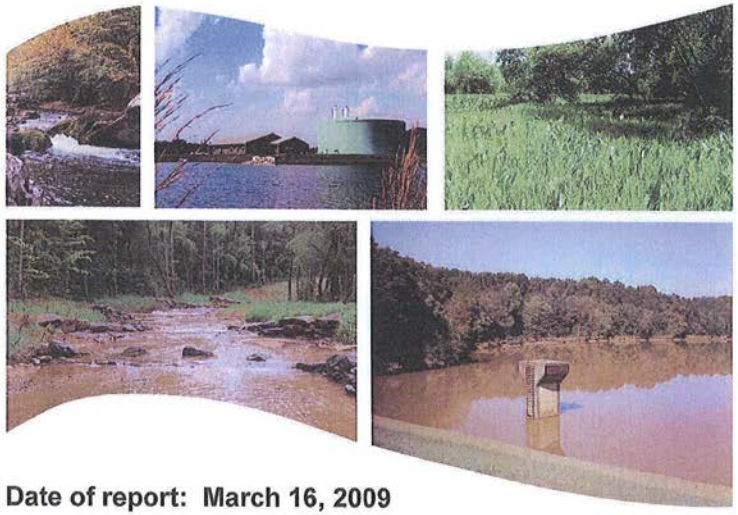
Inventory and Assessment of USDA/Soil and Water Conservation District Watershed Dams

Summary Executive Report



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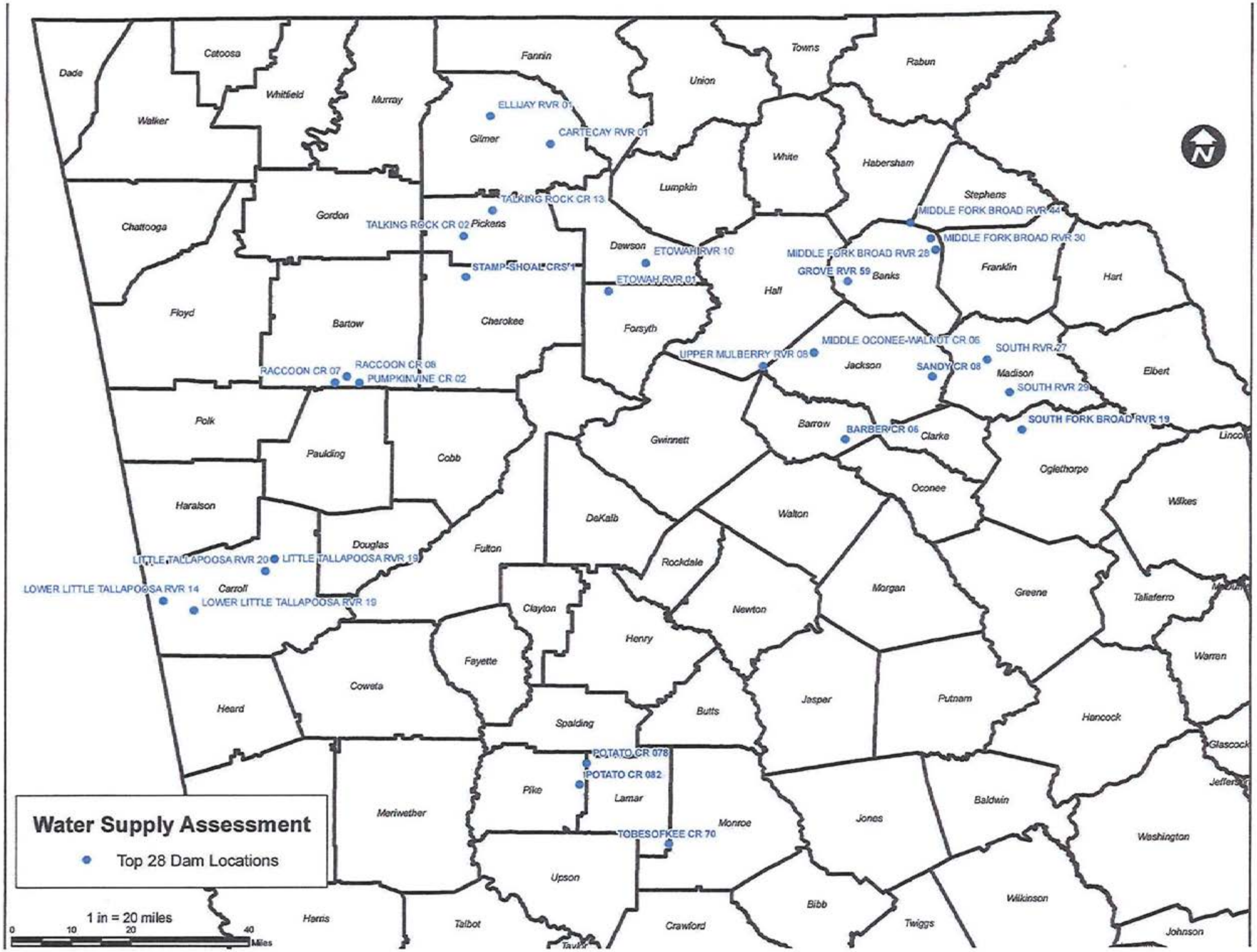
EXECUTIVE SUMMARY

The Georgia Soil and Water Conservation Commission (GSWCC), in partnership with the Natural Resources Conservation Service (NRCS) and the Georgia Environmental Protection Division (EPD), initiated a study to evaluate 166 of the 350 watershed dams in Georgia, designed and constructed under federal laws PL 544 and PL 566, to establish if they could be modified to serve as water supply reservoirs. The initial phase of the study delineated 20 dams based upon a ranking matrix established by the study. Key components of the matrix was a minimum safe yield of 1 MGD, having a refill time of five years or less, proximity to primary trout streams, acceptable impacts on the local infrastructure and the environment. If a dam was located within 2 miles of an adjacent watershed having a minimum drainage basin of 50 square miles, the safe yield was based a pump diversion scheme from the adjacent watershed. Fifteen of the twenty dams were pump diversion schemes. This initial phase of work is documented in the Finding Report dated December, 2007 on file with the GSWCC.

In continuing with this initial phase of work, the selected 20 dams were studied in more detail to better define the safe yield and field verify wetland impacts. Each assessment included detailed assessment of yield potential to include pump diversion where applicable, reservoir stage storage information, historical and projected water usage and demand out to 2050, and environmental and infrastructure impacts. Where available, more detailed topographic maps were used to develop reservoir stage/ storage curves, the number of property parcels were identified, and opinion on projects costs were developed. Each of the twenty dams has individual published reports available through the SSWCC.

Following the completion of the twenty detailed dam assessment reports, the SSWCC decided to evaluate in more detailed eight additional dams that were in areas of the State where demand would exceed supply in the near future. The SSWCC, NRCS, and Schnabel reviewed the original selection criteria and decided to expand the distance boundary to acceptable pump diversion locations. Instead of the two mile limitation, the eight additional dams could have a contributing stream within five miles. Additionally, some pre-screening was performed to maximize storage/yield but keep the refill time less then five years, and minimize impacts on structures and roads. By extending the diversion distance to five miles, all eight dams were viable pump diversion candidates. The detailed reports on the eight dams are on file with the SSWCC.

The locations of all 28 dams are shown on Figure 1. A summary of pertinent data for each of the 28 dams are contained in Table 1.



Water Supply Assessment
Top 28 Dam Locations
1 in = 20 miles
0
10
20
40
Miles
ELLIJAY RVR 01
CARTECAY RVR 01
TALKING ROCK CR 13
TALKING ROCK CR 02
STAMP SHOAL CRS 1
ETOWAH RVR 10
ETOWAH RVR 01
MIDDLE FORK BROAD RVR 44
MIDDLE FORK BROAD RVR 30
MIDDLE FORK BROAD RVR 28
GROVE RVR 59
MIDDLE OCONEE-WALNUT CR 06
UPPER MULBERRY RVR 08
SOUTH RVR 27
SANDY CR 08
SOUTH RVR 29
SOUTH FORK BROAD RVR 19
BARBER CR 06
RACCOON CR 07
RACCOON CR 08
PUMPKINVINE CR 02
LITTLE TALLAPOOSA RVR 20
LITTLE TALLAPOOSA RVR 19
LOWER LITTLE TALLAPOOSA RVR 14
LOWER LITTLE TALLAPOOSA RVR 19
POTATO CR 078
POTATO CR 082
TOBESOFKEE CR 70
Dade
Catoosa
Whitfield
Murray
Fannin
Union
Towns
Rabun
Walker
Gilmer
White
Habersham
Lumpkin
Stephens
Chattooga
Gordon
Pickens
Dawson
Banks
Franklin
Hart
Floyd
Bartow
Cherokee
Forsyth
Hall
Jackson
Madison
Elbert
Polk
Paulding
Cobb
Gwinnett
Barrow
Clarke
Oglethorpe
Oconee
Haralson
DeKalb
Walton
Wilkes
Douglas
Fulton
Rockdale
Carroll
Clayton
Newton
Morgan
Greene
Taliaferro
Henry
Fayette
Warren
Coweta
Heard
Spalding
Butts
Jasper
Putnam
Hancock
Glascock
Pike
Lamar
Monroe
Jones
Baldwin
Meriwether
Upson
Washington
Bibb
Wilkinson
Harris
Talbot
Crawford
Twiggs
Johnson

Watershed Assessment
Top 28 Dams

						Project Costs			
	County	Safe Yield (mgd)	Refill Time (years)	Normal Pool Surface Area (acres)	Water Supply Storage Area (acres)	Dam/Pump Station	Land/Structures	Environmental	Rounded Total
Lower Little Tallapoosa 14 P	Carroll	7.5	4-5	37	526	$30,499,005	$16,866,400	$32,473,560	$79,789,000
Lower Little Tallapoosa 19 P	Carroll	9.9	4-5	26	548	$35,346,727	$18,184,000	$28,545,360	$82,076,000
Little Tallapoosa 20 P	Carroll	0.9	0.8	57	93	$16,259,410	$8,556,000	$25,730,100	$50,546,000
Little Tallapoosa 19 P	Carroll	5.5	4-5	68	933	$25,112,035	$44,808,000	$81,662,310	$151,582,000
Racoon Creek 7 P	Carroll	4.1	4-5	17	343	$21,446,328	$16,176,000	$30,726,270	$68,349,000
Racoon Creek 8 P	Bartow	11.5	4-5	6	149	$37,175,729	$7,338,000	$20,341,440	$64,855,000
Pumpkinvine Creek 2 P	Bartow	6.8	4-5	NA	130	$24,732,106	$7,052,220	$24,044,970	$55,829,000
Ellijay River 1 P	Gilmer	9.6	2	13	230	$25,888,361	$11,875,500	$46,199,580	$83,963,000
Cartecay River 1 P	Gilmer	8.6	2	13	181	$26,132,116	$8,025,000	$22,103,820	$56,261,000
Talking Rock Creek 2	Pickens	1	4	7	124	$10,116,292	$5,444,000	$18,743,970	$34,304,000
Talking Rock Creek 13	Pickens	2.3	5	22	173	$24,518,911	$5,908,000	$22,005,030	$52,432,000
Etowah River 10 P	Dawson	17.8	4-5	9	516	$46,229,646	$25,765,000	$37,341,360	$109,336,000
Etowah River 1 P	Forsyth	24.3	4-5	37	663	$37,396,661	$89,102,500	$56,184,420	$182,684,000
Upper Mulberry River 8 P	Hall	2.6	4-5	22	193	$27,657,963	$26,215,000	$26,755,410	$80,628,000
Middle Oconee-Walnut Creek 6P	Jackson	3	4-5	20	299	$22,255,785	$9,060,000	$25,114,290	$56,430,000
Middle Fork Broad River 28 P	Banks	8	4-5	19	451	$38,153,027	$13,392,000	$20,623,800	$72,169,000
Middle Fork Broad River 44	Habersham	1.5	2	53	94	$19,660,752	$4,328,000	$18,063,000	$42,052,000
Middle Fork Broad River 30 P	Banks	3.5	4-5	15	131	$17,276,708	$4,464,000	$18,860,850	$40,602,000
South River 27	Madison	3.9	5.5	51	992	$31,007,285	$31,596,000	$71,429,640	$134,033,000
South River 29	Madison	5.7	5.5	87	1410	$28,587,835	$48,192,000	$94,817,940	$171,598,000
Sandy Creek 8 P	Jackson	1.3	4-5	14	165	$17,535,431	$5,132,000	$26,673,000	$49,340,000
Barber Creek 6 P	Barrow	4.9	4-5	30	510	$36,963,772	$12,613,600	$40,030,950	$89,608,000
Grove River 59 P	Banks	6.9	4-5	67	530	$40,711,595	$5,916,000	$53,631,570	$100,259,000
South Fork Broad River 19 P	Oglethorpe	6.6	4-5	25	730	$40,248,364	$7,927,000	$63,281,340	$111,457,000
Tobesofkee Creek 70 P	Lamar	4.5	3	74	550	$24,622,561	$5,893,000	$62,697,900	$93,213,000
Potato Creek 78 P	Lamar	2	4-5	42	310	$16,637,074	$4,625,000	$34,815,510	$56,078,000
Potato Creek 82 P	Pike	5.1	4-5	33	490	$29,062,999	$8,698,000	$39,995,640	$77,757,000
Stamp Shoal Creek 1 P	Cherokee	5.6	7	25	450	$27,823,575	$10,188,000	$52,829,580	$90,841,000

P- designates a pump diversion system
Rounded Total Costs does not include costs for engineering or any contingencies