

Issue Action Group: E2 Erosion & Siltation

Meeting Notes & Summary: APC Corporate Headquarters January 30, 2002

Finalized 03-12-02

Warrior and Coosa Relicensing Projects Combined

Meeting Attendees:

IAG Members:

Dan Catchings	ADCNR
Carl Couret	USFWS
Jim Crew	APC
Jeff Duncan	NPS
John Eisenbarth	Trout Unlimited
Don Haney	Lay Lake Home Owners & Boat Owners Association
Jon Hornsby	ADCNR
Henry Mealing	Kleinschmidt
Jim Moore	ADEM
Dan Murchison	Lake Mitchell Home Owners & Boat Owners Association
Kelly Schaeffer	Kleinschmidt
Andy Sheppard	APC
Bill Sim	APC
Isabella Trussell	Logan Martin Lake Protection Association
Beth Wentzel	ARA
Diana Woods	USEPA

Other Attendees:

Mike Akridge	John Ammons
Harold Clark	Tom Counts
Glenn Gaines	Tom Groce
Darryl Harley	George Jackins
Jim Lochamy	Jim McHugh
Roy McKitrick	Jason Moak
Nick Nichols	Christy Nix
John Peconom	Malcom Pierson
Bert Thaxton	

Action Items

- Prepare and distribute meeting notes and summary to team members.
Jim Crew & John Peconom Due - February 20, 2002
- Revise work plan per IAG recommendations and post on APC's hydro relicensing web page.
Jim Crew, John Peconom & Jason Moak Due - February 20, 2002
- Start on revised work tasks.
IAG Team Members Due - February 26, 2002
- Research and begin outlining a public education plan.
IAG Team Members Due - February 26, 2002
- Research other southeast hydroelectric projects erosion solutions and management plans.
Kelly Schaeffer Due - February 26, 2002
- Review and comment on meeting notes and summary.
IAG Team Members Due - March 1, 2002

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Meeting Notes

These notes summarize the major items discussed during the meeting and are not intended to serve as a transcript or analysis of the meeting.

Introductions and IAG Background - Kelly welcomed everyone and distributed the meeting agenda and a draft work plan. The E2 Ecological Issue Statement addresses: "Effects of the existing (and estimated future) levels of erosion and siltation within the Warrior and Coosa Basins on the public uses and water quality of the lakes and rivers in the project study area." After reviewing the IAG Issue Statement the group began discussing the draft work plan.

Review Draft IAG Work Plan - APC and Kleinschmidt created a draft work plan for the IAG's to review prior to the meeting, and the IAG members discussed changes to the work plan. After the IAG finalized their membership, team members discussed changes to the work plan in detail. The IAG's revisions include:

Tasks and Responsibilities

- Identify the types of erosion in the basin – both existing and potential.
- Determine sites having erosion and siltation types that need to be addressed.
- Ascertain erosion and siltation levels at these sites.
- Identify data gaps.
- Determine the causes for erosion and siltation at these sites.
- Discuss methods available to APC to improve, control, and/or reduce erosion at the identified sites.
- Determine the regulations and guidelines pertaining to dredging.
- Make recommendations to the WCRT and EcoRAT and forward those recommendations to the Shoreline Management IAG.

These changes will be incorporated into a revised work plan and the entire work plan will be reevaluated to make sure that all sections are in agreement with these revised "Tasks and Responsibilities." The revised work plan can be viewed or downloaded at APC's hydro relicensing web site.

The IAG discussed several other important topics:

- IAG efforts should focus on "hot spot" erosion sites caused by project operations,
- IAG efforts should cooperate/coordinate with the Shoreline Management IAG, which will address very similar issues,
- Efforts should describe existing development restrictions/stipulations and considering off-site mitigation measures.

Erosion "Hot Spots" - The IAG identified several erosion "hot spots" that should be addressed in this IAG's efforts:

- Smith tailrace
- Bouldin canal
- Clear Creek (Smith reservoir)
- Weiss tailrace
- Neely Henry tailrace
- Reservoir coves
- Shoreline erosion on storage reservoirs

This partial list will be further defined and revised during subsequent IAG meetings.

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Public Education Plan - The importance of public education and awareness was also discussed in this meeting. Several IAG members felt that increased public education and awareness would do a lot to address this issue. An outline based on IAG team member's comments will be produced as part of the group's recommendations.

Erosion Management Plans - IAG team members expressed a desire to increase the efficiency of this groups efforts by researching other southeast hydroelectric projects to see if they have erosion management plans that may help this group fulfill its goals and responsibilities. Potential sources of information include the North American Lake Management Society, Tennessee Valley Authority, and other FERC regulated projects.

Conclusion and Next Meeting

The next meeting of the E2 IAG will be held on either March 12th or 13th, 2002. APC will send meeting materials (an agenda and work products as well as meeting logistics) to IAG members in advance of the next meeting.

IAG documents and materials are posted on the Internet at www.southerncompany.com/alpower/hydro.

Issue Action Group: E2 Erosion & Siltation

Meeting Summary: Sheraton Perimeter Park South Hotel March 12, 2002

Finalized 06-25-02

Warrior and Coosa Relicensing Projects Combined

Meeting Attendees

IAG Members:

Carl Couret	USFWS
Jim Crew	APC
Jay Edwards	USFS
John Eisenbarth	Trout Unlimited
Don Haney	Lake Home Owners & Boat Owners Association
Henry Mealing	Kleinschmidt
Dan Murchison	Lake Mitchell Home Owners & Boat Owners Association
Andy Sheppard	APC
Isabella Trussell	Logan Martin Lake Protection Association

Other Attendees:

Pres Allinder	John Ammons
Sara Chubb	Harold Clark
Keith Floyd	Tom Groce
Ron McKittrick	Jason Moak
Jerry Moss	John Peconom
Alan Peebles	Malcom Pierson
Bert Thaxton	Danny Tignor
Stephanie White	

Action Items

- Post finalized work plan and January meeting notes on APC's hydro relicensing web page.
Jason Moak Due - March 29, 2002
- Prepare and distribute meeting notes and summary to IAG members.
John Peconom & Jim Crew Due - March 29, 2002
- Begin evaluating erosion on Smith Tailrace, Clear Creek and the Weiss Tailrace.
IAG members (USFS, APC, USFWS) Due - May 1, 2002
- Investigate the use of APC Surveillance Contractors for identification of erosion areas.
Jim Crew Due - May 1, 2002
- Continue developing public education process.
Kelly Schaeffer Due - May 1, 2002

Meeting Summary: Sheraton Perimeter Park South Hotel March 12, 2002

Finalized 06-25-02

Meeting Notes

These notes summarize the major items discussed during the meeting and are not intended to be a transcript or analysis of the meeting.

Introductions – Jim Crew and Henry Mealing welcomed the group and thanked them for their ongoing participation in this process. Henry reviewed the IAG’s membership list. Henry informed the group that there was a computer at the back of the room with internet access set up so that anyone having problems with the APC web site could receive a quick tutorial.

Review Meeting Minutes & Revised Work Plan – Henry asked the IAG for comments on the revised IAG work Plan and the January meeting summary. The IAG approved both the revised work plan and meeting notes. These documents will now be placed on APC’s hydro relicensing web site.

Erosion Source Types – The IAG agreed that fundamentally there are two types of erosion, “natural” and “man-made”. “Natural” erosion is related to natural processes, which occur in riverine systems regardless of human presence. “Man-made” erosion is a direct result of human activities. There are several types of “man-made” erosion including project-related erosion. The IAG agreed that its focus should be “man-made” project-related erosion.

Project Related Erosion – During the January 2002 IAG meeting, members identified the following erosion “hot spots” that exhibit atypical (accelerated erosion due to project operations) erosion.

- Smith tailrace
- Bouldin canal
- Clear Creek (Smith reservoir)
- Weiss tailrace
- Neely Henry tailrace
- Reservoir coves
- Shoreline erosion on storage reservoirs

Spring Erosion

The IAG discussed spring erosion and the filling of reservoirs. Several points were raised in this discussion including:

- Aerial analysis of the projects to ascertain erosion sites;
- Increased spring erosion is due in part to soil runoff into the lake tributaries;
- Creating or finding a method to quantify spring erosion levels; and
- Modeling or measuring spring erosion levels would be an enormous and impossible task.

Lay Lake Erosion

Don Haney (Lay Lake HOB0) shared his concerns about erosion on Lay Lake. Don is concerned that the daily 10-inch lake level fluctuation is accelerating erosion around the lake’s shoreline. Don stated that the draw down and subsequent refilling is increasing erosion on the

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river's bends and islands. Don shared pictures of islands that have eroded over the years. Henry pointed out that a 10-inch fluctuation is very modest when compared to other Southeast hydroelectric projects, which typically exhibit much larger daily fluctuations of up to two to three feet. Don also provided a list of FERC projects that have restricted fluctuations of only 0.3 feet a day. Henry suggested that the IAG review information from these projects to better understand the specific circumstances surrounding these limited lake level fluctuations.

Erosion Control Methods

The IAG discussed several possible methods to control erosion around the projects including:

- Specialized vegetative plantings;
- Retaining walls, sea walls;
- Public education;
- Buffer zones; and
- Shoreline management plan, permitting.

Erosion Identification

The IAG acknowledged that more information is needed to identify atypical erosion sites. It was suggested that APC's surveillance contractors could provide assistance in the erosion identification process. The IAG decided that it should conduct a pilot reconnaissance study at Clear Creek (Smith reservoir) and the Weiss tailrace. These pilot studies will then be used to further develop and refine the process of evaluating project-related erosion at other sites. APC will coordinate these pilot studies with IAG members and other interested stakeholders.

Conclusion

The next meeting of the E2 IAG will be held on either May 20th or 21st, 2002. APC will send meeting materials (agenda, work products and meeting logistics) to IAG members in advance of the next meeting.

IAG documents and materials are posted on the Internet at www.southerncompany.com/alpower/hydro.

Issue Action Group: E2 Point & Non-Point Source Pollution

Meeting Notes & Summary: Alabama Power Conference Call Center June 25, 2002

Final 07-16-02

Warrior and Coosa Relicensing Projects Combined

Meeting Attendees

IAG Members:

Jim Crew	APC
John Eisenbarth	TU
Henry Mealing	Kleinschmidt
Kelly Schaeffer	Kleinschmidt
Andy Sheppard	APC
Bill Sim	APC
Isabella Trussell	LMLPA

Other Attendees:

David Brock	Pam McDaniel
Jason Moak	Jerry Moss
John Peconom	Jason Redmond

Action Items

- Post March meeting notes on APC's hydro relicensing web page.
Jason Moak Due – June 28, 2002
- Review the Erosion Study Plan and submit comments to APC.
All IAG Members Due – July 5, 2002
- Prepare and distribute meeting notes and summary to IAG members.
Jim Crew & John Peconom Due – July 10, 2002
- Prepare a 1-page summary of APC's regulated dredging practices.
Jim Crew Due – July 12, 2002
- Create a draft schedule of erosion studies.
Pam McDaniel & Henry Mealing at July 16, 2002 meeting

Agreements & Resolutions

- 1) The IAG agreed to provide comments on the Erosion Study Plan by July 5, 2002.
- 2) The IAG agreed that concerns regarding shoreline erosion on Lay Lake have been adequately addressed in the Lay Lake Erosion Observations memorandum.
- 3) The IAG added the Logan Martin tailrace to the list of erosion "hot-spots" to be addressed in the study plan.

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Meeting Notes & Summary: Alabama Power Conference Call Center June 25, 2002

Final 07-16-02

- 4) The IAG agreed to forward the "Lay Lake Erosion Observations" memorandum to the E8 Lake Level Fluctuations IAG.
- 5) APC will provide more information and education on project operations and dredging practices.

Meeting Notes

These notes summarize the major items discussed during the meeting and are not intended to be a transcript or analysis of the meeting.

Introductions – Jim Crew welcomed all the meeting attendees and thanked them for their continued participation in this relicensing process. Jim also introduced Pam McDaniel who is with APC's Environmental Affairs division. Pam is an erosion specialist within the company that will be working with this IAG on erosion studies, alternatives, and erosion management as needed.

Review March Meeting Notes – The March 12, 2002, meeting notes were approved with comments from Carl Couret and will be posted to APC's hydro relicensing web site.

Erosion Study Plan – Based on IAG input, APC prepared a draft erosion study plan to assess potential erosion sites within the Warrior and Coosa basins and began field observations of these sites to characterize and quantify the severity of any project-related erosion. This study plan was sent to the IAG for their review, and APC asked that comments be submitted by July 5, 2002.

Results of Preliminary Erosion Surveys – APC & Kleinschmidt staff "field-tested" the erosion study plan at the Weiss and Smith tailraces, which had been previously identified as erosion "hot-spots". These field tests were conducted to identify and correct any difficulties with using the study form. A more detailed summary of these surveys will be presented at the IAG's next meeting on July 16, 2002.

Lay Lake Erosion – Kleinschmidt presented a June 18, 2002, memorandum entitled "Lay Lake Erosion Observations". This memo summarizes Kleinschmidt's observations of "potential erosion sites" originally identified at the March 12, 2002 IAG meeting. Copies of this memo are available upon request. Kleinschmidt concluded that erosion on the main body of the lake was not atypical when compared to other southeastern reservoirs and that project operations do not appear to produce significant erosion on the mainstem of Lay Lake.

IAG members discussed the memo including a June 18, 2002, email from Don Haney. APC stated that efforts to address erosion would occur on the hot spots that have been identified. Andy Sheppard explained to the group that it would not be physically possible to hold the lake to a 0.3 ft. fluctuation. A majority of the IAG members concluded that the survey adequately

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Meeting Notes & Summary: Alabama Power Conference Call Center June 25, 2002

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described the erosion that was occurring on Lay Lake and decided to focus further study efforts on the identified hot spots listed in the study plan.

APC's & ACOE's Dredging Regulations – The US Army Corps of Engineers grants APC's Corporate Real Estate Division the authority to regulate dredging activities within FERC's project boundaries. APC will prepare and distribute a one-page handout summarizing dredging regulations.

Conclusion

The next IAG meeting will be held on July 16, 2002. The time and location of this meeting will be announced two weeks prior to the meeting. An agenda and any meeting materials will accompany this announcement.

IAG documents and materials are posted on the Internet at www.southerncompany.com/alpower/hydro

Issue Action Group: E2 Erosion & Siltation

Meeting Summary: Marriott Birmingham July 16, 2002

Finalized 11-14-02

Warrior and Coosa Relicensing Projects

Meeting Attendees

IAG Members:

Jim Crew	APC (Chairperson)	Kelly Schaeffer	Kleinschmidt (Facilitator)
Dan Catchings	ADCNR	Stan Cook	ADCNR
Carl Couret	USFWS	John Eisenbarth	TU
Henry Mealing	Kleinschmidt	Jim Moore	ADEM
Jerry Moss	ADCNR	Dan Murchison	Lake Mitchell Hobo
Malcom Pierson	APC	Andy Sheppard	APC
Bill Sim	APC	Isabella Trussell	LMLPA

Other Attendees:

Ray Cline	Dow Johnston
Jim Lochamy	Pam McDaniel
Brad McLane	Jason Moak
Kathy Nichols	John Peconom
Alan Peebles	John Shuman
Danny Tignor	

Action Items

- Post final June 25, 2002 meeting notes summary to APC's hydro relicensing website.
Jason Moak Due – July 31, 2002
- Post Pam McDaniel's preliminary erosion survey presentation to APC's hydro relicensing website.
Jason Moak Due – July 31, 2002
- Post final Erosion Study Plan to APC's hydro relicensing website.
Jason Moak Due – July 31, 2002
- Schedule "hot-spot" erosion surveys.
Pam McDaniel Due – July 31, 2002
- Collect aerial photographs from Friends of Rural Alabama.
Malcolm Pierson Due – August 7, 2002
- Identify tributary "hot-spots" for analysis.
IAG Members Due – September 4, 2002

Issue Action Group: E2 Erosion & Siltation

Meeting Summary: Marriott Birmingham July 16, 2002

Finalized 11-14-02

Agreements & Resolutions

- 1) The erosion study plan was accepted with revisions by the IAG.
- 2) The IAG should focus its efforts on atypical erosion directly related to project operations.
- 3) Interested stakeholders are invited to participate in the erosion “hot-spot” surveys.
- 4) IAG members should identify “hot-spot” tributaries for review.

Meeting Notes

These notes summarize the major items discussed during the meeting and are not intended to be a transcript or analysis of the meeting.

Erosion Study Plan

The Erosion Study Plan was revised based on recommendations provided by the IAG at its June 25, 2002 meeting. The members agreed that it would be good to proceed with surveys using the outlined methodology.

Preliminary Erosion Surveys

Field testing of a study plan and survey form helps ensure that data derived from the study will be accurate and useful. During May 2002, staff from APC and Kleinschmidt performed a beta test of the erosion survey field observation form. Pam McDaniel is an APC erosion specialist who was involved with the field-testing and has been assigned to collect erosion data for this IAG. Pam presented results from the preliminary surveys at the Weiss and Smith tailraces. Pam presented the field data information, including photos of the sites, collected at each identified erosion site. IAG members asked APC to include property ownership (i.e., fee, flood easement, private) on the survey form.

Tributary Erosion

The IAG discussed the issue of project related erosion impacts on tributaries. Specific tributaries that were identified for investigation included Ohatchee Creek and Kelly Creek. APC asked IAG members to identify other tributary “hot-spots”, if applicable, so that those sites could be added to the survey list.

Implementation of Erosion Control Measures

IAG members asked APC about early implementation of erosion control measures. Once sites are identified, when would erosion control measures be put in place? APC noted implementation would occur in a “triage” fashion with the most critical areas receiving priority.

Miscellaneous

Friends of Rural Alabama may have aerial photographs that might be useful in identifying erosion “hot spots”. APC will contact this group to determine if they have information useful to this IAG.

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During September or October 2002, APC will initiate the Shoreline Management IAG (R6). The E2 IAG will forward project related erosion information to R6 for use in developing the Shoreline Management Plan.

ADEM is revising their erosion control handbook as well as sponsoring a training seminar on Rosgen's Handbook later in 2003.

On July 18, 2002 Mr. Don Haney of the Lay Lake HOBO submitted comments via email regarding the Lay Lake Erosion Memo, presented to and endorsed by IAG members at the June 25, 2002 E2 IAG meeting. Don was unable to attend either the July 16 meeting or the June 25 meetings but, requested that his comments be incorporated into the meeting summary. Don disagrees with the results of the Lay Lake erosion survey and is dissatisfied with the manner in which the survey was conducted. He also restated his position on adverse project related erosion at Lay Lake, provided examples of this erosion and requested that APC do more to address this issue. Don's comments, in their entirety, concerning the IAG's decision on Lay Lake erosion are contained in his July 18, 2002 email to E2 IAG members.

Conclusion

The next meeting of the E2 IAG will be held at the Alabama 4-H Center in Columbiana in September 2002. A meeting agenda, along any other meeting materials will be sent to IAG members for review prior to the next meeting.

E2 IAG documents and materials and are posted on the Internet at www.southerncompany.com/alpower/hydro.

Issue Action Group: E2 Erosion and Siltation

Meeting Summary: APC Headquarters – Birmingham, AL – November 14, 2002

Final 02-19-03

- Draft and distribute November 14, 2002 Working Group meeting notes summary.
Jim Crew Due – November 25, 2002
- Continue developing IAG Erosion Report.
Pam McDaniel Due – Ongoing

Agreements & Resolutions

- 1) The IAG agreed to finish addressing tailrace erosion issues before discussing potential erosion issues in project tributaries.
- 2) APC agreed to research methods on how to potentially monitor some of the tailrace erosion sites identified by this IAG.

Meeting Notes

These notes summarize the major items discussed during the meeting and are not intended to be a verbatim transcript or analysis of the meeting.

Tailrace Erosion Surveys

Pam McDaniel presented a summary of recent tailrace erosion surveys at Smith, Weiss, Neely Henry, Logan Martin, Lay, Mitchell and Bouldin tailrace areas. Pam's presentation included pictures of identified erosion sites as well as cursory explanations of why these sites were eroding and if they were stabilizing or not. Pam attributed much of the identified erosion to land uses with a much smaller fraction being directly associated with project operations. Pam pointed out that the total amount of erosion along APC's Coosa River system equaled to less than a mile of shoreline, whereas APC's entire Coosa River system is comprised of over 2,000 miles of shoreline.

IAG members discussed which sites were actively eroding and which sites were beginning to correct themselves. The Smith tailrace is a good example of a questionable site that may need more analysis. The IAG also discussed briefly whether or not all erosion needed to be "fixed".

In order to gain a better understanding of erosion sites along APC's Coosa River system, the ADCNR proposed that this IAG recommend some sort of monitoring program to determine if and how much these sites are eroding over time before automatically engineering a repair. APC agreed to look into some monitoring methods.

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Final 02-19-03

Bouldin Canal

The Bouldin Canal has long been identified by APC as an area of concern for potential erosion problems. Over the years, APC has actively managed the area, expending significant resources to address specific erosion issues. Though APC has had some limited successes in controlling erosion along the canal, they acknowledge that there are still some erosion issues that need to be addressed.

Next Steps

Pam McDaniel is preparing an “Erosion Report” for the IAG’s review that will document tailrace erosion sites. Based on information provided in the report, the IAG can decide on how to proceed.

Conclusion

The next meeting of the E2 IAG will be scheduled by the IAG Chairman after consulting with IAG members. APC will distribute all meeting materials via email in advance of the next meeting.

IAG documents and materials are posted on the Internet at www.southerncompany.com/alpower/hydro.