



Lake Hartwell Association, Inc

Spring, 2009

Volume XXI, Number 2

Letter from the President

Submitted by Herb Burnham



I would like to begin by saying how proud and honored I am to have been selected the new president of the Lake Hartwell Association. I will give it my "best shot" and I recognize I am taking over from an outstanding predecessor, Joe Brenner. We all owe him a sincere "thank you, job well done" for his three years of service as president.

Lake Hartwell's natural beauty and recreational assets were among the reasons I moved to this area in 1974 and, years later, chose to retire here. LHA was formed in 1989 "for the sake of the lake." Over the years LHA has become the recognized advocate and voice of its members with local, state and federal government representatives and agencies, and many others having an interest and/or impact regarding the lake's operation and maintenance. Sustaining the lake's beauty and recreational assets is on top of LHA's list of ongoing priorities.

We are experiencing the worst drought since the lake began to fill in the early 1960's, and there has been lots of blame and finger pointing regarding water levels throughout the Savannah River Basin (SRB). Some has fact-based merit while some is simply emotional. I know about "emotional" as, like so many others, my wife and I have watched our lake front home's value plunge in the midst of a "perfect storm" of historically low lake levels and the worst economic recession in decades. In addition, many of our members own businesses that depend upon the lake's recreational draw that has diminished significantly as lake levels have dropped. It is important that we learn from this experience and, even more importantly, that we ensure steps are taken to be better prepared for next time...and there will be more droughts.

I accepted the job of president because I saw an absolute commitment within the LHA Board of Directors and the membership in general to do everything possible to ensure that better lake management and drought plans are developed and implemented. The plans must embrace adaptive management techniques, be based on best available science, use best historic and real-time data available and allow for flexibility in light of changing conditions and lessons learned.

LHA has twenty years of experience and lessons learned from dealing with issues related to Lake Hartwell and the Savannah River Basin, but its real strength is its membership. As LHA's membership grows so will our voice and influence. Contrary to a popular misconception, LHA is not a "lake homeowners association," although many members do live on the lake. Anyone and everyone is welcome to join. I am asking all members to help us grow our membership by talking to your friends and neighbors about LHA and how they can make its voice and influence even stronger by joining. That strength will be a key element in getting government agencies to fund the planning and implementation described in the previous paragraph.

Someone once told me "volunteering is the small price we pay to live on this heavenly body called earth." I want to encourage all of our members to consider becoming an active LHA volunteer. For example, you may elect to become an active member of the Covekeeper program where, after attending several orientation sessions, you can agree to spend a few hours each month observing an assigned area of shoreline and reporting problems to the proper authorities. Or, you may like dealing with a wide range of technical issues and become active with the technical committee. Then there is the legislative committee that works closely with our state and federal representatives. There is no better way to help sustain our beautiful lake than to become active with one of the several LHA committees. A list of the committees is shown on the back page of this newsletter. How much, or little, you volunteer for is entirely up to you. To volunteer simply send an email to the address also shown on the back page and someone will contact you as soon as possible.

Later in this newsletter you will see a notice concerning regional meetings where members can meet and interact with experts in various areas of lake management and related issues. I look forward to personally meeting as many of you as possible at those meetings and hope you will bring guests who are ready to join us "for the sake of the lake."

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Savannah River Basin Issues

by Harry Shelley

The following article is excerpted from a paper written by Harry Shelley, facilitator of the Friends of the Savannah River Basin of which LHA is a member. We thought this analysis was well worth sharing with our members. The full text of the paper is available on the LHA website.

The purpose of this paper is to try to put the current issues we face into context and to define some realistic short-term goals. We must think of the river as a system as we go after the implementation of our goals. The issues aren't just with the ACOE, NOAA (NMFS), or the Endangered Species Act. The states, federal agencies and other laws are in play and will play a part.

The lakes and the lower river basin supply a myriad of users. These include major metropolitan areas, a university, small towns, cities and counties. Augusta/North Augusta, Savannah, rapidly growing coastal counties, the DOE Savannah River facility, Vogtle Nuclear Power Plant, Georgia Pacific and other industries are also users. Approximately 21% of the input to Lake Hartwell comes from the two large private power reservoirs (Lakes Keowee and Jocassee). The fact is that the lakes and the lower basin have evolved over the years such that they can no longer operate at the flows of an unregulated river in a drought of this magnitude.

The federal government and the states have defined under the Federal Clean Water Act minimum standards for water quality. In addition, these businesses, bases and municipalities have valid discharge permits under the National Pollutant Discharge Elimination System (NPDES). The states have set various guidelines for these permits based on specific minimum flows at various points in the river. These vary between the two states and increase in value as you go downstream to take into account incremental flows below Thurmond Dam. For example SC uses 3600 cfs at Augusta and adjusts it upwardly. GA flows range from 3800cfs at Augusta to over 4700 cfs at Clio. These permits control the amount of specified pollutants that can be discharged by the permit holder. Likewise, there are permits for withdrawals based on minimum lake elevations and lower river basin flows.

The two states' resource agencies are in favor of the 3100cfs lower flows, but you need to read their language carefully. In the Reduced Release EA (environmental assessment) that allowed the 3100cfs flows, the SC DNR, SC DHEC and the GA EPD specifically acknowledged that the release was seasonal and 3600cfs was recommended for the warmer months. Both States have requested an extension into

May but only after an EA is done to examine the impacts of the reduction. We now know that the EA is underway but only for the cooler months of October through January. Bud Badr of the SC DNR issued a clarification to their letter requesting the extension through May: "The DNR supports the continuation of 3100 cfs from Lake Thurmond from March through May 2009 provided the Environmental Assessment indicates there will be no significant adverse impact to the Savannah River environment and water users." In a subsequent paragraph he further stated, "However, at the time of our January 27, 2009 letter to Col. Kertis, we could not say for certain that we supported the continuation of 3,100 cfs because we had not seen results from ongoing monitoring efforts on anadromous fish, water quality, saltwater intrusion, and water withdrawals and because an Environmental Assessment (EA) for the new time period of March through May 2009 with warmer water temperatures may yield different results than the first EA." This is because of the assimilation capabilities of the river.

The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. This act requires that all federal agencies prepare Environmental Assessments (EAs) or Environmental Impact Statements (EISs) for their actions. The states recognized that a year-long deviation from the 3600 cfs minimum flows might require an EIS which can sometimes take years to complete. These documents are reviewed by the EPA. This was the rationale for the seasonal reduction to conserve water.

The states are thus heavily involved in the determination of water quality/quantity. The availability of monitoring capability and resources in the river are required to determine the water quality. Violation of the Clean Water Act carries significant penalties. All users in the river basin are going to have to share the impact if we are going to ensure an adequate water supply. This is going to pit many intra-basin interests against each other. Other federal acts in play are the Fish and Wildlife Coordination Act and the Anadromous Fish Conservation Act.

So the bottom line question we need to know is what are the real minimum lake elevations and lower basin flows at critical points during the entire year that will fairly share the impacts, meet water quality standards and the conservation of water quantity. We want to emphasize that this is a two way street. We also need to know what mitigating actions the permitted users can take and the associated costs. Once these minimums are known we need to proactively protect elevation levels in the lakes and manage the releases from Thurmond Dam to only meet these mini-

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mums. Obviously if relief is not found, eventually the river will return to an unregulated river and flows of 500 cfs or less would occur with major consequences for all users. This is why the urgency to define what Level 4 really means is critical.

The new ACOE projections showing Level 4 not being reached until the fall of 2012 (should the drought continue) is not good news for economics, recreation, water quality or quantity in the lakes. It shows that the lakes are below Level 3 68% of the time and system conservation storage never gets above 58% and is mostly below 30%. In addition these predictions are based on the 2008 conditions where spring rains created an approximate 6' elevation increases at Thurmond and Hartwell. So far this year we have not seen a similar effect. The NOAA 3 month weather forecast and the *LaNina* conditions do not forecast that occurring. The initial significant increase at Hartwell seen this year is artificial because of the reductions in its outflow the ACOE did to rebalance the pools. Hartwell is now making up most of the required lower basin flow and is dropping. This is the reason we have requested the ACOE rerun the model using this year's predictions. We believe that the 2012 date may be too optimistic and are feeling an urgency to get something done now!

One of the key strategies is to buy time by extending the reduced flows as long as possible and ensuring they occur ever year until the lakes recover. This can only be done legally by doing an Environmental Assessment, hopefully not a full Environmental Impact Statement. We still believe that the extension EA should be pursued as requested by both states so that we can see the specific nature of the issues.

The next step is to have both GA and SC governors declare a public and environmental emergency and convene a special local, state and federal taskforce to update the drought contingency plan to maximize water conservation, including defining Level 4 and the approach to it, and examine the current operational manual. It is time to put all options on the table including the need to consider downstream inflows when controlling releases.

A closely related third step is the continued documentation and quantification of specific economic and social impacts to reinforce the sense of urgency of the current situation. These include the Lincoln County Meeting Videos, the Save our Lakes efforts, the Concerned Citizens of Lincoln and the economic impact work at Lake Hartwell.

A fourth step is to encourage the federal elected officials to examine all ways to bring near term action. This would include discussions with NOAA, the Fish and Wildlife Service and examining the possibility of pursuing emergency appropriations to fund user water conservation mitigating actions (additional effluent treatment, water intake modifications and other local engineering measures) that would act to preserve water and maintain elevations in the lakes and reduce the required flows in the lower river.

A fifth strategy is to ask the federal officials to enact legislation to temporarily de-emphasize the generation of power to a "non-impact basis only" until the lakes have recovered and stabilized to the guide curves.

There are certainly other very important mid-term actions. These

are and need to continue going on in parallel. One is the proposed SC Water Bill supported by LHA. This would generate a SC Water Plan allowing one agency to speak on water matters in SC (similar to GA) and set up Water Basin Commissions. This puts SC on a much better footing to work with its neighbors. A second is obtaining funding for the second phase of the Savannah River Basin Comprehensive Study to address the future operations needs of the SRB, now we are doing it in piecemeal fashion *e.g.* Savannah Harbor expansion project, Plant Vogtle additional reactors, potential fish ladder at NSBDL, etc. This also should emphasize a basic change to the fundamental project operating purposes to prioritize water quality/quantity, economics/recreation, wildlife, and flood control with power generation and navigation as variables driven by water availability.

Lake Associations Unite to Increase Water Levels

Submitted by Mike Massey

The Lake Hartwell Association (LHA) has joined with a number of other lake organizations along the upper Savannah River Basin in advocating higher water in the lakes. The group is called "Save Our Lakes Now" and represents residents, businesses, municipalities and organizations from Lakes Hartwell, Russell and Thurmond.

Save Our Lakes Now is asking all those interested in keeping our lakes full to log on to the website www.saveourlakesnow.org and add their names to the petition asking "the Corps of Engineers for the immediate implementation of 3100 cubic feet per second (cfs) from Lake Thurmond and the continued 3100cfs outflows until ALL three (3) lakes are full."

It has been established that this reduced flow will result in an increase of water in our lakes of approximately 3 feet per year. Other conditions could cause higher increases.

As of this writing we recognize that the Corps has decided to stop discharges out of Hartwell Lake but this is only a temporary - although appreciated - measure until water levels are "balanced" between Hartwell and Thurmond. Outflows from Lake Thurmond are currently 3,600cfs.

The website also has a number of additional facts and figures about the Savannah River Basin, and why 3,100cfs is important. It also provides contact information for all state and federal legislative representatives from Georgia, South Carolina and the Corps of Engineers.

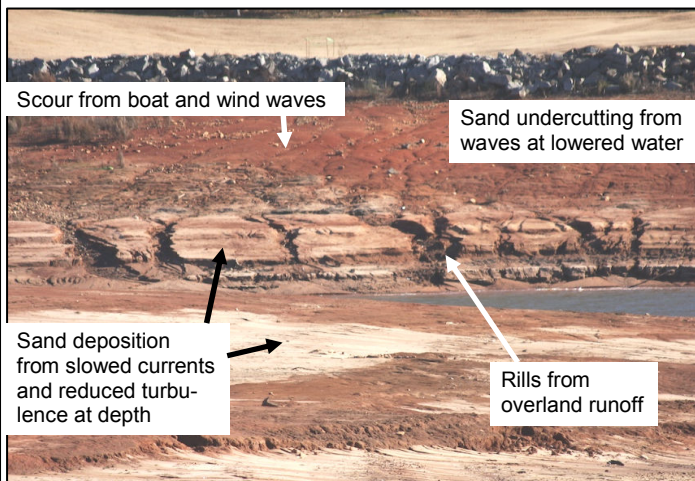
LHA gratefully appreciates all the residents and businesses who have taken time to contact their legislators regarding the impacts the low water has on our area and asking them to intercede where possible. These letters have greatly aided in providing a heightened awareness to the Corps and others resulting in faster and more positive responses to situations affecting the lakes. We are continuing in our next major effort to reduce flows out of Lake Thurmond to 3,100cfs permanently - or for as long a period as possible.

The Low-Water Shoreline (Part I: Sediments)

By Larry Dyck, Chair Covekeeper Project.

At the last monthly Covekeepers' educational session we took a "virtual" walk along the much expanded shoreline of Lake Hartwell. The low water offered an opportunity to see what is normally underwater. Just looking at the sediment patterns along the beach allowed us to read the dynamics of water and its influence on sediments. Exposed on the beach were examples of erosion, examples of alluvial sediment deposition and examples of particle sorting. These dynamics arise as the energy of moving water impacts the beach in several ways. The currents of tributary streams carry sediments into the lake, but as the stream-current is slowed by the inertia of the lake's watery mass, sediments drop-out onto the lake-bed & beach. Next crashing waves generated by wind and by boat wakes scour the shoreline of all but the heaviest sediments. As the lake waters have receded during the drought, wave scouring moves down the shoreline picking up and dropping sand into more protected areas. Finally, as low water exposes sand deposits, rills or channels are formed as storm water cuts across the alluvial materials and washes it further into the lake.

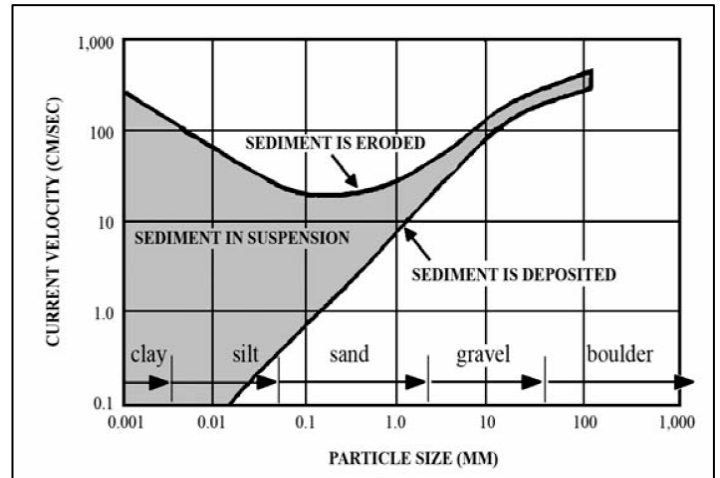
Have a look at the picture below. Can you identify the processes that produced these shoreline patterns?



The variable force of lake water will erode, sort and then deposit sediments onto beaches and the lake bed.

When water moves fast it's capable of suspending and pushing both small and large particles. As the water slows, the various sized particles become sorted; the largest drop out first (boulders then gravel and then sand) and smaller particles like silt and clay are eventually deposited, but only after the water becomes very calm. While rocky areas exist along shorelines most of the sediment that is picked-up, moved and then dropped again is sand. Sand is the dynamic material along the beaches of Lake Hartwell. It can be eroded off a shoreline during a storm, and then pushed back up the shore during calmer conditions. The graph below illustrates the relationships between water energy (actually current velocity) and erosion, suspension and deposition of different sized sediments. Notice that for sand a small drop in energy changes the dynamic from erosion to deposition.

Did you notice the graph shows that clay, as in clay banks, does not erode easily?



This is because the clays that make up our banks and beaches are compacted, and the adhesive forces between the tiny clay particles make them difficult to separate and suspend. The graph shows that it requires as much energy to erode a clay bank as to move gravel and boulder size rock. There is an exception to this situation that you may have observed if you walked the shoreline on a cold morning. The phenomenon is called "frost heaving." Water molecules held between the clay particles freeze and lift-up (heave) the surface layer of clay. When the ice melts, the superficial layer of clay is no longer compacted but has become friable, or highly erodable. The first wave or rain storm will suspend the loosened clay and push it into the lake for sorting and deposition. I found that about 16 lbs of compacted clay can be eroded from each square yard after one frost heaving event.

Did you know that some clay subsoils erode more easily than others? Those that have mica mixed in with the clay are highly erodable. Those small glimmering pieces of smooth mica act as minute slides for clay to slip across and erode away.

Another element in the erosion of banks and beaches is "rotten rock." Maybe you've kicked sandy rock that just crumbles under your foot. This rock is called "Saprolite." It is ancient rock from which fine particles were extracted over millions of years. What remains is mostly sandy material. After erosion and sorting, saprolite serves as a major source of the sand that accumulates along the shoreline.

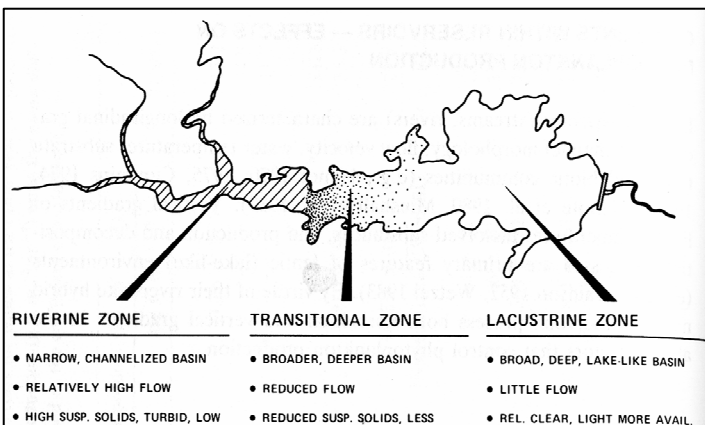
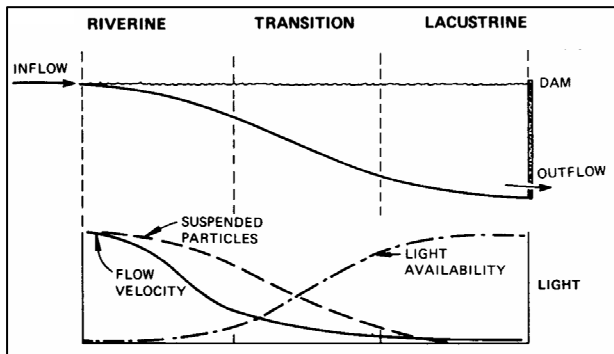
Depending upon where you live on the lake, tributaries may make important contributions to the sediments.

The figures below show how reservoirs can be divided into a series of regions reflecting the water-velocity and sediment load. The upper end of a reservoir is river-like and forms the Riverine zone, the bottom end of the reservoir, near the dam, is lake-like and forms the Lacustrine zone. Between the two is a region designated the Transition zone. As a tributary current enters the lake, its velocity slows and its sediment load is gradually dropped. Much of the sediment is deposited in delta formation at the mouth of the Riverine zone. By the time water has slowed

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from its travel through the Transition region it has deposited most of the suspended sediment. This means water entering the Lacustrine zone is clear and more transparent which allows microscopic planktonic algae to harvest sunlight and serve as a food source for the food chain.



Keep in mind that wherever a tributary comes into the reservoir, no matter how small it might be, it sets up Riverine and Transition zones dynamics. Furthermore, how far down-lake a Riverine and Transition zone extends is determined by the water's velocity. After a major storm, a tributary becomes a roaring torrent and carries a sizable load of sediment. The accelerated flow extends the Riverine and Transition zones further into the lake. This means areas that are normally Lacustrine now assume the depositional properties of a Transition zone. By comparison when tributary-flow is low (e.g., during a drought), there is not much sediment brought into the lake and the Riverine and Transition zones contract back up-lake.

In summary, at low lake levels we see where sediments, mostly sand, were deposited when the water was higher. The historic areas of deposition would have been calm or lower energy environments when the water was high. As the lake lowered, these previously sheltered deposits are exposed and now experience higher energy forces from storm-generated currents, wind and boat waves and from overland runoff.

If you would like to learn more about shoreline erosion and shoreline dynamics, I recommend the following website: <http://www.watershedcouncil.org> click on publications and scroll down to the shoreline erosion publication (it's free).

WHAT? NO LHA SPRING PICNIC?

Submitted by Ruth Ann Maciag

As most of you know, Lake Hartwell Association has traditionally had a spring picnic for its members and guests, generally in May at the Big Oak facility. But attendance at that event has been dwindling, so we thought it was time for a change-up and a different approach.

Because our members reside in such a large area, from Atlanta to Hartwell to Spartanburg and back to Walhalla, we're planning a few smaller, regional meetings. By doing so, we hope we can reach more of you, keep you better informed, and do it closer to home. Our first gathering will be for LHA members and guests who live in the general area from Atlanta all the way into western Oconee and Anderson counties:

Thursday, May 14, 2009, 7:00 p.m.
Holiday Inn Express, Lavonia, GA.
Exit 173, north side of I-85, behind the Exxon station.
706-356-2100

There will be two or three speakers with a five to ten minute presentation (including someone from the Corps), then a question-answer period. If you have a particular question or statement to present, we invite you to email us or write out your question as you enter the meeting on May 14.

Remember: This is just the first of our regional meetings, and all LHA members and their guests are welcome. But there will be other gatherings in other areas – we'll keep you informed!

We look forward to seeing you on May 14!
For the sake of the Lake

LHA Member Survey Assists Goal Setting and Program Planning

The LHA Board reiterates its deep appreciation to all members who responded to the original LHA Member Survey which facilitated LHA's goal setting and program planning. For example, the 2006 results indicated that activities of interest to members were "water-related forums" and "boating safety programs." While resource limitations precluded regular forums, LHA provided several water-related learning opportunities, including shoreline planting excursions to improve fish habitat, the Covekeeper pilot program, and the annual fall meeting featuring guest speakers on water quality and quantity. With respect to boating safety programs, LHA regularly provided members information on local and online courses, maintained a child life jacket loaner program at marinas, and distributed the Lake Hartwell Navigation boating safety brochure to all members. LHA also took action on several other results and suggestions.

Thanks again to all who took the time to complete the initial survey. In light of the many changes related to the historic drought and its impacts, LHA may conduct a new member survey later this year. In the meantime, we encourage members to continue communicating with LHA via email, letters and phone calls. By sharing your thoughts and concerns, you can help shape LHA's program planning and participate in determining the strategic direction of the organization!

LHA 2008 Accomplishments and Activities

Submitted by the LHA Board

Following are the past year's accomplishments of your LHA team of directors, administrator and committee members. The effort that goes into protecting our great resource is sizeable and the challenges are always increasing. If you would like to lend a hand and participate as a director or committee member, or provide comments or suggestions, please contact us at membership@lakehartwellassociation.org or by mail.

Officers and Board of Directors

- Recruited one new highly qualified director to supplement our people resources and selected vice president/president-elect.
- Developed formal processes to guide committee member recruitment and committee functions; secretary developed evergreen process to track volunteer recruitment and follow up; created and distributed committee member handbooks.
- Continued to meet with other southeastern volunteer water associations to discuss issues and identify best practices to assist each other with our policies, practices and goals.
- Provided leadership to re-establish and re-organize the Lake and Watershed Association of South Carolina (LWASC) to provide active involvement in state water issues and planning.
- Maintained memberships in, and coordinated with, other Georgia and South Carolina state and public water organizations to share ideas and knowledge of water initiatives and activities.
- Attended meetings and provided input to the Greater Anderson Chamber of Commerce Water Resources committee. LHA is a member and Mike Massey chairs the Legislative committee.
- Provided presentations about LHA, Hartwell Lake or other water related topics when requested by LHA members or other civic organizations.
- Provided financial support to the Hartwell Ramp Betterment Partnership. This volunteer group funded the extension of four boat ramps while water levels were down.

Safety

- Maintained boat ramp bulletin boards and provided safety displays.
- Funded a life jacket loaner program at Corps facilities and provided replacement children's PFD's at participating marinas.
- Provided information on local and online boating safety courses on the LHA website.

Legislative

- Actively participated with the Georgia Water Coalition to develop consensus guiding principles for the Georgia State Water Plan.
- Supplied chairman (Mike Massey) for the SC Water Resources Advisory committee, resulting in The South Carolina Comprehensive Statewide Water Management Act, HB 4393 and SB925, submitted for the 2008 legislative session. Although the

bill was not passed, it garnered significant support and will be taken up again in the 2009 session.

- Supported activities to develop a working relationship across state lines to better address water needs. The Savannah River committee formed jointly by the GA and SC governors began discussions on common issues and resource sharing. Attended several meetings of this group and gave input toward resolving water issues.
- Actively participated on the Savannah/Ogeechee Basin Advisory Committee as part of the Georgia Statewide Water Planning process. The Water Plan was submitted to the GA Legislature and approved in early 2008.
- Petitioned federal legislators to obtain funding support for key Corps projects: the Thurmond Oxygen Injection project and Phase 2 of the Comprehensive Basin Study. Work has commenced on the Thurmond project, but funding was not provided to continue the Comp Study, and LHA continues to push for completion of this critical project.
- Petitioned the Corps and Governor Perdue to study and implement lower drought condition flows down the Savannah Basin. Georgia EPD proposed lower flow rates for cold weather months, and a flow reduction to 3100 CFS was implemented in November 2008. LHA has also stressed the need for adaptive management approaches in dealing with severe drought situations. The Corps has responded with unique solutions, such as going to zero flow out of Hartwell for two months which significantly increased water levels.
- Worked with a sub-committee of the Hartwell Coalition to define requirements for a Lake Economic Impact Study to be jointly funded by the Corps and conducted primarily through the SC Water Resources Center at Clemson. The study was funded and will commence early in 2009.

Membership

- Maintained an evergreen member recruiting process using the permit list as a basis and conducted recruitment effort. Added 124 new family memberships.
- Continued to recruit new business members by implementing value-added benefits. Added 11 new business members. Provided members with timely information regarding issues and LHA's positions through our member email distribution service.

Technical

- Kicked off the Lake Hartwell Covekeeper program that empowers LHA members to become knowledgeable observers of the lake environment and ambassadors of good lake management practices. Provided a series of educational forums for the pilot group of volunteers ranging from data collection and how to access regulatory databases to reservoir dynamics, limnology, and pollution detection. Conducted two field days on the lake for volunteers to apply learning.
- Reviewed permitting documents for the proposed expansion of Vogtle nuclear power plant on the Savannah River south of Augusta. Determined possible impacts on lake levels, particularly

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during drought conditions, and prepared and published an LHA position paper regarding the proposed project.

- Evaluated plans and proposals for lake island development to ensure consistency with LHA’s position of maintaining lake’s natural aesthetics with no negative water quality impacts.

Programs

- Co-sponsored the annual Hartwell Lake Clean-up Campaign with the Corps of Engineers and organized and managed the volunteer appreciation picnic.
- Managed and supported the spring picnic and Fall Information Meeting by providing members with opportunities for fun and informative networking.
- Updated internal standardized processes for LHA routine activities such as member meetings and the Clean Up picnic. Worked on developing media relationships with area newspapers to ensure better LHA coverage and visibility.

Publications

- Conducted a business member survey to determine interest in newsletter advertising and what benefits LHA might achieve in reduced publication costs. Business member interest was modest, and the board decided not to pursue this project.
- Improved the distribution of the electronic version of our newsletter (eNews). The new method allows download at the member’s convenience from a link to the LHA website with the enhancement of viewing color images. Many members have switched to this service which is much more cost-effective for LHA.

Financial

- Implemented investment strategy for LHA cash on hand to increase income for the organization.
- Conducted an audit of 2007 LHA finances and financial processes. No significant findings or recommendations resulted.
- Restructured the administrator and treasurer roles such that the administrator assumed primary responsibility for cost tracking and financial reporting. Implemented simplified financial processes for budget development, reporting, auditing, and tax preparation.

Website

- Continued to improve and update the website with current LHA and lake information, online calendar of events, government/regulatory contact information and business member contact page.
- Transferred LHA director’s information to secure section of the website for ease of use and elimination of paperwork.
- Measured value to members by showing significant increase in obtaining information and as a conduit for questions to the board. The site had over 35,000 hits in 2008.

Working Together For the Sake of the Lake

Submitted by Petra Massey



L-R: Jane Davis, Cindy Freeman, Sylvia Sanders, Mike Massey, Dave Freeman, Herb Burnham.

LHA President Herb Burnham and LHA legislative committee chair for South Carolina, Mike Massey, met informally with Portman Marina owner and LHA business members, Dave Freeman, Cindy Freeman and Sylvia Sanders. Big Water Marina owner and LHA business member, Jane Davis, also participated. At this initial meeting in mid-March, the group shared information and discussed working together with other Savannah River basin groups to promote a balanced lake-level management approach that could be mutually beneficial to all current stakeholders.

General and Staff Invited to LHA Board Meeting



LHA board invites Brigadier General Joseph Schroedel to a meeting to answer our questions about water usage in the Savannah River Basin. See the article on page 14.

Data and Data Access for the Savannah River Basin

Submitted by Vernon Sauer

During these times of drought, and even when things are looking up like they are at the time of this writing, where can you find current, real-time data on stream flow, lake levels, rainfall and other hydrologic variables for the Savannah River basin? For instance, the current lake level as I write this is 648.80 ft, which is 11.20 ft below the summer full pool of 660 ft. But tomorrow morning the lake level will be different. Is it rising or falling, and by how much? How can I find out quickly and easily? Well, the answer to these questions and many more like it can be found on the internet which most of us have access to. In this article I will outline a few of the internet sites where you can obtain reliable, real time data.

First, let me describe two interactive maps, one for South Carolina and one for Georgia, where you will see many small circles that represent U. S. Geological Survey stream and lake gauging stations. The link for the South Carolina map is <http://water.usgs.gov/waterwatch/?m=flood&r=sc&w=map> and the link for the Georgia map is <http://water.usgs.gov/waterwatch/?m=flood&r=ga&w=map>.

Let's look at the gauging station for the lake that most of us are really interested in, Hartwell Lake. It shows up on both the Georgia and South Carolina maps near the upper end of the Savannah River. Pointing your mouse at the circle for this site will provide some basic data for Hartwell Lake. However, clicking on the small circle will display another box where you can then click the hydrograph tab and get a lot of other data for the site. For instance, this site has current (real time) data for relative humidity, air temperature, precipitation, wind speed, wind direction, lake elevation, and solar radiation.

Following is the lake elevation graph taken from this site, showing the lake elevation for the period March 11 to March 18. By changing the number of days in the heading you can produce a graph for up to 90 days.

Many people are interested in the flow of the lower Savannah

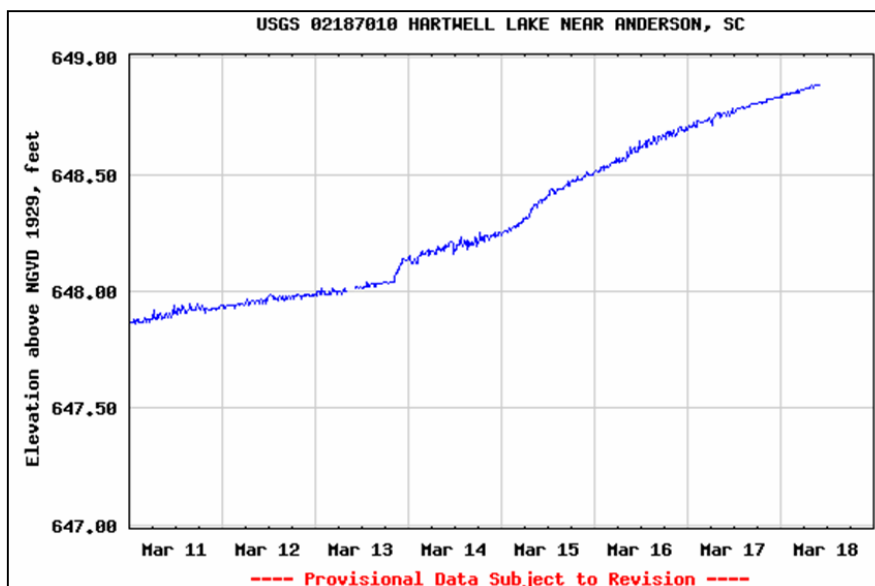
River below Thurmond Lake because this is one of the controlling factors that determines how much water is released from Thurmond Lake and also Hartwell Lake. The interactive maps described above show at least 4 Savannah River gages that monitor river flow from Augusta downstream to Clyo (near Savannah). There are also a number of tributary gages shown on these maps.

But you are saying, this

isn't what I want. I want to know how much water is being released from the lakes, how much will be released in the upcoming days, and what is the drought forecast. The Corps of Engineers has several web sites where these data can be easily found. Their primary water management site can be found at <http://water.sas.usace.army.mil/home/indexDU.htm>. On the left side of the page that opens you'll find a schematic of the Savannah River basin, showing most of the sites where stream flow and lake level data are obtained. Click on any of the named sites and a data page will be opened like the ones described above. There are also several links listed near the bottom that will provide water-watch and drought-watch information.

The right side of this page shows current data for the three lakes, including trigger levels for flow releases. But considerably more detailed information can be obtained from the links at the top of this page. The "Project Log" link will bring up hourly data for the current date, including headwater (lake level), tail water (water level below the dam), discharge, lake storage change, lake inflow, and power generation schedule. The "Morning Report" link will bring up daily data for the past 12 days for each of the three lakes. The "Did you know..." link has a long list of information, much of which you probably could do without, but it's interesting never-the-less. The "Declaration & Projection" link is one you don't want to miss because it provides information on water releases and planned water releases for an 18-day period for all three lakes. There's a lot more that can be found at this web site, so do some exploring on your own. And create some bookmarks for some of these sites so you can get to them quickly and easily.

One final thing I'd like to explain: You often hear about the required release of water from Thurmond Lake or Hartwell Lake as 3,600 cfs or 3,100 cfs or some other amount. Yet, when you look at the reports described above the releases may be shown as much larger numbers. That is because the releases shown in these reports are *hourly* values, whereas the 3,600 cfs or 3,100 cfs are *daily* values. In other words, the required daily releases are computed by averaging the hourly releases for all 24 hours of the day, which includes all of the "zero" hours. And it is the daily releases that must be used for the required downstream flow conditions.



In the last issue of this newsletter I "jokingly" said Hartwell Lake would reach full pool in 4 to 6 months. I still believe this could happen even though the forecasts we are reading say otherwise. Give us two or three really good rain storms, like we had when it snowed, and you might see full pool again. And please note that downstream rain is almost as important as upstream rain because it reduces outflow requirements.

Managing the Basin – Issues, Involvement and Goals

Submitted by Mike Massey

The Lake Hartwell Association (LHA) has strived for years to understand the process for managing lake levels in Hartwell Lake. We have discovered that it is much more complex than most of us realize. We believe it can be simplified. The more we get involved the more we understand that to effect real change for the long-term we have to go beyond the shores of Hartwell Lake and consider the whole Savannah River Basin (SRB). In fact, in many cases it is often essential to go outside the basin and work to revise the way the states manage water to improve the water conditions in Hartwell Lake. The knowledge we have gained has served us well in dealing with the many agencies having some part of the responsibility for water management. It has also taught us that there is no easy process to be followed – and it is constantly changing.

Our last ten years of intense involvement with water planning and management in the lake and SRB has resulted in the development of a number of goals, short and long-term, that the LHA board of directors has agreed to pursue.

While our primary objective is keeping our lake water quality and quantity at acceptable level, it is not enough to be satisfied with that alone. We must continue to work hard at coordinating with all agencies to maintain and improve water conditions in all the lakes in the basin as we look towards the future.

It is natural and important for us to concentrate on short-term objectives such as keeping our lake levels high or getting the discharges from Lake Thurmond reduced to 3,100cubic feet per second (cfs) from the current 3,600cfs - but we also believe we need to work just as hard towards a long-term and more stakeholder coordinated and enforceable plan for basin management at a local level. We would like to see a coordinated plan that looks toward the future and anticipates issues before they appear and provides a path forward to resolution.

Many of us have been deeply involved with water issues for months - some of us for many years - and we are continually finding out new bits of information about specific rules, requirements, administration, management and processes (documented and undocumented) that seem to suddenly be part of the water planning and decision making process. Frequently many of us are learning about these things for the first time.

We have discovered that while the Corps is responsible for trying to follow the rules they are given - they have some leeway – although that leeway is not always clearly understood. However - there is a pecking order. What is it? Who is responsible for "OUR" water? It depends on the situation again! At any one time it is the Corps of Engineers, The National Oceanic and Administrative Agency (NOAA), Federal Wildlife and Fisheries, The U.S. Congress, the states of Georgia and/or South Carolina and many others.

What are they responding to? They react to all the situations and regulations that we are becoming familiar with. Of course the most visible situation is the low water due to lack of rainfall - but that is just the beginning. There are many others like the

South East Power Administration (SEPA) contracts for generating power, a complex Corps drought plan with its many rules almost impossible to manage, interbasin transfer concerns, pollutant assimilation levels and regulations from the Federal Clean Water Act, salt-water intrusion impairing the wells on Hilton Head, the spawning needs of the endangered short nosed sturgeon, the Savannah fresh water deficit (cone-of-depression) from years of depleting the aquifer there, flood control regulations from high water in the rivers (too much rain). Add to that new nuclear power generation needs and plans, low oxygen levels with impacts on fish life and water quality, dredging issues, water diversion to the Augusta Canal, a proposed new shipping port and many different fish and wildlife issues. There are also other state and federal laws and regulations for a great number of conditions that we have not even been involved with - yet. And keep in mind that any number of these are usually in play at the same time.

So what is the answer? There is no easy answer - but you already know that. So have I stated the obvious? Well - the obvious is not always obvious, especially to those of us originally concerned with one specific issue - such as water in our lake. Colonel Ed Kertis, Commander of the Savannah District, U.S. Army Corps of Engineers, made a comment in a recent communication when discussing these issues: "That is why many river basins have established commissions to manage the basin." In 2001, the Lake Hartwell Association attempted to influence legislators to form a "compact" commission for the SRB managed by agencies from Georgia and South Carolina and having federal oversight. Many river basins bound by more than one state have just such a compact. This proposal became so complex and unwieldy that the concept was not pursued by legislators.

Recently, however, Georgia realized they were lacking in water planning processes – especially protecting water resources for the future. They took bold steps to correct that situation by completely revising their water planning and management processes. The Georgia Water Plan was approved in early 2008 after five years of development (see <http://www.georgiawaterplanning.org/>). One of the major results of that plan is the establishment of a statewide Water Council, many modern and updated planning processes and regulations and, important to us, regional Water Councils for each water basin in Georgia. It is these regional Water Councils that will have the most positive impact on our basin for the future. There is one established for the Savannah River Basin.

To see what the Georgia Regional Water Councils are responsible for see: http://www.georgiawaterplanning.org/Files_PDF/Summary_Regional_Water_Planning.pdf. Each regional Water Basin Council in Georgia consists of 25 members and a number of alternates from the business, municipal and other stakeholder groups along the basin. LHA stands firmly behind this concept and in fact, has a Board of Directors member, Pat Goran, on the SRB Water Council. This regional group is where we all need to become involved and offer our support, suggestions and comments.

In South Carolina however, it is a different story. There is no

(Continued on page 10)

(Continued from page 9)

such single state water management organization or regional water council. In fact, while the *South Carolina State Water Plan, January 2004* provides many pages of very important recommendations significant to the protection and management of water in South Carolina, there is no comprehensive water plan in place to review and resolve the recommendations or many water issues in the state and each basin. Every issue is handled as an independent problem by legislators calling on experts to help resolve that issue only - and is often influenced by lobbyists with major corporate interests. It should be concerning to everyone in the state that there is no one agency specifically responsible for all South Carolina water issues.

The Lake Hartwell Association has worked with South Carolina legislators the last several years to try to resolve these issues through the introduction of legislation aimed at developing a Comprehensive Statewide Water Plan. House Bill H3132, introduced by Representative Don Bowen of Anderson and Senate Bill S358, introduced by Senator Kevin Bryant of Anderson both request the formation of a South Carolina Water Planning committee with a single person responsible for water management charged with developing a Comprehensive Water Plan. They also urge the establishment of Water Basin Councils for each basin. South Carolina must have an organization comparable to Georgia's Regional Basin Councils in order to be effective in managing the SRB.

The two Water Basin Councils (SC and GA), working in concert, would then have sufficient legislative and scientific backing to have a major influence on how the SRB is managed. We are asking everyone to please support these bills with letters and comments to your legislators.

In conclusion, with the above thoughts the Lake Hartwell Association has developed the following goals and objectives:

- 1 - **Continue** to work with any and all agencies to reduce water flows out of the dams - or at least to 3,100 cfs from Thurmond when possible.
- 2 - **Revise** the current drought management plan to simplify the drought trigger levels and water release rates with Thurmond Dam being the focus point.
- 3 - **Work** to get funding for a comprehensive basin study allowing a thorough understanding of water needs and other issues in the basin.
- 4 - **Maintain** contact and support the Georgia Regional Water Basin Council for the Savannah River Basin.
- 5 - **Provide** grass roots lobbying to our South Carolina legislators and State agencies for the passing of legislative bills S358 and H3132 and to create a South Carolina Basin Management Council.
- 6 - **Keep** LHA members well informed and up to date on these issues and ask for their support in persuading state and federal representatives and agencies in control that we must spend the effort and money needed to protect the lakes of the SRB.

LHA Wins Keep America Beautiful (KAB) Pride Award

Thanks to our members' efforts to keep Lake Hartwell clean, Keep America Beautiful of Anderson County has honored LHA with a KAB Pride Award. At the annual KAB Awards luncheon on February 23, LHA received the "Litter Prevention Award," for its efforts to "clean the ground, while the lake was down."

LHA President Herb Burnham accepted the award on behalf of LHA. Also present were LHA members, Bob and Virginia Parsons, business member Penny Holst (*Interiors by Penelope*), and LHA Past President Mike Massey



L-R: Bob & Virginia Parsons, Penny Holst, Mike Massey, Herb Burnham.

Early in 2008, LHA enlisted many of its members to actively participate in KAB's clean-up in preparation for the 2008 BASS Tournament, America's most prestigious fishing tournament. Within a few weeks, volunteers had gathered enough trash to fill two hundred and sixty one (261) large trash bags.

Later in the year, LHA coordinated with the Corps on the annual Lake Hartwell clean-up campaign. LHA members and area volunteers removed tons of shoreline debris that had detracted from the beauty of our freshwater coast. LHA provided food and live music for the annual picnic held in appreciation of volunteers who cleaned-up of Lake Hartwell's 962 miles of shoreline. Thanks again for all you do to protect the value and beauty of Lake Hartwell!

LHA Website

Submitted by Vernon Saur

Have you been to the Lake Hartwell Association website yet? There is a lot of good information on it. You can find contact information for government officials. Click on "Contacts" dropdown menu. There's also a fairly new page for "Community and Business Partners." You can find all of this and much more at www.lakehartwellassociation.org.

Improve Your Security on Launching Your Boat

Submitted by Dan Ray

Since we're going to have at least a bit more water in the lake, it's time to take a look at things to do to keep you and your stuff safe at the launch ramp, or at camp grounds and recreation areas around the lake. After you launch and take your tow vehicle back to an approved parking area, be sure any valuables that are left in the vehicle are out of view. Of course, lock your vehicle and it's a good idea to have a trailer lock to secure it to the vehicle. If you will be out after dark, park in a lighted area if one is available.

If you have an emergency call 911 on your cell phone. If you need to contact law enforcement, depending on your location, non-emergency numbers are listed below:

South Carolina

- Anderson County Sheriff (864) 260-4400
- Oconee County Sheriff (864) 638 4111
- Pickens County Sheriff (864) 898 5500
- Dept of Natural Resources (800) 922-5431

Georgia

- Franklin County Sheriff (706) 384-2525
- Hart County Sheriff (706) 376-3114
- Stevens County Sheriff (706) 886-2935
- Dept of Natural Resources (800)241-4113
- Corps of Engineers (888) 893-0678

Or (706) 856-0300

If you are out on the lake marine radio channel 16 (156.8 Mhz) is monitored by the Coast Guard Auxiliary. Or you can call 911 on your cell phone. If you need a tow, TowBoatU.S. call (800) 391-4869. Members of BoatU.S. get up to \$50 for assistance on the water. (LHA members get a BoatU.S. membership cost reduction. Check out our website.)

Launching Safely

Preparation before leaving for the water is important. Having appropriate towing vehicle, trailer, trailer tires, hitch and trailer ball for the size and weight of the boat is a must. A road hazard kit, spare tire, jack capable of lifting a loaded trailer are essential. Trailer lights in working order are a must. Even experienced boaters benefit from using a check list prior to each boat launch.

A recommended checklist:

- ✓ Put on a Coast Guard approved life jacket before working near the water
- ✓ Make sure the depth is sufficient for the boat
- ✓ Make sure the ramps wide enough to accommodate the boat and trailer
- ✓ Make sure the ramp's incline is suitable for the boat and trailer length
- ✓ Check the surface of the ramp and be mindful of particularly slippery condition and/or sharp objects
- ✓ Keep the boat connected to the trailer until launch
- ✓ Make sure the emergency brake is set when out of the vehicle
- ✓ Release transom tie downs before backing into the water
- ✓ Check the fittings
- ✓ Inspect the fuel system

- ✓ Check the oil
- ✓ Make sure the motor brace is disconnected
- ✓ Put in the boat's drain plug
- ✓ Tip the motor so that it does not drag along the ramp
- ✓ Once in the water, lower the outdrive & start the motor
- ✓ For inboard propulsion, energize the installed blower for five minutes prior to starting
- ✓ Make sure water is passing through the engine's cooling system

Everyone on the boat should be wearing an approved life jacket. Boating classes and the boat should have an annual Vessel Safety Check by United States Power Squadrons, the US Coast Guard Auxiliary, or state DNR examiners. On the water you should know where to direct emergency personnel.

Outgoing President Receives Award



Joe Brenner (left), LHA president from January 2006 to December 2008, receives the LHA President's Award from Mike Massey, immediate past president. On behalf of the LHA membership, the LHA board thanked Joe for his exemplary management and leadership while advancing the goals and mission of LHA.

Upcoming LHA Events

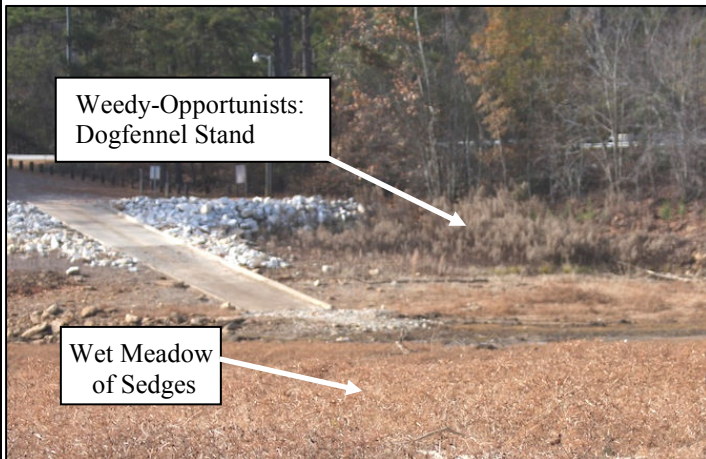
Event	Date
Covekeeper Pilot Meeting, 6:30, Anderson County Library	4/21/09
LHA Board Meeting, 6:00, Anderson County Museum	5/11/09
LHA Regional Meeting, 7:00 PM, Holiday Inn Express, Lavonia, GA	5/14/09
Covekeeper Pilot Meeting, 6:30, Anderson County Library	5/19/09
Covekeeper Pilot Meeting, 6:30, Anderson County Library	6/16/09
LHA Board Meeting, 6:30, Hartwell County Water Authority Building	7/13/09

The Low-Water Shoreline (Part II: Shoreline Vegetation)

by Larry Dyck, Chair Covekeeper Project
Editorial note: pictures are in color on the LHA website
<http://www.lakehartwellassociation.org>

The vast and much expanded shoreline formed by low lake water has fostered extensive shoreline vegetation. This article is a brief look at two types of vegetation that use different biological strategies to prosper when the water is low. One vegetation type is represented by the Weedy-Opportunists whose seeds have blown in from the upland. The Lake Hartwell poster-child for this group is the plant named dogfennel. The second group forms Wet-Meadows with plants restricted to moist alluvial sediments around tributaries or seeps. The plants that make up meadows are dominated by grass-like plants, the sedges and rushes.

The picture below shows the two types of vegetation as they appear on a winter shoreline.



Opportunistic/Weedy Vegetation... Dogfennel Thickets

We have dense stands of dogfennel growing in sandy pockets along most of Lake Hartwell's scoured beaches. Dogfennel (scientific name *Eupatorium capillifolium*) is a robust perennial plant reaching a height of 3 to 6 feet (sometimes 9 feet). It establishes in unoccupied sandy sediments of the shoreline when dandelion-like seeds blow in during the autumn. The plant is invasive and weedy and readily colonizes any disturbed area or abandoned field (like an empty shoreline). It is commonly seen growing along road sidings. Seedlings are herbaceous and grow as a single stem in the first year. Stems are covered with deeply dissected feathery leaves that emit a strong odor when crushed or bruised (hence the "fennel" in dogfennel). Stems die in the winter, but the following year numerous new stems are produced from a perennial root and each plant now develops as a distinct clump. Mature stems are somewhat woody so that each year as leaves wither, a cluster of dry stems remain. Dogfennel is **not** adapted to living in or near water. Its wetland classification is FACU (see table below) so that it is rarely found growing in wet places. You should expect that when the reservoir refills,

this plant will be drowned; however, its somewhat woody stems will persist for several years as testament to its past success. As plants slowly decay they become food for microorganisms which in turn will feed higher levels of the food chain... ultimately stimulating fish abundance.



Single plant with many stems that developed from a perennial rootstock



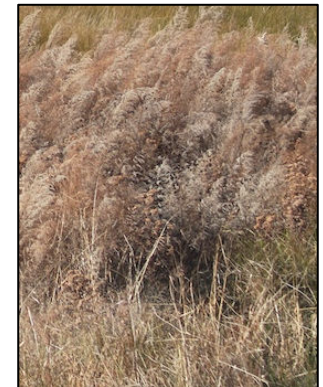
Seed is blown by wind



Seedling has one stem in first year

Eupatorium capillifolium

Dogfennel



Forest of plants in winter

Use the USDA website (<http://plants.usda.gov>) and learn about the vast majority of plants known to grow in the United States. Among the information provided is the wetland category for every plant (see below). Remember dogfennel is a FACU plant...so should we consider it a wetland plant?

Indicator categories

Indicator Code	Wetland Type	Comment
OBL	Obligate Wetland	Occurs almost always (estimated probability 99%) under natural conditions in wetlands.
FACW	Facultative Wetland	Usually occurs in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
FAC	Facultative	Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
FACU	Facultative Upland	Usually occurs in non-wetlands (estimated probability 67%-99%), but occasionally found on wetlands (estimated probability 1%-33%).
UPL	Obligate Upland	Occurs in wetlands in another region, but occurs almost always (estimated probability 99%) under natural conditions in non-wetlands in the regions specified. If a species does not occur in wetlands in any region, it is not on the National List.

(Continued on page 12)

In order for dogfennel to become established in sandy shoreline pockets, the site cannot experience flooding. Furthermore, to get plants with multiple stems, the shoreline region must be inundation-free for at least two years. You can figure that anytime low lake levels occur in the fall (a common occurrence on Lake Hartwell) and the water does not rise in the spring (less common), then dogfennel seedlings will be visible. If there is no inundation for a second year, the plant will have morphed into a large multiple stemmed clumps...the dogfennel forest!

Wet Meadows...home to sedges and rushes

The wet meadows remind us more of plants that belong in wetlands. Plants can be either annual or perennial. Seeds for these plants either washed into the sediments from upstream locations or they float in from plant colonies around the lake. The alluvial sediments that grow these plants serve as a seed bank. Many wet meadow plants produce copious seed; *Juncus effuses*, the common soft rush, is documented to produce about 4 million seeds per square meter. Of these about 5% germinate right away while the remainder are buried and do not germinate until they are exposed to light and the correct temperature regime. This means that as long as the lake is up, seeds do not germinate (poor light penetration). Seeds remain dormant until low water conditions prevail; studies have shown that viable seed can persist in dark sediments of a seed bank for at least 30 years. Alluvial sediments really are "seed banks."

Established plants of the soft rush (*Juncus effuses*) will form dense clumps supported by a stout rhizome. Leaves are tubular and pointed at the tip.

ally found along moist to very moist sites. They enjoy water around their roots and crown but will not tolerate being submerged for extended periods. Perhaps you have already determined that these meadows thrive when the lake is down and may even advance down into the lake bed as the lake continues to recede; however, when the lake rises again and stays up for an extended period, wet-meadow plants will deteriorate and their decaying bodies will be processed through the food chain.

Sedges are also grass-like plants. They are easy to distinguish from grasses by their triangular stems; in fact a common teaching tool is the saying: "sedges have edges, but grasses are round." Like the rushes, different species of sedges can be either annuals or perennials. They produce abundant seeds that feed the seed bank. None of the sedges growing in the wet meadows of Lake Hartwell will survive extended inundation.



Meadow of sedges during winter 2008-09



Cyperus odoratus, fragrant sedge; note abundant seed



Soft rush, *Juncus effuses* in flower



Soft rush along a tributary of Lake Hartwell

In summary the wet meadow plants are characterized by their strategic ability to wax and wane as the lake-water falls and rises. They are not true aquatic plants (OBL); most of the wet meadow plants are classified as FAC or FACW (see table). Their key to continued survival is their seed bank.

It should be clear that the plants discussed here are not appropriate for long term enhancement of the shoreline. Plants that are recommended for use on Corps land are listed in the 2007 Hartwell Shoreline Management Plan. Copies are available at the Corps' project office on U.S. Hwy 29 near the dam. An article on these plants is scheduled for a future newsletter.

Interested in joining the Covekeepers and learning neat stuff about Lake Hartwell? This is a volunteer program that seeks to generate knowledgeable homeowners that are good stewards and ambassadors for the lake. If interested send an email to: lakehartwell@charter.net.

They do not produce leaves, but reveal abundant though inconspicuous flowers on branched stems (see picture). Plants are usu-

USACE Division Commander Briefs LHA Board

Submitted by Herb Burnham

Army Corps of Engineers Brigadier General Joseph Schroedel attended the LHA Board of Directors January, 2009, meeting. He is the South Atlantic Division Commander, which includes the Lake Hartwell Project. The general addressed the negative impact that the multi-year drought has had on water resources throughout the southeastern states, and more specifically on the severe drought conditions we have experienced in the Lake Hartwell area. He also introduced the need for a regional multi-state vision when it comes to management challenges and infrastructure requirements *vis-à-vis* water resources throughout the southeastern region.

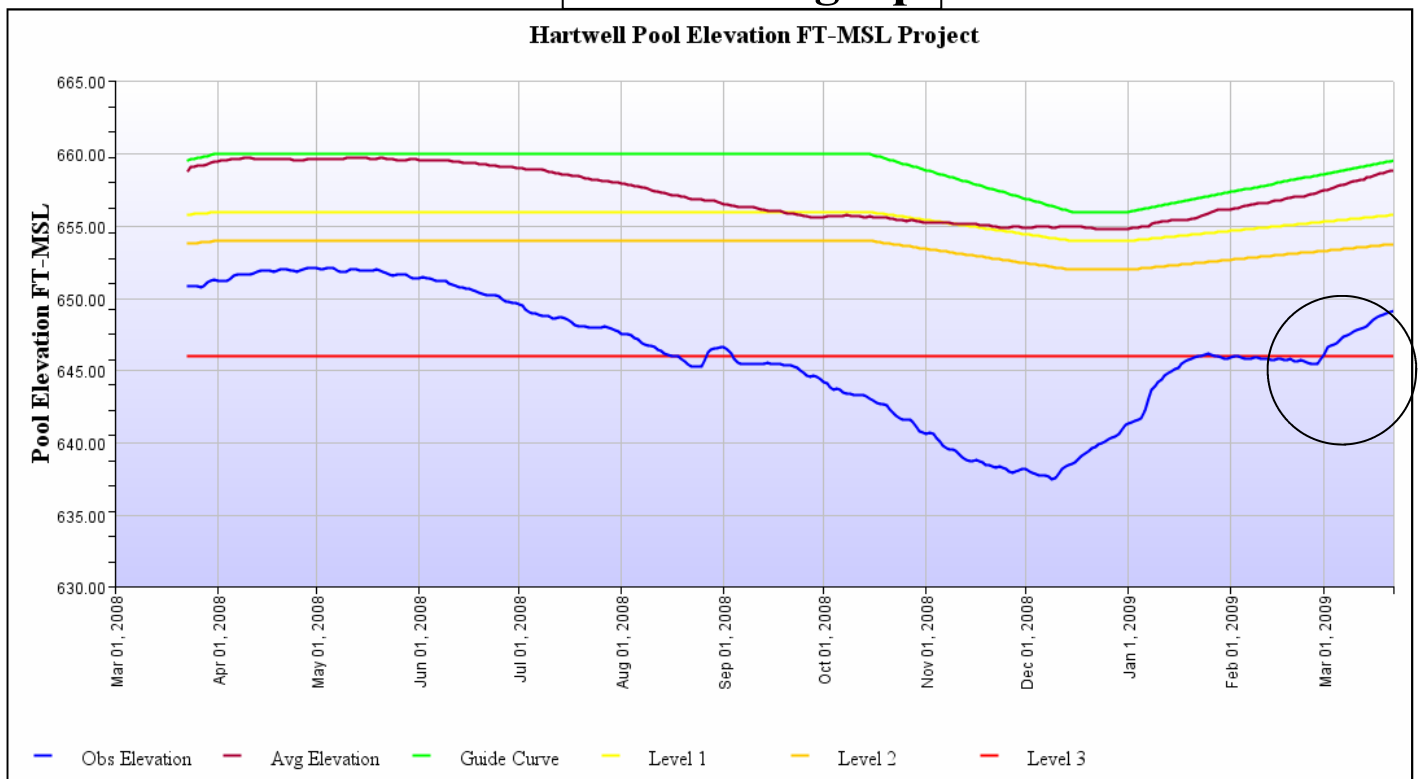


Brigadier General Joseph Schroedel, SAD Commander and Herb Burnham, LHA president

General Schroedel pointed out that most reservoir facilities (dams and associated equipment) are vintage 1950's and 60's and are in need of rehabilitation or replacement. The funding will have to be shared by the states and the federal government; thus the approach will demand regional leadership through multi-state collaboration. Establishment of a regional water resources council representing all the southeastern states could more effectively address these needs and obtain the funding. Federal agencies could then align their resources and capabilities accordingly to help define overall solutions for the region. The general used examples of regional councils of the western states, where "water wars" were a way of life and how they have worked to everyone's advantage.

Meanwhile, General Schroedel pointed out that adaptive management techniques have been implemented by the Corps to help with current and mid-term drought related issues. We experienced the positive results of adaptive management here on Lake Hartwell when the flow was reduced to 3100 cfs during the winter months, and later to zero cfs in March due to more than adequate rainfalls down stream. The general further assured board members that this adaptive approach will become the rule rather than the exception in managing water levels in the Savannah River Basin lakes and down stream flows.

It's Coming Up



Thank You LHA Community & Business Members!

Please support the businesses that support LHA “for the sake of the lake!” Their contact information can be found on the “Community & Business Partners” webpage at www.lakehartwellassociation.org.

Anchor All Realty & Mortgage - Tammy Mobley
 Anderson Regional Joint Water System - Scott Willett
 Big Water Marina - Jane W. Davis
 Bill Brissey Real Estate – Bill Brissey
 Captain Dave's Boating World - David Strickland
 Cateechee Golf Club - Pamela Camp
 Closet Tailors of Anderson - Robert Colcolough
 Coldwell Banker Fort Realty - Fort Oglesby
 Currahee Club - Chris W Whitley
 Custom Steel & Wood - Don Haynie
 DALCO Custom Homes - Flay Dalrymple
 Dock Depot & Marine Supply: Richard & Georgeanne Henshaw
 Docks South LLC - Bill Griggs
 Dr. Andrew Adams, DDS
 Foxwood Hills POA - Bill Lewis, Mgr
 Good Buy Good Bye Fine Furniture Consignment Susan Savage
 GREENSpace Surfaces, LLC - Bill England
 Harbor Light Marina - Larry Rich
 Harding Waterfront Construction - Pete Harding
 Hartwell Marina & Boat Sales - Brant Tew
 Indian Creek Contracting - Lori Duke Jones
 Ingrid Lee Realtors, LLC - Ingrid Lee
 Interiors by Penelope – Penny Holst
 Kroeger Marine Construction, Inc - Dave Kroeger
 Lake Hartwell Sail & Power Squadron - Mary Orem
 Lee's Marine LLC - Randy Lee
 Leeward Landing Assn of Boat Dock Owners - Bobby Medlock
 Mike Sanders Boat Storage - Michael W Sanders
 Paradise Point Inc - William Roberts
 Paul & Susan Meng
 Phil Jewelers – Phil Silverstein
 Portman Marina - Dave Freeman
 Robert & Connie Banks
 Robert Foster & Rudolph Rudy O’Neal III Public Acc.
 SC Homes and Lake Realty by Victoria McCormick
 State Farm Insurance - Terence Roberts
 Superior Dock Systems - Horace McGee
 Swaney’s Point Association - Danny Shook
 T & M Custom Docks - Donnie Thacker
 T N Construction - Thad Strickland
 The Hartwell Sun - Robert Rider
 USACE Hartwell Project - Tanya Grant
 View Point Lot Owners Assn.
 William M. Callahan, DDS

LHA Membership: Welcome Aboard & Thank You!

Thanks to all our members for your continued generosity and support of LHA’s efforts to protect Lake Hartwell’s water resources, especially during this historic drought. Please welcome the following members who have joined LHA since our last newsletter.

New Family Memberships

Norman S. Barber, Carol Bellamy, Dennis & Nadine Baab, Dale C. Blair, Juergen Buch, Lee Cobb, Randall & Laurie Davis, Ronnie & Wanda Joyce Deal, James & Dolores Douma, Lewis & DeLois Gaines, Tommy & Delores Gilstrap, Craig Hartline, Karl & Susan Keifer, Stan & Victoria King, Ron & Margie Langston, Doug & Susan Markham, Tom Miller, William & Karen Payne, Greg Raabe.

Member Donations to LHA

We are truly grateful for member donations to support LHA’s ongoing work during these particularly difficult economic times. Please join us in thanking the following LHA members for their generosity.

Greg & Paige Ashmore, Ken Dansbury, James & Dolores Duoma, Mack & Mary Lynn Eberhart, James Hellams, Ron & Margie Langston, John & Sandy Lederer, Nancy Markley, William & Karen Payne, Jim Pearson, Jack & Cindy Plating, Greg Raabe, Peter Stevenson

LHA Mission Statement

We will develop and establish the Lake Hartwell Association as an organization that promotes and encourages cooperation, assistance and information exchange among those concerned with Hartwell Lake and the Savannah River Basin.

We will provide a forum to collectively represent our membership on issues that pertain to the development, preservation and comprehensive management of Hartwell Lake.

We will collect and distribute information on matters affecting Hartwell Lake.

We will maintain liaisons and communications between the Lake Hartwell Association and educational, governmental, scientific and other communities.

LAKE HARTWELL ASSOCIATION, Inc.
P. O. Box 312
Fair Play, SC 29643

NONPROFIT ORG
U.S. Postage
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Greenville, SC
Permit # 1371



Email address: membership@lakehartwellassociation.org
Web Site: <http://www.lakehartwellassociation.org>

LAKE HARTWELL ASSOCIATION MEMBERSHIP APPLICATION
P.O. Box 312; Fairplay, SC 29643

*Spring
2009*

Membership Information: Check all that apply

New Renewal Address change Amount Paid _____ Date _____

Family \$25 Community, Association or Business \$100
 Gift Membership Additional Donation _____

Name _____

Spouse's Name _____
(Family Membership Application Only)

Mailing Address _____

City _____ State _____ ZIP _____

Phone (H) _____ (W) _____

E-Mail _____

Occupation(s): Yours _____ Spouse's _____
(If retired, check here and give former occupations above)

Lake Address & County _____
(*or Gift Recipient's address) _____

Give something back to the lake.
Select a committee on which you
would be willing to serve.

- Legislative
- Program
- Financial
- Lake Cleanup
- Safety
- Technical
- Membership
- Publications

Pay by Check: Make checks payable to **Lake Hartwell Association, Inc.** Send to address above.

⇒⇒⇒ Your membership fees and donations are fully tax deductible. ⇐⇐⇐