

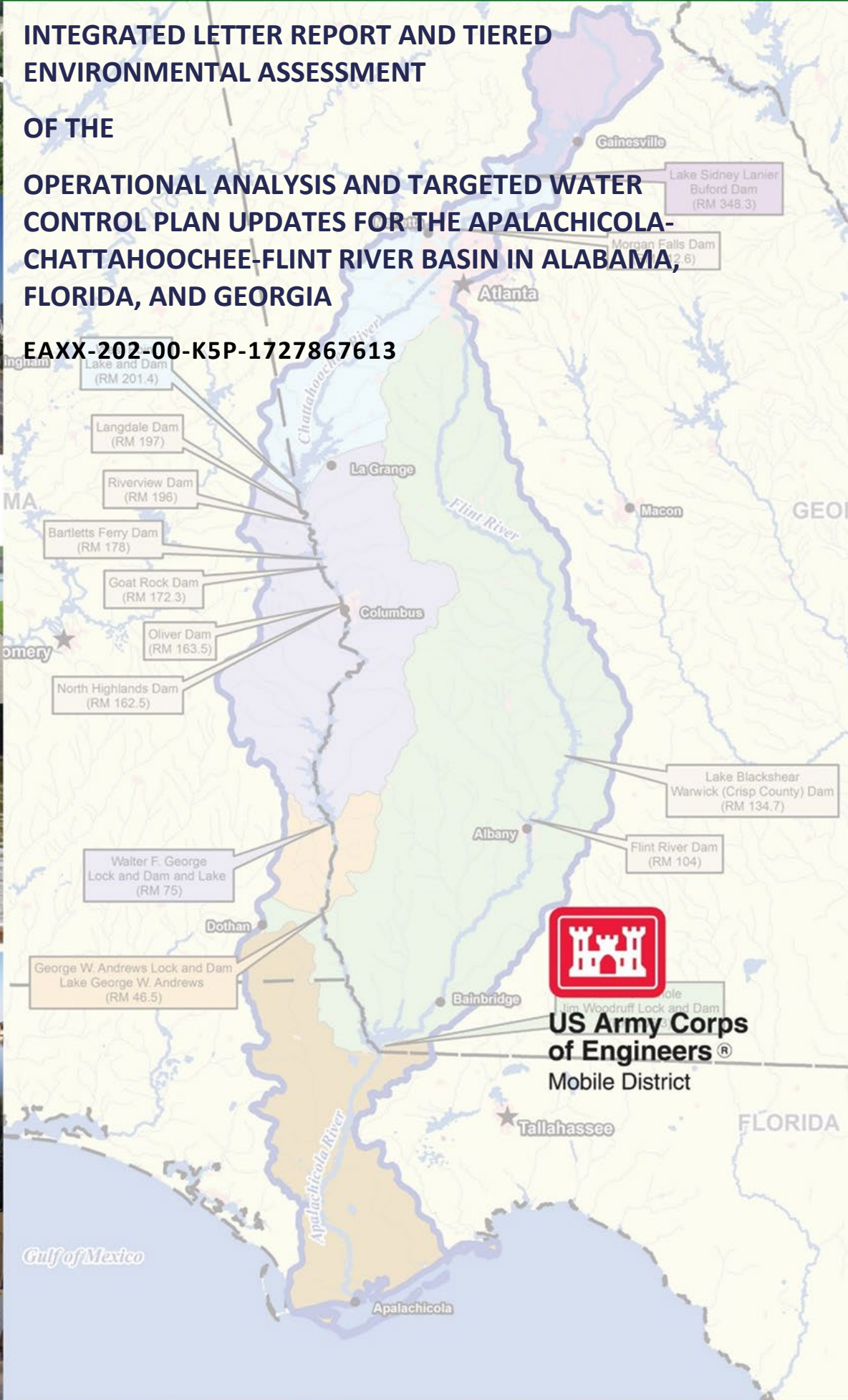


INTEGRATED LETTER REPORT AND TIERED ENVIRONMENTAL ASSESSMENT

OF THE

OPERATIONAL ANALYSIS AND TARGETED WATER CONTROL PLAN UPDATES FOR THE APALACHICOLA-CHATTAHOOCHEE-FLINT RIVER BASIN IN ALABAMA, FLORIDA, AND GEORGIA

EAXX-202-00-K5P-1727867613



US Army Corps of Engineers®
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Appendix H
Hydropower Analysis Center – Memorandum for Record

Internal Memorandum for Record (MFR)

August 30, 2024

From: Mike Paruszkiewicz, USACE Hydropower Analysis Center (HAC)

To: Vongmony Var, CESAM-PD-FE

Subj: Preliminary hydropower analysis of ACF Stay Agreement

This memo summarizes the Hydropower Analysis Center’s (HAC) abbreviated evaluation of ResSim modeling results reflecting modified operations on the ACF system provided by SAM. SAM requested that we look at ResSim output of simulations of a No-Action baseline and a “Stay Agreement” alternative to determine whether a comprehensive hydropower impact analysis would be warranted.

The data provided to us was the result of ResSim simulations of each scenario, covering a hydrologic period from 1939 – 2011. Nine hydropower dams altogether were represented – four federal projects and five nonfederal projects. The simulation results included daily values of pool elevation, outflow, power plant capability, hydropower head, and energy in megawatt-hours (MWh) generated.

In short, the differences between these two simulations, at least from a hydropower perspective, is negligible. Across the 1939 – 2011 hydrologic period and across the entire ACF system, the average net impact to power generation amounts to about 17 MWh per year, which at an average market price of \$50/MWh would be valued at about \$850. On an annual systemwide basis, this is a less than 0.001% impact relative to the No-Action alternative. The highest impact is seen at Bartletts Ferry at about 7 MWh on average during the month of June. The table below summarizes these average impacts across the period of analysis, by project and month.

Table 1 - Average Annual Energy Generation Impacts by Month (MWh)

Month	Buford	Morgan Falls	West Point	Bartletts Ferry	Goat Rock	Oliver	North Highlands	WF George	Woodruff	System
1	0.01	0.00	0.00	-0.01	0.00	0.00	0.00	-0.01	-0.08	-0.10
2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
5	-1.16	-0.24	0.06	0.10	0.05	0.06	0.03	0.12	0.00	-0.96
6	1.79	0.39	4.32	7.08	3.75	4.12	2.43	1.39	0.03	25.31
7	0.02	0.00	-0.04	0.24	0.11	0.14	0.08	-0.23	0.14	0.47
8	0.03	0.00	-2.42	-3.76	-1.94	-2.18	-1.28	-0.46	0.12	-11.90
9	0.03	0.00	-1.11	-2.03	-1.04	-1.17	-0.67	0.85	-0.03	-5.16
10	-2.33	-0.77	-1.95	-3.40	-1.83	-1.99	-1.23	0.16	0.19	-13.16
11	2.19	0.19	0.44	1.05	0.58	0.63	0.36	-14.75	-0.16	-9.47
12	0.01	0.00	0.08	0.12	0.07	0.07	0.04	-1.98	-0.28	-1.85
Annual	0.61	-0.43	-0.61	-0.61	-0.24	-0.32	-0.24	-14.91	-0.06	-16.80

Though these energy-specific impacts do not directly reflect the dependable capacity impacts of the proposed alternative, the very small and infrequent changes to generation suggest similarly insignificant capacity implications.

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In conclusion, HAC does not recommend a comprehensive hydropower analysis of the impacts of the proposed alternative relative to the no-action alternative, as provided to us in ResSim simulation results, at this time.

Mike Paruskiewicz

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