

Monitoring component:) **Large Stream Fisheries Monitoring (Steve Moore –Fishery Biologist)**

1. Who is interested in the information generated by this monitoring component, and why?
Why is it important?

Park management, state agencies, academia, local and national fishing organizations, public citizens and the media are the stakeholders interested in the data.

The large stream fisheries monitoring program is critical to the understanding of natural variation in stream fish communities in an undisturbed ecosystem. Park streams are considered ecological models for the region and the data are being used to determine impacts to streams outside the Park due to development or other land use activities (this is comparative analysis).

2. What are the specific monitoring questions or information needs being addressed?

The data are being used to determine the extent of natural variation in large stream fish communities. The data have shown that floods and droughts are responsible for year to year variation in the density and biomass of all species found in a stream. Water quality data indicate that fish populations in the Park's larger streams (i.e. < 3500 ft.) are not being impacted by acid deposition at this point in time.

3. Are the data being collected available to others? **Yes**

- Are data consistently and regularly entered into computer files? **Yes**
- Are the data regularly summarized and/or analyzed (e.g., annually?) **Yes**
- Are reports written on an annual or other regular basis, and who do they go to? **Yes. They go to park management and staff, state agencies, universities and local, regional and national fishing groups.**
- Are the data available to managers in a format they will use? **Yes**
- Are the data available to the interpretive staff and are they used? **Yes. Fisheries data are incorporated into many Resource Education Programs at GRSM.**
- Are the data available to outside researchers? **Yes. Through the I&M database, by contacting Park fisheries staff, and at various fisheries symposia throughout the year.**

4. Within budget and personnel constraints, what adjustments/additions/improvements would you like to make to this monitoring component?

In 1993 the I & M package stated that Little River and Cataloochee Creek would be monitored annually and that Abrams Creek, Deep Creek, Hazel Creek and Oconoluftee River would be sampled on a four year rotation. Little River and Cataloochee have been monitored to date. Abrams Creek was sampled annually from 1993 – 2000. Samples from 1993 to 1995 were collected as part of a stream bank restoration project and were continued from 1996 to 2000 using brook trout restoration funds. Because of static funding prior to I & M program dollars becoming part of the Park's base operating program, and, because operating funds for fisheries monitoring were reduced by \$25,500 (\$18,500 for Large Stream monitoring and \$7,000 for Rare Fish), none of the other stream monitoring could be initiated. It is expected that, if cost continue to erode operational ability, Little River and Cataloochee could move to biennial monitoring.

5. Is there a story to be told to others (public, researchers) about the work you are doing and what it means?

The story that is being told to park management and staff, state biologist universities, local and regional fishing groups and the public is the extent of natural variation in fish communities due to floods and droughts, the effects of acid deposition on water quality and the lack of impact to trout populations due to recreational fishing.

6. For the overall natural resource monitoring effort at GRSM, what adjustments/additions/improvements would you recommend?

Insure that the components of the I and M program are integrated to the extent possible. Seek adequate funding for the program components to insure that the integrity of the program is maintained. Integrate and fund air quality monitoring as an integral part of the I and M program.