Testimony of

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To the Committee on Small Business of the United States House of Representatives
In a hearing entitled:

"The Impact of the 2006-2007 Drought on Georgia's Economy"

March 25, 2008

Allow me to begin by thanking the Committee, its members, and the Congressional staff that worked so hard to arrange and prepare for this hearing in LaGrange. It is an honor for this community to have this body here to listen to our concerns and to hear testimony about the drought and related issues associated with the ACF River basin.

Let me also note we have great appreciation and admiration for those that serve the United States Army Corps of Engineers. While we have significant disagreements with them from time to time over operations along the river, they must always know that we are proud of their service to this great nation. We also are honored to have US Fish and Wildlife Service regional representatives participate in these hearings today. However, we do NOT agree with or appreciate the approach of these federal agencies in managing this river system, especially West Point Lake.

In 1962 the United States Congress authorized the Army Corps of Engineers to build a reservoir above West Point, Georgia for 5 specific purposes:

- Sport Fishing and Wildlife Development
- Flood Control
- Hydropower
- General Recreation
- Navigation

A benefit to cost ratio and financial analysis was completed by the Corps attributing values to justify the development of a lake at West Point. This analysis revealed, that when combined, hydropower, recreation, and sport fishing and wildlife development, yielded 79% of the benefit to cost for the project. To our knowledge, West Point Lake was the first multi purpose lake authorized by Congress carrying "general recreation" as an authorized purpose. Yet we see these three authorized uses are sacrificed in operations by the Corps to meet other demands in the basin.

The authorized uses of hydropower, sport fishing and wildlife development, and recreation seem to fit hand in hand in the use of reservoirs. Hydropower interests generally like a full pool levels so they can have access to peaking power to meet demands. Empty lakes mean the battery is also empty as the water doesn't exist to generate electricity. Recreation, along with sport fishing and wildlife development, also have the same need- stable, reliable and full pools of water to provide for obstruction free boating safety, usable lake surface area, access to shoreline recreational facilities, and a viable habitat for fish and wildlife. Yet the operations by the Corps of West Point Lake have been almost the opposite. Consistently low water levels have plagued this lake over its entire history as the Corps has utilized the resource for other needs, some of which were not the original intent of Congress.

As the lake was built, the Corps immediately established and has historically utilized a system of very aggressive rule curves and action zones to guide their management of water elevations at West Point Lake. In doing so, the Corps set aside massive amounts of storage and attributed that space for other purposes and demands elsewhere on the river

system. This unused capacity leaves the lake at very low elevations and below the initial recreational impact level for much of the year. Yes, we agree it is essential that the Corps must provide for flood control, but they fail to utilize the full capabilities of the lake. West Point has flood storage above the normal pool of 635, but they have rarely used that additional capacity. Their 1981 Master Plan reveals that the maximum design pool elevation is 646.20 m.s.l.- a full 11 feet above the normal pool of 635 m.s.l[1]. This additional storage has never been fully utilized for flood control - clearly a wasted resource.

The rule curve system in place today for West Point is the harshest of any lake on the entire ACF system with typical variance of at least 7 feet between winter and summer. That's under the best of conditions. Based on information provided to us by the Corps in 2006 (attached chart), before the worst part of the drought, it appears that using historic averages, West Point Lake has only been above its initial recreational impact level of 632.5 m.s.l about 20 percent of the time, which is the level at which recreation begins to be impaired. At the time when the drought was upon us, the Corps failed to utilize valuable capacity to store water in the lake. This past summer we saw the virtual destruction of the lake when it was dropped 13 feet from its normal pool to 622 m.s.l., only 2 feet above its dead pool. What we have seen demonstrated using their current rule curve and action zone system is that the Corps won't store water, particularly when it is so desperately needed to meet the needs of mankind.

Over the past 2 years, we watched as the Corps systematically drained the entire basin during the onslaught of the worst drought we've ever seen. In the springtime, when West Point Lake needed to recharge with nature's rains, the Corps sent vast amounts of water south downstream to the Gulf of Mexico, with Fish and Wildlife Services blessing, and drained the lakes so sturgeon could spawn on the Apalachicola River at a time when lakes needed to refill. Please remember the sturgeon and mussels existed long before there were any federal lakes on the Chattahoochee, and to presume they can't exist after 50 years of living in a regulated river system is at best highly questionable.

The drought worsened, but the Corps continued to drain first Lake Walter F. George, then West Point Lake, and finally Lake Lanier throughout the spring and summer of 2007. The Corps maintains they have always had a flow of 5,000 CFS or greater from Jim Woodruff Lock and dam to the Apalachicola. That may be true of the Corps' operations using water stored in upstream reservoirs. But what mother nature offers in support of that flow has been much less during the drought. I think we all know that mother nature doesn't offer guarantees in writing with a "5" followed by 3 zeros at a given point on a river, especially when the total inflow into the ACF basin above that point is almost half that amount. The Corps deliberately ignored that nature was only providing between 2,000 and 3,000 CFS naturally in the river system while they offered 5,000 CFS and more to the Apalachicola River under the IOP. So the Corps made up their guaranteed

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[1] *Design Memorandum 37, West Point Lake, Master Plan*, Savannah District USACE, April 1981, photocopy, p.1

flow from the federal lakes that weren't designed or authorized to provide flows for thermo electric power plants, sturgeon, or mussels.

To make matters worse, instead of shutting the Jim Woodruff Dam off immediately after providing a flow for the Apalachicola, the Corps, with a Fish and Wildlife Service blessing, continued to draw down from the Federal lakes using a gradual "ramp down" rate that lasted days at the end of a discharge cycle. It would seem far more logical to turn the faucet off when you're done with it rather than to keep it running. But the "so called" IOP (Interim Operating Plan) provided for this new concept - a concept that we would scold our children for if we saw them using this practice at home. In the mean time, the three northern federal lakes - the source of the water - continued to drain, and disappeared while the drought worsened. This ramp down rate concept of the IOP was supposedly to protect mussels that might be stranded on the banks of the river.

Our frustration as a community is that the uses authorized for West Point Lake, recreation, hydropower, and sport fishing and wildlife development, that would yield the most economic benefit, and were associated with the highest level of expectation in our area based on the commitments made by the government, seem largely ignored. In fact our community often wonders how our lake continues to be misused. We see a Corps of Engineers overly concerned about the flow needs of thermo electric power generation for Plant Scholz and Plant Farley, industrial needs, waste assimilation flows and fish and wildlife to our south on the river. Remember, Plant Scholz on the Apalachicola River existed long before the advent of West Point Lake. Plant Farley could have been (and still could be) designed so as to operate on the lowest possible natural yield of the river and not require guaranteed flow augmentation from lakes to the north. Last summer the Corps reminded area stakeholders of the need to meet these downstream flows. Sometimes we'd hear the need was for required flows on the Apalachicola for Endangered species, other times we heard that the flows were required to support these so called essential thermo electric facilities, and at other times we'd hear downstream flows were needed for waste assimilation. All we knew was that West Point Lake and Lake Lanier disappeared, and Southern Company's Georgia Power lakes on the river within 10 miles of West Point remained full all summer long.

Our feeling is that if Southern Company operations on the lower part of the river need water for thermo electric power generation, then let them use the water stored in their own lakes to meet that need, and leave the federal lakes alone. We can't find anywhere where Congress said West Point Lake was built to provide flows to support Southern Company operations or their stockholders. If species on any segment of the river need water, especially during drought conditions, then allow them access only to the yield offering flows that would be provided by nature. Let's not provide artificially high flows guaranteed and augmented by the Corps of Engineers that are two times the natural yield of the river in drought conditions.

Congress made clear that the federal lakes were designed and to be utilized for hydropower, not thermo electric power generation, among other uses. Hydropower as a source of energy is compatible with other uses and represents an important mix in the

source of energy for many cities and electric co-ops as an electric source. LaGrange is one of those communities that rely on hydropower generation in its mix of generation resources. Because of the way the Corps operated river systems in the south during the drought, we lost access to over 1 million kilowatt hours per month of energy from hydropower resources over the past two years. Fortunately, we were able to make that up from other sources. But those sources are less environmentally friendly than hydropower. The cost paid for that replacement energy was far higher, and cost this community over $50,000 per month. Ultimately that cost is born by residential, small business, institutional and industrial customers in our community. Draining the river system for downstream endangered species or thermo electric facilities owned by private industries damages small communities along the river like LaGrange.

Any thought of moving waters from federal lakes downstream for heat or waste assimilation is another concern. Flow augmentation for such needs downstream activities is not listed as an authorized use for West Point Lake waters. Taking valuable water from federal lakes to dilute waters for communities and industries over and above the natural lowest flow of the river is simply the wrong thing to do, especially in the middle of a drought. Our society has the technological capabilities to clean the wastewater we use better than when we withdraw it from a source. There are ways to stabilize temperature and to treat wastewater without diluting it with the limited stored water we have available. Downstream communities and industries that want to avoid the cost of cleaning up their waste treatment operations should be told to take actions to improve their systems to eliminate any demand for additional flows from federal lakes. When extra water is taken from the federal lakes for such uses, our government is simply taking the wealth and resources that were committed to our community in the form of water in a lake, and then transferring it to others downstream who want to avoid spending money to properly treat their wastewater. We'd hope our colleagues at the Corps realize they should not provide water for downstream waste assimilation demands in excess of what the lowest natural yield of the river is at a given point. If this is happening we believe it should be stopped. If it has not started yet, it must be prevented from happening.

We are also concerned about the myopic approach to the attention given to aquatic life in the ACF basin. We challenge the US Fish and Wildlife service to show us the same intensity of scientific study on the fishery and habitat of the West Point Lake region as they have on the Apalachicola River, much less provide upstream stakeholders comfort level as it relates to the adequacy of the science justifying their actions on the Apalachicola. If the US Fish and Wildlife Service is so concerned, then show us the alternative actions taken to protect sturgeon and mussels rather than destroy a river basin by draining it during a drought.

Under the IOP and EDO (Extreme Drought Operations) plans used by the Corps in 2007, we saw significant problems emerge with blue green algae in West Point Lake. While this phenomenon is typical of southern lakes in the summer, it can be controlled by managing water resources in the basin with closer attention to water quality issues. LaGrange system users faced unpleasant odors and aesthetic problems in their treated water in the late summer as lake water diminished under the IOP. More inflow from

upstream lakes could have helped avert this situation and brought better water quality for West Point Lake and the citizens and businesses that rely on the lake as their source of water.

As lake water diminished throughout the summer of 2007, and the lake approached the 620 m.s.l. level, our city became concerned over the Corps intentions and the ability of the lake to sustain human needs in the West Georgia area served by the LaGrange water system. Our water intakes must be kept at usable levels, yet we sense more concern by our government for downstream fish and wildlife needs than we sense for human needs on the river.

Local businesses have been impacted by reduced water levels at Corps reservoirs and the drought. This past year the state of Georgia imposed significant water conservation restrictions on water suppliers like the City of LaGrange and its customers. Probably the most serious impact to business from the conservation efforts were the restrictions on the landscape industry and increased water rates. Institutional, business and residential landscapes and plant material took the brunt of the damage. Yards, trees and shrubs were seriously injured and needed the remedy of water that could have been supplied by the City. The restrictions prohibited watering and nursery and landscape businesses were seriously impacted as a result of the limits placed on watering. We have been told of local landscapers that have had difficulty and experienced reduced revenues and increased costs. It was very difficult for local public officials to justify conserving water to reduce water withdrawals from West Point Lake, just so the Corps could take that water for unauthorized purposes then drain it into the Gulf of Mexico.

This also placed significant additional financial risk on the City's citizens. Our water system is financed through the issuance of tax exempt municipal revenue bonds. The covenants associated with the bond issues that finance the water system require that certain amounts of revenue must be generated, and a multiplier is placed on top of that to assure there is adequate revenue in place to pay for the systems operations and the debt. If enough water is not sold to cover these obligations, the city must then require customers to pay more- for less water used- to satisfy the bond covenants. This impacts all system customers. The ten percent reduction required by the state of Georgia will require the city to bill existing customers and existing $1.5 million dollars per year over their existing payments.

When West Point was filled and began operations in 1974, the citizens that rely on West Point Lake took the federal government at its word. Remember, West Point Lake was sold and promised to the community as a recreational lake. Yet the Corps decided to lessen the relevance of recreational use and sport fishing and wildlife development and make West Point what they term the "workhorse" of the basin. Instead of generating hydropower needed by small towns and electric co-ops, the Corps addresses other concerns in the basin. Rather than fulfill the recreational authorization promised to the region, the Corps seems to manage the lake so as to guarantee flows for privately owned thermo electric power producers, downstream industries, cities that need water to dilute their waste stream, and for fish and wildlife concerns on the Apalachicola River.

In 1981, the Corps prepared and approved the Master Plan for West Point Lake. The message from the report was clear. The concept of West Point Lake being used for recreational purposes was to be far more than a pipe dream. *Design Memorandum 37* laid out a very clear plan for the long term development of West Point Lake as a recreational facility.

The Corps, with Congressional mandate, acquired 5,009 acres specifically for 43 public use recreational areas and 6,386 acres were acquired for a public wildlife and game management area.[2] The Corps, in the same document recognized, "The Lake contains 25,900 acres at normal recreational pool, elevation 635 m.s.l."[3] This same analysis indicates that "…the 6,900,000 visitors projected for 1985 is the optimum visitation." [4]

On March 4, 2008 the Corps reported in its Environmental Assessment supporting the reduction in flow at Peachtree Creek from 750 CFS to 650 CFS, that annual park visitation at West Point Lake was:

- 2,620,642 for 2002
- 2,691,920 for 2003
- 2,947,170 for 2004
- 3,199,052 for 2005
- 3,300,836 for 2006
- 3,200,083 for 2007-

a drop of over 100,000 visits for this past year, and 3,699,917 fewer visits than what the Corps thought was optimal for 1985[5]. I think it's safe to say that missing water creating low lake levels is the major contributing factor to the problem of diminishing visits and a failure to launch the anticipated recreational visits listed in the report.

This past year, the Chambers of Commerce, citizens, businesses, industries and local governments of west Georgia and east Alabama joined together to commission an in depth economic study and environmental assessment of the West Point lake project. The environmental study is ongoing. The economic study is complete and revealed rather stunning information. The current approach to operations by the Corps with consistently low lake levels, yields an economic contribution to the local economy of about $125,000,000. If the lake was managed with a consistently higher and more stable pool level at or above the initial recreational impact level of 632.5 m.s.l., the potential

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[2] *Design Memorandum 37, West Point Lake, Master Plan*, Savannah District USACE, April 1981, photocopy, P. 10,
[3] Ibid.
[4] Ibid.
[5] *Environmental Assessment, Georgia Environmental Protection Division Proposal for a temporary Reduced minimum Flow requirement at the Chattahoochee River at Peachtree Creek for Drought Contingency Water Management Operation in the ACF River basin and Temporary Waiver from ACF Water Control Plan*, prepared by U.S. Army Corps of Engineers, Mobile District, Planning and Environmental Division, Environment and Resource Branch, Inland Environment Team, p. EA-17

economic impact could yield $710,000,000 a year to the west Georgia and east Alabama economies.

Remember that the Corps of Engineers initially conceived and planned for a West Point Lake that was focused on the recreational values approved by Congress. Their Master Plan made clear the purpose for this lake was as a demonstration project for recreational purposes.[6] So if Congress said to use this lake for recreation, if the Corps agrees, and the market potential exists for a far greater fulfillment of a recreational use, one must ask what happened to the water and why?

This year we saw an effort by the Corps to be more prudent with the storage capabilities and resources of West Point Lake. General Schroedel issued a variance this spring that allowed for the storage of additional waters in the project by increasing storage which raised pool elevations. We appreciate and commend the General's approach to managing this resource and hope the Corps will continue to utilize the West Point project in a more practical manner such as this, and avoid future activities that overstress the reservoir.

Somehow this lake was taken away from us. We think we know where that water is going and who is getting it. We beg that our Congress intervene and assure that West Point Lake is returned to the hundreds of thousands of citizens and businesses in the growing west Georgia and east Alabama area and that the promise made for a recreational lake to the citizens of this area is fulfilled. Please see that the Corps stops using West Point as their "workhorse lake" and that those responsible for the management of this lake return it to its authorized uses and sees that the mandate issued by Congress for its development is fulfilled.

Specifically, Congress can help with several actions:

- Compel the Corps to revise the rule curves on West Point Lake to make them more reasonable and limited in scope and magnitude to maintain a lake elevation of not less than 632.5, except in the direst emergency.
- Instruct the Corps to limit the uses of West Point Lake specifically to the authorized purposes set by Congress. In doing so, these uses should relate to the benefit to costs associated with the lake.
- Bring accountability to the federal agencies involved with management of federal lakes. The Fish and Wildlife Service should only institute actions under the Endangered Species Act when they have sound validated science that is beyond question, and then actions related to endangered species should explore a wide range of alternatives that do not adversely impact mankind's use of resources.
- Compel the Corps to operate the lakes of the basin in concert and not sequentially draining them one after another. The current practice extends damage to the southern lakes of the ACF longer. Operating the lakes in balance using

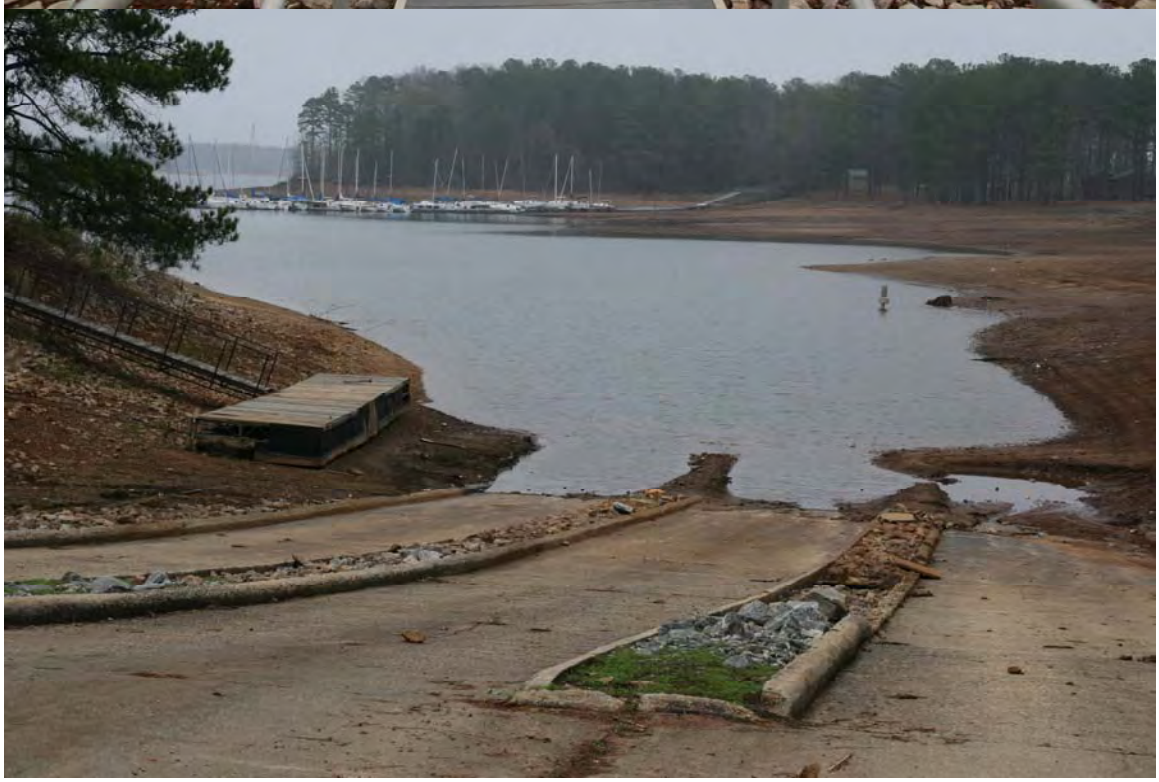
[6] *Design Memorandum 37, West Point Lake, Master Plan*, Savannah District USACE, April 1981, photocopy, p. 2

percentage of conservation storage remaining as an operating benchmark is a far more fair and equitable approach to stakeholders throughout the basin.

- Compel the Corps to study and recognize water quality impacts associated with their operations. The blue green algae blooms on West Point could have been mitigated this past year by providing more inflow into West Point at the time they were draining the lake.
- Find ways to eliminate the use of water in federal reservoirs for waste assimilation needs for downstream interests. Compel downstream interests to clean up their operations so such flows are never needed.
- When downstream interests demand excessive flows from upstream lakes simply to provide a river elevation for their water intakes, the government should compel that user to modify the design of their intakes to utilize water at levels based on the lowest possible natural flow of the river.

On behalf of the City of LaGrange, GA, its citizens, businesses and institutions; and the thousands of stakeholders surrounding West Point Lake in east Alabama and west Georgia; we ask the Committee to please accept our profound appreciation for considering these issues and for the honor bestowed upon us by holding this hearing in LaGrange, GA.

Note: Included with this testimony are numerous pictures of the West Point Lake project during the fall of 2007 when West Point Lake was under the most severe stress associated with the IOP. The elevation at the time was approximately 622 m.s.l.



VA 7C

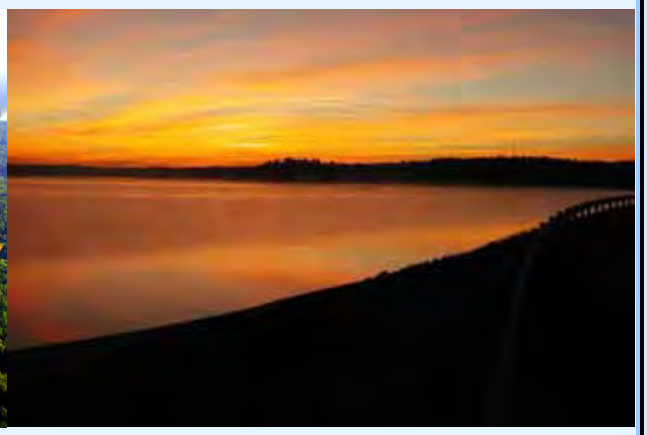
VA 7830 JJ

West Point Updated

Economic Impact of West Point Lake

At

Various Lake Water Levels



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Prepared for:

City of LaGrange, GA and local stakeholders

December 15, 2007

Table of Contents

	Page
I. Introduction	
A. Background	1
B. Purpose of Study	1
C. Definition of Economic Impact	6
D. West Point Lake: Background and Characteristics	7
E. West Point Lake: Water Levels Controversy	8
F. Summary of Research Methods and Approach	12
II. Alternative One: Economic Impact and Value at Current Low Water Levels	
A. Economic Impact Categories	14
1. Corps of Engineers Revenue	
2. Real Estate	
3. Marina and Recreation	
4. Retail and Services	
5. Hotel Revenue	
6. Event Revenue	
7. Government Revenue	
8. Jobs and Miscellaneous Data	
B. Total Economic Impact and Analysis	16
III. Alternative Two: Conservative Estimate of Economic Impact and Value at Higher Water Levels	
A. Economic Impact Categories	18
1. Corps of Engineers Revenue	
2. Real Estate	
3. Marina and Recreation	
4. Retail and Services	
5. Hotel Revenue	
6. Event Revenue	
7. Government Revenue	
8. Jobs and Miscellaneous Data	
B. Total Economic Impact and Analysis	19

IV. Alternative Three: Moderate Estimate of Economic Impact and Value at Higher Water Levels — Page
A. Economic Impact Categories — 22
1. Corps of Engineers Revenue
2. Real Estate
3. Marina and Recreation
4. Retail and Services
5. Hotel Revenue
6. Event Revenue
7. Government Revenue
8. Jobs and Miscellaneous Data
B. Total Economic Impact and Analysis — 23

V. Additional Direct and Indirect Impacts

A. Summary: Measurable Direct and Indirect Impacts — 25
B. Additional Impacts and Multiplier Effects — 27
1. Planned local residential and commercial project construction
2. Impacts of KIA-related job growth
3. Impacts of Fort Benning expansion
C. Future Development Potential and Ability to Attract Commerce — 28
1. Impacts on visitor expenditures
2. Impacts on marina and recreation revenues
3. Impacts on retail and services revenue
4. Impacts on hospitality and food services revenues
5. Impacts on government revenues and jobs
D. Floodplain Real Estate Valuation and Cost/Benefit Analysis — 29
1. Downstream flood prevention/real estate acquisition costs
2. Comparison: value of economic benefits vs. downstream costs

VI. Conclusions — 30

Appendices

A. List of Stakeholders Interviewed — 31
B. Excerpts: USACE Master Plan — 33
C. Economic Impact Calculation: Sources and Assumptions — 35
D. Maple Creek Sites – Amendment #2 to USACE Master Plan — 46
E. USACE Plan for Water Levels — 51

I. INTRODUCTION

A. Background

This study was commissioned by the City of LaGrange, Georgia, Troup County, LaGrange-Troup County Chamber of Commerce and other significant east Alabama/west Georgia stakeholders. The analyses were also prepared in partnership with the Valley Chamber of Commerce and the West Point Lake Coalition, a non-profit, non partisan group of area residents dedicated to the protection and promotion of West Point Lake. All of these entities are interested in maintaining stable and high water levels at full pool for recreational use at West Point Lake.

This analysis compares the total economic impact of West Point Lake at current depressed water levels, with the total potential economic impact of West Point Lake if water levels were to increase to specific levels all-year round. Much information was gained from researching past studies and conducting local interviews (see ***Appendix A*** for a list of stakeholders interviewed).

Estimates of economic impact and economic value associated with an increase in water levels are presented. These estimates capture the way in which spending ripples through the economy to support job and income creation.

The study provides estimates of net economic impact, i.e., the jobs and income that would accrue to the region from local and nonresident spending should lake levels be maintained all year round at or near 635 feet above mean sea level (msl), which represents the lake's "Normal Summer Level", according to the US Army Corps of Engineers (USACE or Corps), who constructed and manages this lake. Also presented are estimates of gross economic impact, which reflect changes in spending from a change in lake levels.

B. Purpose of Study

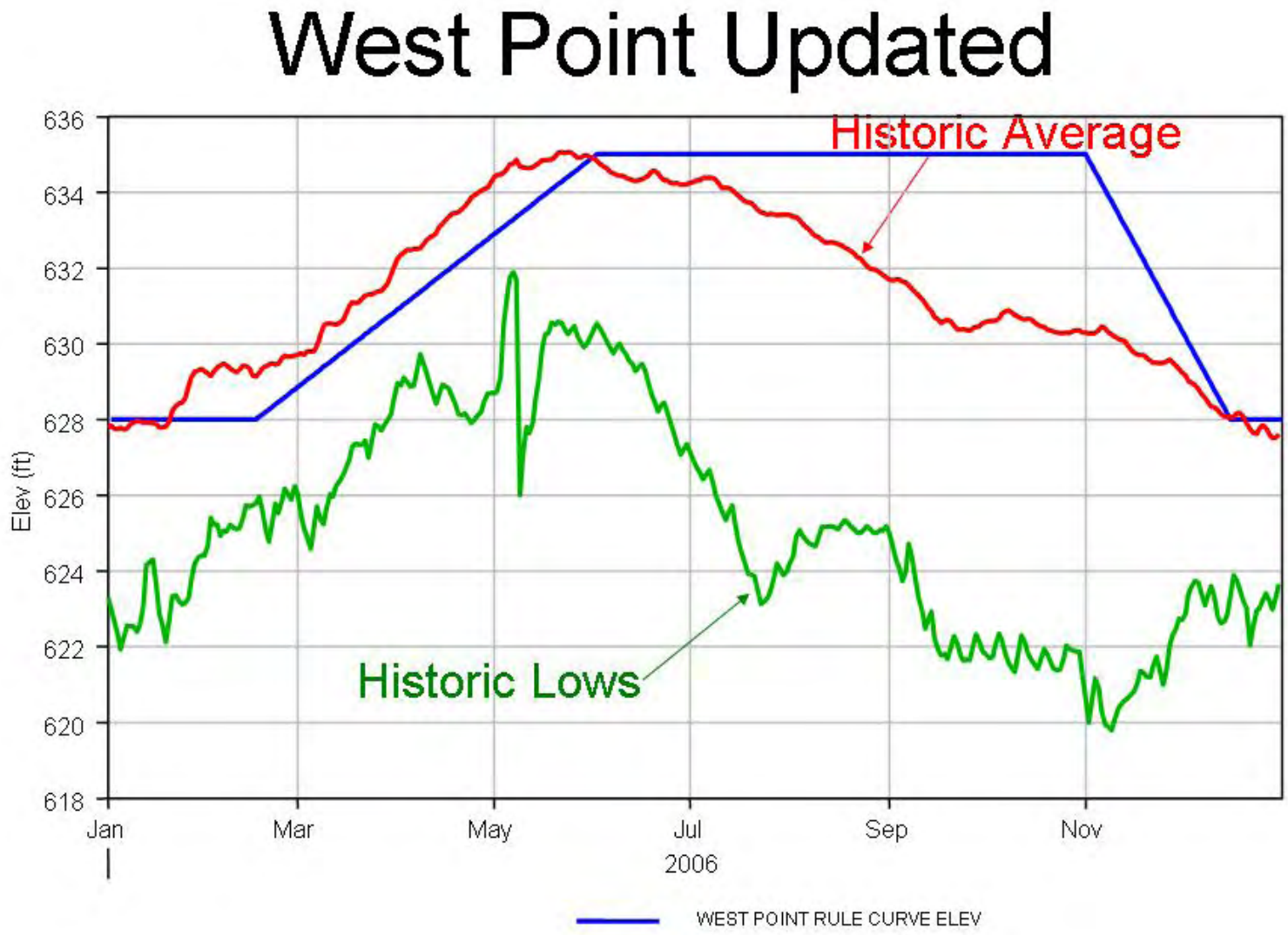
West Point Lake has been plagued by low water levels in recent years. As a man-made reservoir, water levels are controllable. The USACE manages the water levels and releases water at the dam site.

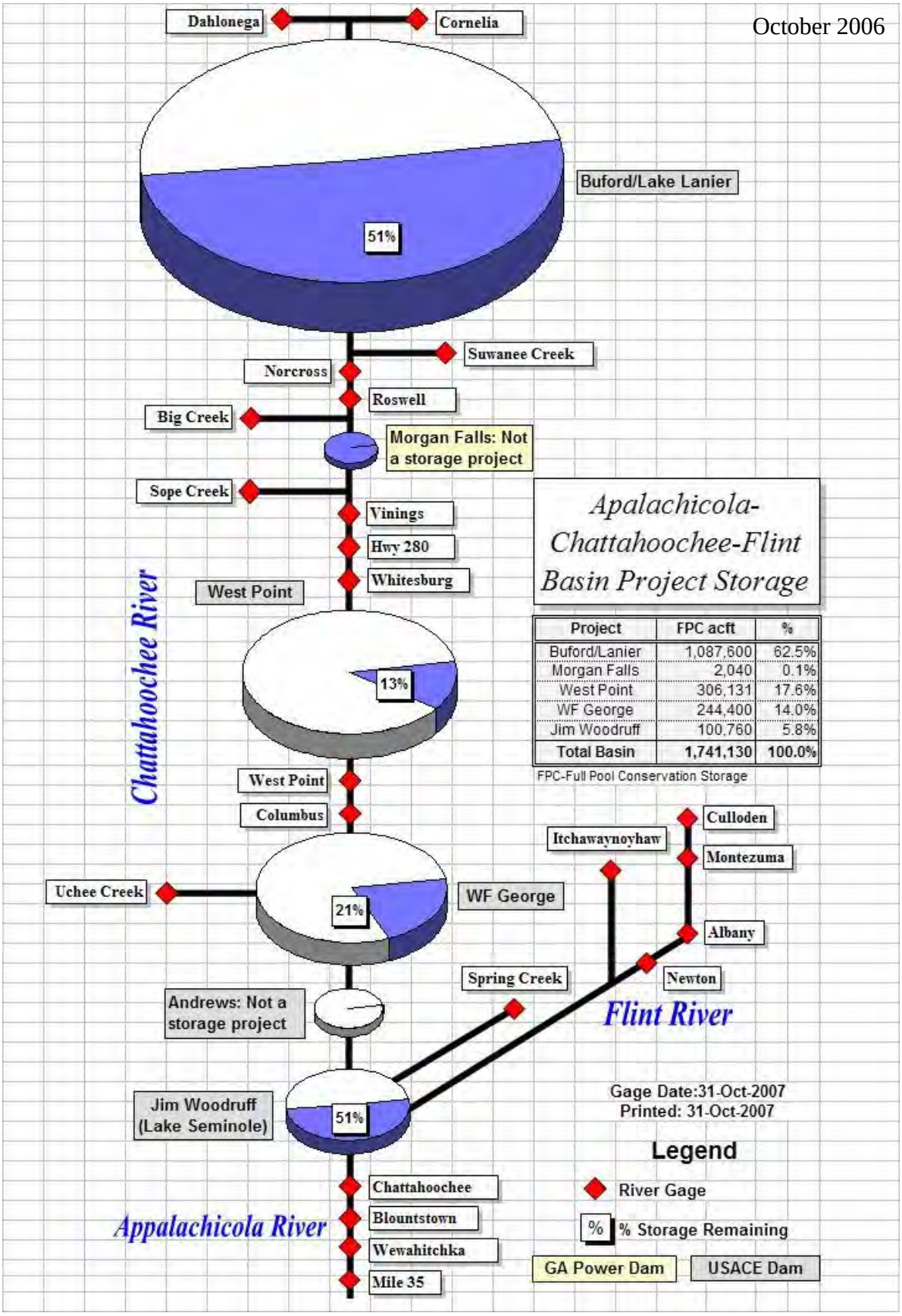
The chart below presented to City officials in November 2006 depicts the historical water levels as compared to the current USACE operating plan water

levels at West Point Lake. Water levels depicted in the red and green lines (historic highs and lows) as compared to blue line (USACE operating plan) explain that since about May 2006 the USACE has ***operated far below its own plan*** for water levels at West Point Lake. Further, the next chart shows that basin storage at West Point Lake (13% of storage capacity) is far below that of other USACE-operated lakes in the region, such as Buford/Lake Lanier (51%), WF George (21%) and Lake Seminole (51%).

The water level is highly influenced by the level of rainfall that occurs, by inflow from upstream sources and by releases to downstream interests. In a period of prolonged drought, lake levels would logically be drawn down from lack of incoming water streams. At the same time decreased amounts of water would expect to be released from the dam, which would help to stabilize lake levels around a predictable range year-over-year. However, increased withdrawals from the Atlanta region and forced releases downstream to accommodate other demands results in low and volatile water levels.

When rainfall is abundant, officials would be expected to release greater amounts from the dam to stabilize water levels. In recent years lake water levels have been volatile, have reach surprising lows and have infrequently if ever returned to full pool in a few months. This volatility has local officials concerned enough to seek a study on the economic impact of volatile lake water levels.


West Point Updated
Historic Average
Historic Lows
Elev (ft)
636
634
632
630
628
626
624
622
620
618
Jan
Mar
May
Jul
Sep
Nov
2006
WEST POINT RULE CURVE ELEV


October 2006
Dahlonega
Cornelia
Buford/Lake Lanier
51%
Suwanee Creek
Norcross
Roswell
Big Creek
Morgan Falls: Not a storage project
Sope Creek
Vinings
Hwy 280
Whitesburg
West Point
13%
Chattahoochee River
West Point
Columbus
Uchee Creek
21%
WF George
Andrews: Not a storage project
Jim Woodruff (Lake Seminole)
51%
Chattahoochee
Blountstown
Wewahitchka
Mile 35
Appalachicola River
Apalachicola-Chattahoochee-Flint Basin Project Storage
Project | FPC acft | %
Buford/Lanier | 1,087,600 | 62.5%
Morgan Falls | 2,040 | 0.1%
West Point | 306,131 | 17.6%
WF George | 244,400 | 14.0%
Jim Woodruff | 100,760 | 5.8%
Total Basin | 1,741,130 | 100.0%
FPC-Full Pool Conservation Storage
Culloden
Itchawaynoyhaw
Montezuma
Albany
Newton
Spring Creek
Flint River
Gage Date:31-Oct-2007
Printed: 31-Oct-2007
Legend
River Gage
% Storage Remaining
GA Power Dam
USACE Dam

Existing key pool lake level thresholds set by the USACE are:

- 641 feet msl: top flood capacity pool
- 635 feet msl: optimal pool level
- 632 feet msl: initial recreational impact level
- 630 feet msl: second recreational impact level
- 628 feet msl: winter flood control level

As of October 2007, though, the lake pool level was significantly lower at 622 feet msl. According to officials interviewed for this report, and to the USACE itself, for maximum enjoyment and safety, the full lake pool should be 635 feet msl. At levels of 633 feet msl and below, the lake and local economy are negatively affected in many ways including:

- diminished recreation value
- continued shoreline erosion and sedimentation
- significant financial impacts on marinas, lake related businesses, and home owners
- boat ramps and floating docks becoming grounded
- dangerous safety conditions
- environmental harm
- aesthetically displeasing to prospective industries
- disincentive to new development uses

Hence, BBPC has been commissioned to identify and, where possible, quantify these economic impacts. A baseline was established which described total direct and indirect economic impacts at current water levels. *Much of the data used to establish the baseline was derived using standards set by the US Army Corps of Engineers.* Then, two other analyses were performed to illustrate economic impacts if higher-than-current water levels were maintained.

Thus, the purpose of the study results can be used by decision makers to answer a fundamental question:

Do the economic benefits derived from higher lake water levels offset the costs of downstream flood measures, upstream uses and downstream demands, thereby making the case to incur these costs to realize the greater economic benefits of maintaining higher lake water levels?

C. Definition of Economic Impact

Economic impact occurs when a resident or visitor to an area spends money in that area – no matter what the reason. The benefits to local economy, however, go beyond the basic impact of the dollars spent in the area. These resident / visitor expenditures create a chain effect. The direct effects or impacts of these expenditures become evident as the recipients of these monies in turn pay wages, earn income and pay taxes.

Furthermore, these direct recipients spend their income, thereby creating indirect impact for more jobs, wages, salaries, proprietary income and tax revenues. These direct and indirect effects together equal the total economic impact of all expenditures in the area.

The primary economic effects of lake draw-downs are reduced recreation spending (restaurant, retail, motel/hotel, etc), reduced value (i.e. personal satisfaction, quality of life, leisure opportunities, etc) from the recreation experience and reduced property values that arise from limits on lake access and from deterioration in the quality of scenic views. Some of these impacts affect regional well being, while others may affect national welfare. These effects are the focus of this report.

Specifically, the analysis is intended to offer guidance on the economic benefits to a change in lake management policy that would raise West Point Lake to optimal levels year-round. The study provides estimates of economic impact, or the benefits that accrue from recreation-related spending within the region and the value of real estate immediately abutting West Point Lake and/or US Army Corps of Engineer property. There is also an undeniable “intrinsic value” to the public from higher average annual water levels. No economic impacts from hydroelectric generation were calculated.

Economic Impact Analysis

Economic impact analysis captures the way in which spending ripples through an economy creating income and expands government tax bases. Economic impact analysis is often used to examine the consequences of changes from external and internal events and practices on business activity on a regional economy. These economic impact analysis techniques have been used for the West Point

Lake study to estimate the economic affects arising from changes in recreation and tourism activity.

Regional economic impacts remain highly relevant from the perspective of the region that makes decisions and invests resources to enhance its own welfare. Residents, as well as state and local governments, are rightly concerned about the gains and losses that may be experienced through the economic development process.

Economic Value

Economic value is not the same as expenditures, income or jobs. Value is instead what persons are willing to pay to purchase a good or service above and beyond the cost to producers of supplying the good or service. Increased value means people are willing to pay more to buy and consume something; increased willingness to pay is a reflection of increased value. In the current context, if year-round lake levels could be increased to and sustained at a minimum of 633 feet msl, value and willingness to pay would likely increase on the part of many visitors and homeowners.

D. West Point Lake: Background and Characteristics

West Point Lake is a 25,864-acre mainstream Chattahoochee River impoundment that has been in existence since 1974, and is located an hour southwest of Atlanta. Escalating consumptive use of water by those areas north and upstream pose a real threat to activities at West Point Lake. Although most of West Point Reservoir is in Georgia, the lake lies on a 45 mile stretch of the Chattahoochee River between Franklin and West Point Georgia.

The lake was authorized by Congress to provide flood control, hydroelectric power, navigation, sport fishing and wildlife development, and general recreation for the region. The 7,250 foot long West Point dam is remote-control operated by the Mobile District via microwave signals from Walter F. George Dam, located about 90 miles downstream.

West Point Dam is located on the Chattahoochee River 3.2 river miles upstream from West Point, Georgia. West Point Lake's main water body is located in Troup County, Georgia, with the lake's upper reaches extending into Heard County. The southwestern portion

of the lake extends into Chambers County, Alabama, with a very small portion extending into Randolph County, Alabama.

From the dam site, the lake extends 35 river miles northward along the Chattahoochee River. The lake's shoreline stretches 525 miles and contains an area of 25,900 acres at the maximum power pool elevation 635.0 m.s.l. The total project acreage is 58,129 acres, which include a buffer area around the lake from 300 to 500 feet wide. The lake drains an area of 3,440 square miles. West Point Lake is shaped like a "shallow bowl," which causes the exposure of expansive mud flats when water levels drop even inches.

West Point Lake offers an abundance of wildlife and a number of ways to enjoy it. When the lake was created, a forested valley was flooded, trees and other structures were left standing to provide excellent fish habitat.

Man-made fish attractors also improve fishing at the lake. Short mild winters, long warm summers, and gradual transitions between seasons characterize the climate making the project conducive to year-round recreational use. There is some seasonal variation in rainfall with the heaviest rains occurring in the winter and the lightest during the fall.

E. West Point Lake: Water Levels Controversy

A key factor distinguishing management practices at West Point Lake from other multiple-purpose water reservoir projects managed by the USACE is that in November 1973, West Point Lake was identified by the US Congress and by the Chief of Engineers for development as a recreational demonstration project. As such, local officials and stakeholders contend that the Corps has a greater responsibility to ensure recreational uses are not negatively impacted in favor of other Corps responsibilities such as flood control, navigation and hydroelectric power generation, consumptive use upstream and other unauthorized downstream uses.

Local government contentions that Corps management practices must place greater emphasis on recreational impacts are further bolstered by the Corps own Master Plan for the lake, which states:

West Point Lake was developed as a demonstration project for the purpose of providing a wider variety of recreational facilities and opportunities for the public than normally provided at Corps Lakes (Preface to Master Plan).

The Master Plan further states:

As stewards of these lands in the public domain, the Corps of Engineers will continue to provide access and encourage use of the project to the fullest extent possible. We will continue to analyze the existing recreation areas and the changing demand to determine the proper facility mix and identify areas needing rehabilitation, closure or expansion (Master Plan, P.13) (see ***Appendix B*** *for additional related master plan excerpts reflecting USACE recreational goals).*

The USACE recreational plans for West Point Lake also have not been met. The USACE Master Plan (P.32) calls for future development of four (4) "public service areas" or marinas. To date, only two marinas exist -- Southern Harbor (a private property) and Highland. These four public service areas are:

- Crossroad – currently undeveloped
- Potts Road – currently undeveloped
- Wehadkee Creek – currently undeveloped
- Whitaker – currently undeveloped – Highland Marina holds lease

Further, since recreation is a Congressionally-authorized purpose at West Point Lake, and is the first US Army Corps of Engineers Lake in the US to have been specifically authorized and designated by Congress as a "demonstration recreation project," local officials and stakeholders feel justified in demanding that the Corps maintain higher water levels.

However, in recent years, the Corps has dropped water levels at West Point Lake for extended periods of time. Large expanses of exposed mud shoreline, bank erosion and smaller lake surfaces have become the norm, rather than the exception. Complaints from lakefront property owners, boat slip renters and a wide range of other lake uses and visitors have greatly risen.

Further, it is reported that the City of LaGrange spends more to treat drinking water when water levels fluctuate or inflows are lower than outflows to the lake.

In response to these concerns, the West Point Lake Coalition was founded in 2000 with the goal of promoting and protecting West Point Lake for the use of everyone in and around the community. Focuses of the Coalition include lake safety, water level, cleanliness and environmental protection and overall enjoyment and promotion of the lake.

The Coalition, joined by the City of LaGrange, Troup County, LaGrange-Troup County Chamber of Commerce and other interested parties, simply want the Corps to manage West Point Lake as it has been mandated to do—as a recreation project. Local officials and stakeholders point to an "antiquated and inequitable rule curve" being used by the USACE, and an Interim Operating Plan (IOP) that adversely impacts this lake. While other major lakes in the "system" (Lakes Lanier and George) are allowed to normally fluctuate 1-2 feet, resulting in a 1-7% loss of water surface, a 13 foot range resulting in a 33% loss of water surface and greater bank exposure is permitted at West Point Lake.

Demands for heightened downstream flows for Florida marine life has also risen from efforts to protect endangered sturgeon and two species of mussels. Many lawsuits have been filed in the last 15 years in the tri-state "water wars" by Georgia, Alabama and Florida over these issues.

Additionally, lake uses continue to be adversely affected. Below is a recitation of those impacts reported during stakeholder interviews:

- canceled fishing tournaments:
    - cancellation: Georgia Bass Federation Tournament, October 13th-14th, 2007
    - past event, return is contingent upon future water levels – FLW Wal-Mart Fishing Tournament in February 2007. This past winter tournament officials commented that they would not come back if the water levels were low, as they were in February.
- damages to boat bottoms and motorized propellers due to hitting submerged objects and obstructions
- boats aground that can not be retrieved or used until lake levels rise
- at local boat and tackle shops:
    - owner had to find a second job for supplemental income not only to keep his business alive, but himself. Still, everyday is a struggle.
    - revenue has decreased approximately $20,000 a month
    - foot traffic as well as total revenue has decreased approximately 45% - 50%

- as a result of the lack of business, the owners' gas contract with a local gas/oil company was terminated; the shop is now no longer providing unleaded fuel to consumers who once filled up their boats and/or vehicles.
- minnow, a small silvery fish used as bait, sales have dropped dramatically; at optimal water levels, the shop would easily sell 50-75 a day; today, with low water levels, it is a stretch to sell 15 a day; the sport of fishing at the lake has nearly disappeared.
- overall revenue has dropped more than 50%
- hard to keep business up and running
- foot traffic into the store has decreased by roughly 50%-80%
- recently, one shop spent $18,000 after clearing and prepping land located next to the shop, and built a fenced lot to store boats, boat trailers, and campers; currently, only one boat is in storage, even though the maximum capacity of lot is approximately 75 – 100 boats

- most public boat launching ramps are unusable

- the USACE IOP demands release of water downstream to Florida for endangered mussels, which results in inadequate time for the lakes to refill; because of the drought, what is going out is twice what is coming in

- low water levels have directly and indirectly negatively impacted the recruitment of industrial and commercial businesses in and around West Point Lake

  - direct impact

    - the recruitment of small businesses has been difficult greatly due to the fact that smaller businesses are more susceptible to the financial and market risk.
    - large corporations and businesses have much larger factors to take into consideration; however, after assessing the region and learning how the lake has effected the surrounding community in such a way, such impact becomes an important decision making factor.

  - indirect impact

    - drawing large numbers of people to the region has been challenging; West Point Lake is Troup "County's biggest tourist attraction, and now without it, it is hard to bring money and business to the local economy.

- employees and their families who relocate to the region choose not to reside near the lake due to the poor quality of life and low water levels… why live near a lake where there is no water?; for example, one of the KIA executives decided to buy a house on Lake Harding rather than West Point Lake simply because Lake Harding has the competitive advantage of normal water levels; with West Point Lake's quality of life slowly deteriorating, money and business for the local economy has been redirected elsewhere.

F. Summary of Research Methods and Approach

Three alternative economic impact analyses were prepared:

- Alternative 1: Economic Impact and Value at Low Water Levels of 630 Feet MSL and Below (baseline)

- Alternative 2: Conservative Estimate of Economic Impact and Value at Higher Water Levels (range: 630-633 feet msl)

- Alternative 3: Moderate Estimate of Economic Impact and Value at Optimal Water Levels (range: 633-635 feet msl)

These three alternative calculations utilize and closely follow approaches used by the Corps and the Tennessee Valley Authority (TVA), another public steward of water reservoirs in this region, when it prepares economic impact analyses ("Economic Effects of TVA Lake Management Policy…", May 2003). As such, these figures should be considered defendable.

Those differences arise where the economic value of additional activity precipitated by higher sustained lake water levels has been added. Data was complied from several sources to calculate economic impacts for lake activity at West Point Lake. The lake is a revenue generator for multiple stakeholders including the U.S. Government, local land owners and real estate brokers, marina and tackle shop owners, fishing and boating guides, restaurants and retail store owners and the local citizenry in the form of jobs, which provide salaries and benefits.

In estimating economic impact to fluctuating lake levels, baseline data reflects the current economic impact with the lower than normal lake levels. In addition

to these direct impact analyses, indirect impacts have also been measured. The theory that links spending at more secondary levels of activity not directly traceable to an activity such as recreation and leisure is derived from economics and the models that posit that a dollar spent in the economy has a multiplier effect. This theory is particularly prevalent in Keynesian economic theory.

In Keynesian models, money that is introduced into an economy at any level will be spent several times before it is either saved or invested and therefore not turned over again. For example, a dollar in wages will be spent on groceries, housing, household effects, and leisure activities. A portion of that dollar may even be saved or invested. The dollar will continue to be spent as it changes hand.

Until the dollar is taken out of the economy through savings, investment or perhaps economic loss there will be a multiple of its value to its spending power. Based on this theory, economic agencies over the years have established data sets that are referred to as multipliers. These are simply whole or fractional numbers tied to specific economic sectors and activities.

Though a variety of multiplier models exist for engaging in economic impact analysis, data sets from the U.S. Commerce Department's Bureau of Economic Analysis were used. This model is widely-recognized in the industry as the best tool to use when calculating the economic impact of a change in demand, in earnings or in employment on a region's economy. These data sets are called RIMS II Multipliers, and they are used to gauge effects that spending directly attributable to one economic activity within a defined economic region will have on other activities. For this exercise the RIMS data covers the west Georgia and east Alabama region.

The data will predict spending that West Point Lake activities has on other related and unrelated activities. In order to prevent double-counting, the direct spending we already have noted is subtracted from the data that the RIMS model offers as an estimate of total economic activity—direct and indirect—that occurs from the activity under analysis.

See ***Appendix C*** for the sources and assumptions used in all economic impact calculations.

II. ALTERNATIVE ONE: ECONOMIC IMPACT AND VALUE AT CURRENT LOW WATER LEVELS

A. Economic Impact Categories

The set of tables below illustrates the elements that provide direct annual economic impacts to the region. The first set of data compiles revenues from Corps of Engineers campgrounds and marinas. This data includes land rents from those providing recreational services at West Point Lake. These figures assume no additional land is rented.

West Point Lake Annual Direct Economic Impacts

Economic Impact Analysis Variables	Alt. 1: Current Lake Levels
	Impact
A. Corp of Engineers Revenue	**$879,148**
1. Land rent	$57,811
2. Visitor expenditures	
Camping expenditures	$654,186
Beach access fees	$34,760
Visitor Center fees	$46,440
Honor vault fees	$40,951
3. Per annum dock permits	$45,000
B. Real Estate	**$25,500,000**
1. Value added of real estate with docks.	$25,500,000
C. Marina / Recreation	**$3,006,652**
1. Boat Slip / Dry Dock Revenue	$916,652
2. Lodging Revenue	$1,840,000
3. Boat Rental Revenue	$250,000
D. Retail & Services	**$58,659,850**
1. Automotive Gasoline	$14,041,277
2. Gas/Oil for Boat	$9,094,124
3. Misc. Boat Expenditures	$1,676,612
4. Fishing Guide Fees	$650,000
5. Bait & Ice	$4,492,171
6. Tackle & Fishing Equip.	$3,675,266
7. Misc. Fishing Equip	$5,743,488
8. Beach Accessories	$1,598,426
9. Misc. Beach Expenses	$1,132,710
10. Camping Supplies	$3,849,788
11. Misc. Camping Expenses	$3,198,227
F. Hospitality & Food Services	**$31,899,787**
1. Hotel revenue	$6,120,000
2. Food & restaurant revenue	$25,779,787
H. Government Revenue	**$1,849,354**
1. License & registration fees	$933,379
3. Fishing licenses	$915,975
I. Jobs	**$3,300,000**
1. Direct lake jobs and avg. salaries	$3,300,000
Total	$125,094,791

Acreage is leased to: Georgia DNR at West Point Wildlife Management Area (12,000 ac.), Southern Harbor Marina (478 ac.), Highland Marina (198 ac.), Pyne Road Park (460 ac. to Troup County), Bush Creek Park (152 ac. to Heard County), Riverside Park (22 ac. to City of Franklin), Camps Lumpkin and Gallant BSA areas (900 ac.); and others for smaller areas.

The most recent available visitor expenditure figures covering camping, beach access, the lake's Visitor Center and honor vault fees and dock permit revenues were provided by the USACE at West Point Lake.

The value-added of real estate is also an important component of economic impact especially as it affects homeowners and their access to the lake for recreational uses. A key value-add for homeowners is direct access to boat docks or by proximity to lake shoreline adjoining their properties on lakefront areas. The permitting of such docks is believed to add considerable value to homes.

For those homeowners whose docks are currently unusable due to low lake water levels, property values were decreased by an assumed $50,000 per property (see Appendix C). The value added of real estate with docks was derived from estimates by multiple real estate brokers in the area, and by brokers at other nearby lakes.

Approximately 850 docks are permitted to homeowners on West Point Lake. The Corps states this lake will accommodate over 3,000 privately-owned docks, under current guidelines and shoreline allocations. At current lake levels it is estimated that nearly all of these docks are unusable or are non-functional in that inadequate surface water exists that would allow for boat mooring and full ingress and egress at the dock sites. It is conservatively estimated that current value-added of boat docks at West Point Lake is $25.5 million (assumed only 40% of docks were unusable; see Appendix C).

Private owners and operators of marinas at West Point Lake generate about $3 million in revenues annually under current conditions. These revenues are derived in part from the existing 664 boat slips and dry dock spaces. Lodging revenue is the biggest component of these revenues are about $1.8M, which was collected from 54 rental units at the two marinas. Boat rental revenue is about 10% of all other revenues, according to both existing marina owners.

Retail services that support the thousands of visitors each year also have a large impact on the local economy. Estimates updated from a TVA study in 1997 for Cherokee Lake can be used to project similar annual spending related to recreational pursuits at West Point Lake at $58.7M. Other retail-based revenues include hotel (hospitality) and restaurant revenues, which are estimated to be $31.8 million by the US Army Corps of Engineers and the TVA.

Government licensing and user fees in addition to the fees from Corps' sites listed earlier total $1.8 million. Salaries tied to jobs directly attributable to lake recreational and management activities total approximately $3.3 million. Both sets of figures were derived from the US Army Corps of Engineers and the TVA.

B. Total Economic Impact and Analysis

The sum of these direct economic impacts is $125.1M in current dollars. Indirect impacts are the outcome of the RIMS data generated by the US Bureau of Economic analysis (BEA) (see Section I (F) for explanation) and each economic activity already noted in this section. A total of $28.7M of indirect spending is attributable to current West Point Lake activities, as shown below:

INDIRECT IMPACTS GENERATED: CURRENT LAKE LEVELS (ALT. 1)	Retail trade	Amusements, gambling, and recreation	Accommodation	Food services and drinking places
1. Agriculture, forestry, fishing, and hunting	$32,977	$27,877	$17,136	$51,560
2. Mining	$2,537	$1,394	$2,448	$2,578
3. Utilities	$240,984	$174,232	$175,032	$327,403
4. Construction	$152,200	$170,050	$190,944	$208,816
5. Manufacturing	$900,517	$294,103	$292,536	$634,183
6. Wholesale trade	$388,110	$221,623	$214,200	$775,972
7. Retail trade	$26,536,092	$616,083	$565,488	$1,268,366
8. Transportation and warehousing	$352,597	$136,598	$118,728	$283,578
9. Information	$1,042,571	$578,449	$552,024	$1,013,146
10. Finance and insurance	$552,994	$323,374	$299,880	$551,687
11. Real estate and rental and leasing	$1,116,134	$648,141	$517,752	$1,067,283
12. Professional, scientific, and technical svcs.	$273,960	$174,232	$130,968	$211,394
13. Management of companies and enterprises	$1,463,658	$315,011	$264,384	$139,211
14. Administrative and waste management svcs.	$550,457	$281,558	$318,240	$268,110
15. Educational services	$114,150	$58,542	$52,632	$103,119
16. Health care and social assistance	$1,105,988	$590,993	$525,096	$1,036,347
17. Arts, entertainment, and recreation	$27,903	$13,953,856	$13,464	$28,358
18. Accommodation and food services	$390,647	$199,321	$12,432,168	$26,205,153
19. Other services	$337,377	$234,167	$231,336	$353,183
Total	$35,581,853	$18,999,601	$16,914,456	$34,529,447
Indirect Impacts Less Spending Noted	$10,215,165	$5,061,078	$4,674,456	$8,749,660
Sum of the total indirect impact columns	**$28,700,359**			
Source Data: Bureau of Economic Analysis -- U.S. Dept. of Commerce				

The total of direct and indirect economic impacts at West Point Lake at current lake water levels is over $153.8M, as shown below:

Total Spending for West Point Lake Activities	
Alternative 1	
Category (Direct Spending)	**Revenues**
Corp of Engineers Revenue	$879,148
Real Estate	$25,500,000
Marina / Recreation	$3,006,652
Retail & Services	$58,659,850
Hospitality & Food Services	$31,899,787
Government Revenue	$1,849,354
Jobs	$3,300,000
Total Direct Spending	**$125,094,791**
Category (Indirect Spending)	**Revenues**
Retail	$10,215,165
Ammusements, Recreation	$5,061,078
Accomodation	$4,674,456
Food/Drink Places	$8,749,660
Total Indirect Spending	**$28,700,359**
Total Direct and Indirect	**$153,795,150**
Sources: Corps of Engineers, BBPC Associates	

III. ALTERNATIVE TWO: CONSERVATIVE ESTIMATE OF ECONOMIC IMPACT AND VALUE AT HIGHER WATER LEVELS

A. Economic Impact Categories

Using the same baseline data for current lake conditions BBPC Associates constructed two additional estimates of economic impact from assumed higher lake levels than now exist. The first of the two estimates is illustrated below:

West Point Lake Alternate Economic Impact Estimate Economic Impact Analysis Variables	Alt. 2: Conservative Estimate
A. Corp of Engineers Revenue	**$934,137**
1. Land rent	$57,811
2. Visitor expenditures	
Camping expenditures	$684,082
Beach access fees	$36,349
Visitor Center fees	$48,562
Honor vault fees	$42,822
3. Per annum dock permits	$64,510
B. Real Estate	**$289,185,000**
1. Value added of real estate with docks.	$31,875,000
2. Premium: value added - lakefront lots	$257,310,000
C. Marina / Recreation	**$3,940,737**
1. Boat Slip / Dry Dock Revenue	$1,468,852
2. Lodging Revenue	$2,123,077
3. Boat Rental Revenue	$348,808
D. Retail & Services	**$51,398,338**
1. Automotive Gasoline	$14,682,963
2. Gas/Oil for Boat	$9,509,725
3. Misc. Boat Expenditures	$1,753,233
4. Fishing Guide Fees	$679,705
5. Bait & Ice	$4,697,464
6. Tackle & Fishing Equip.	$3,843,225
7. Misc. Fishing Equip	$6,005,966
8. Beach Accessories	$1,671,474
9. Misc. Beach Expenses	$1,184,475
10. Camping Supplies	$4,025,723
11. Misc. Camping Expenses	$3,344,386
F. Hospitality & Food Services	**$34,157,923**
1. Hotel revenue	$7,200,000
2. Food & restaurant revenue	$26,957,923
H. Government Revenue	**$1,933,869**
1. License & registration fees	$976,034
3. Fishing licenses	$957,835
I. Jobs	**$3,300,000**
1. Direct lake jobs and avg. salaries	$3,300,000
TOTAL DIRECT IMPACT	**$384,850,005**
Sources: Corps of Engineers, TVA, BBPC Associates	

The assumptions used to derive these estimates include increased levels of spending for camping and recreational opportunities, as well as increased level of spending for retail and restaurant activities, fishing licenses, boating rentals and accommodations. The increases are attributed to increases in visitation on an annual basis of approximately 4.57%, the same rate of increase in the Consumer Price Index (CPI) since 1995.

An additional 200 boat slips, 200 additional dry dock spaces and 10 additional rental lodging units were assumed to be added to marinas given higher lake levels and less water level volatility.

Per annum dock fees were also assumed to increase, as the planned 385 docks to be constructed at the Highland/Settings projects were added to the dock inventory. Also, it was assumed only 25% of docks would remain unusable at this higher water level. The greater utilization of privately owned boat docks on lakefront properties was also assumed to add significantly more value to homeowners properties.

Most importantly, if lake levels were maintained at higher levels, it is assumed that more of the available shoreline would be developed into residential units. As shown in Appendix C, Trimble Appraisal Services completed an analysis which concludes that the premium for a lakefront lot versus an interior lot currently is $67,500. Since 288 miles of shoreline can still be developed if lake water levels are attractive to builders and home purchasers, the premium value added of lakefront residential units (assume each lot has 200' of lake frontage) equates to over $0.5 Billion.

For purposes of Alternative 2 (conservative estimate), only one-half of the available shoreline is assumed to be developed ($257,310,000) at higher water levels. At optimal water levels (Alternative 3), 95% of the premium value ($488,889,000) is assumed.

B. Total Economic Impact and Analysis

The sum of these direct economic impacts is $384.9M in current dollars. Indirect impacts are the outcome of the RIMS data. A total of $34.5M of indirect

spending is attributable to this conservative estimate of economic activity at higher West Point Lake water level, as shown below:

INDIRECT IMPACTS GENERATED: CONSERVATIVE ESTIMATE (ALT. 2)	Retail trade	Amusements, gambling, and recreation	Accommodation	Food services and drinking places
1. Agriculture, forestry, fishing, and hunting	$34,484	$30,551	$17,919	$53,916
2. Mining	$2,653	$1,528	$2,560	$2,696
3. Utilities	$251,996	$190,941	$183,031	$342,366
4. Construction	$159,156	$186,359	$199,670	$218,359
5. Manufacturing	$941,671	$322,309	$305,905	$663,165
6. Wholesale trade	$405,847	$242,877	$223,989	$811,433
7. Retail trade	$27,748,791	$675,168	$591,331	$1,326,330
8. Transportation and warehousing	$368,711	$149,698	$124,154	$296,537
9. Information	$1,090,216	$633,925	$577,251	$1,059,446
10. Finance and insurance	$578,266	$354,387	$313,585	$576,900
11. Real estate and rental and leasing	$1,167,142	$710,301	$541,413	$1,116,058
12. Professional, scientific, and technical services	$286,480	$190,941	$136,953	$221,055
13. Management of companies and enterprises	$1,530,547	$345,222	$276,466	$145,573
14. Administrative and waste management services	$575,613	$308,561	$332,784	$280,362
15. Educational services	$119,367	$64,156	$55,037	$107,832
16. Health care and social assistance	$1,156,531	$647,673	$549,093	$1,083,709
17. Arts, entertainment, and recreation	$29,179	$15,292,102	$14,079	$29,654
18. Accommodation and food services	$408,500	$218,437	$13,000,318	$27,402,729
19. Other services	$352,795	$256,625	$241,908	$369,324
Total	$37,207,943	$20,821,760	$17,687,447	$36,107,442
Indirect Impacts Less Spending Noted	$11,841,256	$6,883,236	$5,447,447	$10,327,655
Sum of the total indirect impact columns	**$34,499,594**			
Source Data: Bureau of Economic Analysis -- U.S. Dept. of Commerce				

The total of direct and indirect economic impacts at West Point Lake assuming conservative estimates at higher West Point Lake water levels is over $429.3M, as shown below:

Total Spending for West Point Lake Activities	
Alternative 2	
Category (Direct Spending)	**Revenues**
Corp of Engineers Revenue	$934,137
Real Estate	$289,185,000
Marina / Recreation	$3,940,737
Retail & Services	$51,398,338
Hospitality & Food Services	$34,157,923
Government Revenue	$1,933,869
Jobs	$3,300,000
Total Direct Spending	**$384,850,004**
Category (Indirect Spending)	**Revenues**
Retail	$11,841,256
Ammusements, Recreation	$6,883,236
Accomodation	$5,447,447
Food/Drink Places	$10,327,655
Total Indirect Spending	**$34,499,594**
Total Direct and Indirect	**$419,349,599**
Sources: Corps of Engineers, BBPC Associates TVA, Bureau of Economic Analysis	

IV. ALTERNATIVE THREE: MODERATE ESTIMATE OF ECONOMIC IMPACT AND VALUE AT HIGHER WATER LEVELS

A. Economic Impact Categories

The second alternate estimate assumes the optimum lake level for West Point Lake to be 635 ft. above msl. This final estimate of economic impact assumes that visitor levels would increase by more than 11.2% from current levels. These assumed increases apply the "conservative" estimate for higher water levels from the TVA study.

As well, boat slip revenues increase from the assumed addition of more than 600 additional boat slips and 500 dry dock spaces, if the Maple Creek site is developed (see below). Also, 25 new rental lodging units were assumed to be added to the marinas. And, property values will increase as all boat docks are fully functional and thus enhance home values to the maximum extent, as shown below:

West Point Lake Alternate Economic Impact Estimate Economic Impact Analysis Variables	Alt. 3: Moderate Estimate
A. Corp of Engineers Revenue	**$997,645**
1. Land rent	$57,811
2. Visitor expenditures	
Camping expenditures	$732,688
Beach access fees	$38,931
Visitor Center fees	$52,013
Honor vault fees	$45,865
3. Per annum dock permits	$70,337
B. Real Estate	**$531,389,000**
1. Value added of real estate with docks.	$42,500,000
2. Premium: valued added - lakefront lots	$488,889,000
C. Marina / Recreation	**$5,458,663**
1. Boat Slip / Dry Dock Revenue	$2,435,202
2. Lodging Revenue	$2,547,692
3. Boat Rental Revenue	$475,769
D. Retail & Services	**$54,657,129**
1. Automotive Gasoline	$15,613,902
2. Gas/Oil for Boat	$10,112,667
3. Misc. Boat Expenditures	$1,864,393
4. Fishing Guide Fees	$722,800
5. Bait & Ice	$4,995,295
6. Tackle & Fishing Equip.	$4,086,896
7. Misc. Fishing Equip	$6,386,760
8. Beach Accessories	$1,777,449
9. Misc. Beach Expenses	$1,259,574
10. Camping Supplies	$4,280,965
11. Misc. Camping Expenses	$3,556,429
F. Hospitality & Food Services	**$37,464,002**
1. Hotel revenue	$8,796,875
2. Food & restaurant revenue	$28,667,127
H. Government Revenue	**$2,056,482**
1. License & registration fees	$1,037,917
3. Fishing licenses	$1,018,564
I. Jobs	**$3,300,000**
1. Direct lake jobs and avg. salaries	$3,300,000
TOTAL DIRECT IMPACT	**$635,322,921**
Sources: Corps of Engineers, TVA, BBPC Associates	

Also, these estimates assume per annum dock permits increase to 1,388, or 500 more permits issued than under current conditions. And, it is assumed at these higher water levels that all docks are rendered usable.

B. Total Economic Impact and Analyses

The sum of these direct economic impacts is $635.3M in current dollars. Indirect impacts are the outcome of the RIMS data. A total of $47.2M of indirect spending is attributable to this moderate estimate of economic activity at higher West Point Lake water levels, as shown below:

INDIRECT IMPACTS GENERATED: MODERATE ESTIMATE (ALT. 3)	Retail trade	Amusements, gambling, and recreation	Accommodation	Food services and drinking places
1. Agriculture, forestry, fishing, and hunting	$36,670	$34,794	$23,150	$57,334
2. Mining	$2,821	$1,740	$3,307	$2,867
3. Utilities	$267,974	$217,464	$236,463	$364,073
4. Construction	$169,247	$212,245	$257,960	$232,204
5. Manufacturing	$1,001,375	$367,079	$395,208	$705,211
6. Wholesale trade	$431,579	$276,614	$289,378	$862,881
7. Retail trade	$29,508,138	$768,952	$763,958	$1,410,423
8. Transportation and warehousing	$392,088	$170,492	$160,398	$315,338
9. Information	$1,159,339	$721,980	$745,768	$1,126,618
10. Finance and insurance	$614,929	$403,613	$405,129	$613,477
11. Real estate and rental and leasing	$1,241,141	$808,965	$699,468	$1,186,819
12. Professional, scientific, and technical services	$304,644	$217,464	$176,934	$235,070
13. Management of companies and enterprises	$1,627,588	$393,174	$357,175	$154,802
14. Administrative and waste management services	$612,108	$351,421	$429,933	$298,138
15. Educational services	$126,935	$73,068	$71,104	$114,669
16. Health care and social assistance	$1,229,858	$737,637	$709,389	$1,152,419
17. Arts, entertainment, and recreation	$31,029	$17,416,238	$18,189	$31,534
18. Accommodation and food services	$434,400	$248,779	$16,795,493	$29,140,135
19. Other services	$375,163	$292,271	$312,528	$392,740
Total	$39,567,025	$23,713,988	$22,850,933	$38,396,750
TOTAL INDIRECT IMPACT	$14,200,338	$9,775,465	$10,610,933	$12,616,963
Indirect Impacts Less Spending Noted	**$47,203,698**			
Source Data: Bureau of Economic Analysis -- U.S. Dept. of Commerce				

The only assumption that makes the final scenario different from the previous two is the addition of construction spending that is assumed to take place from optimal water levels. The one-time construction impact noted in the table below assumes additional economic impact due to construction of the planned 125-room hotel at the Maple Creek site (see ***Appendix D*** for details).

The total of direct, indirect and construction-related economic impacts at West Point Lake assuming moderate estimates at higher West Point Lake water levels is nearly $709.8M, as shown below:

Total Spending for West Point Lake Activities	
Alternative 3	
Category (Direct Spending)	**Revenues**
Corp of Engineers Revenue	$997,645
Real Estate	$531,389,000
Marina / Recreation	$5,458,663
Retail & Services	$54,657,129
Hospitality & Food Services	$37,464,002
Government Revenue	$2,056,482
Jobs	$3,300,000
Total Direct Spending	**$635,322,921**
Category (Indirect Spending)	**Revenues**
Retail	$14,200,338
Ammusements, Recreation	$9,775,465
Accomodation	$10,610,933
Food/Drink Places	$12,616,963
Total Indirect Spending	**$47,203,698**
Construction Spending Impact	$27,239,000
Total Direct and Indirect and Construction Spending	**$709,765,619**
Sources: Corps of Engineers, BBPC Associates TVA, Bureau of Economic Analysis	

V. ADDITIONAL DIRECT AND INDIRECT IMPACTS

A. Summary: Measurable Direct and Indirect Impacts

Shallow water levels at West Point Lake have impacted not only life on the lake, but the surrounding local economy as well. After consultation with several local officials and business owners, a general consensus can be made that such abnormal water levels have dramatically impacted the regions economic status.

- Individuals, businesses and land that are located on and/or near the 525 miles of shoreline have taken the brunt of the impact.

  - Local marina owners have reported that majority of the docks and boat slips available on the lake (about 40%-60%) have become grounded, disrupting their business and resulting in lost revenue. One individual stated that his business had missed out on "an easy $25,000 - $30,000" in revenue (equating to approximately 50% of his overall revenue) for the 2007 season. As a result, many owners have been forced to accept a financial loss. Others have taken a different approach by investing in the construction of costly slip extensions in hope of increased business. Most notably, one owner has been obligated to pursue alternative business practices.

  - Boat sales, service and water sport rentals have all decreased significantly.

  - Local lodging facilities along with restaurants, gas stations, bait/tackle, retail and convenience stores and all who service the thousands of tourists at West Point have all been negatively impacted.

- The safety and water conditions of West Point Lake have been questioned and placed under deep scrutiny.

  - With low water levels, it is natural to have increased water hazards (sticks, rocks, low depth, etc.) that one might not be aware of and that cause unsafe conditions. The Chattahoochee River area is known to be extremely dangerous due to low depths. If boaters remove themselves from the marked channel, they will go "from 20 feet of water to ankle deep in a matter of seconds." Even though, attempts have been made to

place markers where possible danger zones exist, several cases of minor boat damage have been reported.

- Many locals, all of whom are avid boaters, have been obligated to place their boats in storage for the past two years due to such conditions.

- As a result, many individuals, families and tourists have decided not to take part in such dangerous water activities.

It is safe to conclude that the water level of West Point Lake has a direct correlation with its local economy. At this time, with the water level below its optimal range, the lake has negatively impacted the local economy by deterring tourists and investors. Land values have decreased and less money has been attracted to the local economy. With less money being drawn into the West Point Lake region, in general, local businesses have reportedly seen annual revenues and sales decrease by approximately 30-60%. Home values and sales along with West Point's resort image have also been negatively affected.

As the summary table below shows, economic impact is expected to increase as West Point Lake water levels increase to optimal levels from currently lower than normal levels. At optimal levels, additional impacts to recurring impacts include additional construction activity for both residential and commercial uses.

West Point Lake -- Comparison of Economic Impacts and Differing Water Levels			
	Current Level	**Higher Level**	**Optimal Level**
Direct Spending Impact	$125,094,791	$384,850,005	$635,322,921
Indirect Spending Impact	$28,700,359	$34,499,594	$47,203,698
Total Consumer Impact:	$153,795,150	$419,349,599	$682,526,619
Impact from New Construction			$27,239,000
Total Impact	$153,795,150	$419,349,599	$709,765,619
Change for Each Scenario		$265,554,449	$290,416,020
Total Change in Impact			$555,970,469
Sources: Corps of Engineers, TVA, BBPC Associates			

The total additional impact from returning West Point Lake to historic levels is estimated to be more than $556 million. That amount is about 362% more than the current impact. Such an impact would echo throughout the communities situated in and around the lake and would bring more stability to businesses located in the area who are dependent in part on the visitor spending generated by recreational activities at West Point Lake.

B. Additional Impacts and Multiplier Effects

1. impacts of KIA-related job growth

KIA, the world's sixth leading and fastest growing automaker, will soon open a new 28M SF plant in West Point. This plant, the largest project in state history, will create 2,500 direct jobs, 2,000 more indirect jobs and about 10,000 jobs with related suppliers, some of which will also locate in this area (see below). Automobile population at this $1B plant, which will have a 650-acre foundation, will begin in November 2009.

Not only will the new residents taking jobs with KIA utilize West Point Lake, but also business visitors to the plant will stimulate local businesses, such as hotels and restaurants. Lodging patronage mix will likely shift from the current 60% leisure/40% business ratios to more business overnight stays. More business-oriented restaurant offerings likely will occur, as well.

2. planned local residential and commercial project construction

Given that the West Point Lake area is the only non-metropolitan area in the state where two interstate highways cross, and given how close this area is to Atlanta, much more development activity is anticipated. More residential and commercial construction has already been announced that will generate additional economic impacts at West Point Lake.

About 12,000 additional housing units will be added to the local housing inventory when numerous residential projects in the planning stages of development are built. These projects have been discussed with local officials, most would be located within a few miles of LaGrange and most are part of the anticipated wave of growth heading toward West Point Lake from Atlanta.

Inevitably, some of this residential growth will gravitate to the shoreline of West Point Lake; as such, additional dock construction will occur. Economic impacts tied to dock construction and maintenance activities will be generated. Due to recent changes in regulations at the lake, dock construction can now occur 100' (was 80') from the 635' pool level for privately-owned boat docks. And, projects like the Settings at West Point Lake (470 acres, 220 lots) will generate dock construction activity. Home site sales at The Settings has not suffered as much due to the fact that majority of the properties are fortunately located near the deepest parts of the lake. As a preventative measure, though, management at The Settings has decided not to install private docks for each home site, but to instead construct seven

large community multi-slip docks strategically placed where fluctuating water level has very little influence on its use.

Moreover, as noted in Alternatives 2 and 3 above, if water levels were higher and more stable, over 7,600 residential units could be constructed on lakefront lots not yet developed. The one-time construction impacts of these residential units would be tremendous; but, to be conservative, **none** of this construction spending was included in the economic impact figures detailed in Alternatives 2 and 3.

Likewise, more commercial construction is anticipated. A 100-room Courtyard by Marriott will soon be built in downtown LaGrange. And, several business/industrial expansions will occur near West Point Lake due to the opening of the new KIA automobile plant in West Point in 2009 (see above). Included will be new job creation (150 jobs) at the Molded Products facility in LaGrange, a new Dae-Lim USA facility in LaGrange (75 jobs) and a new auto supplier facility (Mobis) next to the KIA plant (600 jobs) in 2010.

3. impacts of expansion of Fort Benning

As a result of recent DoD decisions related to base realignment and closure nationwide, nearby Fort Benning located south of LaGrange will experience a significant increase in personnel. Home of the US Infantry School and headquarters of the 3rd Brigade and 3rd Infantry Division, Fort Benning will grow by 5,500 permanent military and 5,600 civilian employees and contractors by 2011.

Estimates are that an additional 17,000 new jobs will result in the surrounding 7-county area in Georgia and Alabama. And, several surrounding residential projects under discussion -- one is a new 1,200 unit subdivision, and the other is a new 2,000 unit project on 1,100 acres that will also have over 3M SF of commercial space -- will undoubtedly also generate economic impacts at West Point Lake.

C. Matrix: Future Development Potential and Ability to Attract Commerce

Six types of impact are likely as future developments occur and the region's ability to attract commerce is enhanced:

- impacts on visitor expenditures

- impacts on marina and recreation services
- impacts on retail and services revenues
- impacts on hospitality and food services revenues
- impacts on government revenues and jobs
- impacts on industrial recruitment

The cumulative effect of the new KIA plant and its spin-off activities, the planned residential/commercial construction in the area and the expansion of the Fort Benning personnel and its economic multiplier impacts will generate impacts on a number of lake-related activities. Below is a matrix depicting the expected degree and timing of these six types of impacts:

Impacts Matrix

	Likely Degree of Impacts			Impact Timing	
Impacts On	Low	Medium	High	Next 3-5 Years	Thereafter
Visitor Expenditures at Lake		✓		✓	
Marina and Recreation Expenditures			✓	✓	
Retail and Services Revenues		✓		✓	✓
Hospitality and Food Services Revenues		✓			✓
Government Revenues and Jobs			✓	✓	✓
Industrial Recruitment		✓		✓	✓

The degree of impacts on these six categories should range from medium to high; given the influx of residents, businesses and related activities, no low degrees of impacts are projected. And, given the resulting time it may take for support activities (retail and hospitality services) and resulting taxes/jobs to occur, more immediate impacts are foreseen on existing lake activities, such as campgrounds, marinas, fishing and the lake.

D. Floodplain Real Estate Valuation and Cost/Benefit Analysis

1. downstream flood prevention/real estate acquisition costs

According to the 1998 Draft Environmental Impact Statement, in the 500 year flood plain south of the dam there were 11 residential structures, 18 public buildings and 220 commercial structures. Total value of these structures and buildings, including contents, inventory and equipment, at the time was about $130 million.

However, the same document stated that if flood storage was completely eliminated, possible downstream flooding would be limited to only $5.1 million in annualized damages. Accordingly, even doubling this figure would result in a possible $10 million in annualized cost.

2. comparison: value of economic benefits vs. downstream costs

Comparing a possible one-time $10M cost to a net annual economic benefit ranging from $265.5M to $528.7M (difference between Alternative 1, and Alternatives 2 and 3) is not a difficult exercise.

VI. Conclusions

It is clear that USACE operating and management practices at West Point Lake have negatively impacted the economy of this region in a significant way. While the USACE may attempt to point to the drought being experienced as the reason for those adverse impacts, that would be subterfuge to divert attention away from the facts.

This lake was mandated by Congress nearly 35 years ago to be a recreational demonstration project. The USACE had devised plans to respect this mandate by monitoring water levels high enough to the allow recreational pursuits intended. However, the USACE has failed to adhere to both this mandate and its own operating plans since about May 2006.

Instead, the USACE has allowed water levels to drop to disastrous levels. The havoc created in terms of lost recreational opportunities, missed economic benefits, damages to business retention and industrial recruitment, and other negative impacts have been thoroughly documented and detailed in this report.

It is now the responsibility of the USACE to reform its efforts at West Point Lake to stem these damages and restore water levels to accommodate the pursuits Congress intended and authorized to benefit citizens in this region.

Appendix A

List of Stakeholders Interviewed

Representing	Participant
Introductory Mtg & Overview	Joe Maltese & Dick Timmerberg
Co-Chairs of SOS Committee City of LaGrange et al	Mayor Jeff Lukken, Jeff Brown and Patrick Crews et al
Realtor Developer	Jim Daniel, Daniel Realty
Realtor Developer	Roy Spinks, Spinks Brown Durand
Leisure Industry	Scott Malone, Best Western
Realtor Developer	Joe and Rob Upchurch
Realtor Developer	Joyce Trimble, Cornerstone Properties
Major Development	Mike Agee et al "The Settings" Development
City of West Point	Darren Kelley (Councilman) and Ed Moon CM
New Interviews	Jennifer Schrader LDN
Local Government Official	Richard English (Co)
Local Government Official	Norma Tucker (City)
Major Developer	Ron Orr
Chamber and Tourism	Jane Fryer
Local Government Official	Rick Wolfe (Chair) and Mike Dobbs (CM)
Chamber and Tourism	Dianne Holbrook
Valley Chamber	Eleanor Crowder
Economic and Industrial Development – KIA	Mike Criddle, Ray Coulombe
Corps (Land Use)	Stephen Logan and Bob Chitwood(at Corps Office)
Marina Operator	Robbie Nichols (at Southern Harbor)
Marina Operator	Danny and Chris Elrich at Highland Marina
Major Development	Brian McQuarters, The Settings Development
Marina Dock Construction	Don Hale, Don's Dock's
Boat Sales	Adam Mitchell, Mitchell Marine
Bait and Tackle Shop (Grasshoppers)	Amanda Bowen
Bait and Tackle Shop (DJ's)	Larry Grizzard
Fishing Guide	Keith Hudson
Fishing Guide	Joey Mines
Fishing Guide	Paul Parsons

Appendix B

Excerpts: USACE Master Plan

3.3.3 PROTECT AND FURTHER DEVELOP THE FISH AND WILDLIFE MANAGEMENT PROGRAMS ON ALL PUBLICLY OWNED LANDS AND WATERS TO INSURE THE CONTINUED PUBLIC ENJOYMENT OF BOTH CONSUMPTIVE AND NONCONSUMPTIVE USE OF THE FISH AND WILDLIFE RESOURCES OF THE PROJECT.

All Forest and fish and wildlife management activities will be coordinated with the Georgia Game and Fish Division or the Alabama Department of Conservation as appropriate. We will plan f o r the development of facilities and activities for compatible nonconsumptive use and provide for sound game and nongame management practices. Fishery benefits will be maintained through a variety of the following methods, all of which will be coordinated with the appropriate State fishery agencies:

Protection of existing water quality
Replacement and addition of fish attractors and shelters
Maintenance of boat ramps and Fishing piers
Dissemination of public information
Management of lake water levels
Conducting fish population studies.

4.1 RESOURCE CAPACITY AND ANALYSIS.

b. The U.S. Army Corps of Engineers Institute for Water Resources (IWR) Research Report 74-R1 was used as a guide to check the previous attendance projection and to make final determination for the facility design day load and maximum practical use of the natural resources of the project. This analysis determined that the 6,900,000 visitors projected for the year 1985 is the optimum visitation. Studies indicate that when space requirements for boating related activities were applied to the size of the lake using the IWR guide formulas, a good correlation was achieved. This verified that the optimum use of the lake will occur when the ultimate visitation of 6,900,000 is reached.

Appendix C

Economic Impact Calculations: Sources and Assumptions

West Point Lake Annual Direct Economic Impacts	
SOURCE	**Economic Impact Analysis Variables**
	A. Corp of Engineers Revenue
Army Corps	1. Land rent
	2. Visitor expenditures
Army Corps/TVA Study	Camping expenditures
Army Corps/TVA Study	Beach access fees
Army Corps/TVA Study	Visitor Center fees
Army Corps/TVA Study	Honor vault fees
Army Corps/TVA Study	3. Per annum dock permits
	B. Real Estate
Estimates decrease property value by $50,000 per unusable dock, value added as estimated by multiple local real estate brokers.	1. Value added of real estate with docks.
Trimble Appraisal Services	2. Premium: value added - lakefront lots
	C. Marina / Recreation
Estimates based on conversations with local marina owners.	1. Boat Slip / Dry Dock Revenue
Estimates based on conversations with local marina owners.	2. Lodging Revenue
Estimates based on conversations with local marina owners.	3. Boat Rental Revenue
	D. Retail & Services
Army Corps/TVA Study	1. Automotive Gasoline
Army Corps/TVA Study	2. Gas/Oil for Boat
Army Corps/TVA Study	3. Misc. Boat Expenditures
Army Corps/TVA Study and local guide interviews	4. Fishing Guide Fees
Army Corps/TVA Study	5. Bait & Ice
Army Corps/TVA Study	6. Tackle & Fishing Equip.
Army Corps/TVA Study	7. Misc. Fishing Equip
Army Corps/TVA Study	8. Beach Accessories
Army Corps/TVA Study	9. Misc. Beach Expenses
Army Corps/TVA Study	10. Camping Supplies
Army Corps/TVA Study	11. Misc. Camping Expenses
	F. Hospitality & Food Services
Army Corps/TVA Study	1. Hotel revenue
Army Corps/TVA Study	2. Food & restaurant revenue
Army Corps/TVA Study	**H. Government Revenue**
Army Corps/TVA Study	1. License & registration fees
Army Corps/TVA Study	3. Fishing licenses
	I. Jobs
	1. Direct lake jobs and avg. salaries
	TOTAL DIRECT IMPACT
BEA (US Dept. of Commerce)	**TOTAL INDIRECT IMPACTS**
	TOTAL DIRECT AND INDIRECT IMPACTS
Army Corps	**TOTAL CONSTRUCTION SPENDING (ONE TIME REVENUE)**
	TOTAL ECONOMIC IMPACT

West Point Lake Annual Direct Economic Impacts	
Economic Impact Analysis Variables	**ASSUMPTIONS**
A. Corp of Engineers Revenue	
1. Land rent	Assumes no new additional land rented.
2. Visitor expenditures	
Camping expenditures	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2% (conservative estimate for higher water levels from TVA study)
Beach access fees	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2% (conservative estimate for higher water levels from TVA study)
Visitor Center fees	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2% (conservative estimate for higher water levels from TVA study)
Honor vault fees	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2% (conservative estimate for higher water levels from TVA study)
3. Per annum dock permits	Alt 2: Assumes 385 docks constructed as planned @ Highland/Settings; Alt 3: assumes these 1388 docks total (500 more than current number)
B. Real Estate	
1. Value added of real estate with docks.	Alt 1: 40% unusable, Alt 2 Low: 25% unusable, Alt 3 High: All usable
2. Premium: value added - lakefront lots	Trimble Appraisal Services report, November 2007
C. Marina / Recreation	
1. Boat Slip / Dry Dock Revenue	Alt 2: +200 boat slips; Alt 3: +600 boat slips (Assm. Maple Creek Marina built)
	Alt 2: +200 dry dock spaces Alt 3: +500 dry dock spaces (Assm. Maple Creek Marina built)
2. Lodging Revenue	Alt 2: assumes 10 cabins added; Alt 3: assumes 25 cabins added
3. Boat Rental Revenue	Boat rental is 10% of all other revenues (both marina owners offered the same figure)
D. Retail & Services	
1. Automotive Gasoline	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
2. Gas/Oil for Boat	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
3. Misc. Boat Expenditures	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
4. Fishing Guide Fees	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
5. Bait & Ice	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
6. Tackle & Fishing Equip.	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
7. Misc. Fishing Equip	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
8. Beach Accessories	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
9. Misc. Beach Expenses	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
10. Camping Supplies	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
11. Misc. Camping Expenses	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
F. Hospitality & Food Services	
1. Hotel revenue	
	Alt 2: Assumes visitation grew @ 4.57% ; Alt 3: estimate assumes hotel growth of 11.2% PLUS a new hotel, 60% occupancy, $100 per room (includes associated food/restaurant revenue), 125 rooms.
2. Food & restaurant revenue	Alt 2: Assumes visitation grew @ 4.57%; Alt 3: Assumes visitation grew @ 11.2%
H. Government Revenue	
1. License & registration fees	
3. Fishing licenses	
I. Jobs	
1. Direct lake jobs and avg. salaries	Includes Army Corps job revenue
TOTAL DIRECT IMPACT	
TOTAL INDIRECT IMPACTS	Utilizes BEA RIMS II Model Impacts
TOTAL DIRECT AND INDIRECT IMPACTS	Alt 3: Adds in indirect impacts from construction
TOTAL CONSTRUCTION SPENDING (ONE TIME REVENUE)	Construction Assumptions detailed in Appendix D
TOTAL ECONOMIC IMPACT	

West Point Lake - Marina Slip/Dock Revenue

Highland Marina	Docks
Wet	206
Dry	198
Total	*404*

Wet Dock	% of Total Space	
$660	10%	$66
$1,155	70%	$809
$1,595	20%	$319
Avg Annual Cost of Wet Slip		***$1,194***

Dry Dock	% of Total Space	
$550	10%	$55
$1,375	20%	$275
$1,045	25%	$261
$1,155	25%	$289
$1,265	10%	$127
Avg Annual Cost of Dry Slip		***$1,007***

Southern Harbor	Docks
All Slips	260
Total	*260*

Docks	% of Total Space	
$1,925	5%	$96
$3,300	5%	$165
$3,410	5%	$171
$3,630	5%	$182
$3,740	5%	$187
$1,155	10%	$116
$1,375	15%	$206
$1,155	10%	$116
$1,485	15%	$223
$1,155	10%	$116
$1,925	5%	$96
$2,695	10%	$270
Avg Annual Cost of Slip		***$1,942***

Alternative 1: **Current Water Level**

664	**Current Number of Slips/Docks**
$1,380.50	**Average Price**
$916,652.00	**Marina/Slip Revenue**

Alternative 2: **Higher Water Level**

1,064	**Estimated Number of Slips/Docks**
$1,380.50	**Average Price**
$1,468,852.00	**Marina/Slip Revenue**

Alternative 3: **Optimal Water Level**

1,764	**Estimated Number of Slips/Docks**
$1,380.50	**Average Price**
$2,435,202.00	**Marina/Slip Revenue**

Calculation:
Premium-Value Added of Lakefront Lots
West Point Lake, GA

Miles of Shoreline:	525 miles
Miles of Limited Development of Protected Shoreline [1]/	288 miles
• linear feet	1,524,746 LF
Average Width – Lakefront Lot [2]/	200 LF
Remaining Lake Lots to be Developed	7624 lots

Lot Values

Premium for a Lakefront Lot [2]/	$67,500 [3]/
Value of Remaining Lakefront Lots to be Developed if Lake Levels Attract Builders and Buyers	$514,620,000

For Alternative 2, assume 50% impact: $257,310,000
For Alternative 3, assume 95% impact: $488,889,000

Notes

[1]/ source: City of LaGrange, GA
[2]/ source: Trimble Appraisal Services, LaGrange, GA
[3]/ as a check, Trimble determined that the average recent sales price of 40 lakefront homes was $283,500, and the average sales price of 886 other Troup County homes was $139,300, a difference of $144,300 (only $67,500 is used above)

TRIMBLE
APPRAISAL SERVICES
P.O. BOX 357 LAGRANGE, GA.30241
PHONE 706-883-6554 FAX 706-883-6555

November 14, 2007

Ralph Basile
BASILE BAUMANN PROST & ASSOCIATES INC.
Nichols Center, Suite 10
177 Defense Highway
Annapolis, MD 21401-7006

Dear Mr. Basile:

Re: West Point Lake
LaGrange, Georgia

In an effort to determine the premium for lakefront lots vs. interior lots, I have employed the sales comparison method, specifically analyzing paired sales using the method of extraction. The sales adjustment process, which is at the heart of sales comparison analysis, is based on identification and measurement of the effect that the presence or absence of a characteristic has on a sale price.

Using sales from the same subdivision eliminated the location factor. The sales used in each pair were chosen because they were similar in condition and quality of construction. Data in our market is plentiful and by placing it on a sales comparison grid, adjustments can then be made for square footage, age and various amenities such as basements, pools or tennis courts. Removing these differences from the equation allows a reliable pattern to develop clustering around one figure – the premium for lakefront lots.

Sales from within the following ten subdivisions were analyzed and resulted in the lake lot premiums as shown below and outlined on the following pages:

Moss Creek	$125,000
Eagles Rest	$100,000
Foxcroft	$ 90,000
Creek Ridge	$ 75,000
Willowcrest	$ 75,000
Morgans Landing	$ 60,000
Riverside	$ 60,000
The Cloisters	$ 45,000
Graysons Landing	$ 40,000
Indian Bend	$ 30,000

1

It is assumed that if the lake were to be fully developed, it would include different price points in the future just as it has in the past. Since future values can not be predicted, it seems reasonable to measure the above value indications by the median which is a positional average that eliminates extreme indications. Therefore, the premium for a lakefront lot vs. and interior lot is indicated at $67,500.

Sincerely,

Joyce A. Trimble
Certified General Real Property Appraiser

cc: Joe Maltese - City of LaGrange

2

PAIRED SALES DATA ANALYSIS

The following sub-sets of data show the subdivision name, address of each dwelling, type of lot (lake or interior), sale price, square foot and age for both sales. The lake lot premium is the difference between the sale price of the lake house (i.e. $583,000 at 117 Woodchase Drive and the adjusted sale price of the interior dwelling at 110 Hunters Ridge for $458,000 = $125,000, the lake lot premium).

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Moss Creek						**$125,000**
117 Woodchase Dr.	Y	$583,000	4868	17		
110 Hunters Ridge	N	$415,000	4248	8	$458,000	
Adjustments were made for square footage and age.						

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Eagles Rest						**$100,000**
224 E. Yorktown	Y	$377,250	2751	22		
317 W. Yorktown	N	$265,000	2160	12	$277,000	
Adjustments were made for square footage, age and unfinished basement.						

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Foxcroft						**$90,000**
2004 Foxcroft Dr.	Y	$513,000	2388	19		
1005 Foxcroft Dr.	N	$468,000	4219	25	$420,000	
Adjustments were made for square footage, age and a tennis court.						

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Creek Ridge						**$75,000**
144 North Shore	Y	$313,500	2728	12		
43 Creek Ridge Dr.	N	$189,000	1761	17	$238,000	
Adjustments were made for square footage and age.						

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Willowcrest						**$75,000**
230 Baywood Cr.	Y	$380,000	3374	18		
223 Baywood Cr.	N	$255,000	2633	27	$305,000	
Adjustments were made for square footage and age.						

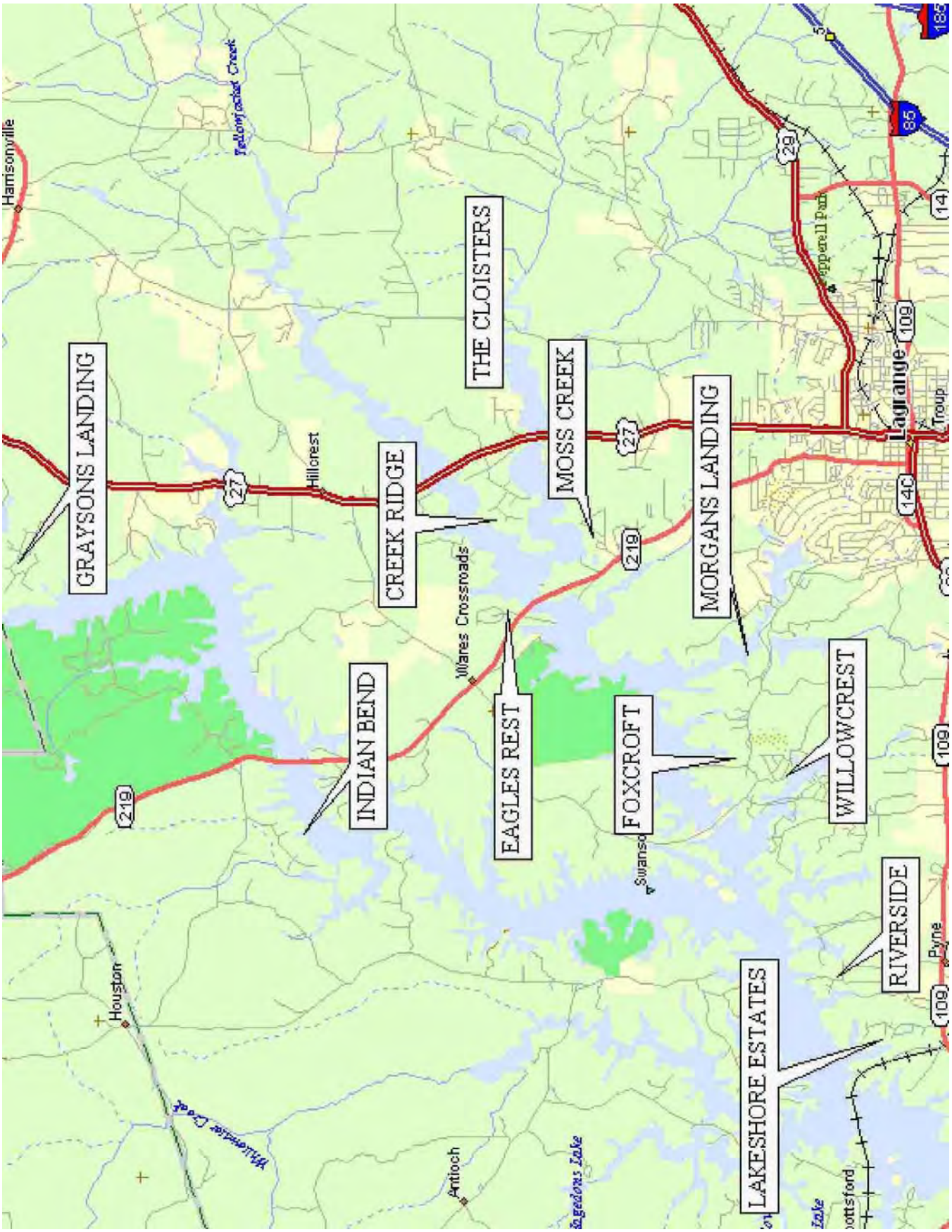
Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Morgans Landing						**$60,000**
131 Morgan Drive	Y	$550,000	4240	2		
120 Morgan Drive	N	$439,900	2811	2	$490,000	
Adjustments were made for square footage and a finished basement.						

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Riverside						**$60,000**
509 Riverside Dr.	Y	$373,000	4002	9		
1040 Riverside Dr.	N	$350,000	2702	19	$313,000	
Adjustments were made for square footage, age and unfinished basement.						

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
The Cloisters						**$45,000**
103 Canterbury Ct.	Y	$325,000	3369	10		
302 Canterbury Dr.	N	$249,900	2226	12	$280,000	
Adjustments were made for square footage and a slight adjustment for age.						

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Graysons Landing						**$40,000**
302 S. Grayson Tr.	Y	$198,000	1818	18		
352 Grayson Tr.	N	$140,000	1870	29	$158,000	
Adjustments were made for square footage, age and lot size.						

Subdivison	Lake Lot	Sale Price	Sq. Ft.	Age	Adjusted Sale Price	Lake Lot Premium
Indian Bend						**$30,000**
155 Indian Bend Tr.	Y	$232,000	2220	8		
43 Indian Bend Dr.	N	$174,900	1584	9	$202,000	
Adjustments were made for square footage and a pool						


GRAYSONS LANDING
INDIAN BEND
CREEK RIDGE
EAGLES REST
THE CLOISTERS
MOSS CREEK
FOXCROFT
MORGANS LANDING
WILLOWCREST
RIVERSIDE
LAKESHORE ESTATES
Harrisonville
Hillcrest
Wares Crossroads
Houston
Antioch
Lagrange
Troup
Pyne
Yellowjacket Creek
Whitewater Creek
Sageadons Lake
27
219
29
109
140
14
85

Fishing Guide Fee's

Based on telephone interviews with multiple fishing guides who service West Point Lake, financial information was obtained determining the amount of fishing guide revenue that is generated annually. Currently, approximately ten (10) fishing guides operate their business at West Point Lake. Majority of the guides are considered part-time with the exception of two (2) who operate full-time and may account for 40% of total revenue of fishing guides at West Point Lake.

The following data was obtained regarding sales revenue for fishing guides:

- Fishing Guide #1 operates part-time and accounts for 10% - 15% of the fishing guide business at West Point Lake. The guide stated that he operates nearly 175 trips/year charging $475/trip. As a result, annual revenue generated from Fishing Guide #1 equates to $83,125.

  Fishing Guide #1 suggested the following information regarding full-time fishing guides and stated that another full-time guide he knows may account for nearly 15% - 20% of the fishing guide business at West Point Lake. The full-time guide operates nearly 250 trips/year charging $525/trip. As a result, annual revenue generated from the full-time Fishing Guide equates to $131,250.

- Fishing Guide #2 operates part-time and typically accounts for 10% of the fishing guide business at West Point Lake. The guide stated that he operates nearly 100 trips/year charging $550/trip. As a result, annual revenue generated from Fishing Guide #2 equates to $55,000.

- Fishing Guide #3 operates part-time and accounts for 5% - 10% of the fishing guide business at West Point Lake. The guide stated that he operates nearly 75 trips/year charging $450/trip. As a result, annual revenue generated from Fishing Guide #3 equates to $33,750.

	% of Total Fishing Guide Business	Revenue
Part Time Guide	10% - 15%	$83,125
Full Time Guide	15% - 20%	$131,250
Part Time Guide	10%	$55,000
Part Time Guide	5% - 10%	$33,750
Totals	***40% - 55%***	***$303,125***

It can be concluded that based off the information provided, 40% - 55% of the overall business generated from fishing guide services equates to about $300,000. Therefore, annual revenue generated from all fishing guides at West Point Lake is approximately $550,000 - $750,000, or on average about $650,000 per year.

Appendix D

Information on Proposed Project on Maple Creek Site:

Amendment #2 to the US Corps of Engineers Master Plan for West Point Lake, GA

Background

The US Army Corps of Engineers commissioned a "Feasibility and Economic Study for Developing the Maple Creek Site at West Point Lake". The study concluded the following:

The time period 2000-2002 appears to be appropriate to support a 100-125 unit lodging/conference complex with an 18-hole golf course operation, and possibly a marina.

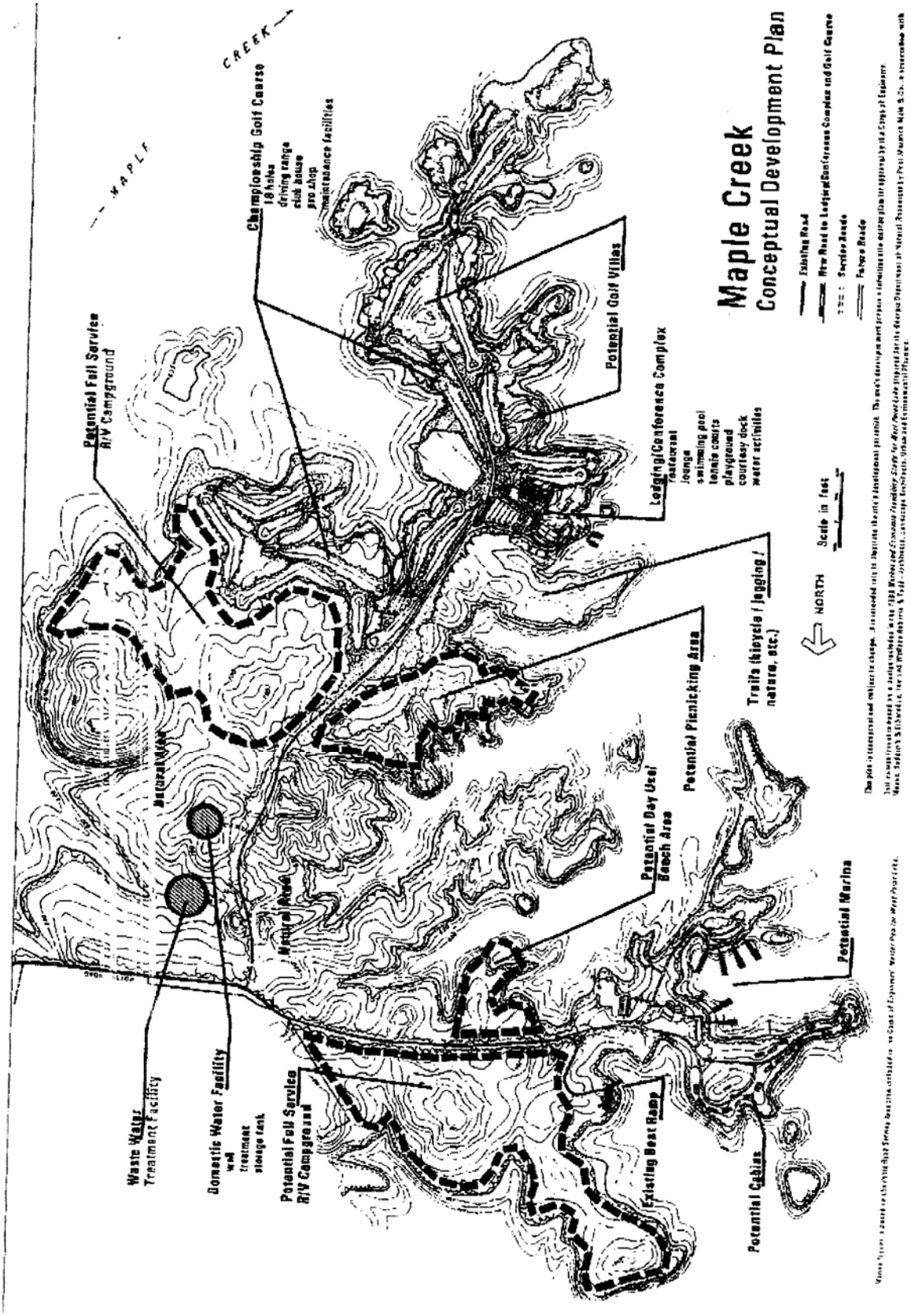
The surrounding lake offers appealing views and extensive water access…(the site offers) panoramic lake views and extensive water front access.

Additional amenities such as a campground, tennis courts, picnicking facilities, a beach and trails should be provided to enhance the overall development.

The ability to offer access to lake cruises, dinner boats, fishing excursions, pleasure craft rentals is attractive to meeting planners.

Volatile water levels, in part, likely played a role in the delay of construction of this project. Low water levels in the protected cove discouraged dock construction, and the lack of water front access and pleasurable waterfront views mitigated interest in lodging and meetings uses. These conditions, which occurred in a climate of favorable business conditions and a hospitable lending climate in the early 2000's, certainly could have contributed to missing the 2000-2002 window of market opportunity.

Since no competing facilities have been contributed elsewhere at the lake, if higher water levels could be maintained, market conditions could still lead to development of this project. Below is a summary of projected direct project costs and indirect economic impacts.


Maple Creek
Conceptual Development Plan
Existing Road
New Road to Lodging/Conference Complex and Golf Course
Service Roads
Future Roads
NORTH
Scale in feet
MAPLE
CREEK
Championship Golf Course
18 holes
driving range
club house
pro shop
maintenance facilities
Potential Golf Villas
Lodging/Conference Complex
restaurant
lounge
swimming pool
tennis courts
playground
courtesy dock
water activities
Potential Full Service
R/V Campground
Trails (bicycle / jogging / nature, etc.)
Potential Picnicking Area
Potential Day Use
Beach Area
Potential Marina
Existing Boat Ramp
Potential Cabins
Waste Water
Treatment Facility
Domestic Water Facility
well
treatment
storage tank
Potential Full Service
R/V Campground
Natural Area

PROPOSED NEW FACILITIES @ MAPLE CREEK SITE: HIGH SCENARIO			
Facility	**Units**	**Avg. Cost / Unit**	**Total Cost to Build**
Hotel (Rooms)	125	$140,000	$17,500,000
Hotel Parking (spaces)	250	$1,500	$375,000
Meeting Space (sq.ft.)	12,000	$150	$1,800,000
Golf Course (holes)	18	$220,000	$3,960,000
Restaurant / Lounge (sq. ft.)	5,600	$100	$560,000
Campgrounds (spaces)	193	$8,000	$1,544,000
Marina (slips)	200	$7,500	$1,500,000
TOTAL			$27,239,000

RIMS II CONSTRUCTION MULTIPLIER		
Industry	**Construction Multiplier**	Total Yield
Agriculture	0.0023	$62,650
Mining	0.0049	$133,471
Utilities	0.0054	$147,091
Construction	1.0028	$27,315,269
Manufacturing	0.0617	$1,680,646
Wholesale Trade	0.028	$762,692
Retail Trade	0.1072	$2,920,021
Transportation	0.013	$354,107
Information	0.0299	$814,446
Finance	0.018	$490,302
Real Estate	0.0417	$1,135,866
Professional services	0.0155	$422,205
Management	0.011	$299,629
Admin	0.0148	$403,137
Education	0.0048	$130,747
Health Care	0.0481	$1,310,196
Arts, entertainment.	0.0012	$32,687
Accomodation	0.0145	$394,966
Other services	0.0142	$386,794
Total with Multipliers		$11,957,921

Year	Cost / Hotel Room	Cost / Boat Slip
1992	$85,000	$4,500
1993	$87,550	$4,635
1994	$90,177	$4,774
1995	$92,882	$4,917
1996	$95,668	$5,065
1997	$98,538	$5,217
1998	$101,494	$5,373
1999	$104,539	$5,534
2001	$107,675	$5,700
2002	$110,906	$5,871
2003	$114,233	$6,048
2004	$117,660	$6,229
2005	$121,190	$6,416
2006	$124,825	$6,608
2007	$128,570	$6,807
2008	$132,427	$7,011
2009	$136,400	$7,221
2010	$140,492	$7,438

*Assumes 3% yearly increase

Appendix E

USACE PLAN FOR WATER LEVELS During Recreation Season at West Point Lake

WEST POINT PROJECT
PLAN FOR LOW WATER LEVELS
DURING RECREATION SEASON
Jul 99

1. Water levels determined to adversely impact recreational use of West Point Project during the period 1 May - 8 Sep, are as follows:

a. Normal Summer Level - 635 ft., NGVD
b. Initial Impact Level - 632.5 ft., NGVD
c. Major Impact Level - 629 ft., NGVD
d. Severe Impact Level - 627 ft., NGVD

2. Potential impacts on swimming areas, marinas, boat launching ramps, navigation, and private boat docks, and actions to be taken at each of these lake levels are listed below.

a. Initial Impact Level (632.5 ft., NGVD)

Recreational use and safety impacts become significant at or near this level. Actions to be taken are primarily concerned with cautioning the public about potential hazards and preparation for worsening conditions.

Impacts	Actions
1. Swimming area buoy lines are established at 629' NGVD. Levels at or near 632.5' NVGD render all swimming areas only marginally usable.	1. Post caution signs at beaches Advising of shallow depths and potential hazards. Cease charging fees for beach use. Monitor swimming areas for hazards.
2. Marina operators must prepare to shift docks outward to deeper water.	2. Notify marina operators and other lessees of lake level forecast, in coordination with Water Management Officials in District Office.
3. Some unmarked shoals and other potential hazards to navigation may begin to appear.	3. Monitor boating channels for hazards during weekend boat patrols. Mark significant hazards as necessary.
4. Approx. 35% of private docks become marginally usable with approximately 2' of water depth under them.	4. Coordinate with District Water Management and Public Affairs officials on periodic news releases advising the public of lake level forecast. Refer lake level inquiries to these officials.
5. Boat launching ramps may become partially blocked by silt in some locations.	5. Monitor ramp conditions and remove silt as necessary.

GAII001281

b. Major Impact Level (629 ft. NGVD)

Recreation and public safety impacts increase in significance at this level, and actions will be taken to identify hazards and inform the public of potentially dangerous conditions.

Impacts	Actions
1. All swimming areas become unusable.	1. Continue to monitor swimming areas for hazards.
2. Marina operators must shift boat dock positions to prevent them from becoming unusable. Approximately 40-50% of private boat docks become unusable.	2. Coordinate with District Water Management officials on issuance of news releases to inform the public of lake level forecasts and local issues such as boating and swimming hazards. Keep marina operators informed.
3. Unmarked navigation hazards continue to emerge. Some areas may become unsafe for skiing.	3. Continue to monitor lake area on weekend boat patrol. Mark hazards as necessary.
4. Approximately 10% of project boat launching ramps are impacted with less than 6' of water on the end of the concrete surface. Other ramps have frequent silt build-up. Approximately 30% of courtesy docks at ramps become unusable.	4. Monitor conditions at all boat launching ramps. Remove silt and post closure notices as appropriate. Issue news releases to identify closed ramps and direct boaters to deeper ramps.

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c. Severe Impact Level (627 ft. NGVD)

Conditions worsen significantly at this level, with water-related recreation activities severely restricted. Activities such as skiing and swimming became dangerous in many portions of the lake.

Impacts	Actions
1. Water is 50-100' from the normal shoreline and access to water is limited by mud. Navigation hazards continue to emerge and skiing is limited to main bodies of the lake.	1. Continue all actions outlined above.
2. Business at local marinas, bait and tackle shops and other lake-related establishments begins to decline significantly. Boat ramp at Highland Marina becomes unusable.	2. Expand area for news releases beyond local area. Stress available recreation activities in releases.
3. Over 50% of courtesy docks at boat ramps are unusable. Problems with silt and drop-offs at boat launching ramps increase	3. Initiate scheduled work items that must be accomplished during low lake levels such as beach nourishment, shoreline protection, launching ramp extension, installation of shoal markers, etc.
4. Approximately 70% of private docks are unusable.	4. Continue public information efforts outlined above.

GAII001283