

AQUACULTURE AND FISHERIES
CENTER OF EXCELLENCE

**STATION AND
SAFETY
GUIDELINES**

**Station and Safety Guidelines
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STATION RULES

The following are some general "station rules" for researchers, staff and student workers. This list is by no means all-encompassing and will be revised periodically as various situations arise. In order to work on the station in any capacity you must complete the **Responsibility Affirmation Form** (Appendix A).

A. Facilities Assignments

All facilities including ponds, hatchery tanks and pools are assigned by Dr. Engle. As a general rule, Dr. R. Lochmann or Harold Phillips supervises the wet lab in the S.J. Parker Research Center. Dr. Goodwin supervises the wet lab in S.J. Parker Extension Center. At the station, Dr. Stone supervises the pool system and enclosed ponds 57-70. Bauer Duke supervises the ponds and hatchery facility.

Facilities are assigned twice per year. All facilities requests require submission of an **Experimental Protocol** (Appendix A). An Experimental Protocol must accompany any facilities request at any time. Please refer to the **Facilities Assignment Policy** (Appendix B) to understand how to get research and storage space. Facilities that are not assigned to you should be left alone. **Please do not engage in activities that will have a negative impact on facilities or research.**

B. Scheduling Assistance

If you need assistance with a project (construction for an experiment, stocking harvesting, transporting, etc.) please let the station manager know at least one week in advance. The longer you wait to arrange for assistance, the less likely the Station Manager will be able to provide you with items you need (tools, equipment, manpower, etc.) Last minute requests are at your own risk.

C. General Use Items

1. Boats, motors, trailers

All boats, motors and boat trailers are arranged by Dr. S. Lochmann, Dr. Eggleton and Dr. Neal. Usage should be arranged through them. Boats may be used for research or class. These items are stored at the Fish Shop Complex.

2. Motor vehicles

In order to drive a UAPB motor vehicle, a driver must fill out a **Driver Statement** (Appendix A). If one is not filled out, a person may not drive any fisheries vehicles. Be prepared to drive both automatic and manual transmission vehicles. If you cannot drive a vehicle and/or do not have a driver's license you must arrange for your driving lessons off station property. Station personnel will not teach you how to drive.

Vehicles are in two categories: (a) station and (b) road.

a) Station

Station vehicles should stay on the station and are used for hauling, feeding, harvesting, etc. These vehicles may be driven on campus, but may not be driven off campus; they have no license plates. Gators assigned to UAPB (green with yellow fenders) may leave the station only for fueling at the Motor Pool. **Do not drive these Gators on campus.** Station vehicles are on a first-come, first-served basis. However, priority is given to more intensive activities such as harvesting or construction.

b) Road

Road vehicles (they have a license plate) are used for field research and project needs off station. Conferences do not qualify. These vehicles must be checked out on the calendar in the VAPD Building and their logs must be filled in. When these vehicles are returned, they will be parked nose-to-nose under the truck shed.

If the road vehicles are not available, you may make arrangements with the University Motor Pool to rent a vehicle.

All vehicles will have keys removed and stored in the VAPD Building office next to the lab door each day.

Do not smoke in the vehicles. A US Fuel gas card may be checked out from the Motor Pool Manager. Shell, Texaco or Exxon gas cards may be checked out from the Controller's Office.

All personal vehicles will be parked in the parking lot, not around the buildings.

3. Water Usage

a) The **Reservoir** provides for:

1. *Ponds 1- 70* which rely on gravity flow from the reservoir. Anytime water is used for filling ponds, pools or tanks, the Station Manager should be notified. Increasing or reducing usage alters flow to any existing open valves. Saran screens are useful to prevent trash fish introduction into the ponds. Any researchers needing them must provide their own. Notification of water usage also ensures that water levels in the reservoir can be managed and maintained.
2. *Holding Facility* that can use gravity flow or pump the water. If too many valves are open on the ponds, gravity flow will not work here.
3. *Hatchery* water that is pumped through a small sand and gravel filter system located on the north wall of the Maintenance Shed.

b) The **two shallow wells** provide water for the reservoir.

c) The **4" deep water well** provides water for the Hatchery.

d) The **large deep water well** normally provides water for Ponds 71-112. Valves may be adjusted to route this water to ponds 41-70, the hatchery, and the holding facility.

Be sure you understand the attached **Plumbing in the Hatchery** document (Appendix B).

4. Harvesting Equipment

At least one week's notice is necessary prior to harvesting/sampling. Seine, dip net, vehicle and equipment repair may be necessary within this timeframe. Upon completion of harvest, **the person responsible for the study harvested must ensure all equipment is cleaned and put back in the correct place (please do not confuse "correct" with "where you found it")**. Seine nets will be hung immediately after a harvest is complete. Do not leave nets out on the levees, they are expensive and their repair is time consuming. Treat them with care.

5. Construction Materials

Appropriation of any general use construction materials (lumber, pipe, electric, etc.) Should be cleared with the Station Manager first. We have a sufficient supply of materials to meet station needs and emergencies. Station supplies are available to prevent delays while waiting for a purchase order. If you use station supplies, please restore them with your next Purchase Order.

6. Equipment/Tools

All tools and equipment should be replaced after use each day. They should be cleaned. Any damaged or broken tools should be reported to the Station Manager. Many tools are under lock and key due to Walking Tools Syndrome. Ask the Station Manager to assist you with their liberation

7. Telephone

The telephone is for business purposes ONLY. Limit personal calls to 3 minutes. Long distance personal calls are not to be made unless there is a dire emergency (Station Manager permission is required).

8. Feed Building

All bagged feed must be stored on the metal pallets. Do not use wood pallets for feed storage. Keep all open feed contained in closed plastic containers. **Sweep up all feed from the floor as it falls.** No researcher should have more than 20 empty bags on their pallet at any given time and all these bags must be completely empty of feed and folded.

9. Oxygen

All oxygen bottles in the Maintenance Building should be labeled FULL, IN USE, or EMPTY. Notify the Station Manager if an oxygen bottle has 500 psi or less in it. Assume all oxygen bottles on tank trailers are IN USE and check their fill status before using.

D. Equipment Designated for a Project or Researcher

Such equipment should be stored in a researcher's lockup/lab when not in use. This equipment should not be used without the expressed consent of the primary investigator. The equipment should have the **researcher's name** on it. **Simply coloring an object is insufficient.** The Station Manager can assist in identifying what equipment belongs with what project. Again, replace cleaned equipment after use.

E. Fish Mortalities and Their Disposal

Fish mortalities will be placed in the composter near Pond 43. If you are unfamiliar with the composter, please contact the Station Manager for instructions. If you have more than 500 lbs of mortalities at a time, please contact the Station Manager for assistance. All equipment used to collect mortalities must be disinfected. Fish found on the ground that are not dead may not be returned to the tank or pond without express permission from the responsible primary investigator.

F. Disinfection

Use the **Disinfection Station** on the east side of the Hatchery building. Fill the **sanitizer dip tank** with water and the amount of sanitizer marked on the scoop in the sanitizer bucket located in the chemical storage area of the Maintenance building. After equipment has been soaked for 15 minutes, rinse in the **rinse tank**. After rinsing, remove the equipment, sun dry it and return it to its correct area.

G. Monitoring

Each researcher is responsible for his/her own feeding and water quality. If the physical plant aspect (e.g. electricity, water delivery, air delivery, landscaping, pest control) of your pond, pool or tank is not to standard, contact the station manager. The Station Manager and crew do not feed your fish, take D.O. readings, turn on your aerators or manage your pond, pool or tank.

H. Holes in Dams

Report all holes and mark them with flags so that they can be filled.

I. Security

All buildings have an alarm system. If a building is locked, assume the alarm is armed and be ready to use your code. At the end of the day, the designated station employee will lock up all the buildings, arm the alarms and assure the vehicle keys are inside the hatchery. S/he will also close and lock the main gate and the bridge gate when leaving. This employee must do the lock down even if people remain on the station. Be sure you have keys and access codes to do your work and remember to lock and arm everything behind you.

The two gates must be locked at all times after hours (5:00 pm – 7:00 am and all weekend). When you work on the station after hours you must call UAPB Police (575-8102 or 8103) to notify them of your arrival and again of your departure.

SAFETY

Aquaculture and fisheries are two very rewarding occupations. They can also be quite dangerous if safety rules and precautions are not followed. An environment, which mixes water, electricity and equipment, deserves everyone's undivided attention.

Be safe. Do not use equipment or chemicals if you do not know how to do so safely. **If you are asked to do something and you have not been trained to do it, inform the asker.** If you plan to do something you have never done before, allow twice as much time as you think it might take. Do not endanger yourself. Be sure you are familiar with the station safety rules.

A. Water Safety

It is recommended that all people with a career in aquaculture and fisheries be able to swim. Swimming lessons are available on the UAPB campus (Swimming 1112 or 1113) or may be taken elsewhere.

For those who cannot swim, **life preservers** are available for your use at the **Hatchery building or Fish Shop Complex**. Life preservers and rope (or comparable equipment) will be placed at various places around the station. These devices can be used to rescue someone who cannot swim safely back to the pond bank.

Using common sense around the station will prevent dangerous situations from occurring. When lowering standpipes or working underwater, it is recommended to work in pairs. All the ponds at the station are shallow. If you find yourself in trouble, **do not panic** and stand up! Lastly, if you feel a situation is too dangerous, do not be afraid to ask for help from someone who is more qualified.

If you are working from a boat, you must wear a life preserver. Failure to do so will result in automatic dismissal. There will be no exceptions.

B. Ambulance

Emergency Ambulance Services, Inc. (**EASI**) formerly (Lusby), 118 North University (536-1124), is the ambulance service that is closest to the ponds. They know how to get to the ponds. Their phone number is next to each phone at the station. Call Emergency Services, Inc., if an ambulance is needed. **If you call 911, specifically ask for and EASI response.**

C. Tetanus Immunizations

All faculty, staff and students who work at the ponds should be vaccinated against tetanus and have an immunization that is biologically effective. Tetanus shots can be obtained from the Health Center (23rd and Hazel).

D. Fire Extinguisher

Fire extinguishers are located on the station near the major access doors of the buildings. These extinguishers are good for paper, wood, gas, oil and electrical fires.

E. Vehicle and Equipment Safety

No one may drive any state vehicle assigned to the Aquaculture Research Station without a valid drivers license and without proper insurance. Permission to drive one vehicle does not mean that you can drive all vehicles. If you drive a vehicle and have not been cleared to do so, you will be disciplined. Other farm equipment, such as but not limited to the tractors, backhoe, etc. are not to be driven unless you have been cleared by the Crew Chief, Otis Johnson. For those interested, lessons on handling farm equipment are available.

Anyone driving an ARS vehicle or vehicle with BRD tags must possess a valid Arkansas driver's license and be cleared by the appropriate leader to use that vehicle.

NO vehicle may be driven faster than 20 miles per hour on the Station.

NO one may ride on a pickup truck tail gate. **If you ride in the back of a pickup truck, you must sit in the bed in a safe manner.**

Report all damaged or unsafe vehicles and what's wrong with them to the Station Manager so that they can be repaired.

The Station Manager may rule a vehicle off limits to you; s/he may designate that a vehicle may be driven only by certain people. If you drive a vehicle that you are not cleared to drive or for which you do not have permission, that act will result in the following disciplinary action to be administered by the Station Manager. The first time, you will receive a warning. The second time, you will be suspended from the station for one week. The third time, you will be barred from working at the station for a period of at least one semester. If you have an accident in a station vehicle and do not have permission to drive that vehicle, you may, at the discretion of the Station Manager, be permanently barred from the fish station, even if it is your first offense.

Any student driving vehicles on wet pond levees will be given a warning upon their first offense and will have their driving privileges suspended for a two-month period upon their second offense. Offenses include, but are not limited to getting stuck and /or rutting up levees when getting unstuck.

F. Electrical Safety

Keep all electrical cords off the ground so others, especially mowers, know where they are. Mowers must be sure electrical cords are off the ground before mowing.

You should only plug electrical devices in ground fault outlets.

When an aerator or other electrical device is in a tank or pond, unplug the device before entering the water.

For those involved in electrofishing/boating, a safety course will be conducted by the BRD Project Leader and the research assistants involved in projects requiring electrofishing/boating. No student will be allowed to participate in electrofishing/boating without this course. BRD rules will be covered in that course. Students not participating in projects requiring electrofishing/boating may participate in this course.

G. Chemical Safety

Do not use or handle a chemical unless you are cleared to do so by the faculty or the Station Manager. Before using a chemical, make sure you know about the danger(s) that a chemical possesses (e.g., explosive, toxic fumes, etc). Safety equipment is available from the Station Manager. **Use appropriate personal protective equipment (PPE) as indicated by the chemical label.**

Store chemicals only in authorized places. Label all containers so that everyone knows what chemicals they contain. Unlabeled containers will be disposed of according to safety and toxic waste procedures. **Use of ANY CHEMICAL on the station must be reported to the Station Manager.** Use the Chemical Use Form (Appendix A).

H. Weather Safety

In the event of a thunderstorm, leave the ponds at once, and either leave the station or go into a building.

In the event of a tornado, lie down in a ditch if you cannot make it to a building (bathroom) or other secure structure.

I. Gun Safety

The only people who may shoot scare devices at the station are the Station Manager, or approved researchers. They can, at their discretion, authorize others to shoot at these animals. When shooting a scare device, make sure that no persons are in your line of sight. Do not shoot towards an electrical outlet, an aerator, a pump or any building. Anyone not authorized to shoot a scare device but who does will be disciplined. Disciplinary action will be determined by the Station Manager and may range from work probation to dismissal.

The only firearm permitted on the station is a .22 rifle (per UAPB Police), and only for snake control. Only people cleared by the Station Manager may use such weapons.

J. Alcohol and Drug Policy

No alcoholic beverages or illegal drugs may be consumed at work. No one who is under the influence of alcohol or drugs will be allowed to work at the station. Violators of this policy will be terminated from work, and will not be eligible to work for at least one full semester. In severe cases, the student will no longer be eligible for employment.

Supervisors who allow people to work at the station under the influence of drugs or alcohol will be disciplined.

K. Classroom Safety

Each teacher must create a safety plan for a lab course, regardless if the lab takes place in the field or in a classroom. A copy for this plan must be given to each student on the first day of class. Each student must sign a form indicating that s/he has read the plan, understands it, and agrees to abide by the safety rules. Students who act in an unsafe manner in labs and/or who refuse to abide by the safety rules will be disciplined. The teacher will decide what the discipline will be and will inform the students about this at the beginning of the course.

A copy of the plan must be submitted to the Safety Committee.

L. Fisheries Biology Fieldwork

All faculty, staff and students must wear a life jacket when working on ponds, lakes, reservoirs and rivers and especially when doing electrofishing.

Students must receive special training with electrofishing equipment before they are allowed to use it, and they may use it only with proper supervision. **See Electrical Safety** section.

No one may drive a vehicle with a boat and trailer unless he/she passed a driving test administered by the crew chief or by the BRD Leader. No student may drive a boat unless he or she has passed a test administered by a faculty member or/and attended a short course specifically on boat safety. Additionally, **Arkansas law requires all people born after January 1, 1986 to attend a Boater Safety Course. See Safety Workshops.**

M. Miscellaneous Safety

If you notice anything that appears to be unsafe or any unsafe conditions, try to rectify them. If you can't, report them to the Station Manager (or appropriate supervisor) so they can be rectified. In the meantime, warn others about them. If you see inappropriate behavior, e.g., drinking alcoholic beverages, use of illegal drugs, inappropriate use of equipment, horseplay that could result in injury, or any activity that looks dangerous, put a stop to it immediately or notify the proper authorities. Write up the report of any incident-names, times, place and what is going on – and give it to the Safety Committee. We need to document this type of behavior in case there is a serious injury. We're not trying to turn everyone into snitches; we're trying to prevent accidents or a fatality. Our obligation is to ensure the safety of the students and others who work here.

N. Safety Workshops

CPR:	It is recommended that faculty, staff and students receive CPR training.
First Aid:	It is recommended that faculty, staff and students receive training in First Aid.
Annual Workshop:	There will be a yearly safety workshop conducted in the early summer. The course will be required for all faculty, staff and students who work at the station.
Electrofishing/Boating:	A workshop will be conducted by Fisheries personnel for all students involved in projects requiring collection of fishes by electrofishing/boating. This workshop will be open to other students as well.
Boater Safety:	The Boater Safety Course is available at the Delta Rivers Nature Center in Pine Bluff (534-0011). More information is available at www.agfc.com , at www.boat-ed.com/ar , or call 501 223 6377.

APPENDIX A

Responsibility Affirmation Form

I, _____
(Printed Name)

have read through both the safety and station rules. I understand I am responsible for comprehending these rules and agree to abide by them. If I am unclear or unsure of rules or of any action I may want to take on the station, I will consult the station manager BEFORE I proceed.

Date: _____

Signature: _____

This sheet must be turned in before you may work at the station. The Commercial Automobile Driver Statement must be turned in before you may drive any station vehicle.

EXPERIMENTAL PROTOCOL

Year: _____ Amount Budgeted for Current Year: _____

Researcher: _____ Funding Source : _____

Title of Study: _____

Hypothesis: _____

Procedures: 1) Stocking dates: _____
2) Harvest dates: _____
3) Experimental units: _____
4) Experimental Design (treatments, replicates, stocking, feeding, aeration rates, data measurements, analytical techniques) _____

Supplies: Please specify type, size and number of fish needed by date: _____

Facilities: Please specify # and types of ponds, pools and tanks (at hatchery) for this study. _____

Construction Needs: _____

Anticipated Benefits: (in lay person's terms): _____

CHEMICAL USE FORM

This form must be turned into the Station Manager after each and every use of any chemical on the Aquaculture Research Station.

1. Date and time applied _____
2. Location where chemical was applied _____
3. Area (sq. ft., acres, etc.) treated _____
4. Product name and active ingredient _____
5. EPA registration number (on label) _____
6. Total amount used _____
7. Air temperature _____
8. Wind speed and direction _____
9. Type of equipment used (tractor sprayer, backpack sprayer, bucket, etc) _____
10. Name of applicator _____

APPENDIX B

Procedure for Facilities Assignments

A number of different scientists, support staff, graduate students, and undergraduate students use facilities at the Aquaculture Research Station. These facilities include ponds, tanks, vats, nets, and an assortment of equipment. It is critical for everyone to abide by a common set of rules with regard to use of facilities to avoid chaos and, more importantly, to avoid damages to research studies, research organisms, and to the facilities themselves. The following outlines explicitly the common-sense rules and procedures governing use of ponds, tanks, and vats at the Aquaculture Research Station.

Requesting Facilities During the Scheduled Request Periods

The responsibility for assigning ponds, tanks, and vats for research studies lies with the Director of the Aquaculture/Fisheries Center. Thus, use of ponds, tanks, and vats for studies must be approved by the Director.

The Director sends out a request for experimental protocols twice a year that serves as the request for facilities for that time period. The first request is sent to scientists by January 15 of each year to be returned by February 15, to request facilities needed to carry out the research studies proposed. This request for facilities should include space needed for temporary storage of fish. Scientists are notified of facilities assignments by March 15 of each year. This first facilities assignment is for facilities to be used during the spring, summer, and early fall.

The second request for facilities is sent to scientists by August 1, to be returned to the Director by September 1 with notification of facilities assignments to be made by October 1 for use through late fall, winter, and early spring.

Facilities used for long-term projects should be specified as such during the initial request, but need to be requested during each facilities -request period. This will avoid conflicts over double assignment of those facilities.

It is important that scientists carefully think through all facilities needed, including ponds needed for broodstock, fingerlings, or spawning and tanks and vats for temporary storage of fish. The more carefully thought out the facilities requests, the less last-minute shuffling and trading of tanks that will be needed.

Requesting Facilities at Times Other than the Request Periods

There are many times when new, unanticipated studies may need to be initiated after facilities have been assigned. This should happen only rarely because research studies should be planned in advance of the 6 month assignment periods in use and every effort should be made to request facilities during the regular periods. If necessary, however, an experimental protocol must be submitted to the Center Director that includes the request for facilities and must be approved before facilities can be used.

Additional Requests for Temporary (several days) Storage of Fish

Every attempt should be made to include temporary storage needs in the regular facilities requests. However, as new issues arise, it may be necessary to temporarily store fish in other tanks or ponds. Requests for temporary storage should be addressed directly to the Station Manager.

Trading Facilities With Other Scientists

Requests to use facilities assigned to another scientist must be addressed directly to that scientist. If the other scientist agrees to the trade, the Station Manager must be notified in writing, either electronically or with a hard copy. When the pond or vat is returned to the original user, the Manager must be notified again in writing.

Staff and students, both graduate and undergraduate, do not have the authority to trade ponds, tanks, or vats. They should suggest any trade to the scientist they work for and all negotiations for facilities handled between scientists.

Careful planning of the season's research should minimize the need to trade facilities.

Emergencies

Sometimes, power failures, equipment failures, and errors, require immediate rescue and transfer of fish to other tanks. Fish should never be moved to a tank with water in it not assigned to that scientist. Fish can be moved to an empty tank, filled for the emergency situation, only if there clearly is no time to contact the Manager and the scientists involved both with the fish in danger and the facilities in question. However, as soon as possible, the Manager, the scientist to whom that tank is assigned, and the scientist for whom that individual works, must be notified. Home and office telephone numbers are posted at the Station specifically for that purpose. Every effort must be made to return the facilities to the individual to whom they have been assigned as soon as possible.

No action should ever be taken that endangers another study, even to save one's own. Problems with two studies are worse than problems with just one.

Posting Facilities Assignments

The Station Manager will provide both electronic and hard copies of facilities assignments after each allocation has been made. An electronic copy will be made available on the network neighborhood and a hard copy posted in the hatchery building.

PLUMBING IN THE HATCHERY

The plumbing system is an amalgamation of almost two decades of making a better mousetrap. What does this mean for you? As you learn the system it will be incomprehensible that a university would construct such a beast. Due to small amounts of money available at different points on the timeline and changing needs, the system is a patchwork quilt. Do not rail against it. If you can, figure out ways to improve it and discuss your ideas with the station manager.

Hatchery Deep Well

A four inch line enters the north-most room of the hatchery from a deep water well. This low iron content water is aerated, run through a sedimentation tank, filtered with sand and gravel and then carbon. All lines in the hatchery building with WELL written on them have this water.

Reservoir

High iron content wells deliver water to the reservoir. The reservoir delivers water to ponds 1-70 and can deliver to ARS ponds 1-42. This water also comes to the hatchery, is filtered with sand and gravel and then at most delivery points filtered again with a cartridge filter. The lines in the hatchery building with RES written on them have this water.

Hot Water

At one time the hatchery was outfitted for boilers and hot water delivery. Some of the pipes have RES and HOT written on them. These pipes do not have hot water. There is not hot water. The hot water lines were reused as Reservoir lines. So you have two water choices: RES or WELL.

Water Mixing

To reduce the amount of pipe in the hatchery, tanks have one set of pipe and valves directly over them, but at the wall, either WELL or RES water can be shunted to them. You might think yourself exceedingly clever and open a little bit of each water type to get a mix in your tank. However, this does not work as it mixes water throughout the building. Mixing will radically change water quality and pressure in all the pipes and no one is happy. DO NOT TRY TO MIX WATER IN THE SAME PIPE.

Pond Deep Well

This well provides low iron content water to ARS ponds 1-42. It can also provide this water to ponds 41-70. At this time, if well water is routed to 41-70, either the reservoir line in the Hatchery must be shut down, or it will deliver well water.

FEED

How do I order feed?

Your major professor should guide you in this matter. UAPB procures feed on a contract basis. You may NOT call up the feed company and order feed. You MUST check to see if your feed has been covered by the contract. If it has, you must make sure the purchase order requisition declares the price of the feed indicated on the contract. If you cannot find a contract and are forced to call the company which was awarded the contract, be sure they understand you are asking for a CONTRACT price quote, not a market price quote.

How do I transport feed?

A station truck can be used for this. Trailers are also available.

Where do I store feed?

Most feed is stored in the ARS Feed building at the station. Each researcher has been given an area to store feed. Never take feed from another researcher's area. You may end up with a bizarre feed. Besides, it's not a very nice thing to do. The manager can usually arrange for some feed.

POWER OUTAGE PROCEDURE

Power is out at the hatchery and the generator did not work:

1. Call Entergy
 - a. 800 766 1648
 - b. Tell the operator you are at UAPB. Tell the operator your location is identified by meter number 3181010 and account number 4998357.
 - c. Read this to the operator:
This is the University of Arkansas at Pine Bluff Fish Research Station. We have a power outage and we are in danger of fish dying. We need quick response.
 - d. Ask the operator when the repair trucks should arrive.

Power is out at the ponds:

1. Call Entergy
 - a. 800 766 1648
 - b. Tell the operator you are at UAPB. Use the Station Meter chart to tell the operator your location. Use the meter and account numbers that relate to the ponds that have no electricity.
 - c. Read this to the operator:
This is the University of Arkansas at Pine Bluff Fish Research Station. We have a power outage and we are in danger of fish dying. We need quick response.
 - d. Ask the operator when the repair trucks should arrive.
 - e. If you are alone, call people to help you before you begin part 2.
2. Begin emergency aeration.
 - a. Hook tractors up to the relift pump and the two fish graders and the paddlewheel.
 - b. Take the paddlewheel directly to a pond and begin aeration.
 - c. Take the relift pump directly to a pond and begin aeration.
 - d. Take the fish graders to a pond and drop the graders in the water. Now move the pump portion to a pond and begin aeration.
 - e. Once the large pumps are in action, all the small gasoline engine pumps should be collected for distribution to other ponds. The pump, a suction hose, oil and gas are needed. Check oil before starting the pumps.
3. One person needs check DOs. As DO rises in a pond, the pumps or paddlewheel should be moved to another pond requiring aeration.
4. The person checking DOs needs to keep the tractor drivers informed of where they need to be.

Entergy Meters at the Fish Station**Meter Number Account
Number****Meters at Aquaculture Research Station, 2101 Oliver Rd, Pine Bluff, AR**

Well 1, near pond 1	3135767	44925840
Well 2, west of reservoir	XKCC591120M	5011796
Well 4, deep well near pond 73	XKCC538527M	6833685
Ditch Pump	3027975	5011960
Power pole, pond 11	3129412	4824223
Power pole, pond 26	KBB1246784S	2397438
Power pole, pond 42	3129413	8291478
Power pole, pond 70	KBB974436S	4824041
Power pole, pond 92	KBB971976S	5862024
Power pole, pond 104	3118917	5861810
Hatchery, Maintenance, Well 3	3181010	4998357
Truck shed	3083283	5352281
Feed building	3001507	5352505
Value-Added Product & Demo (VAPD)	3040632	2614493
Aquaculture Engineering Demo (AEDB)	3099444	1896893
ARS Lab Trailer	3109081	9367558
Fisheries Shop	KBB2035631S	6990493
Hatchery Research and Demonstration	3181020	43494806
Reservoir Water Booster Pump	3076878	3867679

Meters at Lonoke Demonstration Farm, Lonoke, AR

Well at pond 5	KBC959627S	2264428
Well at pond 7	KCC1106368S	6275200
Well at ponds 4,6,7	TXG3066938K	3378122
Lonoke paddlewheels	KC555496V6M	6276430 coded as protected custome r

Contacts:

Entergy phone number	800 368-3749
Entergy for UAPB	800 766-1648
Entergy for UAPB FAX	800 223-3017
UAPB main number	575-8000
Engineer: Doug McDaniel	541-6260 office 550-2116 mobile
Major installations: John Harris	541-6227 office

Aquaculture/Fisheries Center

Animal Welfare Policy 2005

The faculty, staff, and students of the UAPB Aquaculture/Fisheries Center conduct scientific research using living animals and recognize that the welfare of those animals is of paramount importance both for ethical reasons and to insure the quality of research results. In order to insure that animal welfare concerns are adequately addressed, all research done at the Center adheres to the following principles.

- 1) Fish are animals and must be treated with care and respect.
- 2) While there is significant scientific evidence showing that fish do not experience pain in the same way as do higher animals, there is sufficient controversy that we will always err on the side of caution. Fish will be handled as gently as possible and anesthetizing prior to procedures that would be reasonably expected to cause significant pain in a higher animal.
- 3) Studies will be designed to minimize trauma to experimental animals to the greatest practical extent.
- 4) Fish in studies will be protected from disease by biosecurity guidelines administered by the Center Organism Importation Needs Committee. In the event that fish show signs of diseases, the Center Fish Disease Laboratory will be consulted and the fish provided with disease treatments most appropriate to the study and to their potential food animal status. All dead animals will be promptly removed from ponds, tanks or other fish holding containers.
- 5) Environmental conditions will be maintained to provide oxygen levels and water quality consistent with good fish health. In the event that water quality deteriorates below acceptable levels, every practical effort will be made to re-establish acceptable conditions. The nature of these efforts will be chosen based on the study design.
- 6) When fish are sampled, harvested, or handled, they will be kept submerged as much as possible and tranquilizers, salt, and prophylactic disease treatments used as appropriate to mitigate the effects of stress. Fish will be gradually acclimated to temperature changes.
- 7) Wild vertebrate animals (snakes, turtles, amphibians, mammals, birds) invading experimental ponds or other experimental facilities will be harassed into leaving the experimental site, returned to the wild, or (if allowed by state and federal law) killed by the most humane practical method.

8) When studies are completed, remaining live animals will be sold for aquaculture or food use, donated to state or federal agencies, or euthanized by an overdose of a suitably labeled fish anesthetic and disposed of according to station policy.

9) When wild fish are sampled they will be handled gently, maintained in suitable containers with sufficient oxygen and water quality. If they are to be preserved, they will be euthanized with a suitable labeled fish anesthetic prior to preservation. If they are to be measured, tagged, or subjected to other procedures prior to live release, the fish will be tranquilized if such treatment decreases trauma experienced by the animals and their release to the wild does not conflict with drug use regulations. When wild fish are released, it will be into an appropriate habitat as close to their site of capture as practical.

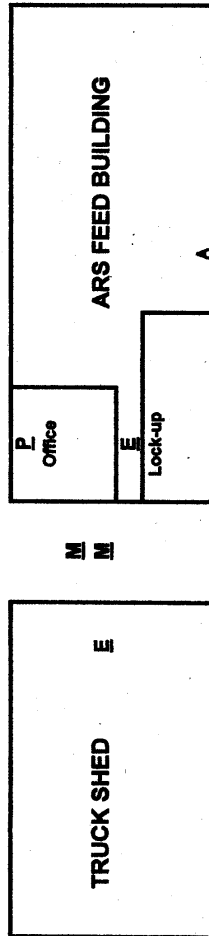
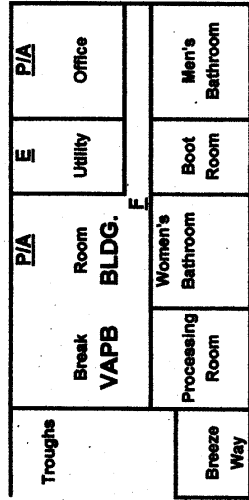
10) Electrofishing procedures will be periodically reviewed and equipment updated if necessary to ensure the least harm to fish during sampling procedures. For more details see *Snyder, D. E. 2003. Electrofishing and its harmful effects on fish. Information and Technology Report USGS/BRD/ITR-2003-0002, U. S. Government Printing Office, Denver, CO.*

11) All research will be conducted with all of the permits, licenses, and animal welfare oversight required by state and federal law.

12) For more detailed guidance than that provided by this policy, the American Fisheries Society “Guidelines for the Use of Fishes in Research” (currently at http://www.fisheries.org/html/Public_Affairs/Sound_Science/Guidelines2004.shtm) will be followed. Those desiring additional information on fish welfare may consult this comprehensive review.

Erickson, H. S. 2003. Information resources on fish welfare 1970-2003. Animal Welfare Information Center Resource Series N. 20, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, MD.

**VAPD BLDG.: Value Added Product
and
Demonstration**



- R:** RADIO
- F:** FIRE EXTINGUISHER
- P:** TELEPHONE
- E:** ELECTRICAL BREAKER BOX
- M:** ELECTRICAL MAIN
- G:** GENERATOR
- A:** FIRST AID KIT

