Harvest of sunfish and bass was comparable to 2021, but there was a slight increase of Channel Catfish harvest (Figure 1). It is uncertain if the difference is due to harvest, or angler use of the iSportsman portal. Stocking for 2024 consisted of 1,479 Channel Catfish (sizes 8-18 inches) and 70 Grass Carp in fisheries managed impoundments, and 5,125 catchable size (~10 – 14 inches) Rainbow Trout in Stone Mill Spring Branch.

Outreach:

Two youth fish derbies are hosted by FLW fisheries in most years: our annual Youth Trout Derby at Stone Mill Spring Branch and Catfish Derby at TA 228 Pond. Both events were a great success (other than few catfish caught), and many youths were provided with a fishing opportunity.

The FLW youth trout derby was held Saturday February 25, 2023, with great attendance. A total of 152 youth participated ranging in ages from 1 to 15, and 25 were fishing for the first time. We had great support from the FLW Outdoor Adventure Center, FLW BOSS (Better Opportunities for Single Service-members), Missouri Department of Conservation (MDC), and U.S. Forest Service.

The youth catfish derby was hosted on Saturday June 10, 2023, by the FLW NRB and MWR Outdoor Adventure Center (OAC) at TA 288 Pond. We had 103 youth attend ages 2 to 15, and 11 attendees were fishing for the first time. Fish stocked included 350 Channel Catfish 12" – 16" and 50 Channel Catfish of 18" or greater in length. It was a great event with beautiful weather, but very few catfish were caught.

Sport Fish Sampling and Management Projects:

Spring sampling for black bass and sunfish was conducted using boat electrofishing in April and May of 2023 on Bloodland Lake, Lower Indiana Avenue Pond, Penn's Pond, Bloodland Pond, Training Area (TA) 27A Pond, Range 25 Pond, Gravel Pit Pond, and TA 228 Pond. Littlewood Pond and Babb's Pond were intended to be sampled, but time was limited. Sampling for Channel Catfish was conducted in Penn's Pond during May and June using baited hoop sets (group of three hoop nets in a spindle wheel shape), but efforts were not successful enough to provide quality data. Catfish spawning activity may be a reason for low numbers sampled. Fish species commonly encountered included Largemouth Bass, Bluegill, and Redear Sunfish. Other species encountered included Black Crappie, Channel Catfish, Spotted Suckers, and Grass Carp. Catch per unit effort and Proportional Size Distribution (PSD) values were calculated for species in sampled impoundments and can be viewed in the detailed FLW annual fisheries report.

Sampling has been conducted annually for prioritized impoundments (Bloodland Pond, Penn's Pond, Lower Indiana Pond, and Bloodland Pond), and a three-year rotational sampling plan is followed (pending on conditions) for all other impoundments. Overall, sport fisheries management sampling was not a priority in 2023 due to efforts focused on the water intake weir repair and Aquatic Organism Passage (AOP) construction on the Big Piney River, but specific management projects were conducted as determined necessary.

Management Projects and Goals (2023/2024)

Management projects in 2023:

- Increased Grass Carp stocking for Penn's Pond, Indiana Pond, and Bloodland Lake continuing from 2022.
- Stone Mill Spring Road repair from flood damage.

Gravel Jetties for Habitat and Access

In 2023, we did not meet our goal of constructing additional gravel jetties for fish habitat and angler access. For 2024, we will communicate with USAF 368th Training Squadron to determine if material and time is available to construct new structures. Increased littoral habitat area might support increased populations for popular sportfish (e.g., Bluegill and Largemouth Bass) in small impoundments pending other resources. In the past, anglers have expressed their gratitude for improved access, and we hope to continue improving access with new structures.

Grass Carp Stocking

Macrophytes are an important component of pond ecosystems, but at high densities, they often provide a nuisance for anglers. Grass Carp can provide a biological method to reduce macrophytes (e.g., coontail and hydrilla), but Grass Carp do not equally consume all species (e.g., cattails and watershield). As part of FLW fisheries management, our goal is not to remove all vegetation but to maintain low abundance at popular bank access locations for anglers. Our objective for 2021 and 2022 was to densely stock Grass Carp for macrophyte reduction in TA 228 Pond, Penn's Pond, Lower Indiana Pond, and Bloodland Lake.

In TA 228 Pond, submerged vegetation (primarily coontail and milfoil) has decreased since 2021 with increased Grass Carp stockings (see stocking records). Quantitative samples of macrophytes have not been collected, but visually, the pond has changed from dense submerged vegetation throughout the littoral zone to minimal cover. This is considered successful because our current management goal for TA 228 Pond is to provide a water body with easy access for our youth catfish derby.

Penn's Pond continued to support dense submerged vegetation (primarily Eurasian Milfoil) in 2023, but additional grass carp were stocked in 2022 and 2023 for continuing efforts to reduce nuisance vegetation. Quantitative vegetation sampling efforts have not been conducted to measure vegetation reduction, and for this coming year, sampling is not planned. Grass Carp are typically not considered effective for Eurasian Watermilfoil management, but reduction has been reported with Grass Carp stocked at high densities. Coontail is also abundant, and with increased stocking of Grass Carp, Eurasian Milfoil is replacing consumed coontail. Herbicide options will continue to be considered in 2024 pending priorities and budgets.

Fish stocking in 2024 should include Grass Carp for Bloodland Lake, Penn's Pond, and Breeden Spring Pond to manage macrophyte management for angler access.

Crappie Management

We had intentions to begin management specifically for crappie (Black Crappie and White Crappie) in FLW impoundments, but multiple hurdles were encountered. Equipment (fyke nets) were not able to be purchased, and appropriate conditions for water temperature in spring 2023 occurred for a very short period. We will repeat our efforts in 2024, and black crappie have been added to the fish stocking agreement. Following crappie sampling, stocking will be considered based on data analysis. Pending on results and angler interest, regulations may be changed to improve crappie angling opportunities.

Goals for 2024

Below are general goals for the FLW Fisheries Management program. Specific impoundment or project goals can be found in the 2024 FLW fisheries management detailed report.

Goals for 2024:

- 1) Sample crappie with appropriate methods in two impoundments.
- 2) Reduce nuisance macrophytes to improve angler access.
- 3) Complete one project to increase littoral zone and angler access.

Table 1. The number of recreational angling trips made to fishing impoundments January through November 2023, Fort Leonard Wood Missouri.

| Impoundment | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------|------|------|------|------|------|
| Bloodland Lake | 1097 | 1304 | 1298 | 1114 | 1195 |
| TA250 Lake | 375 | 619 | 588 | 576 | 776 |
| Penns Pond | 195 | 441 | 440 | 337 | 394 |
| Indiana Avenue Pond | 197 | 290 | 294 | 347 | 487 |
| TA228 Pond | 189 | 272 | 194 | 202 | 264 |
| Bloodland Pond | 141 | 243 | 247 | 228 | 277 |
| Range 27A Pond | 100 | 176 | 138 | 122 | 131 |
| Range 25 Pond | 70 | 159 | 95 | 65 | 77 |
| Gravel Pit Pond | 137 | 135 | 107 | 78 | 111 |
| Decker Ridge Pond | 83 | 115 | 103 | 85 | 91 |
| Route 20 Pond | 68 | 110 | 97 | 140 | 123 |
| Babb Pond | 47 | 100 | 53 | 29 | 86 |
| Breeden Spring Pond | 81 | 91 | 81 | 125 | 84 |
| Littlewood Pond | 45 | 28 | 49 | 43 | 71 |
| Knights Pond | 7 | 25 | 16 | 14 | 7 |
| Macedonia Pond | 18 | 20 | 21 | 14 | 4 |
| Cook Pond | 2 | 16 | 17 | 5 | 5 |
| Total | 2852 | 4144 | 3838 | 3524 | 4183 |

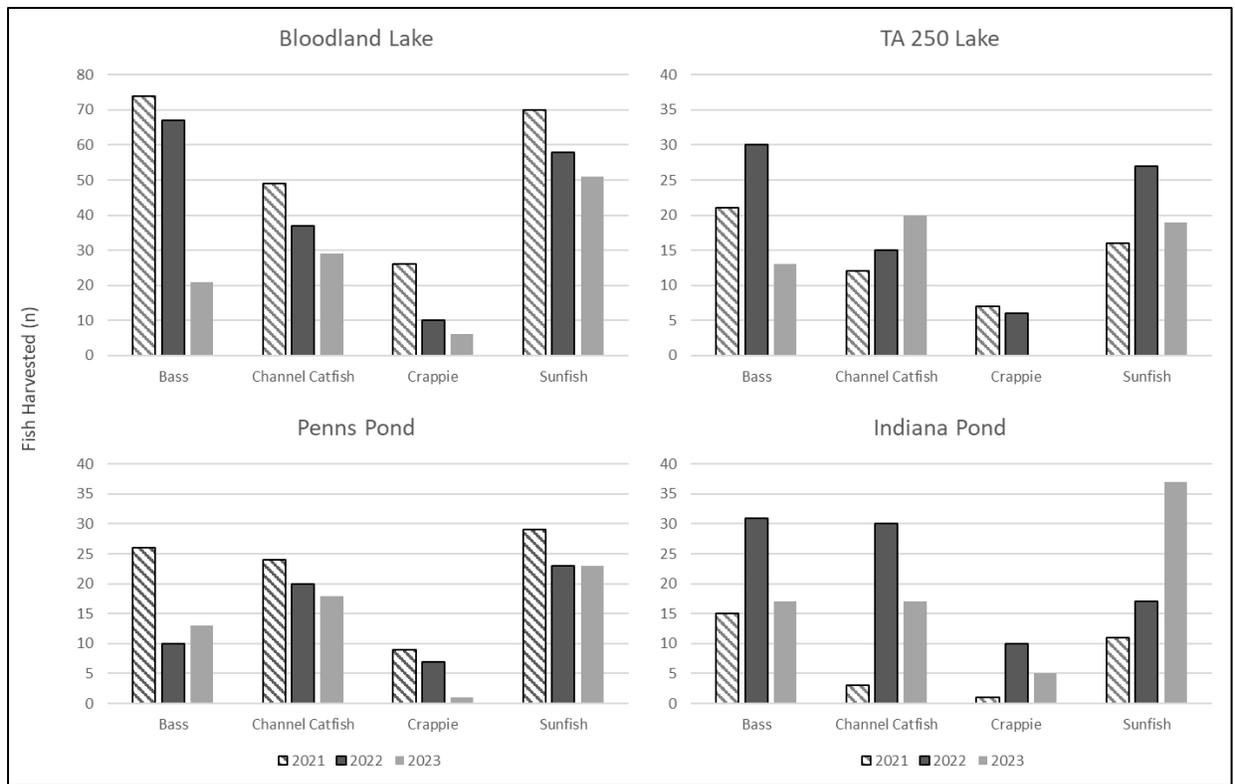


Figure 1. Fish harvested in 2023 totaled to 474 including black bass species, Channel Catfish, crappie species, and sunfish species. Harvest data is provided from the four most visited impoundments other than TA 250 Lake. Data was collected using the iSportsman portal.



Photo 1. The annual Youth Trout Derby was held February 25th, 2023, at Stone Mill Spring Branch with 152 youth participants.



Photo 2. The annual Youth Catfish Derby held on June 10th, 2023, at TA 228 Pond with 103 youth participants.



Photo 3. A Black Crappie sampled from Gravel Pit Pond, 2023.



Photo 4. Joe Turner holding a Channel Catfish sampled from Lower Indiana Pond electrofishing in May 2023.