

Testimony: Floating Homes on TVA Reservoirs – September 2016

I am Laura Anne Sneed, I live in Cherokee, NC and I am the co-founder of Fontana Families for Floating Houses. My husband Erik and I created the group to support the rights of all floating homeowners and we are also members of the Tennessee Valley Floating Homes Alliance (TVFHA). Both groups were formed in 2016 to oppose the TVA's sunset provision on all floating homes.

In 2014, my family purchased our first pre-1978 non-navigable boathouse on Fontana Lake. We promptly transferred ownership and my husband applied for the TVA Section 26a permit. That fall it was granted and we spent that winter completely remodeling the home. The summer of 2015 we enjoyed it with our family, friends and children. At the time I was pregnant with our second son, so we opted to purchase a second pre-1978 non-navigable boathouse to accommodate our expanding family. Together my husband and I have two young boys and he has two grown children from a previous marriage. Like our first home my husband promptly applied for our 26a permit, received it shortly after (See Appendix A) and we worked that winter to remodel the home.

In February of 2016 TVA officials announced they were recommending to TVA's Board of Directors (Board) that they adopt so-called "Alternative B2" from the list of options outlined in their recently completed Environmental Impact Statement (EIS). Alternative B2 included a "sunset" provision which required the involuntary removal of all floating homes from TVA's reservoirs within 20 years. TVA's Board subsequently adopted Alternative B2 as its new policy on May 5, 2016, with the caveat that the sunset would be extended to 30 years. TVA's action would eventually force 1,838 floating homes of the lakes, including the 918 non-navigable boathouses that were permitted and had been previously grandfathered since 1978. I was completely shocked and devastated as I never imagined we would lose our floating homes, especially since we followed the rules, paid \$1,000 in fees and received Section 26a permits from the TVA.

On May 5, 2016 the TVA board ultimately voted for a 30-year sunset. Despite the ten year increase, the financial and emotional impacts have been felt immediately. This decision has created pain and anxiety for so many people; people that are United States Citizens with varying income levels, races, ages, sexual orientation and political party affiliations. These homeowners are not only from North Carolina and Tennessee, but also live and travel from Florida, Georgia, Illinois, Indiana, Kentucky, Ohio, Oklahoma, South Carolina, Virginia and West Virginia. On Fontana Lake many homeowners are also enrolled members of the Eastern Band of Cherokee Indians, including my husband and our children.

Prior to marrying my husband and moving to the Cherokee Indian Reservation, I was a girl from Minnesota that grew up with priceless memories of spending time with family and friends at various lakes. All I wanted was for my children and future grandchildren to have similar life experiences. Due to the land restrictions at Fontana Lake, buying a modest lake shore cabin wasn't an option for us. Fontana is mostly surrounded by United States Forest Service lands and the Great Smoky Mountains National Park. The only accessible and desirable private lake front property is extremely expensive. These floating homes afford everyday people the ability to enjoy the lake regardless of their income status. The floating home community is a unique collection of owners, including an EMS worker, a North Carolina

State Trooper, a registered nurse, a school bus driver, a chemical engineer, a college professor, Tribal employees of the Eastern Band of Cherokee Indians, retirees, numerous former members of the United States Military, and many others.

Following the sunset ruling, homeowners were suddenly faced with the reality that their floating homes would be worth as little as half the value they were the previous summer. New buyers aren't interested in investing in a floating home at previous market values that will continue to decrease in value as it gets closer to the sunset and will then ultimately have to be destroyed and removed at their own cost.

In addition to the proposed sunset, the TVA is developing new regulations and fee structures for the floating houses. As responsible homeowners and frequent users of the lake, many of us are not against reasonable regulations. I am a Certified Interior Designer (MN #C02400) who focuses on commercial construction and my husband is a NASCLA Certified General Contractor (NC #7476). Together we own a design firm and a construction services business. We understand and agree with the need for codes and regulations for the health, welfare and safety of the public. As long as the regulations are based on reasonable standards and are achievable we support the TVA in this effort.

Along with an initial permitting fee of five hundred dollars (\$500), the TVA has proposed a potential fee of fifty cents (.50¢) per square foot on all non-permitted homes and possibly on permitted homes that have been modified over the years. Although our homes were previously permitted I am going to use them as an example:

Our Current Costs

Swain County Taxes = approximately .0036 X tax value	= \$142.20 in 2016 to Swain County, NC
Pump Contract = \$100 per year	= \$200.00 for 2 homes per year to the marina
Alarka Dock Mooring Fees = \$75.00 per month	= <u>\$1800.00 for 2 homes per year to the marina</u>
Sub Total	= \$2142.20 in annual fees and taxes

New proposed TVA annual Fee

Home 3F-502 = Approximately 819 SF x .50 cents	= \$409.50 per year
Home 3F-430 = Approximately 1,320 SF x .50 cents	= <u>\$660.00 per year</u>
Sub Total	= \$1069.50 per year to the TVA

Grand Total with New proposed TVA fees	= \$3,211.70 in annual fees and taxes
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The TVA proposed fees represent a 50% increase in our current cost to legally moor the homes in the marina. The fee is also 7.5 times what we pay in annual taxes. I ask what services the TVA will be providing to justify charging that amount of money annually? With mooring fees you get a space and a marina operator to manage your home as the lake levels rise and drop. With taxes you get the use of emergency services, roads and garbage disposal at the local dump. With the pump contract your raw sewage is properly removed and disposed of. These costs also don't include the cost to moor a boat at a marina (\$400 per season at Alarka Boat Dock), which is necessary to get to and from our floating homes,

nor do these costs include the fuel required for transportation and any other maintenance costs or insurance premiums home owners may have.

I hope the TVA will be reasonable in their fees and only charge what is minimally necessary, in order to not prematurely remove people from the lake. Sometimes I believe the perception is that floating homeowners are “rich” or wealthy. In many cases, this could not be further from the truth. In Swain County, North Carolina there are 171 houseboats and according to the county tax office, the taxable value is \$3,537,626.00. That averages out to only \$20,687.87 per floating home.

At a meeting with floating homeowners on August 25, 2016, the TVA staff revealed they are projecting to lose up to 20% to 30% of the homes after all the proposed regulations and fees go into effect. That’s between 360 to 550 families who would lose their little piece of the American dream. Admittedly there are some homes on Fontana Lake that have been abandoned for years and need to be removed, but the majority are owned and loved by hard working families and retirees.

With the loss of floating homes, there is going to be a significant negative impact on local marinas. On Fontana the Alarka Boat Dock, Prince Boat Dock and Crisp Boat Dock all rely heavily on the income generated from floating homeowners. According to Alarka Boat Dock owner Tony Sherrill, up to 50% of their revenue is generated solely by the floating homeowners that utilize their services. Without this source of income, paired with the extreme annual drawdown of Fontana Lake (Approximately 60’+ in the Fall/Winter) which puts the marina and many homes on the ground for several months, these family owned and operated businesses may not be able to diversify and survive. Without these marinas, the already limited lake access will significantly decrease and that will be a huge detriment to the public.

Another consideration on Fontana Lake are the many floating home owners who are also descendants of families who lost property to the TVA when they created the reservoir in the 1940’s. Despite the years, the wounds of that land grab are still very raw and this newest “taking” is adding insult to injury to the citizens of Graham and Swain Counties. Both Graham and Swain Counties rely on the funds generated by taxing these floating homes. According to each respective tax office, Swain County collected \$12,735 and Graham County collected about \$34,000 in annual taxes for the most recent tax year. This figure does not include the sales tax collected on gas, groceries and other purchases made by floating home owners and guests while they stay at the lake. In the larger scheme of things, these numbers are not huge, but this loss without any supplemental alternatives will have a significant impact on these counties. For example, Swain County is quite large but they have a very limited tax base as it is also comprised of Forest Service land, the National Park, Fontana Lake and the Cherokee Indian Reservation. The money generated by these floating homes, both directly and indirectly, goes into their general funds and helps support our communities’ healthcare systems, education and infrastructure.

In order to justify why all these families must lose their floating homes, the TVA has cited that there “may” be environmental issues, homes moored out of marina limits, and a fairness issue due to the private use of a public resource.

As a steward and frequent user of the lake, I care deeply about our environment. These homes not only provide shelter for us lake goers, but they also provide rich habitats for the fish and other small creatures. Frequently we see fishing boats surround our homes and as we have no claim to the lake and everyone can enjoy the natural resources, we welcome them. In addition, my family also took the initiative to replace all of our old Styrofoam with TVA compliant, environmentally friendly encased black floats. We actually were not alone in this effort and this past winter several fellow homeowners also replaced theirs (which is easier said than done) and all together invested around \$100,000.00 in new compliant flotation at the Alarka Boat Dock alone.

The greatest potential environmental concerns are water quality issues from the dumping of raw sewage. Ironically, the TVA neither performed, nor included, a quantifiable water quality study in their EIS. This concern however is easily dispelled. In 2006 an extensive water quality study (See Attachment B) was performed on Fontana, following the implementation of an extensive grant-funded waste management program. While I am not a water quality scientist or an expert, it is my understanding that this study provided quantifiable proof that the water quality was generally excellent and that the noted issues were primarily coming from the rivers and tributaries feeding the lake. In fairness, one house was found with higher than normal fecal coliform readings nearby, an issue that was never conclusively confirmed as connected to that floating house or any other. As a loving and protective mother I would never allow my children to swim in the lake if it was not safe. Swain and Graham Counties require everyone to have a pump contract with their marinas and the waste is pumped out and properly disposed of regularly. If in fact there are floating homes that are dumping raw sewage, then I would want them off the lake, but it is an overreaction to punish everyone for potential and unsubstantiated actions, especially since the waste issue was effectively dealt with ten years ago and marina operators are diligent in mandating enforcement.

As for homes moored out of the marina limits, Ms. Rebecca Tolene, TVA's VP of Natural Resources, disclosed at the April 26, 2016 meeting of TVA's Regional Resource Stewardship Council (RRSC) that TVA estimates only 2% of the homes are actually moored outside of the marina limits. If that's the case, then that is only 37 homes out of 1,838. At Fontana, many homes "appear" to be out of the marina limits. Due to lake conditions the marinas lease large amounts of shore line verses the marinas on Norris Lake, which are located in more concentrated areas. In my opinion it would make the most sense to address the very few that are not in compliance instead of requiring all homes to be removed.

The most recent concern raised by TVA officials and used as a justification for sunsetting our floating homes involves the private use of a public resource. This concern implies that the ownership of floating homes on a public lake is somehow a social concern of fairness that is driven by privilege or financial means. In regard to private use of a public resource, most marinas on Fontana Lake hold leases with the United States Forest Service, and in return sublease to the floating home owners like they do with all the pre-manufactured houseboats. We pay to rent spaces within the marina limits. We are not squatters, nor do we claim to own our mooring locations, the water, or the land. To put it in perspective, Fontana Lake is 10,227.2 acres and the six marinas (including those that do not have floating homes) constitute 997.1 acres, which is only 10% of the overall lake.

Technically, everyone who uses the lake in any way is privately using a public resource. As such, shouldn't the TVA also then ban all boats, since not everyone can afford a boat? Shouldn't TVA consider boat usage as simply another perk for the "rich" or wealthy? One may argue you can rent a boat from a marina, but you can also rent a floating home.

Now I am aware that not everyone can own a floating home, but is removing them the best solution? We worked hard, saved our money, made sacrifices and bought our homes. Should we all lose them because someone else didn't get the exact same opportunities? We all know life isn't fair and I acknowledge there are much worse situations like fighting cancer or losing a child, but everyone in the floating home community is just trying to live the American dream. If everything in this country was regulated in an effort to balance the wealth and possessions of the population, then we'd find ourselves in another one of those failed socialist or communist states that are counter to the principals on which this nation was founded.

TVA frequently points to the motto that is inscribed on their historic dams – "Built for the People of the United States". They do so with the claim that they are sunsetting floating homes in the interest of the people. This is despite the fact that many people of the United States want the floating homes to stay. Prior to the May 5th meeting, my husband and I started an iPetition that received over 3,700 signatures and over 900 comments (See Appendix C for an excerpt). Many were from people who were not even floating homeowners. In addition to public support, we have received the support of our elected officials including Congressman Meadows, as well as Senators Burr and Tillis. Seven Tennessee Members of Congress also sent the TVA a joint letter in support of floating homes including: Chuck Fleischmann, John Duncan, Diane Black, Stephan Fincher, Marsha Blackburn, Phil Roe and Scott DesJaris. The Eastern Band of Cherokee Indians (See Appendix D) and the State Legislature of Tennessee (See Appendix E) unanimously passed resolutions to oppose the removal of floating homes. On a more local level, the North Carolina counties of Swain, Graham and Haywood and several counties in Tennessee have all passed resolutions in support of keeping floating homes. The TVA board has chosen to ignore all of these officials in spite of the fact they are voted in by the people to serve the interests of the people.

In conclusion, the recent actions of the TVA Board are a clear example of government overreach that will have a negative impact on our local economies, small businesses and American families, including my own. My family followed the rules, did the paperwork, paid the fees, and brought the homes up to decent standards. Yet we too are being unfairly punished and are going to lose something we legally had the right to own. Although the TVA is a government entity, I ask who is overseeing their actions and who is holding them accountable? The TVA reservoirs are "Built for the People of the United States" and as the Citizens served by that mission, we just want to continue to enjoy them as we have done for decades.

APPENDIX A



Tennessee Valley Authority, 4800 US Highway 64 West, Suite 102, Murphy, NC 28906

October 16, 2015

David Sneed


Dear Mr. Sneed:

FONTANA RESERVOIR – RLR 273146 – MODIFICATIONS TO 3-F-502 - NON-NAVIGABLE HOUSEBOAT – ALARKA BOAT HARBOR – TVA TRACT NO. XTFR-3 – MAP 22 D – ALARKA CREEK – LITTLE TENNESSEE RIVER MILE 82.5 – SWAIN COUNTY NORTH CAROLINA

Attached is a copy of your Section 26a permit for your non-navigable houseboat, 3-F-502, currently moored at Alarka Boat Harbor on Fontana Reservoir.

For your information, TVA's regulations governing authorization (permitting) of water-use facilities and other shoreline alterations are published in Part 1304 of Title 18 of the Code of Federal Regulations and can be reviewed on TVA's web site at <http://www.tva.com/river/26apermits/regs.htm>. Subpart B contains the regulations for non-navigable houseboats. We recommend you familiarize yourself with these regulations and want to take this opportunity to inform you that Sections 1304.101(d) and 1304.103 require the following:

- (1) Approved nonnavigable houseboats shall be maintained in a good state of repair. Such houseboats may be structurally repaired or rebuilt without additional approval from TVA, but any expansion in length, width, or height is prohibited except as approved in writing by TVA; and
- (2) Plans for the structural modification, or rebuilding of an approved nonnavigable houseboat shall be submitted to TVA for review and approval in advance of any structural modification which would increase the length, width, height, or flotation of the structure.

Non-essential modifications which increase the length, width, or height of the approved facility (such as decks, porches, additional living space, or boatslips) are generally not approved by TVA. If you have any questions about your Section 26a permit, the modification of your facility, or TVA's Section 26a regulations please contact me at 865-632-1302 or by email at jlduffey@tva.gov.

Sincerely,



Janet L. Duffey
Program Manager
Reservoir Land Use & Permitting, East Region



Tennessee Valley Authority
Section 26a Approval

Permit # 273146

Reservoir Fontana

Category 1

DOT Project #

Name	Company	Address	Phone/Email
David Sneed			

Tract(s)

XTFR-3

Subdivision/Lot(s)	Stream	Mile	Bank	Map Sheet(s)
Subdivision: N/A	Alarka Cr	82.5	R	22 C/D Stage

The facilities and/or activities listed below are APPROVED subject to the plans and general and special conditions attached.

1. Non-navigable Houseboat

Height (ft., in.): 9'; Length (ft., in.): 23'; Structure Number:
273146; Width (ft., in.): 36'

This permit SUPERSEDES all previous TVA approvals at this location including permits approved under land record numbers:

154575

TVA Representative: Tammy W Mc coy Date: 10-16-2015

May require review by U.S. Army Corps of Engineers (USACE). Plans have been forwarded to the USACE.

No construction shall commence until you have written approval or verification that no permit is required.

Applicant is also responsible for all local and state approvals that may be required relating to water quality.

No construction shall commence until you have written approval or verification that no permit is required.

GENERAL AND STANDARD CONDITIONS

Section 26a

General Conditions

- 1) You agree to make every reasonable effort to construct and operate the facility authorized herein in a manner so as to minimize any adverse impact on water quality, aquatic life, wildlife, vegetation, and natural environmental values.
- 2) This permit may be revoked by TVA by written notice if:
 - a) the structure is not completed in accordance with approved plans;
 - b) if in TVA's judgment the structure is not maintained in a good state of repair and in good, safe, and substantial condition;
 - c) the structure is abandoned;
 - d) the structure or work must be altered or removed to meet the requirements of future reservoir or land management operations of the United States or TVA;
 - e) TVA finds that the structure has an adverse effect upon navigation, flood control, or public lands or reservations;
 - f) all invoices related to this permit are not timely paid;
 - g) you no longer have sufficient property rights to maintain a structure at this location; or
 - h) a land use agreement (e.g., license, easement, lease) for use of TVA land at this location related to this permit expires, is terminated or cancelled, or otherwise ceases to be effective.
- 3) If this permit for this structure is revoked, you agree to remove the structure, at your expense, upon written notice from TVA. In the event you do not remove the structure within 30 days of written notice to do so, TVA shall have the right to remove or cause to have removed, the structure or any part thereof. You agree to reimburse TVA for all costs incurred in connection with removal.
- 4) In issuing this Approval of Plans, TVA makes no representations that the structures or work authorized or property used temporarily or permanently in connection therewith will not be subject to damage due to future operations undertaken by the United States and/or TVA for the conservation or improvement of navigation, for the control of floods, or for other purposes, or due to fluctuations in elevations of the water surface of the river or reservoir, and no claim or right to compensation shall accrue from any such damage. By the acceptance of this approval, applicant covenants and agrees to make no claim against TVA or the United States by reason of any such damage, and to indemnify and save harmless TVA and the United States from any and all claims by other persons arising out of any such damage.
- 5) In issuing this Approval of Plans, TVA assumes no liability and undertakes no obligation or duty (in tort, contract, strict liability or otherwise) to the applicant or to any third party for any damages to property (real or personal) or personal injuries (including death) arising out of or in any way connected with applicant's construction, operation, or maintenance of the facility which is the subject of this Approval of Plans.
- 6) This approval shall not be construed to be a substitute for the requirements of any federal, state, or local statute, regulation, ordinance, or code, including, but not limited to, applicable building codes, now in effect or hereafter enacted. State 401 water quality certification may apply.
- 7) The facility will not be altered, or modified, unless TVA's written approval has been obtained prior to commencing work.
- 8) You understand that covered second stories are prohibited by Section 1304.204 of the Section 26a Regulations.
- 9) You agree to notify TVA of any transfer of ownership of the approved structure to a third party. Third party is required to make application to TVA for permitting of the structure in their name (1304.10). Any permit which is not transferred within 60 days is subject to revocation.
- 10) You agree to stabilize all disturbed areas within 30 days of completion of the work authorized. All land-disturbing activities shall be conducted in accordance with Best Management Practices as defined by Section 208 of the Clean Water Act to control erosion and sedimentation to prevent adverse water quality and related aquatic impacts. Such practices shall be consistent with sound engineering and construction principles; applicable federal, state, and local statutes, regulations, or ordinances; and proven techniques for controlling erosion and sedimentation, including any required conditions under Section 6 of the Standard Conditions.
- 11) You agree not to use or permit the use of the premises, facilities, or structures for any purposes that will result in draining or dumping into the reservoir of any refuse, sewage, or other material in violation of applicable standards or requirements relating to pollution control of any kind now in effect or hereinafter established.

- 12) The Native American Graves Protection and Repatriation Act and the Archaeological Resources Protection Act apply to archaeological resources located on the premises of land connected to any application made unto TVA. If LESSEE {or licensee or grantee (for easement) or applicant (for 26a permit)} discovers human remains, funerary objects, sacred objects, objects of cultural patrimony, or any other archaeological resources on or under the premises, LESSEE {or licensee, grantee, or applicant} shall immediately stop activity in the area of the discovery, make a reasonable effort to protect the items, and notify TVA by telephone (865-228-1374). Work may not be resumed in the area of the discovery until approved by TVA.
- 13) You should contact your local government official(s) to ensure that this facility complies with all applicable local floodplain regulations.
- 14) You agree to abide by the conditions of the vegetation management plan. Unless otherwise stated on this permit, vegetation removal is prohibited on TVA land.
- 15) You agree to securely anchor all floating facilities to prevent them from floating free during major floods.
- 16) You are responsible for accurately locating your facility, and this authorization is valid and effective only if your facility is located as shown on your application or as otherwise approved by TVA in this permit. The facility must be located on land owned or leased by you, or on TVA land at a location approved by TVA.
- 17) You agree to allow TVA employees access to your water use facilities to ensure compliance with any TVA issued approvals.
- 18) It is understood that you own adequate property rights at this location. If at any time it is determined that you do not own sufficient property rights, or that you have only partial ownership rights in the land at this location, this permit may be revoked. TVA may require the applicant to provide appropriate verification of ownership.
- 19) In accordance with 18 CFR Part 1304.9, Approval for construction covered by this permit expires 18 months after the date of issuance unless construction has been initiated.

Standard Conditions (Only items that pertain to this request have been listed.)

1) Structures and Facilities

- a) TVA number 273146 3F-502 has been assigned and provided for your facility. When construction is complete, this numbered tag shall be placed on the lakeward side on a readily visible part of the outside of the facility.
- i) You agree that only those facilities which have been approved by TVA prior to construction will be placed within the harbor limits and that permanent mooring buoys, boat slips, or other harbor facilities will not be placed outside the harbor limits.
- j) You agree that all storage, piping, and dispensing of liquid fuel shall comply with applicable requirements of the "Flammable and Combustible Liquids" section of the National Fire Codes and any additional requirements of federal, state, and local laws and regulations.
- k) You agree that the nonnavigable houseboat facility hereby approved will be used for private residential and for no other purpose unless approved in writing from TVA.
- l) All approved nonnavigable houseboats with toilets must be equipped with a properly installed and operating Marine Sanitation Device (MSD). The system must be inspected annually. You also agree to use a pumpout facility, for your MSD Type 3 or a mobile pumpout service to empty your vessel's tank while moored.
- m) You agree to these standard conditions for Sewage Pumping Stations;
 - i) System will have no overflow pipe.
 - ii) Alarm system to notify fluid level in holding tank.
 - iii) Reliable Licensed Sewage hauler.
 - iv) Easy access to holding tank for inspection.
 - v) Maintain the sewage system to prevent leakage of sewage into the reservoir.
- o) You understand that any replacement of existing floatation must include encapsulated foam or commercially manufactured floats pursuant to Section 1304.40 of the Section 26a Regulations.
- r) You are hereby advised that the subject facilities will be on a recreational navigation channel and may be vulnerable to wave wash and possible collision damage from passing vessels.
- s) You agree to securely anchor all floating facilities to prevent them from floating free during major floods. All anchoring cables or spud poles must be anchored to the walkway or to the ground in a way that will not accelerate bank erosion. Anchoring of cables, chains or poles to trees on TVA property is not permitted.

2) Ownership Rights

- b) You are advised that TVA retains the right to flood this area and that TVA will not be liable for damages resulting from flooding.
- d) This approval of plans is only a determination that these harbor limits will not have any unacceptable effect on TVA programs or other interests for which TVA has responsibility. Such approval does not profess or intend to give the applicant exclusive control over the use of navigable waters involved.
- e) You recognize and understand that this authorization conveys no property rights, grants no exclusive license, and in no way restricts the general public's privilege of using shoreland owned by or subject to public access rights owned by TVA. It is also subject to any existing rights of third parties. Nothing contained in this approval shall be construed to detract or deviate from the rights of the United States and TVA held over this land under the Grant of Flowage Easement. This Approval of Plans does not give any property rights in real estate or material and does not authorize any injury to private property or invasion of private or public rights. It merely constitutes a finding that the facility, if constructed at the location specified in the plans submitted and in accordance with said plans, would not at this time constitute an obstruction unduly affecting navigation, flood control, or public lands or reservations.
- f) Land fronting your lot is TVA PUBLIC LAND, no fences or other barricades are allowed which may impede the general public's ability to cross.

6) Best Management Practices

- d) You agree to keep equipment out of the reservoir or stream and off reservoir or stream banks, to the extent practicable (i.e., performing work "in the dry").
- e) You agree to avoid contact of wet concrete with the stream or reservoir, and avoid disposing of concrete washings, or other substances or materials, in those waters.
- f) You agree to use erosion control structures around any material stockpile areas.

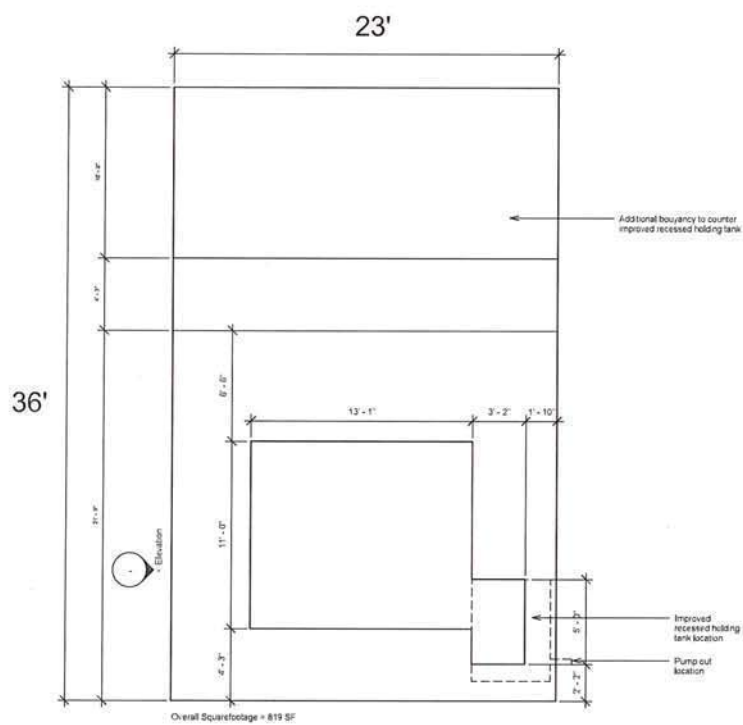
Additional Conditions

Project will be performed using Best Management Practices.

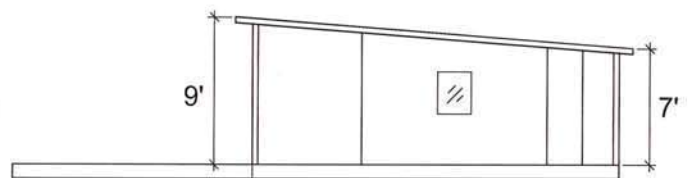
This permit is valid for David Erik Sneed, any transfer of property ownership requires a new Section

26a application.

Attachments to houseboat 3F-502 shall be permanent and the configuration shall remain consistent as displayed in this permit. Facility as approved is at maximum size; future expansion will not be accepted by TVA for review and approval.



PLAN VIEW



SIDE ELEVATION VIEW

David Sneed - 273146
 Fontana Reservoir
 XTFR-3 LTR 82.5R
 Map 22D



David Sneed - 273146

Fontana Reservoir
 Tract No. XTFR-3
 7230 Grassy Branch Road
 Little Tennessee River Mile 82.5R
 Map 22D

JOINT APPLICATION FORM
Department of the Army/TVA

The Department of the Army (DA) permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (P.L. 95-217). These laws require permits authorizing structures and work in or affecting navigable waters of the United States and the discharge of dredged or fill material into waters of the United States. Section 26a of the Tennessee Valley Authority Act, as amended, prohibits the construction, operation, or maintenance of any structure affecting navigation, flood control, or public lands or reservations across, along, or in the Tennessee River or any of its tributaries until plans for such construction, operation, and maintenance have been submitted to and approved by the Tennessee Valley Authority (TVA).

Name and Mailing Address of Applicant: David Erik Sneed 109 Bearclaw Lane Cherokee, NC 28719 Email Address: _____ Telephone Number: Home <u>N/A</u> Office <u>N/A</u> Mobile <u> </u>	Name, Mailing Address, and Title of Authorized Agent: Same as Applicant Email Address: _____ Telephone Number: Home _____ Office _____ Mobile _____
Facility/Activity Location (include all known information): Reservoir <u>Fontana</u> Address: <u>Boathouse near Alarka Boat Dock, 7230 Grassy Branch Road, Bryson City, NC 28713</u> Subdivision, Lot No., and/or Tax Parcel No.: <u>N/A</u> Stream Name and Mile: <u>Fontana Reservoir - Alarka Creek</u> Longitude/Latitude: <u>35.391797, -83.551601</u>	
Application submitted to ☐ DA ☒ TVA Date activity is proposed to commence: <u>Pre-existing</u> Date activity is proposed to be completed: _____	

Describe in detail the proposed activity, its purpose and intended use (*private, public, commercial, or other*). Describe structures to be erected including those placed on fills, piles, or floating platforms. Also describe the type, composition, and quantity of materials to be discharged or placed in the water; the means of conveyance; and the source of discharge or fill material. Please attach additional sheets if needed.

Transfer of ownership of existing T.V.A. permitted boathouse # 3F-502. Boathouse is intended for private recreational use. Structure is in good condition with styrofoam floats in need of replacement. Structure has been modified by a previous owner to meet the requirements of the Swain County Ordinance for sewage/wastewater discharge and is properly permitted with the County. Proposed activity includes maintenance on the structure as well as replacement of flotation to meet T.V.A. requirements. See attached supporting detailed information.

Application is hereby made for approval of the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I understand that TVA and the U.S. Army Corps of Engineers may contact an Authorized Agent listed above and such Agent may act on my behalf on all aspects of this application. I agree that if this application is approved by TVA, I will comply with the terms and conditions and any special conditions that may be imposed by TVA. Please note the U.S. Army Corps of Engineers may impose additional conditions or

July 29, 2015
Date

David Erik Sneed
Name of Applicant (Printed)

[Signature]
Signature of Applicant

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. The appropriate DA fee will be assessed when a permit is issued.

Names, addresses, and telephone numbers of adjoining property owners, lessees, etc., whose properties also join the waterway:
Not applicable.

TVA RESTRICTED INFORMATION

OMB No. 3316-0060
Exp. Date 08/31/2016Section 26a Permit and Land Use Application
Applicant Disclosure Form

By signing the Joint Application Form (Department of Army/TVA) or TVA's Land Use Application and again below, you agree to disclose any business, political, or financial interest that may present an actual or potential conflict of interest with TVA. If a new significant business, political, or financial interest is obtained during the period of the time that the application is under review, you agree to file an additional disclosure.

Disclose if any of the following apply to you (check all that apply ☒). I am:

- ☐ An elected government official
- ☐ A policy making level employee of an entity that regulates TVA or its activities
- ☐ A management level employee of a power customer of TVA
- ☐ A TVA Director
- ☐ A TVA employee
- ☐ An immediate family member of one of the above
- ☐ A representative of a corporation or entity submitting an application and one of the above applies to me. Print entity or corporation name, and identify which of the above applies to you.

- ☐ A representative of a corporation or entity submitting an application and the corporation or entity has partners, investors, or senior management that are one of the above. Print entity or corporation name, and identify the partner(s), investor(s), or senior manager(s) and which of the above applies.

☒ None of the above

Do you have any other business or personal relationships not covered in your answers above that could appear to be a conflict of interest? (check one) Yes ☐ No ☒ If yes, provide more detail here.

By signing this form, you consent to this Applicant Disclosure Form being made available to the public in response to an appropriate request, including, without limitation, a request made under the Freedom of Information Act.

Please sign and return this form with your application package. Your application cannot be processed without receipt of this signed form.

DAVID ERIC SWEED

Name of applicant (Printed)

Signature of Applicant

Date

All applications and communications that occur as part of the application process may be made public to the extent permitted by applicable law, including the Freedom of Information Act and the Privacy Act, and could be reviewed formally by the Office of Inspector General (OIG). All written correspondence regarding your request may be forwarded to the TVA Chief Ethics and Compliance Officer (CECO) and the OIG, and all oral communication between TVA and the applicant regarding this request may be documented and maintained by TVA. Inquiries concerning your application from any person who falls into one of the categories described above will be disclosed to the CECO and OIG.

Privacy Act Statement

This information is being requested in accordance with Sections 4(k), 15d, 26a, and/or 31 of the TVA Act; 40 U.S.C. § 1314; 30 U.S.C. § 185; 16 U.S.C. § 667b; and/or 40 U.S.C. § 483. Disclosure of the information requested is voluntary; however, failure to provide any required information or documents may result in a delay in processing your application or in your application being denied. An application that is not complete will be returned for additional information. TVA uses this information to assess the impact of the proposed project on TVA programs and the environment and to determine if the project can be approved. Information in the application is made a matter of public record through issuance of a public notice if warranted. Routine uses of this information include providing to federal, state, or local agencies, and to consultants, contractors, etc., for use in program evaluations, studies, or other matters involving support services to the program; to respond to a congressional inquiry concerning the application or the applicable program; and for oversight or similar purposes, corrective action, litigation, or law enforcement.

APPENDIX B

Water Quality Measurements Fontana Lake, Summer 2006

Linda White: Project Oversight

Peter Whittaker: Fontana Project Leader

Roger Clapp: Sampling Project Leader

Ryan Sherby: Sample Collector, GIS Technician

Joe McMillan: Author, Sample Collector

SUMMARY

Water samples were taken at Fontana Lake to determine if ordinances against illegal waste water dumping by houseboats had a positive influence on water quality. Past samples had shown high fecal coliform levels thought to originate from the houseboats. Water samples were collected at 5 houseboat marinas with 2 repetitions completed. Two harbors had a third repetition, with no time allowing for the remaining three. Tributary sampling was more sensitive to climatic conditions, and only 1 complete repetition was completed. Samples were taken using all available quality assurance protocols, as well as logging the exact GPS coordinates of each sampling site. A certified lab ran all the data using fecal coliform membrane filtration method#9222D.

Data showed the Fontana Lake was very clean except for a couple isolated areas with elevated fecal coliform levels. Only 2 sampling sites exceeded the maximum EPA standard for organized recreational use set at 200 col/100mL. No data was conclusive that houseboats were still contributing to fecal coliform concentrations. However, there was one sampling site that warranted additional testing to find the cause of an anomalous elevated fecal coliform value. The evidence strongly suggests that today's fecal coliform source is that of the tributaries that feed the river, rather than the houseboats straight-piping waste water.

INTRODUCTION

Starting June 1, 2006, the FLWR organization in conjunction with the Swain and Graham County Health Departments, and WCU set out to determine the water quality of Fontana Lake. Joe McMillan was hired from WCU to take water samples in the lake under the guidance of both Roger Clapp and Peter Whittaker. Ellen Monteith was hired as the boat technician to navigate the lake. Ryan Sherby collected various tributary samples, and acted as the GIS technician. The evaluation was to last to August 1, 2006.

The water samples taken were to evaluate if Fontana Lake's fecal coliform concentrations had dissipated due to the recent addition of local waste water ordinances pertaining to houseboats. If there were sufficient amounts of fecal coliform in the lake, the objective was to determine if houseboats were the cause of the problem, or if tributaries feeding into the lake were the cause. The results of the data were used to determine if the lake's water quality was sufficient for organized recreational use.

BACKGROUND

Fecal coliform is a type of bacteria that is found in large numbers in the intestinal tracts of both mammals and birds. Contamination of both ground and surface waters with fecal coliform can occur. Contamination is usually contributed to faulty septic systems, illegal “straight-piping” of wastes, livestock feces runoff, or other fecal contamination caused by warm blooded animals. Although fecal coliform itself is usually considered nonpathogenic, it is used as an indicator for other pathogenic organisms. An elevated amount of fecal coliform in water increases the probability of other microorganisms being in the water that cause diseases such as hepatitis, dysentery, gastrointestinal diseases, and increase exposure to *E. coli*. Because of the correlation between elevated fecal coliform levels and pathogenic microorganisms in water, the EPA has set the organized recreational limit of fecal coliform to 200 col/100mL.

Recreational waters that have known elevated fecal coliform concentrations should be monitored on a regular basis to ensure public safety. Water samples for fecal coliform should be stored in an ice-chest and be prepared for incubation in less than 6 hours from taking the initial sample. The standard analytical procedure is method#9222D, fecal coliform membrane filtration.

Fontana Lake is a giant power reserve reservoir located in the mountains of North Carolina. Since its inception in the 1940's, Fontana Lake as served as a home to many houseboats. Although Federal law prohibited waste discharge into surface waters, there were no local ordinances or infrastructure to enforce the law upon the houseboat owners. It wasn't until the late 1980's that the subject of houseboat fecal contamination appeared. Complaints began pouring into the two local Health Departments about organized

recreational users coming out of Fontana Lake covered in fecal material. In the mid 1990's fecal coliform testing was done that had values >700 col/100mL within the houseboat harbors. Although the data from those first water samples are no longer available, one could imagine the impact of hundreds of houseboats straight-piping their waste into the lake.

From the Health Department complaints in conjunction with concerned citizens, the Fontana Lake Waste Recovery (FLWR) organization was formed. It took many years of collaboration and compromise between citizens and government agencies to find a solution to the problem. By 2002, local ordinances had been passed to ensure all houseboats on Fontana Lake were void of illegally dumping their sewage. By 2005, Fontana Lake had waste pump-out infrastructure in all the harbors mooring houseboats. By the final deadline of houseboat ordinances in the spring of 2006, only a small number of houseboats didn't contain permanent toilet facilities onboard.

After having the marine waste pump-out abilities serving the entire lake for over a year, the decision was made to begin assessing the water quality improvements made by the newly instated ordinances. The assumption was that the lake would be much cleaner, but needed reproducible scientific data to back up their assumptions. June 1, 2006, this eight week study was conducted to assess just how clean Fontana Lake had become.

METHODS

To begin the data collection process, a set of sampling points had to first be established. The lake was first toured by boat to determine if houseboat locations differed from those shown on satellite imagery. Once the houseboats locations were known, the selection of sampling points began. Sampling locations within each harbor included at least 1 sampling point upstream of the first houseboats located in that harbor. In each harbor an additional sampling point was located near, or at the opposite end of the harbor downstream from the houseboats. One additional sample per sampling day was chosen far away from the houseboats in the main water channel. One other sampling point was chosen for each of the accessible main tributaries feeding into the harbor.

The first points chosen were to find a base-line, and to ensure any contamination found had to come from within the harbor. Next, sampling locations were decided for within the individual harbors. The locations were chosen depending on amount of houseboats in the area, geography features, and relative use of the houseboats. Five to Seven sampling points were chosen for each harbor depending on the relative size of the individual harbor. Each sampling point was then plotted onto a satellite photograph of the individual harbor for ease of navigation (see tables 1-4). Some of the sampling points were set close to the houseboats, and others were plotted farther away to try to center the sample in large clusters of houseboats. Sampling sites were then grouped together depending on their location. The grouping was done to maximize samples on each sampling day, while still making the six hour deadline for the samples to be incubated. Sites were grouped as follows: Alarka and Greasy Branch, Prince and Crisp, and Fontana and Steacoah Creek.

Table 1

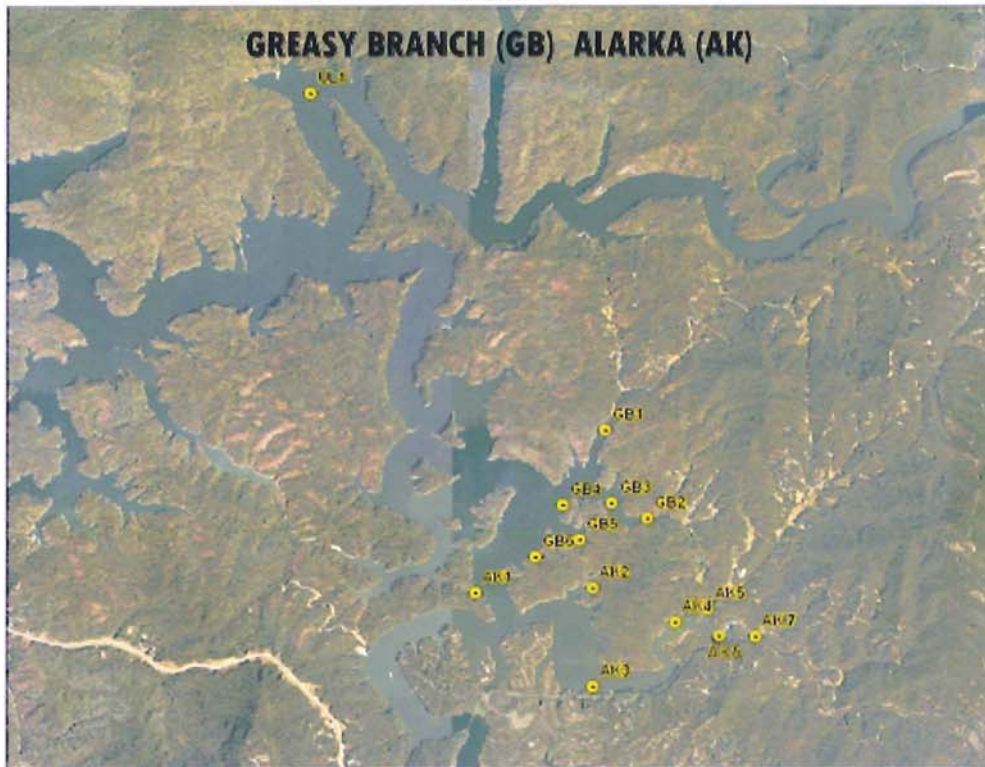


Table 2

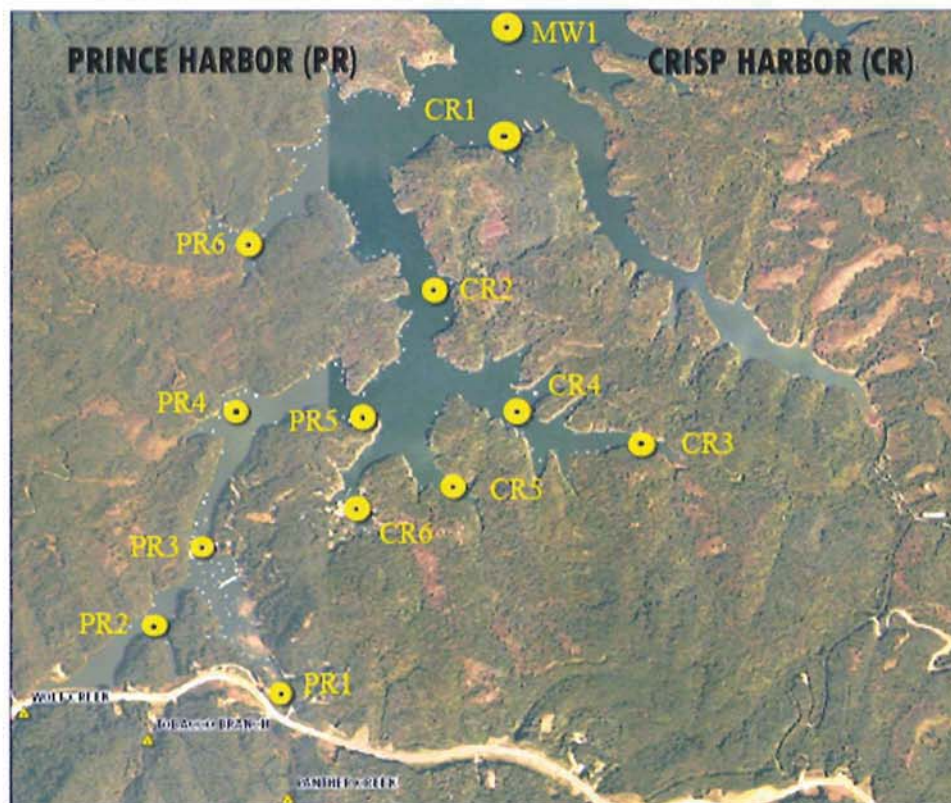


Table 3

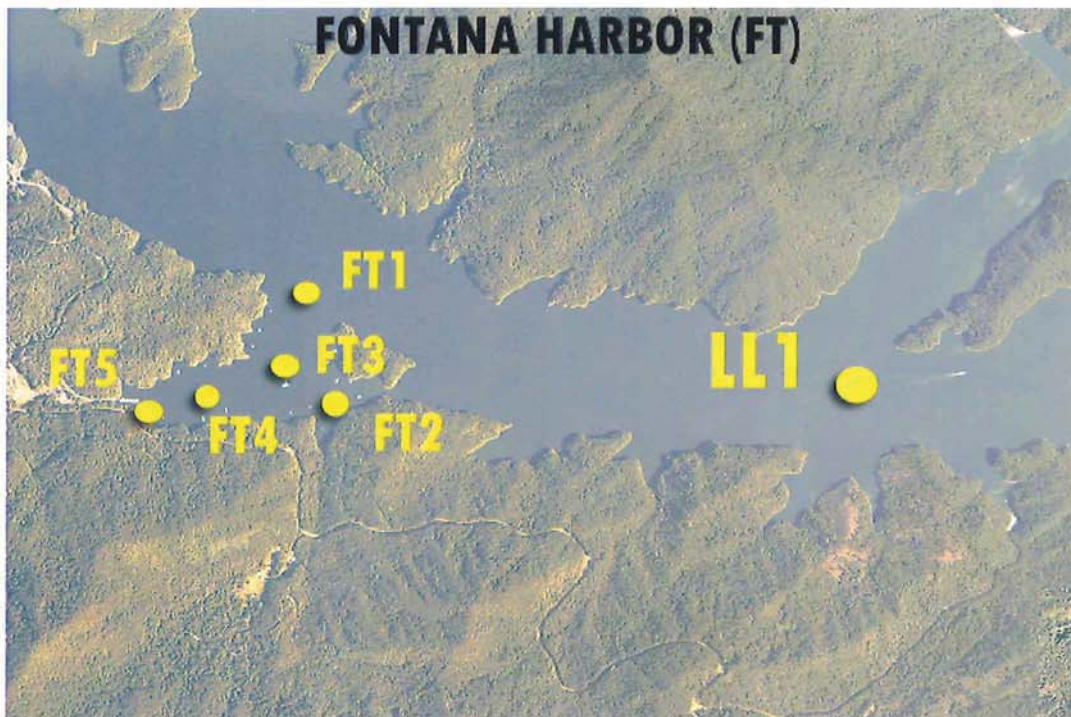
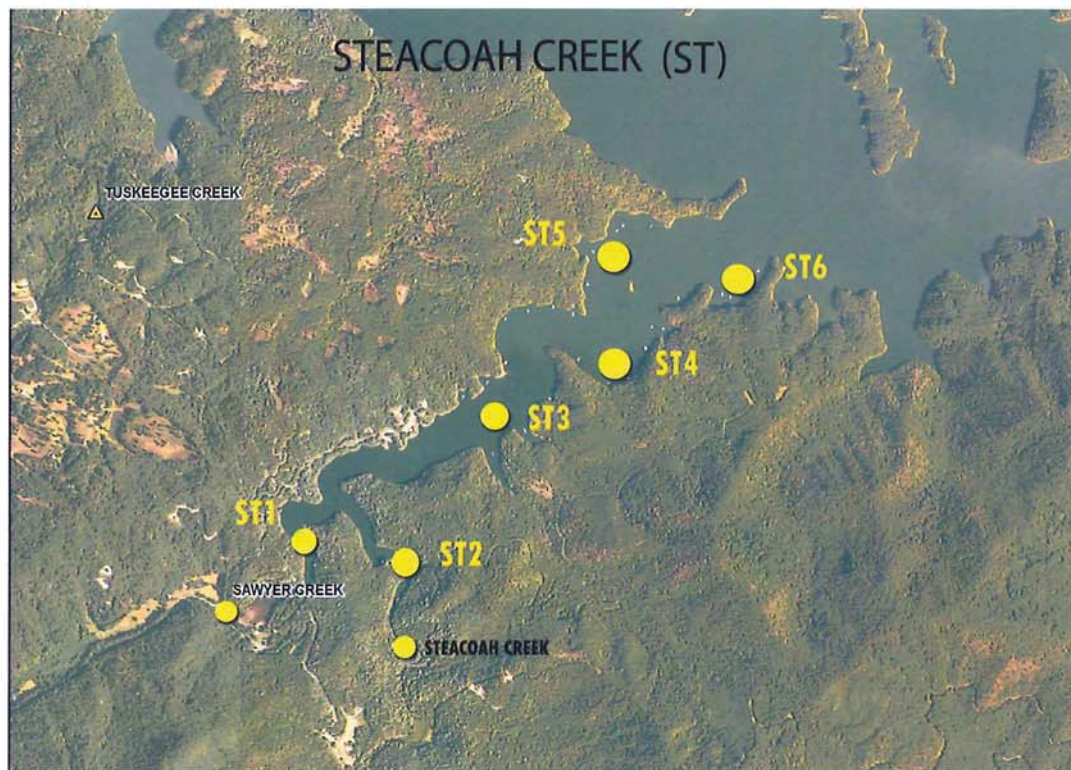


Table 4



After the sampling points had been established, the project was underway. 250mL autoclaved sampling bottles would be delivered from the Cherokee Waste Water Lab 1 to 2 days before each sampling session. Waterproof labels were attached to each bottle containing the following information: location ID, collector's initials, time, date, and any needed notes. Data sheets were printed for each sampling session to include the following: marina, location ID, time and date, location description, GPS coordinates basic notes on the site, and chain of custody.

Sampling days were determined by both the availability of the boat technician and the Cherokee Waste Water Lab (CWWL) to analyze results. The lab was only available Tuesday through Thursday to accept samples, so no weekend sampling would occur. Each sampling day had the goal of beginning the sampling process around 0900. The sample collector and the boat technician from FLWR would leave Alarka marina by boat and head to the first collection site. Care was taken to ensure that the sample collector's hands were washed thoroughly to prevent cross-contamination. Once the boat had reached its designated sampling point, the boat technician would hold the boat as steady as possible. The sample collector recorded onto the datasheets the following information for each sampling site: a basic location description, the latitude and longitude, general climate conditions, time and date, the specific harbor, and location ID. In addition to what was recorded onto the datasheets, the sample collector also filled out the sample bottle labels, and saved the coordinates into the GPS unit for reliable location reproducibility.

Once all the information was recorded for the sampling site, the sample collector would lay on the bow of the boat to take the sample. The sampling bottle would stay

closed until just before the bottle was submerged to combat cross-contamination. The sampling bottles were held at the bottom with one hand. The sampling bottles were then inverted and plunged under the water almost to the elbow. As soon as the sampling bottle reached the correct depth it was scooped upwards against the current to avoid cross-contamination. After replacing the lid, tamper-resistant tape was applied to the bottles. The sample bottles were then transferred to an ice-chest until delivered to the lab.

When time and resources were available, tributaries would be sampled around the lake marinas that were being sampled. The sampling process was the same for the tributaries except for the sampling location. The tributary samples were chosen just upstream of the lake, where the creeks are still flowing. The tributary sampling days were also determined by precipitation. If there was enough rain to affect turbidity, tributary samples were delayed for at least three days. When the tributary samples would take place, the tributary collector would meet the lake sampler at one of the marinas, and take all of the samples back to the Cherokee Waste Water Lab for analysis. This ensured that the samples would be analyzed within 6 hours of the first sample taken. If there were no tributary samples being conducted, the sample collector would be dropped back off at Alarka marina. From Alarka, the samples would be driven to the Cherokee Waste Water Lab for analysis. Mike Bolt or Harold Cooper would sign for the samples, and use standard method#9222D to evaluate the samples for fecal coliform

After the entire lake was sampled, the process started over again. The only difference was that a GPS was used to guide the boat to previously saved coordinates. After completing the second complete round of sampling, a slightly different approach

was used. The sampling points previously determined were still used, but the samples were taken as close as possible (1-5ft) to the nearest houseboat at the given location. Time only allowed for the close houseboat testing at Alarka and Greasy Branch.

Each sampling day two sampling points were chosen with a random number generator for replication. If the sampling point was chosen for replication 2 bottles were used rather than 1. The sample bottle and the replicate bottle were both held in the same hand, and sampled at the same time to ensure quality assurance. After the results came back from the CWWL the replicate values were analyzed to determine if results were in acceptable limits. There was only 1 outlier out of 14 replicates (see table 5). The outlier was caused by a dilution factor of 100mL. The original sample used a dilution factor of 30mL, which caused the original to be counted and the replicate to be too numerous to count. With these facts in hand, the data was deemed acceptable.

Table 5
REPLICATIONS

Marina	Location on Site ID	Location Description	Replicate FC col/100mL	Original FC col/100mL	Date
Alarka	AK1R	NW beginning of AK Harbor	2	1	6-Jun-06
Alarka	AK4R	Cove opposite last point before Marina	45	51	6-Jun-06
Crisp	CR2R	1st Cove NE of Murphy's Br	8	11	7-Jul-06
Crisp	CR4R	Middle of Murphy's Br Cove	TNTC	127	7-Jul-06
Steacoah	ST4R	NE Southern Horn	3	3	11-Jul-06
Fontana	FT1R	Large entrance to Fontana Marina	<1	<1	11-Jul-06
Greasy	GB4R	L Tenn/Greasy Junction	0	0	12-Jul-06
Alarka	AK2R	Cove Adjacent to GB	3	3	12-Jul-06
Main Waterway	MW1R	Main Waterway NW of HB's	<1	<1	19-Jul-06
Crisp	CR3	Middle of Murphy's Br Cove	<1	<1	19-Jul-06
Steacoah	ST2R	Steacoah Creek	3	4	25-Jul-06
Fontana	FT1R	Large entrance to Fontana Marina	<1	<1	25-Jul-06
Alarka	AK5R	Cove Opposite Holding Tank	45	58	26-Jul-06
Upper Alarka	T5R	Alarka Trib	110	170	26-Jul-06

STANDARD DEVIATION 8.49

Excluding Outlier

RESULTS AND DISCUSSION

Table 6

FECAL COLIFORM RESULTS FOR 2006

Sam Num	Marina	Location Site ID	Location Description	Round 1 Results FC col/100mL	Round 2 Results FC col/100mL	Round 3 Results FC col/100mL
1	UPPER LAKE	UL1	Gunter Branch Point	0	1	<1
2	Main Waterway	MW1	Main Waterway NW of Hob's	1	<1	N/A
3	Lower Lake	LL1	Lower Main Lake	<1	N/A	N/A
4	Greasy Branch	GB1*	Greasy Branch Marina	2	4	5
5	Greasy Branch	GB2	Stevenson Cove	3	2	7
6	Greasy Branch	GB3	Stevenson Mouth	0	0	4
7	Greasy Branch	GB4	LTenn. & Greasy Junction	0	0	<1
8	Greasy Branch	GB5	Cove perpendicular to GB Marina	32	0	2
9	Greasy Branch	GB6	End Cluster at Greasy	<1	0	2
10	Alarka	AK1	NW beginning of AK Harbor	1	0	2
11	Alarka	AK2	Cove Adjacent to GB	1	3	1
12	Alarka	AK3	NW Cluster perpendicular AK cry/NP	1	1	<1
13	Alarka	AK4	Cove opposite last point before Marina	51	>433	410
14	Alarka	AK5*	Cove opposite of holding tank	39	20	58
15	Alarka	AK6*	Downstream of Alarka Dock	N/A	160	107
16	Alarka	AK7*	Above Marina	134	170	170
17	Prince	PR1*	Prince Marina at Panther Cr	>520	7	
18	Prince	PR2*	Wolf & Tobacco Cr Merge	25	4	
19	Prince	PR3	500M North of Prince Dock	20	6	
20	Prince	PR4	Just Past 1st Cove on Left N of dock	27	48	
21	Prince	PR5	Panther Cr Merge with Murphy's Br	23	3	
22	Prince	PR6	Large Cove NW of Murphy's Br	147	2	
23	Crisp	CR1	1st Cove in Northern Crisp Harbor	6	1	
24	Crisp	CR2	1st Cove NE of Murphy's Br	11	<1	
25	Crisp	CR3*	Beginning of Murphy's Br	10	2	
26	Crisp	CR4	Middle of Murphy's Br Cove	127	<1	
27	Crisp	CR5	Cove Adjacent to Crisp Dock	4	9	
28	Crisp	CR6	Crisp Dock	127	5	
29	Steacoah	ST1*	Sawyer Cr Boat Ramp	6	5	
30	Steacoah	ST2*	Upstream Steacoah Cr	4	4	
31	Steacoah	ST3	Beginning of Steacoah HB	1	<1	
32	Steacoah	ST4	NE Southern Horn	3	<1	
33	Steacoah	ST5	Last N Shore Cove	1	2	
34	Steacoah	ST6	Last HB's on SE Shore of St.	<1	<1	
35	Fontana	FT1	Large entrance to Fontana Marina	<1	<1	
36	Fontana	FT2	Middle of E. Cove	<1	9	
37	Fontana	FT3	Middle of entrance ~750M NW Point	<1	5	
38	Fontana	FT4	In Middle of Last 4 HB's	<1	2	
39	Fontana	FT5	Fontana Dock	<1	<1	

Samples Taken Near Tributary/Lake Merge Have Asterisk by Location ID

Locations Specifically Mentioned in the Results Bolded

Table 7
TRIBUTARY SAMPLES

Sam Num	Tributary	Location Site ID	Results FC col/100mL	Date
1	Steacoah Cr	T1	137	11-Jul-06
2	Sawyer Cr	T2	15	11-Jul-06
3	Tuskegee Cr	T3	193	11-Jul-06
4	Greasy Br	T4	143	12-Jul-06
5	Lower Alarka	T5	58	12-Jul-06
6	Panther Cr	T6	26	19-Jul-06
7	Tobacco Cr	T7	20	19-Jul-06
8	Wolf Cr	T8	187	19-Jul-06
9	Greasy Br	T4	65	26-Jul-06
10	Lower Alarka	T5	133	26-Jul-06

Table 8
SAMPLING DATES

MARINA	ROUND 1 SAMPLES	ROUND 2 SAMPLES	ROUND 3 SAMPLES
ALARKA/GREASY BRANCH	22-Jun-06	12-Jul-06	26-Jul-06
PRINCE/CRISP	6-Jul-06	19-Jul-06	N/A
FONTANA/ STECOAH CREEK	11-Jul-06	25-Jul-06	N/A

Table 9

Minimum and Maximum Overview

Fontana Western Region

Fontana Eastern Region



Fontana Eastern Region

Minimum and Maximums

Table 10

Upper Lake

Main Water Way

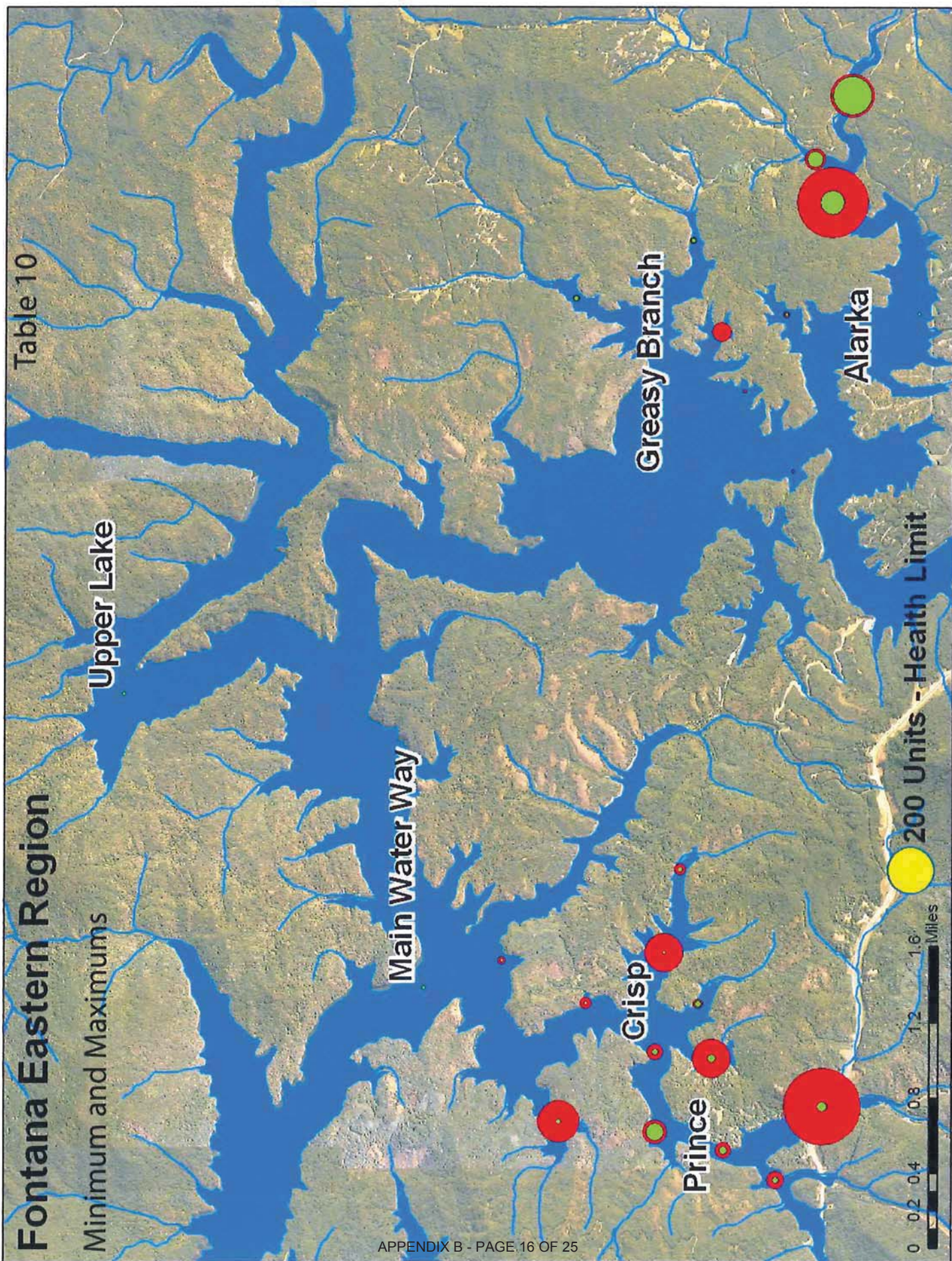
Greasy Branch

Alarka

Crisp

Prince

200 Units - Health Limit



Fontana Western Region

Minimum and Maximums

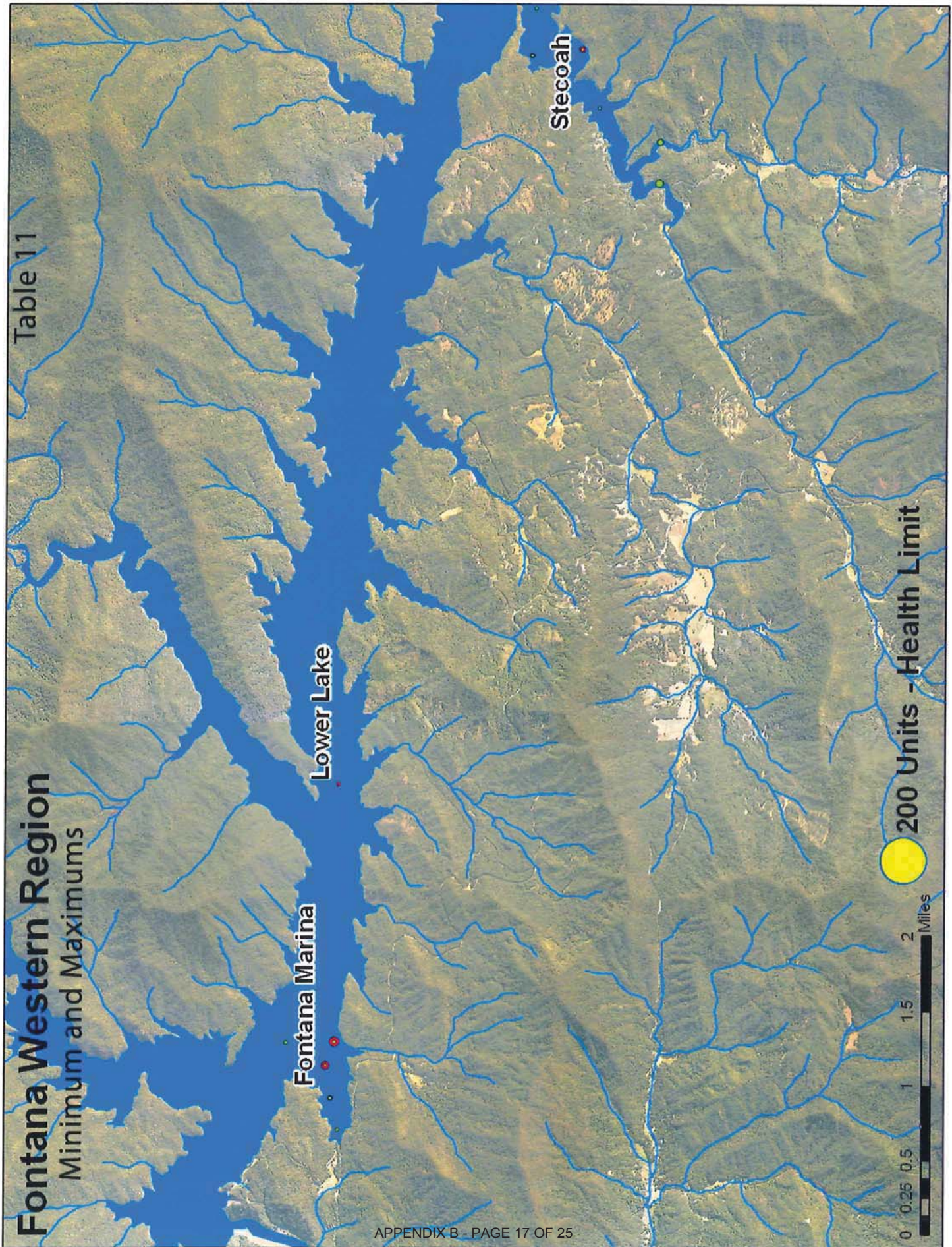
Table 11

Fontana Marina

Lower Lake

Stecoah

200 Units - Health Limit



Data indicates that the lake away from the houseboats is almost completely free from any fecal coliform contamination. The main lake samples had a maximum value of 1col/100mL. The western end of Fontana Lake within the marinas was shown to be the cleanest in terms of fecal coliform contamination, with 9col/100mL being the highest value. The eastern end of Fontana Lake had the highest counts of fecal coliform contamination. Three samples from two separate locations exceeded the EPA standard of 200col/100mL, with the highest sample in excess of 520col/100mL.

Steacoah and Fontana harbors both lie on the western end of the lake where the cleanest water was found. Fontana marina also maintains Steacoah Creek's houseboats, there isn't a dock in Steacoah Creek only places to moor. Fontana was hypothesized to be the cleanest due mainly to tributary activity in the area. Fontana marina lies at the end of the reservoir, and has no tributaries feeding into it. Furthermore, Fontana marina's houseboats are mostly commercially built, already having the proper waste holding tanks at purchase. Steacoah Creek's harbor data was somewhat surprising. The cove is fed directly by Steacoah Creek and Sawyer Creek. Steacoah Creek's headwater tributary sample was slightly elevated, but still not of particular concern. Steacoah harbor also moors some of the oldest houseboats on Fontana Lake. Even with these conditions, Steacoah's highest fecal coliform reading from two samplings was only 6col/100mL. The Tuskegee Creek tributary sample did show a value very close to the legal limit, but it doesn't feed into an area with houseboats, thus there was no other data to draw conclusions from.

On the eastern end of the lake lies Greasy Branch marina. The marina is fed by the upper section of the Little Tennessee River and Greasy Branch. The houseboats in

Greasy Br. are clustered in small coves that make conditions ideal for fecal coliform readings. The first sampling only showed one value that exceeded 3col/100mL. The value of 32col/100mL (GB5) was taken in close proximity to a houseboat without a septage compliance sticker. With the value so low (under 1/6 the EPA limit), the data doesn't show evidence that the houseboat was contributing to the fecal coliform reading. On the next two samplings of the same location, the values were 0 and 2 respectfully. The highest value within Greasy Branch marina for the last two samplings was 7col/100mL. The only elevated readings in the area were with the tributary samples. The two tributary samples had values of 65 and 143. These numbers indicate possible fecal contamination, but not high enough to indicate human contamination without much more data. With the values so low at Greasy Branch, it showed to be the cleanest marina on eastern Fontana in terms of fecal coliform contamination.

Alarka marina lies to the south of Greasy Branch, further upstream on the Little Tennessee River. The beginning of Alarka marina is fed by Grassy Branch and Alarka Creek, with many houseboats mooring far away from these tributaries. Alarka's houseboats that moor along the Little Tennessee River had a high value of 3col/100mL. The readings from closer to the tributaries were much more elevated. Upstream of Alarka dock had readings above 100col/mL for each testing. The values were 134, 170, and 170 respectfully, but still under the EPA limit. This sampling site was about 500 meters upstream of the dock, and 800-1000 meters upstream of the first houseboat in the marina. The tributary samples upstream in the headwaters showed slightly elevated values of 58 for round 2, and 133 for round 3. There were no houseboats in between the two upstream sampling sites. Increased water temperature in the slow moving water

could have contributed to increased fecal coliform growth between the two points. Measurements were taken just downstream of Alarka dock on the 2nd and 3rd sampling to measure dilution factors. The two measurements ascertained were 160 and 107 respectfully. Data from samples taken in the Grassy Branch cove indicated that there might be some fecal contamination coming in, but not enough to be concerned with. The values from Grassy Branch cove were 39, 20, and 58 respectfully.

There was only one sampling point in Alarka marina that couldn't be explained by tributary runoff. Just NW of the Grassy Branch cove, a large cluster of houseboats lie; sampling point AK4. The first sampling indicated a fecal coliform amount of 51col/100mL. With the proximity of the two tributaries, it was hypothesized that it was a value from the mixing of the two tributaries. The second sampling at Alarka added an additional sample point to prove the hypothesis (AK6). The hypothesis was found to be wrong. AK4 had a fecal coliform value in excess of 433col/100mL. This value was 21x higher than Grassy Branch cove, 2.5x higher than Alarka's headwaters, and over twice the EPA limit. The final sampling gave another similar reading of 410col/100mL. Data suggests that one or more houseboats located at AK4 either have malfunctioning plumbing systems, or the straight piping of waste may be occurring.

West of Alarka and Greasy Branch marinas both the Prince and Crisp marinas lie. Prince marina is fed by three tributaries: Panther Creek, Tobacco Creek, and Wolf Creek. Headwater tributary samples were only taken on round 2 of Prince marina. Only the Wolf Creek tributary had any concerns of elevated fecal coliform contamination. The tributary sample had a value of 187 col/100mL. The corresponding value of the closest lake sample was only 4 col/100mL on that sampling day. The data suggested that even

with the tributary having a high value, it wasn't adversely affecting the lake. The first round of sampling had a low of 20col/mL, a high of >520col/mL, and a mean of 127col/mL at Prince marina. The elevated value of >520 was taken upstream of Prince dock (PR1), where Panther Creek comes into the lake. There were a few dilapidated houseboats nearby, but they are abandoned. There are campgrounds upstream on Panther Creek that could have had illegal RV waste dumping that contributed to the high value. Another slightly high value occurred at PR6 centered in the middle of a large cluster of houseboats. The value of 147col/100mL still isn't high enough to be illegal, but does show signs of possible fecal contamination. The other 4 samples in the harbor all ranged in 20's. The second sampling run in Prince harbor showed a dramatic decline in fecal coliform concentrations. The value at PR1 went from >520 on the first sampling down to 7col/100mL. The sampling site at PR6 dropped from 147 to 2col/100mL. Only 1 sample exceeded 7col/100mL. PR4 showed a value of 48col/100mL, still less than ¼ the EPA standard.

Crisp marina had 2 elevated fecal coliform levels on the first sampling. Two values of 127col/mL were found at both the Crisp dock (CR6), and the middle of Murphy's Branch (CR4). Crisp Dock doesn't have any houseboats or tributaries in the immediate area. The data didn't show any viable reason for the elevated levels at the dock. The middle of Murphy's Branch is known to have a few houseboats without waste compliance stickers. The fecal coliform levels were almost 13x higher than where the tributary feeds it. The value of 127 isn't that numerous, but may be attributed to either water temperature or houseboat wastes. The second sampling of Crisp marina showed

the same decline as did Prince marina. The highest fecal coliform concentration was 9col/100mL on the second sampling.

Prince and Crisp marinas were sampled on the same days. The first sampling of the harbors was done on July 6, 2 days after the 4th holiday. The 4th of July holiday is one of the busiest times on Fontana Lake. Prince and Crisp were the only marinas sampled during the holiday week. The significant variance of data between the first sampling and the second sampling are thought to be a direct function of the sheer amount of people using the houseboat's during that holiday.

CONCLUSIONS

Data from the fecal coliform sampling indicates that Fontana Lake is very clean. Only 2 sampling sites exceeded the EPA standard of 200 col/100mL. Only 15% of the total samples reached 50% of the EPA limit, with tributary samples included. The highest reading of 520 col/100mL was close to the headwaters of a known dirty tributary, and tested during the peak of individuals in the area over the July 4th holiday. Throughout the whole lake there was only one true anomaly concerning possible houseboat waste contamination. This data closely supports the hypothesis of much cleaner water due to proper waste containment and removal practices upon the houseboats.

The combination of additional water sampling and closer inspection of plumbing lines at sampling site AK4 is needed to determine if in fact the anomalous reading was directly caused by the houseboats. In future water samplings, it would be beneficial to have a few sampling days on the weekend. The houseboats on Fontana Lake aren't used that often during the week days. Weekend samples could show the max output of fecal coliform if there was any discrepancies with houseboat waste lines. Since analytical laboratories aren't operational on the weekend in the Fontana area, it's not feasible to sample those days. In the future, Western Carolina University would be a good resource to look into for weekend sampling.

The two areas that need additional time put into is the headwaters of Alarka Creek, and the headwaters of Panther Creek. The Alarka Creek samples were elevated on each sampling indicating that something is contaminating the water upstream. Additional samples could be run in intervals to determine a likely source of contamination. The

same applies to Panther Creek. Although there was only one high reading at Panther Creek, it was elevated enough to warrant additional samplings.

APPENDIX IX

LARGE ALARKA/GREASY BRANCH



APPENDIX C

Keep Non-navigable Houseboats and Floating Houses on TVA Reservoirs!

The Petition

8 Highlights

980 Comments

3766 Signatures



Please sign this petition in **support of the rights of all non-navigable and floating house boat owners** on Fontana Lake as well as on all TVA reservoirs.

Recently TVA recommended dramatic changes to the regulations concerning these houses. **The unreasonable proposed changes most notably include a twenty-year sunset period that requires**

the removal of all homes at the cost of their respective owners. This removal even applies to the pre-1978 grandfathered homes!

These changes are unfair and we are asking for your support in requesting the TVA Board to reject the proposed regulations, to grandfather in all existing compliant non-navigable houseboats and floating houses and also to find more common sense solutions in the regulation of these family-friendly floating communities. Many families use these floating homes as a way to spend quality time with their loved ones, while also enjoying the great outdoors.

In addition to the effect on individual homeowners, local marinas depend heavily on the business generated by these floating communities. These changes will clearly have a devastating effect on economies associated with these marina operations. An economic affect that is in conflict with the original intent of TVA's charter and mission.

Please don't stand idly by while TVA's new regulations negatively impact regional communities, the livelihood of marina operators and the quality of life of families who enjoy and appreciate these beautiful lakes. Join us and sign the petition today. Thank you!

HIGHLIGHTS

- May 18** We have collected 3720 of signatures and surpassed our original goal of 1,000 signatures and our secondary goal of 1,500. Thank you to everyone who participated in helping to save our floating homes. Let's use the next 30 years to make sure the sun doesn't set on us!
- May 3** Petition has reached 3000 names
- April 26** Petition has reached 2000 signatures
- April 15** Petition has reached 1500 signatures!
- April 6** Petition has reached 1000 signatures!
- April 4** Petition has reached 500 signatures!
- April 3** Petition has reached 250 signatures!
- April 1** We are now live!

For the full petition and comments visit:

<http://www.ipetitions.com/petition/keep-non-navigable-and-floating-houses-on-tva>

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118. Name: Sonya Rathbone [REDACTED] on 2016-04-03 03:12:37
Comments:
-
119. Name: Chad Collins [REDACTED] on 2016-04-03 03:17:19
Comments:
-
120. Name: Gary H Miller [REDACTED] on 2016-04-03 03:21:19
Comments: Navigable waterways are available for use by all citizens as a general rule of law. TVA should recognize this and not displace houseboats and other floating homes. The houseboats may remain stationary, but that does not change the character of the waterways as navigable and, therefore, available for use by all citizens. What will be next? No paddling or fishing on this navigable body of water? TVA must be consistent and follow the well established principles of law dealing with public navigable waterbodies.
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121. Name: Brad Wiggins [REDACTED] on 2016-04-03 03:26:27
Comments:
-
122. Name: Laura correll [REDACTED] on 2016-04-03 03:28:00
Comments: .
-
123. Name: Kara Smathers [REDACTED] on 2016-04-03 03:35:18
Comments:
-
124. Name: Chelsea Jenkins [REDACTED] on 2016-04-03 03:48:11
Comments:
-
125. Name: Cherri Inman [REDACTED] on 2016-04-03 03:48:56
Comments:
-
126. Name: Melisa kennedy [REDACTED] on 2016-04-03 03:53:03
Comments:
-
127. Name: Lorianne [REDACTED] on 2016-04-03 03:54:29
Comments: Keep the houseboats on the lake, it's family fun, and not hurting nothing! I grew up on Fontana lake from birth and now my children enjoy it!
-
128. Name: Harold Deaver [REDACTED] on 2016-04-03 03:54:50
Comments:
-
129. Name: howell brown [REDACTED] on 2016-04-03 03:55:52
Comments: leave them alone they are quiet and peaceful

2440. Name: Chesiree Middleton [REDACTED] on 2016-04-30 16:15:16
Comments:
-
2441. Name: Michael Heetland [REDACTED] on 2016-04-30 16:19:30
Comments:
-
2442. Name: Sandra Reminga [REDACTED] on 2016-04-30 16:24:13
Comments: These are lovely floating homes, and we'll maintained by the owners. I had the pleasure of being a guest on a float house. They are not in the way. Let them continue to be where they are.
-
2443. Name: Kristen Jones [REDACTED] on 2016-04-30 16:25:44
Comments:
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2444. Name: Jana Davis [REDACTED] on 2016-04-30 16:28:38
Comments:
-
2445. Name: Sam Lizzy Perry [REDACTED] on 2016-04-30 16:30:16
Comments: We have a floating cottage on Norris Lake. We use it for our enjoyment and for our family & friends who visit us. We worked many years to be able to see a dream come true. Please don't destroy our dream.
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2446. Name: Terry Oliver [REDACTED] on 2016-04-30 16:31:04
Comments: I am not an owner of a floating home, but I see no reason to get rid of the them, displacing those who live there.
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2447. Name: Julie Bales [REDACTED] on 2016-04-30 16:32:57
Comments:
-
2448. Name: jimmey swisher [REDACTED] on 2016-04-30 16:33:41
Comments:
-
2449. Name: Donn Claiborne [REDACTED] on 2016-04-30 16:33:57
Comments: I am not a floating home owner. However, I am a resident of Campbell County and have enjoyed Norris Lake all of my life. The simple solution is checking and regulating the waste system in these floating homes.
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2450. Name: Paula Brown [REDACTED] on 2016-04-30 16:37:02
Comments:
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2451. Name: Andrew Cook [REDACTED] on 2016-04-30 16:37:33
Comments:
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3138. Name: Kary Brigger [REDACTED] on 2016-05-03 19:40:43
Comments:
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3139. Name: Karin Gantner [REDACTED] on 2016-05-03 19:41:10
Comments:
-
3140. Name: Jon Ekvall [REDACTED] on 2016-05-03 19:47:59
Comments: Please keep the floating homes on Norris Lake, TN at least grandfather the ones that are currently there, that's only fair.
-
3141. Name: Cat Dalton [REDACTED] on 2016-05-03 19:57:28
Comments:
-
3142. Name: Andrea Harris [REDACTED] on 2016-05-03 20:06:10
Comments: Good luck!!!
-
3143. Name: christopher daniel [REDACTED] on 2016-05-03 20:12:17
Comments:
-
3144. Name: allie huddleston [REDACTED] on 2016-05-03 20:16:24
Comments:
-
3145. Name: James Richard Riddle [REDACTED] on 2016-05-03 20:20:38
Comments:
-
3146. Name: Jon daniels [REDACTED] on 2016-05-03 20:31:08
Comments:
-
3147. Name: Patty wooten [REDACTED] on 2016-05-03 20:41:11
Comments:
-
3148. Name: Alyssa [REDACTED] on 2016-05-03 20:43:22
Comments:
-
3149. Name: Deborah Bielecki [REDACTED] on 2016-05-03 20:48:06
Comments: These changes are unreasonable and do not respect the property rights of owners who invested in the are All!
-
3150. Name: Cierra Allen [REDACTED] on 2016-05-03 20:48:21
Comments: I grew up on Norris Lake, my grand parents lived within walking distance and family friends lived on the lake. In the past, I have also worked at a local marina for over 5 years. I can honestly say that my fondest memories from my childhood and even through adulthood were on the lake. Without the non-navigatable house boats, these memories

would not exist. It would be a shame to eliminate these. I've enjoyed many summers enjoying visiting family and friends who own these structures. I can not see any reason to eliminate these, by doing so the future generations won't be able to create fond memories on the lake like I did. Not to mention, by eliminating these structures, there will be a HUGE financial implication. Many of the customers I met working at the marina, owned these. They would not be here on the lake without them. These people spend thousands of dollars a year and that all goes into the local economy.

It would seriously be a shame to lose these. It would hurt local businesses, not to mention hurt anyone who's ever had the pleasure of using them.

3151. Name: ed emerle [REDACTED] on 2016-05-03 20:51:54
Comments: Keep the floating houses. They are a treasure for the community.

3152. Name: Ashley Loy [REDACTED] on 2016-05-03 20:55:39
Comments: Keep the homes on the lake!!

3153. Name: Carol Moschetto [REDACTED] on 2016-05-03 21:02:39
Comments:

3154. Name: Leeanne McGuire [REDACTED] on 2016-05-03 21:28:12
Comments:

3155. Name: Michael Meadors [REDACTED] on 2016-05-03 21:29:38
Comments: Please reconsider.

3156. Name: Rochelle Fenlon [REDACTED] on 2016-05-03 21:29:58
Comments:

3157. Name: Philip Munschauer [REDACTED] on 2016-05-03 21:39:02
Comments:

3158. Name: Tricia Atwood [REDACTED] on 2016-05-03 21:45:14
Comments:

3159. Name: Sarah Sanford [REDACTED] on 2016-05-03 21:46:39
Comments:

3160. Name: Emily ottesen [REDACTED] on 2016-05-03 21:52:43
Comments:

3161. Name: Eddie Fowler [REDACTED] on 2016-05-03 21:55:19
Comments:

APPENDIX D

PASSED

Cherokee Council House
Cherokee, North Carolina

MAY 03 2016

RESOLUTION NO. 224 (2016)

WHEREAS, members of the Eastern Band of Cherokee Indians have enjoyed Fontana Lake and other regional lakes for many years; and,

WHEREAS, Fontana Lake is managed and operated as a reservoir of the Tennessee Valley Authority (TVA); and,

WHEREAS, members of the Eastern Band of Cherokee Indians own and enjoy non-navigable boathouses and floating houses on the Fontana Reservoir and have invested significant assets and resources into these structures; and,

WHEREAS, the TVA has allowed non-navigable boathouses and floating houses to proliferate through open non-enforcement of its regulations for nearly four decades; and,

WHEREAS, in 2016, TVA proposed a sunset provision that would require all non-navigable boathouses and floating houses to be removed from TVA lakes within twenty years; and,

WHEREAS, the non-navigable boathouse and floating house owners support TVA's new proposed environmental and safety regulations, as detailed in TVA Floating Houses Policy Review EIS Alternative B1, that would alleviate TVA's concerns without requiring the removal of these floating houses; and,

WHEREAS, non-navigable boathouses and floating houses are essential to the economic stability of regional marinas that provide employment and recreational opportunities for members of the Eastern Band of Cherokee Indians.

NOW THEREFORE BE IT RESOLVED by the Tribal Council of the Eastern Band of Cherokee Indians, in Council assembled, at which a quorum is present that the Tribal Council does hereby urge the Tennessee Valley Authority to reject a sunset provision that would require all non-navigable boathouses and floating houses to be removed from TVA lakes at some point in the future.

BE IT FURTHER RESOLVED that Tribal Council supports TVA EIS Alternative B1, which would grandfather existing non-navigable boathouses and floating houses but prohibit new.

BE IT FINALLY RESOLVED that an appropriate copy of this resolution be prepared for transmittal to the Board of Directors of the Tennessee Valley Authority upon ratification of the Principal Chief.

Submitted by: Albert Rose and Erik Sneed

APPENDIX E



State of Tennessee

SENATE JOINT RESOLUTION NO. 676

By Senators Yager, McNally

and

Representatives Powers, Calfee

A RESOLUTION to urge the Tennessee Valley Authority to reject a sunset provision that would require the removal of all floating homes from Tennessee Valley Authority lakes.

WHEREAS, the State of Tennessee has a rich, profitable, and successful history of floating homes on its Tennessee Valley Authority (TVA) lakes; and

WHEREAS, the citizens of Tennessee have for decades utilized such non-navigable/floating homes for lodging, recreation, and the enjoyment of Tennessee's natural wonders; and

WHEREAS, the Tennessee Valley Authority has allowed non-navigable/floating homes to proliferate through open non-enforcement of its regulations for nearly four decades; and

WHEREAS, citizens of Tennessee and neighboring states have purchased and invested substantial assets into non-navigable/floating homes in Tennessee on TVA lakes without knowing that TVA would cause such homes to be removed, and thus rendered worthless, without just compensation; and

WHEREAS, TVA allowed purchasers of existing non-navigable/floating homes to believe that their investments were safe due to its open non-enforcement of its regulations for nearly four decades, thus permitting marina owners to manage non-navigable/floating homes in their harbors, and allowing an economy to flourish in which non-navigable/floating home owners paid fees and dues to marina owners, and non-navigable/floating homes were bought and sold on the open market; and

WHEREAS, in 2016, TVA proposed a sunset provision that would require all non-navigable/floating homes to be removed from TVA lakes within twenty years; and

WHEREAS, the non-navigable/floating home owners support TVA's new proposed environmental and safety regulations, as detailed in TVA EIS option B1, that would alleviate TVA's concerns without requiring removal of floating homes; and

WHEREAS, TVA has taken the most aggressive step of recommending a sunset provision without first allowing a period of time to pass in which the new environmental and safety provisions have been in effect to determine if the new provisions sufficiently alleviate TVA's concerns; and

WHEREAS, non-navigable/floating homes are essential to the economic stability of Tennessee's marinas, which in turn are essential to the economy of the regions surrounding TVA lakes; now, therefore,

BE IT RESOLVED BY THE SENATE OF THE ONE HUNDRED NINTH GENERAL ASSEMBLY OF THE STATE OF TENNESSEE, THE HOUSE OF REPRESENTATIVES CONCURRING, that we hereby urge the Tennessee Valley Authority to reject a sunset provision that would require all non-navigable/floating homes to be removed from TVA lakes at some point in the future.

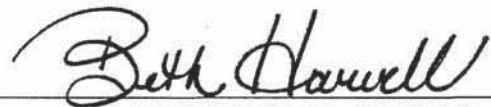
BE IT FURTHER RESOLVED, that an appropriate copy of this resolution be prepared for transmittal to the Board of Directors of the Tennessee Valley Authority.

SENATE JOINT RESOLUTION NO. 676

ADOPTED: April 20, 2016



RON RAMSEY
SPEAKER OF THE SENATE



BETH HARWELL, SPEAKER
HOUSE OF REPRESENTATIVES

APPROVED this 12th day of May 2016



BILL HASLAM, GOVERNOR