

Cheoah River Resource Management and Enhancement Fund

Annual Report 2008

This annual report is submitted to satisfy the requirements of the Tapoco Project Relicensing Settlement Agreement (RSA) that requires an annual report be prepared and distributed to Board members and advisors and that Alcoa Power Generating Inc. (APGI) file the report with FERC by June 30 of the following year. The Cheoah River Resource Management and Enhancement Fund ("Fund") (listed in the RSA as the North Carolina Resource Management and Enhancement Fund) was established through the Tapoco Project RSA and is to be administered by the Fund Board composed of authorized representatives of the North Carolina Wildlife Resources Commission (NCWRC), North Carolina Department of Environment and Natural Resources (NCDENR), USDA Forest Service (USFS), United States Fish and Wildlife Service (USFWS), and the Eastern Band of the Cherokee Indians (EBCI). APGI is required to provide an initial deposit of \$100,000 then annual deposits of \$25,000 (both in inflation adjusted dollars) except for the final 3 years of the new 40-year license.

2008 Board Activities

An informational meeting of the Fund Board was held on May 29, 2008 to receive project updates.

APGI provided its 2008 annual deposit to the Fund. Disbursements totaling \$53,782.88 were made during 2008. A Fiduciary report for 2008 is provided in Attachment 1.

The Board held its annual meeting on November 5, 2008 (Attachment 2). Project proposals for 2009 were not due until December, so funding decisions were postponed until January 2009.

2009 Update

The Board held a follow-up meeting on January 5, 2009 via conference call (Attachment 3). The following proposal was approved for funding for 2009:

Title	Grantee	Amount
Captive Culture and Reintroduction of Priority Fishes and Mussels to Restore Cheoah River Populations	NC Wildlife Resources Commission	\$10,000
Total		\$10,000

Decisions on funding two other proposals were postponed pending additional information.

If you have any questions about the Cheoah River Fund, or its operation during 2008, please contact Chris Goudreau, Board Chair (828-652-4360 ext. 223; chris.goudreau@ncwildlife.org).

CHEOAH RIVER RESOURCE MANAGEMENT AND ENHANCEMENT FUND

Fiduciary Report

May 2007 - December 31, 2008

May 2007	Initial Deposits		\$155,292.00
6/1/07 – 12/3/07	2007 Interest Added		\$4,014.04
1/1/08	Fund Balance		\$159,306.04
Feb 2008	Alcoa 2008 deposit		\$27,710.00
 Disbursements 2008			
1/14	Hargreaves Associates	Spiraea monitoring and management	\$6,400.00
4/03	Hargreaves Associates	Spiraea monitoring and management	\$500.00
4/10	Clearblue Grading	Gravel augmentation	\$24,400.00
4/17	Wildlife Resources Commission	Appalachian elktoe genetics	\$15,000.00
12/11	Hargreaves Associates	Spiraea monitoring and management	\$500.00
12/12	Virginia Tech	Restoration ecology of fish	<u>\$6,982.88</u>
		Total Disbursements	\$53,782.88
1/1/08 – 12/31/08	2008 Interest Added		\$7,420.80
12/31/08	Fund Balance		\$140,653.96

**NC Resource Management and Enhancement (Cheoah) Fund Board Members and
Advisors
Meeting Notes
05 November 2008
1000 - 1330**

Attendees:

Rhiannon Payne	USACE	304.399.5253
Chris Goudreau	NCWRC	
Michael Bolt	EBCI	828.497.2715
T.R. Russ	NCWRC	828.659.3324
Steve Fraley	NCWRC	828.627.8414
Ryan McManamay	VT	540.808.8695
Jason Farmer	USFS	828.479.6431
Steve Reed	NCDWR	919.715.5424
Dick Eyestone	Friends of Lake Santeetlah	828.669.1221
Jane Hargreaves	Specialist	828.298.2426
Mark Cantrell	USFWS	828.258.3939 x227
Marshall Olson	APGI, via teleconference call-in	704.422.5622
Andy Dolloff	USFS-SRS-VT	540.231.4864

Welcome and Introductions

Background – Cheoah fund created as an item in the settlement agreement as mitigation to offset some unavoidable impacts from continued hydropower generation

- Incorporated into FERC license and required to have annual 4th quarter meetings
- Fund will be \$25k contribution (adjusted with inflation from 2005 dollars to present) with the last 4 years up front
- Fiduciary report – fund has finally become interest bearing and has gained ~\$11k in interest
- Initial deposit took place in May 2007
- Fund balance 1/1/08 was \$159,306.04 – for more info see attached draft interim fiduciary report
- Received first invoice from VT and will soon receive invoice on mussel propagation of ~\$10k
 - Q: what is the cost of the annual VT study?
 - A: approx \$24k but not all is paid by Cheoah fund
- Edits to be made to the fiduciary fund will be addition of the rest of the invoices for the year (to the end of December) so there will be a full report for the calendar year (the report needs to be included in the June 09 progress report to Alcoa for FERC)
- Motion to table finalization of the fiduciary report until the end of the year

Status of Projects

1. Restoration ecology of fishes, VT

McManamay

Ryan MacManamay, VT with powerpoint presentation

Main problem – system starved of sediment and gravel trapped by dam

Fixes:

- Flow is restored – more peaks and higher baseflow – mean annual discharge is actually high due to hurricanes, test flows and spill events (2002 – 2004)
- Assessment: Surveying combined approach (wading/shocking and snorkeling) to discern species/habitat association to find the best places to stock specific species
- Snorkeling catches the water column species but not darter species so there was some overlap with electrofishing
- Downstream of dam there is homogenization of fish species, “cosmopolitan species,” lower abundance of gravel-dependent species
- Fluvial-dependent species (i.e. tangerine darters) recover with distance from the dam but hopefully with gravel inputs to the system these species will move up closer to the dam
- Several species found in tribs could recolonize (i.e. walleye, longnose dace, blacknose dace)
- VT was cautioned to not attribute new species found recently to dramatically improved dispersal mechanisms
- Trend with Tuckasegee darter is decline – too early to know the mechanism of decline
- Tangerine darter trend is decline but not well sampled due to depth and sampling efficiency, also this reach has been overfished for area aquaria
- Greenfin trend – stable but fluctuating in abundance over time
- Gravel supplementation
 - 100yd³ deposited on biannual basis
 - Monitoring: migration on annual discharge, stability of redeposited material, biotic effects of gravel sedimentation
 - 4 sites (40mm and 10mm average size)
 - Surveying contour of gravel piles and comparison with flows to determine rate of launching
 - Gravel migration over time measured by placement of monuments and monitoring migration into the channel
 - Rate of gravel launching is greatest at high gradient and least roughness – dispersal is also greatest at least roughness
 - Gravel sites 3 and 4 had movement at $Q_c > 1000\text{cfs}$
 - Gravel site 1 had movement at $Q_c \leq 1000\text{cfs}$
 - Spawning enhancement success – mound builders (keystone species) are important for community recovery
 - Chubs have been found to be incorporating the introduced material into their nests with the native material
 - Diet analysis of smallmouth bass will probably not be continued because the results were not informative
 - Notable: only one live crayfish specimen has been found
 - Conclusions – need further study for diversity and abundance, gravel migration can help determine sediment budgets/critical discharges, and gravel supplementation has had positive impact on river chub spawning habitat
 - Further discussion:

- Nest builders are redistributing gravel material not only by moving it to build nests but also depositing it in areas where it's more likely to be remobilized in high flow events
- 2 goals for gravel addition: 1. meet needs of spawning fish 2. improve mussel habitat
- Could change gravel additions to a heterogeneous mix
- Reminders from Alcoa: need gravel data by mid-January 2009, draft report to be completed in February, comments due on draft in February

2. Gravel augmentation

Steve Reed/Mark Cantrell brief discussion and gravel samples

The gravel additions were made through a contract with ClearBlue Grading.

3. *Spiraea virginiana* Monitoring and Management

Hargreaves

Jane Hargreaves, presentation with maps

Invasive Species

- No chemical controls will be implemented until the EA is completed
- 9 miles of river were surveyed on foot – 12 species of invasives were found and populations marked with GPS for density and seed-bearing populations
- Hand controls have been implemented for kudzu
- All controls are implemented by trained volunteers
- Conclusion – the populations are controllable
- Prioritization:
 - Protect the endangered species
 - Remove seed-bearing populations, esp. oriental bittersweet, mimosa, Chinese potato, kudzu
 - Eradicate distributed invasive species
- Even though controls on Forest Service lands cannot yet be implemented, work can be undertaken on private lands owned by Alcoa
- Essentially \$6,600 funding available to begin implementing controls now
- Meeting will take place soon with NCDOT to discuss road mowing practices that affect the Virginia *spiraea* populations and also allow for spreading of invasive exotics

4. Appalachian elktoe genetics, NCWRC

Fraley

Steve Fraley, NCWRC with handout – genetic tree

Appalachian Elktoe Genetics

- Hypothesis: there are genetic differences in this population from other populations in nearby watersheds that may isolate it
- Ultimate goal – take genetic samples from all populations and relate them to one another
- Is this population similar enough that the population can be augmented through translocation and propagation with nearby populations?
- Cheoah population success is gaining importance as other nearby populations decline – one nearby pop. has declined ~90% in the past four years

5. Identify larval fishes

Wallus

Identify Larval Fishes

New contractor Bob Wallus has been contacted to identify larval fishes collected through monitoring activities. NCDENR (Fiduciary) has negotiated a contract and is processing paperwork currently.

6. Captive propagation fish and mussels, NCWRC

Russ

Steve Fraley and T.R. Russ, NCWRC site visit to hatchery

Fish and mussel propagation and holding facilities have been added at the Marion Fish Hatchery. The group toured the new facilities. The design includes a semi-closed loop water system, with isolated banks of tanks for mussels and fishes. Currently houses several endangered species. The group looked at wavy-rayed lampmussels destined for Cheoah River. The group looked at some spotfin chubs that were obtained from Conservation Fisheries Inc (CFI) for grow out – these fish have demonstrated good growth at lower densities, and will be liberated at the Cheoah River sometime next June.

2009 Fund Board Priorities

- Next gravel addition would be 2010 if considered appropriate
 - LIDAR data could be used to determine where benefits of additional inputs could be maximized
 - Priority – if we want gravel by 2010, contracting must be initiated in 2009
- Gravel discussion: this last round of gravel was expensive because of travel distance/time, type, sorting and washing. Need to give the next contract more time for local contractors to bid the contract rather than the supplier in Alabama. . . avoid the time crunch for better pricing. Non-native gravel will not be necessary next time but was helpful as first round for tracking downstream migration. Future source of gravel could be dredging in the lakes.
- Q: What extra funding is required for invasive plant control?
 - A: No additional funds required other than what has already been allocated. Other agencies have also contributed funding.
- No other new priorities.

New Proposals

Future new proposals (continue mussel work that is already underway) will be due by mid-December

Future Meetings

- Next meeting will be a teleconference for “fiduciary stuff” scheduled for first week of January 2009 – **1pm, 5 January 2009**
- New proposals due by mid-December
- New chair will be coming onboard – set rotation for chairmanship – Chris is the lucky dude to take the reins
- Board needs to compile data into repository
 - Combine with Tallassee fund effort to do the same work for lower shared cost?
 - Discuss with smaller schools such as UNC Asheville – Dick Eyestone will assist.

Cheoah Fund Board
Conference Call
January 5, 2009

Board Members: Chris Goudreau, Chair (NCWRC), Mark Cantrell (USFWS), Steve Reed (NCDWR), Jason Farmer (USFS), Mike Bolt (EBCI)
Advisors: Jody Johns (Longview), Dick Eyestone (Friends of Lake Santeetlah)

Chairman Goudreau opened the call and listed two items for action – approval of the 2008 Fiduciary Report and review of the four grant proposals for 2009.

The 2008 Fiduciary Report prepared by DENR was reviewed. Cantrell moved to approve the report and Bolt seconded. The report was approved by consensus. Cantrell stated his appreciation to Reed and DENR for handling the financial aspects of the Fund Board.

Prior to reviewing the 2009 grant proposals, Goudreau provided an analysis of the funds available to the Board for allocation after considering funds already earmarked to existing projects and known future expenses, such as the gravel addition in 2010. Reed reminded everyone of another project that was funded in 2008.

The first proposal reviewed was from the Land Trust for the Little Tennessee for \$10,000 to control exotic invasive plants on the tract of land they recently purchased in the Yellow Creek area. Questions were raised concerning how this proposal was related or coordinated with the USFS as an adjacent landowner and also with the Spiraea study being conducted by Hargreaves for the USFS and USFWS along the Cheoah River. It was mentioned that LTLT has an overall management plan for the parcel, which includes some large-scale activities, such as controlled burns. Cantrell said he would provide the LTLT management plan to the Board members.

Questions were also raised about the need for ongoing exotic control (thus funding) and the magnitude (acres) of the effort. It was unclear if the exotic plants in the Yellow Creek area were actually contributing to problems in the Cheoah River corridor. Reed mentioned that he is going to meet with USFS and USFWS to discuss the Spiraea study on January 9. After further discussion it was decided to review the other proposals and then return to each for a decision.

The Board then reviewed the proposal from the N.C. Wildlife Resources Commission for \$10,000 to collect, culture and release Spotfin chubs, Wavy-rayed lampmussels and Rainbow mussel into the Cheoah River; and to continue experimental propagation of Appalachian Elktoe and develop propagation and culture techniques for production of releasable size animals for release in the Cheoah River. The proposal received favorable review in that it fulfills the goals of the Cheoah Fund and would directly affect the ecology of the Cheoah River. It was agreed that this would be a high priority for funding.

The third proposal reviewed was from American Whitewater for \$20,000 to remove vegetation from the Cheoah River for boater safety and biological restoration. There was discussion on whether this proposal was mainly for the benefit of recreation or ecological function. Concerns were raised about funding this project before the Environmental Assessment being conducted by the USFS was completed (projected to be in spring 2009) and the lack of specificity in the

Attachment 3

proposal regarding the location and amount of vegetation to be removed. Several members expressed substantial concern that the proposal only marginally addressed the goals of the Cheoah Fund charter. A question was raised whether this project could be conducted without Cheoah Fund money. Several members suggested that if it were done with non-Fund money, then the process would be one controlled solely by various agency regulations and procedures.

The final proposal reviewed was from Brian Carson for \$8,000 to design and maintain a website to house documents for the Cheoah and Tallassee Fund Boards. Eyestone, who had professional experience in this arena, stated that he talked to several people to solicit input. He disclosed that Carson is his son-in-law. Eyestone explained the proposal in some detail and said that the product is very basic in nature. The website will not provide any analysis capabilities, just online storage and retrieval. The proposal includes additional maintenance fees to convert non-digital documents and for an annual archive of the site. There would also be fees to an outside web-hosting company. Since the proposal is designed to cover both the Cheoah and Tallassee Funds, discussion ensued on what might be an equitable dollar amount for each Fund to pay. It was recommended that the ratio be the same as the annual payment from APGI to each Fund. This would be 20% from the Cheoah Fund and 80% from the Tallassee Fund.

Returning to the LTLT proposal, it was decided that the questions raised by the Board would be submitted to LTLT for a response before making a final determination. Also, Reed will report to the Board on the outcome of his meeting with the USFS and USFWS concerning the relationship between the LTLT proposal and the Spiraea study currently underway. Upon hearing from Reed, Goudreau will prepare a letter to LTLT listing the Board's questions.

The WRC proposal was approved by consensus. Goudreau will send a letter to Steve Fraley notifying him that the grant was approved.

After further discussion, the Board decided not to fund the American Whitewater proposal. Goudreau will send a letter to Bob Hathcock outlining the concerns of the Board.

The Board decided to postpone a decision on the website proposal until Cantrell brought it to the Tallassee Fund Board for consideration.

There being no further business, the conference call was ended.