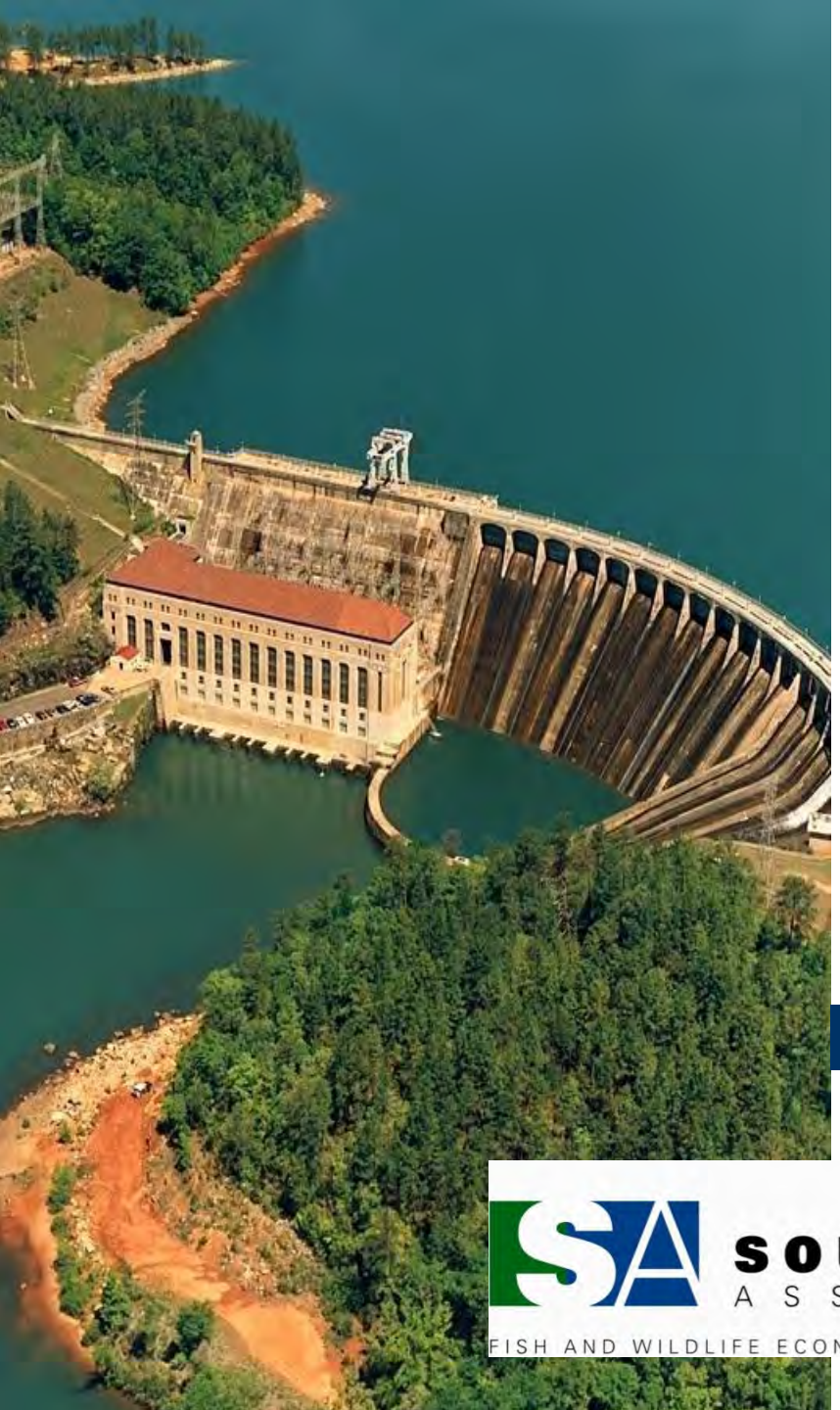

MARTIN DAM RELICENSING

Effects of Changes in Water Level Management on Usage of Lake Martin for Recreation and Related Economic Activity 12(g) and 12(h)

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12 (G) – Effects Of Raising Winter Pool Level and Increasing the Duration Of Summer Pool On Recreation Use:

- Estimate total recreational use of the lake, by month and by day type (weekday, weekend, holiday)
- Estimate recreational user characteristics (type of activity, type of residency)
- Estimate the effects of six different water levels on recreational use.

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12 (H) – Effects Of Raising Winter Pool Level and Increasing the Duration Of Summer Pool On Lake Martin Economic Indicators:

- Estimate trip and equipment expenditures related to recreational use of Lake Martin
- Estimate real estate-related expenditures on the shoreline: purchase, construction and/or maintenance
- Estimate current market value of shoreline property
- Estimate effects of different water levels on expenditures and shoreline property values
- Estimate the current economic impacts of recreational use on the local and statewide economies and the economic impacts from different water level scenarios

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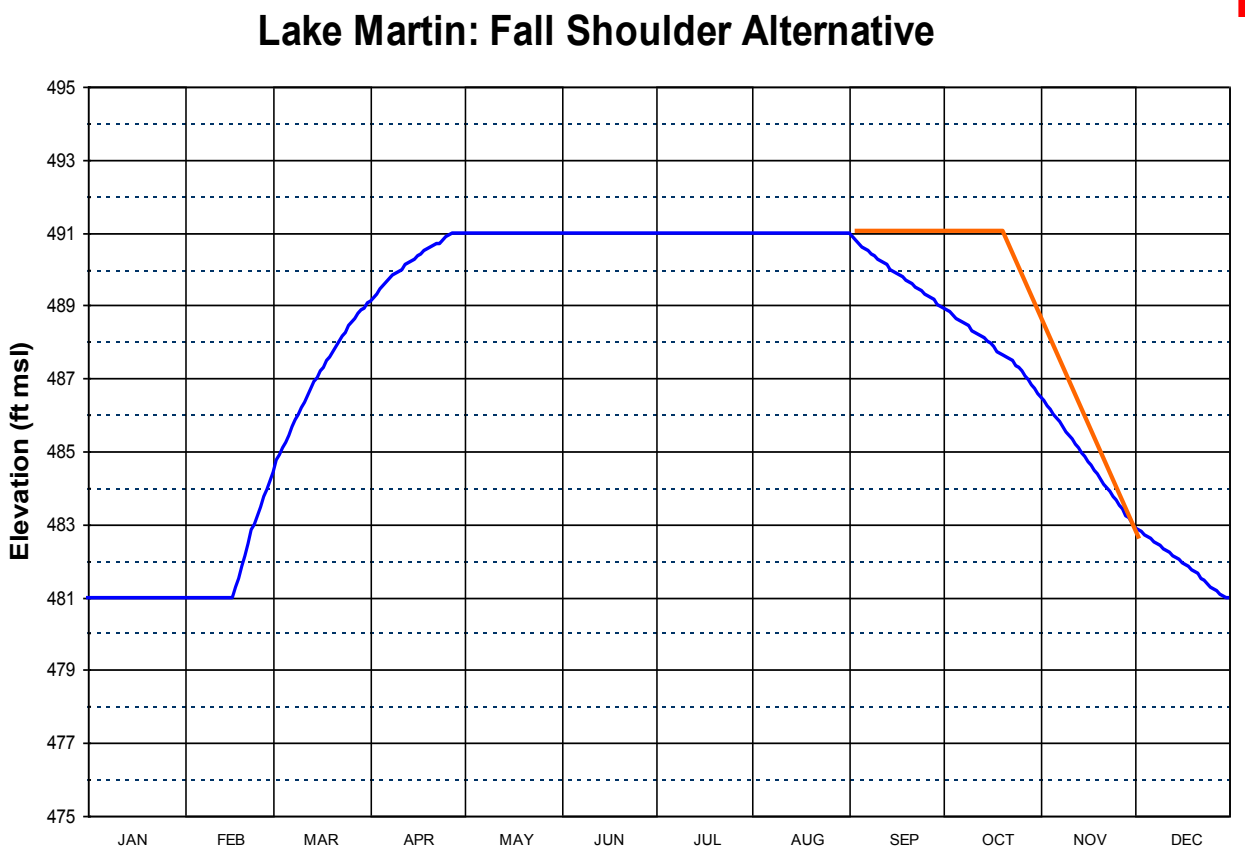
Fall Shoulder Alternative (FSA)



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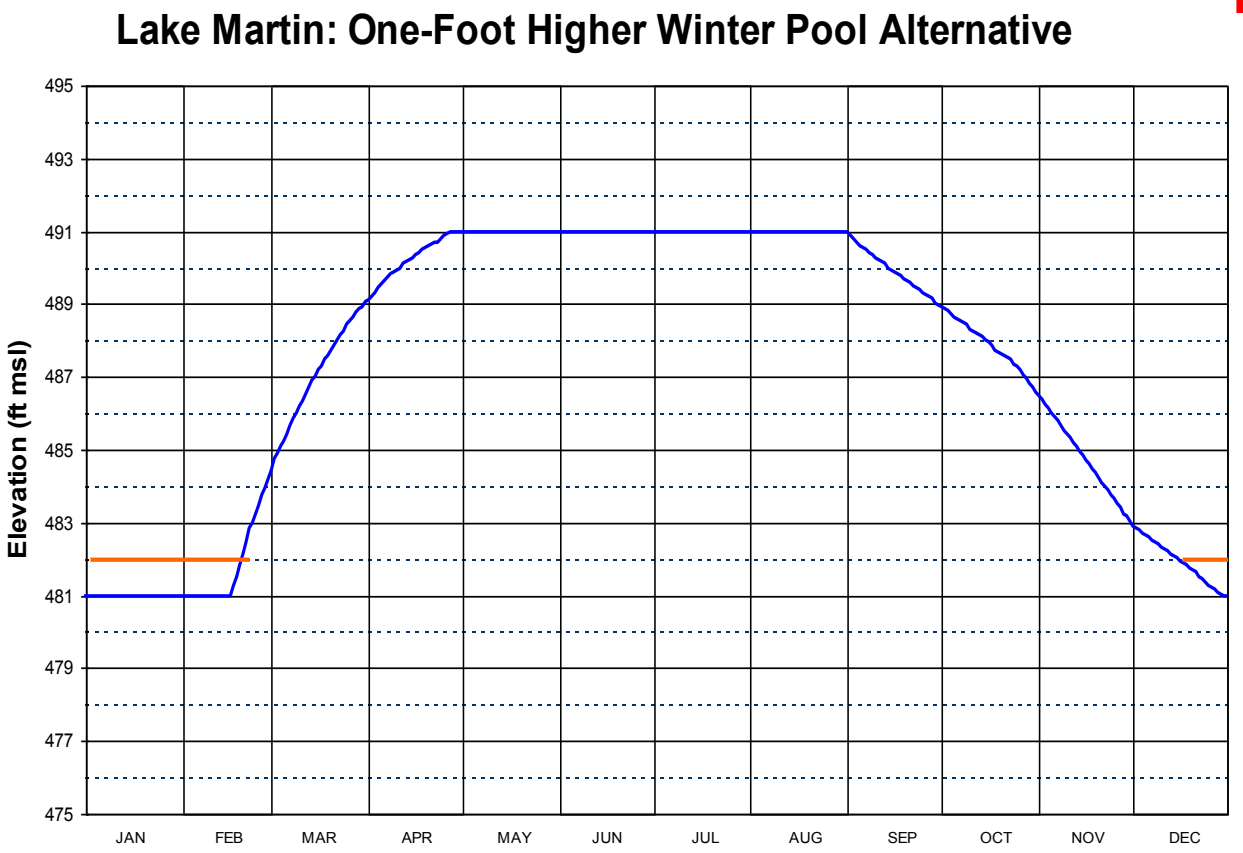
Winter Pool 1-foot Higher (WP1)



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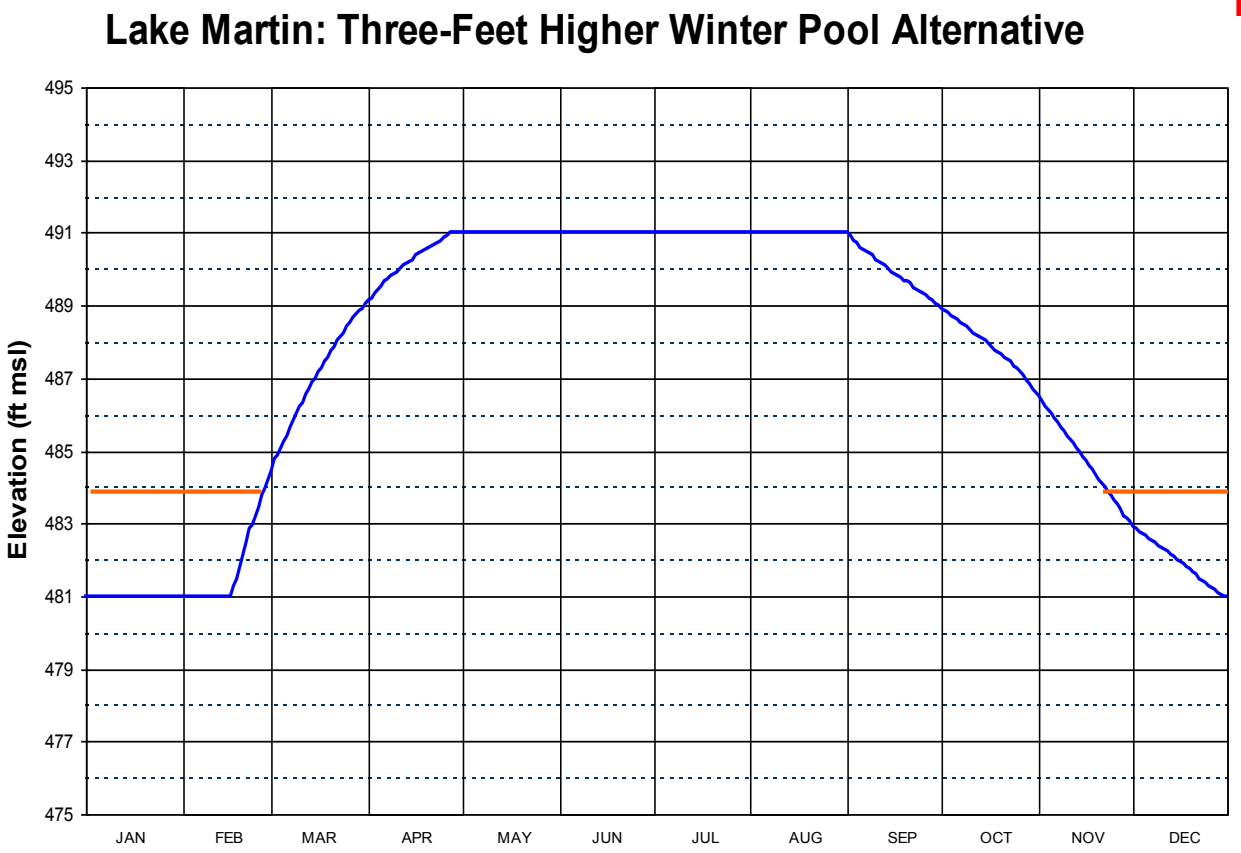
Winter Pool 3-feet Higher (WP2)



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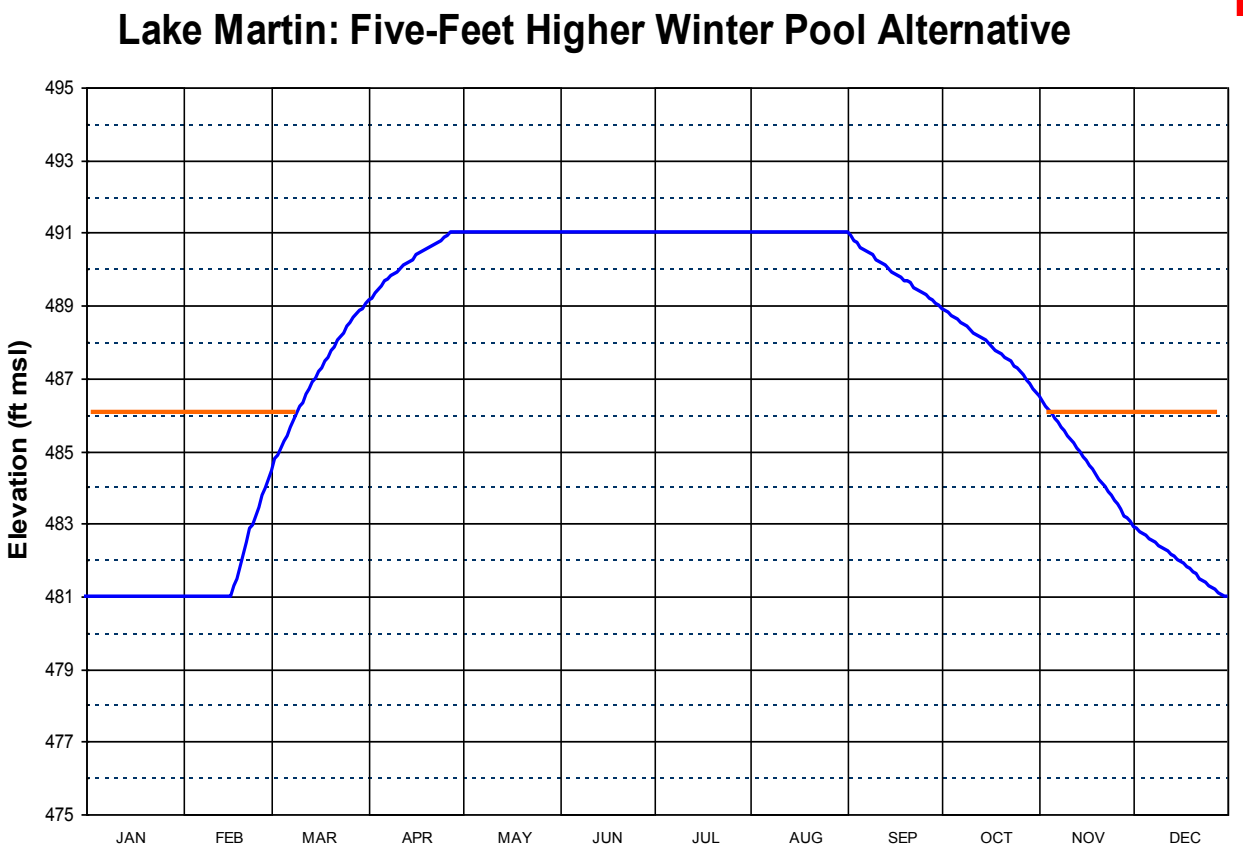
Winter Pool 5-feet Higher (WP3)



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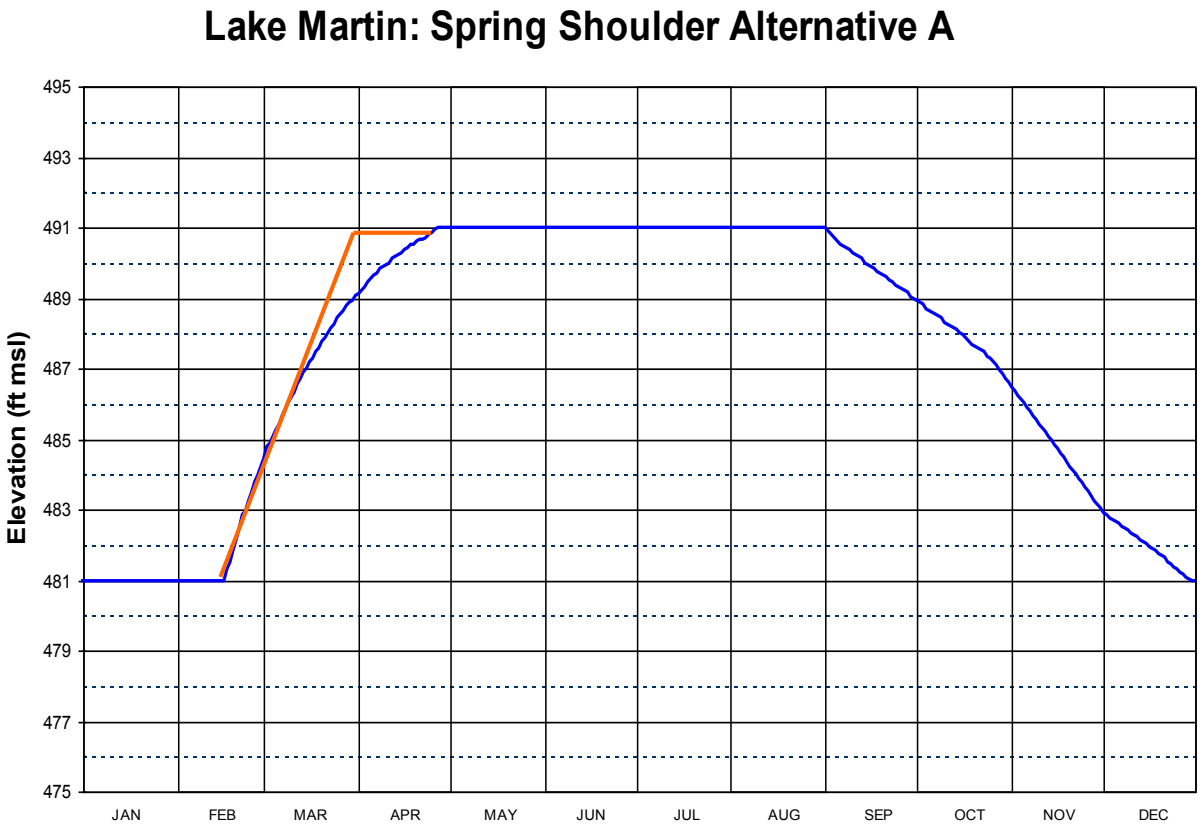
Spring Shoulder Alternative A (SSA)



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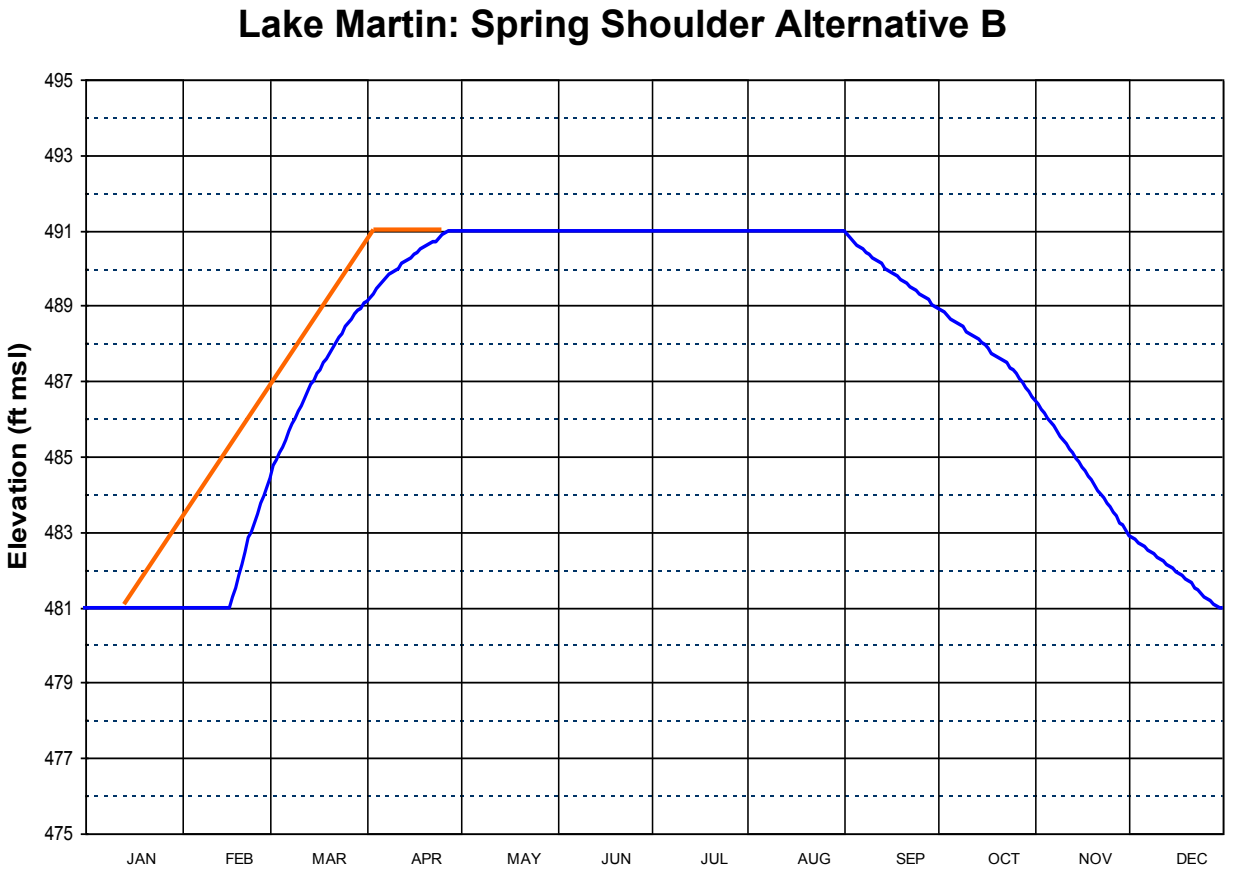
Spring Shoulder Alternative B (SSB)



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Process

- Public Input:
  - Kick-off meeting to gain feedback and insights from local stakeholders.
- Data collection
- Analysis & modeling
- Two business roundtables to ground-truth initial results:
  - Real estate representatives
  - Local business leaders

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Data Collection:

- Task I: Recreational Use and Expenditure Survey
- Task II: Shoreline Property Owner Survey
- Task III: Business Survey

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Task I: Recreational Use and Expenditure Survey

PURPOSE WAS TO ESTIMATE:

- Recreational use of the lake [12(g)]
- Recreational user characteristics (type of activity, residency type, etc.); [12(g)]
- Estimate trip-related expenditures [12(h)]
- Estimate equipment expenditures [12(h)]
- Estimate effects of increasing the duration of the summer pool and increasing the elevation of winter pool [12(g) &12(h)]

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Task I: Recreational Use and Expenditure Survey

Method:

- On-site survey (168 sampling days from June 2009 to 2010)
- Sampling dates and locations randomly selected
- Lake Martin(168 sampled days) plus 11 public access sites and tailwater sampling (42 sampled days each)

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Task I: Recreational Use and Expenditure Survey: Interviews

	SOURCE		
	Reservoir	Recreation Sites	All Surveys
Surveys attempted	**725**	**91**	**816**
			-
Declined	87	32	119
Previously interviewed	4	2	6
No responses	3	-	3
Total removed	**94**	**34**	**128**
Survey completed	**631**	**57**	**688**

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Task II: Shoreline Property Owners Survey

PURPOSE WAS TO ESTIMATE:

- Shoreline property owners characteristics, recreational use and their property [12(g)]
- Months when docks become unusable [12(g)]
- Current market value of shoreline property [12(h)]
- Recreation lake usage expenditures [12(h)]
- Construction and maintenance costs [12(h)]
- Estimate effects of increasing the duration of the summer pool and increasing the elevation of winter pool [12(h)]

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Task II: Shoreline Property Owners Survey

Method:

- Mail survey of shoreline property owners
- 10% of privately owned shoreline parcels were randomly selected (N = 690)
- Six different versions – with one scenario – were distributed
- Post card announcement and two rounds of surveys sent in Nov/Dec 2009
- Online response option

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Task II: Shoreline Property Owners Survey: Response

Survey Version	Mailing	Undeliver-able	Responses		Response Rate
			Online	Mail	
Fall Shoulder Alternative	115	7	3	56	54.6%
Winter Pool Alt 1	115	10	7	53	57.1%
Winter Pool Alt 2	115	8	10	54	59.8%
Winter Pool Alt 3	115	11	4	62	63.5%
Spring Shoulder Alt A	115	6	5	65	64.2%
Spring Shoulder Alt B	115	7	4	54	53.7%
TOTAL	**690**	**49**	**33**	**344**	**58.8%**

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Task III: Lake Martin Business Survey

PURPOSE WAS TO ESTIMATE:

- Characteristics of business and business activity (e.g., on lake or off lake, type of business, gross annual sales, etc.); [12(h)]
- Effects of increasing the duration of the summer pool and increasing the elevation of winter pool on business activity. [12(g)]

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Task III: Lake Martin Business Survey

Method:

- Sale tax data were not available to support a regression-based statistical model.
- A DELPHI survey was used (Rand Corp/DoD):
  - Two rounds of email-based surveys supported by direct phone calls.
  - Draft results were reviewed with other local businesses to ground-truth results.
- Existing data sources used to report size & details of the local business community.

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Task III: Lake Martin Business Survey: Delphi Panel

Type of Business	Total
Food & Beverages	4
Gifts and Souvenirs	1
Marinas	3
Real Estate	2
Other - Retail	2
Government	3
Total	**15**

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RESULTS:

Recreational Use

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Recreational Use of Lake Martin

	Visitors and seasonal landowners	Permanent residents	TOTAL
Reservoir hours	1,379,000	551,021	1,930,021
Tailwater hours	8,854	3,538	12,392
Total hours	1,387,854	554,559	1,942,413
% of Total	71.40%	28.60%	100.00%
Total Days	**264,750**	**105,789**	**370,540**

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Recreational Use of Lake Martin

Month	Weekday user-days	Weekend user-days	Holiday user-days
January	3,014	1,027	0
February	3,393	1,386	0
March	10,630	3,283	0
April	11,042	16,933	0
May	16,482	13,082	1,074
June	27,052	28,014	0
July	70,537	67,616	10,405
August	17,031	23,069	0
September	9,145	9,552	4,922
October	5,625	3,400	0
November	3,757	4,076	0
December	1,632	996	0
Sub-total	**179,339**	**172,433**	**16,401**
Tailwater (annual)	1,516	812	37
Total	**180,855**	**173,245**	**16,438**

Recreational Use of Lake Martin

Reservoir Activity	User-days	% of Total
Pleasure boating	191,364	52.0%
Swimming/beach use	35,496	9.6%
No primary activity	33,094	9.0%
Water-skiing/tubing/other tow	29,574	8.0%
Jet skiing	25,653	7.0%
Fishing (from boat)	19,382	5.3%
Canoeing/kayaking	7,703	2.1%
Fishing (from shore)	7,564	2.1%
Tent or vehicle camping	5,458	1.5%
Sailing	5,014	1.4%
Sightseeing	2,884	0.8%
Other	4,987	1.4%
Total	**368,173**	**100.0%**

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RESULTS:

Recreational Expenditures

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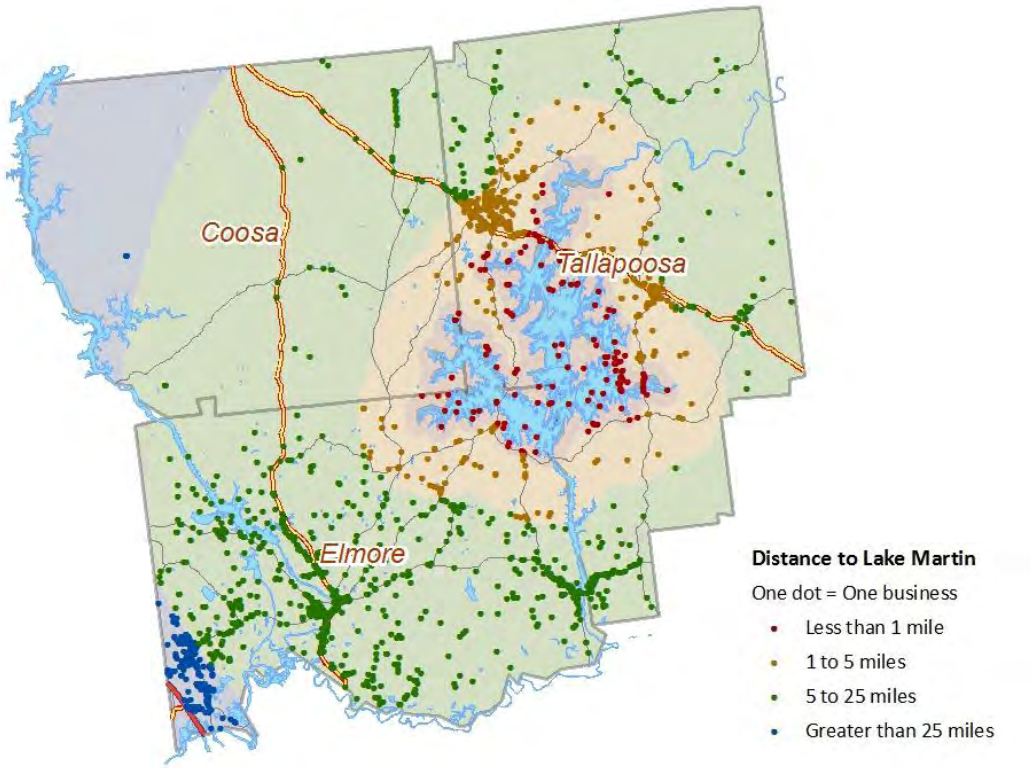
Businesses in the Lake Martin Region



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Regional Industries: Annual Revenues

Industry Sector	In Millions of Dollars			
	Coosa	Elmore	Tallapoosa	Total
Ag, Forestry, Fish	$2.5	$21.5	$14.9	$39
Mining	$4.1	$3.7	$8.7	$17
Construction	$24.8	$307.7	$155.5	$488
Manufacturing	$79.6	$315.3	$437.7	$833
Trans & Utilities	$23.8	$170.7	$55.4	$250
Wholesale Trade	$81.5	$946.9	$266.7	$1,295
Retail Trade	$48.3	$927.9	$469.2	$1,445
Finance, Insur, R.E.	$6.2	$295.0	$350.1	$651
Services	$94.0	$986.9	$740.8	$1,822
Total	**$365**	**$3,976**	**$2,499**	**$6,839**

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Regional Industries: Percent of Sales and Employment

	Sales	Employment
Agriculture, Forestry, Fish	0.6%	1.1%
Mining	0.2%	0.1%
Construction	7.1%	6.6%
Manufacturing	12.1%	15.2%
Transportation, & Utilities	3.6%	2.8%
Wholesale Trade	18.9%	3.9%
Retail Trade	21.1%	24.2%
Finance, Insurance, Real Estate	9.5%	5.7%
Services	26.5%	39.8%
Public Administration	0.3%	0.4%
Total	**100.0%**	**100.0%**

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Trip-related Expenditures (dollars spent per day of recreation)

Expenditure category	Visitors & Seasonal		Permanent Residents	
	N	Mean	N	Mean
Transportation	617	$11.17	271	$14.08
Food & beverages	617	$8.76	270	$12.04
Trip-related gear and services	617	$1.18	270	$1.42
Lodging	621	$2.39		na
Miscellaneous	617	$1.35	270	$2.52
Total	**617**	**$24.86**	**270**	**$30.06**

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Trip-related Expenditures (total annual spending)

Expenditure category	Visitors & Seasonal Residents	Permanent Residents	All Users
Transportation	$2,958,537	$1,489,476	$4,448,013
Food & beverages	$2,319,597	$1,273,960	$3,593,558
Trip-related gear and services	$311,829	$149,763	$461,592
Lodging	$632,323	na	$632,323
Miscellaneous	$356,573	$266,609	$623,182
Total	**$6,578,859**	**$3,179,808**	**$9,758,667**

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Recreation Equipment Expenditures (total annual spending)

Expenditure category	Visitors & Seasonal Residents	Permanent Residents	All Users
Boats & trailers	$23,507,132	$4,374,588	$27,881,720
Boating accessories & repairs	$3,252,893	$1,078,535	$4,331,428
Fishing equipment	$491,244	$367,617	$858,862
Total	**$27,251,270**	**$5,820,740**	**$33,072,010**

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Real Estate & Related Expenditures (total annual spending)

Expenditure category	Visitors & Seasonal Residents	Permanent Residents	All Users
Real estate	$81,215,209	$36,967,130	$118,182,338
House and building construction	$52,696,166	$14,018,986	$66,715,152
Boat docks and boat houses	$4,774,004	$1,246,337	$6,020,341
Other equipment	$1,323,068	$245,897	$1,568,966
Total	**$194,510,987**	**$64,119,829**	**$258,630,816**

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Total Annual Recreation-Related Spending ($ million)

Expenditure category	Visitors & Seasonal Residents	Permanent Residents	All Users
	$ millions		
Trip-related	$6.6	$3.2	$9.8
Recreation equipment	$27.3	$5.8	$33.1
Real estate & construction	$194.5	$64.1	$258.6
Total	**$228.3**	**$73.1**	**$301.5**

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Economic Effects of Combined Trip, Equipment & Real Estate Spending

Visitors/Seasonal Residents	Direct	Total (incl. multiplier)
Output	$96,765,288	$121,954,493
Income	$21,952,294	$29,977,400
Employment	733	1,000
Permanent Residents		
Output	$26,263,957	$33,103,293
Income	$5,913,172	8,089,760
Employment	205	277
Total		
Output	**$123,029,245**	**$155,057,786**
Income	**$27,865,466**	**38,067,160**
Employment	**937**	**1,277**

Current estimated state/local and federal tax revenues associated with trip, equipment and real estate spending

	State and Local Tax Revenues	Federal Tax Revenues	Total tax Revenues
Trip Spending			
Visitors/Seasonal	$372,664	$330,224	$702,888
Permanent Residents	$171,160	$146,428	$317,588
Equipment Spending			
Visitors/Seasonal	$910,279	$767,525	$1,677,804
Permanent Residents	$196,463	$166,454	$362,917
Real Estate Spending			
Visitors/Seasonal	$2,390,005	$4,848,574	$7,238,579
Permanent Residents	$659,154	$1,301,579	$1,960,733
All Spending	**$4,699,725**	**$7,560,784**	**$12,260,509**

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MARTIN DAM RELICENSING

RESULTS:

Estimated Effects of Alternative Water Level Scenarios

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Estimated Change in Recreational Use Per Water-Level Scenario

Management Scenario	Seasonal & Day Visitors (% change in trips)	Permanent Residents (% change in days)	**Wtd Avg % change for all users**
FSA	13%	5%	**11 %**
WP1	1%	6%	**2 %**
WP2	9%	6%	**8 %**
WP3	11%	8%	**10 %**
SSA	3%	3%	**3 %**
SSB	8%	5%	**7 %**

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Estimated Change in Recreational Use: Delphi Results

Management Alternative	Average Predicted Change in Business Activity
Fall Shoulder Alternative	14%
Winter Pool Alt. 1	0%
Winter Pool Alt. 2	5%
Winter Pool Alt. 3	15%
Spring Shoulder Alt. A	7%
Spring Shoulder Alt. B	8%

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Estimated Change in Trip-Related Spending Per Water-Level Scenario

	Visitors	Permanent Residents	All Users
Scenario	*$ millions*		
Baseline	**$6.6**	**$3.2**	**$9.8**
FSA	$7.4	$3.3	$10.8
WP1	$6.6	$3.4	$10.0
WP2	$7.2	$3.4	$10.5
WP3	$7.3	$3.4	$10.7
SSA	$6.8	$3.3	$10.1
SSB	$7.1	$3.3	$10.4

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Estimated Change in Selected Equipment Expenditures Per Water-Level Scenario

Scenario	Percent of *visitors/seasonal residents* who would increase spending:	
	Boat Accessories	Docks & boat houses
FSA	39%	41%
WP1	20%	20%
WP2	31%	28%
WP3	33%	36%
SSA	18%	13%
SSB	31%	27%

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Estimated Change in Lakefront Property Values Per Scenario

Scenarios	% Change		
	Permanent Residents	Seasonal / Occasional	All Property Owners
FSA	15.4%	8.9%	**10.7%**
WP1	7.9%	7.6%	**7.7%**
WP2	11.0%	8.7%	**9.8%**
WP3	9.2%	15.9%	**12.6%**
SSA	6.0%	6.5%	**6.4%**
SSB	0.9%	16.3%	**10.4%**

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Estimated Change in Lakefront Property Values Per Scenario

Scenarios	Increase in Total Property Value
Baseline	**$2.87 billion**
	$millions
Fall Shoulder Alternative	$231.8
Winter Pool Alternative #1	$166.8
Winter Pool Alternative #2	$212.3
Winter Pool Alternative #3	$273.0
Spring Shoulder Alternative A	$138.7
Spring Shoulder Alternative B	$225.3

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Conclusions:

- Lake Martin is an important recreational resource locally and beyond.
- Recreation spending due to Lake Martin is an important contributor to the local economy, but it is not dominant.
- Recreational use is highly seasonal.

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Conclusions:

Winter Pool 3 (WP3) and Fall Shoulder Alternative (FSA) were consistently preferred. Some reported reasons:

1. FSA provided additional months of warm water (preferred by visitors) and more summer months of usable docks (residents)
2. WP3 allows many docks to be used longer, if not year-round, and may not deter as many visitors from the region.

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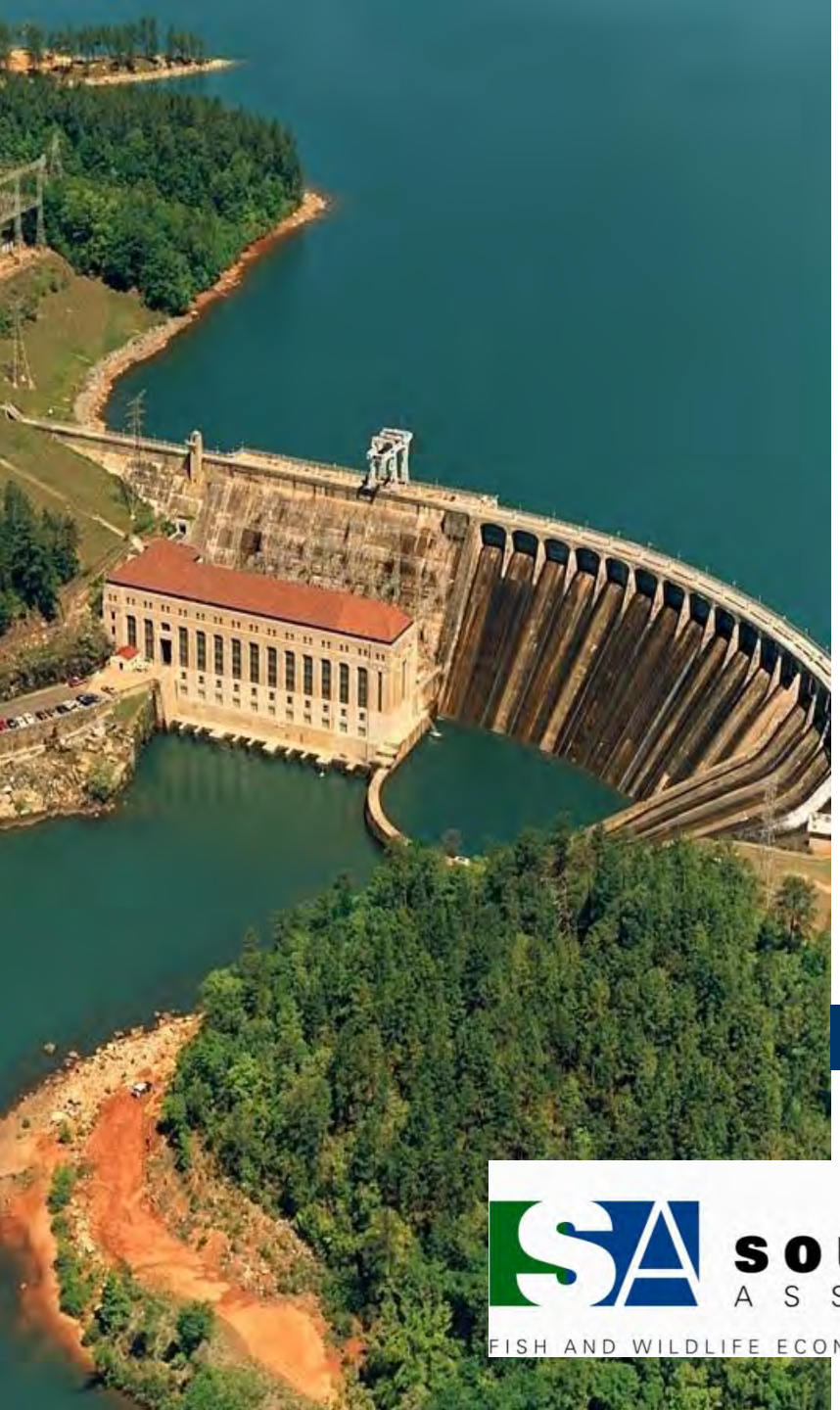

MARTIN DAM RELICENSING

QUESTIONS?

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