

lake guide

GRAND RIVER DAM AUTHORITY

2014-2015

GRDA's Grand Lake, Lake Hudson
and WR Holway Reservoir



Contact GRDA

Administration Headquarters
918-256-5545
PO Box 409, 226 W. Dwain Willis Ave.,
Vinita, OK 74301-0409

Ecosystems and Education Center
918-782-4726 main
PO Box 70, Langley, OK 74350-0070

GRDA Police
918-256-0911
PO Box 70, Langley, OK 74350-0070
*If you need assistance from your boat,
radio GRDA Police on: Marine Band 16*

GRDA Information

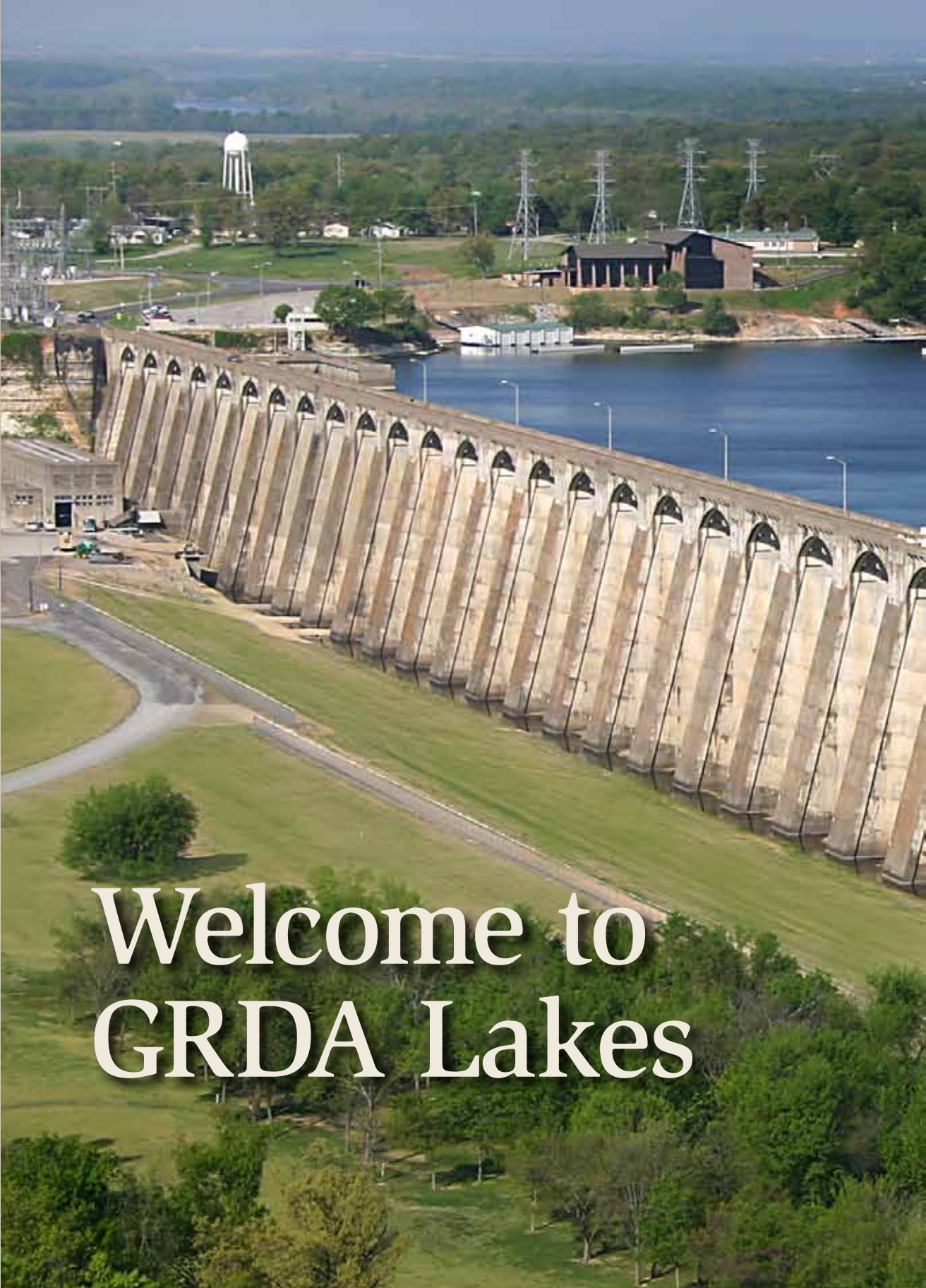


*Sign up for the GRDA text alert service.
Click on the "News" link at grda.com.*

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This publication printed by Western Printing Company, is issued as authorized by 82 O.S. Sec 861 et seq. 2,500 copies have been printed at a cost of \$1,896.00 Copies have been deposited with the Publications Clearinghouse of the Oklahoma Department of Libraries.



In the pages of this special edition GRDA Summer Currents/Lake Guide, I hope you will find much information that will prove to be helpful and informative to you, whether you are a full time resident of the lakes area or visiting for the first time in 2014.

GRDA was created over 75 years ago and, from its very beginnings, it was charged with stewardship responsibilities for the waters of the Grand River system. Over the course of its long history GRDA has responded to that charge by constructing hydroelectric facilities along the river, implementing ecosystems management and habitat enhancement programs and working with other agencies and the public to preserve and protect Grand's waters.

Of course, all that effort centers on beautiful Grand and Hudson lakes. Since the completion of Pensacola Dam in 1940, GRDA lakes have been drawing visitors to a very scenic corner of Northeast Oklahoma. Grand's highly developed shoreline and open expanses, and Hudson's scenic coves and quiet waters support a thriving recreation and tourism industry that truly completes the vision of the men and women who first dreamed of the GRDA idea in the mid 1930s.

On behalf of Team GRDA, I want you to know how proud we are of our lakes, our history and our reputation not only as a good steward of these waters, but also as a provider of low-cost, reliable electricity across the entire state. GRDA has been providing that electricity to Oklahoma since

it first harnessed the waters of the Grand River in 1940.

Again, I do hope you find this publication helpful to you as you experience the GRDA lakes area. Have a safe and enjoyable outing!

Sincerely,



Daniel S. Sullivan
GRDA Chief Executive Officer/
Director of Investments

Historic Pensacola Dam



Brian Edwards
AGM of Law Enforcement & Department of Homeland Security



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Superintendent of Law Enforcement



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Shawn Allred
Police Officer



Derrick Bidleman
Police Officer



Lissa Brown
Police Officer

GRDA POLICE



Helping provide safe, enjoyable outings

Every day, the Grand River Dam Authority Police Department is on the job, to help ensure safe lake outings, to protect GRDA assets and to serve the people of Oklahoma.

Those are primary responsibilities of a department with its roots firmly planted on the shores of Grand Lake. GRDA established its lake patrol not long after the creation of Grand Lake, at a time when the lake's 46,500 surface acres were gaining popularity at a major recreational playground for the region. For decades, GRDA officers have been a fixture on these water (as well as Lake Hudson and W.R. Holway Reservoir) as the Authority works to fulfill its mission to make certain "that on and around our lakes we will support recreational development, environmental awareness, and good safety practices to ensure the continued improvement of the quality of life for all of those who utilize our resources."

To better reflect that mission and its overall duties, the department's name was changed from GRDA Lake Patrol to GRDA Police in 2009. Today's name more accurately conveys the wide range of tasks the officers perform on a daily basis. While enforcing lake rules and regulations, conducting boat inspections and helping to ensure safe outings on 70,000 surface acres of waters are top priorities, the department is also responsible for investigating injuries, deaths, and any theft that occurs on GRDA property, including electric substations. In short, GRDA's law enforcement officers help protect the Authority's assets wherever they are located in the state of Oklahoma.

Today, those assets include multiple facilities, over 1,200 miles of high voltage electric transmission lines, and hundreds of substations all utilized by GRDA to meet its mission and provide low-cost, reliable electricity that reaches into 75 of 77 Oklahoma counties.



Tyler Brown
Police Officer



Scott Cox
Police Officer



Seth Hembree
Police Officer



Jason Littlefield
Police Officer



David Sergeant
Police Officer



Bruce Smith
Police Officer



Amanda Sullivan
Police Officer



Chris Carlson
Superintendent of
Homeland Security



Amanda Gray
Department of Home-
land Security



Lori Starks
Lake Relations &
Programs

GRDA OFFICER TRAINING

As with all law enforcement departments, GRDA officers must have Council on Law Enforcement Education and Training (CLEET) certification. Also, a background in boating and water safety is also an important aspect of the job.

Operating on a 24/7 schedule, the department is headquartered in the GRDA Ecosystems & Education building, adjacent to historic Pensacola Dam, in Langley. That site is just a stone's throw from the shores of Grand Lake which, according to many, can swell to the size of Oklahoma's third largest city on a busy summer holiday weekend. From this important location on the water's edge, GRDA's skilled police force is present to help provide a safe and enjoyable experience for lake visitors.

For more information about the GRDA Police Department, its safety presentations or how an officer can assist you, contact the department at 918-256-0911.





LIFE JACKETS SAVE LIVES

Many boaters say they don't wear a life jacket because it is too hot, or it will mess up their tan line, or they are simply not comfortable. But, an accident happens without warning and usually after the accident, the life jackets are not within reach—stored in cabinets, trapped under the boat or floating far away in the water.

We would like to remind boaters that it's important to wear a life jacket at all times on our lakes. And remember...**Boat Safe, Boat Smart and Boat Sober!**

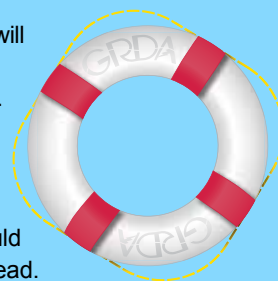
For more information visit us at www.grda.com



Life Jackets Save Lives!

To make sure you have the proper life jacket, the GRDA Police offer these safety tips:

- Buy your own personal life jacket, and use it. One size does not fit all.
- Look at the label. It will provide weight, size and use information.
- Try it on to check the fit. Once the straps and buckles are secured, it should not slip over your head.
- Never use water toys in place of an approved life jacket.
- Check your life jacket yearly for flotation and fit.
- Finally, wear a life jacket to set an example for younger children and to increase your chances of survival in an accident.



Boating Safety Checklist

- ✓ Before you leave the dock, know the stability, load capability and handling of the vessel you're operating.
- ✓ Check the water conditions. Know where hazards like sandbars and stump beds are located.
- ✓ Before you leave home, check the weather. Don't get caught on the lake in a storm.
- ✓ Boaters need a float plan. Tell someone responsible where you are going and when you will return.
- ✓ Double check to see if all your safety equipment is on the boat (required by law): PFD life preservers, throwable cushions, oars, anchor, bailing device, fire extinguishers, lights, horn or whistle.
- ✓ "If you drink, don't drive" applies on the lake. Most lake accidents are alcohol related. Don't become a statistic.

BOATING REGULATIONS

NOTE: This is only a guide to answer frequently asked questions concerning lake rules. The complete set of rules and regulations are available at grda.com.

VESSEL OPERATION

Boats must not operate within 200 feet of any GRDA dam or no closer than 500 feet during generation. No person shall operate on the waters of this state, except privately owned waters, any vessel including personal watercraft, within fifty (50) feet in proximity to another vessel when running at speeds of over ten (10) miles per hour; provided, this prohibition shall not apply to vessels operating in sanctioned events. It shall be unlawful for any person to operate any vessel upon the waters of this state which are under GRDA jurisdiction, between the hours of one-half hours after sunset and one-half hour before sunrise

(night time) at any speed in excess of twenty-five (25) miles per hour.

SPEED LIMIT

Any person who operates or gives permission to operate a vessel on any waters of this state shall operate at a careful and prudent speed not greater than or less than is reasonable, having due regard to other vessels, water skiers, swimmers, restrictive and informational markers or buoys, existing wind conditions, waves or other weather conditions than existing.

WAKE JUMPING

Wake jumping is prohibited in any cove, creek or hollow.

WATER SKIING

Water skiing, jet skiing and similar activities are permitted only during daylight hours and is prohibited upstream from above Twin Bridges, in Elm Creek, east of Grove. A boat towing a skier must have a person (at least 8 years old) in position to observe that skier, unless a rear view mirror has been installed for boat operator observation of skier.

SAFETY INSPECTION

Boats kept or operated on GRDA lakes may be inspected by GRDA Police. A safety inspection sticker will be placed on the port front portion of boat. This is a free inspection.

GRDA's Lake Advisory System

As the Grand River Dam Authority's ongoing water quality monitoring efforts continue, GRDA's "facility" along the information superhighway—grda.com—will continue to be an ideal place for lake area residents and visitors to get real-time information on water quality and conditions.

First introduced in 2012, GRDA's system to advise the public on lake conditions is based on a two-pronged approach. "We have a text notification system we use to share information about water conditions, floodgate operations, special lake events, etc.," said GRDA Corporate Communications Director Justin Alberty. "Our online interactive lake map is also available and it is tied to updated information from our water sampling efforts."

According to Alberty, those interested in receiving texts from GRDA regarding lake issues can sign up for the service at www.grda.com, by following the News link drop down menu.

"With the popularity of smart phones and mobile access, we feel services like the online interactive map and our text services will allow us to reach a lot of lake visitors, whether they are at home or out on the water," said Alberty, adding that GRDA information is also readily available by following the organization on Facebook and Twitter.

Real-time lake information

The GRDA Ecosystems Department opened the doors on its state-of-the-art

water quality laboratory in 2010, and has been expanding and developing its water monitoring efforts ever since. In fact, the installation of several floating water quality profilers in Grand and Hudson lakes in recent years has allowed the department to make the real-time information so readily available to interested lake stakeholders.

Mounted on a couple of small pontoons, the floating monitor located in front of Pensacola Dam has the ability to gather water quality information at three-foot intervals from the top to the bottom of the water column. Similar profilers are located in the tailrace below the dam, as well as above and below Robert S. Kerr Dam on Lake Hudson.

"When someone clicks on a dot on the online map that corresponds to the sampling site, the latest water quality results for several parameters will



AN INTERACTIVE MAP WILL BE FEATURED ON GRDA'S WEBSITE (WWW.GRDA.COM), PROVIDING INFORMATION ON WATER QUALITY CONDITIONS ON GRAND LAKE.

"With the popularity of smart phones and mobile access, we feel services like the online interactive map and our text services will allow us to reach a lot of lake visitors, whether they are at home or out on the water,"

appear in a pop up box," said GRDA Assistant General Manager of Ecosystems/Lake Management Dr. Darrell Townsend. "It just allows us to provide the kind of information that we get requests for, like lake temperatures at certain depths or other parameters."

Currently, the department has established 14 permanent sampling sites on Grand Lake, along with eight on Hudson and three on the W.R. Holway Reservoir. During much of the year those sites are tested on a monthly basis. However, if conditions warrant, samples can be taken weekly.

"We will typically sample more often in the summer months or at times when we feel the conditions warrant," said Townsend. "We just want the public to have the best information possible and we think this system goes a long way in achieving that goal."

SMP

Shoreline Management Plan

With the help of lake area stakeholders and public input received during 27 meetings, GRDA prepared and submitted the Grand Lake Shoreline Management Plan (SMP) to the Federal Energy Regulatory Commission (FERC) in 2009. In October 2013, FERC issued its order modifying and approving the Grand Lake Shoreline Management Plan, also called the SMP. Now that FERC has approved the plan, GRDA wanted to provide you with this quick SMP review:

1. **The SMP is sort of like a road map for future development around the lake shore. It addresses the needs of the public while taking into account all the different types of shoreline uses like recreation, aquatic habitat, commercial, etc.**
2. **GRDA voluntarily developed the plan to address consistent and long-term stewardship of the Grand Lake shoreline.**
3. **FERC is the federal agency that gives GRDA the licenses it needs to operate its hydroelectric facilities in Oklahoma, like Pensacola Dam, which creates Grand Lake.**

Now with FERC's approval and modifications, GRDA will be moving through the final SMP and looking at important issues like:

- **Encroachments**
- **SMP Classifications**
- **Wildlife resources**
- **Habitable Structures**
- **Dredging management**

The ultimate goal is to implement an SMP that meets the needs of all lake users, while protecting this important asset and it's shoreline for years to come. Want to learn more? View the SMP online at GRDA.com.

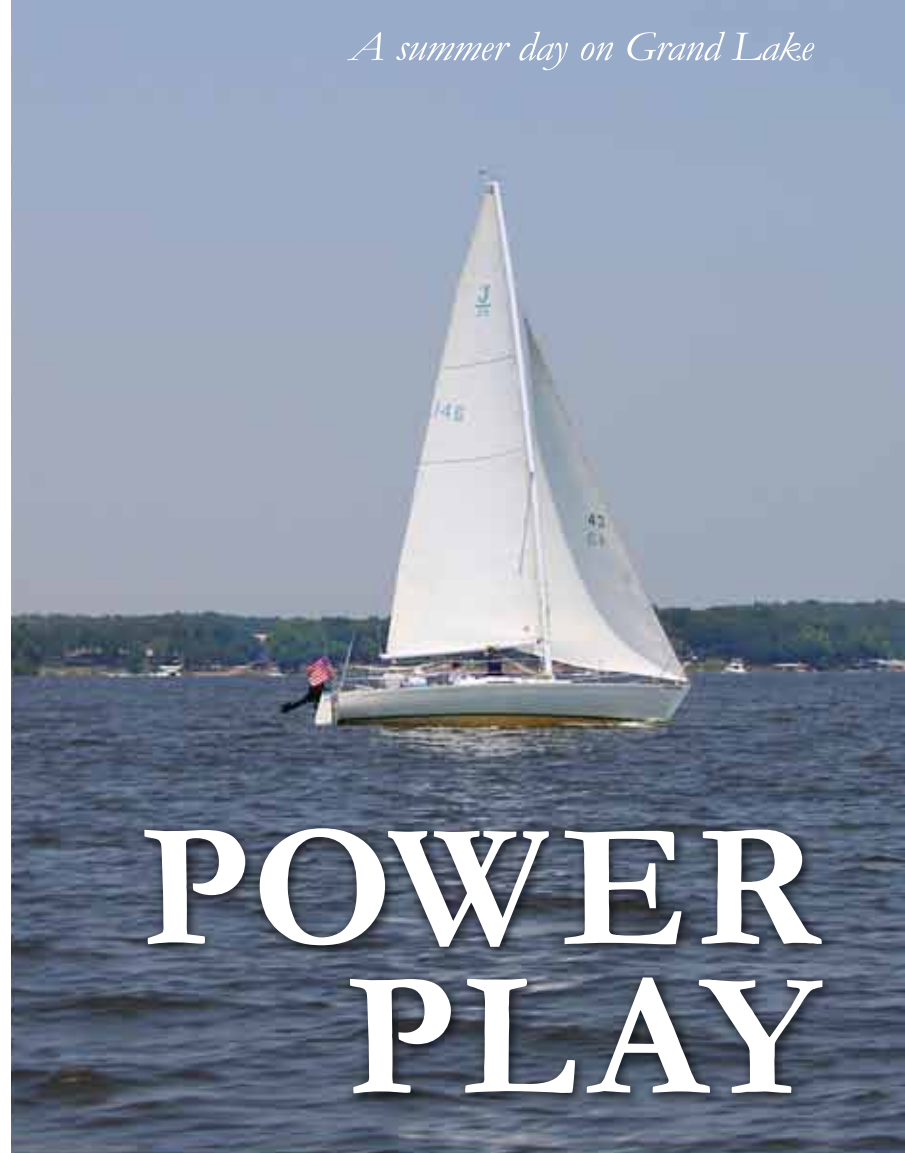
Don't Cut, Don't Dig, Don't Build...
until you contact GRDA.

Providing
Power and Water
for Work and Play
in Oklahoma for
over 70 years!



GRAND LAKE • LAKE HUDSON • WR HOLWAY RESERVOIR

GRDA Ecosystems & Education Center	918-782-4726
GRDA Lake Permits	918-256-0852
E-mail	lakepermits@grda.com
GRDA Police	918-256-0911
GRDA Pensacola Dam Tours and Facility Information	918-256-0899



For over 70 years, Oklahomans have enjoyed the water playgrounds created by GRDA's hydroelectric facilities. Grand Lake, Lake Hudson and W.R. Holway Reservoir offer not only beautiful scenery but also wide open waters for boating, skiing, swimming, fishing or just playing.

At no cost to Oklahoma taxpayers (not even a daily access fee) GRDA manages, patrols, monitors and cares for these waters which support a thriving recreation and tourism industry and a broad tax base around the shoreline. In other words, play time is beneficial to all of Oklahomans.

That's the "power of power" at GRDA.



TITLE 300. GRAND RIVER DAM AUTHORITY

CHAPTER 35. LAKE RULES

SUBCHAPTER 1. DEFINITIONS, PURPOSE AND APPLICATION

300:35-1-1. Definitions

The following words and terms, when used in this Chapter, shall have the following meaning, unless the context clearly indicates otherwise:

“Authority or GRDA” means the Grand River Dam Authority.

“Board” means the Board of Directors for the Grand River Dam Authority.

“GM” or “CEO” means the General Manager and/or the Chief Executive Officer of the Grand River Dam Authority.

“GRDA land” or “GRDA property” or “lands of GRDA” means the land owned by GRDA. The location and boundaries of GRDA land is determined by a legal description (generally described by metes and bounds). Many times, a survey is necessary to determine the boundary of GRDA land. A particular elevation does not necessarily determine the boundary of GRDA land. Additionally, GRDA and/or the U.S. Army Corps of Engineers may have flowage easements over land.

“Wake” means the track of waves left by a vessel or other object moving through the water and such waves are greater than the natural waves in the immediate area of the vessel or are cresting and showing white water or may cause injury to any person or property. However, a “no wake zone” is not violated when a vessel is safely proceeding with engine(s) engaged at normal idle speed.

“Waters of GRDA” means and refers to the waters of the Grand River and its tributaries, including, but not limited to, Grand Lake O’ the Cherokees, Lake Hudson, and the W.R. Holway Reservoir.

300:35-1-2. Statutory authority

The Act (82 O.S.2001, § 861 et seq., as amended) creating the Grand River Dam Authority prescribes the use that may be made of the properties and waters of GRDA and authorizes GRDA to promulgate, prescribe and enforce rules and regulations for the use, for recreational and commercial purposes, of its lakes and shorelands, including the use of firearms and the inspection of all vessels of every character proposing to operate or operating on said lakes. The travel of vessels on the waters of GRDA shall be in keeping with the following rules of GRDA in the interest of public health, safety and convenience in the use of the waters and the shorelands of GRDA.

300:35-1-3. Application of state laws

The laws of the State of Oklahoma, including the Oklahoma Boating Safety Regulation Act, 63 O.S.2001, § 4200 et seq., as amended, and the Oklahoma Penal Code, 21 O.S.2001 § 1 et seq., as amended, apply to the waters of GRDA, in addition to the rules set out herein. Failure to comply with these laws and Rules may constitute a criminal offense.

300:35-1-4. Registration of boats

The Oklahoma Vessel and Motor Registration Act, 63 O.S.2001, § 4001 et seq., as amended, applies to the waters of GRDA and must be complied with in addition to the Rules herein. Every vessel subject to the provisions of the Oklahoma Vessel and Motor Registration Act must have state registration and a current license by no later than June 30 of the current state fiscal year.

300:35-1-5. Law enforcement division and compliance division of GRDA

- (a) GRDA has created a law enforcement division and compliance division for the purpose of enforcing these Rules on the waters and land of GRDA.
- (b) The members of GRDA’s law enforcement division are hereby declared to be the enforcement officers for GRDA. The enforcement officers for GRDA may enforce GRDA rules and regulations, those rules and regulations as may be issued pursuant to the provisions of Section 4200 et seq. of Title 63 of the Oklahoma Statutes, the provisions

visions of Sections 861 et seq. of Title 82 of the Oklahoma Statutes, and all violations of criminal laws occurring within the boundaries of the counties where real property owned or leased by GRDA is located. The enforcement officers shall have the power of peace officers during the performance of their duties, except in the serving and execution of civil process.

- (c) The officers shall, in the event of emergency, assist in the rescue of any person who may be in danger and shall assist in the saving of any property that is in danger of being lost or damaged. They shall require the operator of any vessel operating on the waters of the lakes in any manner which is not in compliance with these Rules, or any applicable state law, to immediately remove said vessel from the lake until compliance has been had.
- (d) The officers are charged with the duty of causing all vessels to be registered with proper registration numbers, or permit numbers, which shall be displayed upon such vessels.
- (e) GRDA’s law enforcement officers may cooperate with federal, state and local enforcement officers in the enforcement of all federal and state laws upon the waters, lands and properties of GRDA or any other location within their jurisdiction.

300:35-1-6. Permitted activities

No person, firm, partnership, corporation or other entity shall perform any activity which requires a permit prior to the receipt of written permission from GRDA. For example, no dock may be placed upon the waters of GRDA until such time as the applicant receives written notice that such activity may take place. Any person that performs any activity which requires a permit prior to the issuance of a permit, or written permission from GRDA shall be subject to the penalties set forth in these Rules and law.

SUBCHAPTER 3. GENERAL PROVISIONS

300:35-3-1. Free access

The public shall have free access to the waters of the lakes and no charges shall be made to the public for the right to engage in hunting, fishing, swimming or non-commercial boating. The public shall comply with all state hunting and/or fishing laws and rules.

300:35-3-2. Lake elevations

Grand Lake, Lake Hudson, and W.R. Holway Reservoir are flood control and hydro electric power projects, and it is recognized and understood that the elevation of the waters in said lakes will vary from time to time as operations for flood control and hydro electric power generation demand, and the water rights granted under these Rules shall be subject to these conditions and all laws governing the Grand River Dam Authority and shall be subject to all federal and state laws and rules governing the control storage release and use of the waters of Grand River, Grand Lake, Lake Hudson, and W.R. Holway Reservoir.

300:35-3-3. Liability

- (a) GRDA shall never be liable in any manner whatsoever because of the quantity or quality of the water in its lakes, nor shall GRDA ever be liable for any damage that the permittee may sustain to person or property which may be occasioned by or result from the construction, maintenance and operation of GRDA’s projects and the Fort Gibson Reservoir.
- (b) Neither GRDA nor any representative thereof assumes any responsibility for loss or damage to life or property by theft, storm, accident or otherwise, in connection with or growing out of the exercising of the privileges conferred by any permit which may be issued in accordance with these Rules.
- (c) Nothing contained in these Rules shall operate to relieve the owners of vessels from complying with, or from the obligation of complying with, the applicable laws of the United States and the State of Oklahoma.

300:35-3-4. Payment of fees

No permit or license, private or commercial, shall be issued until the appropriate fee has been paid.

300:35-3-5. Transfer or assignment of permit prohibited

Transfer or assignment of permits or licenses issued hereunder (both private and commercial) shall not be made except with written consent and approval of GRDA. Additionally, all delinquent unpaid fees, plus interest at the rate of ten percent (10%) per annum must be paid prior to a transfer. No person, firm or corporation shall allow his or its name to be used by any other person, firm or corporation to do any work under his or its permit.

300:35-3-6. Cancellation/termination of permit or license [REVOKED]**300:35-3-7. Rights reserved**

These Rules do not cover the taking or using of water for any purpose or use other than those specifically covered herein.

300:35-3-8. Roads and highways

The existing public rights-of-way to the waters or shorelands and boat ramps sponsored by GRDA shall remain open as a way of free public passage to and from the waters of GRDA.

300:35-3-9. Fishing and hunting

Fishing or hunting within restricted areas will not be permitted, nor will hunting or fishing be permitted within two hundred (200) feet of the tailraces below the dams; nor will hunting or fishing, except commercial bait operators, be permitted at such other points on or about the lakes where such use will unduly interfere with navigation or proper conduct of the business of GRDA or endanger the public.

300:35-3-10. Firearms

- (a) Only shotguns and proper archery equipment are allowed on GRDA property, except that hunters may use rifles and pistols, in compliance with state laws and wildlife regulations, on GRDA property which has been designated as a Wildlife Management Area.
- (b) All hunting on any GRDA property shall be conducted in accordance with Oklahoma Department of Wildlife Conservation regulations. If hunting within ¼ mile of GRDA waters, only nontoxic shot may be used.
- (c) The discharge of any firearms or bows in, over or across the waters of the lakes is expressly prohibited except as regulated by the Oklahoma Department of Wildlife Conservation. In no event shall the use of firearms or bows be conducted in a manner which interferes with the business of GRDA's projects or endangers the public.
- (d) Persons properly licensed to carry concealed weapons may do so only in accordance with the laws of the State of Oklahoma.

300:35-3-11. Gas and oil storage

The keeping or storage of gasoline and other combustible fuels, except for fuel tanks installed in vessels, in, upon or about GRDA lands and waters will not be permitted unless the location and detailed storage plans therefor are first submitted to and approved by GRDA and comply with all applicable state and federal statutes.

300:35-3-12. Health and sanitation

- (a) All sanitary rules, regulations, and laws shall be complied with prior to the granting or renewal of any GRDA permit.
- (b) In the interest of public health, sanitation and safety, there shall be no camping on GRDA's lands except in a designated camping area.
- (c) Bottles, cans, garbage, rubbish, refuse, debris, wreckage, bilge water containing oil or grease, or materials used in the process of cleaning the outer surfaces of vessels, or any other material of any kind shall not be thrown into or released upon the lakes or deposited or dumped upon the shores of the lakes or upon any land under the jurisdiction of GRDA.
- (d) No septic tank, lateral line or lagoon shall be placed on the shorelands of GRDA. No sewage shall be disposed of in the waters or on the shorelands of GRDA. No person

shall operate a vessel equipped with a marine toilet which is not a total retention system in accordance with federal regulations regarding marine toilets.

- (e) The preparation and marking of beaches shall be in such manner as to provide reasonable safety in their use. Commercial beaches shall be provided with adequate and sanitary dressing rooms, toilets, showers and other necessary accessories for public convenience and safety.

300:35-3-13. Repeal

All rules and regulations adopted by the Authority which conflict with the provisions of these Rules are hereby revoked, cancelled and repealed.

300:35-3-14. Permit applications

- (a) Applications for GRDA permits required by these Rules are available at the permitting office inside the GRDA Ecosystems & Education Center located at the west end of Pensacola Dam in Langley, Oklahoma, by mail at P.O. Box 70, Langley, Oklahoma 74350, by calling 918-782-9594, or on the GRDA website at www.GRDA.com.
- (b) In addition to any other requirement that may be applicable to a permit application, GRDA may, in its sole discretion, forward any application to fish and wildlife resource agencies, environmental agencies, and/or tribes for comment.
- (c) These Rules cover the following types of GRDA permits:
 - (1) Private and commercial docks, wharves, landings, anchorages, and boat houses;
 - (2) Buoys;
 - (3) Private and commercial breakwaters;
 - (4) Private and commercial rail-systems and tram systems;
 - (5) Fences located on GRDA lands;
 - (6) Boat ramps;
 - (7) Retaining walls;
 - (8) Dredging (and excavation);
 - (9) Erosion control devices;
 - (10) Shoreline stabilization;
 - (11) Commercial operations (including dock installer, dredging contractor, commercial boat operator);
 - (12) Taking of raw water (including irrigation);
 - (13) Vegetation management plans; and
 - (14) Sanctioned event.
- (d) Permit applications are subject to change without notice. Permitted activities must comply with all standards, rules and regulations in effect at the time the activity commences.

300:35-3-15. Penalty

After notice and an opportunity to be heard in accordance with Subchapter 21 herein, any person, firm, partnership, corporation or other entity which violates any Rule in this Chapter (i.e. Chapter 35 Lake Rules), shall be required to pay all costs (including attorneys fees, GRDA staff time, and mitigation) related to the violation including the repair, restoration and reclamation of GRDA lands and waters. Other penalties may include, but are not limited to, suspension or revocation of a permit for a period of up to and including three (3) years. Also, GRDA may seek an injunction to prevent any violation or unauthorized activity.

SUBCHAPTER 5. BOATING SAFETY RULES**300:35-5-1. Careful operation of a vessel**

No person shall operate or give permission to operate a vessel in a wake zone at a speed which is other than reasonable and prudent and which shows due regard for the existence of actual or potential hazards and obstacles, or in such a manner as to endanger the life, limb or property of any other person, or in such manner as to create a wake. For the purpose of this rule, "no wake zone" means any area posted with buoys or within one hundred fifty (150) feet of any boat ramp, dock, pier, or anchored or moored vessel.

300:35-5-2. Towing activities

- (a) No person shall operate or give permission to operate a vessel on any waters of this state towing a person or persons using parasails or on water skis, a surfboard, a sail-

board or similar device, nor shall any person engage in parasailing, water skiing, surfboarding, sailboarding or similar activity at any time between the hours from sunset to sunrise or at such time visibility due to other existing conditions is obscured so as to endanger life or property. (63 O.S. Supp.2004, § 4212(B)).

- (b) Pursuant to 63 O.S. Supp.2004, § 4212, the following applies to water skiing, wakeboarding, or similar towing activities:
- (c) No person shall operate or give permission to operate a vessel on any GRDA waters for towing a person or persons using parasails or on water skis, a surfboard, or similar device unless there is in such vessel:
 - (1) a person who is at least eight (8) years old, and who, in addition to the operator, is in a position to observe the progress of the person or persons being towed, or
 - (2) if the vessel is not a personal watercraft, an efficient wide angle convex rear view mirror installed on such vessel in such manner as to permit the person operating said vessel to face the direction of travel and be in a position to observe the progress of the person or persons being towed, or
 - (3) if the vessel is a personal watercraft, two (2) efficient wide angle convex rear view mirrors installed on such vessel in such manner as to permit the person operating such watercraft to face the direction of travel and be in a position to observe the progress of the person or person being towed.
- (d) Water skiing shall be allowed with any watercraft which is designed to accommodate two or more persons.

300:35-5-3. Flotation device required

All vessels shall carry a U.S. Coast Guard approved flotation device (life preserver) for each person on board. The operator of a vessel less than twenty-six (26) feet in length, while under way, shall require each passenger twelve (12) years of age or younger to wear a U.S. Coast Guard approved flotation device. Any person operating or manipulating, or who is a passenger on a personal watercraft, water skis, a sailboard, surfboard, wakeboard, parasail or a similar device shall wear a U.S. Coast Guard approved flotation device.

300:35-5-4. Sitting and standing in vessel

No person shall sit or ride on the sides of a vessel, the back of a vessel, a covered bow or the top of any back seat of a vessel, or stand in a vessel while under way at any speed greater than idle or trolling speed; unless, the vessel is specifically designed for such use.

300:35-5-5. Required equipment

- (a) Each vessel which is less than twenty-six (26) feet in length, other than a personal watercraft, shall be equipped with a paddle or set of oars, anchor, bailing device and fire extinguisher. All other vessels shall be equipped in accordance with Oklahoma state law.
- (b) All vessels must be equipped with proper and working navigations and anchoring lights as provided by law.

300:35-5-6. Prohibited areas

All vessels are prohibited from entering any area within 200 feet below Pensacola, Kerr and Chimney Rock Dams. Vessels are prohibited within 500 feet below said dams during periods of hydropower generation.

300:35-5-7. Night speed limit

It shall be unlawful for any person to operate any vessel upon the waters of GRDA, between the hours of one-half hour after sunset and one-half hour before sunrise at any speed in excess of twenty-five (25) miles per hour.

300:35-5-8. Skiing prohibited

- (a) No skiing is allowed upstream of the Strang Bridge on Lake Hudson, upstream of Twin Bridges on Grand Lake, in Elm Creek east of Grove water intake tower, upstream of the Harbors Marina on Duck Creek or upstream of the Lakemont Shores Ramp on Drowning Creek.
- (b) Wake Jumping is defined as the act of repetitively crossing another vessel's wake in such a fashion that the crossing vessel's hull leaves the water.

300:35-5-9. Persons on personal watercraft

The number of persons riding on a personal watercraft shall be limited to that number as recommended by the manufacturer. Any person being towed behind a personal watercraft shall count as one (1) person riding on a personal watercraft.

SUBCHAPTER 7. VESSELS

300:35-7-1. Inspection, registration and certificate of safety

- (a) All vessels and equipment used for transportation of the public for pecuniary gain or profit shall be subject to inspection during each permit year by GRDA.
- (b) All vessels must be licensed under the Oklahoma Vessel and Motor Registration Act.

300:35-7-2. Loose and derelict vessels

Any loose, derelict or apparently abandoned vessel found on the lakes, or shores of the lakes, may be impounded by GRDA in the manner provided for by state law.

300:35-7-3. Anchorages

Vessel anchorages shall not be allowed off the shore of the waters of GRDA in any one location for a continuous period in excess of forty-eight (48) hours. At the end of a forty-eight (48) hour period, a new anchorage may not be taken up within a distance of one (1) mile of the anchorage previously used. No buoy may be used as an anchorage without the permission of its owner.

300:35-7-4. Vessel operating distance

No person shall operate any vessel, including personal watercraft, within fifty (50) feet in proximity to another vessel when running at speeds of over ten (10) miles per hour.

300:35-7-5. Water muffling

Except for a sanctioned event, no person shall operate a vessel or motor which is not equipped with a muffler or muffler system in good working order. The use of cutouts, removal of mufflers or muffler baffles, cutting or punching of holes in mufflers or otherwise modifying the original muffler or muffling system installed by the manufacturer or any subsequent muffler or muffling system so as to increase or modify the noise level is prohibited.

300:35-7-6. Noise abatement

No person shall operate a vessel that exceeds the noise level of ninety (90) decibels on an A-weighted scale when subjected to a sound level test as prescribed by SAE J2005 within fifty (50) feet of any public or private dock or at any location between the hours of 9:00 p.m. through 9:00 a.m. C.S.T.

300:35-7-7. Wake damage

All vessel operators shall be held responsible for any damage that their wake might cause to property. No person shall operate or give permission to operate a vessel in a wake zone at a speed which is other than reasonable and prudent and which shows due regard for the existence of actual or potential hazards and obstacles, or in such a manner as to endanger the life, limb or property of any other person, or in such a manner as to create a wake. "No wake zone" means any area posted with buoys or within one hundred fifty (150) feet of any boat ramp, dock, pier or anchored or moored vessel.

300:35-7-8. Minimum age

- (a) A person under sixteen (16) years of age shall not operate any vessel powered by a motor or combination of motors in excess of ten (10) horsepower or any sail-powered vessel sixteen (16) feet or greater in length on the waters of this state unless the person has:
 - (1) Successfully completed a boating safety education course or has passed a proc-tored equivalency examination which tests the knowledge of information included in the curriculum of such a course and received a Boating Safety Education Certificate as evidence of successful completion of a boating safety education course or an equivalency examination; and
 - (2) Is accompanied by a competent adult, eighteen (18) years of age or older, who is in a position on or in the vessel to take immediate control of the vessel being operated.

- (b) A person under sixteen (16) years of age shall not operate a personal watercraft unless the person has:
 - (1) Successfully completed a boating safety education course or has passed a proctored equivalency examination which tests the knowledge of information included in the curriculum of such a course and received a Boating Safety Education Certificate as evidence of successful completion of a boating safety education course or an equivalency examination; and
 - (2) Is under the visual supervision by a competent adult, eighteen (18) years of age or older within a distance of five hundred (500) yards.

300:35-7-9. Hazardous acts

- (a) In addition to the rules of travel for operation of vessels upon the lakes, all vessels shall be operated in such a manner as will best safeguard the lives and property of others upon the lakes.
- (b) Any person conducting himself/herself in such a manner as to endanger the health and safety of others upon the lakes or lands of GRDA, or violate any of the statutes of the State of Oklahoma, may be removed from the lakes or lands of GRDA and subject to the penalty of any applicable law.

300:35-7-10. W.R. Holway reservoir

With the exception of the Lake Patrol, vessels powered by internal combustion engines are not permitted on W.R. Holway Reservoir. Swimming is prohibited in the W.R. Holway Reservoir.

300:35-7-11. Penalties

- (a) GRDA law enforcement personnel may verbally order any person, firm, partnership, corporation, or any other entity that is violating any provision found in Title 63 or Title 21 of the Oklahoma Statutes or in any GRDA rules to immediately exit the waters and/or lands of GRDA. Failure to obey the verbal order may result in the law enforcement personnel enforcing the provisions of 63 O.S.2001, § 4221 which provides that such failure to comply will constitute a misdemeanor punishable by a fine not to exceed Two Hundred Fifty Dollars (\$250.00).
- (b) Additionally, any such person or entity, after notice and an opportunity to be heard as provided in Subchapter 21 herein, may be banned from the waters and/or lands of GRDA for a period of time up to, and including, ninety (90) days.

300:35-7-12. Duck Creek boating rules

Due to the unique nature of Duck Creek on the Grand Lake O' the Cherokees, GRDA implements, from time to time, special boating rules for the area. Please contact the GRDA Lake Patrol, located at the GRDA Ecosystems & Education Center in Langley, Oklahoma, or by mail at P.O. Box 70, Langley, Oklahoma 74350, or by calling 918-782-9594 or see the website, www.GRDA.com for the current applicable Duck Creek Boating Rules.

SUBCHAPTER 9. SANCTIONED EVENTS

300:35-9-1. Sanctioned event definition

A sanctioned event is any organized event which has been permitted by GRDA that occurs on the waters and lands of GRDA, including, but not limited to, regattas, motorboat or other boat races, marine parades, tournaments, fishing tournaments, "poker" runs, rock-climbing, and exhibitions.

300:35-9-2. Permit required

No sanctioned event shall be held without a written permit issued by GRDA at least ten (10) days prior to the event.

300:35-9-3. Public and environmental safety

- (a) GRDA law enforcement shall require that any sanctioned event be held in a safe manner and under safe environmental conditions.
- (b) Any vessel operating in an unsafe manner, or without due regard to other vessels, water skiers, swimmers, sanctioned events, restrictive markers or buoys, existing wind or weather conditions, waves, or wakes, may be immediately removed from the waters of GRDA by GRDA law enforcement.

- (c) GRDA may require that any sanctioned event conform to specific environmental requirements for the purpose of protecting fish, wildlife, or habitat. Such requirements shall be specified on the sanctioned event permit. Any sponsor of a sanctioned event, or any participant in such sanctioned event, which fails to follow the environmental requirements may be immediately removed from the waters of GRDA by GRDA law enforcement.
- (d) In addition to the penalties specified herein, any person violating this rule may be subject to criminal sanctions as provided by law and any other penalties as provided in 300:35-7-11.

SUBCHAPTER 11. PERMITS FOR WHARVES, LANDINGS, BUOYS, BREAKWATERS AND DOCKING FACILITIES

300:35-11-1. Private use

No person, firm, association, partnership or corporation may construct, modify the footprint, install, relocate, transfer or operate any private wharf, dock, landing, anchorage, boat house or breakwater (or any other type of floating structure) on waters or lands of GRDA until the applicant submits a completed application and written permission has been issued by GRDA. Upon completion of any modification, installation, or relocation, the private wharf, dock, landing, anchorage, boat house or breakwater shall be subject to a final inspection by GRDA prior to the issuance of a permit. Such inspection will include verification that the wharf, dock, landing, anchorage, boat house or breakwater was constructed, modified, and/or installed in accordance with the application submitted to GRDA and also in accordance with all applicable laws, regulations, rules and building codes.

300:35-11-2. Commercial use

No person, firm, association, partnership or corporation may construct, modify the footprint, install, relocate, transfer or operate any wharf, dock, landing, anchorage, boat house or breakwater (or any other type of floating structure) for pecuniary profit or gain, directly or indirectly, on waters or lands of GRDA until the applicant submits a completed application and written permission has been issued by GRDA. The Federal Energy Regulatory Commission (FERC) must also approve all commercial dock applications prior to installation or modification. Upon completion of any modification, installation, or relocation, the commercial wharf, dock, landing, anchorage, boat house or breakwater shall be subject to a final inspection by GRDA prior to the issuance of a permit. Such inspection will include verification that the wharf, dock, landing, anchorage, boat house or breakwater was constructed, modified, and/or installed in accordance with the application submitted to GRDA and also in accordance with all applicable laws, regulations, rules and building codes.

300:35-11-3. Waivers

- (a) Upon written application and hearing, the Board of Directors of GRDA may grant a waiver, exception or modification to the requirements imposed on private and/or commercial permit applicants. Additionally, the Board of Directors may impose additional requirements upon any such applicant. Such waivers, exceptions, modifications, or additional requirements shall be based upon the totality of the circumstances, in consideration of public and environmental concerns.
- (b) In approving waivers of these rules, the Board shall consider positive and negative impacts to the following:
 - (1) Characteristics, zoning and prevailing permitted uses within a half-mile radius of the proposed activity;
 - (2) Shoreline topography and geometry;
 - (3) Safety, navigation and flood control requirements;
 - (4) Environmental impacts;
 - (5) Potential economic development and tourism benefits;
 - (6) Recreational use impacts; and
 - (7) Statutory mandates.
- (c) The applicant shall be required to give notice and the Board shall allow for public comment before acting on any request for a waiver of these rules.
- (d) Public notice of the waiver request shall be given in accordance with guidelines established by the GRDA staff and shall include:
 - (1) Publication in newspapers of general circulation, including the county in which the property is located; and

- (2) Mailing of written notice, via certified mail, return receipt requested, to all owners of property within a three hundred (300) foot radius of the exterior boundaries of the subject shoreline property. Copies of certified mail receipts must be submitted to GRDA prior to any hearing and before GRDA posts any notice.
- (3) The waiver application shall be posted on GRDA's website for a period of at least thirty (30) days.
- (4) Any other notice as required by GRDA.

300:35-11-4. Electrical inspections

- (a) Each commercial and private boat dock (or any other type of floating structure) shall comply with and be maintained in accordance with all laws, regulations and codes regarding electrical systems and wiring.
- (b) All commercial and private boat docks constructed, modified, relocated, or transferred shall be required to provide to GRDA, within thirty (30) days following completion, modification, relocation or transfer a certificate signed by an Oklahoma licensed electrical inspector, evidencing compliance with all laws, regulations and codes regarding electrical systems and wiring.
- (c) Any dock which has been classified as "Not Electrically Wired" shall be prohibited from installing any permanent electric supply until GRDA has issued a classification change which shall require a certificate from an Oklahoma licensed electrical inspector evidencing compliance with all laws, regulations and codes regarding electrical systems and wiring. No temporary electric supply shall be used and left unattended on a dock or walkway. Any temporary electric supply shall be an approved UL Listed Supply Cord and be in good condition with all electrical connectors attached and in use. Any temporary electric supply shall use GFCI (ground fault circuit interrupter) receptacles.

300:35-11-5. Breakwaters

- (a) A breakwater is a structure used to protect docks, shoreline, or other structures by stopping or slowing waves or wakes.
- (b) No breakwater shall be placed in the waters of GRDA without a permit.
- (c) Breakwaters must be anchored in permanent locations and shall have a minimum of proper solar lighting installed at least every 25 feet across the entire structure. The owner of a breakwater shall be responsible for maintaining it in a safe and environmentally acceptable manner.

300:35-11-6. Buoys

- (a) No buoy shall be placed or replaced on the waters of GRDA without a permit from GRDA.
- (b) All buoys placed on the lakes shall be commercially manufactured units approved by the Lake Patrol and shall have reflective tape or paint on the top side. Any buoy not maintained in its proper location shall be subject to removal by GRDA. Any buoys, lighthouses or other types of markers placed with the permission of or installed and maintained by GRDA are primarily warning devices for the convenience of the public and should not be relied upon solely as navigational aids. GRDA assumes no liability or responsibility for loss or damages to life or property arising out of the public's reliance upon said devices.

300:35-11-7. Rail-systems, tram systems, fences, and boat ramps

- (a) No private or commercial rail-systems, tram systems, fences, or boat ramps shall be constructed on GRDA property or waters without first obtaining a permit.
- (b) A rail-system is used to accommodate a watercraft storage facility where standard dock installations are not applicable or desirable.
- (c) A tram-system is a device capable of transporting people to and from a boat dock (or other floating structure) either for private, public or commercial use. Tram-systems are typically utilized on steep inclines associated with cliffs, bluffs, or to accommodate individuals with physical limitations.
- (d) Railways, tram systems, and fences shall be maintained in a manner such that all electrical systems are to code, that environmental guidelines are met, and that the structures are safe and pose no risk or threat to the public.
- (e) No boat ramp shall be constructed unless the ramp may be accessed by at least twenty-five (25) homeowners in a residential community or the public at large. Approval from

the U.S. Army Corps of Engineers, the Federal Energy Regulatory Commission and/or other state and federal agencies may also be required.

300:35-11-8. Removal and cancellation for failure to comply

- (a) If, at any time, any structure, private or commercial, is not installed in accordance with the plans and specifications approved by GRDA, fails to meet current minimum standards adopted by GRDA, is not kept in good state of repair, has not been inspected by a licensed electrical inspector as provided herein, or upon failure of payment of any fee when due, GRDA, after notice and opportunity to be heard in accordance with Subchapter 21 herein, shall have the right to remove or cause to be removed from GRDA's waters and lands such structure and/or cancel any license or permit in the event the owner fails to repair or remove the same after being notified by GRDA to repair or remove the same.
- (b) Any loose or abandoned structure located on GRDA land or water shall be impounded by GRDA and the owner shall be responsible for any expense incurred by GRDA.
- (c) In the event GRDA removes a dock, wharf, boat house, breakwater, buoy, fence, rail-system, tram system or any other structure, private or commercial, the owner of same shall be required to pay all costs of such removal and may be required to pay all costs related to the repair and reclamation of GRDA lands and waters associated with the removal. Any expenses which remain unpaid in excess of 45 days shall accrue interest at the rate of 10% per annum.

300:35-11-9. Location and site to be returned in good condition

Within thirty (30) days after expiration or termination of any permit, the holder shall remove all works and facilities from the lakes and lands of GRDA and shall leave the premises in as good condition as they were before the construction of said works and facilities.

300:35-11-10. GRDA sole judge

GRDA shall be the sole judge as to whether or not structures are constructed and maintained in accordance with these Rules and Regulations, or kept and operated in a good and safe condition.

300:35-11-11. Expiration of permit

- (a) The construction, modification, installation, and final GRDA approval of private docks, landings, anchorages, boat houses, breakwaters, buoys, rail-systems, tram-systems, and fences must be completed within two (2) years from the date the permission to construct or modify is issued by GRDA.
- (b) The construction, modification, installation, and final GRDA approval of commercial docks, landings, anchorages, boat houses, breakwaters, buoys, rail-systems, tram-systems, and fences, walls must be completed within seven (7) years from the date the permission to construct or modify is issued by GRDA and, if applicable, the Federal Energy Regulatory Commission.
- (c) Prior to the expiration of the permission to construct or modify, the GRDA Board of Directors may extend the time in which such structure must be completed.
- (d) If the permit expires, the permit is null and void.

300:35-11-12. Dock modification prohibited

Any person, firm, corporation, business or other entity must obtain permission from GRDA prior to making any modification, change, addition or improvement to an existing dock, landing, anchorage, boat house, breakwater, buoy, rail-system, tram system, or fence. If any such structure will be reconfigured, modified, or expanded from the plans and specifications originally submitted for the construction of the structure, such change must be approved in advance by GRDA. Approval from the Federal Energy Regulatory Commission (FERC) may also be required. This rule applies to both private docks and commercial docks.

SUBCHAPTER 13. PERMITS FOR DIKES, EXCAVATIONS, DREDGINGS, EROSION CONTROL DEVICES, RETAINING WALLS, AND SHORELINE STABILIZATION

300:35-13-1. Permit required

- (a) The contour, elevation or surface of any of GRDA's lands or the reservoir bed shall not be changed in any manner whatsoever by the construction of retaining walls, erosion

control devices, dams, dikes, jetties, channels, canals or landings until and unless a permit has been issued by GRDA.

- (b) No person, firm, partnership, corporation or other entity may excavate, dredge, stabilize or make any improvement or change upon GRDA land or waters until a permit shall have been issued by GRDA. Approval from the Federal Energy Regulatory Commission (FERC), the U.S. Army Corps of Engineers (Corps), and other state and local agencies may also be required. All such activities shall be performed in strict accordance with the plans and specifications approved by GRDA (and, if required, by FERC and the Corps). Additionally, an approved wetland delineation report and metals testing report shall be required prior to the commencement of any dredging or excavation activity.

300:35-13-2. Erosion control devices

- (a) Erosion control devices may be permitted to protect the existing shoreline. These types of structures must not be for the purpose of landscaping or beautifying the area and will only be permitted if GRDA staff determines that the device is necessary for effective erosion control. In some cases, permission may also be required from the U.S. Army Corps. of Engineers.
- (b) During construction activities, GRDA shall require that appropriate erosion and sediment control measures be utilized to prevent pollution of GRDA waters.
- (c) All material which accumulates behind sediment control devices shall be removed from GRDA land and placed at an upland site above the applicable flowage easement.
- (d) Disturbed sites must be promptly stabilized with GRDA approved methods associated with seeding, vegetative planting, erosion control netting, and/or mulch or sediment stabilization material.
- (e) Vegetation removed for erosion control projects must be replaced with GRDA approved species of native vegetation.

300:35-13-3. Dredging

- (a) All dredging activities on GRDA-owned property require a permit from GRDA. Dredging is defined as the activities associated with digging, gathering, removing, or deepening of any channel, depression, or cavity to achieve sufficient navigable water depth (i.e. 8' at 742' PD Grand Lake, or 619' msl Lake Hudson. The U.S. Army Corps of Engineers may also require a permit for dredging activities. Additionally, the Federal Energy Regulatory Commission must approve all dredging activities on GRDA waters requiring the removal of more than 2,000 cubic yards of material. A wetland delineation study must accompany every application and the study must be conducted by a GRDA approved wetland delineation specialist. Dredging activities must be conducted in accordance with the GRDA dredging management plan. These approvals and permits must be obtained prior to commencing any dredging activity.
- (b) Dredging of individual boat channels shall be approved only when GRDA determines there is no other practicable alternative to achieving sufficient navigable water depth and the action would not substantially impact sensitive resources.
 - (1) No more than two thousand (2,000) cubic yards of material shall be removed for any individual boat channel.
 - (2) Materials from dredging activities must be placed in accordance with all applicable local, state, and federal regulations at an upland site above the applicable flowage easement.
 - (3) Dredged shoreline perimeter shall have a slope ratio of at least 3:1 and must allow for the drainage of water.
 - (4) Dredging activities are not authorized during the months of April, May, June and July to avoid potential impact to fish spawning habitat.
 - (5) Dredging within vegetated wetlands is not authorized and will not be permitted.

300:35-13-4. Shoreline stabilization and retaining walls

- (a) GRDA may issue permits allowing adjacent residential landowners to stabilize eroding shorelines on GRDA-owned residential access shoreland. GRDA will determine if shoreline erosion is sufficient to approve the proposed stabilization treatment. No shoreline stabilization activities may be conducted until a permit from GRDA is issued. Shoreline stabilization may include i) the use of biostabilization, ii) the use of riprap to stabilize eroded shorelines, or iii) the use of a retaining wall.

- (b) Biostabilization of eroded shorelines.
 - (1) Moderate contouring of the bank may be allowed to provide conditions suitable for planting of vegetation.
 - (2) Tightly bound bundles of coconut fiber, logs, or other natural materials may be placed at the base of the eroded site to deflect waves.
 - (3) Willow stakes and bundles and live cuttings of suitable native plant materials may be planted along the surface of the eroded area.
 - (4) Native vegetation may be planted within the shoreline management zone to help minimize further erosion.
 - (5) Riprap may be allowed along the base of the eroded area to prevent further undercutting of the bank.
- (c) Use of riprap to stabilize eroded shorelines.
 - (1) The riprap material must be quarry-run stone, natural stone, or other material approved by GRDA.
 - (2) Rubber tires, concrete rubble, or other debris shall not be used to stabilize shorelines.
 - (3) Riprap material must be placed so as to follow the existing contour of the bank.
 - (4) Site preparation must be limited to the work necessary to obtain adequate slope and stability of the riprap material.
- (d) Use of retaining walls for shoreline stabilization.
 - (1) Retaining walls shall be allowed only where the erosion process is severe and GRDA determines that a retaining wall is the most effective erosion control option.
 - (2) GRDA shall inspect the site of the proposed construction and consider whether the planting of vegetation or the use of riprap would be adequate to control erosion.
 - (3) GRDA shall determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline.
 - (4) The retaining wall must be constructed of stone, concrete blocks, poured concrete, or other materials acceptable to GRDA. Railroad ties, rubber tires, broken concrete (unless determined by GRDA to be of adequate size and integrity), brick, creosote timbers, and asphalt are not allowed.
 - (5) Reclamation of GRDA land that has been lost to erosion is not allowed.
 - (6) No existing retaining wall shall be repaired or rebuilt without a permit from GRDA. Repairs must be made with approved and acceptable material by GRDA.

300:35-13-5. Penalty [REVOKED]

300:35-13-6. Expiration of permit

- (a) Any permit issued pursuant to Subchapter 13 of these rules must be completed within two (2) years from the date the permit or modification approval is issued by GRDA.
- (b) Prior to the expiration of the dredging permit, the GRDA Board of Directors may extend the time in which such dredging activities must be completed.
- (c) If the permit expires, the permit is null and void.

SUBCHAPTER 15. COMMERCIAL USE OF THE LAKES AND LANDS OF GRDA

300:35-15-1. Definition

The keeping or operation of one (1) or more vessels, surfboards, aquaplanes, skis, personal watercraft or like devices, docks, landings, anchorages, marine railways, dry docks or any concession, for pecuniary profit or gain on the water of the lakes or upon the property of GRDA, the carriage of any person, or persons, or of any goods, wares, merchandising or other freight, for a valuable consideration, whether directly or indirectly flowing to the owner, charterer, operator, agent or any other person, shall be deemed commercial use of the waters and lands of GRDA and will be allowed only after a permit has been issued.

300:35-15-2. Dock installer's permit

- (a) Any person, firm, partnership, corporation, or any other entity operating for pecuniary gain or profit or any business that, directly or indirectly, is engaged in the building, placing, transfer, demolition or removal, of piers, wharves, landings, anchorages, floating boat houses, docks, barges or other floating structures of a stationary or semi-stationary nature upon the waters of GRDA shall obtain an annual permit. Such person or entity shall not build, place,

transfer, demolish or remove a pier, wharf, landing, anchorage, floating boat house, dock, barge or other floating structure of a stationary or semi-stationary nature upon the waters of GRDA until a Dock Installer's permit has been issued by GRDA.

- (b) At the time a dock is installed or transferred, the dock installer shall post a permanent sign visible on the dock. The sign shall include the name of the dock installer, the dock installer's phone number and the year the dock was installed. The sign shall measure at least 5" x 5".
- (c) A dock installer shall build, construct, place, transfer, demolish and remove docks in strict compliance with the plans and specifications approved by GRDA and in accordance with all applicable laws, regulations, rules and building codes. All styrofoam, trash and construction materials shall be disposed in an environmentally appropriate fashion and shall not be allowed to remain or float in the waters of GRDA.

300:35-15-3. Penalty for violation of dock installer's permit [REVOKED]

300:35-15-4. Dredging contractor's permit

- (a) Any person, firm or corporation operating for pecuniary gain or profit or any business that, directly or indirectly, is engaged in the performance of dredging activities or excavation operations upon the lands or waters of GRDA shall obtain an annual permit.
- (b) A dredging contractor shall not perform any activities upon the lands or waters of GRDA until a Dredging Contractor's permit has been issued. Any such activity shall be performed and completed in accordance with GRDA requirements and in strict compliance with the application and terms and conditions of the permit.

300:35-15-5. Penalty for violation of dredging contractor's permit [REVOKED]

300:35-15-6. Commercial boat operators permit

- (a) Any person, firm or corporation operating for pecuniary gain or profit or any business that, directly or indirectly, is engaged in the performance of the carriage of any person, or persons, or of any goods, wares, merchandising or other freight, for a valuable consideration, whether directly or indirectly flowing to the owner, charterer, operator, agent or any other person, upon the lands or waters of GRDA shall obtain an annual permit.
- (b) No vessel, while carrying passengers for hire, shall be operated or navigated except in charge of a person covered by a policy of insurance that clearly covers the scope of duties resulting from such commercial enterprise.

300:35-15-7. Penalty for violation of commercial boat operators permit [REVOKED]

SUBCHAPTER 17. RAW WATER PERMITS

300:35-17-1. Definition

- (a) For the purpose of these Rules and Regulations, the following terms shall apply "domestic and household use" shall mean water that is taken, used and consumed by the permittee in and upon his premises for all usual and ordinary household uses and purposes which shall include sprinkling and watering lawns and gardens of not to exceed three (3) acres. The term "irrigation" shall mean water that is taken, used and consumed by the permittee in and upon the premises covered by the permit for the purpose of irrigating lands, crops and vegetables growing in and upon said lands by ditches, canals, sprinkling systems and such other usual and ordinary means of irrigation.
- (b) Water rights granted under these Rules and Regulations shall not be construed as the supplying or furnishing of water for domestic purposes to the public; such permits only grant the permittee the right to take and use the water as provided by these Rules and Regulations.
- (c) Commercial use of water requires a written contract with GRDA.

300:35-17-2. Permit required

The taking of and using waters of GRDA, including water from Ft. Gibson reservoir for domestic and household use or irrigation use shall be allowed only after an annual permit has been issued by the Grand River Dam Authority.

300:35-17-3. Irrigation billing [REVOKED]

300:35-17-4. Location of diversion

The granting of such permit to take water from Grand Lake or Lake Hudson shall authorize the permittee to locate upon the lands of GRDA the facilities necessary to take such water covered by the permit; provided, the location and manner of diversion is first approved by GRDA; however, a permit for the use of water from Fort Gibson Lake shall give the permittee no permission or right to take or use any lands for any purpose whatsoever. (The lake bed and shorelands of Fort Gibson Lake are owned by the United States of America and are under the jurisdiction and control of the United States Army Engineers, District Office, Tulsa, Oklahoma.)

300:35-17-5. Construction and maintenance

The permittee, upon being granted a permit, shall construct and maintain all taking and diversion facilities according to plans and specifications and in a proper and safe manner that will prevent waste and loss of water and will not pollute or contaminate the lake water. All such facilities shall be subject to inspection by GRDA.

SUBCHAPTER 19. RIGHTS OF ABUTTING LANDOWNERS

300:35-19-1. Abutting landowner's rights

- (a) No permit, private or commercial, shall issue for any of the facilities described in these Rules and Regulations which would deprive the owner of land adjacent to the shoreland or lakefront or abutting thereon of any anchorage, wharf, dock, boat dock, houseboat and landing privileges.
- (b) GRDA may designate areas closed to such use where, in its opinion, such use would interfere with the health or safety of the public or with the proper conduct of GRDA's business.

SUBCHAPTER 21. ADMINISTRATION OF RULES AND HEARINGS

300:35-21-1. General manager duties

The General Manager of the Grand River Dam Authority is authorized to administer these Rules and Regulations. The General Manager, or the General Manager's designee, shall issue all permits and licenses provided for herein.

300:35-21-2. GRDA Board of Directors duties

The Board of Directors of the Grand River Dam Authority retains the right to authorize and issue any and all permits and licenses not specifically provided for in these Rules and Regulations. No fees, charges or any of these Rules and Regulations shall be changed in any manner without the approval of the Board of Directors.

300:35-21-3. Hearings for violation of rules

- (a) The general procedures for hearings established by this Subchapter shall apply to proceedings conducted by GRDA for such purposes as suspending or revoking permits, enforcement matters, and assessing costs.
- (b) Hearings may be initiated by GRDA staff by issuance of a Notice of Violation or by filing a Petition with the General Manager's Executive Secretary.
- (c) For purposes of this subsection, Respondent shall be the person in whose name the permit is currently listed. The Respondent shall be the only person entitled to notice under this subsection.
- (d) The Notice of Violation or Petition shall inform the Respondent of the matter at issue and, if applicable, the alleged violation. Each Notice of Violation or Petition shall name the Respondent(s) and provide a brief statement of the facts and the relief requested. The Notice of Violation or Petition shall be signed by a GRDA staff member.
- (e) The Notice of Violation or Petition shall specify that the Respondent may file a response, how and where the response may be filed, the number of days or a date certain within which to file the response, state any scheduled hearing date, place and time or include notice of the opportunity to request an administrative hearing, and shall be served on the named Respondent by certified mail, return receipt requested.

300:35-21-4. Hearing officer

The General Manager, or his designee, shall preside at any hearing. The General Manager may contract with an individual that is not employed by GRDA to preside at any hearing. The functions of the hearing officer shall commence upon his/her designation

and terminate upon the entry of a Final Order issued by the Board of Directors. The hearing officer shall have the duty to conduct a fair hearing, to take all necessary action to avoid delay, and to maintain order. The hearing officer's authority shall include, but not be limited to:

- (1) Arrange and change the date, time and place of hearings and issue notice thereof;
- (2) Hold conferences to settle, simplify or determine the issues in a hearing, or to consider other matters that may aid in the expeditious disposition of the hearing;
- (3) Require parties to state their position in writing with respect to the various issues in the hearing and to exchange such statements with all other parties;
- (4) Administer oaths and affirmations;
- (5) Examine witnesses and direct witnesses to testify;
- (6) Receive, rule on, admit, exclude or limit evidence;
- (7) Rule on pending motions and procedural items.

300:35-21-5. Report and record

As soon as practicable after the time for the parties to file proposed findings of fact and conclusions of law has expired, the hearing officer shall prepare a report containing the following:

- (1) Findings of fact and conclusions of law with the reasons therefore.
- (2) Recommendation to the GRDA Board of Directors.

300:35-21-6. Final order

- (a) As soon as practicable after the hearing officer has sent his recommendation to the GRDA Board of Directors as provided in 300:35-21-5, the Board of Directors shall adopt, amend, or reject any findings or conclusions of the hearing officer, or may remand the proceeding for additional argument or the introduction of additional evidence at a hearing held for that purpose.
- (b) At the conclusion of the proceedings and review of the record by the Board of Directors, the Board of Directors shall issue a final order reflecting the findings of fact, conclusions of law, and specifying the action to be taken.

300:35-21-7. Administrative appeal

A challenge from the Board of Director's Final Order shall be made in accordance with Oklahoma law.

300:35-21-8. Noncompliance, violations and penalties

Any person, firm or corporation that fails to comply with, or violates any Rule promulgated by GRDA shall, after notice and an opportunity for hearing as provided for herein, be required to reimburse GRDA for any direct cost and overhead incurred as a result of such failure to comply or violation. Such costs may include, but are not limited to, the costs associated with the repair, restoration and reclamation of the lands and waters of GRDA and any storage costs for the Respondent's personal property. Additionally, GRDA may cancel any permit or license which has been issued in connection with said boat, structure or facility and may remove or cause it to be removed from GRDA's lands and waters.

SUBCHAPTER 23. FOUR-WHEEL VEHICLES, OFF-ROAD VEHICLES AND ALL TERRAIN VEHICLES

300:35-23-1. Designated areas

In the interest of public safety, there shall be no four-wheel vehicles, off-road vehicles or all terrain vehicles on GRDA lands except in designated areas.

300:35-23-2. Passengers prohibited

No passengers are allowed on three (3) wheelers, four (4) wheelers, or motorcycles.

300:35-23-3. Low gear required

Low gear only except on trails posted at speed limits in excess of five (5) MPH.

300:35-23-4. Racing prohibited

No racing on GRDA property is allowed except as other permitted by a sanctioned event permit.

300:35-23-5. Lights required

All vehicles, including motorcycles, must be equipped with working front and rear lights.

300:35-23-6. Roll bar and seat belt requirements

Dune buggies and 4x4 vehicles must have a roll bar sufficient to support the weight of the vehicle and must have a seat belt for each passenger.

300:35-23-7. No liability

GRDA shall not be liable and hereby disclaims any responsibility for any and all injuries and accidents, up to and including death, which may occur as a result of participating in off-road activities. Each driver and passenger rides at his/her own risk and assumes all risks of the activity.

300:35-23-8. Alcoholic beverages prohibited

Alcoholic beverages, including low point beer, are prohibited from areas in which off-road activities occur.

300:35-23-9. Signage

Drivers shall obey all signs posted on GRDA land including areas that are off limits and speed designations.

300:35-23-10. Penalty

- (a) GRDA law enforcement personnel may verbally order any person that is violating these rules to immediately exit the lands of GRDA.
- (b) Additionally, any person, after notice and opportunity to be heard in accordance with Subchapter 21 herein, may be banned from the lands of GRDA for a period of time up to, and including, ninety (90) days.

SUBCHAPTER 25. [RESERVED]

SUBCHAPTER 27. VEGETATION MANAGEMENT PLAN

300:35-27-1. Scope and intent

Shoreline vegetation protects and preserves a healthy vegetative buffer along the shoreline to maintain and enhance the natural and aesthetic resources of the GRDA lakes. Vegetation can help stabilize the shoreline, prevent erosion, and protect water quality. A natural vegetation buffer improves water quality by filtering and trapping organics and chemical pollutants. A vegetative buffer can enhance the natural appearance of the shoreline. These rules provide the objectives for maintaining GRDA Project Land.

300:35-27-2. Applicability

- (a) This subchapter governs vegetation management activity on GRDA Project Land only, and is not applicable on land not owned by GRDA or GRDA owned land that is not Project Land. "Project Land" means the land and other natural resources owned by GRDA that fall within the project boundary identified in the FERC licenses for the Pensacola Project, the Markham Ferry Project, and the W.R. Holway Project.
- (b) Except as otherwise provided for in these rules, no person may engage in any vegetation management activity on GRDA Project Land without first obtaining a permit from GRDA. "Vegetation Management Activity" means any activity that results in or is intended to result in the alteration of the existing physical landscape of Project Land. It includes the trimming, cutting, pruning, mowing, planting or removal of any tree, shrub or other vegetation.
- (c) Floating debris, driftwood, downed limbs/branches, litter, and trash may be removed from GRDA Project Land at any time and does not require GRDA approval, provided the method of removal complies with these rules.
- (d) This subchapter does not apply to utility providers possessing an easement on Project Land. "Utility providers" includes, but is not limited to, public service companies, municipal utilities, electric companies and cooperatives, telecommunication companies, and rural water districts.

300:35-27-3. Permits

- (a) Individuals or entities wishing to engage in a Vegetation Management Activity are required to apply for and obtain a permit from the GRDA Office of Ecosystems Management before conducting any such activities.
- (b) In order to be eligible to apply for a permit, an individual or entity must be the owner of the land adjacent to the GRDA land for which the permit is sought. If an applicant is not the adjacent landowner, the landowner must consent to the application.
- (c) GRDA will consider applications to allow the removal of trees, shrubs, and vegetation for certain conditions and purposes including:
 - (1) Hazardous trees which pose substantial risk to the public, adjacent property, or properly permitted structures on Project Land.
 - (2) Trees, shrubs, and vegetation which are dead, dying, or diseased.
 - (3) Trees, shrubs, and vegetation considered to be an invasive or noxious species by the Office of Ecosystems Management.
 - (4) Trees, shrubs, and vegetation which may contribute to unsafe conditions by creating visibility problems (sight line) near waterways, roadways, trails, paths, or other access points, provided nothing in this section shall allow removal of vegetation to improve views of docks from land.
 - (5) Trees that are crowded from natural competition or that were overplanted may be selectively removed to maintain spacing for optimal tree growth and function.
 - (6) Trees, shrubs, and vegetation may be selectively removed to create and maintain an access corridor between an adjacent landowner's property and the shoreline. Corridors must consist of natural materials such as native grass, wood chips, or gravel/crushed rock. Placement of such must not involve earth moving or soil disturbance and must minimize ground disturbance and vegetation removal.
 - (7) Trees, shrubs, and vegetation may be selectively removed when necessary to facilitate another permitted use of Project Land.
 - (8) Trees, shrubs, and vegetation may be selectively removed for the creation and/or maintenance of a manicured lawn or for general landscaping purposes.
- (d) GRDA will consider applications to allow the pruning or trimming of trees, shrubs, and vegetation for certain conditions and purposes including:
 - (1) Hazardous sections which pose substantial risk to the public, adjacent property, or properly permitted structures on Project Land.
 - (2) Dead, dying, or diseased sections to improve appearance and health.
 - (3) Pruning of trees for crown cleaning, crown thinning, and crown restoration.
 - (4) Pruning of trees, shrubs and vegetation to enhance the view of the lake.
 - (5) Pruning or trimming of trees, shrubs and vegetation for the creation and/or maintenance of a manicured lawn or for general landscaping purposes.
- (e) GRDA will consider applications to allow for other Vegetation Management Activities including:
 - (1) Landscape plantings.
 - (2) Removal or pruning for public utility easements.
 - (3) Planting, removal, or pruning for shoreline stabilization purposes.
- (f) In determining whether to grant a permit, the following will be considered and weighed as appropriate:
 - (1) Current permitted uses in the surrounding area.
 - (2) The aesthetic and biological impacts of pruning or removal on the vegetation.
 - (3) The potential for replacement with more desirable vegetation.
 - (4) The potential impacts on the aesthetic quality of the surrounding area, with consideration given to the views from the land and from the water.
 - (5) Potential environmental impacts on soils, shoreline/slope stability, water quality, and wildlife habitat.
 - (6) Special consideration for unique varieties, vegetation of great age, rare vegetation, or vegetation of horticultural or historical significance.
 - (7) Special consideration for native vegetation in undeveloped landscapes.
- (g) Permit applications shall be subject to the following actions:
 - (1) Approved as submitted.
 - (2) Approved with modifications/conditions. Examples of modifications or conditions that may be placed on a permit include limiting the allowed activities,

requiring activities be performed in a specific manner to minimize impact, and requiring mitigation or other enhancement measures.

- (3) Rejected.
- (h) Permits shall be valid for one year from the date of issuance and all Vegetation Management Activity authorized must be completed within that period.
- (i) No permit shall be required for a utility provider possessing an easement on Project Land to perform Vegetation Management Activities necessary to exercise its rights pursuant to that easement.

300:35-27-4. Vegetation management

- (a) The following acts are prohibited on GRDA Project Land:
 - (1) Herbicides shall not be used for control/removal of vegetation.
 - (2) Pesticides shall not be applied on GRDA land.
 - (3) The sale of any tree or other vegetation that is removed or cut is prohibited.
 - (4) Fertilizers shall not be applied on GRDA land.
 - (5) Vegetable gardens are prohibited on GRDA land.
 - (6) The introduction or planting of invasive plant species is prohibited on GRDA Project Lands.
 - (7) Any Vegetation Management Activity that results in significant soil disturbance is prohibited.
- (b) Machinery or equipment may be used to accomplish a permitted Vegetation Management Activity, subject to the following:
 - (1) Unless prohibited by GRDA, the following may be used in the performance of permitted activities:
 - (A) Hand-held tools including chainsaws and brush cutters.
 - (B) Mechanized equipment with a maximum power output not greater than 30 horsepower (hp), provided the use does not result in the unauthorized movement of soil, rocks, or existing live vegetation.
 - (2) The use of machinery with a maximum power output greater than 30 hp may be allowed with prior express approval from GRDA.

300:35-27-5. Waivers

Since every possible situation cannot be anticipated, GRDA reserves the absolute discretion to make appropriate exceptions or modifications to the Vegetation Management Plan and the requirements of same. GRDA may impose additional requirements, including the requirements that the permit holder provide a survey to verify the permitted activity was completed in conformance with GRDA requirements.

300:35-27-6. FERC approval

In accordance with its licenses with the Federal Energy Regulatory Commission (FERC), GRDA may only permit incidental vegetation disturbance and removal. Therefore, in certain instances an application for a permit to remove vegetation must be approved by both GRDA and FERC. GRDA reserves the right to request FERC to approve any application for a permit.

300:35-27-7. Penalties

After notice and an opportunity to be heard in accordance with Subchapter 21 herein, a permit issued pursuant to these rules may be suspended or revoked by GRDA upon a finding that the permit holder has violated any rule provided for herein. Additionally, the holder of the permit may be assessed costs which may include expenses necessary for the reclamation, restoration, and/or clean-up of GRDA land and waters.

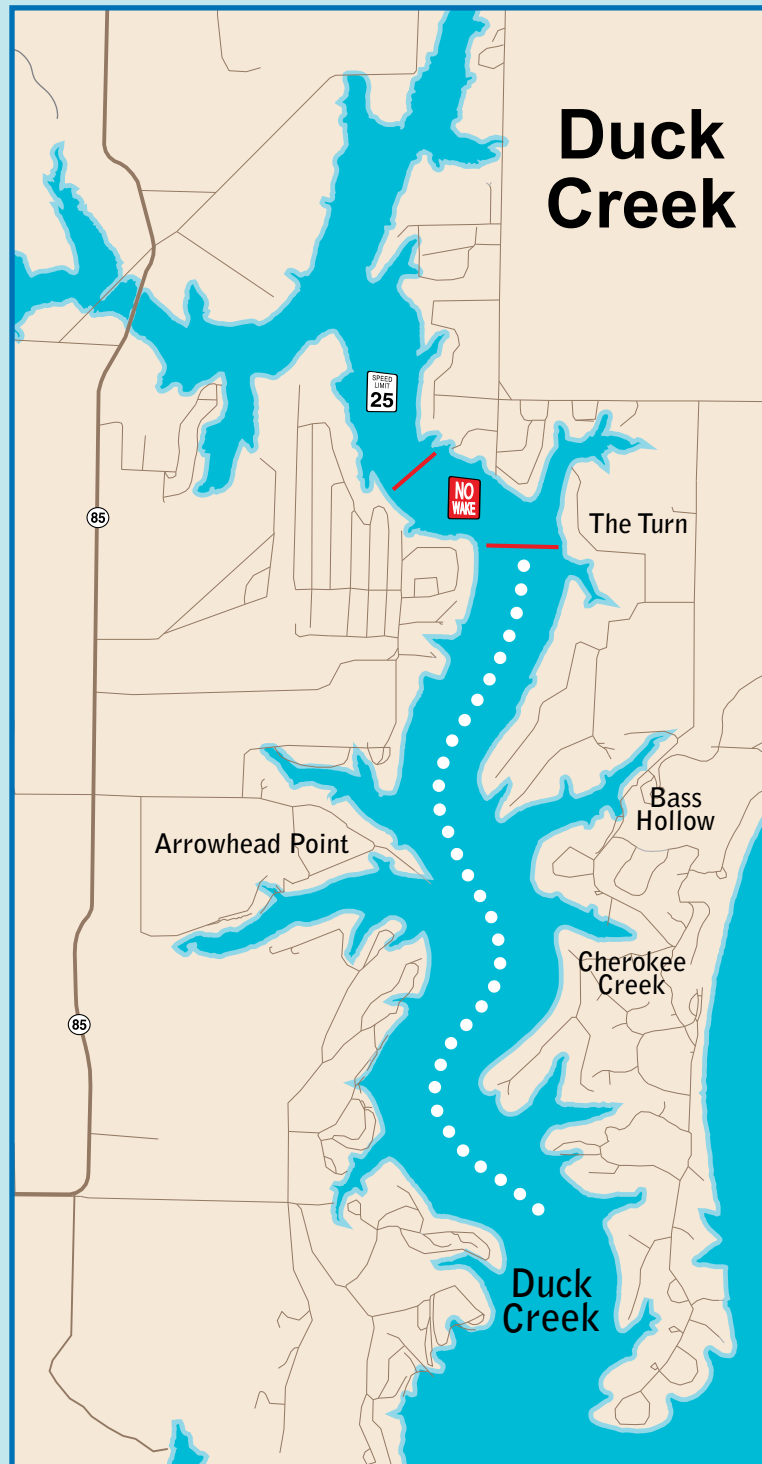
300:35-27-8. General permits for natural disasters and other emergencies

In the event a natural disaster or other emergency situation causes significant vegetation damage or debris accumulation within the project boundary to the extent that site specific permitting is impractical or would result in undue delay, the General Manager may issue a general vegetation permit governing all management activities within an affected area in lieu of requiring site specific permits. A general permit shall clearly identify the scope of allowed activities, the areas in which the permit is applicable, and the period of time for which the permit is valid.

Duck Creek Rules

The following lake rules apply for the Duck Creek area on Grand Lake:

- **All watercraft wider than 8.5 feet shall** operate at "Idle" and avoid producing a wake at all times in Duck Creek. (If the vessel is wider than 8.5 ft, Duck Creek is no wake for the vessel at all times regardless of length).
- **All watercraft longer than 30 feet** shall operate at "Idle" and avoid producing a wake at all times in Duck Creek. (If the vessel is longer than 30 ft, Duck Creek is no wake for the vessel at all times regardless of width).
- **All watercraft smaller than both measurements listed above** may operate on plane not to exceed 30 mph in Duck Creek from official sunrise to official sunset.
- **All watercraft must** "Idle" and avoid producing a wake from official sunset to official sunrise (night time) in Duck Creek between May 1 and Oct 1. (No wake in Duck Creek for all vessels at night).
- **All Watercraft must** stay to the right of the center lane of buoys and at least 150 feet away from any dock, breakwater, structure, or shoreline.
- On the actual day of the Duck Creek Fireworks, all watercraft shall operate at "Idle" and avoid producing a wake at all times in Duck Creek (all day, all night).
- As shown on the map provided, the area between the two red lines (indicated by buoys on the water) known as "The Turn" is a no wake zone for all vessels at all times.
- Areas north of "The Turn" are No Skiing areas, and the vessel size restrictions mentioned above apply to this area as well.



GRDA offers free boater safety courses

As part of a continuing effort to educate the public about Oklahoma's Kyle Williams Boating Safety Education Act, the Grand River Dam Authority offers free boater safety courses each spring and summer.

The Act, which became Oklahoma law in January 2007, prohibits youth between the ages of 12 and up to 16 years old without a valid driver's license, from operating any vessel powered by a motor of more than 10 horsepower or a sailing vessel 16-feet or longer without first completing an approved boater safety course. Children in this age group are also required to have a certification documenting their completion of the course. The free courses taught by the GRDA Police provide the necessary certification for participants.

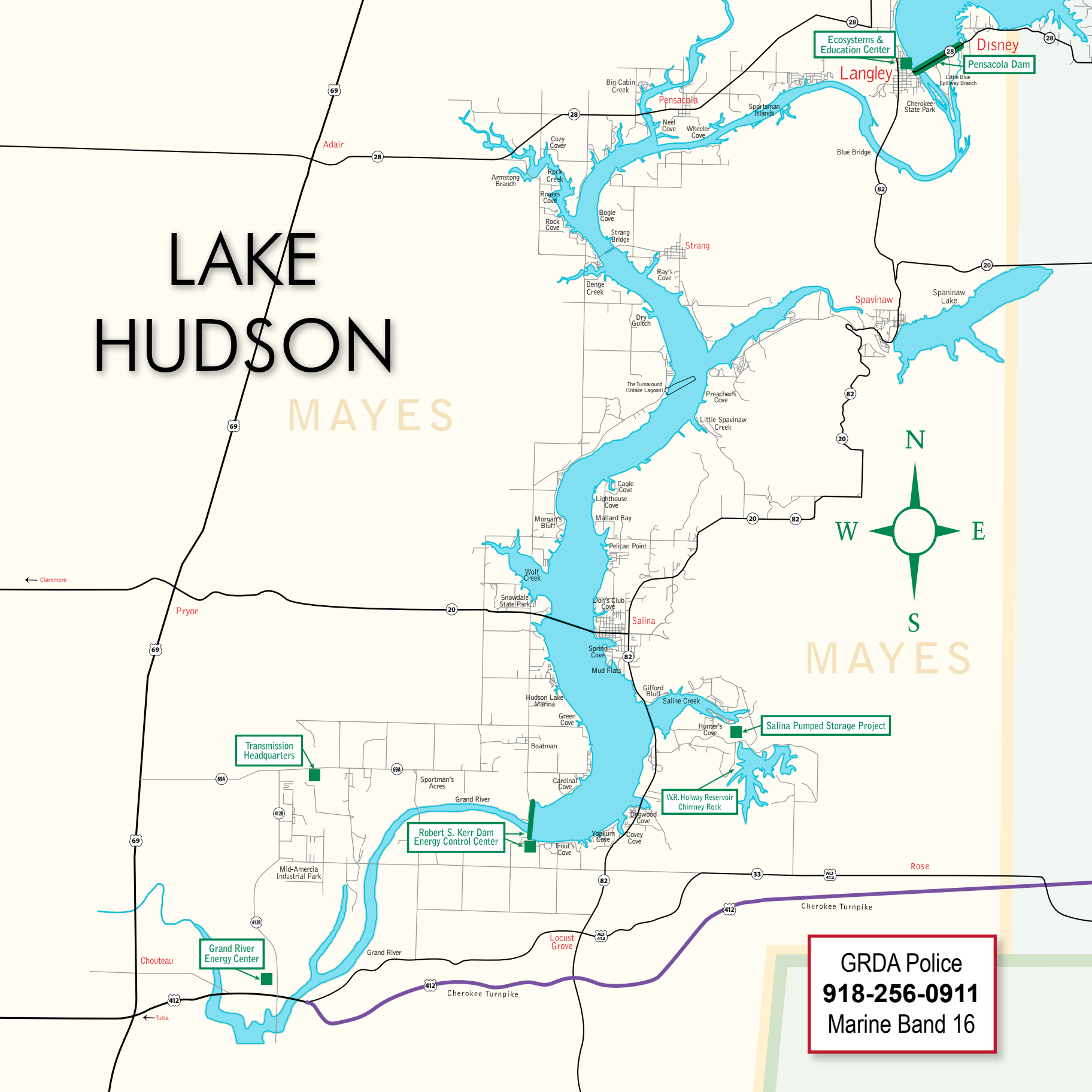
**BOAT SAFE,
BOAT SMART,
BOAT CERTIFIED!**

Courses take place at the GRDA Ecosystems and Education Center in Langley. They are offered on selected Saturdays and typically last from 9 A.M. to 4 P.M. While the law requires ages 12 to 16 to take the course before boating, GRDA encourages adults to participate as well. GRDA has been offering the free boating courses since the law went into effect.

For more information on the class and the current schedule, contact GRDA at 918-256-0644.

LAKE HUDSON

MAYES



GRDA Police
918-256-0911
Marine Band 16

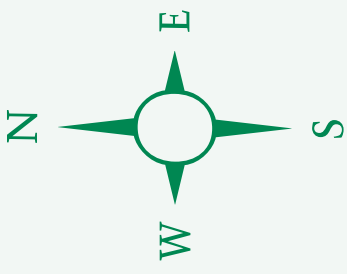
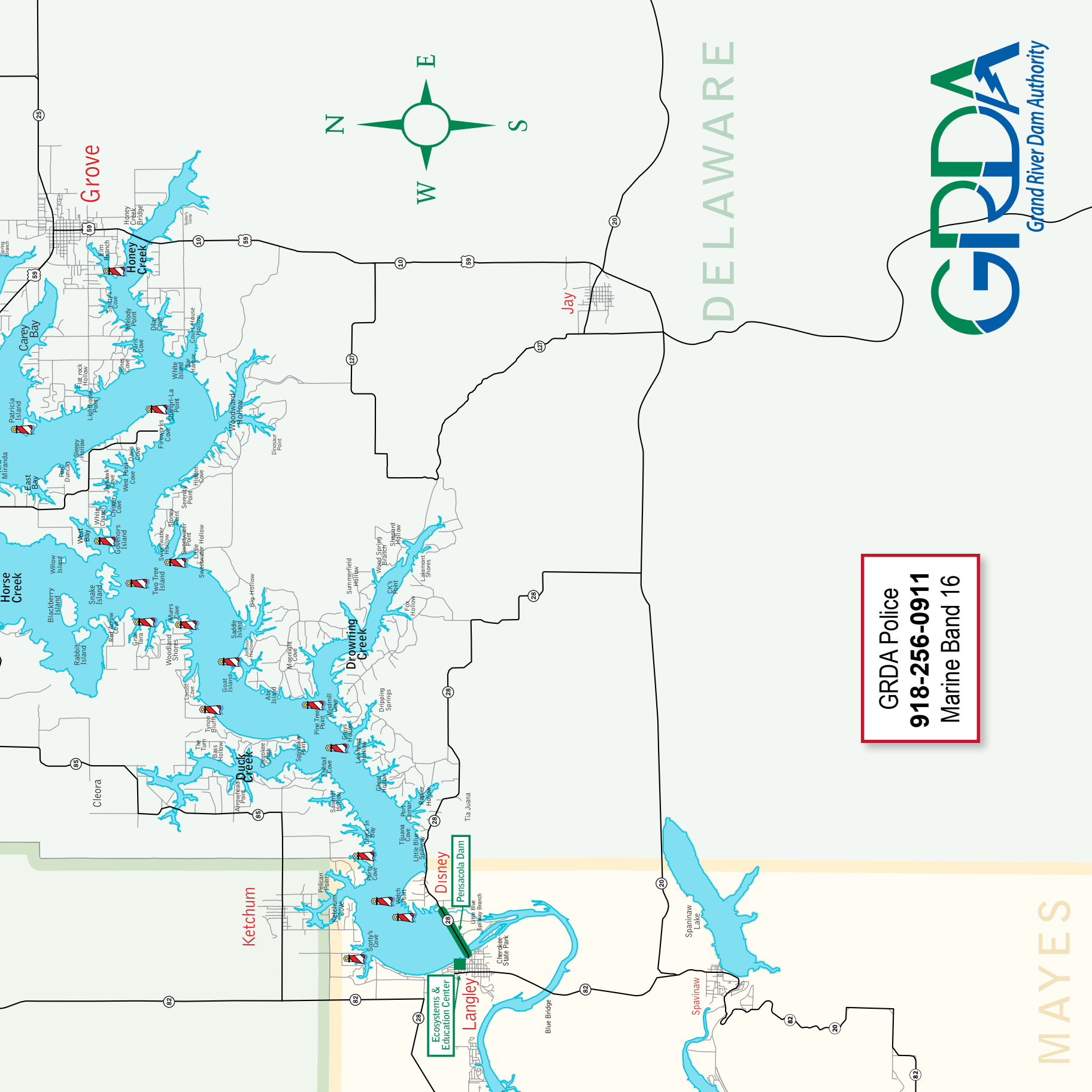
Miami

Afton

Bernice

CRAIG





DELAWARE

MAYES

GRDA Police
918-256-0911
Marine Band 16



GRDA Ecosystems: Watching the water



ONE OF GRDA'S FLOATING WATER QUALITY PROFILERS IN GRAND LAKE NEAR PENSACOLA DAM.

One of the Grand River Dam Authority's most important tools in the ongoing effort to be a good steward of the natural resources under its control is the Authority's water quality research laboratory. Located on the lower level of the GRDA Ecosystems and Education Center in Langley, the lab is home to state-of-the-art tools utilized by GRDA for its ongoing water quality monitoring program and other special projects.

Of course, it is only fitting that the windows of the lab look out onto the waters of Grand Lake. After all, it was established to help monitor those waters and the rest of the nearly 70,000 surface acres of lakes (Lake Hudson and W.R. Holway Reservoir) under GRDA's control.

From the lab's beginnings, GRDA has partnered with both Oklahoma State University and the University of Oklahoma to equip it with the tools necessary to conduct water quality research. GRDA personnel man the lab, along with interns from colleges across the state. Year-round, they stay busy collecting samples, running tests and gathering the all-important data needed to determine what is happening with the waters of the Grand River system.

The equipment and manpower has allowed GRDA to get test results and sampling information quickly so it can be shared with the public through channels like the real-time water quality interactive map on grda.com. Equipment and manpower has also made the facility one of the best equipped water labs in the region for the type of research it does. According to GRDA Assistant General Manager of Ecosystems and Lake Management Dr. Darrell Townsend, that research covers a broad area: nutrients, metals, bacteria and other characteristics of the water.

Cooperation Across The Watershed

The existence of the water lab has also helped GRDA to strengthen its relationships with resource agencies all across the region. While GRDA has oversight of the Grand River flowing through Oklahoma, the majority of the river's watershed lies across state borders, in Kansas, Missouri and Arkansas. Thus, working closely with water quality researchers and interests in those states is important for GRDA as it works towards its stewardship goals.



Grand River Dam Authority ECOSYSTEMS & EDUCATION CENTER

PARTNERS IN CONSERVATION AND RESTORATION



THE DEPARTMENT'S ONGOING WATER QUALITY MONITORING UTILIZES A STATE-OF-THE-ART LABORATORY AND AN EXPERT STAFF, WITH INTERN ASSISTANCE FROM OKLAHOMA STATE UNIVERSITY, THE UNIVERSITY OF OKLAHOMA AND ROGER STATE UNIVERSITY.



Because of that, the Ecosystems and Education Center has been an ideal location for GRDA to host the Four State Watershed Conference on a bi-annual basis. The first conference was held in 2010, in conjunction with the building's grand opening. A subsequent conference was then held in April 2012.

"Because Oklahoma only encompasses approximately 9 percent of Grand River's watershed and the majority of Grand Lake's water supply originates from neighboring states, we can't face these natural resource challenges alone," said Townsend. "That's why our underlying theme since the department was created has been to build cooperative relationships across the region that will help us accomplish our conservation and restoration goals."

The conferences allow researchers, scientists, water quality experts and advocates from the four-state region to discuss the past, present and future of the Grand River Watershed, while also

sharing their own research during two days of presentations and discussion.

"[The conference] is a coordinated effort by GRDA and it's really impressive that you get this level of effort and thought and brainpower in one spot," said Oklahoma Water Resources Board (OWRB) Water Quality Division Environmental Programs Manager Paul Koenig. "Kansas and Missouri are here talking about their efforts in the basin of this lake and who is that going to benefit? The people of Grand Lake."

As issues about water continue to move into the spotlight across the region, GRDA, through its Ecosystems Management Department and water lab efforts, is doing all it can to protect the resource today while preparing to do the same tomorrow.

SEVERAL PRESENTERS WERE ON HAND TO SHARE WATER QUALITY RESEARCH FINDINGS DURING 2012 GRAND LAKE WATERSHED CONFERENCE, HOSTED BY GRDA.



Dock 101

- **No dock shall** be installed until such time as the Applicant receives a letter from GRDA approving such installation.
- **No dock shall** extend more than one third (1/3) of the cove measured from 745 feet elevation Pensacola datum to 745 feet elevation Pensacola datum. On Lake Hudson, the elevation shall be 622 feet mean sea level in figuring the one third (1/3) of the cove rule. Additionally, no dock shall extend further than necessary to obtain appropriate water depth as determined by GRDA.
- **All approved docks** must maintain a minimum of 5 feet between the edge of the dock and the applicant's property line. For example, a property owner with 80 feet of shoreline can accommodate structures with a maximum width of 70 feet allowing for a 5 foot property buffer between the applicant's dock and the neighboring property line.
- **If a dock is located** parallel with the shoreline, the open end, from the edge of the dock to the property line, must be one and one half (1 ½) times the length of the slip. For example, a thirty (30) foot slip would require forty five (45) feet from the edge of the dock to the adjacent property line.
- **Effective August 1, 2013**, any newly constructed or significantly modified dock, must be lit from sunset to sunrise and during periods of low light conditions. Lights are required to be white or amber and must be installed on the outermost edge at the furthest extension of the dock from the shoreline. Solar or electrical lights are acceptable.
- **All docks** shall have an electrical disconnect clearly identified and located above the high water mark. Any residential dock that has electrical service strictly shall adhere to the regulations set forth in the National Electric Code. All docks constructed or modified, relocated or transferred shall be required to provide to GRDA, a certificate signed by an Oklahoma licensed electrical contractor, evidencing compliance with all laws, regulations and codes regarding electrical systems and wiring. If transferring a dock, the Electrical Certification Form must be submitted on or before the real estate closing date.
- Any temporary electrical supply (extension cord, etc) shall not be used for primary electrical service to the dock.
- At the time a new or used dock is installed, the dock installer's sign shall be prominently displayed.
- If the permit holder fails to comply with applicable laws, rules or regulations or ceases to use, operate or maintain a permitted facility, the Office of Ecosystems Management may revoke the permit and cause the facility to be removed by contract or otherwise, and the permit holder agrees to pay all costs incurred thereof.

Excerpt taken from GRDA's Application for Private Dock, August 2013. Visit www.grda.com for the full version.

Rush For Brush



For the past seven years, the Grand River Dam Authority's (GRDA) Ecosystems Management Department has hosted Rush for Brush workshops on Grand Lake and Lake Hudson.

The workshops are a concentrated effort to improve the fish habitat in the lakes. By enhancing the natural fish habitat with the artificial structures, or spider blocks, small fry are given a place to hide from the bigger fish. This, in turn, creates a fish attractant which is popular with area fishermen.

"Our motivation was to supplement the natural fish habitat with artificial structures," said Brent Davis, GRDA Fisheries Coordinator. "As a fisherman, I have actually made the habitats out of different materials and found that the way we make the spider blocks works the best and is by far the easiest. The cinder blocks are small, easy to handle and anyone can put them in their favorite fishing holes."

At the workshops, GRDA provides the materials necessary to build the spider block habitats and lake area volunteers assemble them.

The success of the program can be seen in the growing number of volunteers that attend, as well as the number of habitats deployed. In six years, over five hundred volunteers have deployed more than 7,500 structures.

"This has brought communities together working for a common cause- fish habitat," said Davis. "Besides providing substantial benefits for fish and fisher-

men, one of the best things about it is that it doesn't put anything harmful in the water."

The popularity of the program has not been limited to the events or even the local area; in fact, it has received national attention. According to Davis, phone calls from all over the United States have been answered. Callers want to know about materials, how to construct the blocks and what is the appropriate water depth to place them.

“
**The most frequently
asked questions, at our
GRDA booths, have
been about our Rush
for Brush events.**
”

The event has proven to be successful in more ways than anticipated. Not only do the habitats provide protection for fish—which means more catches for fishermen—but the whole program gives GRDA Ecosystems more face to face time with lake enthusiasts. Thus, both beneficial habitats, and relationships, are built.

Finally, an improved fish habitat has a positive economic impact on the lake area. "More fish habitat means more fish, more fish means more fishermen and more fishermen means more money into the Northeast Oklahoma economy," said Davis.

Preventing The Spread of Zebra Mussels

The United States Fish and Wildlife Service (USFWS) dubbed them “public enemy number one” on the aquatic nuisance species list. Up in the Great Lakes region, their very presence has led to millions of dollars in expenditures directed towards trying to control their spread. And, since the early 1990s, an Oklahoma task force has kept its eyes on our state’s waters, watching for their presence and educating the public about their impact.

Of course, we are talking about the zebra mussel; a non-indigenous freshwater mollusk that has caused plenty of problems in our nation’s waterways since their arrival in North America over two decades ago. The zebra mussels traveled across the Atlantic in the bilge water of cargo ships that made their way into the Great Lakes. That is a long way from their native homes in Russian waters and the Caspian and Black Seas.

They have certainly lived up to their nuisance label since their arrival. The Grand River Dam Authority joined the Oklahoma Zebra Mussel Task Force two decades ago and has been monitoring the waters of the Grand River system and working to inform the public ever since.

The mussels are small; most are only the size of a thumbnail. They have an elongated D-shape shell with a zebra-like pattern of stripes. Adult mussels can grow to 1.5” to 2” in length. With tiny, threadlike filaments they can attach to water intake structures, boat hulls, reefs, buoys, docks and other submerged objects. Add in the facts that they can

reproduce very rapidly (a female can lay up to a million eggs in a season) and have no natural predators and the zebra mussel problem becomes clear.

In 2008, the GRDA Ecosystems Management Department partnered with Oklahoma Aquarium at Jenks to produce a permanent display to educate aquarium visitors about zebra mussels. The department has also worked closely with organizations like the United

States Coast Guard Auxiliary and the United States Army Corps of Engineers to spread the word to lake users.

For more information on zebra mussels or to report a possible sighting in GRDA waters, contact the GRDA Ecosystems Management Department at (918) 782 4726.



Help
STOP
Zebra Mussels



Tips to help hinder the spread of Zebra Mussels:

- Boats should not be left in the water for extended periods of time. With regular use, engine heat should keep mussels from colonizing inside most engine parts.
- Always drain the bilge water, live wells and bait buckets.
- Inspect the boat and trailer immediately upon leaving the water.
- Scrape off any mussel found. DO NOT return them to the water.
- If possible, dry the boat and trailer for at least a week before entering another waterway. (If conditions are right, mussels can live up to seven days on a boat hull outside the water.)
- Wash boat parts and accessories that contact the water using hot water (at least 140 degrees Fahrenheit), a ten percent solution of household chlorine bleach, or hot saltwater solution. Do not wash the boat at the ramp where these solutions could pollute the water. Always finish with a clean water rinse.

A “Grand” reputation among anglers

It is no secret that the fishing is pretty good in Grand River Dam Authority Lakes.

Across approximately 70,000 surface acres that comprise Grand Lake, Lake Hudson and W.R. Holway Reservoir anglers have had plenty of success wetting a hook over the years. In fact, both Grand and Hudson consistently rank among the best bass fishing lakes in the state in the Oklahoma Department of Wildlife Conservation (ODWC) Bass Tournaments Annual Report.

However, the reputation of GRDA lakes goes well beyond the shoreline and the state borders. In fact, when the Bassmaster Classic was held on Grand Lake in February 2013, the attention of fishing enthusiasts from all over the world was focused there. According to numbers released by the BASS organization, the event exceeded crowd expectations and drew approximately 106,000 spectators to the various venues used for the Classic, including the Wolf Creek Complex (Grove), where the competitors launched from each morning. Meanwhile, sights and sounds from the Grand Lake region were being broadcast coast-to-coast during the event.

According to GRDA Fisheries Coordinator Brent Davis, that growing reputation may be a “rising tide” that lifts all boats, but it also adds boats too. Davis said it did not take long for the ripple effect from the Bassmaster Classic to spark a new interest in bass fishing on Grand Lake.

“Since the Classic we’ve had several major tournaments on the lake,” said Davis. Some, like the Nichols Marine Tournament, a Bass Fishing League tournament and a Skeeter Boats Tournament have been held on Grand Lake for many years, but still, thanks to the Classic, all saw an increase in the number of boat entries during their respective 2013 events.

That interest in the region also spilled over to Lake Hudson, which also boasts its own reputation for prime fishing. Hudson hosted the Fourth Annual Bassmaster College Classic in February 2013, in conjunction with the Classic on Grand.

“[The Classic] generated more interest in fishing,” added Davis. “All our tournaments are going up.”

Facilities, Fisheries Management

Of course many of those tournaments will launch from that Wolf Creek Complex which was completed in time to host the Classic. The facility was made possible through the cooperative efforts of many entities, including GRDA, the city of Grove, Tulsa Sports Commission, Oklahoma Department of Wildlife Conservation, Oklahoma Department of Tourism, Oklahoma Department of Transportation and others.

No stranger to Grand Lake, Edwin Evers (Talala, Oklahoma) is a professional fisherman who competed in the Classic in 2013. He sees the benefits of both the new tournament complex as well as the angling opportunities in the water.





FISHING TOURNAMENTS ON LAKE HUDSON AND GRAND LAKE.

“It’s going to hold many tournaments to come,” said Evers. “It’s going to bring people from all across the world to come to this state-of-the-art facility. It’s going to be great for Northeast Oklahoma.”

Meanwhile, making sure the waters always hold the potential for fishing success is a priority for GRDA, said Davis. Just as a new fishing facility must be cared for and maintained, a well-managed fisheries program, as well as properly-managed tournaments, must also be in the equation.

“We’ve made tournament rules and regulations that require the [fishing] tournament director to do things to make it successful with our survival rates,” said Davis. “We want all the fish returned back into the lake at every tournament at the highest possible survival rate.”

Positive Economic Impact

Of course, all that effort helps not only with the fishing opportunities but also with dollars and cents. After all, a reputation for good tournament fishing means more tournaments and more dollars generated from those tournaments. Grand Lake, as well Lake Hudson have helped support a thriving recreation and tourism industry in Oklahoma for decades, and the GRDA enhancement programs in place today will help support it in the future as well.

From January through November 2013, Grand and Hudson lakes combined to host 205 tournaments, which collectively drew roughly 10,155 boats (typically two anglers per boat). Davis estimates that each angler spends about \$120 per tournament (for food, fuel and lodging) during a tournament, for a “Grand” total of approximately \$2.4 million in

“

We handled the fish and we brought them back and returned them all safely to Grand Lake, which is a big thing for GRDA,” Davis stressed. “We work very hard at it.

”

Since the establishment of the GRDA Ecosystems Management Department in 2004, GRDA has worked to bring a new focus to lake management initiatives, including fisheries enhancement. Part of that included changing tournament rules that have resulted in those higher survival rates Davis mentioned. Because of that, the survival rate at the Classic was very high.

“We handled the fish and we brought them back and returned them all safely to Grand Lake, which is a big thing for GRDA,” Davis stressed. “We work very hard at it.”

positive economic impact in a single year, just from the competitors themselves. Of course for a more prestigious tournament, like the Classic, or the Wal-Mart FLW Tour (which visited the lake in June 2013) Davis added that anglers may be spending as much as \$300 to \$400 per day. Add in dollars generated by spectators and the “free advertising” and notoriety the lake region enjoys, and the economic impact and benefits stretch into the millions of dollars.

Add it all together and the result is a “grand” fishing reputation that will never be a secret again.

A New Tool to Battle Fish Mortality

While programs like GRDA's "Rush For Brush" and other fisheries enhancement efforts have helped to maintain the reputation of Grand and Hudson lakes as prime angling destinations in recent years, a new tool will be part of those efforts going forward.

GRDA's Tournament Release Trailer

That new "tool" is actually a 1,000 gallon water tank, to be used to store, then transport for release the fish caught during various tournaments in GRDA's Grand and Hudson lakes. The tank is made of aluminum and capable of holding 1000 pounds of fish. Davis said it gives GRDA more release options following tournaments and will also boost the continuing effort to lower the mortality rate of tournament fish in GRDA waters.

"Over the years we've been able to lower the amount of fish that die as the result of tournaments," said GRDA Fisheries Coordinator/Tournament Director Brent Davis. "Rules for weigh-ins have helped with that, so have the changes in our release practices. Having this new tank available will also be a big help going forward."

Tournament Rules For Less Stressful Fish

In 2004, prior to GRDA's rule changes for tournament weigh-ins, Davis said it was not unusual for 50 percent or more of caught fish to die as a result of the weigh-in process. Today, thanks to nearly a decade of GRDA Ecosystems' efforts to reverse, the percent of fish lost in a tournament is often in the single digits (as low as 1 percent.)

“Over the years we’ve been able to lower the amount of fish that die as the result of tournaments...”

The main objective of the rule change was to reduce stress on the fish, which was accomplished by setting seasonal catch limits. In other words, depending on the time of the year, and the weather, anglers have different limits on the number of fish they can keep in their live well during a tournament. Less stress equals less mortality, which equals more stable fish habitat in the future.

As for that positive impact, Davis said one good measurement has been the size and number of fish caught during tournaments. When it comes to bass fishing—arguably the most popular type of fishing in GRDA waters—Grand ranked as the top lake in the state in the Oklahoma Department of Wildlife Conservation's most recent Bass Tournament Report (2011). According to that report, Grand took the first position due to a couple of key factors: average weight of first place fish, and a high success rate among teams or individuals weighing in. Just two spots

down that list, in third place, you can find Lake Hudson. It did well in the categories of first place weight, weight of the average bass and percent success.

Davis is certain that the current weigh-in rules GRDA has in place for its lakes contributed to that success.

"Our rule changes weren't too popular when we initiated them," said Davis, "but today, we can see the results and the positive impact on the fisheries."

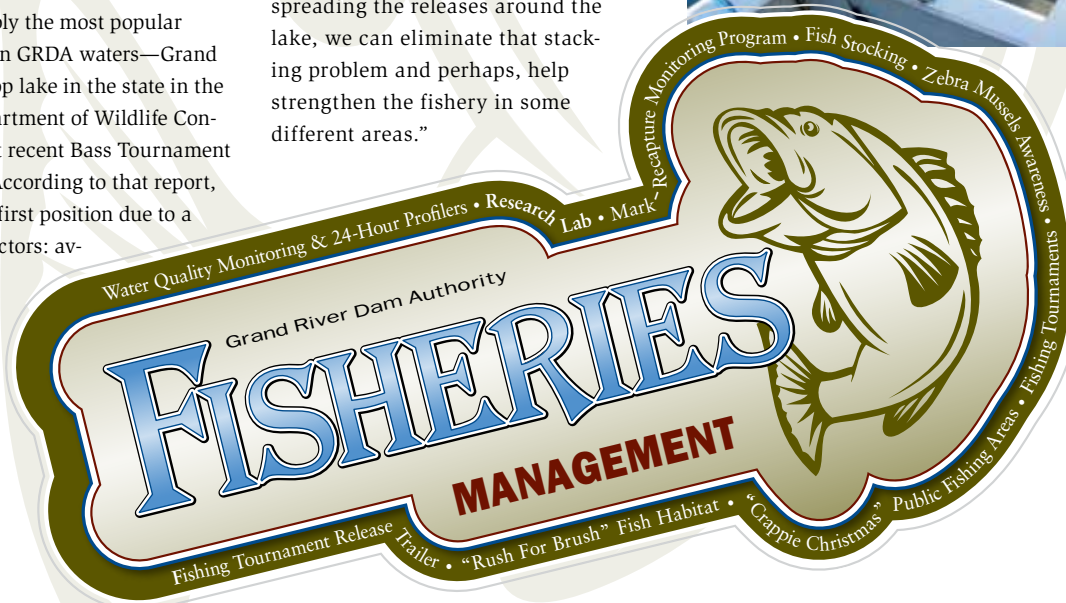
Constructed in-house by the GRDA Welding Shop, that tank is expected to add to those positive results. GRDA will use it to transport live fish caught in tournaments, to various locations to be released back into the lake. That is important because it will prevent the fish from "stacking up" in one area.

"In the past, following a tournament, all the fish might be released back into the water from the same location," Davis said. "That can cause an overpopulation problem and can affect the fishery in that area. By spreading the releases around the lake, we can eliminate that stacking problem and perhaps, help strengthen the fishery in some different areas."

Of course, with the fishing reputation of both Grand and Hudson still on the rise, the sheer number of tournaments will prevent GRDA from being able to use the tank following every weigh-in.

"A lot of times, both Grand and Hudson may be hosting more than one tournament," said Davis. "So we won't be able to use the tank at all of them, but our goal is to certainly be at everything we can accommodate."

BRENT DAVIS, GRDA FISHERIES DEPARTMENT, TAGS FISH BEFORE RELEASING BACK INTO GRAND LAKE.





Tank as a Tracking Tool

Several years ago, the GRDA Ecosystems Management Department also instituted its TEAM (Tournament Education on Angling Mortality) program as a way to educate anglers as to the causes for initial and delayed fish mortality following tournaments. However, now that the new tank is in place, that TEAM effort will be getting a much-needed boost.

“We really want to introduce the program,” said GRDA Assistant General Manager of Ecosystems and Lake Management Dr. Darrell Townsend. “With our tank now, we think we can also institute a mark and recapture program to monitor our bass populations to gather better data on movements and the results of the various release points. We are going to start marking those fish with tags that will include contact information for GRDA, and we will encourage anglers to contact us when they catch one of those tagged fish.”

By taking part in this TEAM effort by contacting GRDA, Townsend said volunteer anglers will help his team

“Our rule changes weren’t too popular when we initiated them...but today, we can see the results and the positive impact on the fisheries..”

gather the kind of data that will be used to make informed decisions that will preserve the fisheries for years to come.

“We’ve always counted on these volunteers,” said Townsend. “They know our lakes really well and they’re just as concerned with protecting the fish population as we are.”

Ultimately, all these things—new tools, data, public cooperation and proper management techniques—all work together to help GRDA fulfill its mission and meet its goal as a good steward of the natural resources under its control.

GRDA FISHERIES MANAGEMENT’S NEW TOURNAMENT RELEASE TRAILER WAS BUILT IN-HOUSE BY THE GRDA WELDING SHOP. IT WILL BE USED TO TRANSPORT LIVE FISH CAUGHT IN TOURNAMENTS, TO VARIOUS LOCATIONS (SEE MAP BELOW) TO BE RELEASED BACK INTO THE LAKE AND PREVENTS THE FISH FROM “STACKING UP” IN ONE AREA.

Tournament Release Sites

- | | |
|---------------------|--------------------|
| 1 Spillway Ramp | 9 Wolf Creek |
| 2 Ketchum Cove | 10 Bernice Bridge |
| 3 Drowning Creek | 11 Echo Bay |
| 4 Duck Creek | 12 Sailboat Bridge |
| 5 Shangri-La Point | 13 Hickory Creek |
| 6 Honey Creek | 14 Elk River |
| 7 Blackberry Island | 15 Bee Creek |
| 8 Patricia Island | 16 Twin Bridges |



Meet Our Ecosystems Management Team



Darrell Townsend, PhD.
AGM of Ecosystems and
Lake Management



Jacklyn Jaggars
Secretary to AGM



Mike Bednar
Environmental



Steve Nikolai
Limnologist



Bruce Battles
GIS Analyst



Janet DelliSanti
Lake Permits



Brent Davis
Fisheries/Tournaments

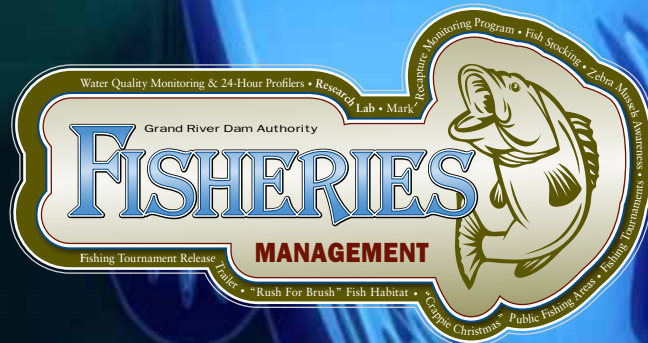


Kenny Baker
Dock Compliance



Charlie Floyd
Dock Compliance

Mortality



Fish

Did You Know?

There are 2 types of mortality associated with Bass Tournaments:

Initial Mortality

Is when fish die the day of weigh in.

Delayed Mortality

Is when fish look healthy at weigh-in, but stress and other factors cause a delayed mortality that can occur greater than a week following a weigh-in.

To Reduce Mortality

- Unhook fish & measure on a wet board.
- Place them in an already filled live well or release them.
- Limit air exposure to reduce stress.
- Fill your weigh-in bags from your live well.
- You only have 2 to 3 minutes of oxygen in your weigh-in bag. Get to a holding tank as soon as possible and replace bags with fresh water.

To Maintain Water Quality

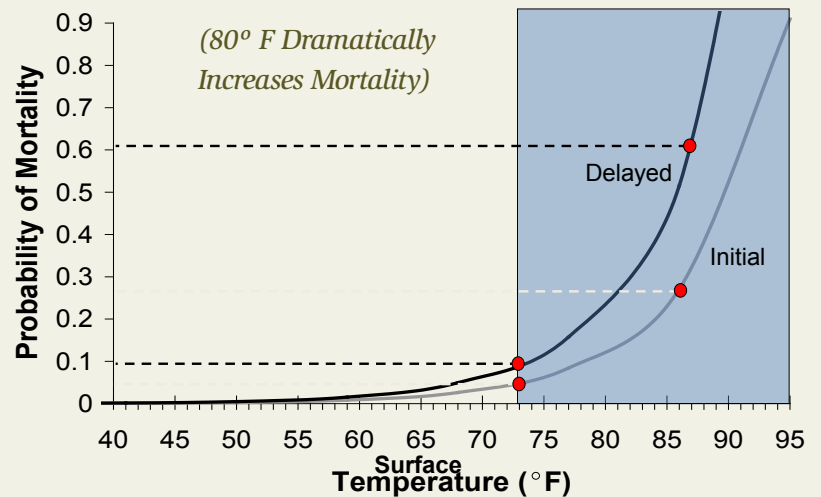
- Fill live wells in open water.
- Flush and refill your live wells every 3 to 4 hours.
- Use ice to maintain live wells temperatures within a few degrees of lake surface temperatures.

To Reduce Stress

- Reduce handling time.
- Promote healthy live well conditions.
- Conduct quick and efficient weigh-ins, with minimal handling, and provide sufficient life support conditions from weigh-in to release.
- Don't have a fish out of the water any longer than you can hold your breath!

Information Provided by: Gilliland, G., H. Schramm, and B. Shupp. 2002. *Keeping Bass Alive: A Guidebook for Anglers and Tournament Organizers*. James Hall, editor. ESPN Productions, Inc/B.A.S.S. Montgomery, Alabama.

TEMPERATURE & MORTALITY



Data Provided by:

Edwards, Jr., G. P., and R. M. Neumann. 2004. Factors related to mortality of black bass caught during small club tournaments in Connecticut. *North American Journal of Fisheries Management* 24:801-810.

GRDA FISHERIES MANAGEMENT 918-782-4726





at Grand Lake

Bald and Golden Eagle Facts

Scientific Name: Bald Eagle: *Haliaeetus leucocephalus*
Golden Eagle: *Aquila chrysaetos*

Color: Male and female adult eagles have a blackish-brown back and breast; and yellow feet and bill. Bald eagles have a white head, neck, and tail. Golden eagles don't have white heads, feathers are all the way to the toes (bald eagles have more leg showing).

Size: Eagles weigh 9.5 to 15 pounds. The females tend to be larger than the males--as with most birds of prey. Their average height is about 3 feet, length up to 3.5 feet. Female wingspans can measure up to 92 inches (or 7.6 feet). Male wingspans can measure up to 82 inches (or 6.8 feet).

Longevity: Wild eagles may live as long as thirty years, but the average lifespan is probably about fifteen to twenty years. A captive eagle in New York lived to be at least forty-eight years old.

Fidelity: Once paired, eagles remain together until one dies, only then will the survivor accept a new mate.

Feeding Habits: Bald eagles scavenge for dead animals whenever possible. When food cannot be scavenged easily, they will hunt small fish, smaller birds or mammals. Bald eagles have been seen to work in tandem to hunt ducks in the air. Around water, bald eagles will snatch smaller fish off of the surface, or steal fish from other birds. Golden eagles feed mostly on rodents and small mammals.



Source: Forshaw, Joseph, Steve Howell, Terence Lindsye, and Rich Stallcup. *The Nature of Company Guides Birding*. Time Life Books, 1994.218. Robbins, Chandler S., Bertel Bruun, and Herbert S. Zim. *Birds of North America*. Golden Press: New York, 1983.78-79.

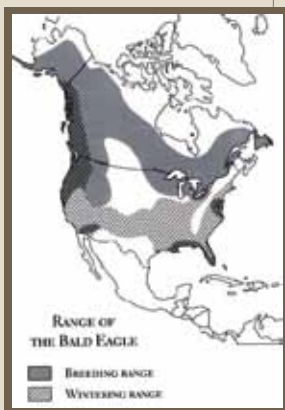
Eagle viewing on Grand Lake



Directions to Eagle Pass

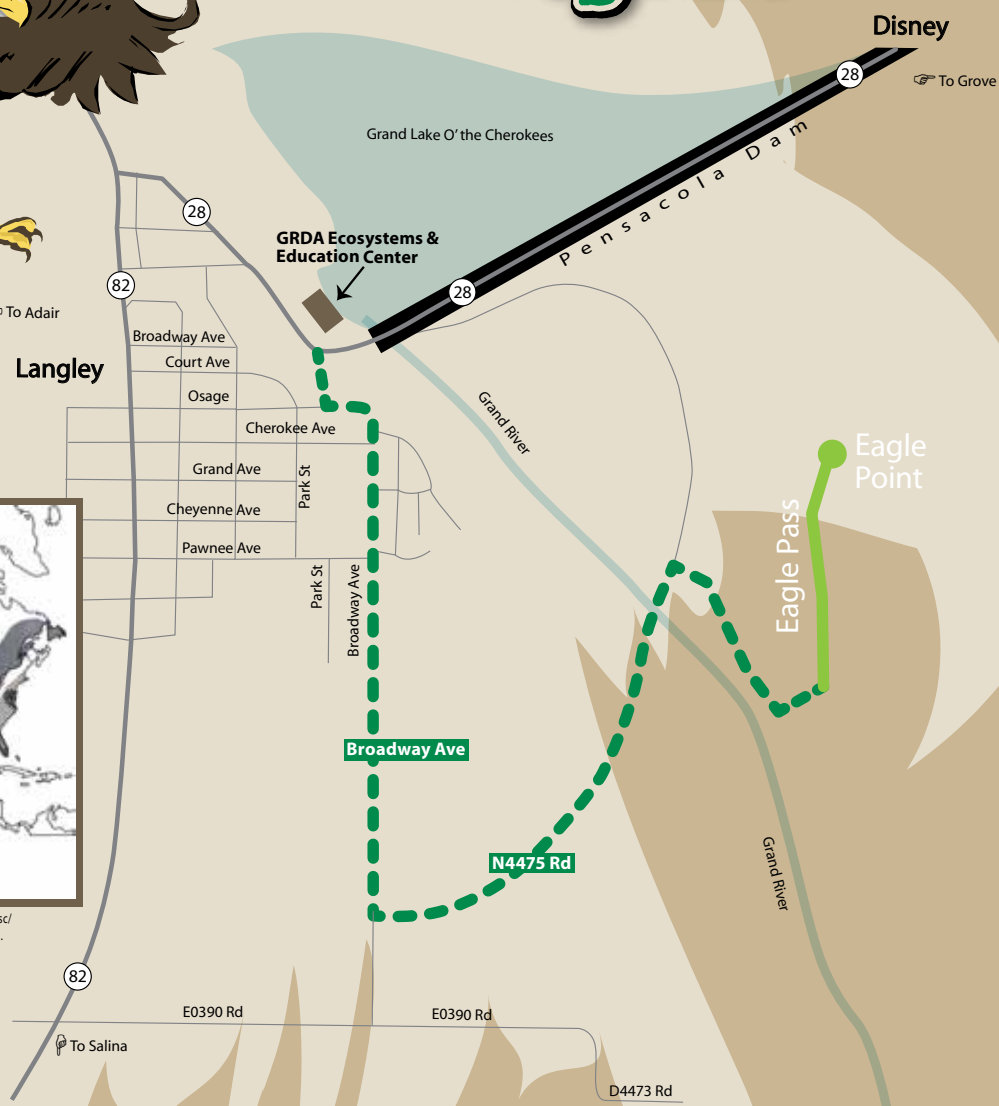
American Bald Eagle

The **American Bald Eagle** is the only eagle unique to North America. It ranges over most of the continent, from the northern areas of Alaska and Canada, to the Northern parts of Mexico. Every year these magnificent birds, along with the **Golden Eagle**, can be seen here **on Grand Lake (at Eagle Pass)** where they come to spend the winter **from mid December to March**.



Source: www.bv229.k12.ks.us/biophilia/wsc/pondanimal/HoganEagle/bald_eagle.html.

Golden Eagle



Rules for Four-Wheel, Off-Road, All-Terrain Vehicles

In the interest of public safety, there shall be no four-wheel vehicles, off-road vehicles or ATVs on GRDA lands except in designated areas.



- ▼ No passengers are allowed on three-wheelers, four-wheelers or motorcycles.
- ▼ Low gear is required except on trails posted at speed limits in excess of five (5) MPH.
- ▼ No racing on GRDA property is allowed except as otherwise permitted by a sanctioned event permit.
- ▼ All vehicles, including motorcycles, must be equipped with working front and rear lights.
- ▼ Dune buggies and 4X4 vehicles must have a roll bar sufficient to support the weight of the vehicle and must have a seat belt for each person.
- ▼ GRDA shall not be liable and hereby disclaims any responsibility for any and all injuries and accidents, up to and including death, which may occur as a result of participating in off-road activities. Each driver and passenger rides at his/her own risk and assumes the risk of the activity.
- ▼ Alcoholic beverages, including low-point beer, are prohibited from areas in which off-road activities occur.
- ▼ Drivers shall obey all signs posted on GRDA land, including areas that are off limits and speed designations.
- ▼ Penalties: GRDA law enforcement personnel may verbally order any person that is violating these rules to immediately exit the lands of GRDA.
- ▼ Additionally, any person, after notice, and opportunity to be heard in accordance with Subchapter 21 (in the official GRDA Lake Rules and Regulations), may be banned from the lands of GRDA for a period of time up to, and including, ninety (90) days.

TITLE 47. MOTOR VEHICLES, CHAPTER 11 RULES OF THE ROAD, SECTION 11-1117 - ALL-TERRAIN VEHICLES - HELMETS - PASSENGER - FINES

- A. It shall be unlawful for a person less than eighteen (18) years of age to operate or to be carried as a passenger upon an all-terrain vehicle unless the person wears a crash helmet of a type which complies with standards established by 49 C.F.R., Section 571.218.
- B. It shall be unlawful for the operator of an all-terrain vehicle to carry a passenger unless that all-terrain vehicle has been specifically designed by the manufacturer to carry passengers in addition to the operator.
- C. Fine and court costs for violating the provisions of this section shall not exceed twenty-five dollars (\$25.00). Any peace officer of this state including, but not limited to park rangers, is authorized to enforce the provisions of this section. All monies collected pursuant to a citation for a violation of this section shall be deposited in the Oklahoma Tourism and Recreation Department Revolving Fund for credit to the cost center of the state park or public recreation area where such citation was issued.
- D. Any parent, legal guardian or person having actual responsibility for a person under eighteen (18) years of age, or who is the owner of the all-terrain vehicle operated by a person under eighteen (18) years of age, who knows, or should have known, that the person operating the all-terrain vehicle is not in compliance with the provisions of this section, shall be punishable according to the provisions of subsection C of this section.
- E. As used in this section, "all-terrain vehicle" means a motorized vehicle manufactured and used exclusively for off-highway use which is forty-eight (48) inches or less in width, with an unladen dry weight of eight hundred (800) pounds or less, traveling on two or more low-pressure tires, having a seat designed to be straddled by the operator, and which is steered by the use of handlebars.
- F. The provisions of this section shall apply only to persons operating all-terrain vehicles on public lands.
- G. The provisions of this section shall not apply to persons operating an all-terrain vehicle on privately owned property.

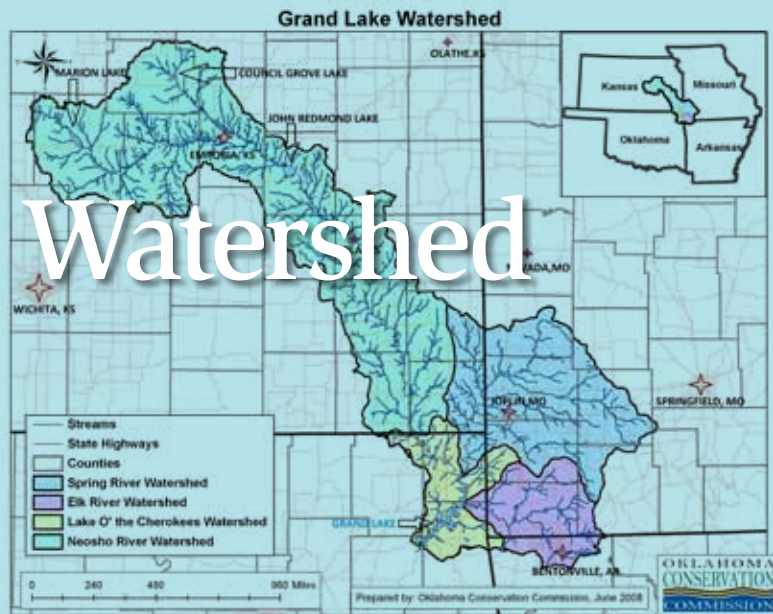
Four states, one river: The Grand River Watershed

Like all rivers, the river that would one day be known as the “Grand” in Northeast Oklahoma has benefited civilization for centuries. Long before anyone ever thought of making a lake from its waters or harnessing those waters to create electricity, the Grand was supplying a necessary resource for those along its shores.

It is a river that truly belongs to Oklahoma; from its beginnings, the Grand flows for 125 miles in a southwesterly direction, winding through the Ozark Mountain foothills, before giving itself to the larger Arkansas River, just outside of Muskogee, Oklahoma. It was a path that went uninterrupted for centuries until mankind was able to draw even more benefit from its waters with the construction of hydroelectric facilities in the 20th century. GRDA’s Pensacola Dam and Robert S. Kerr Dam, along with the United States Army Corps of Engineers’ Fort Gibson Dam transformed the power of Grand’s flow into electricity, and the lakes created by these dams create Northeast Oklahoma’s thriving recreation and tourism industry.

Now, let’s go back to the river’s beginning for a moment and leave that place where it joins the Arkansas and travel upriver, through the scenic hills across the expanses of Grand’s lakes. We pass many tributaries that feed into the river, flowing from the western slopes of the Ozarks in Arkansas and Missouri. We also see other tributaries moving in from the west, flowing in from other parts of Oklahoma. And as we move northeast, across the wide playgrounds of Grand Lake we soon come to where the Neosho (flowing in from the Northwest) and the Spring (flowing in from the Northeast) have joined to give us the Grand itself.

The Neosho (a name which some still give to the Grand as it moves through Oklahoma) has its headwaters in Morris County, Kansas. As it flows in a southeasterly direction through that state, the river—which takes its name from a likely Osage word meaning clear, cold water—also takes in the waters of Kansas’ Cottonwood River, which help to make it stronger as it flows on towards Oklahoma. Along the route, other Kansas creeks and streams flow into the Neosho

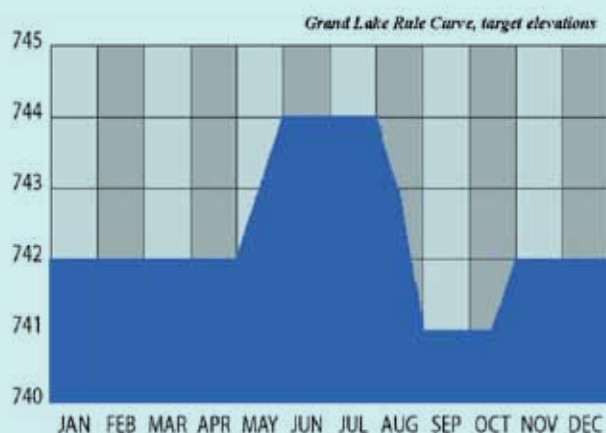


as well. Overall, nearly 5,830 square miles of the Grand River’s watershed is located in Kansas. That is by far the biggest portion in any state and amounts for 57 percent of Grand’s total watershed.

The Spring (named for the many springs that feed it) begins in Barry County, Missouri before flowing 129 miles through Southwest Missouri and Southeast Kansas. It helps to form the western boundary of the Ozark Mountains in both states and picks up plenty of small tributaries before joining the Neosho in Oklahoma. The Spring River’s watershed is roughly 25 percent of Grand’s total watershed, which equals about 2,577 square miles in Missouri and Kansas.

Finally, there’s the Elk River. Though not as long as the larger rivers, many believe it’s as scenic and inviting. It begins when Big Sugar Creek joins Little Sugar Creek near Pineville, Missouri and flows towards the west, for roughly 35 miles, before meeting the Grand. The Elk adds about 1,037 square miles, in Missouri and Arkansas, to the Grand River watershed. Together, these rivers, as well as creeks, streams and springs that feed them, eventually give Oklahoma its Grand River.

While we may know it best today for its lakes that help provide our electricity, allow us recreational opportunities and supply life-sustaining water, it is good to know that, in the middle of it all, a truly “Grand” river still flows.



Flood Control along the Grand River

When rains of significant magnitude affect Northeast Oklahoma, the Grand River Dam Authority works closely with the United States Army Corps of Engineers to control the heavy flows of water along the Grand River System.

In the Flood Control Act of 1944, the United States Congress mandated that the Corps of Engineers direct the operations of the GRDA’s Pensacola Dam and Robert S. Kerr Dam for flood control. The Corps of Engineers orders floodwater release rates that are consistent with downstream conditions and projected river crests. All the lakes along the Grand River, in the Arkansas River System, are operated to minimize downstream flooding, including Grand Lake, Lake Hudson and Fort Gibson Lake.



A place for special occasions!

One of the major features of the Grand River Dam Authority's Ecosystems and Education Center in Langley is the Grand Hall. In fact, since the building was officially opened to the public in April 2010, thousands of people have passed through the Grand Hall for special events, training sessions, conferences, building tours, banquets and more.

The Grand Hall overlooks Grand Lake and historic Pensacola Dam, and was a welcomed addition to the lake's southern end as a much-needed meeting space. For GRDA, the room has offered a permanent location for many public meetings and employee training. During the Grand Lake Shoreline Management Plan (SMP) development process, GRDA held 27 different public meetings at various locations around the lake and across Oklahoma. While traveling to different locations was an important part of the effort to get public input, the availability of a permanent meeting/training location in Langley continues to benefit GRDA.

The Grand Hall has 1,920 square feet of flexible meeting space and can accommodate up to 144 people in certain layouts. Meanwhile, the Hudson Conference Room, also located in the Ecosystems and Education Center, can accommodate up to 12 people for smaller meetings. Both rooms are available for public rental.

For more information, call
918-782-4726.

Around Our Dams...

SAFETY FIRST

Signs: Posted at GRDA hydroelectric facility (Pensacola Dam, Robert S. Kerr Dam, and the Salina Pumped Storage Project) to warn of extreme danger in floodgate areas. Please be aware of other signs near GRDA facilities that notify you of no trespassing areas, no diving areas, or unstable footing.

Buoys: Red buoys and cabling above and below spillway gates and hydroelectric powerhouse restrict access to dangerous areas associated with power generation or floodgate releases.

Flashing Lights: At hydroelectric facilities, the flashing lights are initiated when floodgates are opened or generation is initiated.

Fencing: In place to identify borders and to restrict access to certain areas near the hydroelectric facilities.

Sirens: These are located at various locations on the hydroelectric facilities and are utilized prior to the operation of hydroelectric generators and/or floodgates.

Grand Lake Lighthouses:

As navigational aids, several lighthouses are located on Grand Lake, around the shoreline and in areas of shallow water.

GRDA has an ongoing maintenance program in place to ensure our lighthouses are functioning properly. If you have concerns regarding a lighthouse on Grand Lake, please contact GRDA at **918-782-4726**, or e-mail **lighthouses@grda.com**.

SAFETY AROUND ITS HYDROELECTRIC FACILITIES IS A TOP PRIORITY FOR THE GRAND RIVER DAM AUTHORITY. SIGNS, BUOYS, SIRENS, FENCING AND FLASHING LIGHTS ARE ALL INTENDED TO NOTIFY THOSE IN THE AREA WHEN FLOODGATES ARE OPEN, GENERATORS ARE OPERATING OR WATER IS RISING SWIFTLY.





Touring *Historic* Pensacola Dam

Although thousands of people have taken the opportunity to tour the Grand River Dam Authority's historic Pensacola Dam, there are others out there who have yet to make the trek into the powerhouse. So, what can those folks expect to see when they visit?

First of all, during an opening video presentation in the GRDA Ecosystems and Education Center (where free Pensacola dam tours originate) they can expect to learn more about the men and women who first envisioned and later constructed the dam. The idea for such a dam was first born in the 19th century, but construction did not take place until the late 1930s. Therefore, it was Depression-era labor that built Pensacola Dam at a time when electricity was still considered a luxury for many Oklahomans. The video contains facts and figures about those construction days, as well as black and white photos showing the men and women who donated blood, sweat and tears to turn the idea into a reality.

Visitors can also expect to look out across the top of the mile-long dam as it stretches from Langley to Disney, across the Grand River Valley. This is the southern end of Grand Lake O' the Cherokees, a 46,500 surface-acre lake that attracts thousands and thousands of visitors every year. The lake filled soon after the dam's completion in 1940, and it has been considered Oklahoma's premier water playground ever since. The dam was built at one of the widest parts of the river valley and, to say the least, the view is impressive at this point of the lake, where the waters are at their deepest and the concrete of the man-made dam meets the waters of the Grand.

Step Back In Time

A ride down into the dam's historic powerhouse will also leave an impression on visitors because the elevator itself is a piece of history. Visitors step back in time when they step into the manually-operated elevator with brass-handled controls and interior features that look and feel like the early 1940s. The elevator -- which is tested and maintained on a regular basis -- has made countless trips down through the bluff and into the powerhouse since it was first constructed 70-plus years ago.

When the doors open on the bottom floor, visitors can expect to see the shining white concrete walls and shelves of electric control cables that define the long tunnel leading to the powerhouse's generator floor. Other than a new coat of paint on occasion, and upgraded cables as needed, the interior of the tunnel looks the same as it did when the

first coat of paint was applied. As visitors look close at the concrete walls, they will see the impression left from the wooden forms used during construction.



The art deco design of the powerhouse will be evident to visitors as they step onto the generator floor where Oklahoma's oldest hydroelectric units (upgraded in the late 1990s) still play a vital role in power production for GRDA customers. Visitors in the heat of summer can expect it to be plenty warm in the powerhouse if the generators are turning. As they walk by those generators, visitors can appreciate not only the massive size of the units, but also the sheer engineering feat of constructing such a facility in the late 1930s. Believe it or not, when the dam was being built, many critics felt

it would produce more power than GRDA could ever market. Today though, the low-cost, reliable electricity produced by Pensacola amounts to a small portion of GRDA's overall production.

Finally, as visitors make their way up the back steps behind the powerhouse they will have a good view of the dam's impressive and colossal arches. There are 51 of them, stretching the length of the river valley, holding back the waters that create Grand Lake, while giving Pensacola Dam its unique look. That "look" along with the important role the dam has played in Northeast Oklahoma's development since 1940, are key reasons it is listed on the National Register for Historic Places.

Of course, there are plenty of other things visitors can expect to see, and learn, on a tour of historic Pensacola Dam and what's been mentioned here just begins to scratch the surface of the facility that represents the very foundation of GRDA. For more information on a tour, stop by the GRDA Ecosystems and Education Center in Langley, visit grda.com or send your questions to tours@grda.com.



Pensacola Dam and Grand Lake
Langley, OK - 1941
Units 1, 2, 3, 4, 5 and 6 - 105 MW



Robert S. Kerr Dam and Energy Control Center
Locust Grove, OK - 1964
Units 1, 2, 3 and 4 - 108 MW



Salina Pumped Storage Project and W.R. Holway
Reservoir Salina, OK - 1968
Units 1, 2, 3, 4, 5 and 6 - 260 MW



Administration Headquarters
Vinita, OK



Engineering & Technology Center
Tulsa, OK - 2012



Grand River Energy Center - Chouteau, OK
Unit 1 - 490 MW, 1982
Unit 2 (GRDA's 62%) - 322 MW, 1985



Redbud Power Plant (GRDA's 36%)
Luther, OK
443 MW - Purchased 2008



Transmission and Distribution Headquarters
Pryor, OK



Ecosystem & Education Center
Langley, OK - 2010

GRDA AT A GLANCE

The beginning of GRDA

GRDA was created by the Oklahoma Legislature in 1935 to be a "conservation and reclamation district for the waters of the Grand River." The legislation which created GRDA outlined its primary responsibility this way:

- To control, store and preserve, within the boundaries of the District, the water of the Grand River and its tributaries for any useful purpose and to use, distribute and sell the same within the boundaries of the District.
- To develop and generate water power and electric energy within the boundaries of the District;

GRDA Electricity

GRDA fulfills its responsibilities by operating three hydroelectric facilities and managing two lakes along the Grand River system. These facilities, along with the GRDA Coal Fired Complex and the Redbud Plant (natural gas) combine to give GRDA a diverse electric genera-

tion portfolio that helps keep rates low and reliability high for customers. Directly or indirectly, GRDA's low-cost, reliable electricity serves nearly 500,000 Oklahoma homes and reaches into 75 of 77 counties in the state.

GRDA sells electricity to Oklahoma municipalities, electric cooperatives and industry. Most of GRDA's relationships with its municipal customers are over 60 years old. GRDA's relationship with one of its largest customers, Northeast Oklahoma Electric Cooperative, also dates back to the 1940s. Today, the cooperative serves the electricity needs of much of the GRDA lakes region.

Meanwhile, availability of GRDA power and water helped to establish the Oklahoma Ordnance Works Authority and MidAmerica Industrial Park, near Pryor, 50 years ago. According to maip.com, "nearly 80 companies are operating at the park that collectively employ over 4,500 people."

GRDA Lakes

GRDA also manages 70,000 surface acres of lakes in the state, including

Grand Lake, Lake Hudson and the W.R. Holway Reservoir. These lakes helped transform the rugged and rural landscape of Northeast Oklahoma into a thriving recreational destination.

Serving as an economic development engine, the lakes area contributes to a

FINGER TIP FACTS

- Fully funded by revenues from electricity and water sales, not tax dollars.
- The nation's 20th largest public power utility (based on generation capability, according to the American Public Power Association, www.appa.com).
- Second only to Oklahoma Water Resources Board in amount of jurisdiction over state water resources.
- Provides three lakes (70,000+ surface acres) for the use of lake area visitors.
- Does not charge daily use or ramp access fees (other lakes may charge \$2 to \$6 daily).



Cushing Field Office
Cushing, OK



Satellite Office
Oklahoma City, OK

broad tax base for Oklahoma. Meanwhile GRDA dams play an important role in the region's flood control and water storage. Today, over 50 Oklahoma water districts and municipal water systems, including Tulsa, draw water from GRDA lakes. All services associated with administering that water supply (legal, security, etc.) are provided by GRDA at no cost to Oklahoma taxpayers.

GRDA workforce

The Team GRDA workforce includes 500 Oklahomans in highly skilled positions, all dedicated to maintaining GRDA's reputation as Oklahoma's low-cost, reliable electric power supplier and as a good steward of the natural resources under GRDA control. Together, they continue to produce the same "power for progress" that has benefited the state for 75 years.

The benefits of hydroelectricity

Since its beginning in 1935, the Grand River Dam Authority has been in the hydroelectricity business. After all, Pensacola Dam – Oklahoma’s first hydroelectric facility -- was built to harness the waters of the Grand River, and the river has produced a lot of megawatts of electricity for the state of Oklahoma in 70-plus years.

Of course, Pensacola is just one part of GRDA’s hydroelectric history. The Authority also built Robert S. Kerr Dam in the early 1960s and the Salina Pumped Storage Project (SPSP) in the late 1960s/early 1970s. All together,

these resources play a role in meeting the electrical demand of thousands of Oklahomans all across the state, and it’s all done with clean, renewable hydroelectric power.

According to the United States Geological Survey (USGS), hydroelectric facilities, like GRDA’s, “fit the concept of renewable energy” because these facilities use “running water, without reducing its quantity, to produce electricity.” At GRDA, that water is used repeatedly as it flows down the Grand River, through Pensacola Dam and Kerr Dam, and also as it is pumped up and stored at the SPSP.

PENSACOLA DAM

- Constructed 1938 – 40
- Created Grand Lake O’ The Cherokees
- Oklahoma’s oldest hydroelectric facility
- Six turbine generators,
- 126 Megawatt capacity
- Units upgraded in late 1990s, early 2000s

ROBERT S. KERR DAM

- Completed in 1964
- Created Lake Hudson
- Four turbine generators, total capacity of 121 MW
- Once again, using the “energy” of the Grand River

SALINA PUMPED STORAGE PROJECT

- Stage 1: 1968, Stage 2: 1972
- Located on Saline Creek arm of Lake Hudson
- Created W.R. Holway Reservoir
- Earth and rock dam located in Chimney Rock Hollow
- Six hydroelectric pump/turbine units
- Total generation capacity of 260 megawatts



However, the USGS states there are other benefits to producing electricity with the power of falling water. Here are a few:

Hydroelectricity increases the stability and reliability of electricity systems because hydroelectric generator units, like those inside GRDA dams, can be started very quickly. In fact, “energy generated by hydroelectric installations can be injected into the electricity system faster than that of any other energy source” says the USGS. That is certainly true at GRDA, where a beneficial mixture of coal, natural gas and hydroelectric generation resources also helps maintain system reliability.

Hydroelectricity contributes to the storage of drinking water. Did you know that GRDA lakes serve as storage for 50 Oklahoma municipal water systems and rural water districts, including Tulsa?

Grand, Hudson and the W.R. Holway Reservoir (SPSP) all serve as water storage reservoirs to help meet the needs of thousands of Oklahomans. Without the presence of hydroelectric plants, that storage might not be available.

Hydroelectric power helps develop the entire region. Prior to Pensacola Dam, the surrounding region was rugged and rural. Today, that region is the heart of a large and thriving tourism and recreation industry that revolves around GRDA lakes. Of course, the abundance of low-cost, reliable electricity, produced by GRDA, helps support that thriving region too.

There are other benefits, of course, but these are just a few of the reasons why the GRDA story is really a “power for progress” story for Oklahoma. At GRDA, we are proud of the role our employees play, everyday, to keep the power flowing to our Oklahoma neighbors.

Lend a Hand for



**GRDA and Grand Lake Sail & Power Squadron
will provide dumpsters free of charge.**

Date, Time and Dumpster Locations will be announced.

*This is only for shoreline debris and not
household or commercial use.*



Grand Lake Sail &
Power Squadron



Visit Historic **PENSACOLA DAM**



FREE TOURS start at GRDA's Ecosystems & Education Center
by Pensacola Dam in Langley, OK.

Memorial Day - Labor Day
9:00 A.M. - 4:00 P.M. (Everyday, including holidays)

918-782-4726
tours@grda.com, grda.com



Listed on the National Register of Historic Places.

**For more information
about GRDA lakes,
such as:**

•
Ecosystems Management

•
Dock Permits

•
Other Lake Permits

•
Lake Rules and Lake Safety

•
Grand Lake, Lake Hudson,
WR Holway Reservoir

•
GRDA Police

•
visit us at

WWW.GRDA.COM

or follow us on



What's Up With Your Dock?

Is it properly permitted? Have you had it electrically inspected?
Do you have a dock sticker properly posted?

If you have questions about a dock on Grand or Hudson lakes, Janet DelliSanti
is here to help. A member of the GRDA Ecosystems Department's dock compliance team;
Janet has answers to your questions. Just call **918-256-0852**.



Headquartered in Vinita, OK,
the Grand River Dam Authority
is a state-owned electric
utility; fully funded by revenues
from electric and water sales
instead of taxes.



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