APPENDIX E-1-A

SCOPING CONSULTATION

Good Morning Kelly,

I hope all is well. HPD reviewed the Draft Water Quality Study Plan, Recreation Study Plan, Draft Mussel Study Plan, and RTE Species Plan. Thank you for sending us these documents. At this time HPD has no comment, as there are no cultural resources within the APE of the study areas.

We look forward to receiving the meeting minutes and final study plans.

Thanks!

Whitney Rooks, MHP Environmental Review Historian Historic Preservation Division (770) 389-7855 | F: (770) 389-7878 2610 Ga Hwy 155, SW Stockbridge, GA 30281 Facebook • Twitter • Instagram

From:	HPD106-DoNotReply
To:	Kelly Kirven
Cc:	Anne Floyd
Subject:	FERC: Stevens Creek Hydro Relicensing, #2535, Columbia Co, HP 930928-001
Date:	Friday, September 6, 2019 6:05:32 PM
Attachments:	Columbia HP-930928-001 Sept 6 2019.pdf

From: Historic Preservation Division

Attached is our letter on the subject undertaking (in Adobe Acrobat PDF format)

Do not respond to this e-mail.

If you have any questions concerning our letter, please contact: Whitney Rooks at <u>whitney.rooks@dnr.ga.gov</u>

A free copy of Adobe Acrobat Reader can be downloaded from: <u>www.adobe.com</u>

From:	Kelly Kirven
To:	Alison Jakupca; AMY BRESNAHAN (Amy.Bresnahan@dominionenergy.com); Ashley Holmes; Bill Marshall
	(marshallb@dnr.sc.gov); caitlinh@ccppcrafts.com; Caleb Gaston (caleb.gaston@scana.com); Chris Howard
	(chris@linksolar.net); Chris Nelson (chris.nelson@dnr.ga.gov); Debbie Wallsmith (debbie.wallsmith@dnr.ga.gov);
	Derrick Miller (derrickmiller@fs.fed.us); Elena Richards (elena@savannahriverkeeper.org); Elizabeth Johnson
	(emjohnson@scdah.state.sc.us); Elizabeth Miller (MillerE@dnr.sc.gov); Elizabeth Toombs (elizabeth-
	toombs@cherokee.org); Henderson, Cameron T.; Henry Mealing; Jaime Loichinger (iloichinger@achp.gov);
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	Darley (Jeff.darley@dnr.ga.gov); Jennifer Welfe (Jennifer.welfe@dnr.ga.gov); John Eddins (Jeddins@achp.gov);
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	(Katnryn, A. Feingold <u>@usace.army.mil)</u> ; Keily Kirven; Madeline Banyas (madeline.banyas@dnr.ga.gov); Melanie
	Unset (metanine oldsetws.gov), Mike Mostey (mimosteyescalia.com), Outdoor Adgusta, Padia Matchiek
	padia.inarchitek.eutin.ga.govi, K. A. (Tony) muss barneybinnine eginan.cum, tanteesavainainivei keeper.olig, randy mahan (mahan@ss tr. com). PAVMOND AMMAPELL: Poh Payay (manyul@comcast.net). Pohert Philling
	(mbillins@gwf.org): Robin Goodloe (robin goodloe@fws.gov): Robinson, Scott: Rooks, Whitney: Scott Hyatt
	(scott, m. hyatt2gusace, army, mil): Smith, Leland A.: Stan Simpson (Stanley, L. Simpson@usace, army, mil): Steve
	Schleiger (steve.schleiger@dnr.ga.gov); Thom Litts (thom.litts@dnr.ga.gov); Tonya Bonitatibus
	(riverkeeper@savannahriverkeeper.org); Wenonah G. Haire (wenonahh@ccppcrafts.com); Whalen, James -FS;
	William Jabour (William.E.Jabour@usace.army.mil); Andy Herndon (Andrew.Herndon@noaa.gov); Chris
	Thomason (thomasonc@dnr.sc.gov); David Eargle (eargleda@dhec.sc.gov); Don Imm (donald imm@fws.gov);
	Fritz Rohde (Fritz.Rohde@noaa.gov); Greg Mixon (mixong@dnr.sc.gov); Jason Bettinger (bettingerj@dnr.sc.gov);
	Jason Moak; Jeffery Williams (jeffery.williams@dnr.ga.gov); Morgan Kern (KernM@dnr.sc.gov); Pace Wilber
	(Pace.Wilber@noaa.gov); Ron Ahle; Rusty Wenerick (weneriwr@dhec.sc.gov); Scott Glassmeyer; Tony
	Hornbuckle (thornbuckle61@guali.com); Twyla Cheatwood (twyla.cheatwood@noaa.gov); Zapata. Martha; Bret
	Hoffman; Susan Barrett (sdbarrit@gmail.com)
Subject:	Final Stevens Creek Joint RCG Meeting Notes - 2/18/20
Date:	Wednesday, March 25, 2020 1:58:01 PM
Attachments:	final 02182020 JointRCG notes pdf

Good afternoon all,

Attached are the final notes from the Stevens Creek Joint RCG meeting, held on February 18th. The notes are also available on the project website, <u>www.stevenscreekrelicense.com</u>.

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt

Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com

From:	Alison Jakupca
To:	AMY BRESNAHAN; RAYMOND AMMARELL; Henry Mealing; CALEB GASTON; Jason Moak; Kelly Kirven
Subject:	FW: SCDNR Freshwater Mussel SOP
Date:	Friday, March 13, 2020 3:07:00 PM
Attachments:	SCDNR Freshwater Mussel Survey SOP.pdf

As sent by SCDNR today. Have a wonderful weekend, Alison

Alison Jakupca Senior Regulatory Coordinator Office: 803 462 5628 Mobile: 864 906 4119 www.KleinschmidtGroup.com

Providing practical solutions for complex problems affecting energy, water, and the environment

From: Elizabeth Miller <MillerE@dnr.sc.gov>
Sent: Friday, March 13, 2020 2:57 PM
To: Alison Jakupca <Alison.Jakupca@KleinschmidtGroup.com>
Cc: Morgan Kern <KernM@dnr.sc.gov>
Subject: SCDNR Freshwater Mussel SOP

Hi Alison,

I've attached the SCDNR Freshwater Mussel SOP that we discussed providing Dominion Energy and Kleinschmidt for the mussel survey. Please let me know if you have any questions. Morgan is also available for any technical advice. Thank you and have a great weekend. Elizabeth

Elizabeth C. Miller FERC Coordinator Office of Environmental Programs South Carolina Department of Natural Resources 217 Fort Johnson Road P.O. Box 12559 Charleston, SC 29412 Office: (843) 953-3881 Cell: (843) 729-4636

From:	BRESNAHAN, AMY
To:	Miller, Derrick L -FS; "Bates, Jim -FS"; Morgan, Robert T -FS; Toney, Elizabeth M -FS
Cc:	AMMARELL, RAYMOND R (SCE&G - 8); Alison Jakupca; Kelly Kirven
Subject:	FW: Stevens Creek Project (P-2535) relicensing consultation
Date:	Thursday, October 17, 2019 9:45:24 AM

Forwarding this to you as I left the USFS off the initial email. Please contact me if you have questions.

Amy

From: BRESNAHAN, AMY (SCE&G - 8)
Sent: Tuesday, October 15, 2019 3:14 PM
To: 'Caitlinh@ccppcrafts.com' <Caitlinh@ccppcrafts.com>; 'Rooks, Whitney'
<Whitney.Rooks@dnr.ga.gov>; Johnson, Elizabeth <EJohnson@scdah.sc.gov>; 'elizabethtoombs@cherokee.org' <elizabeth-toombs@cherokee.org>
Cc: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>; Alison Jakupca
<Alison.Jakupca@KleinschmidtGroup.com>; AMMARELL, RAYMOND R (SCE&G - 8)
<RAMMARELL@scana.com>
Subject: Stevens Creek Project (P-2535) relicensing consultation

To all,

Dominion Energy South Carolina, Inc. (DESC), licensee of the Stevens Creek Hydroelectric Project, (FERC Project No. 2535) is initiating consultation pursuant to Section 106 of the National Historic Preservation Act for the relicensing of the Stevens Creek Hydroelectric Project.

During the previous relicensing a Phase I and II Cultural Resources investigation was completed in 1996. A Historic Properties Management Plan (HPMP) was approved by the FERC in March 2004. Since a comprehensive investigation has been done in the past at the Stevens Creek Project, DESC requests that the agencies and tribes review the existing investigations and HPMP to determine if any additional investigation needs to be undertaken for this relicensing. Also, any updates recommended for the HPMP will be discussed during this process to develop the new Historic Management Properties Plan.

Please note that the Project Boundary ends at the Stevens Creek dam but the area of potential effects (APE) for cultural resources scope of this Project encompasses area not only within the project boundary but an area outside as well. Outside of the project boundary the APE encompasses both shorelines of the Savannah River downstream from the Stevens Creek dam for approximately 2, 000 feet below the dam which includes Stallings Island (see Figure 1 of the HPMP). DESC would like confirmation as to whether you are in agreement with the current delineated APE.

Please respond to me within 30 days as to whether your agency or tribe requests additional cultural resource investigations and whether you agree with using the current APE for this relicensing process.

Due to the large file sizes of the documents, you may access them for download via Sharefile site hosted by Kleinschmidt, a consulting firm assisting in the relicensing process. Click on the following

link to download; <u>https://kleinschmidt.sharefile.com/d-scff04f3c2534e958</u>

If you have any questions please contact me. I look forward to working with you during this relicensing.

Amy Bresnahan, P.E.

Dominion Energy South Carolina, Inc. Fossil/Hydro Civil Engineering MC A221 220 Operation Way Cayce, SC 29033-3701 Office: (803) 217-9965 Cell: (803)206-4667 amy.bresnahan@scana.com



Actions Speak Louder"

From:	Kelly Kirven
То:	Alison Jakupca; Andy Herndon (Andrew.Herndon@noaa.gov); ARGENTIERI, WILLIAM R; Ashley Holmes; Bill
	Marshall (marshallb@dnr.sc.gov); Bill Smith (BISMITH44@comcast.net); Bill Stringer (catboyz@nctv.com);
	BRESNAHAN, AMY; Caleb Gaston (caleb.gaston@scana.com); Chad Altman (altmankc@dhec.sc.gov); Charlene
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	<u>Debbie Wallsmith (debbie.wallsmith@dnr.ga.gov);</u> Derrick Miller (derrickmiller@fs.fed.us); Don Imm
	(donald_imm@fws.gov); Ed Bettross (Ed.Bettross@dnr.ga.gov); Elena Richards
	<u>(elena@savannahriverkeeper.org); Elizabeth Johnson (emjohnson@scdah.state.sc.us); Elizabeth Miller</u>
	(MillerE@dnr.sc.gov); Elizabeth Toombs (elizabeth-toombs@cherokee.org); Fritz Rohde (Fritz.Rohde@noaa.gov);
	<u>George and Diane Sleister (gwsleister@att.net);</u>
	Loichinger (jloichinger@achp.gov); Jamie Rader (jrader@ducks.org); Jamie Sykes
	<u>(James.A.Sykes@usace.army.mil); Jason Bettinger (bettingerj@dnr.sc.gov); Jason Moak; Jeff Darley</u>
	(jeff.darley@dnr.ga.gov); Jennifer Welte (jennifer.welte@dnr.ga.gov); John Boland (jkboland59@me.com); John
	Eddins (jeddins@achp.gov); John Harris (john.harris@gfii.com); Jon Ambrose (jon.ambrose@dnr.ga.gov); Jordan
	Johnson; Josh Williford (joshua.paul.williford@gmail.com); Kathryn Feingold
	(Kathryn,A.Feingold@usace.army.mil); Kelly Kirven; Ley, Amanda; Lorianne Riggin (RigginL@dnr.sc.gov); Lynn
	Arnett (LynnArnett325@gmail.com); Madeline Banyas (madeline.banyas@dnr.ga.gov); Mark Caldwell
	(mark_caldwell@tws.gov); Mark Davis: Matt Thomas (matt.thomas@dnr.ga.gov); Melanie Olds
	(metanie_olds@tws.gov); Mertill McGregor (merrilim@sccc.org); Mike Mosley (MMosley@scana.com); Morgan
	Kern (kerniwednr.sc.gov); Outdoor Augusta; Pace Wilber (Pace Wilberemoda.gov); Pat and Dallas Simon
	(parsimonewctel.net); Paula Marcinek (paula.marcinekegan.ga.gu); Phili Gaines (pagalesescopt.com); K.A.
	(Tonty) Hicks (barnetypommer egimali.com); rammareliescala.com; kanoy manan (randoppi.mananescana.com); randop metagana and transported to the second party and the second party
	ranov manan (rmananesc.rr.com); KOD Pavey (rpavey reconcast.net); Kobert Philipse (philopse (philopse)); Desky
	ROBIT GOULDE (TODIT GOULDEETWS.GOV), ROT ALLE, ROT DAVIS (DIGOT.GAVISODE GITAL.COTT), ROCKS, WITHEY,
	Kusty Weiterlick (Weiterlink edited.st. dow); Scott myatt (scott, intriviatizeusate.atmy.imii); Stat Collins
	(StadeSavalinalityetkeeper.org), Shifti, Leanu A., Sati Sinpson (Stalley, LSinpsoneusdeeanity.http: Schlagar (stave schlagar@drr ag agu): Susap Parentt (charrit@amail.com): Them Little
	Scheiger Steveschleigere um gagov), Susan barrett Subarnte ginalicom, hiom Litts (them litteradier ga gou): Tom McCay (themas, mecowaftis gou): Tom Drector (proctor251/agal.com): Topy
	Unom.ntcsedni.ga.gov, rom wcov (ulonas incovernity story) rom rocco (proctions) reaction, i forty Hornbuckle (thornbuckle/i@gmail.com): Tonya Ropitatibus (riverkeener@sayangabriverkeener.org): Twyla
	Cheatwood (twyla cheatwood@noa.gov), Torra bornatious (Twinkeper Savenation Repet 1999), Twyla Cheatwood (twyla cheatwood@noa.gov). William Jahour
	(William E Jabour@usace army mil)
Subject	EW: Stayens Creek Balicensing Meeting - August 22, 2010
Data:	Turoday August 20 2010 1:22:2 DM
Date:	Tuesuay, August 20, 2017 1:33:37 MVI

Good afternoon all,

This is a reminder that if you have any comments on the draft Stevens Creek Pre-Application Document, please try to send those to me by mid-day tomorrow, so that we can address them adequately at the meeting on Thursday.

Also, several of you have asked for an address/directions to the Misty Lake Clubhouse. The address is 1280 Ascauga Lake Road, North Augusta, SC 29841. But that actually puts you at a different place on the correct road. If you go to Google Maps, near that address you will see the GVW Volunteer Fire Dept. Station No. 3. The entrance to Misty Lake is just east of that. I hope this helps!!

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com

Sent: Tuesday, July 30, 2019 2:46 PM

To: Alison Jakupca < Alison. Jakupca@KleinschmidtGroup.com>; Andy Herndon (Andrew.Herndon@noaa.gov) <Andrew.Herndon@noaa.gov>; ARGENTIERI, WILLIAM R <BARGENTIERI@scana.com>; Ashley Holmes <ashley@savannahriverkeeper.org>; Bill Marshall (marshallb@dnr.sc.gov) <marshallb@dnr.sc.gov>; Bill Smith (BISMITH44@comcast.net) <BISMITH44@comcast.net>; Bill Stringer (catboyz@nctv.com) <catboyz@nctv.com>; BRESNAHAN, AMY <Amy.Bresnahan@scana.com>; Caleb Gaston (caleb.gaston@scana.com) <caleb.gaston@scana.com>; Chad Altman (altmankc@dhec.sc.gov) <altmankc@dhec.sc.gov>; Charlene Coleman (cheetahtrk@yahoo.com) <cheetahtrk@yahoo.com>; Charles Whisenant (chaswhis1988@aol.com) < chaswhis1988@aol.com>; CHASTAIN, WILLIAM K JR <WKCHASTAIN@scana.com>; Chris Howard (chris@linksolar.net) <chris@linksolar.net>; Chris Nelson (chris.nelson@dnr.ga.gov) <chris.nelson@dnr.ga.gov>; Chris Thomason (thomasonc@dnr.sc.gov) <thomasonc@dnr.sc.gov>; Chuck Hightower (hightocw@dhec.sc.gov) <hightocw@dhec.sc.gov>; Cory Eubanks (JCE1440@yahoo.com) <JCE1440@yahoo.com>; Dan Rankin (rankind@dnr.sc.gov) <rankind@dnr.sc.gov>; David Bernhart (david.bernhart@noaa.gov) <david.bernhart@noaa.gov>; David Eargle (eargleda@dhec.sc.gov) <eargleda@dhec.sc.gov>; Debbie Wallsmith (debbie.wallsmith@dnr.ga.gov) <debbie.wallsmith@dnr.ga.gov>; Derrick Miller (derrickmiller@fs.fed.us) <derrickmiller@fs.fed.us>; Don Imm (donald imm@fws.gov) <donald imm@fws.gov>; Ed Bettross (Ed.Bettross@dnr.ga.gov) <Ed.Bettross@dnr.ga.gov>; Elena Richards (elena@savannahriverkeeper.org) <elena@savannahriverkeeper.org>; Elizabeth Johnson (emjohnson@scdah.state.sc.us) <emjohnson@scdah.state.sc.us>; Elizabeth Miller (MillerE@dnr.sc.gov) < MillerE@dnr.sc.gov>; Elizabeth Toombs (elizabeth-toombs@cherokee.org) <elizabeth-toombs@cherokee.org>; Fritz Rohde (Fritz.Rohde@noaa.gov) <Fritz.Rohde@noaa.gov>; George and Diane Sleister (gwsleister@att.net) < gwsleister@att.net>; Greg Mixon (mixong@dnr.sc.gov) <mixong@dnr.sc.gov>; Henry Mealing <Henry.Mealing@KleinschmidtGroup.com>; Jaime Loichinger (jloichinger@achp.gov) <jloichinger@achp.gov>; Jamie Rader (jrader@ducks.org) <jrader@ducks.org>; Jamie Sykes (James.A.Sykes@usace.army.mil) <James.A.Sykes@usace.army.mil>; Jason Bettinger (bettingerj@dnr.sc.gov) <bettingerj@dnr.sc.gov>; Jason Moak <Jason.Moak@Kleinschmidtgroup.com>; Jeff Darley (jeff.darley@dnr.ga.gov) <jeff.darley@dnr.ga.gov>; Jennifer Welte (jennifer.welte@dnr.ga.gov) <jennifer.welte@dnr.ga.gov>; John Boland (jkboland59@me.com) <jkboland59@me.com>; John Eddins (jeddins@achp.gov) <jeddins@achp.gov>; John Harris (john.harris@gfii.com) <john.harris@gfii.com>; Jon Ambrose (jon.ambrose@dnr.ga.gov) < jon.ambrose@dnr.ga.gov>; Jordan Johnson <Jordan.Johnson@KleinschmidtGroup.com>; Josh Williford (joshua.paul.williford@gmail.com) <joshua.paul.williford@gmail.com>; Kathryn Feingold (Kathryn.A.Feingold@usace.army.mil) <Kathryn.A.Feingold@usace.army.mil>; Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>; Ley, Amanda <leyah@dhec.sc.gov>; Lorianne Riggin (RigginL@dnr.sc.gov) <RigginL@dnr.sc.gov>; Lynn Arnett (LynnArnett325@gmail.com) <LynnArnett325@gmail.com>; Madeline Banyas (madeline.banyas@dnr.ga.gov) <madeline.banyas@dnr.ga.gov>; Mark Caldwell (mark_caldwell@fws.gov) <mark_caldwell@fws.gov>; Mark Davis <mddavis629@gmail.com>; Matt Thomas (matt.thomas@dnr.ga.gov) <matt.thomas@dnr.ga.gov>; Melanie Olds (melanie olds@fws.gov) <melanie_olds@fws.gov>; Merrill McGregor (merrillm@scccl.org) <merrillm@scccl.org>; Mike Mosley (MMosley@scana.com) <MMosley@scana.com>; Morgan Kern (KernM@dnr.sc.gov) <KernM@dnr.sc.gov>; Outdoor Augusta <outdooraugusta@gmail.com>; Pace

Wilber (Pace.Wilber@noaa.gov) <Pace.Wilber@noaa.gov>; Pat and Dallas Simon (patsimon@wctel.net) <patsimon@wctel.net>; Paula Marcinek (paula.marcinek@dnr.ga.gov) <paula.marcinek@dnr.ga.gov>; Phil Gaines (pgaines@scprt.com) <pgaines@scprt.com>; R. A. (Tony) Hicks (barneybimmer@gmail.com) <barneybimmer@gmail.com>; rammarell@scana.com; Randy Mahan (randolph.mahan@scana.com) <randolph.mahan@scana.com>; randy mahan (rmahan@sc.rr.com) <rmahan@sc.rr.com>; Rob Pavey (rpavey1@comcast.net) <rpavey1@comcast.net>; Robert Phillips (rphillips@gwf.org) <rphillips@gwf.org>; Robin Goodloe (robin goodloe@fws.gov) <robin goodloe@fws.gov>; Ron Ahle <AhleR@dnr.sc.gov>; Ron Davis (bigron.davis00@gmail.com) < bigron.davis00@gmail.com>; Rooks, Whitney <Whitney.Rooks@dnr.ga.gov>; Rusty Wenerick (weneriwr@dhec.sc.gov) <weneriwr@dhec.sc.gov>; Scott Hyatt (scott.m.hyatt2@usace.army.mil) <scott.m.hyatt2@usace.army.mil>; Sica Collins (Sica@savannahriverkeeper.org) <Sica@savannahriverkeeper.org>; Smith, Leland A. <smithla@cdmsmith.com>; Stan Simpson (Stanley.L.Simpson@usace.army.mil) <Stanley.L.Simpson@usace.army.mil>; Steve Schleiger (steve.schleiger@dnr.ga.gov) <steve.schleiger@dnr.ga.gov>; Susan Barrett (sdbarrit@gmail.com) <sdbarrit@gmail.com>; Thom Litts (thom.litts@dnr.ga.gov) <thom.litts@dnr.ga.gov>; Tom McCoy (thomas_mccoy@fws.gov) <thomas_mccoy@fws.gov>; Tom Proctor (proctor351@aol.com) ctor351@aol.com>; Tony Hornbuckle (thornbuckle61@gmail.com) <thornbuckle61@gmail.com>; Tonya Bonitatibus (riverkeeper@savannahriverkeeper.org) <riverkeeper@savannahriverkeeper.org>; Twyla Cheatwood (twyla.cheatwood@noaa.gov) <twyla.cheatwood@noaa.gov>; Wenonah G. Haire (wenonahh@ccppcrafts.com) <wenonahh@ccppcrafts.com>; William Jabour (William.E.Jabour@usace.army.mil) < William.E.Jabour@usace.army.mil> Subject: Stevens Creek Relicensing Meeting - August 22, 2019

Good afternoon all,

A Stevens Creek Relicensing Meeting is scheduled for August 22, 2019 from 9:30 AM – 4:00 PM at the Misty Lake Clubhouse. A detailed agenda is forthcoming, however at this meeting, our primary focus will be to review the draft Pre-Application Document (PAD). The draft PAD is available for download at http://stevenscreekrelicense.com/index.php/milestone-documents/. Please review this document, and if possible, provide any comments or questions to me prior to the meeting so that we can come prepared to answer them.

If you will need to join this meeting via teleconference, please let me know so that I can provide you with the call-in information.

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt Office: 803.462.5633 Cell: 423.747.2660

www.KleinschmidtGroup.com

Good Afternoon Kelly

I hope all is well. HPD has reviewed the draft Recreation Study Plan for the Stevens Creek Hydroelectric Project in Columbia County, Georgia (and South Carolina). At this time, our office has no comments regarding the draft study plan. We look forward to receiving any Section 106 consultation information related to Stevens Creek as projects become available.

Thanks!

Whitney Rooks, MHP Environmental Review Historian Historic Preservation Division (770) 389-7855 | F: (770) 389-7878 2610 Ga Hwy 155, SW Stockbridge, GA 30281 Facebook • Twitter • Instagram

From:	Olds, Melanie
To:	Kelly Kirven
Subject:	Re: [EXTERNAL] Stevens Creek PAD - mussels
Date:	Wednesday, September 25, 2019 10:18:47 AM

Hi Kelly,

I've discussed the mussel section and the T&E section with our mussel biologist. The freshwater mussel section only discusses surveys that were completed within the Savannah River down stream of the project. We are not aware of surveys that have been conducted in lower Stevens Creek but surveys there are of high priority and are within the project boundary. I would include a sentence or two the states that surveys up Stevens Creek have not been conducted. For the T&E section related to Carolina Heelsplitter - The Turkey Creek population includes 7 streams with known occurrences, it's not just Turkey Creek. That area is considered a heelsplitter hotspot and the entire watershed is important for the species and its recovery. Again there have been no surveys for the species conducted in the lower Stevens Creek but a quick look at the aerial imagery within the project boundary within Steven's Creek indicates that habitat may exist for the species and them being there can not be ruled out.

Let me know if you have any other questions,

Melanie

Melanie Olds | Fish & Wildlife Biologist/FERC Coordinator U.S. Fish and Wildlife Service South Carolina Ecological Services Field Office 176 Croghan Spur Road, Suite 200 Charleston, SC 29407 843-727-4707 ext. 205 843-727-4218 fax

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

On Thu, Sep 19, 2019 at 11:09 AM Kelly Kirven <<u>Kelly.Kirven@kleinschmidtgroup.com</u>> wrote:

Hi Melanie!

At the August 22nd Stevens Creek meeting, you said you would review the PAD to determine if there was any need for additional mussels data. I just wanted to follow up with you to see if you had a chance to review yet. No rush – just checking in!

Thanks,

Kelly

Kelly Kirven

Project Licensing Coordinator

Kleinschmidt

Office: 803.462.5633

Cell: 423.747.2660

www.KleinschmidtGroup.com

From:	Sykes, James A Jr CIV USARMY CESAS (US)
To:	AMY BRESNAHAN
Cc:	Kelly Kirven; Brashier, Evan G CIV USARMY USACE (USA)
Subject:	RE: Bald eagles
Date:	Tuesday, February 11, 2020 2:42:49 PM
Attachments:	Mid Winter Waterfowl Eagle Surveys.xlsx

Amy,

We conduct an annual eagle and waterfowl survey that includes all of the lake and the immediate tailrace.

I have attached an annual summary of the survey data back to 2004.

If you have any questions about the survey data please ask Evan Brashier, Conservation Biologist at JST. He is copied above.

Thanks. Jamie

-----Original Message-----From: AMY BRESNAHAN [mailto:amy.bresnahan@dominionenergy.com] Sent: Tuesday, February 11, 2020 2:07 PM To: Sykes, James A Jr CIV USARMY CESAS (US) <James.A.Sykes@usace.army.mil> Cc: 'Kelly Kirven' <Kelly.Kirven@KleinschmidtGroup.com> Subject: [Non-DoD Source] Bald eagles

Jamie,

Does the USACE track bald eagles in the vicinity of JST dam and down river? Drafting the RTE paper and at two of our hydro facilities we do track eagles but not at Stevens Creek hydro. If so, could you share that information so that we may document it in the RTE paper?

Thanks,

Amy Bresnahan, P.E.

Dominion Energy South Carolina, Inc.

Fossil/Hydro Civil Engineering

MC A221

220 Operation Way

Cayce, SC 29033-3701

Office: (803) 217-9965

Cell: (803)206-4667

amy.bresnahan@dominionenergy.com <mailto:amy.bresnahan@dominionenergy.com>

From:	Joe Lemeris
То:	Kelly Kirven
Subject:	RE: Revised species review, Stevens Creek Hydro Project
Date:	Friday, March 27, 2020 1:03:21 PM
Attachments:	image003.png image001.png

Unfortunately right now it does not, since it was not reviewed/tracked at the time of the 2015 SWAP. It will almost certainly be included in the upcoming revision of the SWAP, in which I'd imagine it will receive a high or highest status, but as it stands it is not on our list. It is definitely one of our tracked species for sure!

Cheers, Joe

Joseph Lemeris, Jr.

GIS/Data Manager, Natural Heritage Program | o: 803-734-1396 | m: 843-729-0679 | e: LemerisJ@dnr.sc.gov South Carolina Dept. of Natural Resources | 1000 Assembly St, Columbia, SC 29201 | www.dnr.sc.gov



From: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>
Sent: Friday, March 27, 2020 12:40 PM
To: Joe Lemeris <LemerisJ@dnr.sc.gov>
Subject: RE: Revised species review, Stevens Creek Hydro Project

Hi Joe,

One follow-up question. Does the Ocmulgee skullcap have a state priority status (highest, high, or moderate) or is it a tracked species?

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Office: 803.462.5633 www.KleinschmidtGroup.com

From: Joe Lemeris <LemerisJ@dnr.sc.gov>
Sent: Friday, March 27, 2020 11:37 AM
To: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>
Cc: Elizabeth Miller <MillerE@dnr.sc.gov>; speciesreview <speciesreview@dnr.sc.gov>
Subject: Revised species review, Stevens Creek Hydro Project

Good morning Ms. Kirven,

I was forwarded your request for more information from Elizabeth Miller about the species list included in our response to the Stevens Creek Hydro Project. Unfortunately one of our previous staff members had made some errors listing the status of several species in this list, therefore please find a revised copy which reflects accurate status. Note that species listed as 'Tracked Species' are species within our natural heritage database deemed to be vulnerable or imperiled within the state, but may be more secure in other parts of its range.

Please let me know if you have any other questions!!!

Cheers, Joe

Joseph Lemeris, Jr.

GIS/Data Manager, Natural Heritage Program | o: 803-734-1396 | m: 843-729-0679 | e: <u>LemerisJ@dnr.sc.gov</u> South Carolina Dept. of Natural Resources | 1000 Assembly St, Columbia, SC 29201 | <u>www.heritagetrust.dnr.sc.gov</u>



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From:	<u>Magniez, Jeff -FS</u>
То:	Kelly Kirven
Subject:	RE: Stevens Creek - Forest Service Species of Conservation Concern
Date:	Thursday, January 30, 2020 2:40:11 PM
Attachments:	image002.png

Oops...one more example of a species that is listed...this time on the LC...but has never been found on national forest land: relict trillium. It's known from Aiken County...so because of its close proximity to the Long Cane District, we do include it when we do botanical surveys.

From: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>
Sent: Thursday, January 30, 2020 2:37 PM
To: Magniez, Jeff -FS <jeff.magniez@usda.gov>
Cc: Miller, Derrick L -FS <derrick.miller@usda.gov>
Subject: RE: Stevens Creek - Forest Service Species of Conservation Concern

So if a district is not listed for a particular species, then that species it not known or likely to occur in that district?

Kelly Kirven Project Licensing Coordinator Office: 803.462.5633 www.KleinschmidtGroup.com

From: Magniez, Jeff -FS <jeff.magniez@usda.gov>
Sent: Thursday, January 30, 2020 2:35 PM
To: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>>
Cc: Miller, Derrick L -FS <<u>derrick.miller@usda.gov</u>>
Subject: RE: Stevens Creek - Forest Service Species of Conservation Concern

Hey, Kelly. For the most part, yes. Districts listed are those in which the species is known to occur...or is likely to occur. For example, the Andrew Pickens District is listed for persistent trillium...even thought the species has never been confirmed on national forest land...it's only known in the vicinity. I think that's the only exception to the rule.

From: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>>
Sent: Thursday, January 30, 2020 2:27 PM
To: Magniez, Jeff -FS <<u>jeff.magniez@usda.gov</u>>
Cc: Miller, Derrick L -FS <<u>derrick.miller@usda.gov</u>>
Subject: RE: Stevens Creek - Forest Service Species of Conservation Concern

Jeff,

Thank you so much for this information! I do have an additional question, if you don't mind indulging me. I am trying to understand the list of Threatened, Endangered, and Sensitive species that you sent over to me originally. In the column titled "District," are the districts listed those in

which the species is know to occur?

Thanks!

Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com

From: Magniez, Jeff -FS <jeff.magniez@usda.gov
Sent: Wednesday, January 22, 2020 5:40 PM
To: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>
Cc: Miller, Derrick L -FS <<u>derrick.miller@usda.gov</u>
Subject: RE: Stevens Creek - Forest Service Species of Conservation Concern

Hello, Kelly. Not a dumb question at all! No, the list of PETS species is not the same as the list of MIS.

The Sumter National Forest MIS are: hooded warbler, scarlet tanager, pine warbler, Acadian flycatcher, brown-headed nuthatch, prairie warbler, Swainson's warbler, field sparrow, American woodcock, pileated woodpecker, bobwhite quail, eastern wild turkey, and black bear.

From: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>>
Sent: Wednesday, January 22, 2020 1:30 PM
To: Magniez, Jeff -FS <<u>jeff.magniez@usda.gov</u>>
Cc: Miller, Derrick L -FS <<u>derrick.miller@usda.gov</u>>
Subject: RE: Stevens Creek - Forest Service Species of Conservation Concern

Jeff and Derrick,

This might be a dumb question, but is this list the same as the management indicator species for the Sumter National Forest?

Thanks! Kelly

Kelly Kirven Project Licensing Coordinator Office: 803.462.5633 www.KleinschmidtGroup.com

From: Magniez, Jeff -FS <jeff.magniez@usda.gov>

Sent: Wednesday, January 15, 2020 1:17 PM
To: Kelly Kirven kelly.Kirven@KleinschmidtGroup.com
Cc: Miller, Derrick L -FS <<u>derrick.miller@usda.gov</u>
Subject: RE: Stevens Creek - Forest Service Species of Conservation Concern

Attached please find the Sumter National Forest list of threatened, endangered, and Forest Service sensitive species.

From: Miller, Derrick L -FS <<u>derrick.miller@usda.gov</u>>
Sent: Wednesday, January 15, 2020 12:52 PM
To: Magniez, Jeff -FS <<u>jeff.magniez@usda.gov</u>>
Cc: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>>
Subject: FW: Stevens Creek - Forest Service Species of Conservation Concern

Jeff

Can you respond to Kelly for me.



Derrick L. Miller, Forester Special Uses Program Manager

President NFFE, Local 466 National Federation of Federal Employees Francis Marion & Sumter National Forest

p: 803-561-4056 f: 803-561-4004 <u>derrick.miller@usda.gov</u>

4931 Broad River Road Columbia, SC 29212 http://www.nffe-fsc.org

From: Kelly Kirven [mailto:Kelly.Kirven@KleinschmidtGroup.com]
Sent: Wednesday, January 15, 2020 12:43 PM
To: Miller, Derrick L -FS <<u>derrick.miller@usda.gov</u>>
Subject: Stevens Creek - Forest Service Species of Conservation Concern

Hi Derrick,

I hope you are doing well and had a great Christmas and New Year's! I wanted to reach out to you to see if you could provide a list of the Forest Service Species of Conservation Concern that may exist on Forest Service lands within the Stevens Creek project area. We are beginning to pull together our Rare, Threatened, and Endangered Species Whitepaper and would like to list the species that are important to the Forest Service.

Thanks so much!

Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com

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From:	Alison Jakupca
To:	Kelly Kirven; Ashley Holmes; Bill Marshall (marshallb@dnr.sc.gov); BRESNAHAN, AMY; caitlinh@ccppcrafts.com;
	Caleb Gaston (caleb.gaston@scana.com); Chris Howard (chris@linksolar.net); Chris Nelson
	<u>(chris.nelson@dnr.ga.gov);</u>
	(derrickmiller@fs.fed.us); Ed Bettross (Ed.Bettross@dnr.ga.gov); Elena Richards
	(elena@savannahriverkeeper.org); Elizabeth Johnson (emjohnson@scdah.state.sc.us); Elizabeth Miller
	(MillerE@dnr.sc.gov); Elizabeth Toombs (elizabeth-toombs@cherokee.org); Henry Mealing; Jaime Loichinger
	(jloichinger@achp.gov); Jamie Rader (jrader@ducks.org); Jamie Sykes (James.A.Sykes@usace.army.mil); Jeff
	Darley (jeff.darley@dnr.ga.gov); Jennifer Welte (jennifer.welte@dnr.ga.gov); John Eddins (jeddins@achp.gov);
	<u>Jon Ambrose (jon.ambrose@dnr.ga.gov); Jordan Johnson; Kathryn Feingold</u>
	<u>(Kathryn.A.Feingold@usace.army.mil); Madeline Banyas (madeline.banyas@dnr.ga.gov); Matt Thomas</u>
	(matt.thomas@dnr.ga.gov); Melanie Olds (melanie_olds@fws.gov); Mike Mosley (MMosley@scana.com); Outdoor
	<u>Augusta; Paula Marcinek (paula.marcinek@dnr.ga.gov); rammarell@scana.com; randy mahan</u>
	(rmahan@sc.rr.com); Rob Pavey (rpavey1@comcast.net); Robert Phillips (rphillips@gwf.org); Robin Goodloe
	<u>(robin_goodloe@fws.gov); Rooks, Whitney; Scott Hyatt (scott.m.hyatt2@usace.army.mil); Stan Simpson</u>
	(Stanley.L.Simpson@usace.army.mil); Steve Schleiger (steve.schleiger@dnr.ga.gov); Thom Litts
	(thom.litts@dnr.ga.gov); Tonya Bonitatibus (riverkeeper@savannahriverkeeper.org); Wenonah G. Haire
	(wenonahh@ccppcrafts.com); Whalen, James -FS; William Jabour (William.E.Jabour@usace.army.mil)
Subject:	RE: Stevens Creek Draft Recreation Use and Needs Study Plan
Date:	Tuesday, November 12, 2019 3:10:34 PM
Attachments:	Stevens Creek Recreation User Survey 10-9.docx
	Stevens Creek Spot Count Form.docx
	Stevens Creek Recreation Inventory Form.docx

Good Afternoon,

On behalf of Kelly Kirven, please find attached the draft Recreation Use and Needs Survey appendices for discussion at tomorrow's Stevens Creek Resource Conservation Group meetings. If you are not able to attend tomorrow's meeting, please feel free to forward any comments that you may have on these appendices, or the Recreation Study Plan itself to Kelly or me. Many thanks, Alison

Alison Jakupca Senior Regulatory Coordinator Office: 803 462 5628 Mobile: 864 906 4119 www.KleinschmidtGroup.com

Providing practical solutions for complex problems affecting energy, water, and the environment

From: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>

Sent: Friday, November 1, 2019 3:36 PM

To: Alison Jakupca <Alison.Jakupca@KleinschmidtGroup.com>; Ashley Holmes <ashley@savannahriverkeeper.org>; Bill Marshall (marshallb@dnr.sc.gov) <marshallb@dnr.sc.gov>; BRESNAHAN, AMY <Amy.Bresnahan@scana.com>; caitlinh@ccppcrafts.com; Caleb Gaston (caleb.gaston@scana.com) <caleb.gaston@scana.com>; Chris Howard (chris@linksolar.net) <chris@linksolar.net>; Chris Nelson (chris.nelson@dnr.ga.gov) <chris.nelson@dnr.ga.gov>; Debbie Wallsmith (debbie.wallsmith@dnr.ga.gov) <debbie.wallsmith@dnr.ga.gov>; Derrick Miller (derrickmiller@fs.fed.us) <derrickmiller@fs.fed.us>; Ed Bettross (Ed.Bettross@dnr.ga.gov) <Ed.Bettross@dnr.ga.gov>; Elena Richards (elena@savannahriverkeeper.org) <elena@savannahriverkeeper.org>; Elizabeth Johnson (emjohnson@scdah.state.sc.us) <emjohnson@scdah.state.sc.us>; Elizabeth Miller (MillerE@dnr.sc.gov) <MillerE@dnr.sc.gov>; Elizabeth Toombs (elizabeth-toombs@cherokee.org) <elizabeth-toombs@cherokee.org>; Henry Mealing <Henry.Mealing@KleinschmidtGroup.com>; Jaime Loichinger (jloichinger@achp.gov) <jloichinger@achp.gov>; Jamie Rader (jrader@ducks.org) <jrader@ducks.org>; Jamie Sykes (James.A.Sykes@usace.army.mil) < James.A.Sykes@usace.army.mil>; Jeff Darley (jeff.darley@dnr.ga.gov) <jeff.darley@dnr.ga.gov>; Jennifer Welte (jennifer.welte@dnr.ga.gov) <jennifer.welte@dnr.ga.gov>; John Eddins (jeddins@achp.gov) <jeddins@achp.gov>; Jon Ambrose (jon.ambrose@dnr.ga.gov) < jon.ambrose@dnr.ga.gov>; Jordan Johnson <Jordan.Johnson@KleinschmidtGroup.com>; Kathryn Feingold (Kathryn.A.Feingold@usace.army.mil) <Kathryn.A.Feingold@usace.army.mil>; Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>; Madeline Banyas (madeline.banyas@dnr.ga.gov) <madeline.banyas@dnr.ga.gov>; Matt Thomas (matt.thomas@dnr.ga.gov) <matt.thomas@dnr.ga.gov>; Melanie Olds (melanie olds@fws.gov) <melanie_olds@fws.gov>; Mike Mosley (MMosley@scana.com) <MMosley@scana.com>; Outdoor Augusta <outdooraugusta@gmail.com>; Paula Marcinek (paula.marcinek@dnr.ga.gov) <paula.marcinek@dnr.ga.gov>; rammarell@scana.com; randy mahan (rmahan@sc.rr.com) <rmahan@sc.rr.com>; Rob Pavey (rpavey1@comcast.net) <rpavey1@comcast.net>; Robert Phillips (rphillips@gwf.org) <rphillips@gwf.org>; Robin Goodloe (robin_goodloe@fws.gov) <robin goodloe@fws.gov>; Rooks, Whitney <Whitney.Rooks@dnr.ga.gov>; Scott Hyatt (scott.m.hyatt2@usace.army.mil) < scott.m.hyatt2@usace.army.mil>; Stan Simpson (Stanley.L.Simpson@usace.army.mil) <Stanley.L.Simpson@usace.army.mil>; Steve Schleiger (steve.schleiger@dnr.ga.gov) <steve.schleiger@dnr.ga.gov>; Thom Litts (thom.litts@dnr.ga.gov) <thom.litts@dnr.ga.gov>; Tonya Bonitatibus (riverkeeper@savannahriverkeeper.org) <riverkeeper@savannahriverkeeper.org>; Wenonah G. Haire (wenonahh@ccppcrafts.com) <wenonahh@ccppcrafts.com>; Whalen, James -FS <james.whalen@usda.gov>; William Jabour (William.E.Jabour@usace.army.mil) <William.E.Jabour@usace.army.mil> Subject: Stevens Creek Draft Recreation Use and Needs Study Plan

Good afternoon all,

Attached is the draft Recreation Use and Needs Study Plan for the Stevens Creek relicensing. Please review and be prepared to discuss at the upcoming Stevens Creek Land Mgt/Recreation RCG meeting on November 13th.

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com

Good afternoon,

A representative from GA EPD Wetlands Unit will not be attending the meeting on August 22nd. After attending the Stevens Creek Agency/NGO outreach meeting in January and reviewing the draft Stevens Creek PAD, I do not have any concerns or comments relating to water quality issues at this stage in the Stevens Creek relicensing process. The draft Stevens Creek PAD has provided sufficient information/data on water quality monitoring and annual reports for the project that meet Georgia water quality standards and shows that project operations will continue to moderate flow releases and re-oxygenate water. Thank you for reaching out. If there is any additional information you need, please let me know.

Sincerely, Madeline Banyas Environmental Compliance Specialist - Wetlands Unit Georgia Environmental Protection Division 7 Martin Luther King Jr. Drive, Suite 450, Atlanta, GA 30334 (404) 651-8463 madeline.banyas@dnr.ga.gov

From: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>
Sent: Friday, August 16, 2019 12:36:35 PM
To: Scott, Delaine <Delaine.Scott@dnr.ga.gov>; Banyas, Madeline <madeline.banyas@dnr.ga.gov>
Subject: Stevens Creek Hydroelectric Project Relicensing Meeting

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon,

Dominion Energy South Carolina, Inc. (DESC) is hosting a meeting on August 22nd to discuss the draft PAD for the Stevens Creek Hydroelectric Project. I wanted to check in and ask if a representative from the Georgia DNR-EPD would be attending this meeting. We will be discussing water quality at the meeting and feedback from your division would be appreciated. If you would like to join, but can't be there in person, I can provide a call-in number.

Thanks so much!

Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt

Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com

Kelly,

I'm sorry that it has taken me a bit to get back with you on the mussel survey. I'd like to request that at a minimum the reach of Steven Creek between the top (upstream extent) of the Stevens Creek reservoir and the confluence with Horn Creek should be surveyed. This is the area with the highest likelihood of rare mussel species within the project boundary.

Also just to let you know I will be calling in next week for the meeting.

Thanks,

Melanie

Melanie Olds | Fish & Wildlife Biologist/ SC FERC Coordinator U.S. Fish and Wildlife Service South Carolina Ecological Services Field Office 176 Croghan Spur Road, Suite 200 Charleston, SC 29407 843-727-4707 ext. 205 NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

From: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>
Sent: Friday, January 31, 2020 11:24 AM
To: Olds, Melanie J <melanie_olds@fws.gov>
Subject: [EXTERNAL] RE: Stevens Creek Mussel Study

Hi Melanie,

Attached is the Project boundary on a topo map. If you need something else, just let me know.

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Office: 803.462.5633 www.KleinschmidtGroup.com

From: Olds, Melanie J <melanie_olds@fws.gov>Sent: Thursday, January 30, 2020 4:28 PMTo: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>

Subject: Re: Stevens Creek Mussel Study

Kelly,

Can you send me a map of the project area?

Thanks,

Melanie

Melanie Olds | Fish & Wildlife Biologist/FERC Coordinator U.S. Fish and Wildlife Service South Carolina Ecological Services Field Office 176 Croghan Spur Road, Suite 200 Charleston, SC 29407 843-727-4707 ext. 205 NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

From: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>>
Sent: Monday, January 20, 2020 12:52 PM
To: Olds, Melanie J <<u>melanie_olds@fws.gov</u>>
Subject: [EXTERNAL] Stevens Creek Mussel Study

Hi Melanie!

I hope you are doing well. I just wanted to touch base with you and see if you have had a chance to gather any specifics on what the USFWS wants to see in the Stevens Creek Mussel Study. We want to try and put together a draft over the next few weeks so we can review with the RCG at a meeting sometime in late March.

Thanks! Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt Office: 803.462.5633 Cell: 423.747.2660

www.KleinschmidtGroup.com

From:	Twyla Cheatwood - NOAA Federal
To:	Kelly Kirven; Alison Jakupca
Cc:	Alice Lawrence
Subject:	Re: Stevens Creek PAD Information Questionnaire
Date:	Wednesday, February 13, 2019 10:53:29 AM

Kelly,

The NMFS received the Stevens Creek PAD Questionnaire via email on February 6th, 2019. The FERC license issued to SCG&E on November 22, 1995 included a fish passage prescription by NMFS and USFWS requiring SCE&G to provide up-stream fish passage facilities within two years after installation of such facilities at the Augusta diversion dam. This email is to inform you we have no additional information or comments to provide at this time.

Thank you for your coordination during this relicensing process.

Twyla

On Wed, Feb 6, 2019 at 11:28 AM Kelly Kirven <<u>Kelly.Kirven@kleinschmidtgroup.com</u>> wrote:

Good morning all,

The Stevens Creek Hydroelectric Project (Project) (FERC Project No. 2535) is a 17.28 MW hydroelectric project located at the confluence of Stevens Creek and the Savannah River, in Edgefield and McCormick counties, South Carolina, and Columbia County, Georgia. The current operating license for the Project is due to expire on October 31, 2025.

As part of relicensing, SCE&G is developing a Pre-Application Document (PAD) for the Project that includes all existing engineering, economic, and environmental information relevant to licensing that is reasonably available or can reasonably be obtained with due diligence. Attached is a PAD information questionnaire. This questionnaire will assist SCE&G with the collection of any additional relevant existing resource information pertinent to the Project and help to identify any data collection needs or potential issues early in the relicensing process.

SCE&G asks that you take a few moments to fill out the questionnaire and provide all responses on or before Wednesday, March 6, 2019. If you have any questions regarding the questionnaire, please don't hesitate to email me, or Alison Jakupca at <u>Alison.Jakupca@KleinschmidtGroup.com</u>.

Thanks,

Kelly

Kelly Miller Kirven

Project Licensing Coordinator

Kleinschmidt

Office: 803.462.5633

Cell: 423.747.2660

www.KleinschmidtGroup.com

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Twyla H Cheatwood Fishery Biologist Southeast Region, Habitat Conservation Division NOAA Fisheries Beaufort, NC 28516 Office: (252) 728-8758 Twyla.cheatwood@noaa.gov

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From:	Schroer, Keely
То:	Amy.Bresnahan@scana.com
Cc:	Caitlinh@ccppcrafts.com; Whitney.Rooks@dnr.ga.gov; Johnson, Elizabeth; elizabeth-toombs@cherokee.org; Kelly
	Kirven; Alison Jakupca; RAMMARELL@scana.com; Bates, Jim -FS; Morgan, Robert T -FS; SPIREK, JIM; BRADLEY,
	RYAN
Subject:	RE: Stevens Creek Project (P-2535) Relicensing Consultation
Date:	Wednesday, November 6, 2019 4:31:53 PM
Attachments:	image003.png
	MULT Stevens Creek Hydroelectric Project Relicensing 18-EJ0115.pdf

From: South Carolina State Historic Preservation Office

Please find attached our comments letter on the subject referenced project. A hard copy can be provided upon request.

Please contact us if you have any questions regarding our comments.



Keely Lewis-Schroer Archaeologist State Historic Preservation Office SC Department of Archives & History 8301 Parklane Road Columbia, SC 29223 Ph: 803.896.6181 Fax: 803.896.6167 <u>https://scdah.sc.gov/historic-preservation</u> kschroer@scdah.sc.gov

From: BRESNAHAN, AMY [mailto:Amy.Bresnahan@scana.com]
Sent: Tuesday, October 15, 2019 3:14 PM
To: 'Caitlinh@ccppcrafts.com' <<u>Caitlinh@ccppcrafts.com</u>>; 'Rooks, Whitney'
<<u>Whitney.Rooks@dnr.ga.gov</u>>; Johnson, Elizabeth <<u>EJohnson@scdah.sc.gov</u>>; 'elizabethtoombs@cherokee.org' <<u>elizabeth-toombs@cherokee.org</u>>
Cc: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>>; Alison Jakupca
<<u>Alison.Jakupca@KleinschmidtGroup.com</u>>; AMMARELL, RAYMOND R (SCE&G - 8)
<<u>RAMMARELL@scana.com</u>>
Subject: Stevens Creek Project (P-2535) relicensing consultation

To all,

Dominion Energy South Carolina, Inc. (DESC), licensee of the Stevens Creek Hydroelectric Project, (FERC Project No. 2535) is initiating consultation pursuant to Section 106 of the National Historic Preservation Act for the relicensing of the Stevens Creek Hydroelectric Project.

During the previous relicensing a Phase I and II Cultural Resources investigation was completed in 1996. A Historic Properties Management Plan (HPMP) was approved by the FERC in March 2004. Since a comprehensive investigation has been done in the past at the Stevens Creek Project, DESC

requests that the agencies and tribes review the existing investigations and HPMP to determine if any additional investigation needs to be undertaken for this relicensing. Also, any updates recommended for the HPMP will be discussed during this process to develop the new Historic Management Properties Plan.

Please note that the Project Boundary ends at the Stevens Creek dam but the area of potential effects (APE) for cultural resources scope of this Project encompasses area not only within the project boundary but an area outside as well. Outside of the project boundary the APE encompasses both shorelines of the Savannah River downstream from the Stevens Creek dam for approximately 2, 000 feet below the dam which includes Stallings Island (see Figure 1 of the HPMP). DESC would like confirmation as to whether you are in agreement with the current delineated APE.

Please respond to me within 30 days as to whether your agency or tribe requests additional cultural resource investigations and whether you agree with using the current APE for this relicensing process.

Due to the large file sizes of the documents, you may access them for download via Sharefile site hosted by Kleinschmidt, a consulting firm assisting in the relicensing process. Click on the following link to download; <u>https://kleinschmidt.sharefile.com/d-scff04f3c2534e958</u>

If you have any questions please contact me. I look forward to working with you during this relicensing.

Amy Bresnahan, P.E.

Dominion Energy South Carolina, Inc. Fossil/Hydro Civil Engineering MC A221 220 Operation Way Cayce, SC 29033-3701 Office: (803) 217-9965 Cell: (803)206-4667 amy.bresnahan@scana.com

Dominion Energy

Actions Speak Louder"

From:	Miller, Derrick L -FS
То:	<u>Alison Jakupca; Whalen, James -FS</u>
Cc:	Kelly Kirven
Subject:	RE: Stevens Creek Recreation Study - revised user survey
Date:	Monday, April 6, 2020 2:48:36 PM
Attachments:	image006.png
	image007.png
	image008.png
	image009.png
	image010.png

Yes I would remove the camera use from Stevens Creek because of the past issue there with cameras.



Derrick L. Miller, Forester Special Uses Program Manager

President NFFE, Local 466 National Federation of Federal Employees Francis Marion & Sumter National Forest

p: 803-561-4056 f: 803-561-4004 derrick.miller@usda.gov

4931 Broad River Road Columbia, SC 29212 http://www.nffe-fsc.org

From: Alison Jakupca [mailto:Alison.Jakupca@KleinschmidtGroup.com]
Sent: Monday, April 6, 2020 2:43 PM
To: Whalen, James -FS <james.whalen@usda.gov>; Miller, Derrick L -FS <derrick.miller@usda.gov>
Cc: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>
Subject: RE: Stevens Creek Recreation Study - revised user survey

Good Afternoon Gentlemen,

I hope that you are both doing well and staying healthy. Are you guys working from home at this point? The Lexington Kleinschmidt office is closed, and Kelly and I are both working from home; however, that is something we are both pretty used to. We were discussing the finalization of the Stevens Creek Recreation Study Plan today and wanted to check back in with you regarding camera use at Fury's Ferry and Chota Dr. Should we remove the camera component from the study plan? Just let us know. Thanks and take care! Alison

Alison Jakupca Senior Regulatory Coordinator Office: 803 462 5628 Mobile: 864 906 4119 www.KleinschmidtGroup.com

Providing practical solutions for complex problems affecting energy, water, and the environment

From: Whalen, James -FS <james.whalen@usda.gov>
Sent: Wednesday, February 19, 2020 10:31 AM
To: Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>; Miller, Derrick L -FS
<derrick.miller@usda.gov>
Cc: Alison Jakupca <Alison.Jakupca@KleinschmidtGroup.com>
Subject: RE: Stevens Creek Recreation Study - revised user survey

Looks good to me.



J. Keith Whalen Forest Fish Biologist Forest Service Francis Marion & Sumter National Forests - Supervisor's Office p: 803-561-4076 james.whalen@usda.gov 4931 Broad River Road Columbia, SC 29212 www.fs.fed.us

Caring for the land and serving people

From: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>>
Sent: Wednesday, February 19, 2020 10:29 AM
To: Whalen, James -FS <<u>james.whalen@usda.gov</u>>; Miller, Derrick L -FS <<u>derrick.miller@usda.gov</u>>;
Cc: Alison Jakupca <<u>Alison.Jakupca@KleinschmidtGroup.com</u>>
Subject: Stevens Creek Recreation Study - revised user survey

Hi Keith and Derrick,

It was so nice to see you both yesterday. I made some changes to the User Survey that we will be using during the Stevens Creek Recreation Study next year – particularly regarding the extra questions on Fury's Ferry and Chota Drive. Would you mind looking at these questions and letting me know if you have any edits (Question 9 A-D on the attached document)? Thanks so much!

Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

From:	BRESNAHAN, AMY
To:	Johnson, Elizabeth
Cc:	Kelly Kirven; Alison Jakupca; AMMARELL, RAYMOND R (SCE&G - 8); ARGENTIERI, WILLIAM R (SCE&G - 8);
	Henry Mealing
Subject:	RE: Stevens Creek Relicensing Meeting Agenda - 8/22/19
Date:	Friday, August 23, 2019 1:06:12 PM
Attachments:	image007.png

Elizabeth,

Currently we are not aware of any new recreation area or expansion of existing ones. I do want to let you know that I am currently in the process of revising the existing Recreation Plan to remove from the Plan one of the sites that is adjacent to historic property 38ED48. That site was identified in the existing Recreation Plan to make improvements to which is on USFS land. That site is not supported by the current Forest Service Recreation plan is not consistent with the recent Forest Service Sustainable Recreation Strategy, therefore the USFS requested to not move forward with developing this site.

At the meeting yesterday there was some discussion of looking for more informal sites for bank fishing and/or kayak put ins. As those discussion progress through the process we will verify any proposed site with the existing archeological survey and keep that in mind should it not be within that surveyed area.

Thank you. *Amy Bresnahan* office: (803) 217-9965 mobile: (803) 206-4667



Actions Speak Louder"

From: Johnson, Elizabeth <<u>EJohnson@scdah.sc.gov</u>>
Sent: Wednesday, August 21, 2019 3:57 PM
To: Kelly Kirven <<u>Kelly.Kirven@KleinschmidtGroup.com</u>>
Subject: RE: Stevens Creek Relicensing Meeting Agenda - 8/22/19

Kelly:

Thank you for the invitation to this meeting. I regret that I won't be in attendance.

I have had a chance to review our office's previous consultation on the relicensing process in the 1990s, and the resulting cultural resources studies that were conducted, along with the existing Cultural Resources Management Plan. Please let us know when you would like to talk specifically about the cultural resources and consultation for Section 106. (Please note that these documents are available in the state archives.)

One specific question is do you anticipate any new recreational areas or expansions of existing ones? I know that may be unknown at this point, but those types of projects can arise in this process. And if the areas are in locations that are likely to contain archaeological sites, a survey may be recommended, if the area hasn't been previously surveyed.

Thanks,

Elizabeth



Elizabeth M. Johnson Director, Historical Services, D-SHPO State Historic Preservation Office SC Department of Archives & History 8301 Parklane Road Columbia, SC 29223 Ph: 803.896.6168 Fax: 803.896.6167 <u>https://scdah.sc.gov/historic-preservation</u> *Note that our web site address has changed*. Good morning Alison,

We look forward to presenting to the stakeholders on the 4th. Hopefully there will not be government shutdown to cause a bump.

Is there a date that you need our presentation by? Or will it be alright to bring a laptop with it? Please let us know if there are any specific questions about Thurmond's operations you would like answered upfront in the presentation. We are planning on giving a overview of operations at Thurmond, and a bit about the system as a whole since that is how we manage it.

Has Amy been in contact with Vince Moody recently? He no longer works for the Corps, so I can't really speak to his availability. But if Amy has been in contact with him recently, and that is something that you think will add value then I think it's a good idea. Personally, I would enjoy a presentation/discussion on the application of the HEC-RAS 2d model to the savannah river, but I don't know your stakeholders as well as you do.

Looking forward to the 4th.

Respectfully,

Kathryn Feingold Savannah District Water Manager Hydrology & Hydraulics Branch U.S. Army Corps of Engineers (W) 912-652-5959 (C) 912-239-0275

From: Alison Jakupca [mailto:Alison.Jakupca@KleinschmidtGroup.com]
Sent: Tuesday, November 19, 2019 8:47 AM
To: Feingold, Kathryn A CIV USARMY CESAS (USA) <Kathryn.A.Feingold@usace.army.mil>; Simpson,
Stanley L CIV USARMY CESAS (US) <Stanley.L.Simpson@usace.army.mil>
Cc: BRESNAHAN, AMY <Amy.Bresnahan@scana.com>; Kelly Kirven
<Kelly.Kirven@KleinschmidtGroup.com>
Subject: [Non-DoD Source] USACE Presentation - December 4th Meeting

Good Morning Kat,

I hope that all is well your way. As you probably saw, we chose Wednesday, December 4th for the Stevens Creek Operations RCG meeting. I wanted to touch base again regarding the potential for a discussion/powerpoint on Thurmond operations given by you and/or Stan at that meeting. In discussions with Amy Bresnahan, fluctuations of the Stevens Creek reservoir, and the need to
prepare for Corps operations is an ongoing education exercise in order to help stakeholders understand the operation of the river system. We are confident that you all can help with stakeholder understanding. Here is my tentative agenda for the meeting:

- Presentation on Thurmond Operations given by Kat and Stan
- Follow-up discussions on Stevens Creek Operations Dominion/Kleinschmidt
- (HEC RAS 2D Model Discussions by Vince Moody???? See below)
- USGS Gage Discussions and Correlations/Lack of Correlation Kleinschmidt

Amy has been in contact with Vince Moody regarding the HEC-RAS 2D model the Corps has been developing using LiDAR and bathymetric data. I understand that this model may still be in development, but what are your thoughts on if Vince may be willing to come talk about the model and the intended outcome and potential uses at the December 4th meeting? I can certainly call him but I would love your thoughts first.

Please let me know any thoughts and questions and feel free to give me a ring as well, if you like. There is the slight potential that we may have to move this meeting if there is a government shutdown, but I am hopeful that everything gets funded on Thursday. Take care and talk soon, Alison

Alison Jakupca Senior Regulatory Coordinator *Kleinschmidt* Office: 803 462 5628 Mobile: 864 906 4119 <u>Blockedwww.KleinschmidtGroup.com</u>

Providing practical solutions for complex problems affecting energy, water, and the environment

From:	Kelly Kirven
To:	<u>Alison Jakupca; Ashley Holmes; Bill Marshall (marshallb@dnr.sc.gov); BRESNAHAN, AMY;</u>
	caitlinh@ccppcrafts.com; Caleb Gaston (caleb.gaston@scana.com); Chris Howard (chris@linksolar.net); Chris
	<u>Nelson (chris.nelson@dnr.ga.gov); Debbie Wallsmith (debbie.wallsmith@dnr.ga.gov); Derrick Miller</u>
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	Darley (jeff.darley@dnr.ga.gov); Jennifer Welte (jennifer.welte@dnr.ga.gov); John Eddins (jeddins@achp.gov);
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	<u>Outdoor Augusta; Paula Marcinek (paula.marcinek@dnr.ga.gov); rammarell@scana.com; randy mahan</u>
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	(wenonahh@ccppcrafts.com); Whalen, James -FS; William Jabour (William.E.Jabour@usace.army.mil)
Subject:	Stevens Creek Draft Recreation Use and Needs Study Plan
Date:	Friday, November 1, 2019 3:36:06 PM
Attachments:	Draft Stevens Creek Recreation Study Plan 11-1.docx

Attached is the draft Recreation Use and Needs Study Plan for the Stevens Creek relicensing. Please review and be prepared to discuss at the upcoming Stevens Creek Land Mgt/Recreation RCG meeting on November 13th.

Thanks, Kelly

From:	Kelly Kirven
To:	<u> Alison Jakupca; Andy Herndon (Andrew.Herndon@noaa.gov); Ashley Holmes; Bill Marshall</u>
	(marshallb@dnr.sc.gov); BRESNAHAN, AMY; Caleb Gaston (caleb.gaston@scana.com); Chris Howard
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	Anie; Rusty wenerick (weneriw/r@dnec.sc.gov); Scott Hyart (scott.m.nyatt2@usace.army.mi); Smith, Leland A.,
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	(increasing a second se
	(intervetice) availabling (william baber), wilden, Jahres -r.s., will cheatwood (wylacheatwood@hoda.gov), wilden, Jahres -r.s., will
C	Whiten Boool (Whiten Ouslike Study Bland
Subject:	Stevens Creek Draft water Quality Study Plan
Date:	Friday, November 1, 2019 3:39:21 PM
Attachments:	2019-10-23 Draft Stevens Creek Water Quality Study Plan.docx

Attached is the draft Water Quality Study Plan for the Stevens Creek relicensing. Please review and be prepared to discuss at the upcoming Stevens Creek Water Quality, Fish and Wildlife RCG meeting on November 13th.

Thanks, Kelly

From:	Kelly Kirven
То:	Alice Lawrence (alice lawrence@fws.gov): Alison Jakupca: Andy Herndon (Andrew.Herndon@noaa.gov):
	ARGENTIERI, WILLIAM R; Ashley Holmes; Bill Marshall (marshallb@dnr.sc.gov); Bill Smith
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	(rahubipt.manares.ana.com); handy manare (manares.m.com); kob Pavey (pavey) econicas.the(); kobert Dbillios (rabilities.gauf era); Babin Coodleo (rabin goodloo@fue gau); Bon Abio; Bon Davis
	Finings (things davisor), Kobin Boulde (tobin goodleewivs.gov), Koh Anie, Koh Davis
	(contribution) (contribution), Kusty Wenerick (Weneriki Weneriki (contribution), Stort Hydri (contribution), Stor Colling (Sica
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Subject	Stevens Creek Ederal Agency Meeting Notes - 3/27/19
Data:	Monday April 20 2010 4:41:27 DM
	Wonday, April 27, 2017 4.41.37 FW
Attachments:	Inal 032714 Jointkug notes .pdf

Due to the government shutdown a few months ago, several agency representatives were not able to attend the Stevens Creek Agency/NGO outreach meeting held in January 2019. A second outreach meeting was held in March to accommodate those agencies. The notes from that meeting are attached to this email and are available at the Project website, <u>www.stevenscreekrelicense.com</u>.

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator *Kleinschmidt*

Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com

From:	Kelly Kirven
To:	Alison Jakupca; Andy Herndon (Andrew.Herndon@noaa.gov); ARGENTIERI, WILLIAM R; Ashley Holmes; Bill
	Marshall (marshallb@dnr.sc.gov); Bill Smith (BISMITH44@comcast.net); Bill Stringer (catboyz@nctv.com);
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	<u>Amanda; Lorianne Riggin (RigginL@dnr.sc.gov); Lynn Arnett (LynnArnett325@gmail.com); Madeline Banyas</u>
	<u>(madeline.banyas@dnr.ga.gov); Mark Caldwell (mark_caldwell@fws.gov); Mark Davis; Matt Thomas</u>
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.	(william.E.Jabour@usace.army.min)
Subject:	Stevens Creek Final Meeting Notes - August 22, 2019
Date:	Friday, September 20, 2019 11:18:34 AM
Attachments:	final 082219 JointRCG notes .pdf

Good morning all,

Attached for your record are the final notes from the Stevens Creek relicensing meeting held on August 22, 2019. These notes are also available on the project website at <u>www.stevenscreekrelicense.com</u>.

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt

Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com

From:	Kelly Kirven
To:	Alison Jakupca; AMY BRESNAHAN (Amy.Bresnahan@dominionenergy.com); Ashley Holmes; Bill Marshall
	(marshallb@dnr.sc.gov); caitlinh@ccppcrafts.com; Caleb Gaston (caleb.gaston@scana.com); Chris Howard
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	Derrick Miller (derrickmiller@fs.fed.us); Elena Richards (elena@savannahriverkeeper.org); Elizabeth Johnson
	(emjohnson@scdah.state.sc.us); Elizabeth Miller (MillerE@dnr.sc.gov); Elizabeth Toombs (elizabeth-
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	Jon Ambrose (jon.ambrose@dnr.ga.gov); Jordan Johnson; Kathryn Feingold
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	chive keeper as avanabriver keeper ora): Wennab G. Haire (wennabh@ccnncrafts.com): Whaten James -FS:
	William Jabour (William E Jabour@usace army mil): Andy Herrdon (Andrew Herrdon@noaa.gov): Chris
	Thomason (thomason:@dpr.sc.gov): David Eargle (eargleda@dbec.sc.gov): Don Imm (donald imm@fws.gov):
	Fritz Rohde (Fritz.Rohde@noaa.gov); Greg Mixon (mixong@dnr.sc.gov); Jason Bettinger (bettingeri@dnr.sc.gov);
	Jason Moak; Jeffery Williams (jeffery.williams@dnr.ga.gov); Morgan Kern (KernM@dnr.sc.gov); Pace Wilber
	(Pace.Wilber@noaa.gov); Ron Ahle; Rusty Wenerick (weneriwr@dhec.sc.gov); Scott Glassmeyer; Tony
	Hornbuckle (thornbuckle61@gmail.com); Twyla Cheatwood (twyla.cheatwood@noaa.gov); Zapata, Martha
Subject:	Stevens Creek Joint RCG Meeting Documents
Date:	Thursday, February 13, 2020 12:20:33 PM
Attachments:	Stevens Creek RCG Meeting Agenda 02-18-20 docx
Attaorimonto.	Draft Stevens Creek Water Quality Study Plan 2-13 docx
	Final Stevens Creek Recreation Study Plan.pdf

Attached is the agenda for our Stevens Creek Joint RCG Meeting, scheduled for next Tuesday,

February 18th. At this meeting, we plan to review the edits made to the Water Quality Study Plan and Recreation Study Plan stemming from our November 2019 meeting. These revised documents are attached to this email for your review.

We will also discuss two new documents, including a Mussel Study Plan and the RTE Whitepaper. These documents will be sent out in a separate email prior to next week's meeting.

If you have not already RSVP'ed, please do so that I can plan appropriately for lunch. Thanks!

Kelly

From:	Kelly Kirven
То:	Alison Jakupca; AMY BRESNAHAN (Amy.Bresnahan@dominionenergy.com); Ashley Holmes; Bill Marshall
	(marshallb@dnr.sc.gov); caitlinh@ccppcrafts.com; Caleb Gaston (caleb.gaston@scana.com); Chris Howard
	(chris@linksolar.net); Chris Nelson (chris.nelson@dnr.ga.gov); Debbie Wallsmith (debbie.wallsmith@dnr.ga.gov);
	<u>Derrick Miller (derrickmiller@fs.fed.us); Ed Bettross (Ed.Bettross@dnr.ga.gov); Elena Richards</u>
	(elena@savannahriverkeeper.org); Elizabeth Johnson (emjohnson@scdah.state.sc.us); Elizabeth Miller
	(MillerE@dnr.sc.gov); Elizabeth Toombs (elizabeth-toombs@cherokee.org); Henderson, Cameron T.; Henry
	Mealing; Jaine Loichinger (Iloichinger@achp.gov); Jamie Rader (irader@ducks.org); Jamie Sykes
	(James, A. Sykes@usace.army.ml); Jert Darley (left.darley@dnr.ga.gov); Jennifer Welte
	(Jennirer-weite@anr.ga.gov); Jonn Edains (Jedains@achp.gov); Jon Ambrose (Jon.ambrose@anr.ga.gov); Jordan
	Johnson; Kathiyn Feingold (Kathiyn A.Feingold@usate:anny.min); Keiny Kiven; Madeline bahiyas
	Unideenie Jahydswaini galogori, wielanie olds (Thetanie oldsewiss.govi, Twike Wosley (Wiwosleyestana.com); Outdoor Augusta: Paula Marcinok (Koaula marcinok@dor galgovi); P. A. (Toop) Hicks (barpoulbimor@amail.com);
	Utiduor Augusta, Faula Maitinex (Paula Infactinexeuni, ga.gov), K. A. (Torry) micks (darleybinine) eginari.com, rachal@sayanpabrivarkeener.org: randy mahan (mahan@sc rr.com): PAYMOND AMMAPELL: Pob Payey
	reachere stream and the reaction of the stream and
	Scott-Rooks, Whitney, Scott Hvatt (scott m hvatt2@usace army mil). Smith Leland A - Stan Simpson
	(Stanley, L. Simpson@usace.army.mil): Steve Schleiger (steve.schleiger@dnr.ga.gov): Thom Litts
	(thom.litts@dnr.ga.gov); Tonya Bonitatibus (riverkeeper@savannahriverkeeper.org); Wenonah G. Haire
	(wenonahh@ccppcrafts.com); Whalen, James -FS; William Jabour (William.E.Jabour@usace.army.mil); Andy
	Herndon (Andrew.Herndon@noaa.gov); Chris Thomason (thomasonc@dnr.sc.gov); David Eargle
	(eargleda@dhec.sc.gov); Don Imm (donald imm@fws.gov); Fritz Rohde (Fritz.Rohde@noaa.gov); Greg Mixon
	<u>(mixong@dnr.sc.gov); Jason Bettinger (bettingerj@dnr.sc.gov); Jason Moak; Jeffery Williams</u>
	(jeffery.williams@dnr.ga.gov); Morgan Kern (KernM@dnr.sc.gov); Pace Wilber (Pace.Wilber@noaa.gov); Ron
	Ahle: Rusty Wenerick (weneriwr@dhec.sc.gov); Tony Hornbuckle (thornbuckle61@gmail.com); Twyla Cheatwood
	(twyla.cheatwood@noaa.gov)
Subject:	Stevens Creek LLM/Rec RCG and WQFW RCG Meeting Notes - 11/13/2019
Date:	Wednesday, January 8, 2020 3:37:49 PM
Attachments:	final 111319_RecLLMRCG_notes.pdf
	final 111319 WQFWRCG notes.pdf

Attached are the final notes from the LLM/Rec RCG and WQFW RCG meetings, held on November 13, 2019. These notes are also available on the Project website at <u>www.stevenscreekrelicense.com</u>.

Thanks, Kelly

From:	Kelly Kirven
To:	<u>Alison Jakupca; Ashley Holmes; Bill Marshall (marshallb@dnr.sc.gov); BRESNAHAN, AMY;</u>
	caitlinh@ccppcrafts.com; Caleb Gaston (caleb.gaston@scana.com); Chris Howard (chris@linksolar.net); Chris
	<u>Nelson (chris.nelson@dnr.ga.gov);</u>
	(derrickmiller@fs.fed.us); Ed Bettross (Ed.Bettross@dnr.ga.gov); Elena Richards
	<u>(elena@savannahriverkeeper.org); Elizabeth Johnson (emjohnson@scdah.state.sc.us); Elizabeth Miller</u>
	(MillerE@dnr.sc.gov); Elizabeth Toombs (elizabeth-toombs@cherokee.org); Henry Mealing; Jaime Loichinger
	(iloichinger@achp.gov); Jamie Rader (irader@ducks.org); Jamie Sykes (James.A.Sykes@usace.army.mil); Jeff
	Darley (jeff.darley@dnr.ga.gov); Jennifer Welte (jennifer.welte@dnr.ga.gov); John Eddins (jeddins@achp.gov);
	Jon Ambrose (jon.ambrose@dnr.ga.gov); Jordan Johnson; Kathryn Feingold
	(Kathryn,A.Feingold@usace.army.mil); Kelly Kirven; Madeline Banyas (madeline.banyas@dnr.ga.gov); Matt
	Inomas (matt.thomas@dnr.ga.gov); Melanie Uids (melanie olds@tws.gov); Mike Mosley (Mikosley@scana.com);
	Outdoor Augusta; Paula Marcinek (paula: marcinek@onr.ga.gov); rammarei@scana.com; ranoy manan
	(mmananesch.com); Rob Pavey (Pavey recomcast.net); Robert Primtips (mprintips@gw.org); Robin Goodinge
	(10bii) golulideeriyasigovi, Kooss, wiiittey, scott rivat scott.int.iyatt2@usate.anny.intit, Letaitu A., stari
	Simpson cyanicy
	(wepphableconcrafts com): Whaten lames -ES: William labour (William E labour @usace army mil): Andy
	Herndon (Andrew Herndon@noaa.gov): Chris Thomason (thomasonc@dnr.sc.gov): David Fardle
	(eargleda@dhec.sc.gov): Don Imm (donald imm@fws.gov): Fritz Rohde (Fritz, Rohde@noaa.gov): Greg Mixon
	(mixong@dnr.sc.gov); Jason Bettinger (bettingeri@dnr.sc.gov); Jason Moak; Jeffery Williams
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	(Tony) Hicks (barneybimmer@gmail.com); Ron Ahle; Rusty Wenerick (weneriwr@dhec.sc.gov); Tony Hornbuckle
	(thornbuckle61@gmail.com); Twyla Cheatwood (twyla.cheatwood@noaa.gov)
Subject:	Stevens Creek Meeting Agenda - 11/13/19
Date:	Wednesday, November 6, 2019 11:53:25 AM
Attachments:	Stevens Creek RCG Meeting Agenda 11-13-19.docx

Good morning all,

Attached is the agenda for next week's Stevens Creek Lake, Land and Recreation RCG and Water Quality, Fish and Wildlife RCG meetings. If you will need to join us by phone, please let me know so we can set up a call-in number.

Thanks, Kelly

From:	Kelly Kirven
To:	<u>Alison Jakupca; Andy Herndon (Andrew.Herndon@noaa.gov); Ashley Holmes; Bill Marshall</u>
	(marshallb@dnr.sc.gov); BRESNAHAN, AMY; Bret Hoffman; Caleb Gaston (caleb.gaston@scana.com); Chris
	<u>Nelson (chris.nelson@dnr.ga.gov);</u>
	<u>(Ed.Bettross@dnr.ga.gov); Elena Richards (elena@savannahriverkeeper.org); Elizabeth Miller</u>
	(MillerE@dnr.sc.gov); Henry Mealing; Jamie Sykes (James.A.Sykes@usace.army.mil); Jason Moak; Jeff Darley
	(jeff.darley@dnr.ga.gov); Jennifer Welte (jennifer.welte@dnr.ga.gov); Jon Ambrose (jon.ambrose@dnr.ga.gov);
	<u>Kathryn Feingold (Kathryn A. Feingold@usace.army.mil); Kelly Kirven; Madeline Banyas</u>
	<u>(madeline.banyas@dnr.ga.gov); Matt Thomas (matt.thomas@dnr.ga.gov); Melanie Olds</u>
	(melanie_olds@fws.gov); Mike Mosley (MMosley@scana.com); Pace Wilber (Pace.Wilber@noaa.gov); Paula
	Marcinek (paula.marcinek@dnr.ga.gov); R. A. (Tony) Hicks (barneybimmer@gmail.com); rammarell@scana.com;
	<u>randy mahan (rmahan@sc.rr.com); Robin Goodloe (robin_goodloe@fws.gov); Rusty Wenerick</u>
	(weneriwr@dhec.sc.gov);
	(Stanley.L.Simpson@usace.army.mil); Steve Schleiger (steve.schleiger@dnr.ga.gov); Susan Barrett
	(sdbarrit@gmail.com); Thom Litts (thom.litts@dnr.ga.gov); Tonya Bonitatibus
	(riverkeeper@savannahriverkeeper.org);
	(William.E.Jabour@usace.army.mil)
Subject:	Stevens Creek Operations RCG Meeting - Doodle Poll
Date:	Tuesday, October 15, 2019 9:57:07 AM

Good morning all,

Dominion Energy South Carolina, Inc. would like to schedule a meeting of the Stevens Creek Operations Resource Conservation Group (RCG). Please follow the link below to vote for the day(s) that work best for your schedule.

https://www.doodle.com/poll/ywmgtcpf3r92c44f

Thanks, Kelly

From:	Kelly Kirven
To:	<u>Alison Jakupca; AMY BRESNAHAN (Amy.Bresnahan@dominionenergy.com); Andy Herndon</u>
	(Andrew.Herndon@noaa.gov); Ashley Holmes; Bill Marshall (marshallb@dnr.sc.gov); Bret Hoffman; Caleb Gaston
	(caleb.gaston@scana.com); Chris Nelson (chris.nelson@dnr.ga.gov); Derrick Miller (derrickmiller@fs.fed.us); Ed
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	(MillerE@dnr.sc.gov); Henderson, Cameron T.; Henry Mealing; Jamie Sykes (James.A.Sykes@usace.army.mil);
	Jason Moak; Jeff Darley (jeff.darley@dnr.ga.gov); Jennifer Welte (jennifer.welte@dnr.ga.gov); Jon Ambrose
	(jon.ambrose@dnr.ga.gov); Kathryn Feingold (Kathryn.A.Feingold@usace.army.mil); Kelly Kirven; Madeline
	<u>Banyas (madeline.banyas@dnr.ga.gov); Matt Thomas (matt.thomas@dnr.ga.gov); Melanie Olds</u>
	(melanie_olds@fws.gov); Mike Mosley (MMosley@scana.com); Pace Wilber (Pace.Wilber@noaa.gov); Paula
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	(rmahan@sc.rr.com); RAYMOND AMMARELL; Robin Goodloe (robin_goodloe@fws.gov); Rusty Wenerick
	(weneriwr@dhec.sc.gov);
	(Stanley.L.Simpson@usace.army.mil); Steve Schleiger (steve.schleiger@dnr.ga.gov); Susan Barrett
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	<u>(riverkeeper@savannahriverkeeper.org);</u> <u>Twyla Cheatwood (twyla.cheatwood@noaa.gov)</u> ; <u>Whalen, James -FS</u> ;
	William Jabour (William.E.Jabour@usace.army.mil)
Subject:	Stevens Creek Operations RCG Meeting Agenda - 12/4/19
Date:	Tuesday, November 26, 2019 4:15:44 PM
Attachments:	Stevens Creek RCG Meeting Agenda 12-04-19.docx

Attached is the agenda for the Stevens Creek Operations RCG meeting scheduled for next

Wednesday, December 4th. Please note that this will be a half-day meeting, from 9:00 AM until 12:00 PM. If you will be joining us by phone, please let me know so that I can send you call-in information.

Thanks, Kelly

From:	BRESNAHAN, AMY
To:	"Caitlinh@ccppcrafts.com"; "Rooks, Whitney"; Johnson, Elizabeth; "elizabeth-toombs@cherokee.org"
Cc:	Kelly Kirven; Alison Jakupca; AMMARELL, RAYMOND R (SCE&G - 8)
Subject:	Stevens Creek Project (P-2535) relicensing consultation
Date:	Tuesday, October 15, 2019 3:14:26 PM

To all,

Dominion Energy South Carolina, Inc. (DESC), licensee of the Stevens Creek Hydroelectric Project, (FERC Project No. 2535) is initiating consultation pursuant to Section 106 of the National Historic Preservation Act for the relicensing of the Stevens Creek Hydroelectric Project.

During the previous relicensing a Phase I and II Cultural Resources investigation was completed in 1996. A Historic Properties Management Plan (HPMP) was approved by the FERC in March 2004. Since a comprehensive investigation has been done in the past at the Stevens Creek Project, DESC requests that the agencies and tribes review the existing investigations and HPMP to determine if any additional investigation needs to be undertaken for this relicensing. Also, any updates recommended for the HPMP will be discussed during this process to develop the new Historic Management Properties Plan.

Please note that the Project Boundary ends at the Stevens Creek dam but the area of potential effects (APE) for cultural resources scope of this Project encompasses area not only within the project boundary but an area outside as well. Outside of the project boundary the APE encompasses both shorelines of the Savannah River downstream from the Stevens Creek dam for approximately 2, 000 feet below the dam which includes Stallings Island (see Figure 1 of the HPMP). DESC would like confirmation as to whether you are in agreement with the current delineated APE.

Please respond to me within 30 days as to whether your agency or tribe requests additional cultural resource investigations and whether you agree with using the current APE for this relicensing process.

Due to the large file sizes of the documents, you may access them for download via Sharefile site hosted by Kleinschmidt, a consulting firm assisting in the relicensing process. Click on the following link to download; <u>https://kleinschmidt.sharefile.com/d-scff04f3c2534e958</u>

If you have any questions please contact me. I look forward to working with you during this relicensing.

Amy Bresnahan, P.E.

Dominion Energy South Carolina, Inc. Fossil/Hydro Civil Engineering MC A221 220 Operation Way Cayce, SC 29033-3701 Office: (803) 217-9965 Cell: (803)206-4667 amy.bresnahan@scana.com



From:	Kelly Kirven
То:	Alison Jakupca; Andy Herndon (Andrew.Herndon@noaa.gov); ARGENTIERI, WILLIAM R; Ashley Holmes; Bill
	Marshall (marshallb@dnr.sc.gov); Bill Smith (BISMITH44@comcast.net); Bill Stringer (catboyz@nctv.com);
	BRESNAHAN, AMY; Caleb Gaston (caleb.gaston@scana.com); Chad Altman (altmankc@dhec.sc.gov); Charlene
	Coleman (cheetahtrk@yahoo.com); Charles Whisenant (chaswhis1988@aol.com); CHASTAIN, WILLIAM K JR;
	Chris Howard (chris@linksolar.net); Chris Nelson (chris.nelson@dnr.ga.gov); Chris Thomason
	(thomasonc@dnr.sc.gov); Chuck Hightower (hightocw@dhec.sc.gov); Cory Eubanks (JCE1440@yahoo.com); Dan
	Rankin (rankind@dnr.sc.gov); David Bernhart (david.bernhart@noaa.gov); David Eargle (eargleda@dhec.sc.gov);
	<u>Debbie Wallsmith (debbie.wallsmith@dnr.ga.gov); Derrick Miller (derrickmiller@fs.fed.us); Don Imm</u>
	(donald_imm@fws.gov);
	<u>(elena@savannahriverkeeper.org); Elizabeth Johnson (emjohnson@scdah.state.sc.us); Elizabeth Miller</u>
	(MillerE@dnr.sc.gov); Elizabeth Toombs (elizabeth-toombs@cherokee.org); Fritz Rohde (Fritz.Rohde@noaa.gov);
	<u>George and Diane Sleister (gwsleister@att.net);</u>
	Loichinger (jloichinger@achp.gov); Jamie Rader (jrader@ducks.org); Jamie Sykes
	(James.A.Sykes@usace.army.mil); Jason Bettinger (bettingerj@dnr.sc.gov); Jason Moak; Jeff Darley
	(jeff.darley@dnr.ga.gov); Jennifer Welte (jennifer.welte@dnr.ga.gov); John Boland (jkboland59@me.com); John
	Eddins (jeddins@achp.gov); John Harris (john.harris@gfil.com); Jon Ambrose (jon.ambrose@dnr.ga.gov); Jordan
	Johnson; Josh Williford (joshua.paul.williford@gmail.com); Kathryn Feingold
	(Kathryn, A. Feingold@usace.army.mil); Kelly Kirven; Ley, Amanda; Lorianne Riggin (RigginL@dnr.sc.gov); Lynn
	Arnett (LynnArnett325@gmail.com); Madeline Banyas (madeline.banyas@dnr.ga.gov); Mark Caldwell
	(mark_caldwell@tws.gov); Mark_Davis; Matt_Thomas (matt.thomas@dnr.ga.gov); Melanie Olds
	(melanie olds@tws.gov); Merrill McGregor (merrillm@scccl.org); Mike Mosley (MMosley@scana.com); Morgan
	Kern (KernM@dnr.sc.gov); Outdoor Augusta; Pace Wilber (Pace.Wilber@noaa.gov); Pat and Dallas Simon
	(patsimon@wctel.net); Paula Marcinek (paula.marcinek@dnr.ga.gov); Phil Gaines (pgaines@scprt.com); R. A.
	(Iony) Hicks (barneybimmer@gmail.com); Randy Mahan (randolph.mahan@scana.com); randy mahan
	(mahan@sc.rr.com); Rob Pavey (rpavey1@comcast.net); Robert Phillips (rphillips@gwt.org); Robin Goodloe
	(robin_goodloe@tws.gov); Ron Ahle; Ron Davis (bigron.davisU0@gmail.com); Rooks, Whitney; Rusty Wenerick
	(weneriwr@dnec.sc.gov); Scott Hyatt (scott.m.nyatt2@usace.army.mil); Sica Collins
	(Sica@savannanrverkeeper.org); Smith, Leland A.; Stan Simpson (Siraley, L.Sinpson@usace.army.mil); Steve
	Scheiger (Steve.scheigeredonr.ga.gov); Susan Barrett (Sobarritegmail.com); Inom Litts
	(inom.ittisednr.ga.gov); 1om McCoy (inomas mccoyeriws.gov); 1om Proctor (proctors51@aoi.com); 1ony
	nonnouckie (monnouckieo reiginan.com); ronya Bonnanous (nverkeeperiessavannannverkeeperiorg); rwyja
	Unitian Elaborationa and the second
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Subject:	Stevens Creek Project Relicensing Meeting - Doodle Poll
Date:	Tuesday, July 9, 2019 1:39:00 PM

Dominion Energy South Carolina, Inc. would like to schedule a meeting for the Stevens Creek Project relicensing. At the meeting we will discuss the formation of Resource Conservation Groups, the draft Pre-Application Document, and draft study plans. Please follow the link below to vote for the day(s) that work best for your schedule.

https://doodle.com/poll/a7c2z9ghhha864yf

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt Office: 803.462.5633

Cell: 423.747.2660 www.KleinschmidtGroup.com

From:	Kelly Kirven
To:	Alison Jakupca; Ashley Holmes; Bill Marshall (marshallb@dnr.sc.gov); BRESNAHAN, AMY;
	caitlinh@ccppcrafts.com; Caleb Gaston (caleb.gaston@scana.com); Chris Howard (chris@linksolar.net); Chris
	<u>Nelson (chris.nelson@dnr.ga.gov); Debbie Wallsmith (debbie.wallsmith@dnr.ga.gov); Derrick Miller</u>
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	(jloichinger@achp.gov); Jamie Rader (jrader@ducks.org); Jamie Sykes (James.A.Sykes@usace.army.mil); Jeff
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	<u>Jon Ambrose (jon.ambrose@dnr.ga.gov); Jordan Johnson; Kathryn Feingold</u>
	<u>(Kathryn.A.Feingold@usace.army.mil); Kelly Kirven; Madeline Banyas (madeline.banyas@dnr.ga.gov); Matt</u>
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	(rmahan@sc.rr.com); Rob Pavey (rpavey1@comcast.net); Robert Phillips (rphillips@gwf.org); Robin Goodloe
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	Don Imm (donaid_imm@tws.gov); Fritz Rohde (Fritz.Rohde@noaa.gov); Greg Mixon (mixong@dnr.sc.gov); J.
	Keith Whalen (jwhalen@ts.ted.us); Jason Bettinger (bettingerj@dnr.sc.gov); Jason Moak; Jettery Williams
	(jertery.williams@dnr.ga.gov); Morgan kern (kernM@dnr.sc.gov); Pace Wilber (Pace.Wilber@noaa.gov); R. A.
	(hony) Hicks (barneybinner@gmail.com); Kon Anie; Kusty wenerick (weneriwr@dnec.sc.gov); Tony Hornbuckie
	(thornbuckles legmal.com); 1wyla cheatwood (twyla.cheatwood@noaa.gov)
Subject:	Stevens Creek RCG Meetings - Doodle Poll
Date:	Wednesday, September 25, 2019 10:44:15 AM

Good morning all,

Dominion Energy South Carolina, Inc. would like to schedule Water Quality, Fish and Wildlife (WQFW) RCG and Recreation/Land Management (Rec/LM) RCG meetings. Ideally, both RCGs will meet on the same day, with one RCG meeting in the morning and the other RCG meeting in the afternoon. This will cut down on travel for those parties that are members of both RCGs. Please follow the link below to vote for the day(s) that work best for your schedule.

https://doodle.com/poll/wkmqf4ty3mbi74d5

Thanks, Kelly

From:	Kelly Kirven
To:	Alison Jakupca: Andy Herndon (Andrew.Herndon@noaa.gov); ARGENTIERI, WILLIAM R; Ashley Holmes; Bill
	Marshall (marshallb@dnr.sc.gov); Bill Smith (BISMITH44@comcast.net); Bill Stringer (catboyz@nctv.com);
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	Eddins (jeddins@acnp.gov); Jonn Harris (Jonn.narris@jill.com); Jon Ambrose (Jon.ambrose@dnr.ga.gov); Jordan
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Subject:	Stevens Creek Relicensing Meeting - August 22, 2019
Date:	Tuesday, July 30, 2019 2:45:36 PM
-	

A Stevens Creek Relicensing Meeting is scheduled for August 22, 2019 from 9:30 AM – 4:00 PM at the Misty Lake Clubhouse. A detailed agenda is forthcoming, however at this meeting, our primary focus will be to review the draft Pre-Application Document (PAD). The draft PAD is available for download at http://stevenscreekrelicense.com/index.php/milestone-documents/. Please review this document, and if possible, provide any comments or questions to me prior to the meeting so that we can come prepared to answer them.

If you will need to join this meeting via teleconference, please let me know so that I can provide you with the call-in information.

Thanks, Kelly

From:	Kelly Kirven
То:	<u>Alison Jakupca; Andy Herndon (Andrew.Herndon@noaa.gov); ARGENTIERI, WILLIAM R; Ashley Holmes; Bill</u>
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	Kern (Kerniwedni st. 1907), Outdoor Augusta, Pade Wilber (Pade.Wilber en load, gov), Pad and Dailas Simon (asteinangewerdt pat), Bulla Marchinek, paula marchinek gebr gav), Bill Calace (pagingspart som), B. A
	(Japa) Hicks (harpa) Faula Marchek (paula.marchekeun.ga.gov), Phil Garles (pgalaiteseschilt.com), K. A.
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	Kusty Weiterick, Weiteriew eduliet.sc.guyu, sooti nyat (southininyatizeusace.aniny.ini), side collins (Sica@signangatyiyarkagneg.org). Smith Laland A. Stan Simpson (Stanlay L. Simpson@usace.army.mil). Stave
	Schlarder szerenintalmeterkezpel.org/, Sinth, Letanu A., Start Sintpson (Stanley, L.Sintpson edsadesarny, Intr., Steve Schlarder (stave schlarder/dar as any): Susan Barratt (schbarrit/@gmail.com): Thom Litts
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Subject	Stevens Creek Relicensing Meeting Agenda - 8/22/19
Data.	Thursday August 1, 2010 2021 T DM
	Hiursuay, August 1, 2017 2:21:47 PM
Attachments:	Final Stevens Creek Relicensing Meeting Agenda U82219 .docx

Attached is the agenda for the Stevens Creek Relicensing Meeting, scheduled for Thursday, August

22nd. I also wanted to note that the PAD available for download on the website has been converted to a PDF (<u>http://stevenscreekrelicense.com/index.php/milestone-documents/</u>). If you would like to review a copy of the PAD in a Word format, please let me know and I can email you directly.

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt

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From:	Alison Jakupca
То:	<u>Morgan Kern; Elizabeth Miller; Paula Marcinek (paula.marcinek@dnr.ga.gov); Melanie Olds</u> (melanie_olds@fws.gov); Twyla Cheatwood; Keith Whalen; Miller, Derrick L -FS
Cc:	Henry Mealing; Kelly Kirven; AMY BRESNAHAN; RAYMOND AMMARELL; CALEB GASTON; Jason Moak; Jordan Johnson
Subject:	Stevens Creek Revised Mussel Study Plan
Date:	Monday, April 13, 2020 10:47:40 AM
Attachments:	Stevens Creek Mussel Study Plan - April 2020 Track Changes.docx SCDNR Freshwater Mussel Survey SOP.pdf

Good Morning,

I hope that everyone is doing well after the severe storms and the general health situation we are in at the moment. I am reaching out to you all specifically prior to our Stevens Creek conference call next week in order to provide you with a revised copy of the draft Mussel Study Plan that encompasses the SC DNR Freshwater Mussel SOPs (attached). We have also included relevant species information within the Study Plan and have updated the Survey Area map in order to encompass the additional survey scope requested at the February meeting. All relevant changes are in track changes (I have accepted most of the extraneous formatting changes). If possible, could you please provide us with any comments prior to the meeting so that we are prepared to address them during the meeting review? Please reach out if you have any questions or would like to discuss this further prior to the meeting. Thanks and have a great week. Alison

Alison Jakupca Senior Regulatory Coordinator *Kleinschmidt* Office: 803 462 5628 Mobile: 864 906 4119 www.KleinschmidtGroup.com

Providing practical solutions for complex problems affecting energy, water, and the environment

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Cubicat	[weinonamiescoppciaris.com]; wiinten Jabour (wiinten.c.Jabour@usace.army.mii)
Subject:	Stevens Creek Site Visit - US/15/19
Date:	Thursday, May 2, 2019 2:34:18 PM

Dominion Energy South Carolina, Inc. (previously SCE&G) is hosting a site visit to the Stevens Creek

Hydroelectric Project on Wednesday, May 15th. We will view the Project area from several recreation sites and visit the Project powerhouse. We will meet at the Betty's Branch Recreation Site and consolidate into large vehicles to travel to the other sites. An itinerary for the day is included below.

- Meet at 9:00 AM at Betty's Branch Recreation Site, view site;
- Travel to Fury's Ferry Recreation Site and view site;
- Travel to Stevens Creek Park Site and view site;
- Travel to the Stevens Creek Project powerhouse and view powerhouse;
- Travel back to Betty's Branch Recreation Site and eat lunch;
- Adjourn.

A few additional notes are listed below.

- Lunch will be provided.
- If you would like to walk inside of the powerhouse, you will need to bring a pair of steel-toed boots. We will have several hard hats and safety glasses available.
- We plan to caravan to all of the sites in as few vehicles as possible. If you have a large vehicle and don't mind others riding with you, please let me know ASAP.

- This is a rain or shine event. Please dress appropriately for that day's weather.
- If you have not already RSVP'ed by accepting the meeting notice and plan to attend this event, please RSVP to me as soon as possible so that we can plan lunch.

Thanks! Kelly

From:	Kelly Kirven
To:	Alison Jakupca; Andy Herndon (Andrew.Herndon@noaa.gov); ARGENTIERI, WILLIAM R; Ashley Holmes; Bill
	<u>Marshall (marshallb@dnr.sc.gov);</u> <u>Bill Smith (BISMITH44@comcast.net);</u> <u>Bill Stringer (catboyz@nctv.com);</u>
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	(monbuckeo regimal.com); Tonya bontatious (nverkeeper@savannaninverkeeper.ju); Tuvja cheatwood
<u></u>	
Subject:	Stevens creek Site Visit Notes and RCG Lists
Date:	Friday, June 21, 2019 1:51:53 PM
Attachments:	Stevens Creek Hydroelectric Project RCG Lists.docx
	final_051519_JointRCG_notes_site_visitpdf

Good morning all,

Attached for your record are the final notes from the Stevens Creek Project site visit held on May 15, 2019. These notes will also be available on the Project website at <u>www.stevenscreekrelicense.com</u>.

Also attached is a draft list of the three Resource Conservation Groups (RCGs) for the Project and stakeholders who might be interested in participating in each RCG. Please review and let me know if you would like me to add your name to a particular RCG; likewise, please let me know if I need to remove your name from a particular RCG.

Thanks, Kelly

Kelly Kirven Project Licensing Coordinator Kleinschmidt

Office: 803.462.5633 Cell: 423.747.2660 www.KleinschmidtGroup.com Meeting Notes 2019 - April 2020

MEETING NOTES

SOUTH CAROLINA ELECTRIC & GAS COMPANY STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

Relicensing Kick-Off Meeting with the U.S. Forest Service July 25, 2018

Final ACJ 8-03-18

ATTENDEES:

Bill Argentieri (SCE&G) Amy Bresnahan (SCE&G) Alison Jakupca (Kleinschmidt) Jordan Johnson (Kleinschmidt) Kelly Kirven (Kleinschmidt) Henry Mealing (Kleinschmidt) Derrick Miller (USFS) Jason Moak (Kleinschmidt)

These notes are a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

<u>Meeting Purpose</u>: The purpose of the meeting was to begin relicensing discussions with the U.S. Forest Service; to discuss the Project, operations, process and potential resource issues.

Housekeeping Items:

The meeting opened and the Stevens Creek Hydroelectric Project (Project) relicensing team began introductions. Derrick Miller, USFS Special Uses Program Manager, noted that he should be the primary point of contact at the USFS for the Project relicensing. Amy Bresnahan, Alison Jakupca and Kelly Kirven should be included on the SCE&G and Kleinschmidt side. When sharing privileged cultural resource information, Jim Bates with the USFS should be the primary point of contact. The team will check with Derrick first, before directly sending privileged cultural correspondence to Jim.

The group reviewed through a general relicensing presentation (attached) and began open discussions. Major discussions points are included in the sections below, although not necessarily in the order discussed.

Relicensing Timeframe:

The group discussed that the relicensing process would stretch for a period of at least 7 years, with the anticipation of a new license being issued by the FERC in 2025. At Derrick's request, Alison noted that she would send Derrick the relicensing timeline, with dates of potential USFS interest highlighted. Alison noted that, at this time, some dates are still flexible. It was also noted that SCE&G would be seeking approval from FERC to use FERC's Traditional Licensing Process (TLP), as was done at Saluda and Parr. Derrick noted that the USFS was amenable to the use of the TLP at Stevens Creek.

Rare, Threatened, Endangered and Special Status Species (RT&E):

Derrick explained that the USFS has discovered Northern long-eared bat and red cockaded woodpecker in the area surrounding the Project. Therefore, these species would be of interest to the USFS. He continued to explain that the U.S. Fish and Wildlife Service (USFWS) would be responsible for setting any survey protocol for these species, if surveys were necessary. The group discussed that, as no modifications to the Project are being proposed, there should likely not be any impacts to these species. Moreover, if any enhancements were proposed at Project recreation sites, keeping within the existing development footprint should minimize or avoid affects to RT&E species. Nevertheless, potential impacts to these species, along with the necessity of species surveys, would be determined in consultation with the USFS and USFWS through the relicensing. Additionally, Derrick noted that USFS personnel would examine the USFS GIS system to see if there were any USFS sensitive species in the Project Area (within the FERC Project boundary) or Project Vicinity. If there are, Derrick will provide this information for inclusion in the Pre-Application Document and/or other licensing documents.

Cultural Resources:

Derrick explained that Jim Bates would be handling cultural resource reviews for the USFS. Jim Bates currently reviews annual cultural resources and shoreline erosion reports. His review includes consideration of reservoir fluctuations and whether fluctuations may be causing the loss of shoreline/cultural artifacts. The heavily vegetated shorelines aid in protecting the banks against erosion. The group discussed the extensive cultural resource studies performed at the Project in the mid-1990s. Studies included Phase II archeological surveys of the Project Area. Cultural resources were found near the Mims Recreation Site, which has enhancements proposed through the current Project Recreation Plan. Derrick noted that he would discuss this issue with Jim Bates.

Recreational Resources:

The group discussed Project recreation sites and the USFS's goal of "sustainable recreation"; defined as providing recreation opportunities that are "ecologically, economically, and socially sustainable for present and future generations." Given this, the group discussed the potential re-evaluation of recreational enhancements at the Mims Recreation Site through the Project relicensing. Alison noted that recreation data would be compiled and analyzed during the relicensing process, with a goal of showing existing use and future needs. If recreation enhancements at Mims Recreation Site were determined to be placed on hold until after relicensing recreation evaluations were performed, then SCE&G would need an email or letter from the USFS stating this by December 31, 2018. Derrick noted that he would investigate this internally and discuss further with Bill and Amy.

4(e) and Special Use Permits:

Derrick noted that under the One Federal Decision, the USFS had stricter timeframes for the development of 4(e) conditions; thus, early consultation was beneficial. Derrick explained that he envisioned the Stevens Creek 4(e) conditions being similar to the 4(e) conditions recently developed for the Parr relicensing, with a strong emphasis on ADA/Barrier Free accessibility. The group discussed the long USFS roads (located outside of the Project boundary) used to access various recreational facilities on the Stevens Creek reservoir. Derrick noted that since these roads are

outside the Project boundary, and if SCE&G does not use them for the maintenance of Project facilities, then a 4(e) road maintenance agreement will likely not be required.

Derrick also noted that a Special Use Permit does not currently exist for the hydroelectric project license and that in discussions with Jim Twaroski, they determined that a Special Use Permit would not be needed.

Project Site Visit:

The group discussed setting up a Project site visit with USFS personnel in the October 2018 timeframe. Alison noted that she would provide potential date options through a doodle poll.

The group adjourned and action items from this meeting are included below.

ACTION ITEMS:

- Derrick/USFS will review the USFS GIS system to see if there were any USFS sensitive species in the Project Area (within the FERC Project boundary) or Project Vicinity and provide that information to SCE&G for inclusion in the licensing documents.
- Derrick will discuss with Jim Bates if they have concerns regarding a cultural resource site at the currently designated Mims Recreation Site.
- Derrick will discuss the current need for recreational improvements at Mims Recreation Site, and their potential re-evaluation during relicensing. A letter/email from USFS is required by December 31, 2018.
- Alison will provide the relicensing timeline to Derrick.
- Alison will set up an October 2018 Project site visit.



Stevens Creek Project Relicensing U.S. FOREST SERVICE KICK-OFF MEETING JULY 25, 2018

Meeting Agenda

- Relicensing Process
- Project Overview
- Review of USFS Lands within Project Boundary and Recreation Sites
- Discussion of Recreation Site Improvements
- Discussion of 4(e) and Special Use Permits
- Other Items



General Map of Project Area





----- Project Boundary Line

Property owned in fee by SCE&G

USFS Land within PBL (without pre-existing easement)

//////, USFS Land Within PBL (with pre-existing easement)

Note:

- SCE&G owns flowage easements which predate acquisition of the National Forest Lands by the United States and is not subject to annual charges for occupancy of these lands.
- SCE&G's property rights within the Stevens Creek Project Boundary consist only of flowage rights except for the project structures and the properties designated as being owned in fee by SCE&G.

Coordinate System: NAD 1983 NSRS2007 StatePlane South Carolina FIPS 3900 Ft Indl All elevations are in NAV89.



Surrounding Facilities

Upstream Facilities

- Thurmond USACE
- Richard B. Russell USACE
- Hartwell USACE

Downstream Facilities

- Augusta Diversion Dam City of Augusta
- New Savannah Bluff Lock and Dam USACE



General Project Data

- FERC Project Number 2535
- Location: Edgefield and McCormick Counties, SC/Columbia County, GA
- Constructed 1912; Began operation 1914
- FERC license issued in 1995; expires 10/31/25
- 8 Generating Units
- 29-ft Gross Head
- 9,000 cfs max hydraulic capacity
- Authorized Installed Capacity: 17.3 MW
- Reservoir: 2,220 ac / extends approx. 12 miles upstream to USACE Thurmond Dam
- Drainage Area: 7,180 sq. mi
- Approx. 104 acres of USFS lands in the PBL
- No transmission lines in the Project Boundary



FERC Relicensing Process

- Proposing to use FERC's Traditional Licensing Process (TLP) with Enhanced Stakeholder Involvement
- TLP = 3 Stage Process
- First Stage (late 2018 through mid-2020)
 - Preliminary Issues Scoping
 - Issuance of Pre-Application Document (PAD)
 - Joint Agency Meeting and Site Visit
 - Written PAD comments and study requests due from agencies



Traditional Licensing Process

- Second Stage (Late 2020- mid 2023)
 - SCE&G performs resource studies
 - SCE&G provides Draft License Application (DLA) for agency review
 - Written DLA comments due
- Third Stage (Mid 2023-2025)
 - SCE&G files Final License Application with FERC and sends copies to agencies and tribes
 - Early 2025 Final 4(e) conditions due for Project



Project Operations

Operates as a reregulating facility -

- Minimize pool fluctuations
- SCE&G maintains reservoir between 183.0 and 187.5 NGVD
- Operating Plan:
 - Identifies minimum flow
 - Contains procedures for adjusting minimum flows based on inflow conditions



What does "Reregulation" Mean?





Environmental Resources

SCE&G has existing license articles that protect natural resources surrounding Project

- Water quality monitoring in the Project Boundary
- Funding of Mitigation Trust Fund
- Fisheries Resource Enhancement Plan



Environmental Resources

Federal Rare, Threatened and Endangered Species

- Relict Trillium (end.)
- Miccosukee Gooseberry (threat.)
- Carolina Heelsplitter (end.)
- RC Woodpecker (end.)
- Wood Stork (threat.)



Environmental Resources

Cultural Resource Studies




Project Recreation Facilities

Existing Facilities

- Betty's Branch (Riverside Park) – Columbia County
- Mims (Rec Site #1) -USFS
- Fury's Ferry USFS
- Stevens Creek Park
- Chota Drive (Rec Site #2) USFS





Stevens Creek Recreation Sites - Map 1



0 0.25 0.5 1 1.5 2



Stevens Creek Recreation Sites - Map 2



0 0.25 0.5 1 1.5 2



Recreation Site Improvements

Fury's Ferry Recreation Site

Chota Drive Recreation Site

Mims Recreation Site

NEPA/SHPO consultation by Dec. 31, 2018



Mims Recreation Site



Stevens Creek 4(e) Conditions

No 4(e) conditions in current license

Special Use Permit



USFS Concerns and Goals



Other Items

Parr draft 4(e) conditions







MEETING NOTES Stevens Creek Hydroelectric Project (FERC No. 2353)

SOUTH CAROLINA ELECTRIC & GAS COMPANY Agency and NGO Outreach Meeting

January 10, 2019

Final KMK 2-1-19

ATTENDEES:

Amy Bresnahan (SCE&G)IBill Argentieri (SCE&G)ICaleb Gaston (SCANA)IPaula Marcinek (GADNR – WRD)IMadeline Banyas (GADNR – EPD)IDelaine Scott (GADNR – EPD)IEd Bettross (GADNR – Fisheries)IChris Thomason (SCDNR)IElizabeth Miller (SCDNR)IBill Marshall (SCDNR)IRon Ahle (SCDNR)IElizabeth Johnson (SC SHPO)Stacy Rieke (GADNR – HPD) – via conf. callDebbie Wallsmith (GADNR – HPD) – via conf. call

James Sykes (USACE) Elena Richards (Savannah Riverkeeper) Tonya Bonitatibus (Savannah Riverkeeper) Tony Hicks (private individual) Tom Proctor (land owner) Bill Stringer (SC Native Plant Society) Alison Jakupca (Kleinschmidt) Kelly Kirven (Kleinschmidt) Jason Moak (Kleinschmidt) Henry Mealing (Kleinschmidt)

These notes are a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

The purpose of this meeting was to discuss the Stevens Creek Hydroelectric Project and its operations, the upcoming relicensing process and potential resource issues at the Project. The PowerPoint presentation from the meeting is attached to the end of these notes and is available on the Project website at <u>www.stevenscreekrelicense.com</u>.

Alison opened the meeting with introductions and then gave a brief overview of the relicensing process and the public meetings held in November 2018. Amy provided a brief overview of Project operations and explained that the Stevens Creek Project re-regulates flows released from the upstream U.S. Army Corps of Engineers (USACE) Thurmond Dam. Amy said that each day the USACE provides SCE&G with a daily average flow and SCE&G then releases flows from Stevens Creek Dam continuously to meet that daily average.

Alison told the group that the Pre-Application Document (PAD) is due to be filed with FERC in 2020. She said that SCE&G will distribute a draft PAD to the agencies to review prior to filing with FERC. In the meantime, SCE&G is requesting that agencies provide them with any existing information they may have on the Project that can be incorporated into the PAD. Kleinschmidt will



distribute a PAD Information Questionnaire to agencies and NGOs within the next few weeks requesting information. SCE&G also wants to scope out potential studies and submit study plans to FERC with the PAD. Meetings will be held throughout 2019 and early 2020 to develop these study plans.

Alison asked the agency personnel if the public had expressed any concerns to them regarding the Project and existing recreation sites. No concerns were expressed. Ed asked if there was any potential for recreation below the dam. Alison explained that FERC prefers for recreation sites to be within the Project boundary. If stakeholders and licensees agreed to develop a recreation site outside of the Project boundary, FERC either won't agree to this, or will require the licensee to expand the Project boundary to include the recreation site. Bill A. said that in the Project's current license, stakeholders and SCE&G agreed to develop a fishing pier downstream of the dam. However, there was an archaeological site in the area that required protection. In this case, FERC required SCE&G to develop a recreation area inside the Project boundary on the Georgia side which was part of Columbia County's Riverside Park. Elena asked if the Mims recreation site had any potential for further development and established amenities. Bill A. said that this site is in the Project's existing Recreation Plan, however it is located on U.S. Forest Service (USFS) land and the USFS hasn't prioritized development at the site. Bill A. said that SCE&G needs to talk to FERC about this and determine if further development is needed during the current license term. A recreation study is likely to occur during relicensing to determine utilization of existing sites and the potential need for new site development and/or upgrades at existing sites.

The group discussed soils and geology at the Project. Alison said that SCE&G performs annual shoreline erosion surveys at the Project and this information will be included in the PAD. Tom said that the Modoc fault line is located close to the dam. Amy said she wasn't aware of that fault line, however it hasn't appeared to cause any issues at the Project. Bill M. asked if there was any concern about sediment in the reservoir. Amy said that sedimentation was mentioned as a potential issue during the public meetings in November 2018, particularly in Stevens Creek. Amy said that sedimentation can be an issue at the confluence of Stevens Creek and the Savannah River but does not currently affect project operations. Members of the public mentioned that they often had to navigate inside of the buoy lines upstream of the dam in order to access the main river channel. Bill M. asked if there were any operational requirements regarding sediment management. Amy said that there aren't any in the current license. She also mentioned that flows have been particularly high for the last two months, which may result in a change in sediment load and sediment deposits in the Project area.

The group discussed water quality and quantity associated with the Project. SCE&G has a large amount of existing data since they complete annual reports for the Project using USGS data. Water quality at Stevens Creek has been improving due to water quality improvement efforts upstream at Thurmond. Bill S. asked if SCE&G was aware of a wastewater discharge on Plum Branch. Bill A. said this was outside of the Project boundary but it could affect water quality at the Project. Alison said that SCE&G will apply for a new 401 water quality certificate from Georgia. She said that typically the application is submitted after the Final License Application is filed. Madeline and Delaine asked if there were any requirements in the existing license for monitoring or improving dissolved oxygen downstream of the Project. Amy said that SCE&G monitors water quality immediately downstream of the dam.



The group discussed fish and aquatics at the Project. SCDNR is currently completing fish studies on Stevens Creek and will have reports available soon. Ron said that SCDNR recently hired a new malacologist, Morgan Kern, who is focusing on the Carolina heelsplitter, a mussel that has potential to occur within the Project boundary. A question was asked about the Project boundary and why it doesn't extend any downstream of the dam. Henry explained that the City of Augusta's Diversion Dam is located within a mile downstream of Stevens Creek Dam and so there isn't any riverine influence.

Tonya provided a list of questions and concerns she had regarding the Project. She asked if there was any opportunity for SCE&G to work with USACE to lessen the flow fluctuations from Thurmond Dam. She also said that fish passage at Stevens Creek will eventually happen and suggested that SCE&G be proactive about addressing fish passage rather than wait for passage to be installed downstream. Tonya said that fish passage installations could be used as an educational tool. She is also working to have the water quality standards for this section of the Savannah River reclassified from "fishing" to "recreation". She indicated that this stretch of the river is a popular active recreation area and that SCE&G should consider constructing a recreation site downstream of the Project. Tonya also said that she would like to see canoes and kayaks be able to move through the locks at the Project or through a rock weir. She also mentioned rocky shoals spider lilies (RSSL) in Stevens Creek, a few small dams in Stevens Creek in poor condition, and silt/sedimentation out of Stevens Creek as issues that need to be considered during relicensing. Bill S. said that Dr. Donna Ware and Dr. Judy Gordon have been studying local RSSL populations for 20 years and could be a resource for information. He also mentioned a small concrete dam that the SC Native Plant Society owns that might be eligible for removal.

Alison said that the public mentioned concerns over aquatic vegetation in the Project reservoir. Amy said that this aquatic vegetation has caused operational issues for SCE&G. SCE&G has never sprayed the vegetation. Tonya suggested dropping the water level during freezing temperatures as a natural way to kill off the plants. Henry said he has seen approximately 9 or 10 different species of aquatic vegetation in the reservoir. Since the reservoir shoreline is heavily vegetated, there isn't much shoreline erosion.

The group discussed reservoir and downstream fluctuations. Ron mentioned the development of a plan to consider fluctuations during fish spawning seasons. Tonya said she would like to see flows tweaked in an effort to hold the reservoir more stable. Amy said that there are some scheduled maintenance and repairs that will occur in the near future that should make the plant more efficient, including replacing flashboards. Bill M. said that he sees the Stevens Creek Project as one that provides a service to the river downstream by providing more stable downstream flows due to reregulation of flows from Thurmond. The existing license requires Stevens Creek to re-regulate flows from Thurmond. Henry said that simple modeling could show how the downstream is affected from varying fluctuations.

The group discussed rare, threatened and endangered species at the Project. Carolina heelsplitter, RSSL, robust redhorse, redeye bass, trillium, bats and vultures at Stallings Island were all mentioned as species to consider.

Other issues mentioned during the meeting are listed below.



- Chris asked about the buffer zone at Stevens Creek and whether it was maintained in a natural state. Bill A. said SCE&G doesn't do anything in the buffer zone. SCE&G doesn't own most of the land and only has flowage rights in most areas.
- The group discussed whether there was a need for a Shoreline Management Plan and that currently the USACE permits docks on Stevens Creek reservoir. Elizabeth M. asked if SCE&G has a general permit for the Project area. Bill A. said he didn't think they did.
- The group reiterated the need for a recreation study. Tonya will provide a list of vendors that use the area and will provide data she has on special events that take place in the area.
- A cultural study was completed in the 1990s and likely doesn't need to be repeated. An HPMP and PA were developed in 2004 and may need to be updated if operational changes occur as a result of relicensing. Also, the documents may need to be updated regarding Stallings Island including how to protect the resource and increase awareness.
- SCE&G mentioned they will contact local tribes separately and address any issues they may have.
- After the meeting, Tom submitted an additional issue he would like addressed through relicensing. He said there are hundreds of stumps in Stevens Creek that provide navigation issues. He would like to see the stumps either removed or cut, or a navigation channel marked.

The next meeting will likely occur in the spring of 2019. During this meeting, the group will develop Resource Conservation Groups and begin developing study plans. Action items from this meeting are listed below.

ACTION ITEMS:

- Kleinschmidt will distribute a PAD Information Questionnaire to stakeholders. Stakeholders are encouraged to fill out the questionnaire and provide any existing data they have relevant to the Project to Kleinschmidt and SCE&G for inclusion in the PAD.
- Tonya will provide a list of vendors that use the Project area for recreation and any data she has on special events that occur in the Project area.
- SCE&G will contact local tribes as part of the cultural resource component of relicensing.



MEETING NOTES Stevens Creek Hydroelectric Project (FERC No. 2353)

SOUTH CAROLINA ELECTRIC & GAS COMPANY Agency and NGO Outreach Meeting

March 27, 2019

Final KMK 4-29-19

ATTENDEES:

Amy Bresnahan (SCE&G) Bill Argentieri (SCE&G) Randy Mahan (SCANA) Pace Wilber (NOAA Fisheries) Twyla Cheatwood (NOAA Fisheries) Andy Herndon (NOAA Fisheries) Melanie Olds (USFWS) Derrick Miller (USFS) Alison Jakupca (Kleinschmidt) Henry Mealing (Kleinschmidt Kelly Kirven (Kleinschmidt)

These notes are a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

The purpose of this meeting was to discuss the Stevens Creek Hydroelectric Project and its operations, the upcoming relicensing process and potential resource issues at the Project. SCE&G hosted an agency/NGO outreach meeting on January 10, 2019, however several federal agency representatives were not able to attend due to the government shutdown. SCE&G convened a conference call to accommodate those representatives not able to attend the January meeting. The PowerPoint presentation from the meeting is attached to the end of these notes and is available on the Project website at <u>www.stevenscreekrelicense.com</u>.

Alison opened the meeting with introductions and then gave a brief overview of the relicensing process, the public meetings held in November 2018, and the agency/NGO outreach meeting in January 2019. Amy provided a brief overview of Project operations and explained that the Stevens Creek Project re-regulates flows released from the upstream U.S. Army Corps of Engineers (USACE) Thurmond Dam. Amy said that each day the USACE provides SCE&G with daily average flow targets and SCE&G then releases flows from Stevens Creek Dam continuously to meet that daily average.

Amy said that there is a large amount of existing water quality data for the Project, including forebay and tailrace data from the upstream Thurmond Project. SCE&G has to assemble and file with FERC an annual water quality report that primarily summarizes temperature and dissolved oxygen (DO) data. Dissolved oxygen enhancements installed at the Thurmond Project seem to have improved water quality in the area. Pace said that after review, it appears that the last 5-10 years of water quality reports didn't seem to show an instance of DO below 5 mg/L in the tailrace. He asked if SCE&G has ever considered installing a data sonde to collect continuous water quality data. Amy said that hadn't been considered at this time, but it can be considered during relicensing.



The group discussed land and shoreline management at the Project. Amy said that SCE&G doesn't own a significant amount of land around the river but have flowage easements instead. SCE&G may need to discuss dock and other permitting with the US Army Corps of Engineers. Derrick mentioned that the USFS doesn't allow the public to put docks on USFS land and they won't sell any land for private development.

Alison told the group that the Pre-Application Document (PAD) is due to be filed with FERC in 2020. She said that SCE&G will distribute a draft PAD to the agencies to review prior to filing with FERC. In the meantime, SCE&G is requesting that agencies provide them with any existing information they may have on the Project that can be incorporated into the PAD. Alison noted that Kleinschmidt received a great response to the PAD Questionnaires that were distributed to stakeholders in January. SCE&G also wants to scope out potential studies and submit study plans to FERC with the PAD. Meetings will be held throughout 2019 and early 2020 to develop these study plans.

The group discussed existing information on the various resource areas. The group discussed the potential for continuous data collection through a data sonde in more detail. Pace noted that visitors of the Stevens Creek and Thurmond Project areas have a perception of low DO in that stretch of river, however the data collected and presented in the annual reports doesn't support this. He said that the more data that exists, the easier SCE&G can combat this negative public perception. High amounts of siltation and run-off from farms located along Stevens Creek may be contributing to low DOs in the Project area. Henry said that data gaps will be identified in the PAD, and these data gaps will be used to determine what type of studies may need to be completed during relicensing. Bill A. also said that stakeholders can try to identify areas where they would like to see continuous data monitoring, through the installation of a data sonde, and SCE&G can consider contracting with USGS to get these monitors installed. This continuous data collection may also eliminate the need for an annual report with FERC.

Melanie mentioned the Lower Savannah River Watershed Initiative Longleaf Alliance and said the program overlaps with the Project boundary and USFS land. She said that the purpose of this alliance is to improve water quality within the watershed and they may be able to provide additional water quality information. Derrick said he would check within USFS to determine input on the water quality issue.

Henry mentioned that the Stevens Creek Project does a lot to soften the peak flow release from upstream at Thurmond. This is seen as a Project benefit by SCE&G and the USACE, however, some members of the public would rather see the Stevens Creek reservoir held stable and the Stevens Creek Project send the peak flow downstream. Pace said it might be good to show how unnatural Thurmond's peak flow would make the river downstream if the Stevens Creek Project didn't re-regulate. Pace asked that the PAD be very clear about the physical constraints regarding water manipulation at the Stevens Creek Project due to the Thurmond Project upstream. Alison said that USACE has developed a flow model for the Savannah River system and that SCE&G will hopefully utilize this model during relicensing.

The next meeting will likely occur in the spring of 2019. During this meeting, the group will develop Resource Conservation Groups and begin developing study plans. A site visit to the Stevens Creek Project is scheduled for May 15, 2019. Action items from this meeting are listed below.



ACTION ITEMS:

• Kleinschmidt will schedule a meeting to develop Resource Conservation Groups and begin discussion of the PAD and study plans.





Stevens Creek Project Relicensing FEDERAL AGENCY OUTREACH MEETING



MARCH 2019



Meeting Agenda

Introductions

Relicensing Goals and Agency Goals

- Project Overview
- Relicensing Process and Timeline
- Review Environmental Resource Areas and Potential Issues
- Discuss Relicensing Working Groups and Agency Personnel Interest and Involvement



SCE&G Relicensing Goals

- Enhanced agency and stakeholder engagement through use of the TLP
- Establish and/or enhance positive working relationships with resource agencies and NGOs
- Develop licensing documents that satisfy regulatory requirements and hold up to FERC scrutiny
- Progression towards a Comprehensive Relicensing Settlement Agreement (CRSA)

Retain operational flexibility in order to reregulate USACE flows



Stevens Creek Hydroelectric Project FERC Project No. 2535 – GA,SC





Stevens Creek Project location















Operations

The current license states:

- Reregulate releases from Thurmond Dam
- Minimize pool fluctuations
- Maintain reservoir between 183.0 and 187.5 NGVD

Operating Plan developed to:

- Identify minimum flow
- Procedures for conditions when minimum flow may not be provided



Operations

- Gross storage capacity, ~23,600 acre-feet
- Usable storage at full pool, ~7,800 acre-feet with 4.5 foot drawdown
- Re-regulate river flows below 8,300 cfs
- 8 vertical turbine generators





What does "reregulation" mean?

3 Day Re-regulation Example



Stevens Creek reservoir

≊USGS

USGS 02196483 SAVANNAH RVR AT STEVENS CREEK DAM NR MORGANA, SC



Period of approved data



Water Quality

<u>Schedule:</u> Once a month on 2 consecutive days, once daily for Nov – May;

Twice a month on 2 consecutive days, twice daily for June - Oct



Recreation

- Stevens Creek Site parking area, boat ramp, picnic tables, restroom
- Chota Drive Site parking area, paths with bank fishing access, canoe launch area
- Mims Site currently undeveloped (not supported by USFS Recreation Plan of the Long Cane Ranger District or the Forest Service Sustainable Recreation Strategy)
- Fury's Ferry Site parking area, boat ramp, picnic tables, primitive camping area
- Riverside Park on Betty's Branch, parking area fishing pier, boat ramp and dock



Stevens Creek Recreation Sites - Map 1



Stevens Creek Recreation Sites - Map 2



Stevens Creek Recreation Sites


Shoreline management

 US Army Corps of Engineers permits docks and shoreline maintenance between Thurmond dam and Stevens Creek dam.







Relicensing Process and Milestones

Existing FERC license issued in 1995; expires 10/31/2025

Required to start relicensing at least 5 years before existing license expires.

Complete an enhanced Traditional Licensing Process (TLP) that encourages cooperative resolution of the issues.

Develop a Comprehensive Relicensing Settlement Agreement



Big Picture – Relicensing Timeline

- May-October 2020 File NOI and PAD with FERC, request approval of TLP
- <u>Between 30 to 60 days after FERC approval of TLP</u>
 hold Joint Agency Meeting
- Late 2020-2021 First Year Studies
- <u>2022</u> Second Year Studies (if necessary)
- November 2022 Issue DLA
- October 2023 File FLA and Settlement Agreement with FERC



Agency and Stakeholder List

Federal/Tribal: NMFS, USACE, USFWS, USFS, Cherokee Nation

NGO: American Whitewater, Savannah Riverkeeper, Ducks Unlimited

South Carolina

- SC Dept. of Health and Environmental Control
- SC DNR
- Edgefield County Water & Sewer Auth.
- Edgefield Planning Commission
- SC Dept. Of Archives and History
- SC Parks, Rec, Tourism

<u>Georgia</u>

- Georgia DNR –
 Environmental
 Protection Division (401)
- Georgia DNR
- City of Augusta
- Georgia Forestry Commission
- Georgia Geologic
 Survey
- Georgia Historic
 Preservation Division

Environmental Resource Areas

- Soils and Geology
- Water Quality and Quantity
- Fish and Aquatic Resources
- Terrestrial Resources and Wetlands
- Rare, Threatened and Endangered Species
- Land Use, Aesthetics, and Socioeconomic Resources
- Recreation Resources
- Cultural/Tribal



Soils and Geology

Existing Available Information

- Soil surveys
- FERC Environmental Inspections
- SCE&G Erosion Surveys



Water Quality and Quantity

Existing Available Information

- USACE Survey Reports, Water Control Manual, Savannah River Drought Management Plan
- Phinizy Center Basin Reports
- DO and Temp Monitoring by SCE&G
- GDNR 401 Reports



Fish and Aquatic Resources

Existing Available Information

- SCDNR and GDNR habitat plans for Atlantic and shortnose sturgeon, shad and river herring
- Georgia Bass Club creel data
- Sunfish stocking evaluations at Stevens Creek impoundment
- Previous entrainment studies at Project
- Freshwater mussel surveys contracted by USFWS
- SNSA macro sampling data
- Fishery resource reports prepared for other relicensings (ADD, King Mill, Sibley Mill)
- Diadromous Fish Restoration Plan for Middle Savannah River (NMFS and USFWS)
- 2016-2018 Report of Robust Redhorse Conservation Committee
- ASMFC's Atlantic Sturgeon Stock Assessment Report
- SCDNR Fisheries Study in Stevens Creek Reservoir final report due spring 2019
- Other Available Information/Resource Discussion Points ?



Terrestrial and Wetland Resources

Existing Available Information

- USFWS National Wetlands Inventory data
- USFS Forest Plan EIS
- General species info available from SC/GA DNRs



RT&E Resources

Existing Available Information

- USFWS IPAC Data
- USFS Forest Plan EIS
- General species info available from SC/GA DNRs



Land Use, Aesthetics,& Socioeconomic Resources

Existing Available Information

- USFS Forest Plan EIS
- SCORPs
- County data
- GIS data and aerial photography



Recreation Resources

Existing Available Information

- Existing Form 80 data
- USFS data
- Columbia County use data



Cultural/Tribal Resources

Existing Available Information

- Extensive survey performed at the Project in 1990's
- Existing Programmatic Agreement and HPMP
- Annual monitoring of known sites



Resource Conservation Groups

Fish, Wildlife and Water Quality

Lake, Land and Recreation Management

Project Operations

*Cultural resources will be evaluated under consultation guidelines as defined by Section 106 of the Historic Preservation Act



Summary of Concerns Noted at November Public Meeting

Vegetation management

- Potential scheduled drawdown below el. 183'
- Sedimentation
- USACE operations
- Stevens Creek Recreation Site improvements
- Communications regarding reservoir operations
- Noise from trash rake operation



Summary of Issues Identified on PAD Questionnaire

Resource Area	Issue
RTE Species	Carolina Heelsplitter (Endangered) – occurs within the Steven's Creek watershed
RTE Species	Brook Floater(ARS) – occurs in medium tributary in Steven's Creek
RTE Species	Relict Trillium (Endangered) – can occur on bluffs near large rivers
Water Resources	Low Flow requirements at Thurmond Dam
Fish & Aquatic	Sedimentation, Water elevation fluctuations, Vegetation, Water Quality (DO in Stevens Creek)
Fish & Aquatic	Robust redhorse, sturgeon, shad, striped bass, native mollusks – spawning migrations, pulsing effects including quantity and timing, water quality, habitat quality, fish passage
Recreation	Portage options



www.stevenscreekrelicense.com



Relicensing Events Calendar

Welcome to the Stevens Creek Relicensing Website

South Carolina Electric & Gas Company (SCE&G) has started their multi-year relicensing process for the Stevens Creek Hydroelectric Project (Project). This is a federally mandated process that is governed by the Federal Energy Regulatory Commission (FERC) and has the ultimate goal of obtaining a new operating license for the Project. This new license will dictate Project operations and associated Project resource management for the next 40 to 50 years.

EEPC requires SCE&C to collaborate and consult with stakeholders, including feder



PROJECT UPDATES

October 11, 2018 – Stevens Creek Public Outreach Meetings: 2:00 p.m. & 6:00 p.m., Savannah Rapids Pavilion







MEETING NOTES Stevens Creek Hydroelectric Project (FERC No. 2353)

Dominion Energy South Carolina, Inc. Stakeholder Site Visit

May 15, 2019

Final KMK 6-20-19

ATTENDEES:

Amy Bresnahan (DESC) Bill Argentieri (DESC) Randy Mahan (DESC) Brandon Stutts (DESC) Caleb Gaston (DESC) Alison Jakupca (Kleinschmidt) Kelly Kirven (Kleinschmidt) Jason Moak (Kleinschmidt) Jordan Johnson (Kleinschmidt) Henry Mealing (Kleinschmidt) Thom Litts (GDNR) Paula Marcinek (GDNR) Ed Betross (GDNR) Elizabeth Miller (SCDNR) Ron Ahle (SCDNR) Chris Thomasson (SCDNR)

Melanie Olds (USFWS) Pace Wilber (NMFS) Twyla Cheatwood (NMFS) Andy Herndon (NMFS) Scott Hyatt (USACE) Tonya Bonitatibus (SRK) Rachel Freeman (SRK) Tony Hicks (SRNL retiree) Andy Colbert (Outdoor Augusta) Rob Pavey (individual) Bill Smith (individual) Bill Smith (individual) Cory Eubanks (individual) Ronald Davis (individual) Tom Proctor (individual) John Harris (individual)

On May 15, 2019, Dominion Energy South Carolina, Inc. (DESC) hosted a stakeholder site visit at the Stevens Creek Hydroelectric Project. The purpose of the site visit was to allow stakeholders an opportunity to view the Project area from several of the DESC-managed Project recreation sites and the Project dam and powerhouse prior to the official start of relicensing. DESC believes this site visit will provide important perspective of the Project that stakeholders can refer to during study scoping and throughout the entire relicensing. A second site visit will be held as part of the Joint Agency Meeting (JAM) after the Pre-Application Document (PAD) is filed with the Federal Energy Regulatory Commission (FERC).

DESC representatives and stakeholders met at the Betty's Branch Recreation Site, part of the larger Riverside Park located in Columbia County, GA. The group viewed the boat launch area and then loaded into vehicles and traveled to the Fury's Ferry Recreation Site (Edgefield County, SC). The group viewed the Fury's Ferry site including the boat launch and the Project area visible from the recreation site. The group then traveled to the Stevens Creek Park Site (Edgefield County, SC), viewed the site, boat launch, and Project area visible from the recreation site. The group then traveled to the Stevens Creek Park Site (Edgefield County, SC), viewed the site, boat launch, and Project area visible from the recreation site. The group then traveled to the Stevens Creek Project powerhouse (Columbia County, GA). The group viewed the inside of the powerhouse through the open roll up door and walked along the upstream side of the powerhouse and lock area. On the lock area, the stakeholders were able to view upstream and



downstream portions of the Savannah River, the trash rake, the lock, and the spillway. Finally, the group traveled back to the Betty's Branch Recreation Site to have lunch and follow-up discussions. Stakeholders listed the following items as issues for concern or follow-up during relicensing.

- Stakeholders requested that trash receptacles be installed at the recreation sites.
- Stakeholders noted security concerns at Fury's Ferry.
- Caleb noted that the Fury's Ferry ramp sign is only visible from one direction on the paved road. It appeared that an additional sign was originally located on the other side of the post but is now missing.
- Several stakeholders indicated that the stumps in the river near the Stevens Creek Park site make it difficult to launch a boat and navigate the river. In addition, stakeholders noted that there was a substantial drop-off at the end of the ramp, along with a stump close to the end of the ramp at the left side.
- Reservoir fluctuation was again mentioned as a primary issue of stakeholder concern and DESC personnel provided an explanation of the re-regulation function of the Project. The group additionally discussed means of predicting reservoir fluctuation using USGS gages and calling the USACE to understand their generation schedule for Strom Thurmond Dam and means to track flood events using USGS gages.
- Several stakeholders again mentioned the proliferation of aquatic vegetation on the mainstem of the river and in the Stevens Creek arm.
- While at the dam, federal agencies discussed the appropriateness of the lock as a fish passage option, as well as alternative fish passage measures, if fish passage is deemed necessary.
- Tonya inquired about having a USGS gage on Stevens Creek closer to where it joins the Savannah River. The current gage on Stevens Creek is about 20 miles upstream near Modoc.

These items will be considered and addressed during relicensing, specifically through review of existing data or studies that may be conducted.

ACTION ITEMS:

• Kleinschmidt and DESC will schedule a meeting to develop Resource Conservation Groups and begin discussion of the PAD and study plans.



MEETING NOTES Stevens Creek Hydroelectric Project (FERC No. 2353)

Dominion Energy South Carolina, Inc. Joint RCG Meeting

August 22, 2019

Final KMK 9-20-19

ATTENDEES:

Amy Bresnahan (DESC) Bill Argentieri (DESC) Ray Ammarell (DESC) Randy Mahan (DESC) Caleb Gaston (DESC) Mike Mosley (DESC) Alison Jakupca (Kleinschmidt) Kelly Kirven (Kleinschmidt) Henry Mealing (Kleinschmidt) Paula Marcinek (GDNR) Ed Betross (GDNR) Jeffrey Williams (GDNR) Elizabeth Miller (SCDNR) Ron Ahle (SCDNR) Rusty Wenerick (SCDHEC) Melanie Olds (USFWS) via conf. call Twyla Cheatwood (NMFS) Kathryn Feingold (USACE) Stan Simpson (USACE) Derrick Miller (USFS) Elizabeth Toombs (CN) via conf. call Tonya Bonitatibus (SRK) Tony Hicks (individual) John Harris (individual)

These notes are a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

The purpose of the meeting was to review the draft Pre-Application Document (PAD) and discuss any potential information or study needs. Alison reminded the group that the final PAD is not due until May 2020 at the earliest, so there is plenty of time for revisions if needed. She told the group that at the time of PAD issuance, DESC will also request the use of the Traditional Licensing Process (TLP) to complete relicensing. Alison gave the group a short review of the steps involved in a TLP. Twyla said that if the Project isn't expected to be controversial, NOAA generally supports the use of the TLP.

Operations

Amy gave an update on the flashboard replacements. She said that the replacement of the four-foot flashboards is complete, but they are still working on replacing the five-foot flashboards. She said they plan to be finished by the end of September, but they have received approval from the agencies to keep the reservoir drawn down through October if needed. Amy said that the plant should operate much more efficiently after these upgrades are complete. John Harris asked if it would be possible for the reservoir operating range to be modified so that the minimum reservoir level is higher than the current requirement of 183.0 NGVD. Ray explained that the reservoir fluctuation range is used to accomplish the re-regulation function of the Project. He said that sometimes the entire fluctuation range is necessary to re-regulate the flows released by the upstream Thurmond Dam. However, the new flashboards should help keep the pool elevation more stable. Bill A. said that if they raise the lower level of the range, it pushes the upper level over the top of the



flashboards; tripping the flashboards more frequently and would create a maintenance issue. Resetting the flashboards also requires the reservoir to be lowered. Bill A. asked John if there is a time of the year when he would like to see the reservoir level higher. He said that he would like to see the reservoir higher all year, but especially so in the spring and summer. Ray said they could speak with plant management about what impact this would have on the Project. Alison said that this will be a good point to discuss further in the Operations Resource Conservation Group (RCG). John also asked if there is a correlation between the height of USGS Gage 02195520 Savannah River near Evans, GA and the elevation of USGS Gage 02196483 Savannah River at Stevens Creek Dam near Morgana, SC. DESC will look into this and determine if a correlation exists. If so, they will provide a document showing the comparison. Ron asked that Table 3-2 on page 3-8 be revised to show megawatts converted to cubic feet per second.

Fish Passage

Tonya said that it is very important to her organization that fish passage is addressed in the PAD. Alison assured her that fish passage will be addressed during the relicensing process and discussion of fish passage requirements under the existing license and relicensing consultation needs will be included in the PAD. Twyla stated that sturgeon are not being considered for passage at Stevens Creek.

<u>Tribal</u>

Elizabeth T. asked that Section 4.9.3 (page 4-90) be revised to state that the Cherokee Nation will be consulted anytime the State Historic Preservation Offices (SHPOs) are consulted. She also noted that formal consultation only occurs with federally-recognized tribes, such as the Cherokee Nation. State-recognized tribes can participate in the relicensing process as interested parties.

Land Management

Derrick asked if there was a Shoreline Management Plan (SMP) for the Project. Alison said that there is not since docks are currently permitted through the USACE and since DESC doesn't own large tracts of land around the reservoir. She said that the Final License Application will summarize DESC's land management practices. Ron said that since there isn't an SMP, it is important from a resource management perspective that Environmentally Sensitive Areas (ESAs) are identified and protected. He would like to see ESAs identified during this relicensing and protected from development.

Water Resources

The group discussed water quality in the Project area. Paula noted that there was additional, potentially more up-to-date information available from the EPA via their National Rivers and Streams assessment. Ed suggested collecting data further upstream Stevens Creek to characterize fish habitat in this area (specifically above Woodlawn Road, or the current Site 5 location). He said this is increasingly important considering the implementation of fish passage in the coming years. At a previous meeting, Pace Wilber (NMFS) said there is interest in collecting water quality data in the Project tailrace, such as continuous sampling for temperature and dissolved oxygen. Kleinschmidt will develop a water quality study plan strawman for discussion with the Water Quality RCG. Tonya will send information on the low head dams that exist on Stevens Creek. She also mentioned that a USGS gage around the bridge at Woodlawn Road would be helpful.



Fisheries

The group discussed fisheries in the Project area. A fisheries report completed by Jason Bettinger (SCDNR) became available after the draft PAD was prepared. The PAD will be updated with information from this report. Ed will provide additional fisheries information and Paula will provide updated robust redhorse information. Melanie said she will let us know if any additional information is needed regarding mussels.

Wildlife

Ron mentioned that additional information on ducks and local birds in the area is needed in the PAD. He suggested Phinizy Center as a potential source.

<u>RTE</u>

Alison suggested that DESC/Kleinschmidt develop an RTE whitepaper to identify potential RTE species in the Project area and to help guide ESA discussions. Melanie agreed that this would be helpful. Derrick said that he could get the forest biologist to review the whitepaper and provide comments. Twyla said that sturgeon should not be an issue at Stevens Creek. Tonya said that wood stork and swallow-tailed kite should be considered. Paula suggested creating one table in the PAD that lists all species and identify which are state or federally-protected.

Recreation

Alison said that a recreation study is likely needed at the Project. The group agreed. Derrick gave the group some background on the Mims site and explained that this site does not need to be included in the recreation study because it is no longer supported by USFS. USFS is requesting that DESC remove this site from their current license recreation plan and that no additional time or effort should be invested in this site. Bill A. said that DESC is going to send an email to stakeholders about removing Mims from their current license. There are no plans for a replacement recreation site because the site would be on USFS land and the USFS is unable to financially support additional recreation sites at this time, as it is not in-line with their Sustainable Recreation Strategy. Instead, the USFS will focus on improving the Fury's Ferry site. The group discussed the poor condition of the boat ramp at Betty's Branch. DESC has a MOA with Columbia County that states the county is responsible for maintenance. This will be clarified in the PAD. Georgia DNR stated that they would like to see opportunities for recreational development explored further upstream in Stevens Creek. Kleinschmidt will develop a draft recreation use and needs study plan to discuss with the Recreation RCG. Survey instruments will be developed in consultation with stakeholders. The recreation site inventory will account for ADA/barrier-free amenities. Informal recreation areas will be documented and land ownership will be identified. The recreation study will also include analysis on bank fishing. Tonya suggested looking into how to make the recreation sites part of the Blueway Trail so that they are advertised to the public. Tonya will send information on the Blueway Trail.

Geology/Soils

Tonya asked if sedimentation in the reservoir can be addressed during relicensing. She suggested focusing on the sedimentation issue at Betty's Branch. Henry suggested looking at Google Maps history to see how sediment may have filled in the reservoir. Erosion studies are completed annually around the reservoir by DESC. Bill A asked if they knew where the sediment was coming from. John H noted it was from new neighborhood developments and the lack of county enforcing their sediment control measures.



Action items from the meeting are listed below.

ACTION ITEMS:

- Kleinschmidt will make edits to the PAD as discussed in the meeting.
- Kleinschmidt/DESC will develop the following draft study plans/whitepapers and distribute to stakeholders for review:
 - o Water Quality Study
 - o Recreation Use and Needs Study
 - o Environmentally Sensitive Areas Study
 - \circ RTE Whitepaper
- DESC will look into the possibility of raising the reservoir range minimums.
- DESC/Kleinschmidt will determine if there is a correlation between the two USGS gages, and if so, will provide a document for the stakeholders.
- Kleinschmidt will distribute the Jason Bettinger fisheries report to stakeholders.
- Tonya will provide information on low head dams on Stevens Creek.
- Tonya will provide information on the Blueway Trail.
- Ed will provide fisheries data and Paula will provide Robust Redhorse information.
- Melanie will let the group know if additional information is needed for mussels.

MEETING NOTES Stevens Creek Hydroelectric Project (FERC No. 2353)

Dominion Energy South Carolina, Inc. Water Quality, Fish and Wildlife RCG Meeting

November 13, 2019

Final KMK 1-8-2020

ATTENDEES:

Amy Bresnahan (DESC) Ray Ammarell (DESC) Randy Mahan (DESC) Caleb Gaston (DESC) Alison Jakupca (Kleinschmidt) Kelly Kirven (Kleinschmidt) Henry Mealing (Kleinschmidt) Jason Moak (Kleinschmidt) Jordan Johnson (Kleinschmidt) Paula Marcinek (GDNR) Ed Betross (GDNR) Jeffrey Williams (GDNR) Jeff Darley (GDNR) Elizabeth Miller (SCDNR) Chris Thomason (SCDNR) Jason Bettinger (SCDNR) Melanie Olds (USFWS) Twyla Cheatwood (NMFS) Keith Whalen (US Forest Service) Derrick Miller (US Forest Service) Jamie Sykes (USACE) Cameron Henderson (SCDHEC) via conf. call Rachel Freeman (SRK) Tony Hicks (individual)

These notes are a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

The purpose of the meeting was to review the draft Water Quality Monitoring Study Plan, review shoreline/substrates and potential habitat in the Project reservoir, discuss potential Environmentally Sensitive Areas in the reservoir, and discuss any additional study needs. The draft Water Quality Monitoring Study Plan was distributed to stakeholders prior to the meeting and is attached to the end of these notes.

Draft Water Quality Monitoring Study Plan Discussion

Jason M. provided a brief overview of the draft study plan. The objective is to assess dissolved oxygen levels in Stevens Creek and the Project tailrace portion of the Savannah River. Monitoring locations will be at Stevens Creek at Woodlawn Drive (aka Sportsman's Corner), Stevens Creek Dam Forebay and Stevens Creek Tailrace. Monitoring parameters include continuous (15-minute interval) monitoring of temperature and dissolved oxygen from April 1 to November 30, 2021. Amy noted that the USGS gage in Stevens Creek is USGS 021963601 Stevens Creek near Murphy Village. The USGS gage near the Stevens Creek Dam is USGS 02196483 Savannah River at Stevens Creek Dam near Morgana, SC.

Henry said that since there is a lot of vegetation near the intakes, Kleinschmidt will put out dummy monitors prior to the start of monitoring to determine if this will cause issues.



Henry asked if the 401 Water Quality Certification will be issued by the Georgia DNR's Environmental Protection Division (EPD) and the Georgia DNR-EPD representatives affirmed this. He asked if this study will provide sufficient data to characterize water quality. Jeff D. suggested adding two more monitoring sites at the dam on the opposite side of the river from the powerhouse. Paula requested monitoring additional parameters, including nutrients, conductivity, pH, and turbidity. Alison said that there is some existing data for these parameters and DO and temperature were the only two parameters that were previously requested by stakeholders. However, monthly grab samples for nutrients can be collected and the continuous monitors that are installed can include pH, conductivity, and turbidity. Jason M. said that these continuous monitors typically don't collect pH readings for longer than a week or two before accuracy suffers. However, one or two good weeks each month could provide enough data to describe pH ranges in the project areas.

Paula suggested extending the study season to encompass at least an entire year. Elizabeth and Melanie agreed and Melanie suggested starting in February instead of April to catch the entire spawning season. Elizabeth suggested that data be collected for a second season in the event of high flows.

Alison said that currently, DESC has a license requirement to submit an annual water quality report to FERC, which was based on DO issues at Thurmond Dam/Reservoir upstream. These DO issues have been mostly resolved due to upgrades at Thurmond. An expanded water quality study at Stevens Creek could help in the removal of this annual reporting requirement in the next license. Alison said that Kleinschmidt will do some reconnaissance work on additional monitoring sites and monitor specifications and provide a short memo to the RCG. The study plan will be revised and sent back to the RCG for additional review.

Shoreline/Substrate and Potential Habitat/Environmentally Sensitive Areas Discussion

Alison said during the August meeting there was discussion on the substrates and shorelines in the Project area. While the reservoir was lowered to complete work on the flashboards, Jason M. and Jordan visited the Project and documented the shoreline through pictures. Jason M. noted that a drone may be used in the future. Pictures shown during the meeting will be converted to PDF and distributed to stakeholders.

Alison said that the group should discuss what constitutes environmentally sensitive areas at the Stevens Creek Project, as well as the potential outcome of defining and identifying environmentally sensitive areas. At other projects, these areas are identified so that they can be exempted from the installation of boat docks, recreation sites, and other construction activities. At Stevens Creek, boat docks are permitted by the USACE. Ray added that DESC doesn't own much land in fee at the Project, so besides providing some public education, there isn't much DESC could do to protect the environmentally sensitive areas once they are identified.

Jason B. said that shoreline habitat should be preserved as much as possible. Since a majority of the land on the South Carolina side of the Project is owned by the Forest Service, stakeholders should focus on the Georgia side of the Project. Derrick said that the Forest Service is concerned about losing national forest lands from erosion caused by reservoir fluctuations. Amy said that currently, DESC monitors the shoreline annually for erosion and includes this information in the annual cultural report to FERC.



Rachel noted that there is a population of rocky shoals spider lilies downstream of the Project below the Augusta Diversion Dam.

Elizabeth asked for a map that shows ownership of the Project shoreline. She said that SCDNR is interested in protecting buffer zones around the shoreline.

Alison asked that Jason B. talk with Ron Ahle, who indicated concern over environmentally sensitive area protection at a previous meeting, to get his perspective on what would be classified as an environmentally sensitive area at the Stevens Creek Project.

The group discussed potential outcomes after these areas are defined and identified. Options include development of a public education pamphlet and a formal, expanded erosion monitoring plan.

Additional Study Request Discussion

Melanie said that the USFWS is requesting a mussel study, particularly along the Stevens Creek arm of the Project reservoir. Alison said that Kleinschmidt and DESC will pull together a draft study plan and send to the RCG for review and revisions. Melanie will send information on areas of interest to the USFWS. Derrick added that information on the Carolina heelsplitter is of interest to the Forest Service.

Twyla asked if there is any bathymetry data for the tailrace of Stevens Creek Dam and any flow data for this area. Amy said that the USGS has attempted to install a gage in this area before, but they had issues establishing flow curves. Ray said that they only have an estimate for flows at this time. Twyla said that flow and bathymetry data will be important in the future for determining where to best install fish passage. Ray said that DESC will pull together some information on flows for the upcoming Operations RCG meeting. In addition, the USACE is developing a flow model from Thurmond dam to the New Savannah Bluff Lock and Dam. The USACE may be able to provide an update on the model at the Operations RCG meeting.

Kleinschmidt and DESC will start a white paper to characterize Stevens Creek aquatic habitat. The white paper will include information on water quality, substrates in various areas, presence of gravel bars, presence of old mill dams, stream flows, and fish restoration efforts for species such as American eel, American shad, blueback herring, striped bass and robust redhorse.

Kleinschmidt and DESC will also start a white paper on rare, threatened and endangered species in the Project area. The white paper will include all federal at-risk species and specific information on relict trillium.

Action items from the meeting are listed below.

ACTION ITEMS:

• Kleinschmidt will incorporate edits to the draft Water Quality Study Plan and send back to RCG for review and comment. Kleinschmidt will also develop a brief memo with reconnaissance information on additional proposed study sites and parameters.





- Kleinschmidt will send pictures of reservoir shoreline to RCG.
- Kleinschmidt will develop a mussel study plan strawman and distribute to the RCG for review and comment.
- USFWS will send information on priority areas for mussel surveys in Stevens Creek.
- Kleinschmidt will develop an RTE white paper and distribute to the RCG for review and comment.
- Kleinschmidt will develop a draft aquatic habitat white paper and distribute to the RCG for review, discussion, and comment.
- Jason B. will discuss potential environmentally sensitive areas definition with Ron Ahle and provide feedback to the RCG.



STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

Prepared for:

Dominion Energy South Carolina, Inc. Cayce, South Carolina

Prepared by:

Kleinschmidt

Lexington, South Carolina www.KleinschmidtUSA.com

October 2019

Stevens Creek Hydroelectric Project (FERC No. 2535)

Prepared for:

Dominion Energy South Carolina, Inc. Cayce, South Carolina

Prepared by:



Lexington, South Carolina www.KleinschmidtUSA.com

October 2019

STEVENS CREEK HYDROELECTRIC PROJECT (FERC NO. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

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STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

1.0 INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC) is the licensee of the Stevens Creek Hydroelectric Project (FERC No. 2535) (Project). The Project, which has an installed capacity of 17.28 megawatts (MW), is located in Edgefield and McCormick counties, South Carolina and Columbia County, Georgia, at the confluence of Stevens Creek and the Savannah River. The Project's dam is located approximately one mile upstream of the Augusta Diversion Dam, and approximately 13 miles downstream of the U.S. Army Corps of Engineers (USACE) J. Strom Thurmond Dam (Thurmond Dam). The Stevens Creek Reservoir is approximately 25 <u>RMs-miles</u> long, extending upstream to the Thurmond Dam and 12 miles up Stevens Creek. The surface area of the reservoir is 2,400 acres at the normal full pond EL 187.5 feet. The Project drainage area is approximately 7,173 square miles.

DESC operates the Project to generate clean, renewable energy and re-regulate highly variable river flows discharged by the USACE from the Thurmond Dam. DESC's operational protocols include releasing all Thurmond Dam discharges on a weekly basis and operating to achieve full pool in the Stevens Creek reservoir by Friday evening to provide a continuous weekend downstream discharge.

On November 22, 1995, FERC issued a 30-year license which is scheduled to expire on October 31, 2025. DESC intends to file an application for a new license with FERC on or before October 31, 2023. The Project is currently involved in a relicensing process which involves cooperation and collaboration between DESC, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. DESC established a Water Quality, Fish and Wildlife Resource Conservation Group (RCG), with interested stakeholders to address Project issues related to aquatic and terrestrial resources. The RCG determined there was a need for supplemental water

quality data at the Project, particularly dissolved oxygen (DO) and temperature. The Georgia Department of Natural Resources expressed a desire for more information on water quality in upstream areas of Stevens Creek to determine its suitability for fish habitat. The National Marine Fisheries Service expressed that the collection of continuous downstream water quality data over a period of time would aid in supporting the baseline water quality data currently available, as summarized in the Pre-Application Document prepared for the Project relicensing.

2.0 STUDY OBJECTIVE

The objective of this study is to assess the water quality, specifically DO levels, of the Savannah River, immediately downstream of the Stevens Creek Hydroelectric Project and in Stevens Creek.

3.0 GEOGRAPHIC AND TEMPORAL SCOPE

Water quality will be monitored at two sites in the Savannah River and one site in Stevens Creek. Monitoring Site 1 will be used as a control, and will be located in Stevens Creek Reservoir, upstream of the hydro station. Monitoring Site 2 will be located directly downstream of the Stevens Creek Hydroelectric Project. Monitoring Site 3 will be located in Stevens Creek at Woodlawn Road, approximately 4.5 miles upstream of its confluence with the Savannah River at Stevens Creek Dam. The monitoring sites are shown in Figure 1.

The study will begin April 1, 2021 and extend through November 30, 2021.



1

Commented [AJ1]: Correct Stevens Creek

FIGURE 1 STEVENS CREEK HYDROELECTRIC PROJECT WATER QUALITY STUDY SITES

4.0 DATA COLLECTION METHODS AND ANALYSIS

Water quality will be monitored at the three monitoring sites shown in Figure 1 for temperature and DO using continuous water quality monitoring instruments. The instruments will be deployed at approximately mid-depth in the stream channel. The instruments will be calibrated according to the manufacturer's specifications and will be set to collect temperature and DO data at hourly intervals.

The instruments will be cleaned, checked for accuracy, and downloaded on a monthly basis, at minimum, though more frequent checks will be conducted after initial deployment to determine the extent of fouling from aquatic vegetation. A separate, calibrated meter will be used to record DO and water temperature readings during each maintenance visit to the sites. These data will be compared to deployed instrument data as a check on accuracy and for use in post-processing and correction of any fouling or calibration drift.

All continuous data will be compiled at the end of the monitoring season. The data will be analyzed by computing daily and monthly minimum, maximum, and average values for DO and water temperature and comparing them to applicable water quality criteria.

5.0 SCHEDULE

The water quality monitoring instruments will be deployed at each monitoring site on, or around, April 1, 2021 and will collect data for approximately eight months. The instruments will be checked monthly, at a minimum, during the study period. Study methodology, timing and duration may be adjusted based on consultation with resource agencies and interested stakeholders.

A final report summarizing study findings will be issued within four months of the end of field work. The report will include tabular and graphical summaries of the DO and water temperature data, as well as summaries of pertinent hydrologic and meteorological data.

6.0 USE OF STUDY RESULTS

Study results will be used as an information resource during the discussion of resource issues with relicensing stakeholders.

Commented [AJ2]: 12- Months instead of 8. Deployment in January

Commented [AJ3]: Suggestion to go a whole year on monitoring.
MEETING NOTES Stevens Creek Hydroelectric Project (FERC No. 2353)

Dominion Energy South Carolina, Inc. Recreation and Lake and Land Management RCG Meeting

November 13, 2019

Final KMK 1-8-2020

ATTENDEES:

Amy Bresnahan (DESC) Ray Ammarell (DESC) Randy Mahan (DESC) Caleb Gaston (DESC) Alison Jakupca (Kleinschmidt) Kelly Kirven (Kleinschmidt) Henry Mealing (Kleinschmidt) Jason Moak (Kleinschmidt) Jordan Johnson (Kleinschmidt) Elizabeth Miller (SCDNR) Chris Thomason (SCDNR) Jason Bettinger (SCDNR) Paula Marcinek (GDNR) Ed Betross (GDNR) Keith Whalen (US Forest Service) Derrick Miller (US Forest Service) Tonya Bonitatibus (SRK) Tony Hicks (homeowner)

These notes are a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

The purpose of the meeting was to review the draft Recreation Study Plan and discuss any additional study needs. The draft Recreation Study Plan was distributed to stakeholders prior to the meeting and is attached to the end of these notes.

Alison provided a brief overview of the draft Recreation Study Plan. The objectives of the study are to characterize existing use of the Project recreation sites and identify additional recreation needs at the Project. Recreation sites included in the study are Betty's Branch, Chota Drive, Fury's Ferry and Stevens Creek Recreation Site. Data collection measures will include site inventories, spot counts, traffic counters and recreation user surveys. The study season will start September 1, 2020 and end September 6, 2021 (Labor Day).

A summary of the major discussion points from the meeting are listed below.

- Derrick said that the Forest Service collected recreation use data on Forest Service lands. He will provide that data to Kelly.
- Tonya suggested modifying the spot count form to differentiate between vehicles with boat trailers and vehicles with kayak trailers/roof racks.
- Tonya noted that recreators are accessing the Savannah River at the Savannah Rapids Pavilion and paddling upstream to the Stevens Creek Project tailrace. She would like to see a trail camera installed at the Columbia County operated Savannah Rapids Park site to estimate this use.



- The Forest Service wants to focus on data collection at Fury's Ferry versus Chota Drive, since Fury's Ferry is identified in their Sustainable Recreation Strategy as a priority site. Spot counts and surveys will be collected periodically at Chota Drive. In addition, trail cameras will be installed at both Fury's Ferry and Chota Drive to get an idea of the type of use at these sites and to capture use during waterfowl hunting season at Fury's Ferry.
- The sampling window will be extended to occur from 7:00 AM to 8:00 PM to catch bank fisherman in the evenings.
- The Recreation User Survey will be modified to ask for a primary language, if the respondent does not speak English.
- A question will be added to the Recreation User Survey to identify target species for fishing/hunting.
- Additional activities will be added to the table in Question 3 of the Recreation User Survey, including Jet-Skiing, diving/scuba, bow-fishing/spear-fishing.
- Questions referencing recreation on islands on the Recreation User Survey will be modified to say "on or near" the islands.
- A map of the Project vicinity will be included for reference regarding Question 8 of the Recreation User Survey.
- Kleinschmidt will develop a draft sampling plan and distribute to the RCG for review.

Action items from the meeting are listed below.

ACTION ITEMS:

- Kleinschmidt will incorporate edits to the draft Recreation Study Plan, Recreation User Survey, and Spot Count form and send back to RCG for review and comment.
- Kleinschmidt will develop a draft sampling plan and distribute to the RCG for review.
- Derrick will send Forest Service recreation data to Kelly.



STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

Prepared for:

Dominion Energy South Carolina, Inc. Cayce, South Carolina

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October 2019

Stevens Creek Hydroelectric Project (FERC No. 2535)

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October 2019

STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

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STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

1.0 INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC) is the licensee of the Stevens Creek Hydroelectric Project (FERC No. 2535) (Project). The Project, which has an installed capacity of 17.28 megawatts (MW), is located in Edgefield and McCormick counties, South Carolina and Columbia County, Georgia, at the confluence of Stevens Creek and the Savannah River. The Project's dam is located approximately one mile upstream of the Augusta Diversion Dam, and approximately 13 miles downstream of the J. Strom Thurmond Dam. The Project occupies approximately 104 acres of federal lands within the Sumter National Forest, with three existing Project recreation sites located on federal land and managed through agreement with the U.S. Forest Service (Forest Service).

2.0 PURPOSE OF THE STUDY

On November 22, 1995, FERC issued a 30-year license which is scheduled to expire on October 31, 2025. DESC intends to file an application for a new license with FERC on or before October 31, 2023. The Project is currently involved in a relicensing process which involves cooperation and collaboration between DESC, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. DESC established a Recreation and Land Management Resource Conservation Group (RCG), with interested stakeholders to address Project issues related to recreation and land management. The RCG determined there was a need for a recreation study at the Project.

DESC is proposing to perform an assessment of existing and future recreational use, opportunities, and needs for the Project. The assessment is designed to provide information pertinent to the current and future availability and adequacy of DESC-owned and managed

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- 1 -

recreation sites, Forest Service owned and managed recreation sites, and Columbia County, Georgia owned and managed recreation sites at the Project. The overall study plan objective is to identify current and potential recreation opportunities, use, and needs at the Project by addressing the specific goals and objectives listed below. Results from the study will be used to develop a new Recreation Management Plan (RMP) for the Project.

<u>Goal 1</u>: Characterize the existing use of recreation sites at the Project. This will be accomplished by meeting the following objectives:

- i. Identify recreation sites; inventory the services and facilities offered; and assess the general condition of each site (including whether the site provides barrier free access).
- ii. Identify patterns of use at each site (type, volume, and daily patterns of use).
- iii. Assess existing recreation sites located on federal land for consistency with Forest Service Sustainable Recreation Strategy.

<u>Goal 2</u>: Identify future needs relating to public recreation sites at the Project. This will be accomplished by meeting the following objectives:

- i. Identify existing user needs and preferences, including perceptions of crowding at recreation sites.
- ii. Estimate future recreation use of existing recreation sites.
- iii. Identify future needs for new recreation sites and facilities.

3.0 STUDY AREA

Recreation sites at the Project that will be included in this study are listed in Table 3-1 and shown in Figure 3-1.

RECREATION SITE NAME	RECREATION SITE NAME AS LISTED IN 2014 RECREATION PLAN	RECREATION SITE NAME AS LISTED IN 1995 PROJECT LICENSE/EXHIBIT G DRAWINGS	RECREATION SITE OWNER/ MANAGER
Stevens Creek	SC Recreation Site #1	Stevens Creek Recreation Site	DESC
Recreation Site			
Fury's Ferry	SC Recreation Site #2	Fury's Ferry Recreation Site	Forest Service
Recreation Site			
Chota Drive	SC Recreation Site #4	Recreation Site #2	Forest Service
Recreation Site			
Betty's Branch/	SC Recreation Site #5	GA Recreation Site	Columbia
Riverside Park			County, GA

 TABLE 3-1
 EXISTING PROJECT RECREATION SITES AT THE STEVENS CREEK PROJECT¹

Source: SCE&G 2014

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¹ The 2014 Recreation Management Plan (RMP) includes an additional recreation site – Stevens Creek Recreation Site #3 (also known as Recreation Site #1 or the Mims Recreation Site). This site is located on Forest Service property and is maintained by the Forest Service. The Forest Service has decided that this recreation site is not in line with their Sustainable Recreation Strategy and will no longer be supported by the Forest Service. The Forest Service has asked that this site be removed from the RMP and therefore not be studied during relicensing.



FIGURE 3-1 STEVENS CREEK PROJECT RECREATION SITES

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4.0 STUDY SEASON

Generally, the study season will last for one year, beginning on September 1, 2020 and ending on September 6 (Labor Day), 2021. During this time, traffic counters will be deployed at all four recreation sites, collecting continuous data for one full year. Within this general study season, recreation user surveys and spot counts will be collected during the peak recreation season, from April 1, 2021 through Labor Day weekend or September 6, 2021.

5.0 DATA COLLECTION METHODS

A variety of data collection techniques will be used to obtain the information necessary to meet the study objectives and goals listed in Section 2.0. Both primary and secondary data will be collected. Primary data will entail site inventories, spot counts, traffic counter data, and recreation user surveys. Primary data will be collected at each site as shown in Table 5-1.

	DATA COLLECTION METHOD						
RECREATION	SITE	SPOT COUNT	TRAFFIC	RECREATION			
SITE	INVENTORY		COUNTER DATA	USER SURVEYS			
Stevens Creek	*	*	*	*			
Recreation Site	•						
Fury's Ferry	*	*	*	Donio di o?			
Recreation Site		·••		Perioaic-			
Chota Drive	*	Dania dia	*	Daviadia			
Recreation Site		<u>Perioaic</u>		Perioaic			
Betty's Branch/	*	*	*	*			
Riverside Park		-1-	-1*				

 TABLE 5-1
 DATA COLLECTION METHODS AT STEVENS CREEK RECREATION SITES

Formatted: Font: Italic

Secondary data will include U.S. Bureau of Census data, the South Carolina Statewide Comprehensive Outdoor Recreation Plan (SCORP), SC Recreation Participation & Preference Study, and other relevant, readily available literature. Additional input will be solicited from the RCG, Columbia County, and Forest Service. Table 5-2 summarizes the study objectives,

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Commented [AJ1]: Game camera at chota; game camera at

² Recreation user surveys will be administered at Fury's Ferry and Chota Drive if recreation users are present during spot counts and/or traffic counter data download events.

information needed to meet these objectives, and sources for information. Sections 5.1 through 5.4 summarize the primary data collection methods.

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TABLE 5-2 RECREATION USE AND NEEDS STUDY PLAN OBJECTIVES AND EFFORTS

OBJECTIVES	INFORMATION NEEDED	SOURCE						
Goal 1: Characterize existing recreational use of Project recreation sites								
Goal 1a: Identify formal recreation sites, inventory the services and facilities offered at each, and assess the general condition and ADA compliance of each site Goal 1b: Identify the patterns of use at each site (type,	 Physical inventory of all facilities at each recreation site General assessment of site condition to include maintenance, basic rehabilitation needs, etc. Visitors' assessment of site conditions Identification of activities that occur at each site Barrier free/ADA compliance assessment Utilize vehicle counts as an estimation of 	Recreation Site Inventory Recreation User Surveys Traffic Counter Data						
volume, and daily patterns of use)	 people Estimate of # people/vehicle Estimate of # vehicles/site Parking capacity 	 Spot Count Data Recreation User Surveys - # of people per vehicle and length of visit Recreation Site Inventory - # of parking spaces Columbia County/USFS data, if available 						
Goal 1c: Assess existing recreation sites located on federal land for consistency with Forest Service Sustainable Recreation Strategy.	Results from Goal 1a and Goal 1b for recreation sites located on federal land	 Forest Service input Forest Service Sustainable Recreation Strategy 						

OBJECTIVES	INFORMATION NEEDED	SOURCE
Goal 2: Identify future recreational needs at the Project		
Goal 2a: Identify existing user needs and preferences, including perceptions of crowding at Project recreation sites	 User preferences and opinions of needs and crowding at sites Condition assessment 	Recreation User SurveysRecreation Site Inventory
Goal 2b: Estimate future recreation use of existing Project recreation sites	 Inventory and use data Population projections for the project area Recreational use trends 	 Results of Goal 1 U.S. Bureau of Census Data SC Division of Research & Statistics (Budget and Control Board)

October 2019

		•	SCORP, SC Recreation Participation & Preference Study, or other readily available literature
Goal 2c: Identify future needs for new recreation sites and/or facilities	 Estimate of future recreation use at the Project Parking capacity at recreation sites vs. existing and projected use density Condition/perception assessment 	•	Results of Goal 1a, 1b, 2a, 2b, Columbia County, USFS, and RCG input on future needs

5.1 RECREATION SITE INVENTORY

Prior to completion of a recreation site inventory, GPS points and land area of each recreation site will be collected and recorded. Then a recreation site inventory will be completed for each recreation site included in Table 3-1. A site visit will be made to collect data on the type, number, and size of facilities (restrooms, parking areas, boat ramps, picnic shelters and tables, etc.) located at each site. The general condition of all recreation facilities will be noted during the inventory. In addition, any facilities that qualify as barrier free will be identified as such. A copy of the inventory form is provided in Appendix A.

Upon completion of the inventory, all data will be uploaded into an Excel database. The database will be structured so that it can be used in a variety of formats (brochure, maps, web pages, etc.) and can be updated as recreation sites are modified, added, or changed in any way.

5.2 TRAFFIC COUNTS

Traffic counters will be installed at all recreation sites included in Table 3-1 to record the number of vehicles that enter and exit the public recreation areas. Traffic count data will be collected for one year in order to capture use during the various seasons. Traffic counter data will be downloaded from the counter at a minimum of twice per month to ensure the counter is working properly and to minimize the potential for lost data.

5.3 RECREATION USER SURVEYS

The preferences and perceptions of people using Project recreation sites weigh heavily into the determination of need for recreation site improvements and/or new recreation sites. Information from recreation site users will be collected through on-site surveys. Surveys will be conducted at recreation sites as shown in Table 5-1. Surveys may be collected at Chota Drive Recreation Site and Fury's Ferry Recreation Site when spot counts are completed and traffic counter data is downloaded. However, a recreation clerk will not be stationed at these sites.

Surveys will be administered to recreation site users at the close of their recreation day³. Data collected will include user demographics, group size, the type of land-based and water-based recreation activities individuals are participating in, length of stay, and perceptions of crowdedness and condition of recreation facilities at the Project. The data collected will be used to identify recreation use patterns and use estimates at the recreation sites. The data will also characterize user perceptions on crowdedness, which will be considered during the future needs analysis.

The survey will be pre-tested in the field prior to implementation and revisions will be incorporated, as necessary. If any significant revisions to the survey or study protocol are deemed necessary following field pre-testing, the RCG will be notified. A copy of the survey is provided in Appendix B.

Surveys will be administered during the peak recreation season from April 1 through Labor Day weekend, 2021. Each recreation site will be sampled according to a sampling plan that will be prepared in consultation with the RCG. Sampling days will include weekdays, weekends and peak use weekends⁴. The sampling plan will be developed using a stratified random sampling method, with weekends being sampled at a greater rate than weekdays to account for the heavier use that typically occurs on these days. During each sampling day, survey clerks will be on-site for a four-hour shift, collecting as many complete surveys as possible. The shifts will occur randomly throughout the day within the window of 7:00 AM to 78:00 PM. Shift start times will be listed in the sampling plan.

All survey clerks will be trained thoroughly as a means of quality control. Survey clerks will be provided with detailed information on the study schedule, appropriate materials to aid in data collection, and direction on appropriate interviewing techniques and attire. Interviewers will also be provided with an incentive for survey respondents to complete the survey.

October 2019

Kleinschmidt

Commented [AJ2]: Change the shift to 8:00. Bank fisherman may be better captured during the week.

³ FERC defines a recreation day as a visit by a person to a development for recreational purposes during any portion of a 24-hour period.

⁴ FERC defined peak use weekends as weekends when recreation use is at its peak for the season (typically Memorial Day, Independence Day and Labor Day). All three days in a holiday weekend should be included.

5.4 SPOT COUNTS

Spot counts will be conducted at the recreation sites listed in Table 3-1 once per sampling day, prior to the start of survey collection. Spot counts will document the number of vehicles present at a recreation site at one moment in time. Information recorded during spot counts will include: date, time, and weather; number of vehicles and vehicles with trailer at recreation site; type of activities observed at the site; and state license plate data. Spot count data will be used in parallel with traffic counter data.

6.0 ANALYSIS

The following sections provide a description of the approach for estimating existing and future recreational use, recreation site capacity and use density percentages, and future recreation needs.

6.1 CURRENT RECREATION USE ESTIMATES

The reported estimates of recreation will be presented in "recreation days". The FERC defines a recreation day as one visit by a person to a development for purposes of recreation during any 24-hour period. The weekday, weekend, and peak weekend average recreation days will be calculated for each recreation site utilizing the traffic counters and recreation site survey data. The average number of people at each site within the morning and afternoon periods will be estimated within each day type and converted to a daily estimate. Daily estimates for each day type will be expanded to represent the study period and summed for a total estimate for each recreation site.

6.2 FUTURE RECREATION USE ESTIMATES

Estimated projections of future recreation use at the Project will be developed using the average annual increase in population growth over the past 10 years, as reported by the Census Bureau or the State Division of Research and Statistics, for Edgefield and McCormick counties, SC and Columbia County, GA. The estimates will be augmented with discussion of trends reported in the SCORP (2014) and the SC Recreation Participation & Preference Study (2005). Estimated

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projections will be provided in 5-year intervals for the anticipated term of the license up to 50 years into the future (through year 2075).

While it is acknowledged that future changes in the supply of recreation resources, either in their quantity, accessibility, and/or quality may influence future demand and use, the demand analysis undertaken for this study does not attempt to predict what these future changes might consist of or how they might specifically affect levels of use at Project facilities. Therefore, the demand analysis results should be viewed as a general guide of potential future recreation pressure developed for planning purposes only.

6.3 RECREATION SITE CAPACITY

For purposes of this study, the carrying capacity for a recreation site is defined as the number of vehicles and boat trailers that can be parked at a recreation site at one time, based on the number of available parking spaces associated with each site. For paved parking areas, this will be achieved by counting the number of designated parking spaces available at the recreation site. For gravel parking areas, the number of available parking spaces for each recreation site will be estimated by measuring the area (sq ft) available for parking and estimating the number of vehicles that could be parked at the location, if optimal space were utilized. These estimates will be based on parking capacity standards for vehicle length, width, and available turn around space.

6.4 RECREATION SITE USE DENSITY

The use density of recreation sites will be estimated by comparing the average observed number of vehicles at the sites on sampled weekday, weekend, and peak weekend days with the available parking capacity for each recreation site. The average observed number of vehicles divided by the parking capacity will provide an estimated use density for each site. The average number of vehicles at the site will be determined using spot count and traffic counter data.

6.5 RECREATION NEEDS ASSESSMENT

The need for recreation and site development or modification of existing recreation resources will be assessed based on the inventory, condition assessment results, parking capacity and use density assessment results, user survey results, and Forest Service consultation. The needs

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assessment will focus on the existing condition and user opinions of recreation sites, the presence of "barrier free" facilities at recreation sites, and the ability of sites to meet current and anticipated future recreation demand. Consideration will also be given to site opportunities and constraints, as well as support facilities such as signage and maintenance. The need for new recreation sites and/or facilities will be determined through assessment of the information collected and the input of stakeholders through the RCG and the Forest Service.

7.0 SCHEDULE

The proposed schedule for completion of the Recreation Use and Needs Study is as follows:

TASK	DATE
Installation of Traffic Counters	September 1, 2020
Mobilization for field work (includes field clerk hiring, training, etc.)	March 2021
User survey pre-testing	March 2021
User survey collection	April 1 - September 6, 2021
Data entry, cleaning, and processing	October 2021
Conduct analyses	November – December 2021
Submit draft report	January 2022
Determine if additional data collection is needed	February 2022 ⁵
Finalize report	March 2022

8.0 **REFERENCES**

- Federal Energy Regulatory Commission (FERC). 2018. 18 CFR Parts 8 and 141: Elimination of Form 80 and Revision of Regulations on Recreational Opportunities and Development at Licensed Hydropower Projects. Issued December 20, 2018.
- South Carolina Electric & Gas Company (SCE&G). 2014. Revised Recreation Plan: Stevens Creek Hydroelectric Project, FERC Project No. 2535. January 2014.

⁵ If additional data collection is required, data collection methods, results and analyses will be developed and assessed in cooperation with the RCG and will be provided in an addendum to the report.

APPENDIX A

SITE INVENTORY FORM

APPENDIX B

RECREATION USER SURVEY

APPENDIX C

SPOT COUNT FORM

	Stev	Re ens Creek H	ecreation User Survey	ey (FERC No. 2535)	
Clerk:_	:	Site:	Date:	Time:	am/pm
Weathe	r: 🗆 Sunny	Partly Clou	udy 🛛 Cloudy	Light Rain	□ Heavy Rain
RESPO	NDENT GENDER:	🗆 Male 🛛	Female RESPONDE	NT REFUSED INTER	VIEW: 🗆
NUMBE	R OF PEOPLE IN V	EHICLE:	RESPONDE	NT DOES NOT SPEA	
			PESPONDE		
RESPO	NDENT HAS BEEN	INTERVIEWED	AT THIS SITE PREVIOU	SLY: LI	
٦	THE FIRST FEW	QUESTIONS	ASK ABOUT YOUR	EXPERIENCE HE	ERE TODAY
1.	Including yoursel	f, how many j	people are in your pa	rty today? <i>(Fill in b</i> i	lank.)
		people in	party		
2	What time did you	u arriva at thi	a rearraction aita tada	(2) (Eill in blonk)	
Ζ.	what time did yo	u arrive at this	s recreation site today	/ ? (Fill in blank.)	
		am	/ pm		
	Site? (Please rea column.) What other activit apply in the seco	a the list to re ties did you p nd column.)	articipate in today at	nly one main activi	ty in the first ? (Check all that
	Check only	Check all			
	<u>one</u> main	other			
	activity	activities	Types of Activities		
			FISHING:		
			boat fishing		
			bank fishing		
			BOATING		
			motor boating		
			pontoon/party boa	ting	
			canoeing/kayaking	, <u>, , , , , , , , , , , , , , , , , , </u>	
			paddle-boarding		
			OTHER:		
			bicycling		
			tent or vehicle can	nping	
			horseback riding		
			walking/hiking/bac	kpacking	
			sightseeing		
			nunting	ifa viowing/photo	aranhy
			swimming		graphy
			nicnicking		
			sunbathing		

Check only	Check all	
<u>one</u> main	other	
activity	activities	Types of Activities
		other:
		None

4. Did you spend any time on the water today? (Check one box.)

- ☐ YES☐ NO (If no, skip to Question 6.)
- 5A. Did you recreate on or near any of the islands today?

YES NO (If no, skip to Question 6.)

5B. What activities did you participate in **while on/<u>near</u> the island(s)**? (Do not read this list. Allow respondent to answer and check all that apply and/or fill in the blanks.)

□ sunbathing		bank fishing		hunting
		walking/hiking		sightseeing
nature study/wildlife viewing/photography		swimming		picnicking
□ other (please specify:)	
			,	

6. On a scale from 1 to 5, with 1 being light, 3 being moderate, and 5 being heavy, how would you rate the crowdedness *at this recreation site* today? (*Circle one number.*)

Light	Moderate			Heavy	
1	2	3	4	5	

7A. On a scale from 1 to 5, with 1 being poor and 5 being excellent, how would you rate the overall condition **of this recreation site** today? (*Circle one number.*)

Poor				Exce	llent
1	2	3	4	5	

7B. Are there any additional facilities needed at this recreation site? (Check one box.)

YES	
NO	(If no, skip to Question 8.)

7C. What do you recommend? (Do not read this list. Allow respondent to answer and check all that apply and/or fill in the blanks.)

	□ access road	□ bank fishing area	□ boat dock	
	boat launch	camping area	□ fish cleaning station	
	□ fishing pier/dock		parking lot	
	picnic tables/shelt	er 🗆 restrooms	□ signs & information	
	□ swimming area	□ trails	□ trash cans	
	□ RV camping	□ tent camping	bilingual signs & information	
	□ other (please spec	cify:)	
7D. 7E.	Are there any other improvements do	ovements that you would recom (If no, skip to Question 8.) you recommend? (Fill in the bla	nmend for this site? ank.)	
8.	What other lakes do you	recreate at? (Fill in blank.)		Commented [AJ4]: May want to edit this question. O include a map of the area where people pinpoint the spot that they use.
9.	What is your zip code? _			
10.	In what year were you bo	orn?		
11.	Do you have any addition site? (Please fill in blank	nal comments about the recreat and be as specific as possible	tion <mark>facilities</mark> at this recreation .)	Commented [AJ5]: Or lack thereof

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

4

MEETING NOTES Stevens Creek Hydroelectric Project (FERC No. 2353)

Dominion Energy South Carolina, Inc. Operations RCG Meeting

December 4, 2019

Final KMK 1-8-2020

ATTENDEES:

Amy Bresnahan (DESC) Ray Ammarell (DESC) Randy Mahan (DESC) Caleb Gaston (DESC) Trey Brock (DESC) Alison Jakupca (Kleinschmidt) Kelly Kirven (Kleinschmidt) Henry Mealing (Kleinschmidt) Bret Hoffman (Kleinschmidt) Jay Payne (GDNR) Paula Marcinek (GDNR) via conf. call Elizabeth Miller (SCDNR) Rusty Wenerick (SCDHEC) Melanie Olds (USFWS) via conf. call Twyla Cheatwood (NMFS) via conf. call Andy Herndon (NMFS) via conf. call Stan Simpson (USACE) Kat Feingold (USACE) Derrick Miller (USFS) via conf. call Tonya Bonitatibus (SRK) via conf. call Tony Hicks (individual)

These notes are a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

Kat Feingold and Stan Simpson prepared a presentation for the Operations RCG detailing water management within the USACE Savannah District. The presentation is attached to the end of these notes. Following the presentation, Kat and Stan answered questions from the RCG. This discussion is summarized in the following paragraphs.

Tonya asked if the USGS gages available in the Stevens Creek area provide enough information for USACE, or do they need additional gages. Stan said that there are several gages that they currently use, including the USGS 02196000 Stevens Creek near Modoc, SC gage. He said that additional gages would be great, but they come with an associated cost. Amy added that there was a USGS gage right below the Stevens Creek powerhouse, but USGS couldn't get a confident rating curve so they removed it. Tonya added that she would like an additional gage installed on Stevens Creek below the Modoc gage to inform people recreating in the area about flows. It was mentioned that there is a new gage, USGS 021963601 Stevens Creek near Murphy Village SC, which is near the Hwy 53 (Woodlawn Road) Bridge. This gage is much closer than the Modoc gage.

Henry said that he has heard people ask if it's possible for USACE to change their operations. Stan said that theoretically they can run on a minimum flow, then operate solely for flood control and not to produce hydropower. USACE would also need to complete an Environmental Assessment prior to any operations changes. Stan said they would also continue to follow the drought plan. However, changes in operations would be outside of FERC control since the USACE is a separate federal agency. In addition, Stan stated that the process for changing operations would likely take

years and would need to be based on some valid environmental impacts and benefits that would be analyzed against the need for power.

Following discussion of USACE water management, Bret provided information on two USGS gages in the Stevens Creek Project area. At a previous meeting, a stakeholder asked how the readings at the USGS 02195520 Savannah River near Evans, GA gage and the USGS 02196483 Savannah River at Stevens Creek Dam near Morgana, SC gage relate. Bret said that the difference between the two gages is that the Evans gage provide gage height (in feet) and the Stevens Creek Dam gage provides elevation of reservoir water surface (in feet). The Evans gage is generally reflective of what's going on at the dam but with a time delay. In order to convert the gage height information at the Evans gage to elevation, 170 feet must be added to the gage height readings.

Prior to the close of the meeting, Stan and Kat said that they are open to hosting a site visit to Thurmond Dam for the Operations RCG. A doodle poll will be sent out in the next couple of months to help schedule the site visit for the spring of 2020.

Action items from the meeting are listed below.

ACTION ITEMS:

• Kleinschmidt will send out a doodle poll to schedule the Thurmond Dam site visit in spring 2020.



USACE SAVANNAH DISTRICT WATER MANAGEMENT 101

Savannah Water Managers

Stan Simpson

Kat Feingold



US Army Corps of Engineers BUILDING STRONG®

Savannah

DISTRICT

AGENDA

- Current Basin Status
- Water Management Overview
- Questions





Past Year's Rainfall and Levels

Thurmond Reservoir Current Pool Elevation 323.95





J. STROM THURMOND PROJECT

- Completed in 1952
- 8th most-visited Corps project 5.0M Visitors/yr
- 71,100 acre water surface (330 ft-msl)
- Seven turbines capable of generating 364 MW
- 1,200 miles of shoreline
- 76 recreation sites







HARTWELL PROJECT

- Constructed in 1962
- 3rd most-visited Corps project 9.3 M Visitors/yr
- 56,000 acre water surface (660 ft-msl) 962-mile shoreline
- 5 Turbines with a 422 MW Generating capacity
- Largest shoreline management program in the Corps with 47,523 permitted activities







RICHARD B. RUSSELL PROJECT

- Completed in 1984
- Largest Corps power plant east of Mississippi River
- 26,653 acre water surface (475 ft-msl) 540-mile shoreline
- Four conventional turbines 328 MW Generating Capacity
- Four pump turbines 320 MW Generating Capacity
- 27 recreation sites
- 4 state parks






POOL SCHEMATIC



DRAINAGE BASINS

25)

Athel

Hartwell = 1294 Square Miles (Local Basin) 1 in. Runoff = 34,799 cfs-days = 1.2 ft. @ 660.0 Russell = 802 Square Miles (Local Basin) 1 in. Runoff = 21,566 cfs-days = 1.5 ft. @ 475.0 Thurmond = 2890 Square Miles (Local Basin) 1 in. Runoff = 87,502 cfs-days = 2.2 ft. @ 330.0





MANAGED AS SYSTEM OF PROJECTS



Total Drainage Basin Area -10,580 sq miles

WATER MANAGEMENT OBJECTIVES

- Minimize Flood Damages and Loss of Life
- Provide Maximum Benefit to the Public

Flood Risk Management

Recreation

Hydro-Production

Fish and Wildlife Management

Water Supply

Water Quality

Navigation

- Balance Drought impacts to Project Purposes
- Follow USACE Environmental Operating Principles
- Adaptively Manage within Corps Authorities
- Educate the Public





WHAT IS ???

Induced Surcharge Storage (7-9 feet per project) (Last used Dec 2015)

 Additional flood storage that can be gained when gates are lifted above their closed position.

Flood Storage (5 feet per project)

- Used to temporarily store inflows from flood events

Conservation Storage (625 - 660) (470-475) (312-330)

- Water Supply
- Recreation
- Hydropower
- Navigation
- Water Quality
- Fish and Wildlife

Inactive Storage (Bottom of Conservation Storage to streambed)

- All projects require some storage for the storage of sediment





POOL BALANCING PROCEDURE



POOL BALANCING HARTWELL VS THURMOND

Elevation Comparison FT-MSL



Data current as of 3 December 2019

US Army Corps of Engineers.

U.S.ARMY

Data used to make our decisions







Stream Gage Networks







of Engineers.











Sty Collaborating AGENCIES







E

R

The University of Georgia

S





Protecting nature. Preserving life."





















WATER MANAGEMENT WEB PAGE

 Not secure | water.sas.usace.army.mil/gmap/ C

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US Army Corps of Engineers





http://water.sas.usace.army.mil





MOBILE APPLICATION

USACE SAVANNAH

Lake Levels	Outflows	Rainfall	FORECAST Rainfall Forecast
Hartwell Data	Russell Data	Thurmond Data	FORECAST Streamflow Forecast
Ang	Mu	M	

Hartwell Projection

Facebook

Russell Projection

Twitter

Thurmond

Projection

Feeds

Gages

Savannah

Hri

Contact Us



http://water.sas.usace.army.mil/smart



of Engineers.



Questions?





MEETING NOTES Stevens Creek Hydroelectric Project (FERC No. 2353)

Dominion Energy South Carolina, Inc. Joint RCG Meeting

February 18, 2020

Final KMK 3-25-20

ATTENDEES:

Amy Bresnahan (DESC) Ray Ammarell (DESC) Caleb Gaston (DESC) Randy Mahan (DESC) Alison Jakupca (Kleinschmidt) Kelly Kirven (Kleinschmidt) Henry Mealing (Kleinschmidt) Jason Moak (Kleinschmidt) Jordan Johnson (Kleinschmidt) Jay Payne (GWRD) Jeffrey Williams (GEPD) Cameron Henderson (SCDHEC) Elizabeth Miller (SCDNR) Jason Bettinger (SCDNR) Morgan Kern (SCDNR) Melanie Olds (USFWS) via conf. call Martha Zapata (USFWS) via conf. call Scott Glassmeyer (USFWS) via conf. call Derrick Miller (USFS) Keith Whalen (USFS) Keith Whalen (USFS) Andy Herndon (NMFS) via conf. call Twyla Cheatwood (NMFS) via conf. call Rachel Freeman (SRK) Tony Hicks (individual)

These notes are a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

The purpose of the meeting was to review the revised Water Quality Study Plan, draft Mussel Study Plan, Draft Rare, Threatened and Endangered Species Whitepaper, Aquatic Habitat Outline, and revised Recreation Study Plan. The draft documents discussed during the meeting are attached to the end of the notes. A summary of the discussion on each document is included below.

Revised Water Quality Study Plan

Alison provided a review of the revisions made to the Water Quality Study Plan stemming from discussion in the 11/13/2019 meeting.

- Two additional monitoring sites were added at the east end of the dam
- The study period was extended to last from January through December 2021
- Added continuous monitoring (15-minute intervals) for parameters including pH, conductivity, turbidity and monthly nutrient samples

Alison added that Kleinschmidt and DESC will go into the field prior to the start of the study to scope out the best locations for monitor installation. Jason M. said that since the reservoir fluctuates, the monitors will be attached to buoys and will be located at least 1 meter below the water surface, or mid-depth if possible. Sites will be recorded by GPS once selected.



Amy added that the USGS does monthly profiles and collects DO, temperature, pH and specific conductivity. This information will continue to be collected during the study season.

Jason B. asked if an additional site could be added in the Savannah River portion of the Stevens Creek reservoir, specifically in an area where the powerline crosses the reservoir. This area has a lot of vegetation and not much water flow. He would like to see DO and maybe pH collected during summer months for 24-48 hours on a twice-per-month or monthly basis (one sample in mid-June, 2 samples each in July and August spaced two weeks apart, and one sample in mid-October). This request will be considered and Kleinschmidt will confirm the location with Jason after the meeting.

Mussel Study Plan

A strawman for the Mussel Study Plan was distributed prior to the meeting. USFWS identified a general area that they would like to see mussel surveys completed. This area starts at the upstream extent of the Stevens Creek arm of the Project reservoir down to the Stevens Creek confluence with Horn Creek. USFWS believes this area may have the highest potential for mussels within the Project boundary. Keith said the Forest Service contracted a malacologist to complete mussel surveys in the upper Horn Creek area. He will send that information over to Kleinschmidt and DESC. Morgan asked that the approximately 1.5 miles of Horn Creek that are within the Project boundary be added to the study area in the study plan. Keith also suggested adding to the study area portions of Dry Branch and Cheves Creek that occur in the Project boundary. He said that these areas could potentially be accessed through Forest Service roads. These areas will be checked for suitable habitat in the transition zones but may not be added to the study if such habitat does not exist in the Project boundary.

Morgan said that SCDNR generally conducts a qualitative assessment first to determine if any mussels are present in an area and then conducts a quantitative assessment within a defined boundary to determine relative abundance. Morgan will share any SCDNR standard methods used to collect data.

Melanie asked about the potential for mussels downstream of the Stevens Creek Dam and if a study in this area is necessary. Henry said this area received full river flow so it is pretty scoured and a majority of the water that flows through is cold hypolimnetic water released from Thurmond Dam. He said this may not be good habitat for mussels. In addition, this area is actually the headpond for the Augusta Diversion Project and is outside of the Project boundary so priority should be placed on studying the identified areas within the Project boundary.

Keith asked if any tributaries on the Georgia side of the Savannah River provide any habitat for mussels. Henry said there is likely a lower chance for mussels on the Georgia side of the Stevens Creek reservoir because there is more residential build-up in this area, which has significantly affected the tributaries.

Jason M. suggested adding several level loggers in various portions of the mussel study area, especially in areas where mussels are detected. He said this will provide information on project influence and potential backwatering in this area.



Alison said that the study plan strawman will be revised with a new map of the study area and sent back to stakeholders for additional review in the next few days. She requested that comments be submitted by mid-March.

Rare, Threatened and Endangered (RTE) Species Whitepaper

Alison explained that the whitepaper includes a list of federal, Forest Service, and state (Georgia and South Carolina) RTE species that occur in the Project vicinity. The federal and Forest Service species were analyzed to determine if their habitat exists within the Project boundary and potentially affected by continued Project operations. Currently, the state species that were provided by the SCDNR and GDNR are only listed in the report. However, the DNRs can request that any of these species that may have cultural significance be analyzed. Ultimately, FERC will make a determination on Project effects and ask for concurrence with the USFWS.

Elizabeth asked that the conservation status for state-listed species be added to the whitepaper (highest, high and moderate priority levels).

The group was in general agreement that the RTE Whitepaper will be beneficial for analyzing various species of concern. Alison asked that comments from the stakeholders be submitted by mid-March.

Aquatic Habitat Outline

Alison said that there was discussion of preparing an aquatic habitat whitepaper/study at the 11/13/2019 meeting. Over the next few years, data will be collected during a variety of studies that will help describe aquatic habitat (substrates, water quality, species distributions, etc.) in the Stevens Creek reservoir. The data collected in each proposed study will be rolled into a comprehensive report that will be filed with the Final License Application (FLA). Kleinschmidt and DESC have put together an outline for this report that will be filed with the Pre-Application Document (PAD). This outline will be filled in with data as it becomes available during relicensing.

The group reviewed the outline and suggested the following additions:

- Additional discussion on effects of fluctuation zones
- USACE Thurmond Dam operations
- Updated USACE Drought Contingency Plan
- Stevens Creek Project operations information
- Environmentally Sensitive Areas identified during relicensing

Henry said that this document should be helpful during Section 7 -RTE consultation and Section 18 - fish passage consultation as needed. Elizabeth asked if this document will be used to develop a Shoreline Management Plan (SMP). Alison said that an SMP isn't well-suited to this Project because DESC owns very little shoreline around the reservoir and USACE controls dock permitting. The recreation areas and Project operations lands will be described in the FLA, but there isn't a need for a separate SMP. In addition, DESC doesn't have the opportunity to establish a buffer zone around the reservoir since they don't own much land, however, this Aquatic Habitat whitepaper can help inform those that might have control over a buffer zone (i.e. USACE or Forest



Service). A land ownership map is also under development and will be shared with stakeholders when complete.

Recreation Study Plan

The revised Recreation Study Plan was distributed to stakeholders for review prior to the meeting. The use of trail cameras for activity monitoring at the Fury's Ferry and Chota Drive recreation sites was discussed at a previous meeting and added into the study plan. However, Derrick said that since that time, an incident was brought to the Forest Service's attention that caused the Service to be wary of trail camera use. Keith and Derrick said that they can find out if trail camera placement further down the access road may be possible. If trail cameras can't be used at these sites, spot counts will be conducted by two people throughout the study season.

Keith also noted that there was discussion of adding questions to the surveys regarding use at Fury's Ferry and Chota Drive, since surveys would not be conducted at these sites during the study. Kelly said that these questions would be added to the survey form.

Alison said that the next meeting would be conducted via conference call to discuss the updates to the PAD. Alison said that the official start of relicensing occurs when the Notice of Intent (NOI) and PAD are filed with FERC, which will occur around May 2020. At this time, DESC will also request the use of the Traditional Licensing Process (TLP). DESC requested that stakeholders send in letters to FERC supporting the use of the TLP. FERC will decide on the TLP request by June 2020. The Joint Agency Meeting (JAM) and site visit will occur around August 2020.

Action items from this meeting are listed below. Comments on the study plans/whitepapers are requested by March 17, 2020.

ACTION ITEMS:

- Kleinschmidt will revise the Water Quality Study Plan, Mussel Study Plan, RTE Whitepaper, Aquatic Habitat Outline and Recreation Study Plan and send back out to stakeholders for review.
- Morgan will send information on SCDNR standard measures and procedures for mussel surveys.
- Keith will send information on Forest Service mussel studies near Horn Creek.
- Derrick will explore the Forest Service's position on using trail cameras on FS properties.



STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

Prepared for:

Dominion Energy South Carolina, Inc. Cayce, South Carolina

Prepared by:

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February 2020

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STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

1.0 INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC) is the licensee of the Stevens Creek Hydroelectric Project (FERC No. 2535) (Project). The Project, which has an installed capacity of 17.28 megawatts (MW), is located in Edgefield and McCormick counties, South Carolina and Columbia County, Georgia, at the confluence of Stevens Creek and the Savannah River. The Project's dam is located approximately one mile upstream of the Augusta Diversion Dam, and approximately 13 miles downstream of the U.S. Army Corps of Engineers (USACE) J. Strom Thurmond Dam (Thurmond Dam). The Stevens Creek Reservoir is approximately 25 miles long, extending upstream to the Thurmond Dam and 12 miles up Stevens Creek. The surface area of the reservoir is 2,400 acres at the normal full pond EL 187.5 feet. The Project drainage area is approximately 7,173 square miles.

DESC operates the Project to generate clean, renewable energy and re-regulate highly variable river flows discharged by the USACE from the Thurmond Dam. DESC's operational protocols include releasing all Thurmond Dam discharges on a weekly basis and operating to achieve full pool in the Stevens Creek reservoir by Friday evening to provide a continuous weekend downstream discharge.

On November 22, 1995, FERC issued a 30-year license which is scheduled to expire on October 31, 2025. DESC intends to file an application for a new license with FERC on or before October 31, 2023. The Project is currently involved in a relicensing process which involves cooperation and collaboration between DESC, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. DESC established a Water Quality, Fish and Wildlife Resource Conservation Group (RCG), with interested stakeholders to address Project issues related to aquatic and terrestrial resources. The RCG determined there was a need for supplemental water

quality data at the Project, particularly dissolved oxygen (DO) and temperature. The Georgia Department of Natural Resources expressed a desire for more information on water quality in upstream areas of Stevens Creek to determine its suitability for fish habitat. The National Marine Fisheries Service expressed that the collection of continuous downstream water quality data over a period of time would aid in supporting the baseline water quality data currently available, as summarized in the Pre-Application Document prepared for the Project relicensing.

2.0 STUDY OBJECTIVE

The objective of this study is to assess the water quality, specifically DO levels, of the Savannah River, immediately downstream of the Stevens Creek Hydroelectric Project and in Stevens Creek.

3.0 GEOGRAPHIC AND TEMPORAL SCOPE

Water quality will be monitored at four sites in the Savannah River and one site in Stevens Creek. Monitoring Site 1 will be used as a control, and will be located in Stevens Creek Reservoir, upstream of the hydro station. Monitoring Site 2 will be located directly downstream of the Stevens Creek Hydroelectric Project. Monitoring Sites 3 and 4 will be located downstream and upstream of the east end of Stevens Creek Dam, respectively. Monitoring Site 5 will be located in Stevens Creek at Woodlawn Road, approximately 4.5 miles upstream of its confluence with the Savannah River at Stevens Creek Dam. The monitoring sites are shown in Figure 1.

The study will begin January 1, 2021 and extend through December 31, 2021.



FIGURE 1 STEVENS CREEK HYDROELECTRIC PROJECT WATER QUALITY STUDY SITES

4.0 DATA COLLECTION METHODS AND ANALYSIS

4.1 CONTINUOUS MONITORING

Water quality will be monitored at the five monitoring sites shown in Figure 1 for temperature, dissolved oxygen, pH, conductivity, and turbidity and using continuous water quality monitoring instruments. The instruments will be deployed at approximately mid-depth in the stream channel. The instruments will be calibrated according to the manufacturer's specifications and will be set to record measurements at hourly intervals.

The instruments will be cleaned, checked for accuracy, and downloaded on a monthly basis, at minimum, though more frequent checks will be conducted after initial deployment to determine the extent of fouling from aquatic vegetation. A separate, calibrated meter will be used to record DO and water temperature readings during each maintenance visit to the sites. These data will be compared to deployed instrument data as a check on accuracy and for use in post-processing and correction of any fouling or calibration drift.

All continuous data will be compiled at the end of the monitoring season. The data will be analyzed by computing daily and monthly minimum, maximum, and average values for DO and water temperature and comparing them to applicable water quality criteria.

4.2 NUTRIENT SAMPLING

Water samples will be collected monthly at Sites 2, 3, and 5 and submitted to a certified laboratory for analysis of ammonia, nitrate-nitrite, total Kjeldahl nitrogen, orthophosphate, and total phosphorus. A set of duplicate samples and one field blank sample will also be included for quality assurance.

4.3 EXISTING MONITORING DATA

Data collected by the USGS in 2020 and 2021 as required by Article 405 of the existing license will be summarized and included in the final report.

5.0 SCHEDULE

The water quality monitoring instruments will be deployed at each monitoring site on, or around, January 1, 2021 and will collect data for approximately twelve months. The instruments will be checked monthly, at a minimum, during the study period. Nutrient samples will be collected monthly during the same time period and timed to coincide with maintenance visits to the continuous monitors. Study methodology, timing and duration may be adjusted based on consultation with resource agencies and interested stakeholders.

A final report summarizing study findings will be issued within four months of the end of field work. The report will include tabular and graphical summaries of the DO and water temperature data, as well as summaries of pertinent hydrologic and meteorological data, and data collected by the USGS as part of the existing Project license requirement.

6.0 USE OF STUDY RESULTS

Study results will be used as an information resource during the discussion of resource issues with relicensing stakeholders.

MUSSEL STUDY PLAN

STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

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Dominion Energy South Carolina, Inc. Cayce, South Carolina

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January 2020

DRAFT Mussel Study Plan

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STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

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DRAFT Mussel Study Plan

STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

1.0 INTRODUCTION

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On November 22, 1995, FERC issued a 30-year license which is scheduled to expire on October 31, 2025. DESC intends to file an application for a new license with FERC on or before October 31, 2023. The Project is currently involved in a relicensing process which involves cooperation and collaboration between DESC, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. DESC established a Water Quality, Fish and Wildlife Resource Conservation Group (RCG), with interested stakeholders to address Project issues related to aquatic and terrestrial resources. During an RCG meeting on November 13, 2019, the USFWS formally requested a mussel study at the Project, particularly in the Stevens Creek arm of the Project reservoir. This study plan was developed in consultation with the USFWS and the RCG.

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2.0 STUDY OBJECTIVE

The purpose of this study is to gather quantitative and qualitative data on the diversity, spatial distribution and relative abundance (density) of the mussel fauna inhabiting the portion of Stevens Creek included within the Stevens Creek Project boundary.

3.0 GEOGRAPHIC AND TEMPORAL SCOPE

Hypolimnetic releases from J.S. Thurmond Reservoir are both low in oxygen and much colder than southeastern river typical temperatures. Therefore, mussel surveys will focus on selected habitats within Stevens Creek that are more likely to support populations of native freshwater mussels. Due to the accumulation of silt in the lower portions of Stevens Creek, a majority of the surveys will take place in the upper portion of Stevens Creek within the Project boundary. USFWS requested that the reach between the upstream extent of the Stevens Creek reservoir to the confluence with Horn Creek be surveyed (Figure 3-1). Specific survey points will be identified in the field by the lead malacologist performing the study. Surveys will be conducted in the summer and early fall months in 2021 when water clarity and temperatures are sufficiently high to support wading, snorkeling, and other in-water survey methods. We do not anticipate that scuba will be needed to perform surveys in the identified areas.



FIGURE 3-1 MUSSEL STUDY AREA

4.0 DATA COLLECTION METHODS

Freshwater mussel surveys in Stevens Creek will involve timed visual and/or tactile inspections of suitable habitat for presence of live freshwater mussels and/or shell material and will be conducted by a qualified malacologist with expertise in Savannah River fauna. Although the number and specific location of qualitative survey points will likely be refined in the field based on professional judgement of the lead malacologist, it is expected that a range of 5 to 10 representative sites will be distributed along the creek. Particular attention will be placed upon the examination of potential Carolina heelsplitter (*Lasmigona decorata*) (federal-endangered species and South Carolina state-endangered species) habitat within areas of Stevens Creek.

Exact methods for conducting visual and tactile searches will vary depending on water depth. Daily and weekly fluctuations of the Stevens Creek reservoir within a 4.5-foot band to accommodate flow releases from Thurmond Dam result in routine changes to the water surface elevation, microhabitat characteristics (e.g., water depth and water velocity), and change water levels along shoreline habitats. The maximum reservoir drawdown of 4.5-feet exposes approximately 575 acres of littoral zone habitat (FERC 1995). Because of this, mussel surveys will focus primarily on those areas below the 4.5-foot depth contour where mussels are likely to become established. Depending on water depths, wading, batiscope, or snorkeling will be used to conducted timed surveys at each of the selected sites:

- Wading Where water is relatively shallow, clear, and flat (no disturbances by wind), a biologist walks over an area to conduct a visual and/or tactile survey for live mussels and shells. This method is typically focused upon examinations of exposed near-shore habitats.
- Batiscope or snorkeling In clear to slightly turbid waters up to 2 meters deep, or in waters with wind-disturbed surfaces, a batiscope or snorkeling will be used to conduct a visual and/or tactile survey for live mussels and shells.

Live and fresh dead mussels collected during the survey will be identified to species, enumerated and returned to their habitat, although some shell material and/or live specimens may be preserved and returned to the laboratory for taxonomic confirmation. All sampling stations, as well as any significant mussel beds found during sampling, will be documented using a GPS receiver. Mussel habitat and substrate surveyed at each sample location, as well as the species collected during the survey, will also be noted and photo documented. Basic water quality parameters (temperature, dissolved oxygen and conductivity) will be collected near the substrate at representative sample areas.

5.0 SCHEDULE

Field surveys will be conducted during the summer or fall of 2021 over 2-3 days. Study methodology, timing and duration may be adjusted based on consultation with resource agencies and interested stakeholders. A final report will be issued to the RCG within four months of the completion of field work.

6.0 **REFERENCES**

Federal Energy Regulatory Commission (FERC). 1995. Final Environmental Assessment for Hydropower License. Filed November 7, 1995.

STEVENS CREEK HYDROELECTRIC PROJECT

FERC No. 2535

RARE, THREATENED AND ENDANGERED SPECIES WHITEPAPER

Prepared for:

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February 2020
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RARE, THREATENED AND ENDANGERED SPECIES WHITEPAPER DOMINION ENERGY SOUTH CAROLINA, INC.

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STEVENS CREEK HYDROELECTRIC PROJECT FERC No. 2535

RARE, THREATENED AND ENDANGERED SPECIES WHITEPAPER DOMINION ENERGY SOUTH CAROLINA, INC.

1.0 INTRODUCTION

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On November 22, 1995, FERC issued a 30-year license for the Project which is scheduled to expire on October 31, 2025. DESC intends to file an application for a new license with FERC on or before October 31, 2023. The Project is currently undergoing a relicensing process which involves cooperation and collaboration between DESC, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. During early stakeholder meetings, DESC and stakeholders identified the need for a Rare, Threatened and Endangered (RTE) Species Whitepaper to provide baseline information on federal and state-listed RTE species within the FERC project boundary¹ and the area of potential Project influence (project area)². The information included in this whitepaper will be used during the development of the Draft License Application (DLA) and Final License Application (FLA) and identify potential Project effects on RTE species within the project area.

¹ The FERC-delineated boundary surrounding those lands and waters necessary for operation of a federally-licensed hydroelectric project.

² For the purposes of this whitepaper the "project area" is considered those lands and waters in the vicinity of the Project that may be influenced by operation and maintenance of the Project. The Project area may include lands and water adjacent to, but outside of, the FERC Project boundary.

2.0 CONSULTATION HISTORY

When developing the Pre-Application Document (PAD), DESC reached out to the Georgia Department of Natural Resources (GDNR), South Carolina Department of Natural Resources (SCDNR), United States Forest Service (Forest Service), and the United States Fish and Wildlife Service (USFWS) to compile a comprehensive list of federal and state-listed RTE species and Forest Service species of conservation concern. Consultation records are included in Appendix A.

3.0 METHODOLOGY

The Project area for the purpose of this study includes the main stem of the Savannah River from the Thurmond Dam downstream to the Stevens Creek Dam (approximately 13 River Miles [RMs]), the main stem of Stevens Creek, from the Stevens Creek Dam upstream to the top of the Project boundary (approximately 12 RMs), and associated shoreline habitats (Figure 3-1).

As an initial step, a comprehensive list was developed that includes federal-protected and Forest Service Threatened, Endangered and Sensitive (TES) species that may occur in the Project boundary (Table 3-1). In order to identify federal-protected species in the Project area, the USFWS's Information for Planning and Consultation (IPaC) online system was reviewed. Results from the IPaC review are included in Table 3-1 and Appendix A. Forest Service TES species that may occur in the Project area were also identified. The Forest Service provided a list of their Threatened, Endangered and Sensitive (TES) Species for the Long Cane Ranger District of the Sumter National Forest on January 15, 2020. These species are also in Table 3-1 and Appendix A.

After identification of federal-protected and Forest Service TES species, habitat requirements for each species were reviewed to determine the likelihood of each species to occur within the Project boundary. Species that were deemed likely to occur within the Project boundary were then analyzed to determine if continued Project operations would have any adverse effect on the species.



FIGURE 3-1 STEVENS CREEK RARE, THREATENED, AND ENDANGERED SPECIES STUDY AREA

TABLE 3-1 FEDERAL-PROTECTED AND FOREST SERVICE TES SPECIES IN THE STEVENS CREEK PROJECT AREA

COMMON NAME	SCIENTIFIC NAME	FEDERAL PROTECTION	FOREST SERVICE
	ANIMALS	FROIECTION	I LO SPECIES - SINF
Atlantic Spike	Elliptio producta		Sensitive
Bachman's Sparrow	Peucaea aestivalis		Sensitive
Bald Eagle	Haliaeetus leucocenhalus	*	belisterve
Bartam's Bass	Micropterus coosae		Sensitive
Brook Floater	Alasmidonta varicosa		Sensitive
Carolina Heelsplitter	Lasmigona decorata	Endangered	Endangered
Monarch Butterfly	Danaus plexippus	2	Sensitive
Piedmont Prairie	Distocambarus crockeri		Sensitive
Burrowing Crayfish			
Red-Cockaded	Dryobates borealis	Endangered	Endangered
Woodpecker			
Roanoke Slabshell	Elliptio roanokensis		Sensitive
Robust Redhorse	Moxostoma robustrum		Sensitive
Tricolored Bat	Perimyotis subflavus		Sensitive
Webster's Salamander	Plethodon websteri		Sensitive
Wood Stork	Mycteria americana	Threatened	Endangered
Yellow Lampmussel	Lampsilis cariosa		Sensitive
	PLANTS		·
Faded Trillium	Trillium discolor		Sensitive
Georgia Aster	Symphyotrichum georgianus		Sensitive
Lanceleaf Trillium	Trillium lancifolium		Sensitive
Miccosukee Gooseberry	Ribes echinellum	Threatened	Threatened
Oglethorpe Oak	Quercus oglethorpensis		Sensitive
Relict Trillium	Trillium reliquum	Endangered	Endangered
Shoals Spider Lily	Hymenocallis coronaria		Sensitive
Sweet Pinesap	Monotropsis odorata		Sensitive

* This species is protected under the Bald and Golden Eagle Protection Act of 1940.

In addition to federal-protected and Forest Service TES species, this report identifies stateprotected species that may occur in the Project area. On February 4, 2019, the Georgia Department of Natural Resources (Georgia DNR) provided a letter summarizing Georgia's State Wildlife Action Plan priority species that may occur in the Project area. On November 4, 2019, the South Carolina Department of Natural Resources (South Carolina DNR) provided information on the South Carolina State Wildlife Action Plan priority species that may occur in the Project area. These species are also included in Table 3-2 and Appendix A. Although these species were not analyzed for likelihood of existence within the Project boundary and potential Project operations effects, they are included in this report for informational purposes.

COMMON NAME	GEORGIA SWAP SPECIES	SOUTH CAROLINA SWAP SPECIES		
	ANIMALS			
American Eel		*		
Atlantic Pigtoe	*			
Atlantic Spike		*		
Atlantic Sturgeon	*			
Bald Eagle		*		
Baltimore Oriole		*		
Bartram's Bass		*		
Brother Spike	*			
Carolina Slabshell	*			
Christmas Darter		*		
Delicate Spike	*			
Dwarf Waterdog	*			
Eastern Creekshell		*		
Eastern Elliptio		*		
Flat Bullhead		*		
Florida Pondhorn		*		
Highfin Shiner		*		
Ironcolor Shiner	*			
Notchlip Redhorse		*		
Roanoke Slabshell	*			
Rosyface Chub		*		
Robust Redhorse	*	*		
Savannah Elimia	*			
Savannah Lilliput	*			
Shortnose Sturgeon	*			
Snail Bullhead		*		
Spotted Turtle	*			
Tiger Salamander		*		
Turquoise Darter		*		
Webster's Salamander		*		
Yellow Lampmussel	*	*		
	PLANTS			
Aethusa-like				
Trepocarpus		*		

 TABLE 3-2
 GEORGIA AND SOUTH CAROLINA STATE-PROTECTED SPECIES IN THE PROJECT AREA

COMMON NAME	GEORGIA SWAP SPECIES	SOUTH CAROLINA SWAP SPECIES
American Barberry	*	
American Ginseng		*
Carolina Larkspur		*
Carolina Trefoil	*	
Curly-Heads	*	
Dixie Mountain		
Breadroot	*	
Dutchman's Breeches		*
Eared Goldenrod		*
Faded Trillium		*
False-Rue Anemone	*	*
Georgia Aster		*
Georgia Plume	*	
James' Sedge		*
Lanceleaf Wakerobin		*
Log Fern	*	
Lowland Bladderfern		*
Miccosukee Gooseberry		*
Ocmulgee Skullcap	*	*
One-Flowered		
Broomrape		*
Pale Yellow Trillium	*	
Pineland Barbara Buttons	*	
Relict Trillium	*	*
Shoals Spider Lily	*	*
Side-Oats Grama	*	
Slender Sedge		*
smooth indigobush		*
Southern Nodding		
Trillium		*
Streambank Mock		
Orange		*
Tall Bellflower		*
Tuberous Gromwell		*
Virginia Spiderwort		*
Weak Nettle		*
Whiteleaf Sunflower		*
Wingpod Purslane	*	
Yellow Nailwort	*	

4.0 PROPOSED ACTION, SPECIES DESCRIPTIONS AND ANALYSIS

4.1 **PROPOSED ACTION**

For the purpose of this analysis, we have assumed that the Project will continue operating as a reregulating facility for flows released from the upstream U.S. Army Corps of Engineers' J. Strom Thurmond Dam. Stevens Creek reservoir fluctuations and downstream releases are anticipated to continue under the new license in the same form and capacity as they have over the past 30 years. Moreover, much of the land in the Project area is easement/Forest Service lands, not owned by DESC. Therefore, DESC does not actively manage or maintain these lands, and they are generally left in a natural state. If the proposed action changes prior to submittal of the Final License Application, species discussions will be updated accordingly.

4.2 FEDERAL-PROTECTED SPECIES

Table 4-1 lists the federal-protected species that may occur in the Project area. Habitat descriptions of each species along with an analysis of likelihood to exist in the Project boundary and potential for adverse effects from continued Project operations are included below.

COMMON NAME	SCIENTIFIC NAME	FEDERAL PROTECTION
		STATUS
Bald Eagle	Haliaeetus leucocephalus	*
Carolina Heelsplitter	Lasmigona decorata	Endangered
Miccosukee Gooseberry	Ribes echinellum	Threatened
Red-Cockaded Woodpecker	Dryobates borealis	Endangered
Relict Trillium	Trillium reliquum	Endangered
Wood Stork	Mycteria americana	Threatened

 TABLE 4-1
 FEDERAL-PROTECTED SPECIES IN THE PROJECT AREA

* This species is protected under the Bald and Golden Eagle Protection Act of 1940.

4.2.1 BALD EAGLE

The bald eagle was removed from the federal list of threatened species in 2007 (USFWS 2007) but remains protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act (16 U.S.C. 668-668d) (72 FR 37345-37372). Bald eagles are found throughout North American, typically around water bodies, where they feed on fish and carrion. Studies have shown that foraging bald eagles are particularly attracted to reservoirs associated with

hydroelectric facilities (Brown 1996). Bald eagles nest in large trees near water and typically use the same nest for several years (Degraaf and Rudis 1986).

Status in the Project Boundary and Effects of Continued Project Operations

The USACE monitors eagles on an annual basis on Lake Thurmond and in the immediate tailrace. During the 2020 survey, approximately 37 bald eagles were documented. In addition, SCDNR tracks bald eagle nests around the state. One nest is documented very close to the Project, however outside the Project boundary. It is likely that bald eagles reside and forage within the Project boundary, although no nests have been documented. Since much of the land surrounding the Project reservoir is maintained in a natural state, continued operation of the Project is not likely to result in negative effects on eagle foraging or nesting.

4.2.2 CAROLINA HEELSPLITTER

The Carolina heelsplitter is found in cool, well-oxygenated reaches of rivers and streams. The current range of this species is limited as compared to its historic range. These declines and loss of populations are associated with factors including pollutants from municipal and industrial wastewater releases. The species is sensitive to silt and is generally found in silt-free areas with banks that are stabilized and shaded by trees and shrubs (USFWS 2011). One of the eight surviving populations of Carolina heelsplitter is found in Turkey Creek and its tributaries. These creeks are part of the Savannah River drainage, located in Edgefield County, SC (NRC 2020).

Status in the Project Boundary and Effects of Continued Project Operations

As mentioned, the Carolina heelsplitter is known to occur in the Savannah River drainage in Edgefield County, SC. DESC is conducting a mussel study as part of the relicensing process, with special focus on identification of this species. Effects of continued Project operations will be determined as part of that study in the event this species is found within the project area of influence.

4.2.3 MICCOSUKEE GOOSEBERRY

The Miccosukee gooseberry is a bushy shrub that flowers in late February to early April and produces spiny green berries. The Miccosukee gooseberry is associated with a deciduous, mixed hardwood forest with an overstory canopy dominated by oak and hickory trees. Specifically, the

species is known to occur in three locations, including the shores of Lake Miccosukee in Jefferson County, Florida; and along Stevens Creek and a site on the Sumter National Forest in McCormick and Edgefield counties, South Carolina (NatureServe 2019).

Status in the Project Boundary and Effects of Continued Project Operations

This species is known to occur on north-facing hardwood slopes in the Stevens Creek drainage and at a site in the Long Cane Ranger District of the Sumter National Forest in McCormick and Edgefield counties. It is likely a portion of this population occurs within the Project boundary. Continued Project effects are unlikely to adversely affect this species, as the population in the Sumter National Forest appears stable and no modifications to Project operations are proposed.

4.2.4 RED-COCKADED WOODPECKER

The red-cockaded woodpecker is found in open, mature, and old growth pine ecosystems in the southeastern portion of the United States (USFWS 2003). Suitable nesting habitat includes open pine forests and savannahs with large, older pines and minimal hardwood midstory or overstory. Older living trees that are easily excavated due to susceptibility to red-heart disease are preferred nesting trees for the species. Suitable foraging habitat includes open-canopy, mature pine forests with low densities of small pines, little midstory vegetation, limited hardwood overstory, and abundance bunchgrass and forb groundcover (USFWS 2003).

Status in the Project Boundary and Effects of Continued Project Operations

Although the species is known to occur in Edgefield County (Forest Service 2020), it is unlikely the species occurs in the Project boundary, since there is limited suitable woodland habitat within the Project boundary. If the species did nest or forage in trees within the Project, they would remain unaffected as no logging or construction is proposed to occur as part of continued Project operations.

4.2.5 RELICT TRILLIUM

Relict trillium is typically found in mesic hardwood forests that can be on slopes or on bottomlands and floodplains. Soils and subsoils include rocky clays to alluvial sands all with high organic matter content. The largest populations are found in the drainages of the Savannah and Chattahoochee Rivers. The species is not indicated to occur in areas that have ever been disturbed by fire. The species is known to occur in Aiken County in proximity to the Sumter National Forest (Forest Service 2020).

Status in the Project Boundary and Effects of Continued Project Operations

This species is known to occur in Edgefield County and likely occurs within the Project boundary. This species is most often threatened by residential and urban development. The potential of Project effects to this species are minimal and would likely only occur during any development activities proposed through the new license. Consideration of the potential occurrence of this species should take place prior to the development or expansion of recreation facilities proposed under the new license.

4.2.6 WOOD STORK

The wood stork, a large colonial wading bird, is the only stork species that breeds in the United States (USFWS 1996). The wood stork uses a variety of wetlands for nesting, feeding, and roosting. Wood storks require periods of flooding, during which fish populations increase, alternating with dryer periods, during which receding water levels trap fish, leaving higher densities for easier foraging (USFWS 2020b). Nesting habitat includes primarily cypress swamps with nests located in the upper branches of large black gum or cypress trees. Nesting in the United States is currently thought to be limited to the coastal plain of South Carolina, North Carolina, Georgia and Florida (Murphy and Hand 2013).

Status in the Project Boundary and Effects of Continued Project Operations

Although the wood stork is not likely to nest within the Project boundary, it may forage periodically in the freshwater wetlands associated with the Stevens Creek reservoir. Project operations are expected to result in no adverse effects on wood storks or their foraging habitat.

4.3 U.S. FOREST SERVICE THREATENED, ENDANGERED AND SENSITIVE SPECIES

Table 4-2 lists the Forest Service TES species that may occur in the Project area. Habitat descriptions of each species along with an analysis of likelihood to exist in the Project boundary and potential for adverse effects from continued Project operations are included below. See Section 4.1 for the habitat descriptions and analysis of species that are also federal-protected species, as indicated in Table 4-2 with an asterisk (*).

TABLE 4-2 FOREST SERVICE TES SPECIES FOR THE LONG CANE DISTRICT OF SUMTER NATIONAL FOREST

COMMON NAME	SCIENTIFIC NAME	FOREST SERVICE TES SPECIES	
ANIMALS			
Atlantic Spike	Elliptio producta	Sensitive	
Bachman's Sparrow	Peucaea aestivalis	Sensitive	
Bartam's Bass	Micropterus coosae	Sensitive	
Brook Floater	Alasmidonta varicosa	Sensitive	
Carolina Heelsplitter*	Lasmigona decorata	Endangered	
Monarch Butterfly	Danaus plexippus	Sensitive	
Piedmont Prairie Burrowing Crayfish	Distocambarus crockeri	Sensitive	
Red-Cockaded Woodpecker*	Dryobates borealis	Endangered	
Roanoke Slabshell	Elliptio roanokensis	Sensitive	
Robust Redhorse	Moxostoma robustrum	Sensitive	
Tricolored Bat	Perimyotis subflavus	Sensitive	
Webster's Salamander	Plethodon websteri	Sensitive	
Wood Stork*	Mycteria americana	Endangered	
Yellow Lampmussel	Lampsilis cariosa	Sensitive	
	PLANTS		
Faded Trillium	Trillium discolor	Sensitive	
Georgia Aster	Symphyotrichum georgianus	Sensitive	
Lanceleaf Trillium	Trillium lancifolium	Sensitive	
Miccosukee Gooseberry*	Ribes echinellum	Threatened	
Oglethorpe Oak	Quercus oglethorpensis	Sensitive	
Relict Trillium*	Trillium reliquum	Endangered	
Shoals Spider Lily	Hymenocallis coronaria	Sensitive	
Sweet Pinesap	Monotropsis odorata	Sensitive	

4.3.1 ATLANTIC SPIKE

The Atlantic spike is found throughout South Carolina (Bogan and Alderman 2008) and prefers streams or rivers with sandy, rocky, and/or muddy bottoms in sections where the current is not too rapid (Forest Service 2020). This species is found throughout Maryland, Pennsylvania, North Carolina, Virginia, and South Carolina, although it has been extirpated from some reaches where it was previously found, possibly due to environmental factors including decreased water quality associated with sedimentation and pollution. The host fish for this species is not known (NatureServe 2020a).

This species is found throughout the Savannah River Basin (NatureServe 2020a) and is found in the Long Cane Ranger District of the Sumter National Forest (Forest Service 2020).

Status in the Project Boundary and Effects of Continued Project Operations

As mentioned, this mussel is found throughout the Savannah River Basin and may occur within the Project boundary. DESC is conducting a mussel survey as part of the relicensing process and will document any individuals found during the survey. Effects of continued Project operations on the species will be assessed as part of that survey, if the species is found.

4.3.2 BACHMAN'S SPARROW

Bachman's sparrow, known by its "buffy" brownish-gray under plumage tinged with reddish streaks, typically yields two broods each breeding season (USFWS 2015). The female sparrow builds nests of grasses at or just above ground level. The species historically preferred mature pine forests, however since most of these areas have been logged, today the sparrow is typically found in pine forests with a more open understory and herbaceous understories. The sparrow is known to span the Coastal Plains and Piedmont regions of the southeastern United States.

Status in the Project Boundary and Effects of Continued Project Operations

Bachman's sparrow is found in the Piedmont region of the southeastern United States and within the Long Cane Ranger District of the Sumter National Forest. This species is unlikely to occur in the Project boundary area as it has not been documented in the counties in which the Project is located. Continued Project operations are not expected to affect this species.

4.3.3 BARTRAM'S BASS

The Bartram's Bass is a small to medium sized black bass species that occurs in the Savannah River drainage above the fall line and has been introduced in the Saluda River drainage (Forest Service 2020). This species utilizes shoal habitats in small to moderate size upland streams, particularly upland reaches with cool water temperatures. Specifically, it is generally found in areas with boulders, submerged logs, and undercut banks with vegetation such as water willow (Forest Service 2020). It can also be found in some lentic habitats over rocky substrates. The diet consists of terrestrial insects, crayfish, small fish, salamanders, and aquatic insects. Threats to the species include hybridization with Spotted Bass and Smallmouth Bass. Spotted Bass have spread throughout the upper Savannah River system, and hybridization between the two species has eliminated Bartram's Bass from several reaches. Additional threats include increased water temperatures and increased turbidity from loss of riparian vegetation along stream banks (SCDNR 2020).

Status in the Project Boundary and Effects of Continued Project Operations

Bartram's Bass have been collected from the mainstem of the Savannah River and in upstream reaches of Stevens Creek well upstream of the Project Boundary (SCDNR 2020, Freeman et al. 2015). Bartram's Bass inhabiting reaches of Stevens Creek upstream of the Project Boundary would not be affected by Project operations. Bartram's Bass inhabiting the Savannah River downstream of the Project would likely benefit from flow reregulation resulting habitat stability in the Augusta Shoals.

4.3.4 BROOK FLOATER

The brook floater is a freshwater mussel species that is usually found in high gradient, consistently flowing reaches of rivers and streams. Preferred substrates are characterized by sand and gravel, often with adjacent boulders (PNHP 2020; USFWS 2019). This species is sensitive to habitat degradation, including excessive silt and nutrient inputs, and is also sensitive to hypoxia (PNHP 2020; USFWS 2019). Potential host fish include blacknose dace, longnose dace, golden shiner, pumpkinseed, slimy sculpin, yellow perch, and margined madtom (PNHP 2020). This species is known to occur in Edgefield and McCormick counties in SC. Specifically, it has been documented in several streams in the Steven's Creek basin (USFWS 2019).

Status in the Project Boundary and Effects of Continued Project Operations

The brook floater is known to occur in the Upper Stevens Creek watershed on the Long Cane Ranger District in the Sumter National Forest. DESC is conducting a mussel survey as part of the relicensing process and will document any individuals found during the survey. Effects of continued Project operations on the species will be assessed as part of that survey, if the species is found.

4.3.5 MONARCH BUTTERFLY

The monarch butterfly is a migratory insect that passes through South Carolina and Georgia on a seasonal basis. The species has declined 80 percent during the last 20 years, in large part due to habitat loss at overwintering sites in Mexico and breeding sites in the American Midwest. The

monarch butterfly population in Eastern North America overwinters in central Mexico, with northern migrations to the United States and Canada occurring during March, and southward migrations occurring between August and September. Adult female monarch butterflies lay their eggs on milkweed plants and utilize a variety of other plant species as nectar sources throughout their migrations (USFWS 2020). Summer breeding habitat includes woodlands, roadsides, or utility rights-of-way containing nectaring plants (Forest Service 2020).

Status in the Project Boundary and Effects of Continued Project Operations

As mentioned, the monarch butterfly passes through South Carolina and Georgia on a seasonal basis. Summer breeding may occur within the Project boundary in woodlands, roadsides, or utility rights-of-way. Continued Project operations are not expected to affect the species as significant disturbance of these potential breeding areas is not expected to occur as a result of Project operation or maintenance activities.

4.3.6 PIEDMONT PRAIRIE BURROWING CRAYFISH

The Piedmont prairie burrowing crayfish is a semi-terrestrial species that utilizes the eastern watershed of the South Carolina Piedmont. Habitats can include intermittently flooded low lying areas and agricultural land. Specifically, it is found in terrestrial habitats around intermittent streams and colluvial valleys with treeless, prairie-like characteristics. Non-hydric well drained soils with seasonally perched water tables are necessary for the species' life history needs, as compared to species that require more aquatic and semi-aquatic habitats (Eversole and Welch 2013; NatureServe 2020b). Piedmont prairie burrowing crayfish spend much of the year in burrows, often below layers of leaf litter and organic matter, and are most likely to venture from burrows during wet periods in search of food or breeding opportunity. (Eversole and Welch 2013).

Status in the Project Boundary and Effects of Continued Project Operations

This species is present in Thurmond Lake – Savannah River, Upper Stevens Creek, Kiokee Creek – Savannah River, Turkey Creek – Stevens Creek, Bush River – Saluda River, and Little River – Savannah River watersheds that contain Forest Service land on the Long Cane Ranger District (Forest Service 2020). It is not likely that this species occurs within the Project boundary as it is most often found on a perched water table along ridge tops and not in aquatic habitats (Forest Service 2020). Continued Project operations are not expected to affect this species.

4.3.7 ROANOKE SLABSHELL

The Roanoke slabshell is typically found in large rivers and occasionally in small creeks. The mussel tolerates large variations in flow levels and higher water temperatures, making it able to survive in some locations near dams and hydroelectric plants (Price 2006). In South Carolina, the mussel is found in the Pee Dee River and the Catawba, Congaree and Savannah River basins. Although it has the potential to be found in watersheds on the Long Cane Ranger District in the Savannah River basin, no known records in the Sumter National Forest exist (Forest Service 2020).

Status in the Project Boundary and Effects of Continued Project Operations

In 2006, the Catena Group inventoried freshwater mussels in the Savannah River from the Augusta Shoals area (near RM 203) downstream to RM 23. The Roanoke slabshell was identified during this inventory. DESC is conducting a mussel survey as part of the relicensing process and will document any individuals found during the survey. Effects of continued Project operations on the species will be assessed as part of that survey, if the species is found.

4.3.8 ROBUST REDHORSE

Once presumed extinct, the Robust Redhorse, a large, heavy-bodied sucker, was rediscovered in the Oconee River below Georgia Power's Sinclair Hydroelectric Project (FERC No. 1951) in the early 1990s. This rediscovery sparked the formation of the Robust Redhorse Conservation Committee (RRCC) in 1995 to guide recovery efforts for the species. While little is still known about habitat preferences of juvenile Robust Redhorse, adults typically inhabit areas of the river where the current is moderately swift. Preferred habitat includes riffle areas or in/near outside bends, where depths are greater, and accumulations of logs and other woody debris are present (Evans 1997). Spawning occurs between April and June over gravel substrate in deep and shallow waters (Hendricks 1998). In South Carolina, it is found in the Savannah River and Pee Dee River basins (Forest Service 2020).

Status in the Project Boundary and Effects of Continued Project Operations

The Robust Redhorse is known to occur in the Savannah River and the Georgia DNR documented the species in the shoals below the Augusta Diversion Dam in 2005. Continued Project operations are not expected to adversely affect the species since the Project reregulates

large pulses from Thurmond Dam, providing increased flow and associated habitat stability in the Augusta Shoals and further downstream.

4.3.9 TRICOLORED BAT

The tricolored bat is a small bat weighing 0.2 to 0.3 ounces, that roosts in trees in the summertime and hibernates in caves, mines and rock crevices during the winter (USFWS 2019b). The species is found statewide in South Carolina, but populations have declined recently due to the white-nose-syndrome (USFWS 2019b).

Status in the Project Boundary and Effects of Continued Project Operations

The tricolored bat may roost in trees around the Project reservoir in the summertime but is unlikely to hibernate in the area due to a lack of hibernacula. Continued Project operations are unlikely to have any effect on the species as DESC does not plan to significantly change the Project shoreline or remove trees used for roosting.

4.3.10 WEBSTER'S SALAMANDER

The Webster's salamander is a woodland species that is often found on hardwood-forested hillsides underneath cover including rocks, logs, and leaf litter. The species breeds in early winter and lays eggs during the summer months. With the exception of June and July breeding activity, adults are mostly active between October and May, likely to avoid the high heat of the summer months. Unlike some other salamander species, there is no aquatic larval lifestage, and hatchlings emerge during August and September. The range of the species is fragmented, with isolated populations occurring across Louisiana, Mississippi, Alabama, Georgia, and South Carolina (Rogers 2020). In South Carolina, it has been documented in both Edgefield and McCormick counties (NatureServe 2020c).

Status in the Project Boundary and Effects of Continued Project Operations

This species may occur in the forested habitat surrounding the Project boundary. Nevertheless, much of the land surrounding the Project has been left in its natural state, and there are no Project-related disturbance activities proposed under the new license. Therefore, continued Project operations are unlikely to affect populations occurring in the Project boundary.

4.3.11 YELLOW LAMPMUSSEL

The yellow lampmussel is a freshwater mussel species found primarily in medium to large rivers and streams with a variety of substrates including silt or sand, gravel bars and bedrock cracks (Price 2006b). Distribution in South Carolina spans the Savannah, Broad, Wateree, Congaree, and Pee Dee River basins. The species is found in the Long Cane Ranger District in the Lower Stevens Creek and Turkey Creek-Stevens Creek watersheds with the potential to also occur in the Upper Stevens Creek watershed (Forest Service 2020).

Status in the Project Boundary and Effects of Continued Project Operations

The yellow lampmussel may occur within the Project boundary, as it is found throughout the Savannah River basin, including Stevens Creek watersheds. DESC is conducting a mussel survey as part of the relicensing process and will document any individuals found during the survey. Effects of continued Project operations on the species will be assessed as part of that survey, if the species is found.

4.3.12 FADED TRILLIUM

The faded trillium (or pale yellow trillium) is a perennial herb characterized by three whorled leaves and a pale yellow or cream-colored flower. The faded trillium sends up leaves and flowers in early spring before the forest canopy has fully leafed out. The above ground plant is not present during the fall and winter, persisting as an underground rhizome. Mature faded trillium are long lived, as the rhizomes continue to persist and produce shoots as other portions decay (Chafin 2007). Habitat types for the species include wooded slopes, rich cove forests, oak-pine woods, and cane breaks. They are often found in areas that are sheltered with dense forest canopies (NatureServe 2020d).

This species is only found in the Savannah River Basin across Georgia, North Carolina, and South Carolina (Chafin 2007), and has been documented in Columbia County, GA and Edgefield and McCormick counties, SC (NatureServe 2020d).

Status in the Project Boundary and Effects of Continued Project Operations

Although the faded trillium has not been documented within the Project boundary, it may occur in wooded areas around the shoreline. As no changes to Project operation or maintenance activities are proposed, continued Project operations are unlikely to affect this species.

4.3.13 GEORGIA ASTER

Georgia aster is a flowering plant that prefers a habitat of open woodlands, savannas and prairies, including open woodlands associated with utility and roadside rights-of-way (Forest Service 2020). It is thought to be a relict species of the post oak-savannah communities that existed in the southeast prior to fire suppression.

Status in the Project Boundary and Effects of Continued Project Operations

Georgia aster is known to occur in the Long Cane Ranger District of the Sumter National Forest and in McCormick and Edgefield counties, SC. Habitat for Georgia aster may exist within the Project boundary, however potential occurrences would be limited to terrestrial sites, which should not be affected by continued operation of the Project.

4.3.14 LANCELEAF TRILLIUM

The lanceleaf trillium occurs in a variety of habitat types, including floodplains, rocky upland woodlands, brushy thickets, canebrakes, and shaded or open woods. It is most commonly associated with alluvial soils. This regional endemic species is relatively small compared to other southeastern trilliums, with narrow leaves, a flower comprised of 3 maroon petals, and an ovoid pulpy fruit that contains several seeds (NatureServe 2020i).

Known populations of this species exist in Edgefield and McCormick Counties, SC (NatureServe 2020i).

Status in the Project Boundary and Effects of Continued Project Operations

Lanceleaf trillium is known to occur in the Long Cane Ranger District of the Sumter National Forest and in McCormick and Edgefield counties, SC. Habitat for this species may exist within the Project boundary, however potential occurrences would be limited to terrestrial sites, which should not be affected by continued operation of the Project.

4.3.15 OGLETHORPE OAK

The Oglethorpe oak is a "white oak" species that is associated with wet clay soils and is found in disjunct populations throughout Georgia, Alabama, Mississippi, Louisiana, and South Carolina. The species can grow up to 80 ft. tall and is characterized by reddish-gray bark that covers the tree in loose plates. It is generally found in seepage swamps, stream edges, and moist areas of hardwood forests adjacent to these types of habitats. Like other oak species, the Oglethorpe oak is wind-pollinated, and must be cross pollinated in order to produce acorns. Habitat fragmentation can isolate individuals, decreasing pollination and associated acorn production (Chafin 2008).

Oglethorpe oak has been documented in McCormick and Edgefield counties in SC (NatureServe 2020f).

Status in the Project Boundary and Effects of Continued Project Operations

The Oglethorpe oak is known to occur in the Long Cane Ranger District of the Sumter National Forest and in McCormick and Edgefield counties, SC. Habitat for this species within the Long Cane Ranger District is limited to streamside forests and depressional wetlands in the Carolina Slate belt, located north and outside of the Project boundary (Forest Service 2020). It is unlikely this species exists within the Project boundary and therefore, continued Project operations should have no effect on this species.

4.3.16 SHOALS SPIDER LILY

The shoals spider lily occurs mostly above the fall line in Alabama, Georgia, and South Carolina. This flowering plant is often found in bedrock outcroppings or in large cobble and boulder substrates where the plants' roots and bulbs can anchor into the substrate. Habitat requirements for the species include direct sunlight, constantly flowing water, and low sediment loads (Kleinschmidt 2015).

Status in the Project Boundary and Effects of Continued Project Operations

Shoals spider lilies are currently found at multiple locations in Edgefield and McCormick counites, SC and Columbia County, GA, with populations known in Stevens Creek (NatureServe

2020h). Since no changes to Project operations are proposed, no adverse effects to this species are expected.

4.3.17 SWEET PINESAP

The sweet pinesap is an herbaceous perennial wildflower characterized by a fleshy stalk, scalelike leaves, and pink or yellowish flowers that produce a strong odor of violets. The flowers are present in mid to late spring. The sweet pinesap is generally found in mature, moist hardwood forests under areas that are well shaded by the canopy (Forest Service 2020b). Specifically, the species is known to occur in shortleaf pine-oak heaths in the Southern Appalachians and Piedmont (Forest Service 2020).

Status in the Project Boundary and Effects of Continued Project Operations

The sweet pinesap is not expected to occur within the Project boundary due to a lack of habitat. Continued Project operations should not have any effect on this species.

4.4 STATE-PROTECTED SPECIES

On February 4, 2019, the Georgia DNR provided a list of Natural Heritage Database occurrences within 3 miles of the Project site for terrestrial species and within the local HUC10 watershed for aquatic species. These species are listed below in Table 4-3. For more information on the locations of these species, see Appendix A.

COMMON NAME	SCIENTIFIC NAME
American Barberry	Ververis canadensis
Atlantic Pigtoe	Fusconaia masoni
Atlantic Sturgeon	Acipenser oxyrinchus oxyrinchus
Brother Spike	Elliptio fraterna
Carolina Slabshell	Elliptio congaraea
Carolina Trefoil	Acmispon helleri
Curly-Heads	Clematis ochroleuca
Delicate Spike	Elliptio arctata
Dixie Mountain Breadroot	Pediomelum piedmontanum
Dwarf Waterdog	Necturus punctatus
False-Rue Anemone	Enemion biternatum
Georgia Plume	Elliottia racemosa
Ironcolor Shiner	Notropis chalybaeus

TABLE 4-3 GEORGIA STATE-PROTECTED SPECIES WITHIN 3 MILES OF THE PROJECT AREA

COMMON NAME	SCIENTIFIC NAME
Log Fern	Dryopteris celsa
Ocmulgee Skullcap	Scutellaria ocmulgee
Pale Yellow Trillium	Trillium discolor
Pineland Barbra Buttons	Marshallia ramosa
Relict Trillium	Trillium reliquum
Roanoke Slabshell	Elliptio roanokensis
Robust Redhorse	Moxostoma robustum
Savannah Elimia	Elimia caelatura
Savannah Lilliput	Toxolasma pullus
Shoals Spiderlily	Hymenocallis coronaria
Shortnose Sturgeon	Acipenser vrevirostrum
Spotted Turtle	Clemmys guttata
Wingpod Purslane	Portulaca umbraticola ssp.coronata
Yellow Lampmussel	Lampsilis cariosa
Yellow Nailwort	Paronychia virginica

Source: GDNR, Letter dated February 4, 2019

On November 4, 2019, the South Carolina DNR provided a list of species having conservation priority through the South Carolina State Wildlife Action Plan (SWAP) that are located within the Project boundary and within 3 miles of the Project boundary. These species are listed below in Table 4-4. Additional details on these species are included in Appendix A.

COMMON NAME	SCIENTIFIC NAME
Aethusa-like Trepocarpus	Trepocarpus aethusae
American Eel	Anguilla rostrate
American Ginseng	Panax quinquefolius
Atlantic Spike	Elliptio producta
Bald Eagle	Haliaeetus leucocephalus
Baltimore Oriole	Icterus galbula
Bartram's Bass	Micropterus
Carolina Larkspur	Delphinium carolinianum
Christmas Darter	Etheostoma hopkinsi
Dutchman's Breeches	Dicentra cucullaria
Eared Goldenrod	Solidago auriculate
Eastern Creekshell	Villosa delumbis
Eastern Elliptio	Elliptio complanate
Faded Trillium	Trillium discolor
False-Rue Anemone	Enemion biternatum
Flat Bullhead	Ameiurus platycephalus

 TABLE 4-4
 SOUTH CAROLINA STATE-PROTECTED SPECIES IN THE PROJECT AREA

COMMON NAME	SCIENTIFIC NAME
Florida Pondhorn	Uniomerus caroliniana
Georgia Aster	Symphyotrichum georgianum
Highfin Shiner	Notropis altipinnis
James' Sedge	Carex jamesii
Lanceleaf Wakerobin	Trillium lancifolium
Lowland Bladderfern	Cystopteris protrusa
Miccosukee Gooseberry	Ribes echinellum
Notchlip Redhorse	Moxostoma collapsum
Ocmulgee Skullcap	Scutellaria ocmulgee
One-Flowered Broomrape	Orobanche uniflora
Relict Trillium	Trillium reliquum
Robust Redhorse	Moxostoma robustum
Rosyface Chub	Hybopsis rubrifrons
Shoals Spider Lily	Hymenocallis coronaria
Slender Sedge	Carex gracilescens
Smooth Indigobush	Amorpha glabra
Snail Bullhead	Ameiurus brunneus
Southern Nodding Trillium	Trillium rugelii
Streambank Mock Orange	Philadelphus hirsutus
Tall Bellflower	Campanulastrum americanum
Tiger Salamander	Ambystoma tigrinum
Tuberous Gromwell	Lithospermum tuberosum
Turquoise Darter	Etheostoma inscriptum
Virginia Spiderwort	Tradescantia virginiana
Weak Nettle	Urtica chamaedryoides
Webster's Salamander	Plethodon webster
Whiteleaf Sunflower	Helianthus glaucophyllus
Yellow Lampmussel	Lampsilis cariosa

5.0 SUMMARY

There are several federal-protected and Forest Service TES species that have either been documented within the Project boundary or have potential to occur within the Project boundary due to availability of suitable habitat. These species are listed below.

- Atlantic Spike
- Bald Eagle
- Bartram's Bass
- Brook Floater
- Carolina Heelsplitter
- Faded Trillium
- Miccosukee Gooseberry
- Monarch Butterfly
- Relict Trillium
- Roanoke Slabshell
- Robust Redhorse
- Shoals Spider Lily
- Tricolored Bat
- Webster's Salamander
- Wood Stork
- Yellow Lampmussel

Although these species occur or have the potential to occur within the Project boundary, continued Project operations are not expected to have any adverse effect on these species. DESC is not proposing any changes to Project operations and does not have any plans for significant logging or shoreline changes within the Project boundary. If the need arises for tree removal, construction, or other shoreline modifications in the future, DESC will consult with the USFWS, Forest Service, and the Georgia DNR and/or South Carolina DNR (as appropriate) prior to the commencement of these activities.

In addition, DESC is conducting a mussel survey within the Project boundary with methodology developed in consultation with federal and state agencies. The results of this study will determine the presence of any mussel species listed in this report within the Project boundary and will identify the potential for Project effects on these species. The results of this study will be included in the Project's Final License Application.

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APPENDIX A

CONSULTATION RECORD

STEVENS CREEK HYDROELECTRIC PROJECT

FERC No. 2535

AQUATIC HABITAT WHITEPAPER

Prepared for:

Dominion Energy South Carolina, Inc. Cayce, South Carolina

Prepared by:

Kleinschmidt

Lexington, South Carolina www.KleinschmidtGroup.com

February 2020

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STEVENS CREEK HYDROELECTRIC PROJECT FERC No. 2535

AQUATIC HABITAT WHITEPAPER DOMINION ENERGY SOUTH CAROLINA, INC.

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CONSULTATION RECORD

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STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

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STEVENS CREEK HYDROELECTRIC PROJECT (FERC No. 2535)

DOMINION ENERGY SOUTH CAROLINA, INC.

1.0 INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC) is the licensee of the Stevens Creek Hydroelectric Project (FERC No. 2535) (Project). The Project, which has an installed capacity of 17.28 megawatts (MW), is located in Edgefield and McCormick counties, South Carolina and Columbia County, Georgia, at the confluence of Stevens Creek and the Savannah River. The Project's dam is located approximately one mile upstream of the Augusta Diversion Dam, and approximately 13 miles downstream of the J. Strom Thurmond Dam. The Project occupies approximately 104 acres of federal lands within the Sumter National Forest, with three existing Project recreation sites located on federal land and managed through agreement with the U.S. Forest Service (Forest Service).

2.0 PURPOSE OF THE STUDY

On November 22, 1995, FERC issued a 30-year license which is scheduled to expire on October 31, 2025. DESC intends to file an application for a new license with FERC on or before October 31, 2023. The Project is currently involved in a relicensing process which involves cooperation and collaboration between DESC, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. DESC established a Recreation and Land Management Resource Conservation Group (RCG), with interested stakeholders to address Project issues related to recreation and land management. The RCG determined there was a need for a recreation study at the Project.

DESC is proposing to perform an assessment of existing and future recreational use, opportunities, and needs for the Project. The assessment is designed to provide information pertinent to the current and future availability and adequacy of DESC-owned and managed recreation sites, Forest Service owned and managed recreation sites, and Columbia County, Georgia owned and managed recreation sites at the Project. The overall study plan objective is to identify current and potential recreation opportunities, use, and needs at the Project by addressing the specific goals and objectives listed below. Results from the study will be used to develop a new Recreation Management Plan (RMP) for the Project.

<u>Goal 1</u>: Characterize the existing use of recreation sites at the Project. This will be accomplished by meeting the following objectives:

- i. Identify recreation sites; inventory the services and facilities offered; and assess the general condition of each site (including whether the site provides barrier free access).
- ii. Identify patterns of use at each site (type, volume, and daily patterns of use).
- iii. Assess existing recreation sites located on federal land for consistency with Forest Service Sustainable Recreation Strategy.

<u>Goal 2</u>: Identify future needs relating to public recreation sites at the Project. This will be accomplished by meeting the following objectives:

- i. Identify existing user needs and preferences, including perceptions of crowding at recreation sites.
- ii. Estimate future recreation use of existing recreation sites.
- iii. Identify future needs for new recreation sites and facilities.

3.0 STUDY AREA

Recreation sites at the Project that will be included in this study are listed in Table 3-1 and shown in Figure 3-1.

RECREATION SITE NAME	RECREATION SITE NAME AS LISTED IN 2014 RECREATION PLAN	RECREATION SITE NAME AS LISTED IN 1995 PROJECT LICENSE/EXHIBIT G DRAWINGS	RECREATION SITE OWNER/ MANAGER
Stevens Creek	SC Recreation Site #1	Stevens Creek Recreation Site	DESC
Recreation Site			
Fury's Ferry	SC Recreation Site #2	Fury's Ferry Recreation Site	Forest Service
Recreation Site			
Chota Drive	SC Recreation Site #4	Recreation Site #2	Forest Service
Recreation Site			
Betty's Branch/	SC Recreation Site #5	GA Recreation Site	Columbia
Riverside Park			County, GA

 TABLE 3-1
 EXISTING PROJECT RECREATION SITES AT THE STEVENS CREEK PROJECT¹

Source: SCE&G 2014

¹ The 2014 Recreation Management Plan (RMP) includes an additional recreation site – Stevens Creek Recreation Site #3 (also known as Recreation Site #1 or the Mims Recreation Site). This site is located on Forest Service property and is maintained by the Forest Service. The Forest Service has decided that this recreation site is not in line with their Sustainable Recreation Strategy and will no longer be supported by the Forest Service. The Forest Service has asked that this site be removed from the RMP and therefore not be studied during relicensing.





FIGURE 3-1 STEVENS CREEK PROJECT RECREATION SITES

4.0 STUDY SEASON

Generally, the study season will last for one year, beginning on April 1, 2021 and ending on March 31, 2022. During this time, traffic counters will be deployed at all four recreation sites, collecting continuous data for one full year. Within this general study season, recreation user surveys and spot counts will be collected during the peak recreation season, from April 1, 2021 through Labor Day weekend or September 6, 2021.

5.0 DATA COLLECTION METHODS

A variety of data collection techniques will be used to obtain the information necessary to meet the study objectives and goals listed in Section 2.0. Both primary and secondary data will be collected. Primary data will entail site inventories, spot counts, traffic counter data, trail camera data, and recreation user surveys. Primary data will be collected at each site as shown in Table 5-1.

	DATA COLLECTION METHOD				
RECREATION	SITE	Spot	TRAFFIC	RECREATION	TRAIL
SITE	INVENTORY	COUNT ²	COUNTER	USER	CAMERA
			DATA	SURVEYS ³	DATA
Stevens Creek	*	*	*	*	
Recreation Site					
Fury's Ferry	*	Pariodic	*	Pariodic	*
Recreation Site		Тепошс		Теношс	
Chota Drive	*	Pariodia	*	Dariadia	*
Recreation Site		renouic		renouic	·
Betty's					
Branch/	*	*	*	*	
Riverside Park					

 TABLE 5-1
 DATA COLLECTION METHODS AT STEVENS CREEK RECREATION SITES



² Spot counts will be administered at Fury's Ferry and Chota Drive during traffic counter/trail camera data download events.

³ Recreation user surveys will be administered at Fury's Ferry and Chota Drive if recreation users are present during traffic counter/trail camera data download events.

Secondary data will include U.S. Bureau of Census data, the South Carolina Statewide Comprehensive Outdoor Recreation Plan (SCORP), SC Recreation Participation & Preference Study, and other relevant, readily available literature. Additional input will be solicited from the RCG, Columbia County, and Forest Service. Table 5-2 summarizes the study objectives, information needed to meet these objectives, and sources for information. Sections 5.1 through 5.4 summarize the primary data collection methods.

OBJECTIVES	INFORMATION NEEDED	SOURCE			
Goal 1: Characterize existing recreational use of Project recreation sites					
Goal 1a: Identify formal recreation sites, inventory the services and facilities offered at each, and assess the general condition and ADA compliance of each site Goal 1b: Identify the patterns of use at each site (type, volume, and daily patterns of use)	 Physical inventory of all facilities at each recreation site General assessment of site condition to include maintenance, basic rehabilitation needs, etc. Visitors' assessment of site conditions Identification of activities that occur at each site Barrier free/ADA compliance assessment Utilize vehicle counts as an estimation of people Estimate of # people/vehicle Estimate of # vehicles/site Parking capacity 	 Recreation Site Inventory Recreation User Surveys Traffic Counter Data, Trail Camera Data Spot Count Data Recreation User Surveys - # of people per vehicle and length of visit Recreation Site Inventory - # of parking spaces Columbia County/Forest Service data, if available 			
Goal 1c: Assess existing recreation sites located on federal land for consistency with Forest Service Sustainable Recreation Strategy.	• Results from Goal 1a and Goal 1b for recreation sites located on federal land	 Forest Service input Forest Service Sustainable Recreation Strategy 			

TABLE 5-2RECREATION USE AND NEEDS STUDY PLAN OBJECTIVES AND EFFORTS

OBJECTIVES	INFORMATION NEEDED	SOURCE
Goal 2: Identify future recreational needs at the Project		
Goal 2a: Identify existing user needs and preferences, including perceptions of crowding at Project recreation sites	 User preferences and opinions of needs and crowding at sites Condition assessment 	Recreation User SurveysRecreation Site Inventory

OBJECTIVES	INFORMATION NEEDED	SOURCE
Goal 2b: Estimate future recreation use of existing Project recreation sites	 Inventory and use data Population projections for the project area Recreational use trends 	 Results of Goal 1 U.S. Bureau of Census Data SC Division of Research & Statistics (Budget and Control Board) SCORP, SC Recreation Participation & Preference Study, or other readily available literature
Goal 2c: Identify future needs for new recreation sites and/or facilities	 Estimate of future recreation use at the Project Parking capacity at recreation sites vs. existing and projected use density Condition/perception assessment 	 Results of Goal 1a, 1b, 2a, 2b, Columbia County, USFS, and RCG input on future needs

5.1 RECREATION SITE INVENTORY

Prior to completion of a recreation site inventory, GPS points and land area of each recreation site will be collected and recorded. Then a recreation site inventory will be completed for each recreation site included in Table 3-1. A site visit will be made to collect data on the type, number, and size of facilities (restrooms, parking areas, boat ramps, picnic shelters and tables, etc.) located at each site. The general condition of all recreation facilities will be noted during the inventory. In addition, any facilities that qualify as barrier free will be identified as such. A copy of the inventory form is provided in Appendix A.

Upon completion of the inventory, all data will be uploaded into an Excel database. The database will be structured so that it can be used in a variety of formats (brochure, maps, web pages, etc.) and can be updated as recreation sites are modified, added, or changed in any way.

5.2 TRAFFIC COUNTS

Traffic counters will be installed at all recreation sites included in Table 3-1 to record the number of vehicles that enter and exit the public recreation areas. Traffic count data will be collected for one year in order to capture use during the various seasons. Counters will be installed by April 1, 2021 and will collect data through March 31, 2022. Traffic counter data will be downloaded from the counter at a minimum of twice per month to ensure the counter is working properly and to minimize the potential for lost data.

5.3 TRAIL CAMERA DATA

Trail cameras will be installed at Fury's Ferry and Chota Drive recreation sites to capture the number of recreators and types of activities in which recreators partake at the recreation sites. Trail camera data will be collected during the peak recreation season, from April 1, 2021 through September 6, 2021 at Chota Drive and from April 1, 2021 through March 31, 2022 at Fury's Ferry. The trail camera will be installed at Fury's Ferry for a full year to capture the waterfowl hunting season. Trail camera data will be used in addition to periodic spot counts and recreation use and recreation activity types.

5.4 **RECREATION USER SURVEYS**

The preferences and perceptions of people using Project recreation sites weigh heavily into the determination of need for recreation site improvements and/or new recreation sites. Information from recreation site users will be collected through on-site surveys. Surveys will be conducted at recreation sites as shown in Table 5-1. Surveys may be collected at Chota Drive Recreation Site and Fury's Ferry Recreation Site when traffic counter/trail camera data is downloaded. However, a recreation clerk will not be stationed at these sites.

Surveys will be administered to recreation site users at the close of their recreation day⁴. Data collected will include user demographics, group size, the type of land-based and water-based recreation activities individuals are participating in, length of stay, and perceptions of crowdedness and condition of recreation facilities at the Project. The data collected will be used to identify recreation use patterns and use estimates at the recreation sites. The data will also characterize user perceptions on crowdedness, which will be considered during the future needs analysis.

The survey will be pre-tested in the field prior to implementation and revisions will be incorporated, as necessary. If any significant revisions to the survey or study protocol are deemed necessary following field pre-testing, the RCG will be notified. A copy of the survey is provided in Appendix B.

Surveys will be administered during the peak recreation season from April 1 through Labor Day weekend, 2021. Each recreation site will be sampled according to a sampling plan that will be prepared in consultation with the RCG. Sampling days will include weekdays, weekends and peak use weekends⁵. The sampling plan will be developed using a stratified random sampling method, with weekends being sampled at a greater rate than weekdays to account for the heavier use that typically occurs on these days. During each sampling day, survey clerks will be on-site for a four-hour shift, collecting as many complete surveys as possible. The shifts will occur

⁴ FERC defines a recreation day as a visit by a person to a development for recreational purposes during any portion of a 24-hour period.

⁵ FERC defined peak use weekends as weekends when recreation use is at its peak for the season (typically Memorial Day, Independence Day and Labor Day). All three days in a holiday weekend should be included.

randomly throughout the day within the window of 7:00 AM to 8:00 PM. Shift start times will be listed in the sampling plan.

All survey clerks will be trained thoroughly as a means of quality control. Survey clerks will be provided with detailed information on the study schedule, appropriate materials to aid in data collection, and direction on appropriate interviewing techniques and attire. Interviewers will also be provided with an incentive for survey respondents to complete the survey.

5.5 SPOT COUNTS

Spot counts will be conducted at the recreation sites listed in Table 3-1 once per sampling day, prior to the start of survey collection. Spot counts will document the number of vehicles present at a recreation site at one moment in time. Information recorded during spot counts will include: date, time, and weather; number of vehicles and vehicles with trailer at recreation site; type of activities observed at the site; and state license plate data. Spot count data will be used in parallel with traffic counter data. Spot counts will only be collected at Chota Drive Recreation Site and Fury's Ferry Recreation Site when traffic counter/trail camera data is downloaded. However, a recreation clerk will not be stationed at these sites.

6.0 ANALYSIS

The following sections provide a description of the approach for estimating existing and future recreational use, recreation site capacity and use density percentages, and future recreation needs.

6.1 CURRENT RECREATION USE ESTIMATES

The reported estimates of recreation will be presented in "recreation days". The FERC defines a recreation day as one visit by a person to a development for purposes of recreation during any 24-hour period. The weekday, weekend, and peak weekend average recreation days will be calculated for each recreation site utilizing the traffic counters and recreation site survey data. The average number of people at each site within the morning and afternoon periods will be estimated within each day type and converted to a daily estimate. Daily estimates for each day



type will be expanded to represent the study period and summed for a total estimate for each recreation site.

6.2 FUTURE RECREATION USE ESTIMATES

Estimated projections of future recreation use at the Project will be developed using the average annual increase in population growth over the past 10 years, as reported by the Census Bureau or the State Division of Research and Statistics, for Edgefield and McCormick counties, SC and Columbia County, GA. The estimates will be augmented with discussion of trends reported in the SCORP (2014) and the SC Recreation Participation & Preference Study (2005). Estimated projections will be provided in 5-year intervals for the anticipated term of the license up to 50 years into the future (through year 2075).

While it is acknowledged that future changes in the supply of recreation resources, either in their quantity, accessibility, and/or quality may influence future demand and use, the demand analysis undertaken for this study does not attempt to predict what these future changes might consist of or how they might specifically affect levels of use at Project facilities. Therefore, the demand analysis results should be viewed as a general guide of potential future recreation pressure developed for planning purposes only.

6.3 RECREATION SITE CAPACITY

For purposes of this study, the carrying capacity for a recreation site is defined as the number of vehicles and boat trailers that can be parked at a recreation site at one time, based on the number of available parking spaces associated with each site. For paved parking areas, this will be achieved by counting the number of designated parking spaces available at the recreation site. For gravel parking areas, the number of available parking spaces for each recreation site will be estimated by measuring the area (sq ft) available for parking and estimating the number of vehicles that could be parked at the location, if optimal space were utilized. These estimates will be based on parking capacity standards for vehicle length, width, and available turn around space.

6.4 **RECREATION SITE USE DENSITY**

The use density of recreation sites will be estimated by comparing the average observed number of vehicles at the sites on sampled weekday, weekend, and peak weekend days with the available parking capacity for each recreation site. The average observed number of vehicles divided by the parking capacity will provide an estimated use density for each site. The average number of vehicles at the site will be determined using spot count and traffic counter data.

6.5 RECREATION NEEDS ASSESSMENT

The need for recreation and site development or modification of existing recreation resources will be assessed based on the inventory, condition assessment results, parking capacity and use density assessment results, user survey results, and Forest Service consultation. The needs assessment will focus on the existing condition and user opinions of recreation sites, the presence of "barrier free" facilities at recreation sites, and the ability of sites to meet current and anticipated future recreation demand. Consideration will also be given to site opportunities and constraints, as well as support facilities such as signage and maintenance. The need for new recreation sites and/or facilities will be determined through assessment of the information collected and the input of stakeholders through the RCG and the Forest Service.

7.0 SCHEDULE

The proposed schedule for completion of the Recreation Use and Needs Study is as follows:

TASK	DATE
Mobilization for field work (includes field clerk hiring, training, etc.)	March 2021
User survey pre-testing	March 2021
Installation of traffic counters/trail cameras	April 1, 2021
Traffic counter data collection	April 1, 2021 – March 31, 2022
User survey collection	April 1 - September 6, 2021
Preliminary data entry, cleaning, and processing	October 2021
Conduct analyses	April-May 2022
Submit draft report	July 2022
Determine if additional data collection is needed	July 2022 ⁶
Finalize report	August 2022

8.0 **REFERENCES**

- Federal Energy Regulatory Commission (FERC). 2018. 18 CFR Parts 8 and 141: Elimination of Form 80 and Revision of Regulations on Recreational Opportunities and Development at Licensed Hydropower Projects. Issued December 20, 2018.
- South Carolina Electric & Gas Company (SCE&G). 2014. Revised Recreation Plan: Stevens Creek Hydroelectric Project, FERC Project No. 2535. January 2014.

⁶ If additional data collection is required, data collection methods, results and analyses will be developed and assessed in cooperation with the RCG and will be provided in an addendum to the report.

APPENDIX A

SITE INVENTORY FORM

DOMINION ENERGY SOUTH CAROLINA, INC.

RECREATION STUDY

STEVENS CREEK HYDROELECTRIC PROJECT

(FERC NO. 2535)

Recreation Site Inventory Form

Inspector:			
Date:			
Site Name:			
Site Address:			
City:	State:	Zip Code:	

Road Access:

	Paved	Unpaved/Gravel
Road Access		

Parking:

	Paved	Unpaved/Gravel
Vehicle Spaces		
Vehicle with Trailer Spaces		
ADA/Barrier Free Spaces		

Restrooms:

	Flush Toilets	Vault Toilets	Portable Toilets	ADA/Barrier Free
Women				
Men				
Unisex				

Boat Launches (# of lanes):

	Hard Surface (concrete/paved)	Gravel	Informal
Trailer Launch			
Carry-In			

Docks:

	# of Docks	ADA/Barrier Free
Courtesy Dock		
Fishing Dock/Pier		

Camping:

	# of Sites	ADA/Barrier Free
RV Sites		
Cabins		
Tent Sites		
Primitive Sites		

Operations (circle the one that applies):

Manning	Manned	Unmanned
Availability	Seasonal	Year Round
Fees	Yes	No

Amenities:

	Yes	No	Additional Information
Marina			
Whitewater Boating			
Portage			
Tailwater Fishing			
Reservoir Fishing			
Swim Area			
Trails			
Active Recreation Area			
Picnic Area			
Overlook/Vista			

	Yes	No	Additional Information
Interpretive Display			
(Signage/Kiosk/Billboard)			
Hunting Area			
Trash Cans			
Other			

APPENDIX B

RECREATION USER SURVEY

Recreation User Survey Stevens Creek Hydroelectric Project (FERC No. 2535)

Clerk:	Site:	Date:	Time:	am/pm	
Weather: 🛛 Sunny	Partly Cloudy	□ Cloudy	Light Rain	🗆 Heavy Rain	
RESPONDENT GENDER:	Male Female	RESPONDEN	REFUSED INTERVI	EW: 🗆	
NUMBER OF PEOPLE IN	_ RESPONDENT DOES NOT SPEAK ENGLISH: 🗆				
		RESPONDEN ⁻ ENGLISH):	I'S PRIMARY LANG	JAGE (IF NOT	
VEHICLE HAS A BOAT TR		RESPONDEN	T IS NOT 18 YEARS (
RESPONDENT HAS BEEN INTERVIEWED AT THIS SITE PREVIOUSLY:					

THE FIRST FEW QUESTIONS ASK ABOUT YOUR EXPERIENCE HERE TODAY

1. Including yourself, how many people are in your party today? (Fill in blank.)

_____ people in party

2. What time did you arrive at this recreation site today? (Fill in blank.)

_____ am / pm

3. What is the primary recreation activity that you participated in today at this recreation site? (*Please read the list to respondents. Check only one main activity in the first column.*)

What other activities did you participate in today at this recreation site? (Check all that apply in the second column.)

Check only	Check all	
<u>one</u> main	other	
activity	activities	Types of Activities
		FISHING:
		boat fishing
		pier/dock fishing
		bank fishing
		bow fishing/spear fishing
		BOATING:
		motor boating
		pontoon/party boating
		canoeing/kayaking
		paddle-boarding
		Jet-skiing
		OTHER:
		bicycling
		diving/SCUBA
		tent or vehicle camping
		horseback riding
		walking/hiking/backpacking
		sightseeing

Check only	Check all	
<u>one</u> main	other	
activity	activities	Types of Activities
		hunting
		nature study/wildlife viewing/photography
		swimming
		picnicking
		sunbathing
		other:
		None

- 4. If you are hunting or fishing today, what is/are your target species? (List all that are stated.)
- 5. Did you spend any time on the water today? (Check one box.)
 - □ YES□ NO (If no, skip to Question 7.)
- 6A. Did you recreate on or near any of the islands today?
 - □ YES□ NO (If no, skip to Question 7.)
- 6B. What activities did you participate in **while on/near the island(s)**? (Do not read this list. Allow respondent to answer and check all that apply and/or fill in the blanks.)

□ sunbathing	bank fishing		hunting
□ camping	walking/hiking		sightseeing
nature study/wildlife viewing/photography	swimming		picnicking
□ other (please specify:)	
	 ,	/	

7. On a scale from 1 to 5, with 1 being light, 3 being moderate, and 5 being heavy, how would you rate the crowdedness *at this recreation site* today? (*Circle one number.*)



8A. On a scale from 1 to 5, with 1 being poor and 5 being excellent, how would you rate the overall condition *of this recreation site* today? (*Circle one number.*)



- 8B. Are there any additional facilities/improvements needed **at this recreation site**? (Check one box.)
 - □ YES
 □ NO (If no, skip to Question 9.)
- 8C. What do you recommend? (Do not read this list. Allow respondent to answer and check all that apply and/or fill in the blanks.)

access road	bank fishing area		boat dock
hoat launch			fish cleaning station
	camping area		IISH Cleaning Station
fishing pier/dock	lighting		parking lot
picnic tables/shelter	restrooms		signs & information
swimming area	trails		trash cans
			bilingual signs &
RV camping	tent camping	infor	mation
other (please specify:			
)	

8D. Are there any other improvements that you would recommend for this site?

□ YES □ NO

NO (If no, skip to Question 9.)

8E. What improvements do you recommend? (Fill in the blank.)

9. What other lakes do you recreate at? (Fill in blank.)

10. What is your zip code? _____

- 11. In what year were you born?
- 12. Do you have any additional comments about this recreation site, including comments on existing or needed recreation facilities? (*Please fill in blank and be as specific as possible.*)

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

APPENDIX C

SPOT COUNT FORM

Spot Count Form Dominion Energy South Carolina, Inc. Stevens Creek Hydroelectric Project							
MONITOR:			DATE:// D (month) (day) / (year)		Day	Type: 1 weekday 2 weekend 3 holiday	
WEATHER AT START1. SUNNY(PLEASE CIRCLE AS2. PARTLY SUNNY(PLEASE CIRCLE AS3. CLOUDYMANY DESCRIPTORS4. LIGHT SHOWEIAS APPLY)5. HEAVY RAIN6. WINDY		NNY WERS N					
SPOT COUNT							
RECREATION SITE	TIME		TOTAL VEHICLES W/O TRAILERS	TOTAL VEHIC TRAILERS	TOTAL VEHICLES W BOAT TRAILERS KAYAK/CANOE TRA		
		AM/PM					
			-				
TYPES OF ACTIVITIES		Check all	STATE LICENSE PLATES		# F	# FROM EACH STATE	
FISHING			South Carolina				
Boat Fishing			Georgia				
Pier/dock Fishing			North Carolina				
Bank Fishing			Other:				
BOATING							
Motor Boating							
Pontoon/party Boating							
Sailing							
Canoeing/Kayaking							
Windsurfing							
Paddle-boarding							
OTHER							
Bicycling							
Tent or Vehicle Camping							
Walking/Hiking/Backpacking							
Sightseeing							
Hunting							
Nature Study/Wildlife							
Swimming							
Picnicking							
Sunbathing							
Other:							
TOTAL:							