Georgia Power

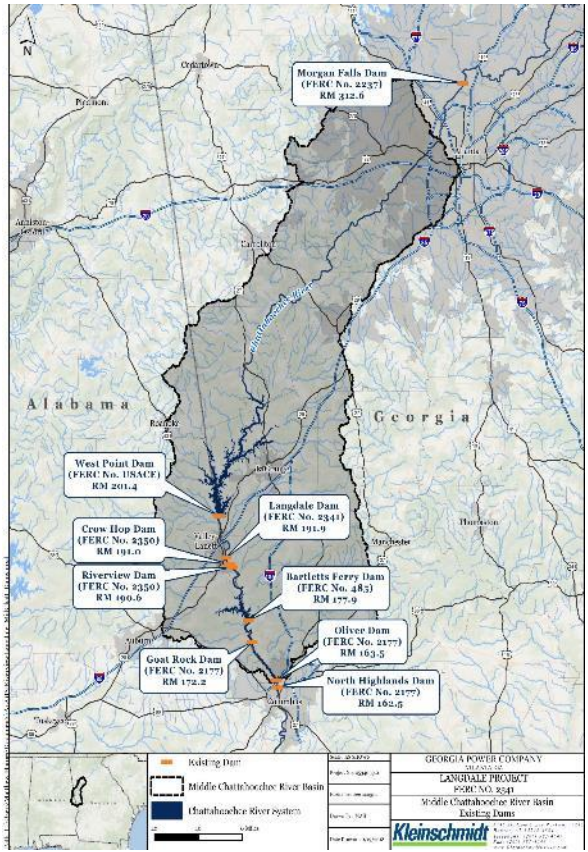
Langdale and Riverview Dams
FERC License Surrender and Decommissioning
(FERC No. 2350 and 2341)

Update for ACF Waters Conference
April 27, 2022

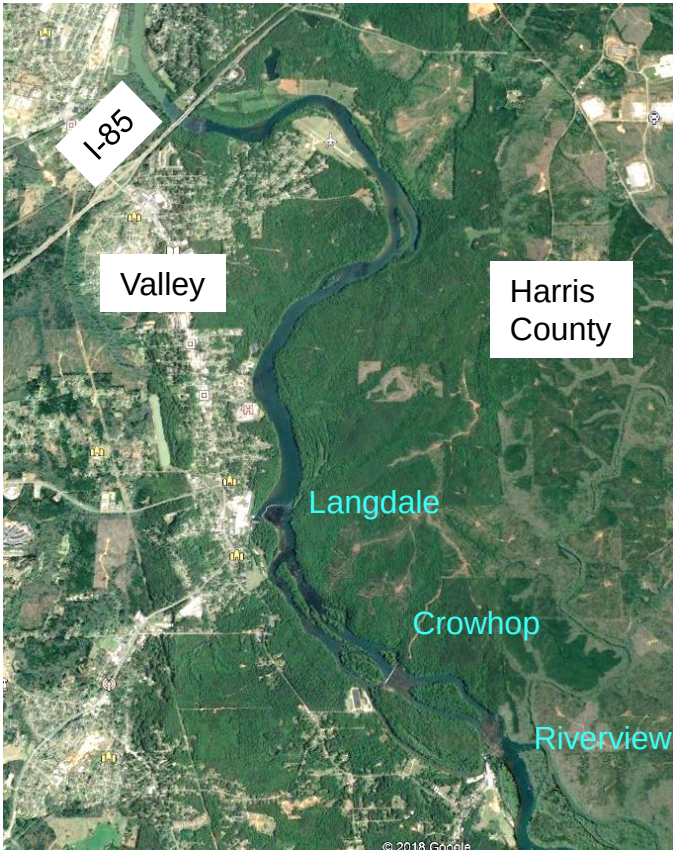
Courtenay O'Mara, P.E. and Patrick O'Rouke

Proximity of Langdale and Riverview Projects in the Middle Chattahoochee Basin

- 9.5 miles from West Point Dam to Langdale Dam
- 1.5 miles from Langdale to Riverview
- 1 mile from Langdale to Crowhop
- Upper reaches of Lake Harding impounded to Crowhop Dam
- Bartletts Ferry Dam, Goat Rock Dam, Oliver Dam and North Highlands Dam between Riverview and City of Columbus, GA



Geographic Landmarks and Land Use



South of Interstate 85

South of West Point, Georgia and adjacent to City of Valley, Alabama in Chambers County, Alabama.

- Commercial/Industrial
- Residential

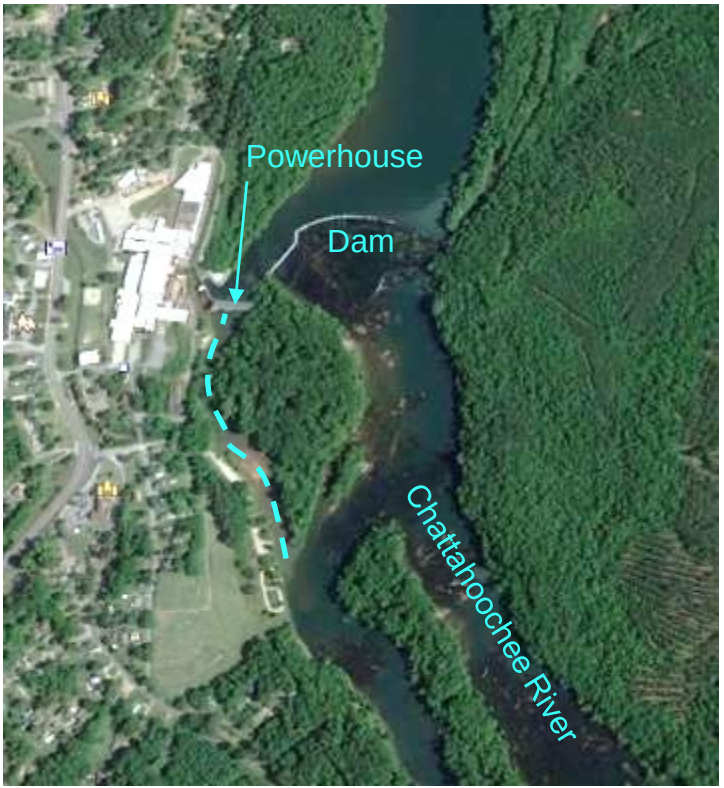
Adjacent to Harris County, Georgia

- Rural

Description of Langdale and Riverview Projects

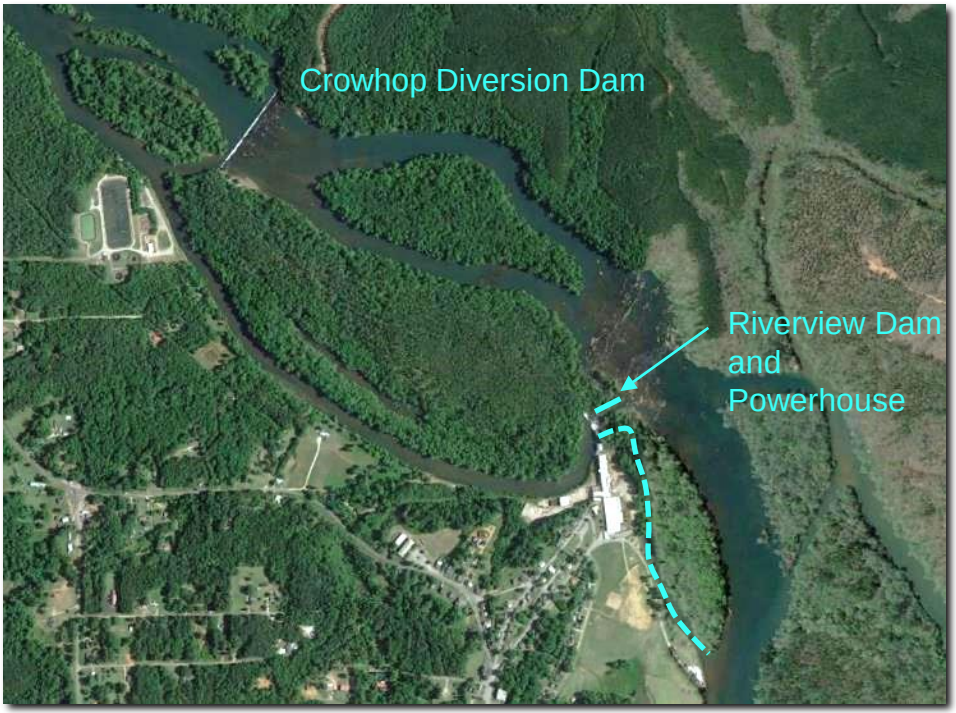
- Operating Mode: Run-of-River, flow regime dependent upon upstream Corps of Engineers' West Point Dam
- Dam Height: Range from 12 feet at Riverview and Crowhop to 15 feet at Langdale
- FERC Project Acreage:
  - Approximately 28 acres at Langdale
  - Approximately 11 acres at Riverview and Crowhop combined
- FERC Licenses Expire: December 31, 2023
- Application to Surrender Licenses Filed with FERC: December 18, 2018

Langdale Project Area



2018 Google Earth Imagery

Riverview Project Area



2018 Google Earth Imagery

Facilities and Generating Units

Langdale Powerhouse

Riverview Powerhouse

Langdale Dam

Crowhop Dam

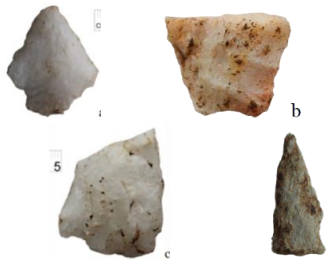
Studies Completed or Ongoing

Field Studies

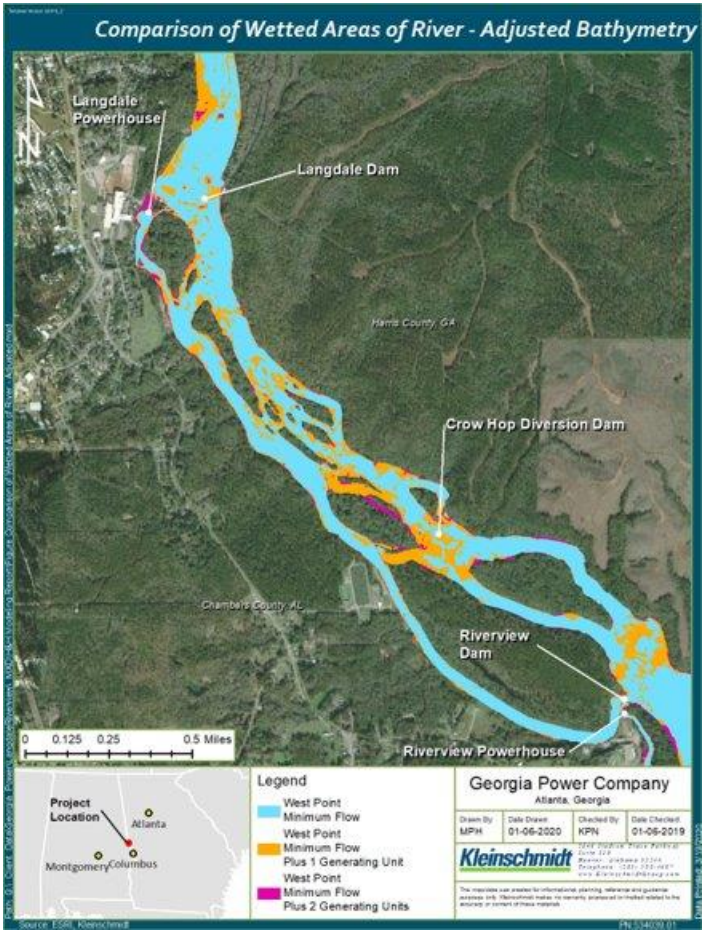
- H&H Model
- Cultural Resources
- Mussel Survey
- Sediment Quality - TBF
- Sediment Transport - TBF
- Shoal Bass Survey - TBF

Desktop Studies

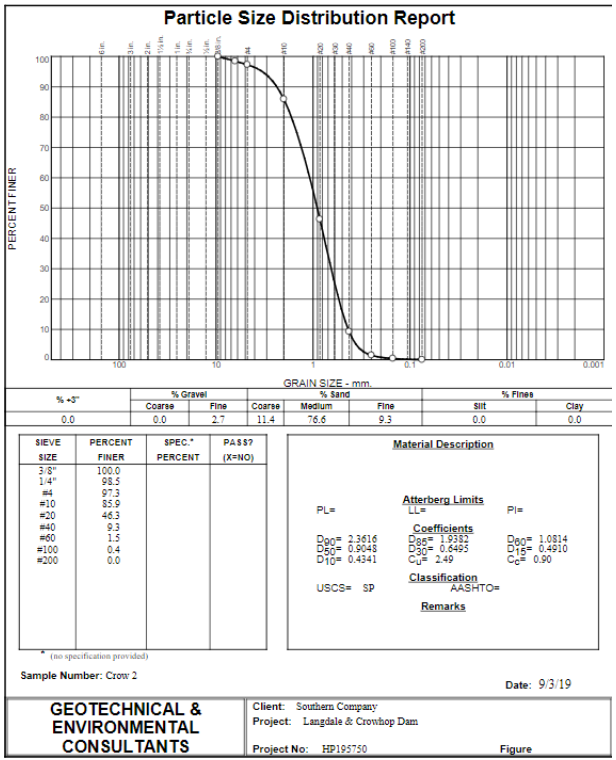
- Water Quality
- Shoal Bass Life History



H&H Modeling


Comparison of Wetted Areas of River - Adjusted Bathymetry
Langdale Powerhouse
Langdale Dam
Harris County, GA
Crow Hop Diversion Dam
Chambers County, AL
Riverview Dam
Riverview Powerhouse
0 0.125 0.25 0.5 Miles
Project Location
Atlanta
Montgomery
Columbus
Legend
West Point Minimum Flow
West Point Minimum Flow Plus 1 Generating Unit
West Point Minimum Flow Plus 2 Generating Units
Georgia Power Company
Atlanta, Georgia
Drawn By MPH
Date Drawn 01-06-2020
Checked By KPN
Date Checked 01-06-2019
Kleinschmidt

Sediment



Particle Size Distribution Report

PERCENT FINER

GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.7	11.4	76.6	9.3	0.0	0.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
1/4"	98.5		
#4	97.3		
#10	85.9		
#20	46.3		
#40	9.3		
#60	1.5		
#100	0.4		
#200	0.0		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 2.3616 D_{85}= 1.9382 D_{60}= 1.0814
D_{50}= 0.8048 D_{30}= 0.6495 D_{15}= 0.4910
D_{10}= 0.4341 C_u= 2.49 C_c= 0.90

Classification

USCS= SP AASHTO=

Remarks

Sample Number: Crow 2

Date: 9/3/19

GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS

Client: Southern Company
Project: Langdale & Crowhop Dam
Project No: HP195750 **Figure**

Project: **Southern Company Dams** Valley, AL	Boring No: **CROW-3**
Location: **See Figure 2**	Project No: HP195750
Driller/Equipment: Amdrill/ Vibrocore	GS Elevation:
Water Level: ---	Drilling Date: August 22, 2019
	Engineer/Geologist:

Depth (ft)	Soil Symbol	Soil Description	Sample Type	Standard Penetration Test Data (blows/ft) 0 10 20 30 60 80 N-Value
		Water depth 2 feet.		
		ALLUVIUM tan-brown, silty, fine to coarse **SAND (SP)** Gradation sample taken (CROW 3)		
5		**RESIDUUM** grey, silty **GRAVEL (GP)**; with sand Gradation sample taken (Crow 3, 4.5-8') This is sample with hydrometer		
10		**AUGER REFUSAL ENCOUNTERED AT 8.0ft**		
15				

Boring and sampling performed in accordance with ASTM D 1586.
Depths are measured from existing ground surface at time of drilling.
Depths are shown to illustrate general arrangements of the strata encountered at the boring location.
Do not use depths for determinations of quantities or distances.

NOTES:

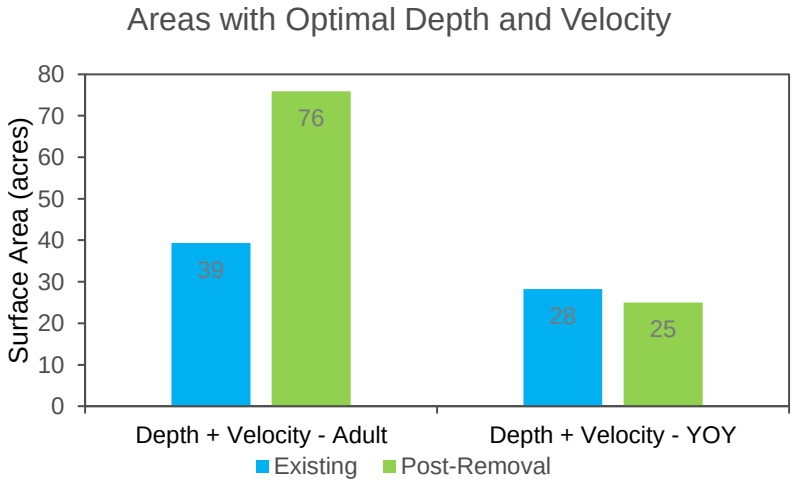
Mussel Surveys

Villosa vibex (southern rainbow)

Elliptio pullata (Gulf spike)

Corbicula fluminea
(Asian clam)

Shoal Bass


Areas with Optimal Depth and Velocity
Surface Area (acres)
80
70
60
50
40
30
20
10
0
76
39
28
25
Depth + Velocity - Adult
Depth + Velocity - YOY
Existing
Post-Removal

FERC's Surrender Process and Schedule

Electronic Code of Federal Regulations

e-CFR data is current as of April 30, 2019

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Title 18: Conservation of Power and Water Resources

PART 5—INTEGRATED LICENSE APPLICATION PROCESS

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§5.9 Comments and information or study requests.
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§5.27 Amendment of application.
§5.28 Competing applications.
§5.29 Other provisions.
§5.30 Critical energy infrastructure information.
§5.31 Transition provision.

Timeline for surrender not known at the time of application.

Processed through FERC's Department of Hydro Compliance and Administration

Our proposal includes public input, studies, NEPA analysis and final FERC order

Electronic Code of Federal Regulations

e-CFR data is current as of April 30, 2019

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Title 18: Conservation of Power and Water Resources

PART 6—SURRENDER OR TERMINATION OF LICENSE

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§6.4 Termination by implied surrender.
§6.5 Annual charges.

Overall Langdale/Riverview Decommissioning Tasks:

Task	Estimated Date of Completion
File Surrender Application and Draft Outline for the Decommissioning Plan	December 2018
Conduct Decommissioning Studies	Winter 2019-May 2022
File Final Decommissioning Plan and Remaining Draft Studies	Early July 2022
Began Obtaining Corps permit	Begin July 2022
Implement FERC approved Dam Decommissioning Plan	Estimated Summer/Fall 2023