FISHERIES DIVISION
Federal Aid Job Progress Report

Montana Statewide Fisheries Management

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Project Title: Statewide Fisheries Management
Job Title: Bitterroot River Drainage
Project Number: 3220
Project Reporting Period: January 1, 2003– December 30, 2004

ABSTRACT

Bitterroot River trout populations remained stable over the past few years with some exceptions. Rainbow trout in particular have declined in number in the upper river, but overall have increased slightly. Westslope cutthroat populations have increased since restrictive fishing regulations were imposed in 1990. The parasite associated with whirling disease, *Myxobolus cerebralis* was found in higher densities in the upper river particularly the East Fork Bitterroot. It may be the cause of declining rainbow trout numbers in the East Fork.

Fish population monitoring on the Bitterroot National Forest indicates that population trends vary throughout the drainage. No overall trend is apparent. The debris flows after the fires of 2000 had serious impacts to the fishery in some streams, but most seem to be recovering. Fishing regulation restrictions appear to be having a positive effect in Skalkaho and Daly Creeks

The stocking of Lake Como with kokanee has had mixed success. Early survival appeared to be high, however recent sampling has not identified much adult survival or spawning. Stocking of kokanee will be discontinued.

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BACKGROUND

The Bitterroot River flows in a northerly direction from the confluence of the East and West Forks near Conner, Montana. The river flows 84 miles through irrigated crop and pastureland to it's confluence with the Clark Fork River near Missoula, Montana. Five major diversions and numerous smaller canals remove substantial quantities of water from the river during the irrigation season (Spoon 1987). In addition, many of the tributaries, which originate on the BNF are diverted for irrigation during the summer months and contribute little streamflow to the river during that time. Therefore, many tributaries and the mainstem of the Bitterroot River are chronically dewatered during the irrigation season. Streamflow characteristics vary along the Bitterroot River, with the most critically dewatered reach between Hamilton and Stevensville (Spoon 1987). To help alleviate the mainstem dewatering, the MFWP annually supervises the release of 15,000 acre-feet of water from Painted Rocks Reservoir on the West Fork of the Bitterroot River and 3,000 acre-feet of water from Lake Como. Urbanization and associated development of the floodplain is increasing in the Bitterroot Valley (Javorsky 1994).

The Bitterroot River is an important sport fishery for anglers in western Montana. Pressure estimates from the statewide survey indicate that the Bitterroot River supported and estimated 92,150 angler days during 2003, (McFarland R.C. 2004). Due to the high fishing pressure, fishing regulations have become more restrictive in recent years to protect the adult fish. A creel census was conducted in 1992 and 1993 to assess these impacts. Overall, it indicated that fishing harvest was not having a serious impact on the population of trout but that monitoring should continue (Clancy 1993). Angling pressure has nearly doubled since that creel census. A Bitterroot River management plan is overdue since the original 5-year plan was written in 1991 (MFWP 1991).

Due to the importance of understanding connections between Bitterroot River salmonids and their spawning areas we implanted radio transmitters in westslope cutthroat trout O*ncorhynchus clarki lewisi* from the Bitterroot River in 2003. A private consultant and FWP personnel followed these fish to identify spawning locations.

Streams within the Bitterroot National Forest support widespread populations of native westslope cutthroat and bull trout. Due to the importance of streams within the Bitterroot National Forest (BNF), we have also monitored fish populations there. The Bitterroot National Forest encompasses 1.6 million acres, 71% of which is in Montana. Three mountain ranges, the Bitterroots to the west, the Sapphires to the east, and the Anaconda-Pintlars to the southeast comprise the Bitterroot National Forest. Water flowing within the BNF is excellent in quality and most is considered soft, a result of basin geology. Streams originating from the Bitterroot Mountains are unusually low in hardness and dissolved solids because of the resistant igneous and metamorphic rocks. The streams draining the Sapphire range tend to have higher dissolved solids because of slightly less resistant and more soluble background geology (Garn and Malmgren 1973). Within Montana, the BNF is the headwaters of the Bitterroot River.

During 2000, wildfires burned significant acreages in the Bitterroot drainage. It is estimated that 356,000 acres were burned. Studies of the impacts of wildfire on fisheries indicate that in healthy systems, most negative impacts are short-term (Gresswell 1999). Since wildfire impacts have been widely studied, we did not focus our work on assessing these impacts. However, a graduate study through Montana State University is researching the impacts of the fires on native and non-native trout. (Sestrich,in press).

Historically, Lake Como has been stocked with various species of fish. In the past decade catchable and brood rainbow trout have been stocked annually. Due to the fluctuating water levels in the reservoir, growth and survival has been poor. Beginning in 1997, kokanee, O*ncorhynchus nerka*, were stocked as fingerlings, in an attempt to add some variety for the anglers and study whether kokanee would grow faster than rainbow trout.

METHODS

Fish population estimates on the Bitterroot River were collected on several reaches over the past 23 years. Study reaches were selected based on historical data, streamflow patterns and fishing regulations. The reaches are 2.2-5.1 miles in length. Electrofishing was conducted from a 14-foot long aluminum drift boat fitted with a boom shocking system. The system was powered by 5000-watt generator and current was modified through a Coffelt Mark XXII electrofishing unit. Smooth direct current was used to capture fish. The Peterson mark-recapture method was used to calculate population estimates as modified through the Montana Fish, Wildlife and Parks mark-recapture program. Several mark and recapture runs were required to obtain sufficient sample size to estimate fish populations in some reaches. In recent years, most of the fish collections downstream of Hamilton have occurred at night to facilitate handling of more fish. The population estimates were collected during September and October each year. Brown trout may be migrating by October, therefore, their estimates may be inflated.

During 2003 and 2004 sentinel cages were used to assess the presence and degree of whirling disease. Personnel from the Bozeman office of MFWP installed the cages with the help of regional personnel. During this study period we concentrated on the East Fork and upper Bitterroot River.

A variety of ditches divert water from Skalkaho Creek. Some of the ditches divert water and fish directly from the creek while others mix Bitterroot River water and Skalkaho Creek water before diverting it from the creek. A graduate study was completed in 2003-2004 to assess the impacts of ditches on fish. During 2004 fishscreens were installed in three of the ditches. The study also assessed the effectiveness of these screens.

We monitored fish populations in some streams on the Bitterroot National Forest. Background work that went into selection of the study sites is described in previous reports (Clancy 1993, 1996). Due to the severity and large geographic scale of wildfires on the Bitterroot National Forest in 2000 we selected our sites to assess some of the

future impacts. A graduate project was initiated to study the impacts of these fires on native and non-native fish populations (Sestrich, in press) Most of the sites chosen in the past few years are long term monitoring sites established previously. Fish were captured by electrofishing using smooth direct current. On larger streams a bank electrofishing unit is used powered by 4500 watt generator and current is controlled through a Coffelt VVP-15 unit. On small streams a backpack shocker, the Coffelt Mark 10, was used. We estimated trout populations on monitoring reaches using a mark-recapture technique. Monitoring sections are usually 1000 feet long. On the marking run, fish are released as close to their capture site as possible and approximately one week is allowed between mark and recapture. Population estimates are calculated using the Montana Department of Fish Wildlife and Parks Mark-Recapture program..

RESULTS AND DISCUSSION

East Fork Bitterroot River and Bitterroot River

During 2003 and 2004 trout population estimates were collected from two sections of the lower East Fork of the Bitterroot River. During 2003 population estimates were collected on the Hamilton and Bell Crossing sections of the Bitterroot River. During 2004 population estimates were collected on the same East Fork Bitterroot River sections and the Hannon Memorial and Stevensville sections of the Bitterroot River (Figure 1).

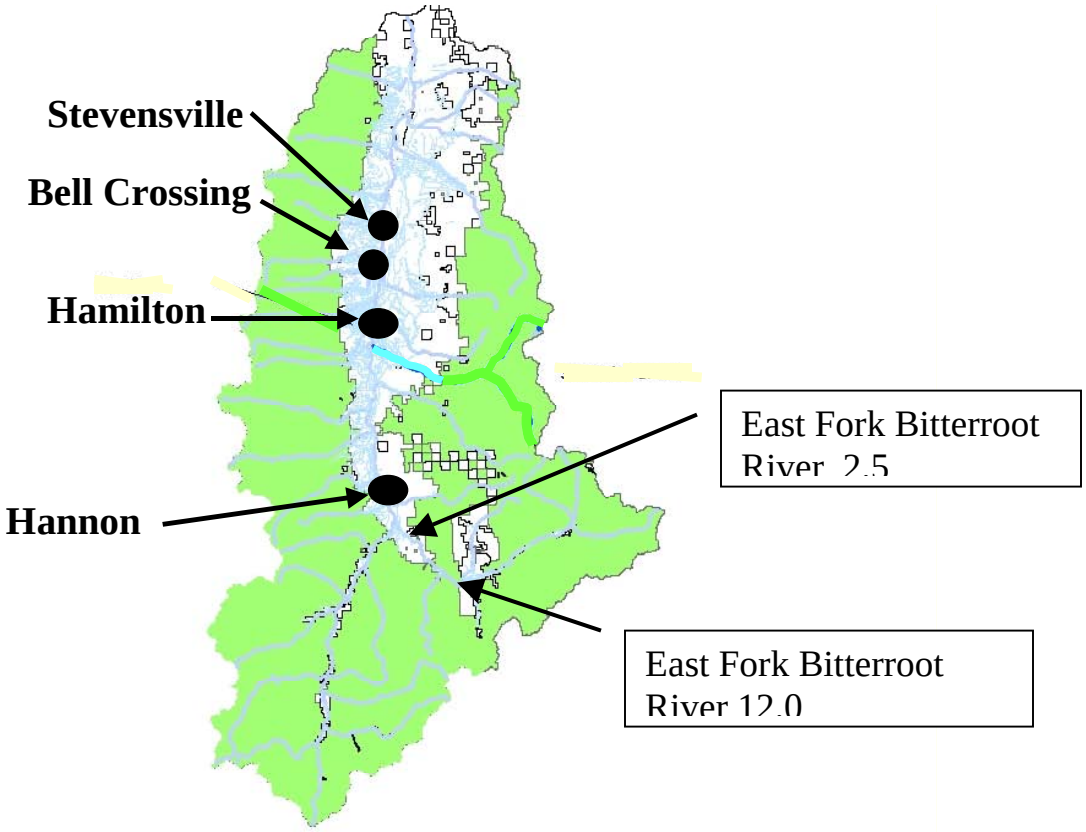

Figure1. Location of East Fork and Bitterroot River electrofishing sections discussed in this report.

Rainbow Trout

Overall, the rainbow trout population estimates indicate a positive trend in the number of rainbow trout, particularly in larger fish (Figures 3-12). One notable exception is the rainbow trout population in the lower East Fork Bitterroot (Figure 4.). In this reach, the rainbow trout population has been declining, possibly due to the presence of whirling disease. Whirling disease is discussed later in the report.

The rainbow trout estimates in the mainstem of the Bitterroot River indicate average populations of 8-12 inch fish and average to above average numbers of larger rainbow trout. Overall, rainbow trout populations are stable to increasing at this time, but may be vulnerable to whirling disease.

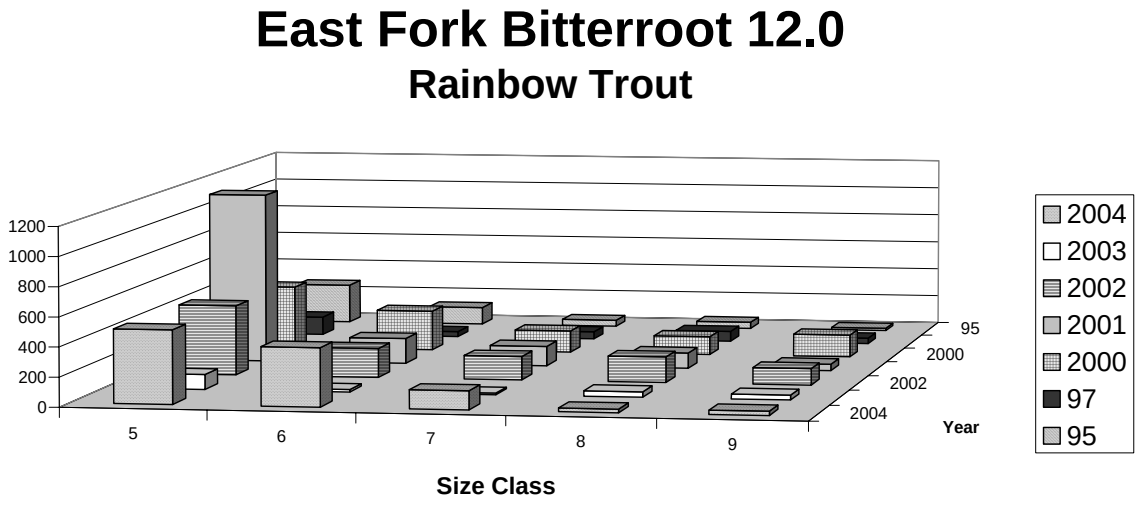

Figure 2. Population estimates of smaller rainbow trout in the East Fork Bitterroot 12.0 section during the years indicated.

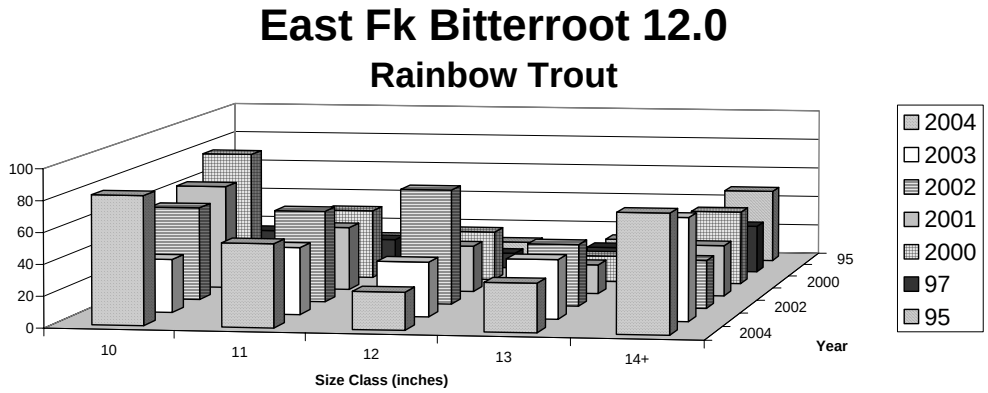

Figure 3. Population estimates of larger rainbow trout in the East Fork Bitterroot 12.0 section during the years indicated.

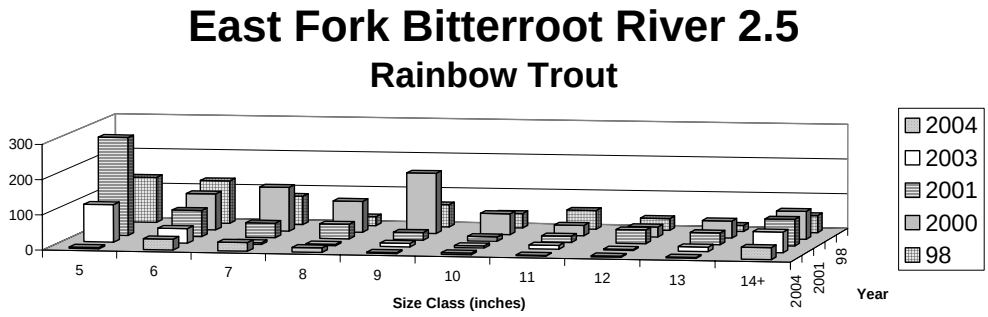

Figure 4. Population estimates of rainbow trout in the East Fork Bitterroot 2.5 section during the years indicated.

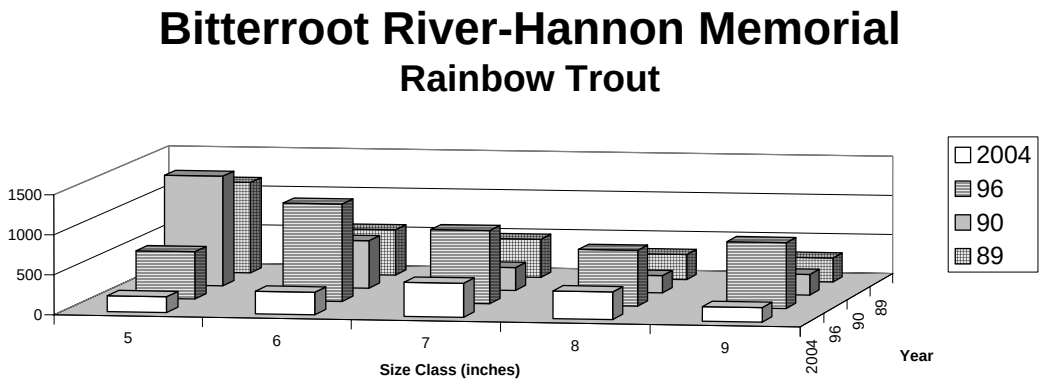

Figure 5. Population estimates of small rainbow trout in the Hannon Memorial section of the Bitterroot River during the years indicated.

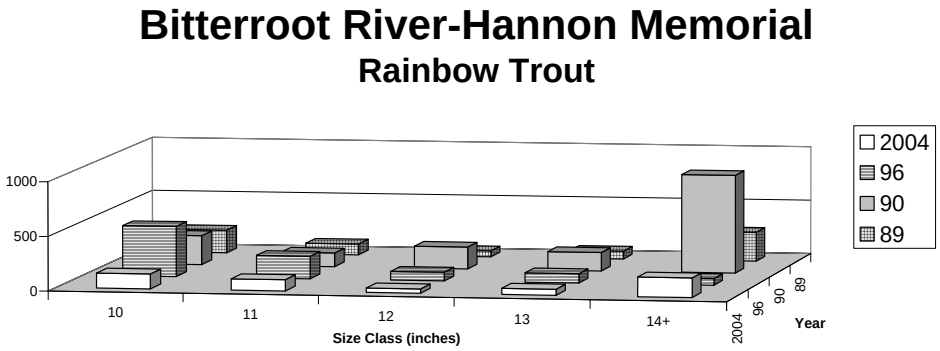

Figure 6. Population estimates of large rainbow trout in the Hannon Memorial section of the Bitterroot River during the years indicated.

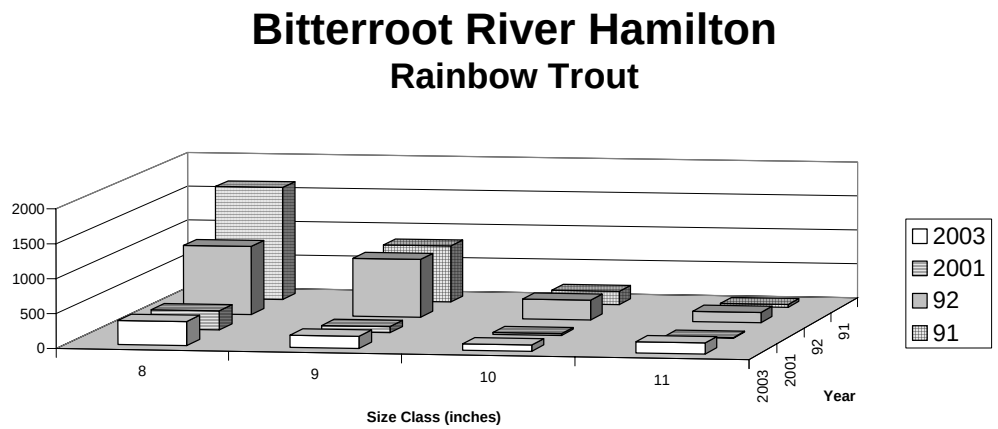

Figure 7. Population estimates of small rainbow trout in the Hamilton section of the Bitterroot River during the years indicated.

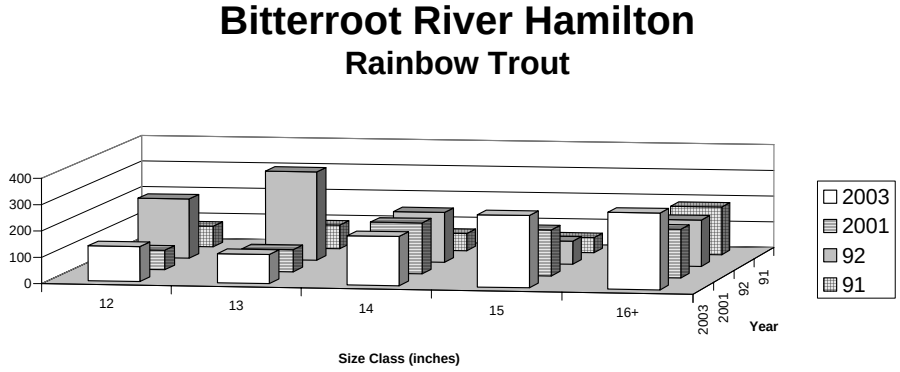

Figure 8. Population estimates of large rainbow trout in the Hannon Memorial section of the Bitterroot River during the years indicated.

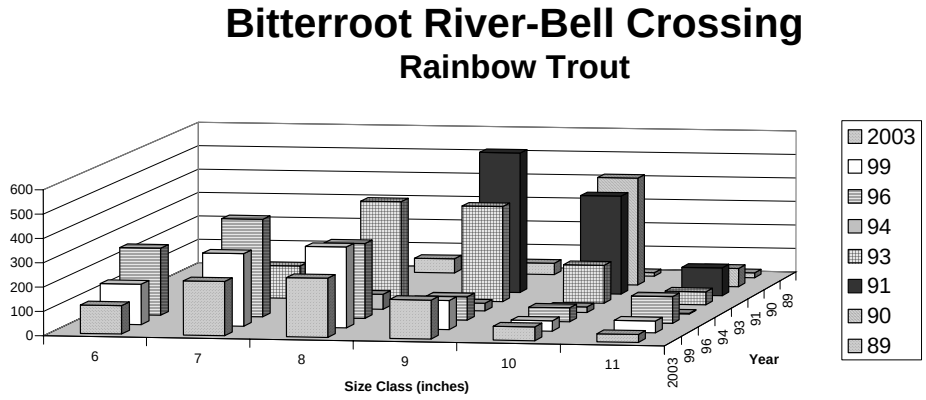

Figure 9. Population estimates of small rainbow trout in the Bell Crossing section of the Bitterroot River during the years indicated.

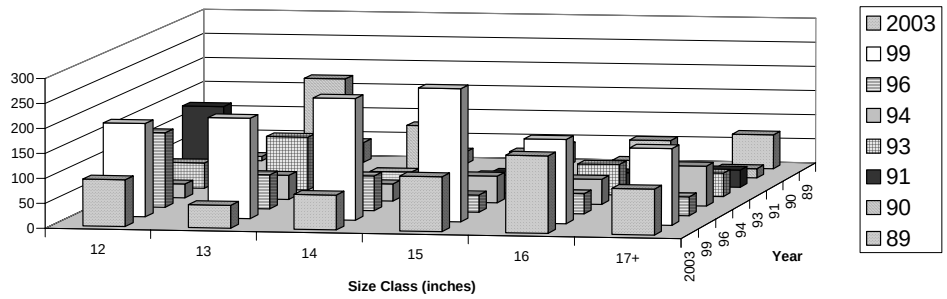

Figure 10. Population estimates of large rainbow trout in the Bell Crossing section of the Bitterroot River during the years indicated.

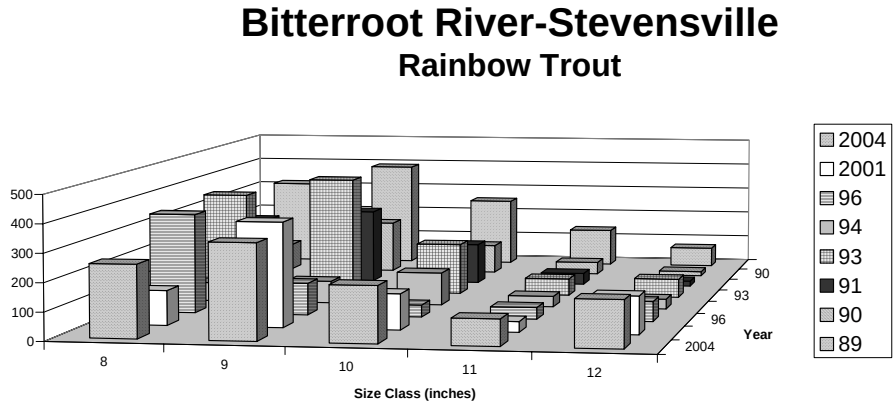

Figure 11. Population estimates of small rainbow trout in the Stevensville section of the Bitterroot River during the years indicated.

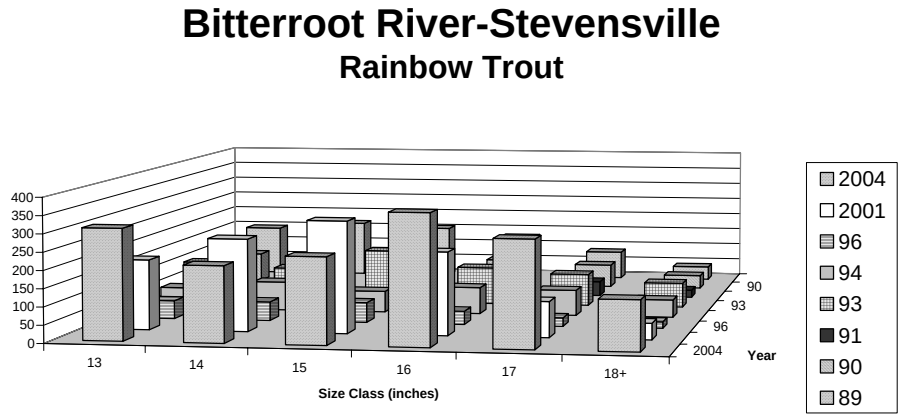

Figure 12. Population estimates of large rainbow trout in the Stevensville section of the Bitterroot River during the years indicated.

Brown Trout

Due to the time of year we collect population estimates spawning migrations have likely begun and this could bias our population estimates. Therefore, brown trout population estimates are more of an index than numeric estimate. Brown trout populations have remained stable in the study sections (Figures 13-22).

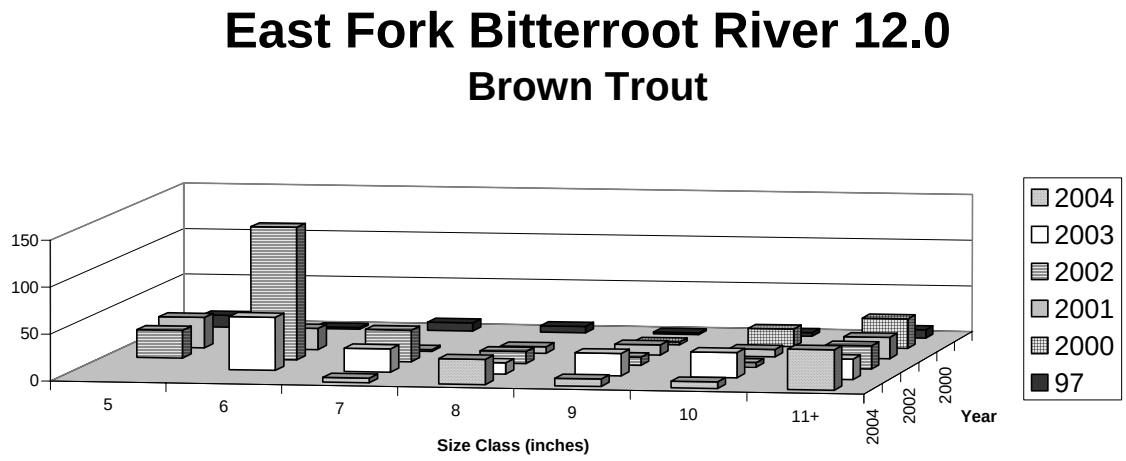

Figure 13. Population estimate of brown trout in the East Fork Bitterroot 12.0 section during the years indicated.

The brown trout populations in the two East Fork Bitterroot sections has remained stable (Figure 13 and 14). Although rainbow trout numbers have declined in the lower East Fork, the brown trout numbers have not changed significantly. This would be consistent with other streams where whirling disease is having an impact.

In the Bitterroot River, our data indicate that brown trout populations have remained stable and possibly increased at Bell Crossing and Stevensville (Figure 15-22).

East Fork Bitterroot River 2.5
Brown Trout

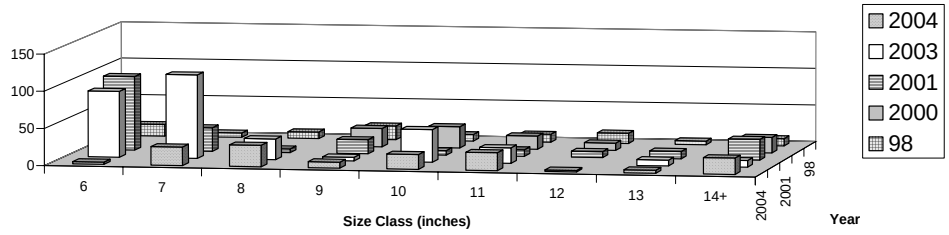

Figure 14. Population estimate of brown trout in the East Fork Bitterroot 2.5 section during the years indicated.

Bitterroot River-Hannon Memorial
Brown Trout

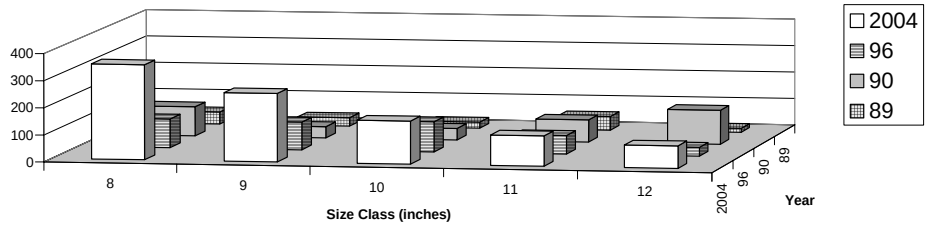

Figure 15. Population estimate of small brown trout in the Hannon Memorial section of the Bitterroot River during the years indicated.

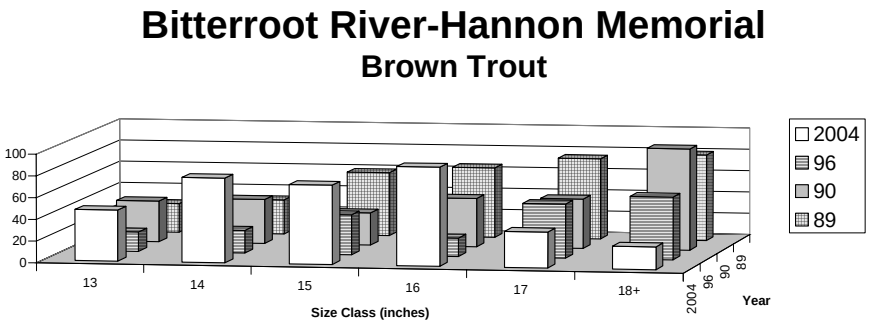

Figure 16. Population estimate of large brown trout in the Hannon Memorial section of the Bitterroot River during the years indicated.

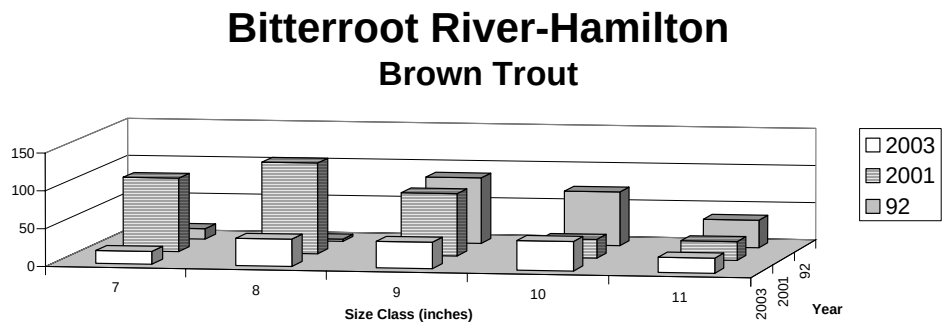

Figure 17. Population estimate of small brown trout in the Hamilton section of the Bitterroot River during the years indicated.

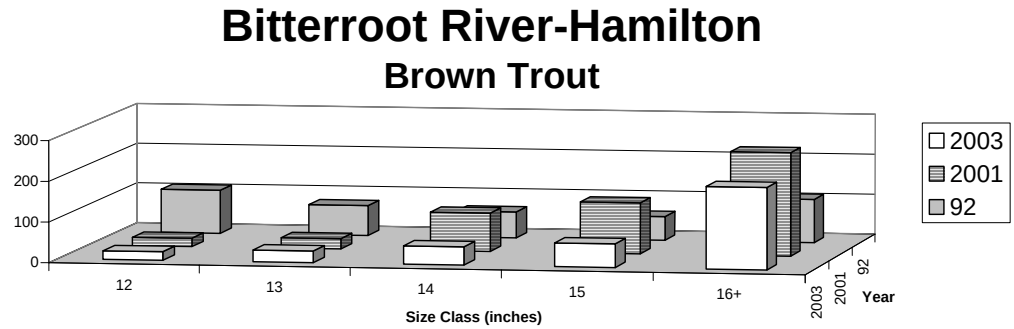

Figure 18. Population estimate of large brown trout in the Hamilton section of the Bitterroot River during the years indicated.

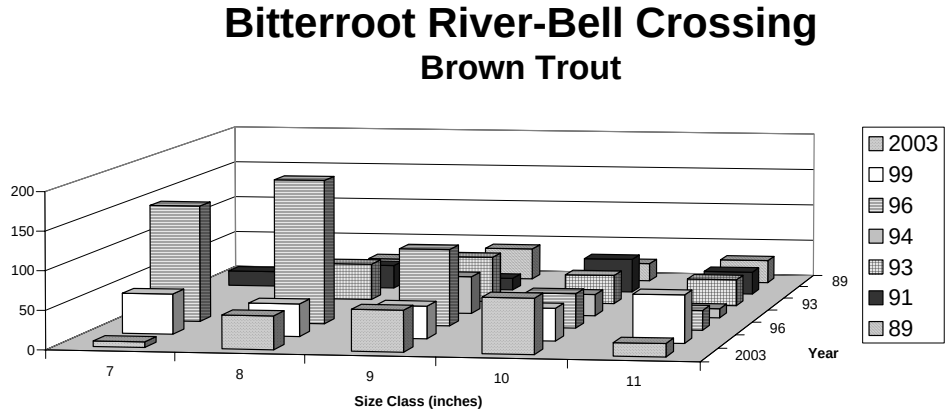

Figure 19. Population estimate of small brown trout in the Bell Crossing section of the Bitterroot River during the years indicated.

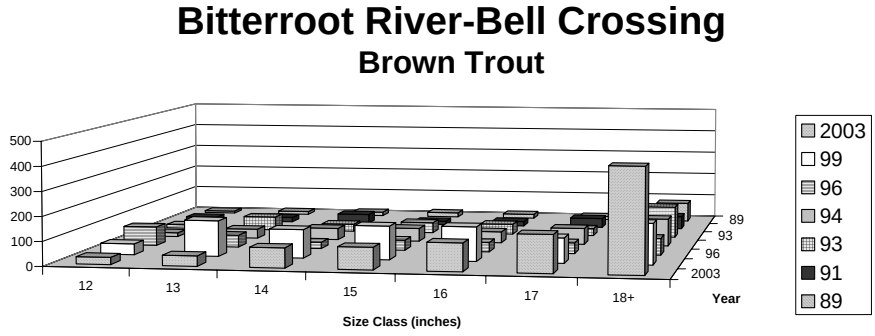

Figure 20. Population estimate of large brown trout in the Bell Crossing section of the Bitterroot River during the years indicated.

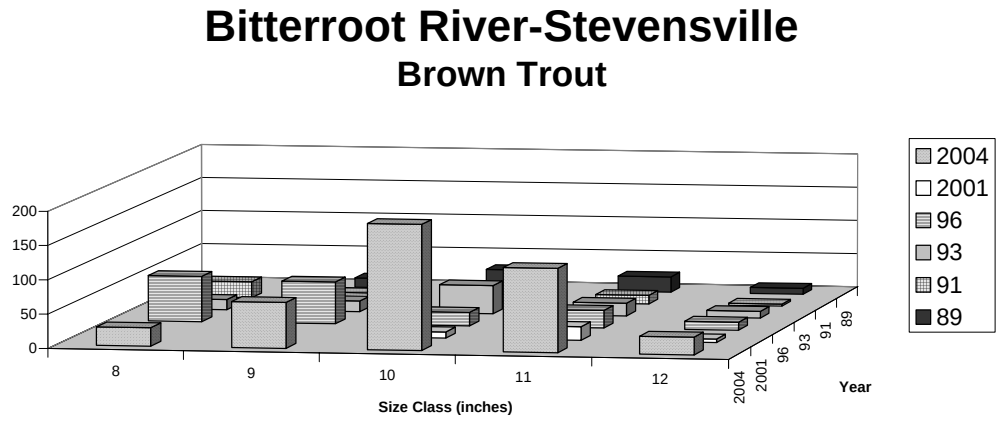

Figure 21. Population estimate of small brown trout in the Stevensville section of the Bitterroot River during the years indicated.

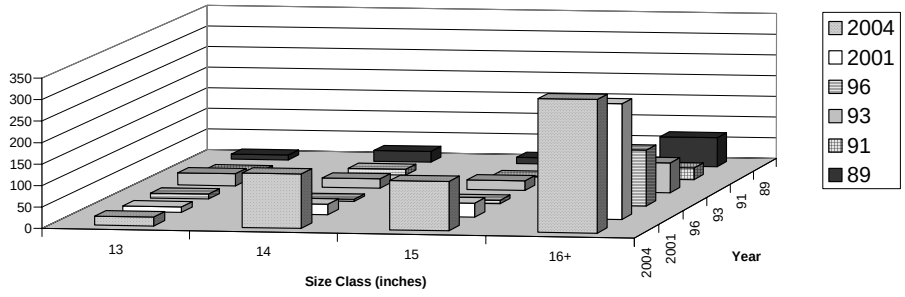

Figure 22. Population estimate of large brown trout in the Stevensville section of the Bitterroot River during the years indicated.

Westslope cutthroat

The population estimates of westslope cutthroat indicate a stable population. The sections we were able to collect population estimates on are not the best sites for conclusive data. Specifically, the lower East Fork Bitterroot River only has recent data, the Bell Crossing and Stevensville sections support low populations and hybridization makes estimates difficult. We were unable to collect a westslope cutthroat population estimate on the Hamilton section and the Hannon section does not have enough historic data to identify a trend.

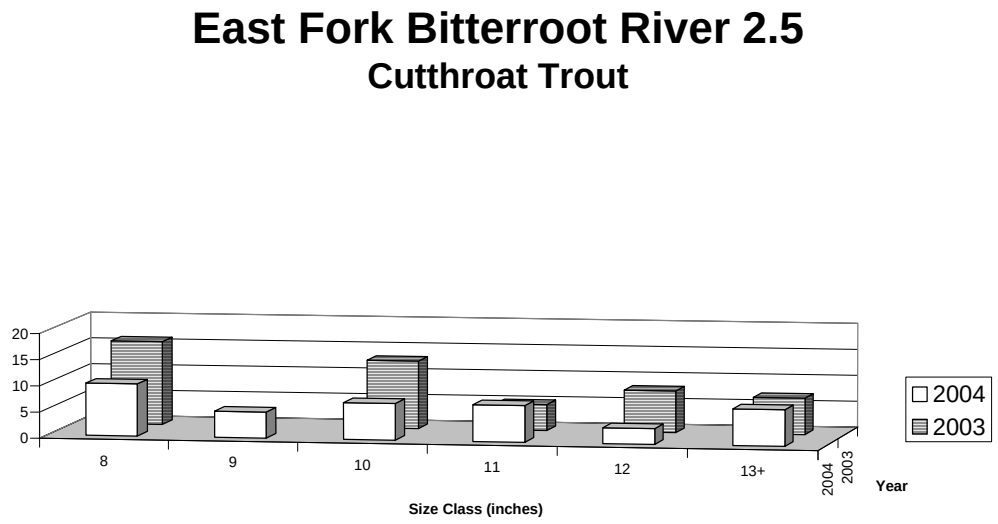

Figure 23. Population estimates of westslope cutthroat in the lower East Fork Bitterroot during the years indicated.

Bitterroot River-Hannon Memorial
Cutthroat Trout

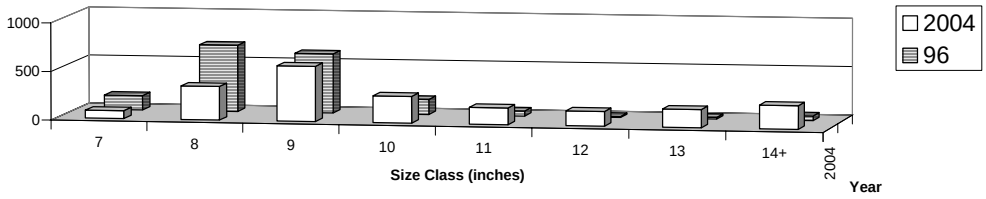

Figure 24. Population estimate of westslope cutthroat in Hannon Memorial section of the Bitterroot River during the years indicated.

Bitterroot River Bell Crossing
Cutthroat Trout

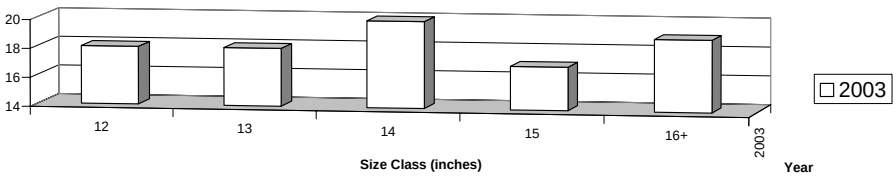

Figure 25. Population estimate of westslope cutthroat in the Bell Crossing section of the Bitterroot River during 2003.

Whirling Disease

Sampling fish for the presence of *Myxobolus cerebralis* was first undertaken in the Bitterroot River in 1995 (Clancy 2003). Since then, continuous sampling has occurred by Fish Wildlife and Parks personnel from Bozeman and region 2. We have used a combination of grab samples and sentinel cages to assess the presence and distribution of the parasite. Prior to 2000 we found that the parasite was present in the Bitterroot River and a few infected fish were found at scattered locations (Clancy and Javorsky 2001). Recent sampling has indicated that the upper Bitterroot River, and particularly the East Fork Bitterroot River, have high infection rates (Clancy 2003).. As previously reported in this document, the population of rainbow trout in the Conner area has declined significantly in the past two years and this may be due to the effects of whirling disease. The highest infection rates in the East Fork Bitterroot River have been found between Conner and Sula (Figure 26). These sites are also sites where high numbers of *T. tubifex* have been located. (Figure 27). These results are from Spring 2003 and 2004. Fall may be a better time to take samples in the Bitterroot system (E.R. Vincent, personal communication). But data from fall 2004 samples are not yet available.

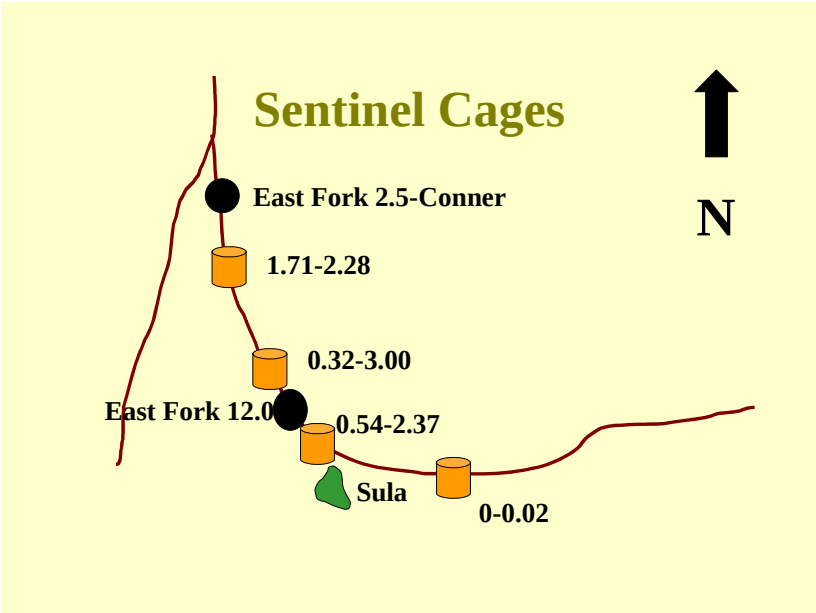

Figure 26. Average infection rates of sentinel fish in cages set at various sites during Spring, 2003 and 2004.

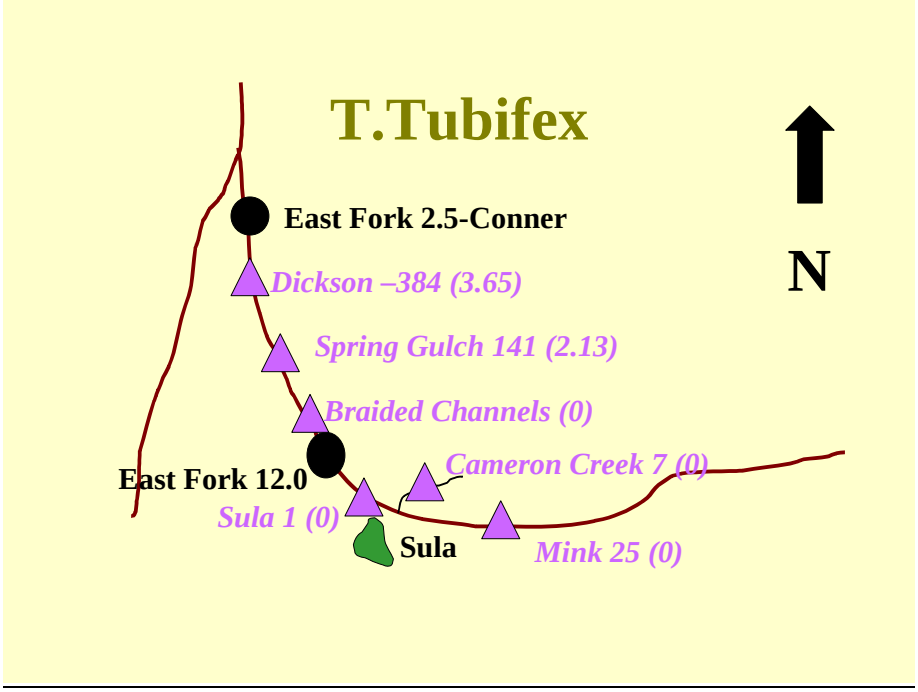

Figure 27. The number of *T.tubifex* captured in qualitative sampling (visual prevalence of infection in parenthesis) at various sites in the East Fork Bitterroot drainage.

Radio Telemetry

During 2003, radio transmitters were implanted in 12 cutthroat trout in the Bitterroot River. The fish were captured between Bell Crossing and Florence and subsequently followed to learn which tributaries were used for spawning. A private contractor followed the fish from an airplane and FWP personnel helped from the ground. In past years, this method has been successful in identifying spawning tributaries (Clancy 2003). During 2003, we also picked up the signals of 5 fish from previous years. Of the 17 fish that were followed, only two ascended tributaries in 2003. One fish ascended Blodgett Creek and one fish ascended into Kootenai Creek.

None of the other fish left the Bitterroot River. Some made substantial migrations yet did not ascend tributaries and others made little or no migration. It is possible that some spawning takes place in the Bitterroot River. The 5 transmitters from past years were in fish of unknown status.

Skalkaho Creek ditches

Electrofishing in the ditches from Skalkaho Creek indicates that a significant number of fish are moving into the ditches during the irrigation season (Clancy 2003). Due to the complexity of the situation on Skalkaho Creek, a graduate project was initiated on Skalkaho Creek through Montana State University. Fishscreens that were installed and functional in 2004 were successful in screening many fish from 3 ditches. However, the status of those fish is still unknown (Gale and Zale 2005).

Bitterroot National Forest

During 2003 and 2004, we continued to monitor fish populations at established sites within the Bitterroot National Forest. Due to the widescale forest fires of 2000 and subsequent debris flows in some tributary streams, a graduate study was initiated to assess the impacts of the fires on native salmonids. Most of the study sites for the graduate study are duplicates of long term monitoring sites sampled previously by personnel from the Bitterroot National Forest or MFWP. I have not included the population estimates from that effort in this report. That data is being collected through Montana State University. The data from that study is being assimilated into our monitoring database.

The following discussion is for sites that were sampled by MFWP unless otherwise noted.

Darby District

The trends in cutthroat populations vary by site and it is not possible to characterize them on a district wide basis, partially due to impacts of the fires of 2000.

Daly Creek 0.7

The Daly Creek fish population was within the normal range from past estimates for both westslope cutthroat and bull trout.

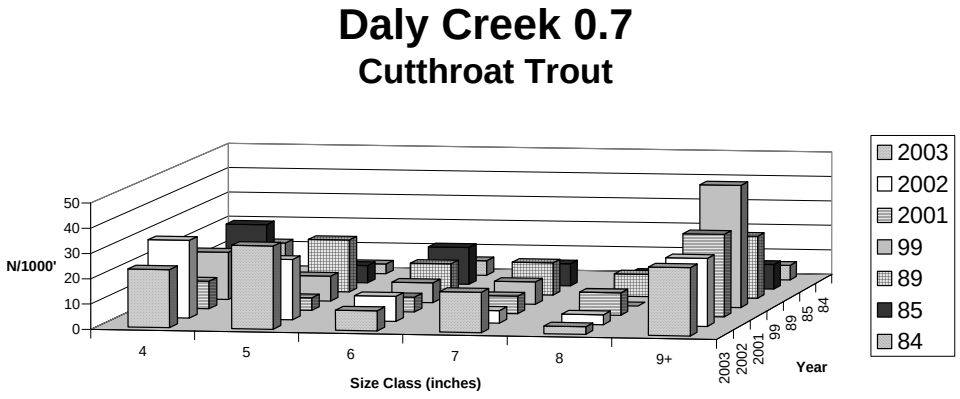

Figure 28. Population estimate of westslope cutthroat in the Daly Creek monitoring reach during the years indicated.

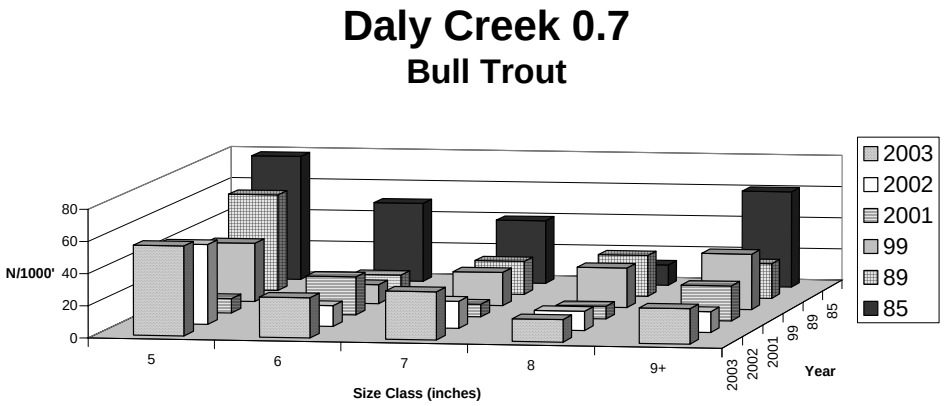

Figure 29. Population estimates of bull trout in the Daly Creek monitoring reach during the years indicated.

Divide Creek 0.1

MSU collected this data that was within the normal range of past data.

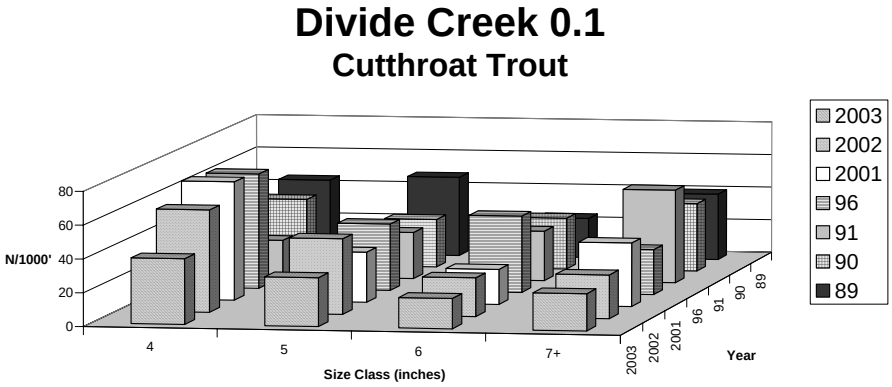

Figure 30. Population estimates of westslope cutthroat trout in the Divide Creek monitoring reach during the years indicated.

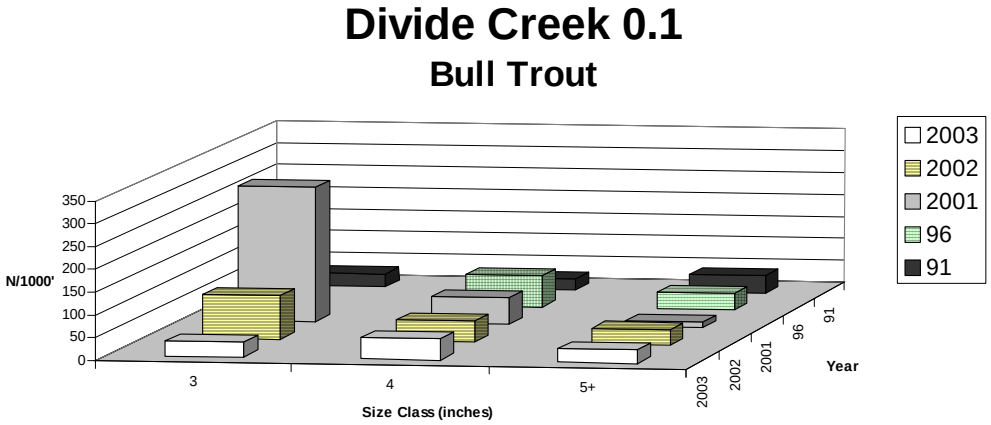

Figure 31. Population estimates of bull trout in the Divide Creek monitoring reach during the years indicated.

North Fork Rye Creek 1.9

This section was impacted by the fires of 2000 and several subsequent debris torrents that caused significant fish mortality. However the population of westslope cutthroat has nearly recovered to pre-fire status, while the brook trout fishery has not. (Figures 32 and 33).

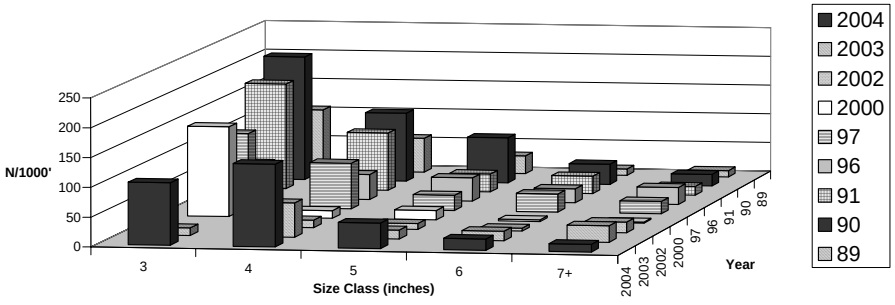

Figure 32. Population estimates of westslope cutthroat trout in the N. Rye Creek monitoring reach during the years indicated.

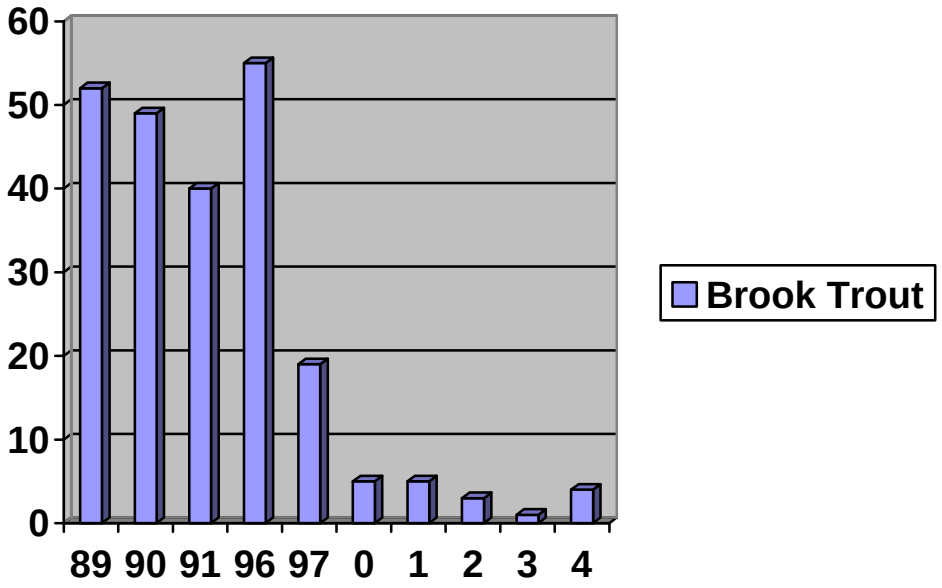

Figure 33. The number of brook trout captured during electrofishing in the North Rye Creek 1.7 section during the years indicated.

Rye Creek 6.6

This section of Rye Creek is just downstream of the mouth of North Rye Creek. Athe data was collected by personnel from the Bitterroot National Forest. The impacts of the fires on this population are unknown but most likely were not significant. The brook trout population has declined since the fires but the cutthroat population initially declined then stabilized (Figures 34 and 35). There may be a relationship between this section and North Rye Creek.

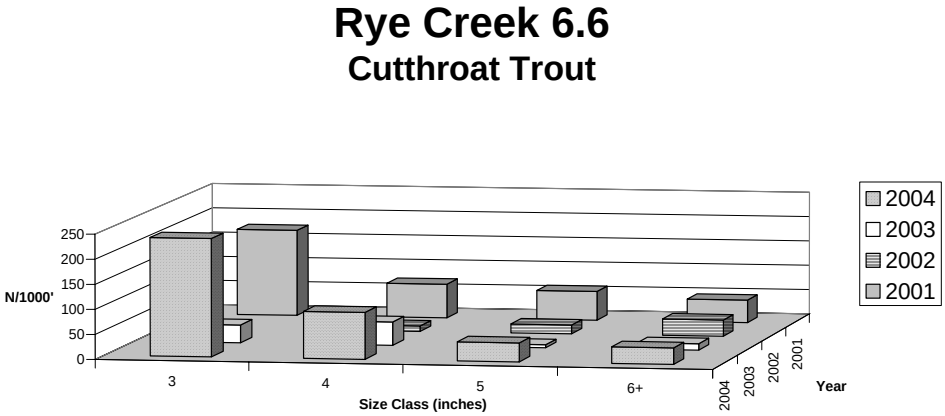

Figure 34. Population estimates of westslope cutthroat in the Rye Creek 6.6 section during the years indicated.

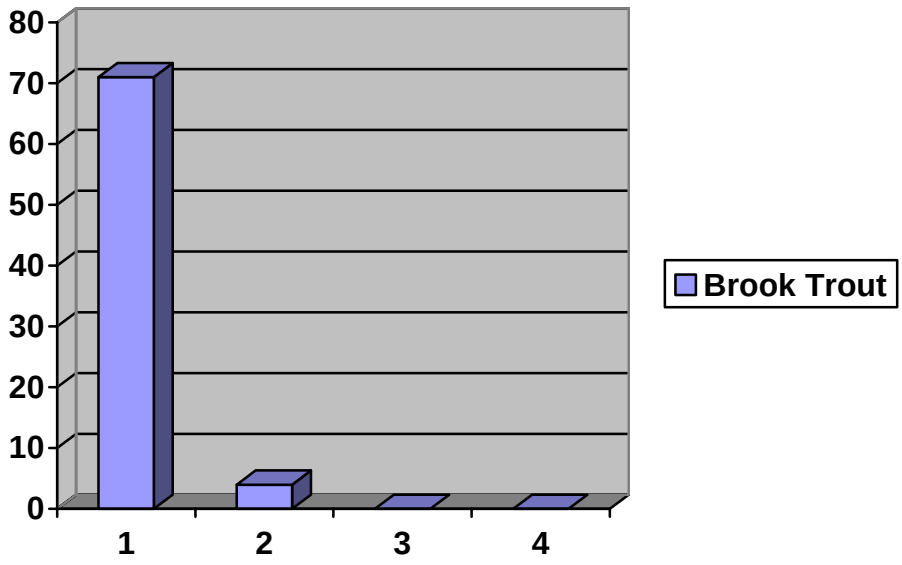

Figure 35. The number of brook trout captured during electrofishing in the Rye Creek 6.6 section during the years indicated.

Rye Creek 12.4

The native fishery of this reach was impacted significantly and possible permanently by the fires of 2000. Before the fires, the section was composed of westslope cutthroat and a small population of bull trout. Since the fire, bull trout have not been captured and increasing numbers of brook trout have been caught in this section. The westlope cutthroat population may have been impacted by the fires, but have recovered to historic levels since.

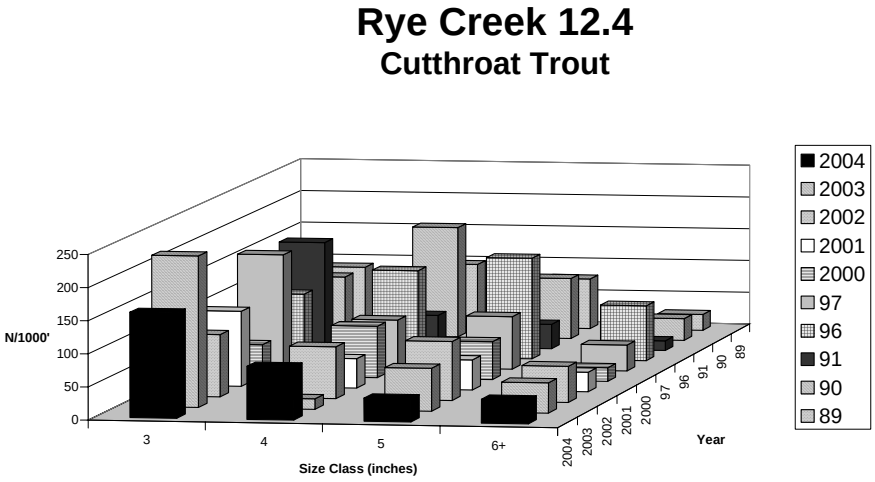

Figure 36. Population estimates of westslope cutthroat trout in the Rye Creek 12.4 monitoring reach during the years indicated.

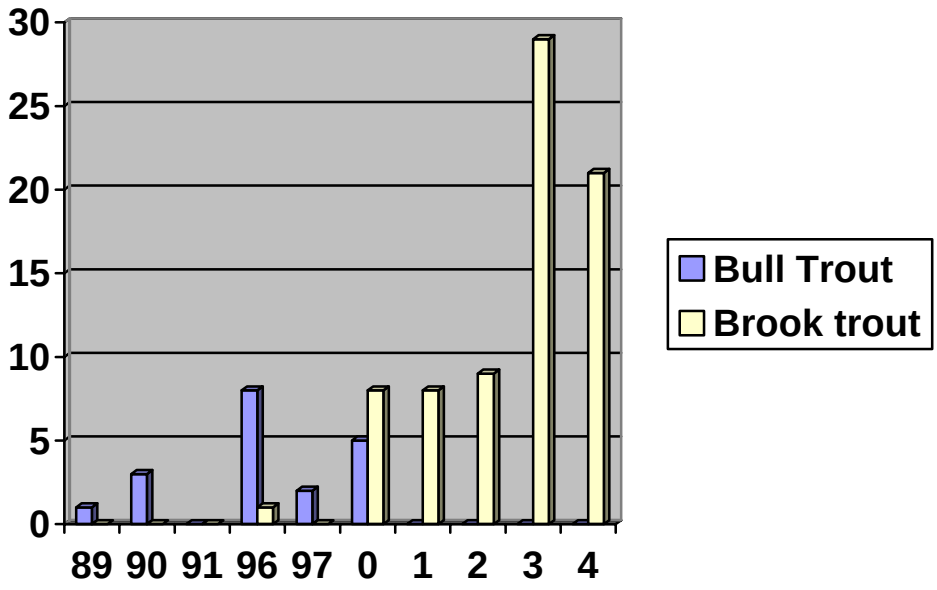

Figure 37. The number of bull trout and brook trout captured during electrofishing in the Rye Creek 12.4 section during the years indicated.

Skalkaho Creek 16.8 and 20.6

The number of large westslope cutthroat continues to increase since the catch and release regulations took effect (Figure 38). The bull trout population in this reach has remained fairly stable since sampling began in 1989 (Figure 39). The long term trend for both species is increasing numbers of larger fish. The upstream section data indicates similar trends (Figures 40 and 41).

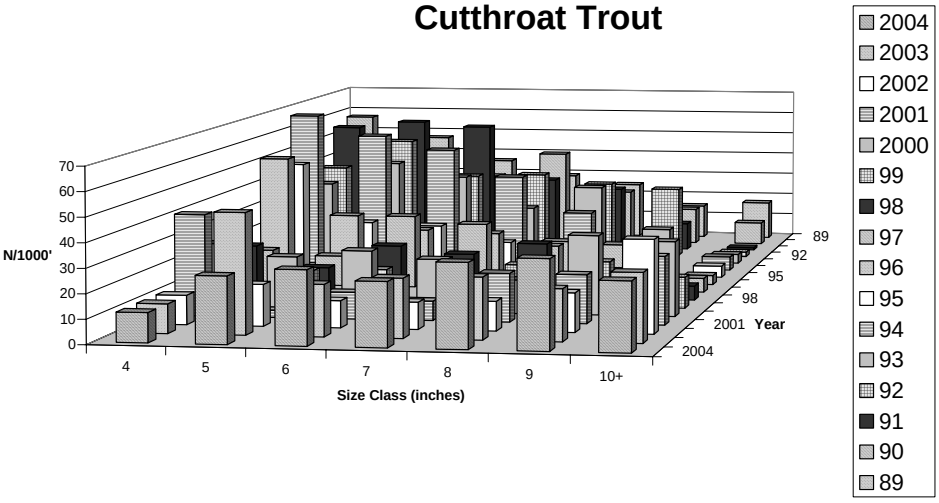

Figure 38. Population estimates of westslope cutthroat trout in the Skalkaho Creek 16.8 monitoring reach during the years indicated.

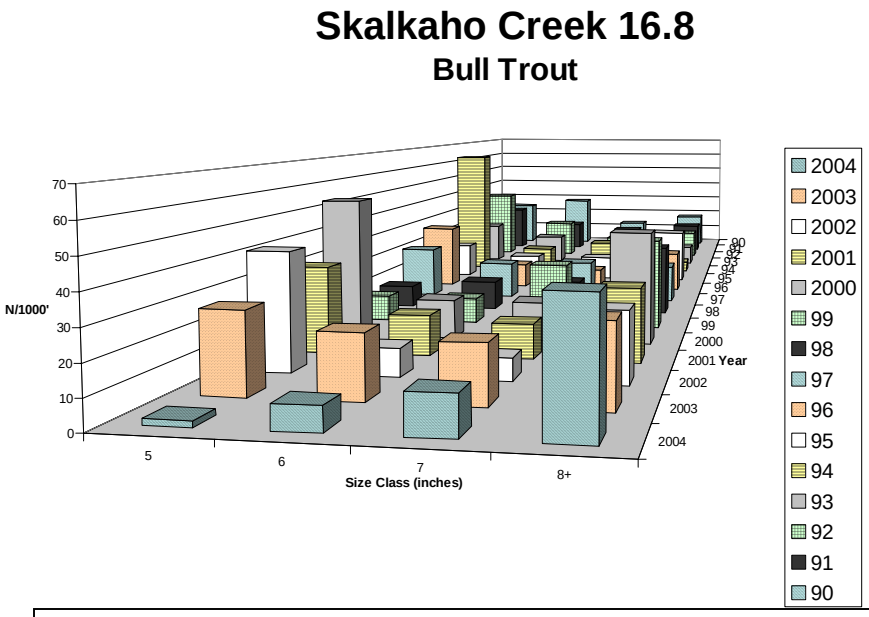

Figure 39. Population estimates of bull trout in the Skalkaho Creek 16.8 monitoring reach during the years indicated.

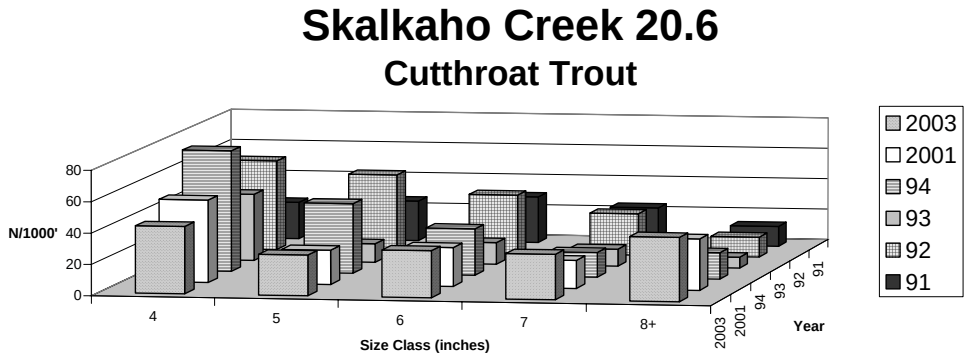

Figure 40. Population estimates of westslope cutthroat trout in the Skalkaho Creek 20.6 monitoring reach during the years indicated.

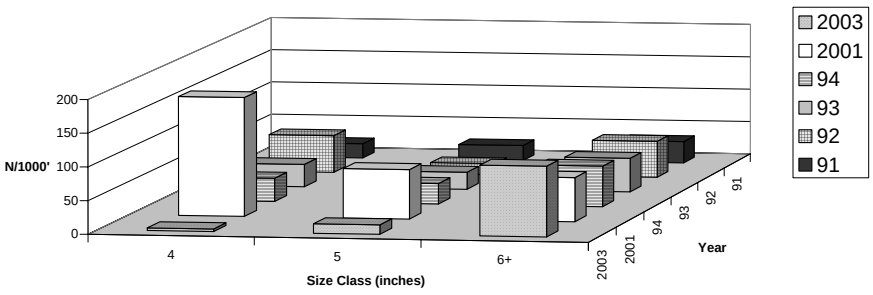

Figure 41. Population estimates of bull trout in the Skalkaho Creek 20.6 monitoring reach during the years indicated.

Sleeping Child Creek 10.2

This monitoring section has been electrofished since 1989. The population of westslope cutthroat fluctuates annually, but was impacted seriously by debris flows in 2001 and 2002 (Figure 42). During 2002, no fish in the 4-5 inch range were captured, indicating that at least one year class of cutthroat trout was probably destroyed by the debris flows. The data from 2003 and 2004 indicate the population of westslope cutthroat is returning to pre-fire levels. The population of bull trout in this reach is small and difficult to enumerate.

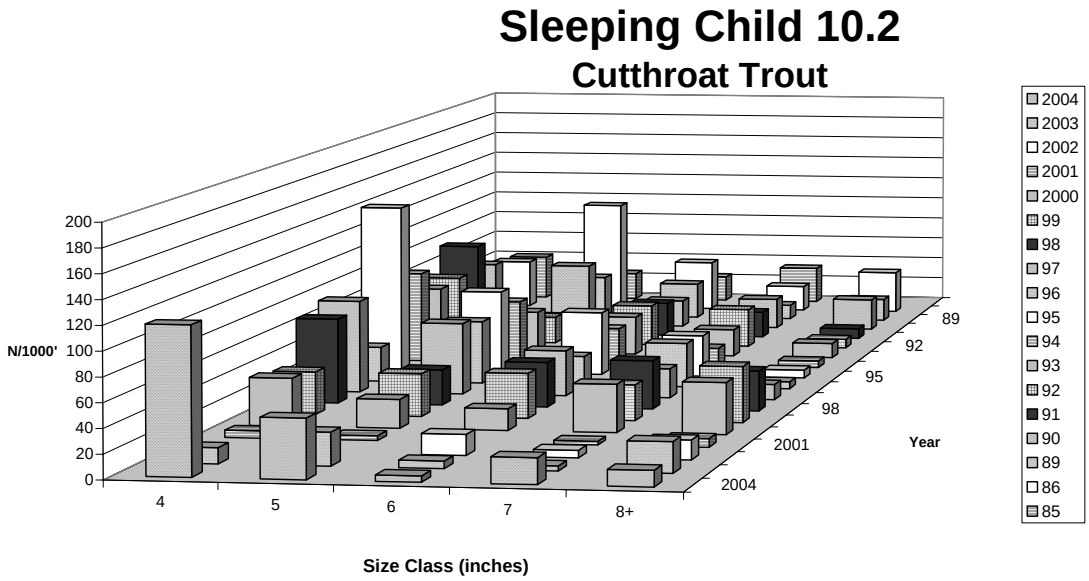

Figure 42. Population estimates of westslope cutthroat in the Sleeping Child 10.2 section during the years indicated.

Sula District

Some of the long-term monitoring reaches were sampled during 2003 and 2004. Most of the population estimates were within range of past data.

Bertie Lord Creek 0.2

The population of westslope cutthroat trout in this small stream has remained stable since sampling began in 1990 (Fig 43, 44). A small number of brook trout are also present, but most years not enough are captured to calculate a population estimate.

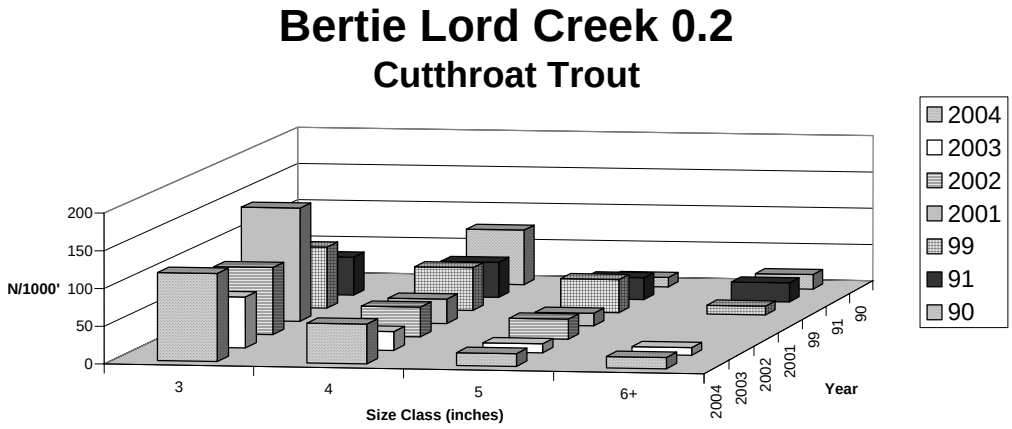

Figure 43. Population estimates of westslope cutthroat in the Bertie Lord 0.2 section during the years indicated.

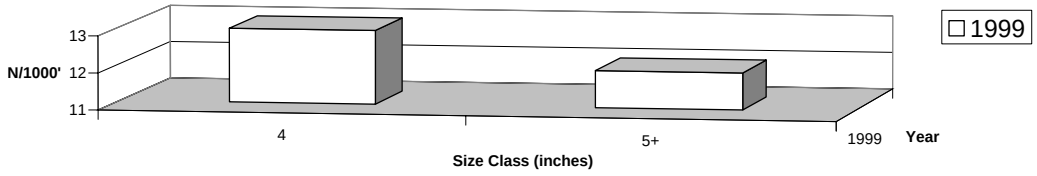

Figure 44. Population estimates of brook trout in the Bertie Lord 0.2 section during the years indicated.

Camp Creek 2.3 (and 3.2)

This reach was restored from a ditch-like channel parallel to Highway 93 into a more natural meandering channel. The 1999 data represents a one-time population estimate

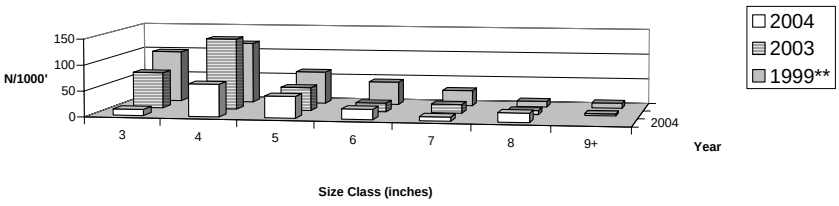

Figure 45. Population estimates of westslope cutthroat in the Camp Creek sections during the years indicated.

before the restoration work. The 2003 and 2004 data represent the post-restoration data (Fig 45). The population of westslope cutthroat is similar in density since the work was completed, but due to the increase in stream length, the population of fish has increased. .

Martin Creek 1.3 and Moose Creek 1.4

The lower reaches of Martin and Moose Creeks support similar populations of westslope cutthroat (Figures 46, 47). The 2003 population estimates of westslope cutthroat was similar to past years. Both reaches support small numbers of bull trout, but population estimates were not collected in 2003 and 2004.

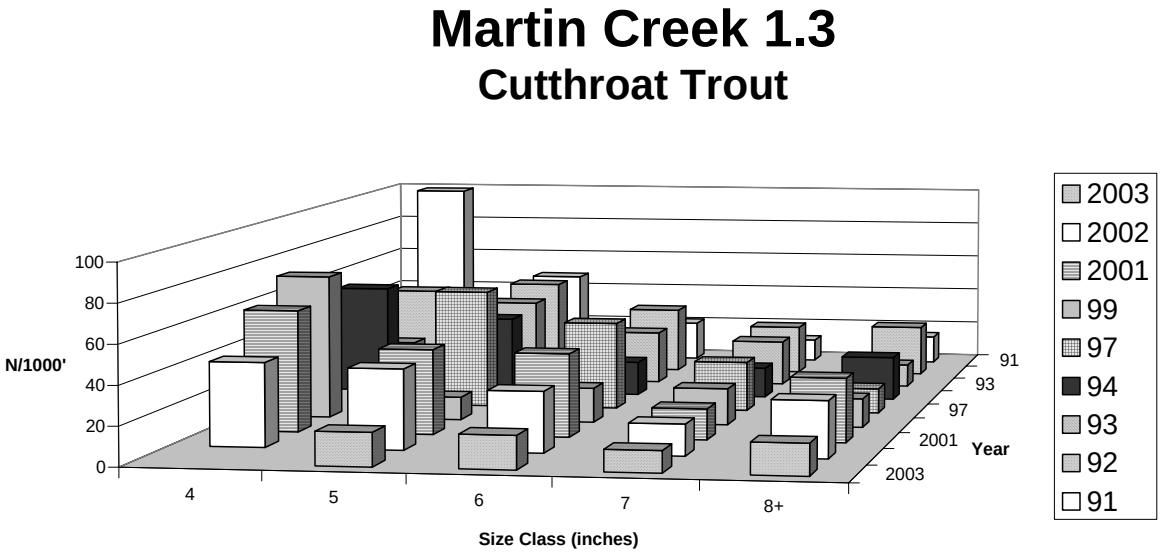

Figure 46. Population estimates of westslope cutthroat in the Martin Creek 1.3 section during the years indicated.

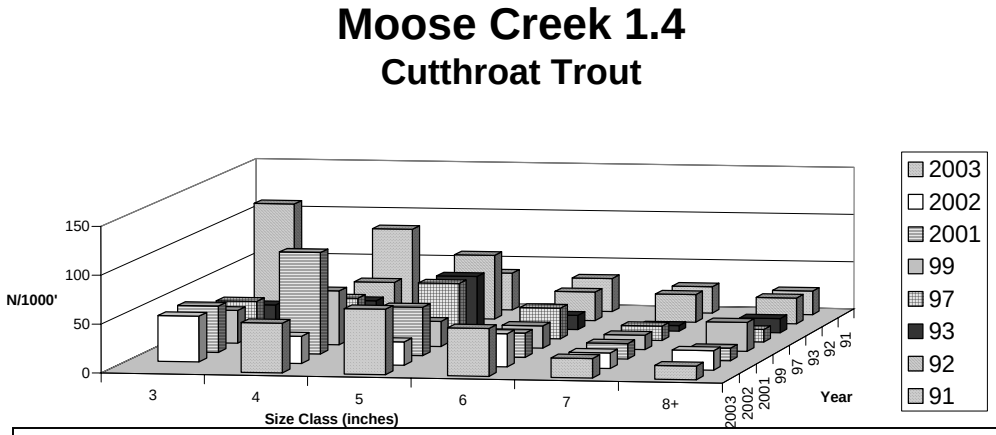

Figure 47. Population estimates of westslope cutthroat in the Moose Creek 1.4 section during the years indicated.

Meadow Creek 5.6, Swift 0.7

This reach was first sampled in 1989. In 2003 and 2004 the population estimates of westslope cutthroat and bull trout are higher than past estimates (Figures 48-49). Swift Creek is a tributary of Meadow Creek. The fish population is stable (Fig. 50.51)

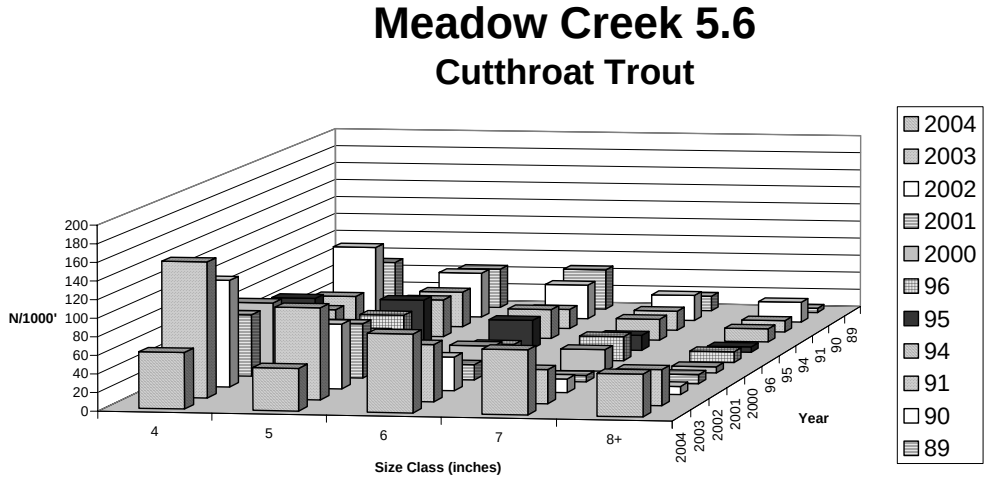

Figure 48. Population estimates of westslope cutthroat in the Meadow Creek 5.6 section during the years indicated.

Meadow Creek 5.6
Bull Trout

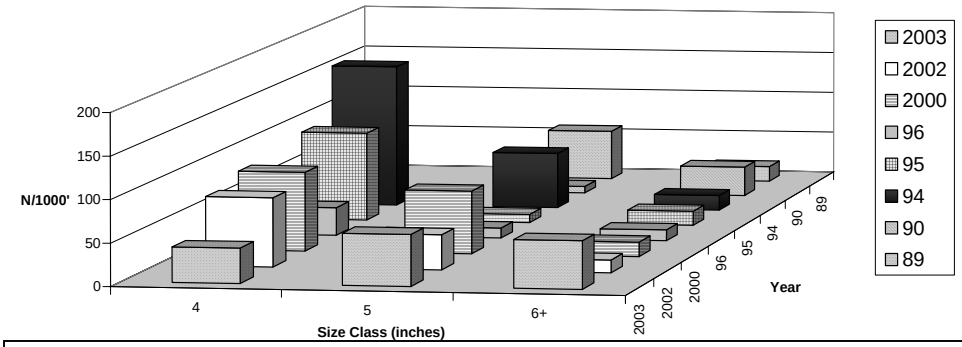

Figure 49. Population estimates of bull trout in the Meadow Creek 5.6 section during the years indicated.

Swift Creek 0.7
Cutthroat Trout

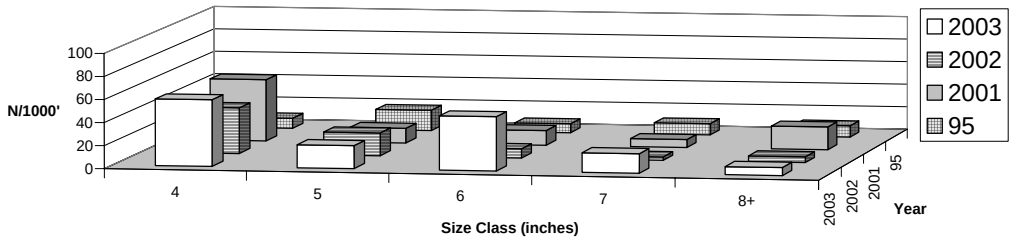

Figure 50. Population estimates of westslope cutthroat in the Swift Creek 0.7 section during the years indicated.

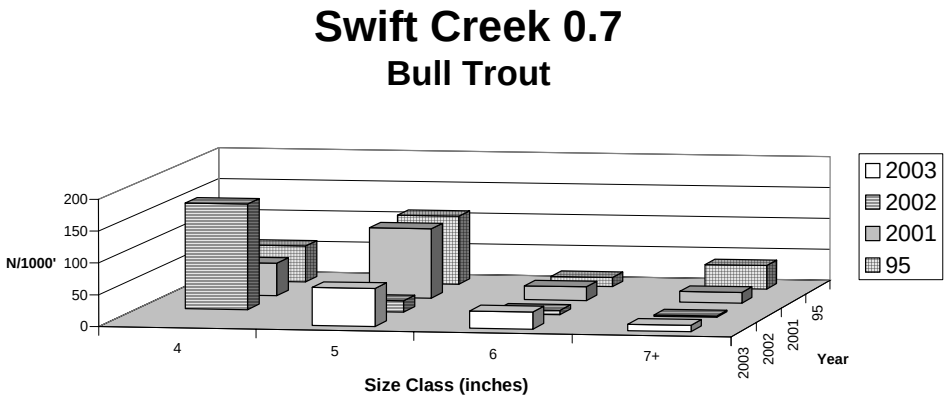

Figure 51. Population estimates of bull trout in the Swift Creek 0.7 section during the years indicated.

Warm Springs Creek 3.5

This reach of Warm Springs Creek was sampled in 2003 and 2004. The number of 6-8 inch fish was lower than in the past but overall the westslope cutthroat population was similar to past sampling, (Figure 52).

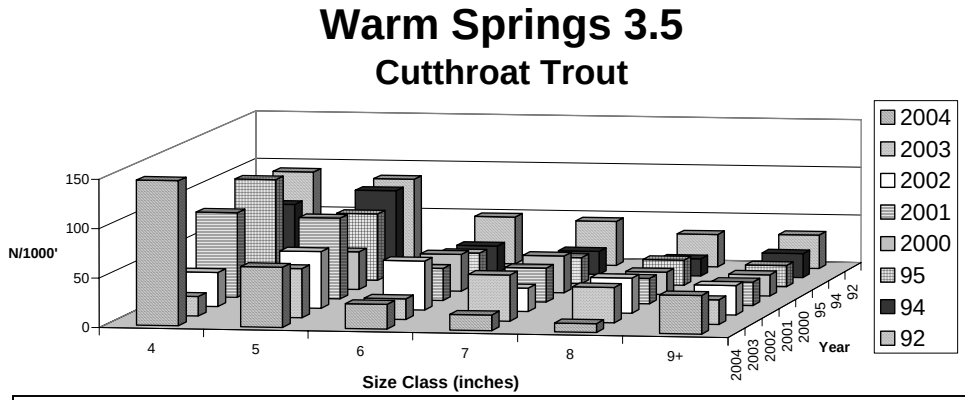

Figure 52. Population estimates of westslope cutthroat in the Warm Springs 3.5 section during the years indicated.

Tolan Creek 5.1

This reach was first sampled in 1989. The Tolan Creek drainage burned in 2000, but the population of fish has remained stable (Figures 53, 54)

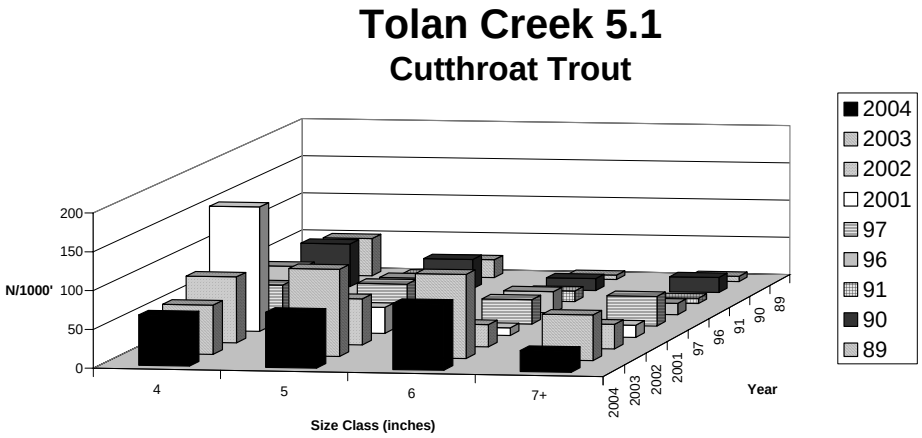

Figure 53. Population estimates of westslope cutthroat in the Tolan Creek 5.1 section during the years indicated.

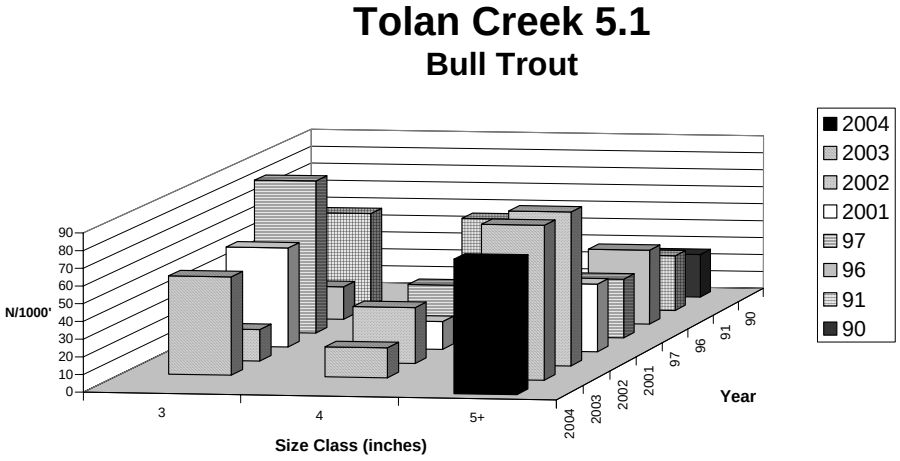

Figure 54. Population estimates of bull trout in the Tolan Creek 5.1 section during the years indicated.

West Fork District

Little West Fork1.3, Nez Perce 9.8

The population estimates were similar to past years in these sections (Figure 55, 56).

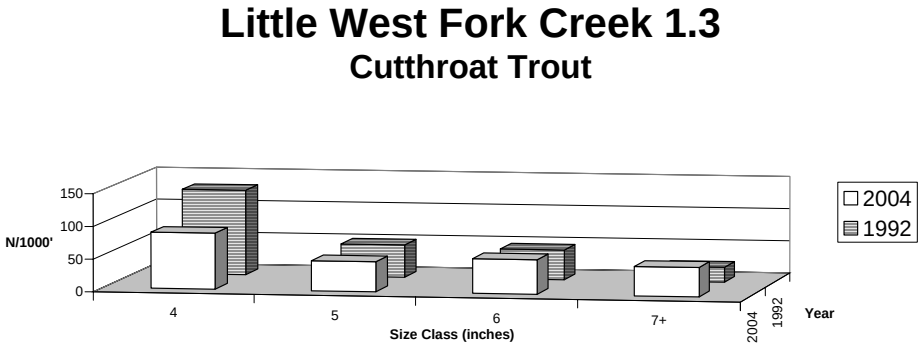

Figure 55. Population estimates of westslope cutthroat in the Little West Fork 1.3 section during the years indicated.

Nez Perce Fork 9.8

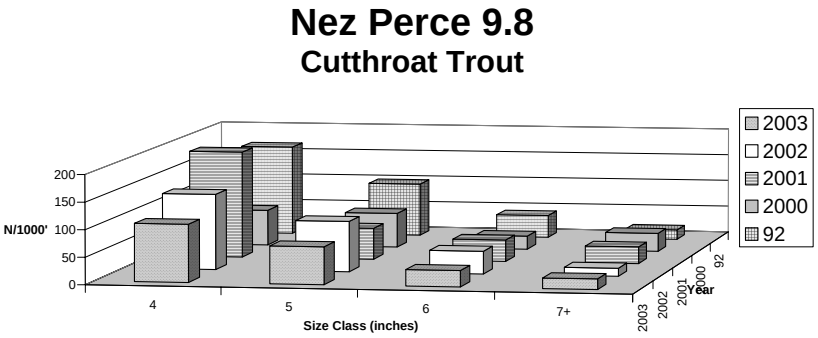

Figure 56. Population estimates of westslope cutthroat in the Nez Perce 9.8 section during the years indicated.

Lake Como

Lake Como has been stocked annually with rainbow trout and more recently with kokanee. Each Fall we set gillnets to assess the status of the fishery. Trends in the data are probably not evident due to limited sampling (Table 1).

Table 1 . Capture of fish in 2 gillnets set overnight in Lake Como during the year indicated. Total number of each species is listed with the average length in parenthesis.

Year	Rainbow trout	Kokanee	Largescale sucker
1998	4 (8.6)	61(8.7)	25(10.1)
1999	3(10.3)	15(7.8)	13(12.0)
2001	0	80(7.0)	30(8.5)
2002	8(10.5)	17(7.7)	33(8.4)
2003	3(9.6)	29(8.4)	16(9.8)
2004	5(11.6)	33(9.3)	6(8.0)

The stocking of kokanee did not occur in 2000 and 2002, did occur in 2003. The average size of kokanee was slightly higher in 2004.

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Prepared by: Christopher G. Clancy-June 2005

Stream	Code Number	Key Words
Bitterroot River drainage	2-03-8865	Trout populations
		Whirling Disease
		Fishing regulations
		Westslope cutthroat
		Rainbow trout
		Brown trout
		Bull trout
		Brook trout
		Radio Telemetry
		Lake Como
		Bitterroot River
		Bitterroot National Forest