SDAFS RESERVOIR COMMITTEE
Meeting Minutes
2025 Summer Meeting
July 7, 2025 – 1:00 PM to 3:00 PM
Video Conference

Action Items and To-Do List:
1) Create an endowment fund to support future scholarship funding, utilizing $5,000 from our funds.
2) Provide $500 for the upcoming AFS 2025 Black Bass Symposium. Completed on July 10, 2025.
3) Compile a distribution list of college professors, co-op program leaders, and researchers in each state to increase awareness about the Jenkins Scholarship.

Attendees:
Sean Kinney, Louisiana Department of Wildlife and Fisheries (*Chair*; Rep)
Jeremy Risley, Arkansas Game and Fish Commission (*Secretary-Treasurer*; Rep)
Jeremy Shiflet, Kentucky Department of Fish & Wildlife Resources (*Scholarship Chair; Webmaster*; Rep)
Aaron Gray, Georgia Department of Natural Resources (Rep)
Casey Joubert, North Carolina Wildlife Resources Commission (Rep)
Amy Chastain, South Carolina Department of Natural Resources (Rep)
Michael Homer, Texas Parks and Wildlife Department (Rep)
John Odenkirk, Virginia Department of Wildlife Resources (Rep)
Stephen Brown, Mississippi Department of Wildlife, Fisheries and Parks (Rep)
John Hammonds, Tennessee Wildlife Resources Agency (Rep)
Lawrence Dorsey, North Carolina Wildlife Resources Commission
Dan Shoup, Oklahoma State University
Gene Gilliland, B.A.S.S.
Patrick O'Rouke, Georgia Power
Shannon O'Quinn, Tennessee Valley Authority
Tyler Ham, Missouri Department of Conservation

Motions – Sean Kinney
On June 30, Sean sent an email regarding two items that were up for a vote, as it appeared that not enough state representatives would be attending the summer meeting.

Motion #1: John Odenkirk made the motion to create an endowment fund to support future scholarship funding, utilizing $5,000 from the SDAFS RC's current bank account. Aaron Gray seconded the motion. The motion was approved, receiving 11 votes in favor and no votes against it.

Motion #2: On February 18, 2025, Mike Homer formally requested a donation of $500 for the AFS 2025 Black Bass Symposium to assist with the meeting's operations and possibly contribute to the proceedings. Although no motion was required, a vote among the state representatives

was necessary to approve the $500 donation. There were 10 votes in favor and none against. On July 10, 2025, Jeremy R. issued a check for $500 to the American Fisheries Society for the sponsorship of the 2025 Black Bass Symposium.

Introduction – Sean Kinney

Reservoir Committee (RC) Chair Sean Kinney called the meeting to order at 1:02 PM and welcomed the attendees. The agenda can be found on page 10. There was no quorum present for the meeting.

Financial Report – Jeremy Risley

Secretary-Treasurer Jeremy Risley provided a brief update on the current finances of the RC (see Page 11). **As of January 2025, the beginning balance was $27,404.57.** Transfers between accounts included $1,500 to cover various expenses. Withdrawals from the account comprised a $1,000 Jenkins scholarship awarded to Bobby Cope during the 2025 spring meeting and a $200 to cover Bobby's SDAFS 2025 spring meeting registration. Additionally, there was a deduction of $110.00 due to account fees and an increase of $915.42 due to changes in mutual fund value. **Consequently, the RC's account balance at the end of June 2025 was $27,009.99. After accounting for the TVA grant earmarked, the remaining balance stood at $17,009.99.** The Committee could not approve the budget due to a lack of quorum. After the meeting, Jeremy R. wrote a check for $500 towards the AFS 2025 Black Bass Symposium.

Jenkins Scholarship update and announcement – Jeremy Shiflet

Jeremy S. reported that he does not have many updates to share. There have been discussions on how to increase the number of applicants, but no significant actions have been taken yet. He emphasized the importance of promoting the announcement on other AFS division pages and ensuring that the latest version reaches the appropriate audience. Additionally, an email list of college professors, Co-op leaders, and other researchers still needs to be created. Sean suggested that Jeremy S. should begin compiling this list and distribute it to the state representatives so they can add their contacts for college professors and others. Jeremy S. stated he would revisit the list started by Dr. Steve Sammons and begin to circulate it by state. Sean stated that the deadline for scholarship applications is October 15 of this year. This will allow students to plan their travel for next spring's meeting. He also mentioned that the announcement should be included in the quarterly newsletters of AFS and SDAFS.

Donations for scholarship and endowment – Sean Kinney

Sean has contacted several businesses regarding donations for the scholarship and endowment, but he has received limited interest thus far. He mentioned that the endowment for the scholarship has been approved, allowing us to set aside $5,000 from our account to initiate it. Sean believes that allocating this money demonstrates our commitment to establishing the endowment, which may encourage potential businesses to contribute. If anyone knows of a company or individual who might be interested in donating, please share their contact information with Sean so he can reach out to them.

Update on email voting – Sean Kinney

Refer to the information above regarding the motions for the scholarship endowment and the black bass funding request, along with the outcomes of the voting.

Website/Social Media – Jeremy Shiflet

Website chair Jeremy S. reported that there have not been many changes. He has established the deadline dates for the scholarship but has not yet shared any information regarding the 2026 SDAFS spring meeting. Jeremy S. requested a photo of Sean with scholarship recipient Bobby Cope from the 2025 spring meeting. Jeremy R. will provide that photo to Jeremy S.

Microplastic Grant – Sean Kinney

The grant application for the microplastic study was not funded, and we will not be able to apply for another national grant until 2027. The professors involved in the project are pursuing other research, making their availability uncertain. As a result of the funding issues, the original plan for a multi-state study across the eastern United States now seems unlikely. Instead, we are considering conducting a smaller, regional study in Tennessee to meet our obligations to the Tennessee Valley Authority or doing a more regional project with a few surrounding states. However, we would like to avoid the possibility of returning the TVA grant money.

Artificial Habitat Guidance – Sean Kinney

A guidance document on artificial fish habitat, created by BASS, MLF, and the Black Bass Stewardship Group, has been distributed. Please see pages 12-17 for the document. This document aims to establish a consensus on the appropriate types of plastic and artificial structures to be used for fish habitats. Former and current committee members Dave Terre and Gene Gilliland contributed to its creation. Sean believes this document serves as a valuable reference. However, he asked to please review it and be prepared for more discussions about it at the 2026 spring meeting as it could be adopted as a best management practice by the Committee.

Standard sampling protocol update – Sean Kinney

Louisiana is in the process of standardizing its sampling protocols and equipment into a single comprehensive document. The state has already completed protocols for electrofishing, backpack electrofishing, seining, and gill netting, and is currently developing protocols for hoop netting. Once finalized, this document will serve as a valuable reference, as no other state has created a complete sampling protocol that covers all methodologies. Sean will ensure that everyone receives a copy once it is completed.

State and Member Reports – State Representatives

Contact the State Representatives for more detailed information on the topics provided.

Kentucky – Jeremy Shiflet (jeremy.shiflet@ky.gov)

- F1 Bass stockings
    - Their commission voted against the staff's recommendation not to stock F1 bass in a reservoir in eastern Kentucky. Instead, they went with public request and recommended that the staff stock F1 bass. They will be doing evaluations throughout the process.
- Thoroughbred Bass
    - The project aims to sequence the entire genome of Largemouth Bass to identify trophy markers.
    - Once this is completed, a selective breeding program for Largemouth Bass will be initiated.
    - They are utilizing the CAT Lab in California and has sent approximately 260 samples of large bass for analysis.
    - Once the results are received, they plan on collecting smaller fish this fall for testing.
    - Their goal is to produce thoroughbred bass next spring.
- Habitat
    - Reef balls
        - USACE is onboard and is buying pre-made reef balls from Florida.
        - Although Kentucky has the molds, they are pleased to have USACE cover the cost of the pre-made reef balls, with Kentucky staff responsible for placing them.
        - They are working on obtaining an enclosed trailer so that they can create a mobile reef ball trailer to transport all the reef ball molds and materials across the state to set up on site to pour reef balls.

Texas – Mike Homer (michael.homer@tpwd.texas.gov)

- They are preparing for the Black Bass Symposium held in conjunction with the annual AFS meeting in San Antonio, Texas.
- They announced their next round of Habitat and Angler Access program projects. Their budget is $1.25 million, and they will fund shoreline-based angler access improvements as well as freshwater fish habitat enhancement projects.
- Just started an in-house research project evaluating fish habitat use of reef balls and comparing them to other common structures used for habitat enhancement.
- They have recently completed their statewide stocking of Florida Bass, Largemouth Bass, Blue Catfish, Channel Catfish, Bluegill, and Hybrid Striped Bass.

Virginia – John Odenkirk (john.odenkirk@dwr.virginia.gov)

- F1 Bass stockings
    - We are still evaluating a decade of F1 bass stockings in five lakes.
    - Recently, it was decided to continue these stockings.
    - Smith Mountain Lake and Lake Ann appears to be successful, while Craytor was not successful.
    - F1 Bass stockings will not everywhere.
- Budget issues
    - They are facing budget reductions.
    - This will significantly impede their ability to do their work.
- Bass genetics
    - They are now using the CAT lab for genetic analysis.
    - They are about to send 1,000 fin clips to CAT.

North Carolina – Casey Joubert (casey.joubert@ncwildlife.org) – Notes provide afterwards

- Webinar on reservoir Striped Bass and Hybrid Striped Bass social science survey on 7/8/25. Will be on commissions YouTube page in near future.
- 2025 Striped Bass and Hybrid Striped Bass stocking completed. Great success at hatcheries this year with Striped Bass/Hybrid Striped Bass production.
- F1 Bass Stocking
    - Lake Norman, Jordan, and Gaston
    - 2025 stocking completed. 4.5 fish/acre
    - Over 300 genetic samples (fin clips) samples collected at tournaments on Lake Norman
    - Genetics evaluations moved “in-house” beginning in 2025
    - Seeing potentially good results related to growth, still preliminary.
    - Largest fish of each age class was an F1 (Lake Norman, 2024 data).
- Reservoir habitat work continuing (planting vegetation, fish attractors).
    - New greenhouse construction beginning soon.
- Black Bass Management Plan continues to be developed. Survey sent out to anglers.
- Corey Oakley- promoted to Chief of Inland Fisheries Division.
- Beginning project looking at survey techniques for Alabama Bass.
    - Working with NCSU, Corey Dunn.

Tennessee – John Hammonds (john.hammonds@tn.gov)

- Building a lot of habitat and collecting dissolved oxygen/temperature profiles.
    - Taught staff from Oklahoma about making reef balls.
- Restructuring within their Fisheries Division
    - There will be changes within the Division
- Dealing with some budget shortfalls
- Hurricane Helena.
    - Still evaluating the impacts of last fall’s Hurricane Helena
    - No impacts on fish populations detected yet

- FEMA contracted companies to remove most trees and woody debris from streams, rivers, and their shorelines due to public safety concerns after the devastating Hurricane Helena floods.
    - Tennessee staff expects significant long-term impacts from these actions, so they are working with TVA to get some woody debris placed back in the rivers and streams.
- Paddlefish creel survey on Cherokee Lake.
    - They are studying the effects of live sonar on Paddlefish populations and harvests in the reservoir.

Missouri – Tyler Ham (tyler.Ham@mdc.mo.gov; reported for Shane Bush) – Notes provide afterwards

- Early this spring the Missouri Department of Conservation (MDC) wrapped up year one of a two-year project assessing population demographics and angling impacts for Missouri's Paddlefish fisheries in Harry S. Truman Reservoir (hereafter, Truman Reservoir), Lake of the Ozarks, and Table Rock Lake.
    - This project involves assessing exploitation via jaw band returns coupled with an intensive angler creel during Missouri's snagging season (March 1-April 15).
    - Data analysis is ongoing.
- This spring also marked the end of a multi-year MDC project to assess a Blue Catfish regulation change (pre-reg vs. post-reg comparison) at Truman Reservoir and Lake of the Ozarks, the results of which will help shed light on this important fishery and efficacy of a protected slot-length limit.
- Moving later into the spring, heavy rain hampered black bass sampling across the southern half of the state. While there is some optimism for black bass recruitment due to relatively stable yet high water levels during the spawn, most annual black bass sampling was cancelled.
- Overall, reservoir fish stockings (primarily Walleye and Striped Bass/Hybrid Striped Bass) were completed as planned.
- Reservoir fish habitat enhancement projects have been a major focus in Missouri as of late.
    - A large project on Bull Shoals and Table Rock Lakes was completed in early 2024 while a project is underway at Truman Reservoir.
    - Two projects are slated to begin later this year: one at Mark Twain Lake in NE Missouri and another at Stockton Lake in SW Missouri.
    - Funds for all projects received through Reservoir Fish Habitat Partnership grants with in-kind match from MDC and the US Army Corps of Engineers.
- Two fishing regulation changes impacting large reservoirs in Missouri have been proposed and stakeholder input collected.
    - One proposal involves the removal of a near- statewide closure to nighttime Walleye and Sauger harvest during a specific portion of the year.
    - Other would reduce the minimum length limit for Spotted Bass from 15-inches to 12-inches at Table Rock Lake.

    - Both proposed regulation changes are moving through the MDC internal regulations process and are not yet approved at time of this report.
- Lastly, MDC is in the final stages of Phase I of a much-anticipated update to our statewide-internal fisheries database (Fisheries Information Network System; FINS). This work is supported via contract with Real Time Research (RTR), an Oregon-based company that specializes in fisheries data solutions.
    - Phase I involves a mobile data entry application synced with a desktop portal for cloud-based data storing and analysis.
    - Future phases will involve a public-facing dashboard for fisheries data along with a bony structure library and aging analysis within the larger database.

South Carolina – Amy Chastain (breedlovea@dnr.sc.gov)

- New Executive Director
- Facing challenges due to budget constraints and a number of unfilled positions
- Completed spring bass sampling
- Habitat
    - Current habitat projects are taking place at Lake Murray, Lake Hartwell, Lake Greenwood, and Lake Wateree.
- Staff are conducting private pond evaluations throughout the state.
- Striped and Hybrid Striped Bass stockings completed.
- Staff is currently awaiting the results of the statewide genetic evaluation for black bass.

Mississippi –Stephen Brown (stephen.brown@wfp.ms.gov)

- Dam issues at the USACE Arkabutla Lake
    - The lake has been drawn down for eight to nine months due to concerns about possible dam failure, which has increased crappie fishing pressure at Lake Grenada and Sardis.
    - USACE anticipates that the lake will be refilled between 2027 and 2030.
- Keith Mills, a long-time fisheries biologist in charge of many of the popular crappie fisheries in the state, is retiring after 30 years.
    - Arthur Dunn will be taking his place after Keith's retirement
- Sportfish sampling will occur this fall
- The 79th annual SEAFWA will be held in Biloxi, Mississippi from October 26 – 29, 2025.

Louisiana – Sean Kinney (skinney@wlf.la.gov)

- Staff complete spring bass sampling and has moved on to stream sampling.
- They are experiencing budget issues and staff shortages as well.
- Wanted to discuss carbon sequestration in the open discussion.

Arkansas – Jeremy Risley (jeremy.risley@agfc.ar.gov)

- Legacy Lunker Program.
    - On July 16, the Agency will make a public announcement about this program, which will go live on January 1, 2026.
    - This will be a trophy bass donation and angler recognition program
    - They will accept ten pounds or greater Largemouth Bass from January through March for spawning purposes.
    - They have been conducting a trial run in 2025 to prepare for the official opening of the program. They ended up with five fish donated during the trail run.
    - They have worked closely with TWPD's Sharelunker Program Coordinator and staff at the TWPD's Freshwater Fisheries Center.
    - The Agency recently hired a Legacy Lunker Program Coordinator to oversee the program.
- Hydroacoustic sampling for shad in large reservoirs.
    - Agency is concluding a project with Dr. Dan Shoup of Oklahoma State University to develop a hydroacoustic sampling protocol for sampling shad in large reservoirs where Striped Bass or Hybrid Striped Bass are stocked.
- Habitat
    - Reservoir Habitat Biologists are still working to establish aquatic vegetation in several reservoirs with moderate water level fluctuation using the Arkansas Cube.
- The northern part of the state experienced heavy rains and flooding during the spring bass sampling season, resulting in numerous samples having to be canceled.
- Most of the sportfish stockings have been completed for the year.

Georgia – Aaron Gray (aarongray1@dnr.ga.gov)

- They completed their spring bass sampling season.
- Staff is heavily focused on habitat and aquatic vegetation.
    - Clarks Hill Lake and Lake Russell.
- They are seeing a large cohort of first-generation crosses between Alabama Bass and Largemouth Bass on Clarks Hill Lake.
    - Analysis of fin clips finds a 50/50 split between Alabama and Largemouth Bass.
    - The tooth patches are present on these fish but located towards the very back of the tongue. Additionally, some fish have a normal tooth patch and an extra one.

Open Discussion

Carbon Sequestration – Sean Kinney

Sean sought input from committee members about carbon sequestration, asking if anyone had relevant experience. However, no one had any experience, and there was no further discussion on the topic.

Oxygenation System – Gene Gilliland
Gene said BASS is now using an oxygen concentration systems called Piranha O2 system (Click Here) for all their aeration at tournaments and on one of their live-release boats. He believed this technology, based on medical oxygen, has significant potential in fisheries, for hauling fish or holding them in captivity instead of using bottled oxygen. He encouraged everyone to check them out.

Scholarship Funding from Bass Fishing Hall of Fame – Gene Gilliland
Gene has been in conversations with the Bass Fishing Hall of Fame about providing a donation for the Jenkins Scholarship. Unfortunately, he has not been able to get anyone to take action. However, he will continue working to secure a donation.

2026 SDAFS RC Meeting – Sean Kinney
The 2026 SDAFS meeting will take place in New Orleans from March 5 to March 8, with the Reservoir Committee Technical meeting scheduled for March 5.

The RC meeting was concluded at 02:11 PM.

Minutes recorded and submitted by Jeremy Risley (*Secretary-Treasurer*).

2025 SDAFS Reservoir Technical Committee

Mid Year Meeting

July 7, 2025 from 13:00 – 16:00 Central time

Zoom Link

Meeting ID: 952 1239 6088 Passcode: 290744

1. Introduction – Sean Kinney
2. Financial report – Jeremy Risley
3. Jenkins Scholarship update and announcement – Jeremy Shiflet
4. Donations for scholarship and endowment – Sean Kinney
5. Update on email voting – Sean Kinney
6. Website –Jeremy Shiflet
7. Micro plastic grant
8. Artificial Habitat Guidance/ see attachment
9. Standard sampling protocol update
10. State Updates
11. Open Discussion
12. Adjourn

SDAFS Reservoir Committee Edward Jones Mutual Fund Account Balance ending June 2025							
Prepared on 07/03/2025 by Jeremy Risley - Sec/Treasurer							
Date	**Beginning Balance**	**Deposits**	**Withdrawals**	**Fees**	**Change in Value**	**Ending Balance**	**Comment**
Jan-25	$27,404.57	$1,500.00	-$1,500.00	-$20.19	$346.98	$27,731.36	$1,500 transferred between accounts (01/29_30)
Feb-25	$27,731.36		-$1,200.00	-$19.91	-$96.29	$26,415.16	$1,000 scholarship (Bobby Cope, 02/18; check #1043), $200 to NC AFS for Bobby Cope's registration (02/19; check #1044)
Mar-24	$26,415.16			-$16.75	-$484.95	$25,913.46	
Apr-25	$25,913.46			-$17.99	$41.81	$25,937.28	
May-25	$25,937.28			-$16.90	$568.96	$26,489.34	
Jun-25	$26,489.34			-$18.26	$538.91	$27,009.99	
Jan - Jun 2025	$27,404.57	**$1,500.00**	**-$2,700.00**	**-$110.00**	**$915.42**	**$27,009.99**	**2025 Assets deposited to acct / 2025 Assets withdrawn from acct**
						($394.58)	**1.44% decrease**
						$17,009.99	**Account balance without TVA Grant**

Responsible Manufacturing, Construction, and Deployment of Plastic Habitat

Freshwater fish habitat declines as water bodies age due to the cumulative ecological processes of increased sedimentation, nutrient buildup, and decay of submerged wood and other plant materials. As this process occurs, habitat restoration has emerged as an essential and popular fisheries management strategy to reinvigorate aging fisheries. Artificial habitats offer a promising approach in many systems to counteract decline, with plastic structures emerging as a solution.

Plastics resist natural decay and are impervious to the forces that degrade traditional materials like wood. Their longevity ensures the structures endure in dynamic environments, providing lasting support for aquatic life. Additionally, their lightweight and adaptable properties enable efficient transport and deployment, making them a practical choice for both small- and large-scale habitat restoration efforts. When sourced from recycled materials, plastic habitats also present an opportunity to repurpose waste, simultaneously addressing ecological and environmental challenges.

Despite the growing popularity of plastic artificial fish habitats, the field lacks standardization. Clear guidelines for manufacturing, ecological compatibility, and on-site assembly are essential to maximize their benefits while ensuring environmental safety. Establishing these standards is critical to safely scaling up the use of plastic habitats and unlocking their full potential to restore, sustain, and enhance freshwater ecosystems.

Avoidance of Toxic Additives

One of the primary concerns when using plastic in freshwater habitats is the potential leaching of toxic additives or chemicals into the water. Compounds such as phthalates, heavy metals, and certain stabilizers can negatively impact water quality and harm aquatic life. To mitigate these risks, materials should be chosen based on their safety and environmental compliance certification. The NSF/ANSI 61 certification addresses concerns regarding the safety assessment of plastic used for potable water. Additionally, selecting plastics that do not require a Proposition 65 (Prop 65) warning is vital. Prop 65 is a regulatory framework in California that identifies substances

known to the State of California to cause cancer, birth defects, or reproductive harm. Plastics that are certified free of Prop 65-listed chemicals are considered safe for use in sensitive environments. Manufacturers can ensure compliance by sourcing materials with verified safety data sheets (SDS) and certifications attesting to the absence of harmful substances.

Durability Considerations

In addition to ecological safety, the long-term success of artificial habitats depends on their durability. With growing concerns regarding the impacts on human health from microplastics (small pieces of plastic less than 5 millimeters in length), the structural integrity and, therefore, longevity of habitat materials must be a priority. Two critical factors in material performance are UV stability and abrasion resistance.

UV Stability: Exposure to sunlight can cause many plastics to degrade over time, resulting in brittleness, fading, or loss of structural integrity. UV-stabilized plastics, which incorporate additives such as hindered amine light stabilizers (HALS) or UV-absorbing pigments, are designed to resist photodegradation. This property is significant for habitats deployed in shallow waters or areas with considerable sun exposure, ensuring their effectiveness and longevity. UV stabilizers should be avoided if the goal of the artificial habitat is to promote the growth of aquatic organisms on the material's surface. Stabilizers may also not be necessary if structures are deployed at an adequate depth to avoid UV exposure.

Abrasion Resistance: Freshwater habitats often encounter mechanical wear from sediment movement, flowing water, wave action, and human interactions. Specially engineered thermoplastics offer high abrasion resistance. These plastics maintain their surface integrity and structural strength even under harsh conditions, making them well-suited for environments with high friction or turbulence. Additionally, the deployment depth and location of the habitat can mitigate the potential for mechanical breakdowns. Sites should be selected considering boat traffic, water flow, and wave action. Placement in areas such as coves or on the slopes of a secondary point may provide protective refuge not available in the main channel, on shallow flats, or in high-traffic areas.

Virgin, Recycled, and Reclaimed Plastic

When selecting plastics, it is crucial to consider sustainability and safety. Prioritize using recycled or reclaimed plastics to reduce the demand for virgin materials, conserve resources, and minimize environmental impact. However, when working with reclaimed plastics, it is essential to thoroughly understand their prior usage to assess potential contaminants or compromises in material integrity. This ensures that reclaimed materials are safe and suitable for their intended applications, striking a balance between environmental responsibility and functionality. Both recycled and reclaimed plastics offer the opportunity to close the loop on plastic waste, with recycled plastic minimizing the risk of unknown previous use.

Processes

Stringent quality control measures throughout manufacturing, packaging, construction, and deployment should ensure that no substandard materials enter ecosystems. Manufacturing artificial habitats requires a meticulous approach to minimize environmental impact, particularly regarding material waste and preventing "passenger plastics"- unintended plastic fragments that can degrade into microplastics. The cutting and shaping processes should be optimized for minimal waste. Any off-cuts and defective products should be recaptured and recycled. Additionally, suppose products are to be scarified or textured to encourage the colonization of aquatic organisms. In that case, the resulting product must once again be cleaned before packaging or construction to ensure the removal of all “passenger plastic”.

Once located within the watershed, the onsite construction element of artificial habitat offers a final opportunity to prevent the unintended introduction of “passenger plastics” into the environment. Using ground cover (such as tarps or sheeting), minimizing onsite alterations, and recapturing plastic waste ensures that the artificial habitat enters the system as clean as possible.

Proper anchoring and deployment of artificial habitats are crucial to ensuring their stability, functionality, and longevity. The anchoring system must use appropriate weights and durable materials to securely hold the habitat, preventing displacement

caused by mechanical wave action, wind, or boat traffic. The deployment depth should be carefully chosen to avoid high-energy zones where such forces are most potent while also considering seasonal water level fluctuations and potential drawdowns to ensure the habitat remains effective and accessible. Flexibility in project design should allow for adjustments to accommodate changes, maintaining habitat benefits across varying conditions. Additionally, it is essential to plan for the reclamation of the habitat, incorporating features that enable safe and efficient removal of structures if they become damaged, obsolete, or need relocation, thereby preventing debris accumulation and preserving the integrity of the aquatic ecosystem.

Summary Review

The restoration of freshwater fish habitats using plastic structures offers a practical and innovative approach to countering the ecological decline of aging water bodies. Plastics provide durability, adaptability, and sustainability through their long-lasting properties and potential for recycling. Ensuring the safety and effectiveness of these habitats requires a careful selection of materials, with an understanding of toxic additive leaching, UV degradation, abrasion resistance, and the use of recycled materials. Adopting best management practices that include stringent manufacturing standards, waste plastic recapture, and thoughtful deployment practices will be essential to fully realize the potential of plastic fish habitat while safeguarding environmental integrity.

For further information on habitat best management practices in reservoirs in general, refer to Best Management Practices Manual - Friends of Reservoirs

Authors

Steven Bardin Pro Lake Management LLC/ Co-Owner BBSG

Gene Gilliland Conservation Director B.A.S.S.

Dave Terre Texas B.A.S.S. Nation Conservation Director

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Standardized Questionnaire for Artificial Habitat Manufacturers	
Are the plastic types of all materials known? (PVC, HDPE, LDPE, Other)	
Do you review the plastic supplier's ingredients and additives through an SDS sheet?	
Does the plastic contain plasticizers or have potentially toxic coatings?	
Does the product carry a Prop 65 Warning?	
Is the material recycled or reclaimed?	
If recycled or reclaimed, is the previous use known?	
Do you recapture drill cuts and skeleton plastic?	
Is your product cleaned before shipping?	
Are your products packaged to minimize waste?	
Are tools required to build your product on-site?	
Will the product need to be altered before deployment?	

Standardized Questionnaire for Internal Review of Projects	
Is the planned habitat commercially manufactured?	
If YES, is it manufactured according to the above-recommended guidelines?	
If NO, is the planned habitat homemade using plastic?	
Are the plastic types of all materials known? (PVC, HDPE, LDPE, Other)	
Does each plastic component of the habitat have an NSF/ANSI 61 certification stamp?	
Does the plastic contain plasticizers or have potentially toxic coatings?	
Are the plastic materials recycled or reclaimed?	
If the material is recycled or reclaimed, is the previous use known?	
Will you recapture drill cuts and skeleton plastic?	
Will glues or adhesives be used?	
Will the habitat be built within the watershed?	
Will a tarp or ground covering be used at the build site?	
Is the habitat cleaned before deployment?	
Does the water body experience drawdowns or drought?	
Do we have a current hydrographic map of the water body to determine optimum locations?	
Have sites been selected to avoid mechanical wear?	

Commitment to Review and Adopt

Below is a list of reviewers who have committed to following or implementing the standards. Manufacturers have provided SDS sheets and a review of their manufacturing process to the authors and are committed to providing the same to your organization.

If you would like to add your name to the list below as an official reviewer and adopter, please contact the author above.

Commercial Manufacturers Who Have Committed to Adopt

MossBack Fish Habitat - David King, President/Owner
Submit SDS request to Tracey Rosenau at tracey@mossbackfishhabitat.com

Pond King Inc. - Brad Metzler, President/Owner
Submit SDS request to Jill Roush at marketing@pondking.com

Texas Hunter Products - Cody Borgfeld
Submit SDS request to cody@texashunterproducts.com