OUTDOORS

BY JOE SKORUPA

Wet & Wild Toys

PHOTO BY JOE SKORUPA

Booming personal watercraft scene is flying high this summer, as is Yamaha's WaveJammer.

IF YOU LIKE spills and thrills *in* the water on a hot summer day, you'll love personal watercraft because that's what these miniwavebusters are all about.

I recently tested a number of these hot, new water toys and was amazed at their diversity. Here's a look at four totally different models tested in the waters around Captiva Island, Florida.

■ *Pumper*, a jet-driven, 2-person prototype by Fun Boats, of Largo, Florida.

We found this preproduction model fast enough to provide thrills and stable enough to inspire confidence. It's powered by a 60-horse, 425-cc engine and is expected to retail for about $4500.

It topped out at 22 mph with one person and 21.5 mph with two.

The time it took to sprint 100 ft., starting from a dead stop, was 4.33 seconds.

Time on the handling course, a tight figure eight, also begun from a stop, was 42.57 seconds.

The problem, however, was that the experimental craft needed continual maintenance. Still, once the engine bugs are worked out, the 360-pounder will be appreciated by cautious family buyers for its tip-free ride.

■ *Dolphin*, also built by Fun Boats, is a more-established product, but not a textbook personal watercraft. Using the same 200-lb., 10-ft. 4-in. hull as Pumper, Dolphin is equipped with a 35-hp Force outboard, rather than an experimental jetdrive.

It topped out at 25.5 mph with one person and 25 mph with two. Hole-shot time was 3.9 seconds, and 38.15 seconds on the demanding performance course.

Unlike a jetdrive, which can run in inches of water, this soft-riding, 360-pound, V-bottom boat has a 17-in. draft. Price is $4150.

■ *WaveJammer*, by Yamaha, has been on the market two years but it's interesting to compare it to recent models.

Surprisingly, the 1-person WaveJammer is only about 20 pounds lighter than the 2-person Fun Boats, but look at these performance figures: 33.5-mph top-end speed, 3.94-seconds hole shot and 27.04 seconds in the handling course.

It's a head-snapping, arm-straightening water machine that requires athletic skill and a learning curve to operate properly. But, in return, it carves tight turns, does spinouts and leaps waves like a marlin.

Power is supplied by a 32-horse, 496-cc engine. Total length is 88 in. and weight is 346 pounds.

The WaveJammer ($3380) may not be for everyone, but for those seeking adventure, it's hotdogging heaven.

■ *Wave Rider*, by Castoldi Jet, of Milan, Italy, rides more like the *QE2* than a true minijet.

The 12-ft. 8-in., 638-pounder is powered by a 1000-cc Fiat jetdrive that pushes out 55 hp and hits 32.5 mph with one person and 29 mph with two.

Because of its enormous size and power, the Wave Rider can actually seat three and pull a water skier. In addition, its dry, ultrastable ride inspires confidence by cautious first-timers. However, its barge-like handling and upscale price, $9535, offset some of the allure.

There's no other feeling to compare with the thrill of riding a top-performing personal watercraft. It brings the hotdogger out of anyone.

Rally Drivers Beat Odds

I spoke with Trans Amazon Marathon Rally driver, Al Micallef, recently and he confirmed some gut feelings I'd had prior to the race. One was that the rally would be a spectacular South American adventure. Two was that it would be plagued by disorganization and financial woes.

I was scheduled to cover the portion of the rally from Santiago, Chile, to the finish line in Buenos Aires, Argentina. But, after discovering chaos and uncertainty at rally headquarters in New Orleans on the eve of vehicle departure, I decided that my current duties in the United States needed urgent, personal attention.

"You were right not to go," said Micallef. "We felt like we were going to war every day, and that included the

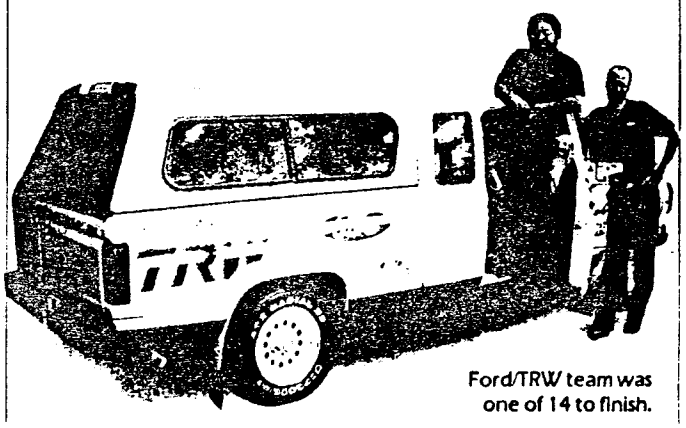
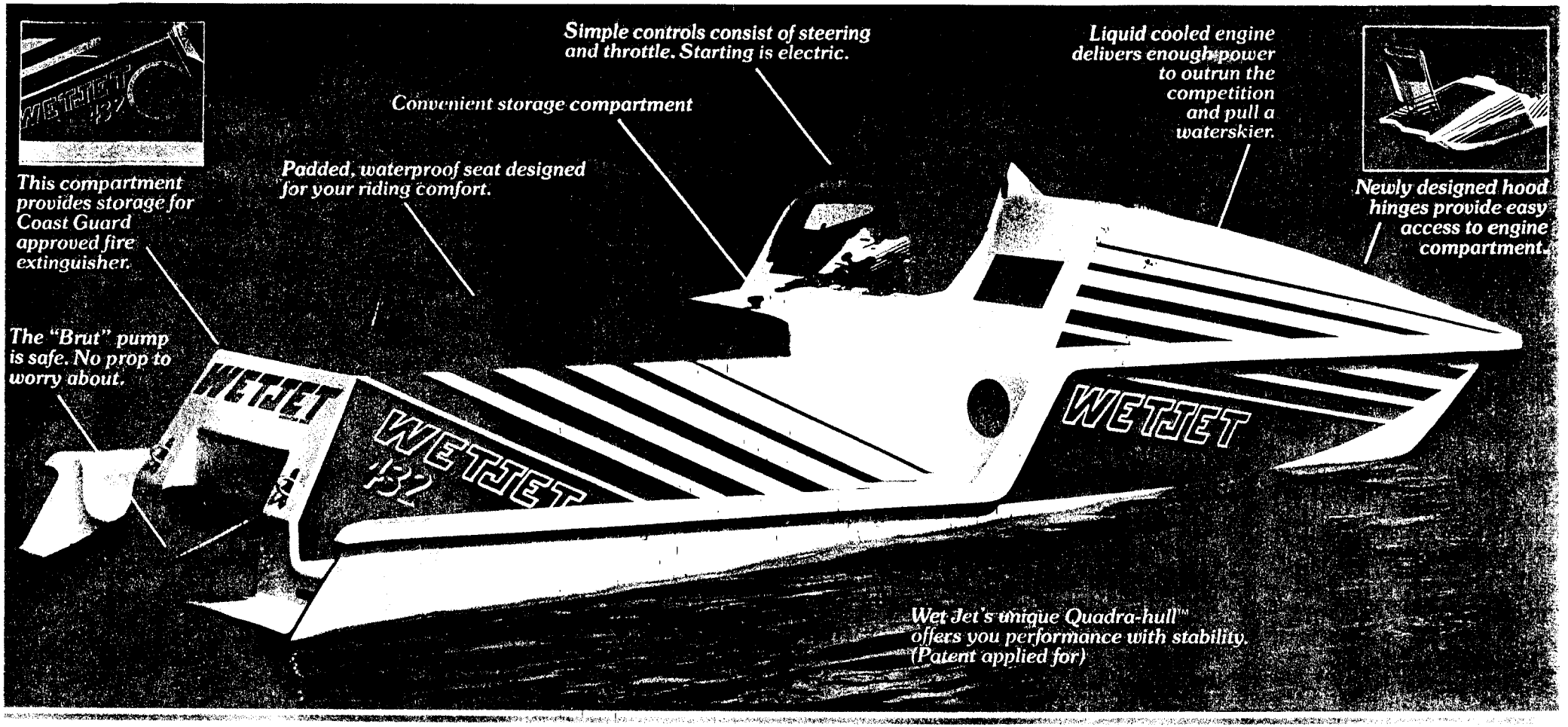


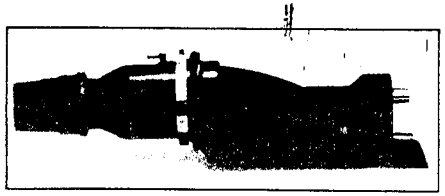
PHOTO BY JOE SKORUPA

Ford/TRW team was one of 14 to finish.



So easy...the hardest part is getting off.

In choosing the American Made WETJET you'll experience everything from a pleasurable ride to wet and wild excitement. Total stability at any speed is what makes the WETJET unique. Powerful enough to pull a skier yet practical enough for ship-to-shore shuttles. Ease of operation lets anyone "Catch the Feeling." Controls consist of steering and throttle. Starting is electric. The jet pump makes it safe. No prop to worry about. Exciting, powerful, stable, unique and fun. The American Made WETJET. Test ride one today and "Catch the Feeling."



Safe, test proven "Brut" jet pump. No prop to worry about.

Powerful enough to pull a skier on two skis or slalom.

For more information contact:

Always wear a lifejacket, eye and foot protection. Ride safely; respect the rights of swimmers and watercraft.

WETJET SPECIFICATIONS

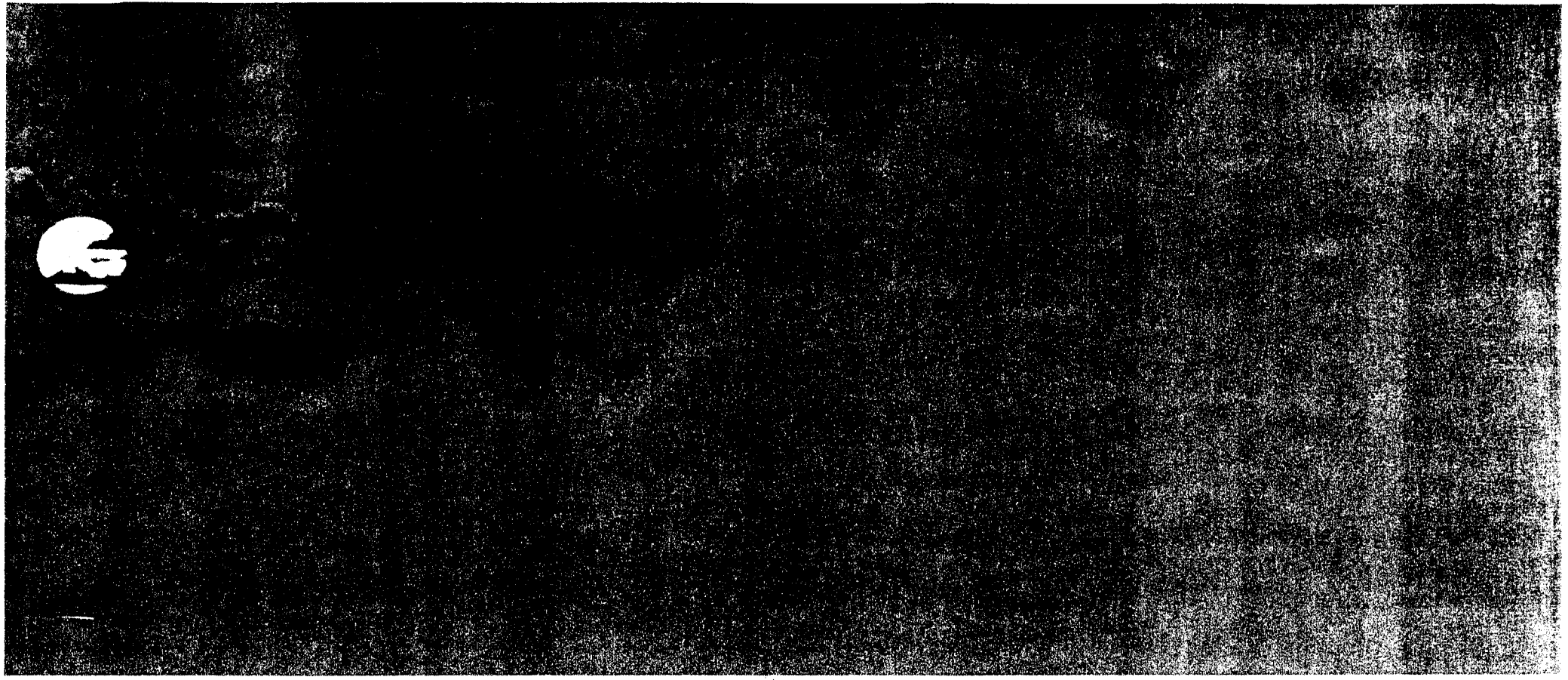
Length	8'
Width	32"
Weight	273 lbs.
Engine	twin cylinder, marine liquid cooled
Exhaust	liquid cooled
Starting	12 V electric
Ignition	CDI
Carburetion	Mikuni Diaphragm
Drive	Jet Axial Drive
Thrust	340 Pounds
Fuel Capacity	5 Gallons
Bilge	Constant Siphon
Body Construction	Fiberglass

Specifications subject to change without notice.

Qualifies for U.S. Coast Guard Exemption #CGB-84-032

WETJET® American Made

WETJET INTERNATIONAL LTD.
Paynesville, MN 56362-1705 Telephone (612) 243-3311



SPECIFICATIONS	1988 JS650-A2
Engine type	2-stroke Twin
Displacement	635 cc
Bore × stroke	76 × 70 mm
Compression ratio	7.2:1
Cooling system	Water-cooled
Carburetion	Diaphragm-type
Ignition	Waterproofed CD
Maximum power	52 ps @ 6,000 rpm
Thrust	463 pounds
Starting	Electric
Propulsion system	Jet pump, axial flow, single stage
Fuel capacity	4.6 gallons
Minimum turning radius	9.2 feet
Dimensions	87 inches long, 27 inches wide, 30 inches high, 9-inch draft
Dry weight	282 pounds
Color	Jet White

KEEP THE GOOD TIMES ROLLING

Ride responsibly. Kawasaki believes safety begins with us and ends with you. Never ride under the influence of drugs or alcohol. Ride in authorized areas only. Respect the rights of shoreline residents and other marine recreationists. Riding is more fun on a well-maintained machine...follow the instructions in your owner's manual. Remember, riding safe is smart.

KEEP YOURSELF COVERED

Get the Good Times Protection Plan—only from Kawasaki. It extends the warranty protection on major components of most Kawasaki products. Depending on the model, you'll stretch coverage up to 24 or 36 months. If a specified component or assembly is found defective in material or workmanship, Kawasaki will repair or replace it free. There's no deductible on claims. The warranty can be transferred to another owner with no fee. And it's honored by every authorized Kawasaki dealer in the continental U.S. You can sign up as long as your machine is under original warranty. Tell your dealer you want the best protection in the industry—the Kawasaki Good Times Protection Plan.

(Good Times Protection Plan currently not available in Florida.)

12-MONTH WARRANTY

The Kawasaki JET SKI 650SX watercraft includes the Kawasaki 12-month limited warranty. Extended warranty available. See your dealer for details.

ADD TO YOUR FUN

Kawasaki offers hundreds of quality accessories to make your good times even better. Ask your dealer for details.

Kawasaki

©1987 Kawasaki Motors Corp., U.S.A.
P/N 99969-1233 Printed in Hong Kong
Specifications subject to change without notice. Availability may be limited. Accessories shown available at extra cost. JET SKI watercraft are "Class A" inboard boats and their use is subject to all applicable state and local boating laws.

EXPLORE THE FINAL FRONTIER

Launch yourself into some wet and wild good times with the Kawasaki JET SKI 550.

It packs all the high-performance features you've come to expect over the past 15 years from Kawasaki—the exclusive manufacturer of the world's only JET SKI watercraft.

The proven liquid-cooled engine and powerful jet impeller churn out a whopping 368 pounds of thrust, all wrapped up in an easy-handling 251-pound hull.

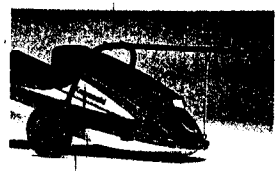
Its exclusive design is so compact, you can easily transport it to your favorite launching pad.

And once you're there—just push the electric starter, open the throttle, get up, and take off into the wild blue yonder. Riding is as easy as water skiing, and you decide what speed and direction to take.

And if you take a spill, it cools its jet and circles back around to pick you up.

So splash down on the 1988 JET SKI 550.

And go where no man has gone before.



- Loading or launching, the optional Tote-A-Ski makes it a breeze to wheel around your Kawasaki JET SKI watercraft.
- Sleek, sheet-molded compound hull features a tough bumper rail.
- Kawasaki JET SKI watercraft use shielded water-jet impellers, not propellers.
- Electric starter gets you going at the push of a button.
- Special bilge system automatically removes water from the engine compartment.
- Super-shallow 8-inch draft lets you go almost anywhere there's two feet of water.
- Dry weight is just 251 pounds for easy maneuverability.
- Cushioned handle pole folds down for easy transport and storage.
- Super fuel economy keeps the good times rolling for just a few dollars a day.

SPECIFICATIONS	1988 JS550-A7
Engine type	2-stroke Twin
Displacement	530 cc
Bore × stroke	75 × 60 mm
Compression ratio	5.7:1
Cooling system	Water-cooled
Carburetion	Diaphragm-type
Ignition	Shielded CD
Maximum power	41 ps @ 6,250 rpm
Thrust	368 pounds
Starting	Electric
Propulsion system	Jet pump, mixed flow, single stage
Fuel capacity	3.4 gallons
Minimum turning radius	9 feet
Dimensions	84 inches long, 24 inches wide, 25 inches high, 8 inch draft
Dry weight	251 pounds
Color	Optic Red

KEEP THE GOOD TIMES ROLLING

Ride responsibly. Kawasaki believes safety begins with us and ends with you. Never ride under the influence of drugs or alcohol. Ride in authorized areas only. Respect the rights of shoreline residents and other marine recreationists. Riding is more fun on a well-maintained machine...follow the instructions in your owner's manual. Remember, riding safe is smart.

KEEP YOURSELF COVERED

Get the Good Times Protection Plan—only from Kawasaki. It extends the warranty protection on major components of most Kawasaki products. Depending on the model, you'll stretch coverage up to 24 or 36 months. If a specified component or assembly is found defective in material or workmanship, Kawasaki will repair or replace it free. There's no deductible on claims. The warranty can be transferred to another owner with no fee. And it's honored by every authorized Kawasaki dealer in the continental U.S. You can sign up as long as your machine is under original warranty. Tell your dealer you want the best protection in the industry—the Kawasaki Good Times Protection Plan.
(Good Times Protection Plan currently not available in Florida.)

SIX-MONTH WARRANTY

The Kawasaki JET SKI 550 watercraft includes the Kawasaki six-month limited warranty. Extended warranty available. See your dealer for details.

ADD TO YOUR FUN

Kawasaki offers hundreds of quality accessories to make your good times even better. Ask your dealer for details.

Kawasaki

©1987 Kawasaki Motors Corp., U.S.A.
P/N 99969-1232 Printed in Hong Kong
Specifications subject to change without notice. Availability may be limited. Accessories shown available at extra cost. JET SKI watercraft are "Class A" inboard boats and their use is subject to all applicable state and local boating laws. Always wear a USCG-approved personal flotation device, eye wear, and other appropriate safety apparel.

FREEDOM OF THE SEAS

If you think summer fun should go far beyond soaking up a great tan—you're ready for the excitement and adventure of a Kawasaki JET SKI watercraft.

And the 1988 JET SKI 440 is a great place to start.

It's a unique kind of watercraft. The light, compact design makes it easy to store and easy to transport to your favorite watering hole.

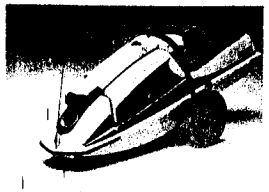
The liquid-cooled 436cc engine gives you 243 pounds of water-jet thrust—more than enough power to let you go where you want at the speed you choose.

And if you happen to take a spill, like all JET SKI watercraft, the 440 slows to idle and circles back to pick you up—no other personal watercraft does that.

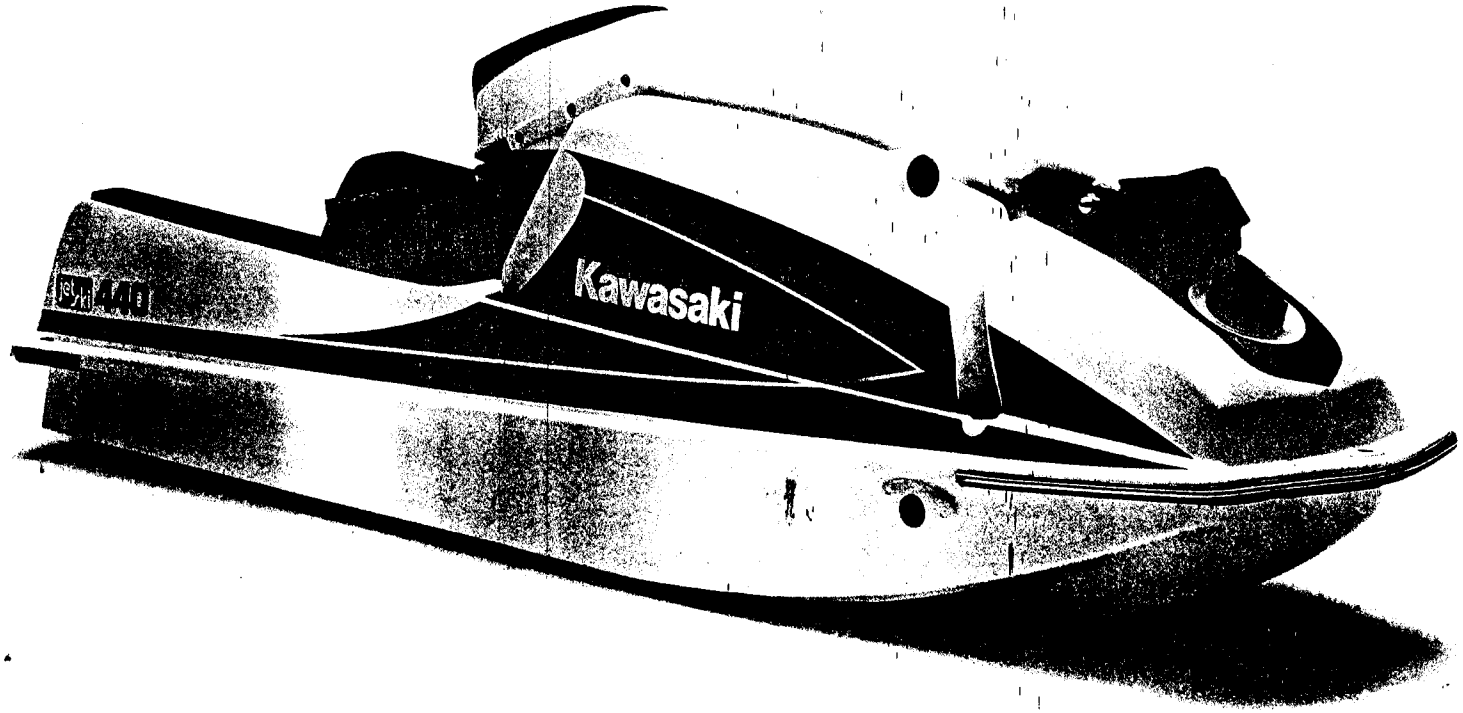
Kawasaki has been refining JET SKI watercraft for the past 15 years. So you get the kind of proven reliability that frees you from costly maintenance. And the 440's great fuel economy means it's affordable fun that just about everyone can enjoy.

This year, break away from it all on the Kawasaki JET SKI 440.

You'll never look back.



- Optional Tote-A-Ski makes it easy to wheel around your JET SKI watercraft.
- Light 244-pound dry weight ensures ease of handling in and out of the water.
- The streamlined hull is molded from SMC—a tough fiberglass-reinforced compound.
- Excellent fuel economy gives you maximum good times at minimum cost.
- Special bilge system automatically removes water from the engine compartment.
- Tight turning radius gives you superb agility and maneuverability.
- Shallow 8-inch draft lets you roam almost anywhere there's two feet of water.
- Every JET SKI watercraft uses shielded water-jet impellers—not propellers.
- Rider tray is padded for extra comfort.
- Cushioned handle pole folds down for easy storage and transport.
- All JET SKI watercraft are self-circling and self-righting.



SPECIFICATIONS	1988 JS440-A12
Engine type	2-stroke Twin
Displacement	436 cc
Bore × stroke	68 × 60 mm
Compression ratio	6.1:1
Cooling system	Water-cooled
Carburetion	Diaphragm-type
Ignition	Shielded CD
Maximum power	27 ps @ 6,000 rpm
Thrust	243 pounds
Starting	Electric
Propulsion system	Jet pump, axial flow, single stage
Fuel capacity	3.4 gallons
Minimum turning radius	9 feet
Dimensions	84 inches long, 24 inches wide, 25 inches high, 8 inch draft
Dry weight	244 pounds
Color	Jet White

KEEP THE GOOD TIMES ROLLING

Ride responsibly. Kawasaki believes safety begins with us and ends with you. Never ride under the influence of drugs or alcohol. Ride in authorized areas only. Respect the rights of shoreline residents and other marine recreationists. Riding is more fun on a well-maintained machine...follow the instructions in your owner's manual. Remember, riding safe is smart.

KEEP YOURSELF COVERED

Get the Good Times Protection Plan—only from Kawasaki. It extends the warranty protection on major components of most Kawasaki products. Depending on the model, you'll stretch coverage up to 24 or 36 months. If a specified component or assembly is found defective in material or workmanship, Kawasaki will repair or replace it free. There's no deductible on claims. The warranty can be transferred to another owner with no fee. And it's honored by every authorized Kawasaki dealer in the continental U.S. You can sign up as long as your machine is under original warranty. Tell your dealer you want the best protection in the industry—the Kawasaki Good Times Protection Plan. (Good Times Protection Plan currently not available in Florida.)

SIX-MONTH WARRANTY

The Kawasaki JET SKI 440 watercraft includes the Kawasaki six-month limited warranty. Extended warranty available. See your dealer for details.

ADD TO YOUR FUN

Kawasaki offers hundreds of quality accessories to make your good times even better. Ask your dealer for details.

Kawasaki

©1987 Kawasaki Motors Corp., U.S.A.
P/N 99969-1231 Printed in Hong Kong
Specifications subject to change without notice. Availability may be limited. Accessories shown available at extra cost. JET SKI watercraft are "Class A" inboard boats and their use is subject to all applicable state and local boating laws. Always wear a USCG-approved personal flotation device, eye wear, and other appropriate safety apparel.

TAKE THE PLUNGE

Hop aboard a 1988 Kawasaki JET SKI 300SX.

It's a fun-filled high-performance watercraft that gives you the freedom of the seas without putting your expense account in a bind.

The liquid-cooled engine pumps out enough foam-churning power to let you explore lakes, rivers, and oceans at the pace you choose.

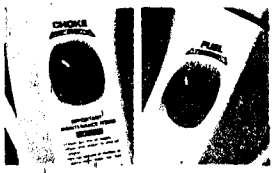
Yet for all its agility and power, riding a JET SKI 300SX is just about as easy as water skiing. And even more fun.

And it's equipped with all the advanced features Kawasaki has refined in 15 years of building the world's only JET SKI watercraft.

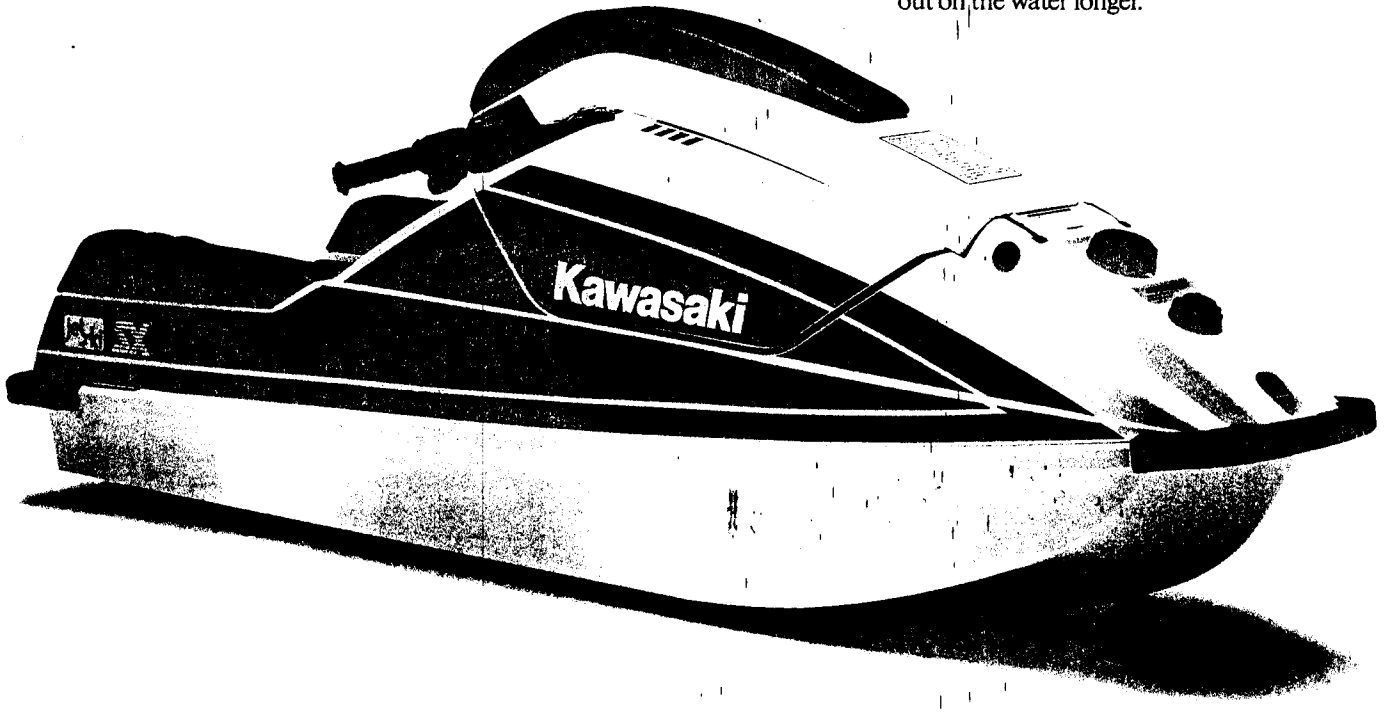
It slows to an idle and circles around to pick you up if you happen to fall off.

A light, compact hull means easy handling in and out of the water, while the self-righting design and sealed flotation cells make it virtually impossible to sink.

This year, chart your own course to good times on a Kawasaki JET SKI 300SX.



- All controls including choke and fuel tap are within easy reach of the rider.
- Kawasaki JET SKI watercraft use shielded water-jet impellers—not propellers.
- Underwater exhaust ensures super-quiet operation.
- Convenient cap-top gauge tells you the oil level at a glance.
- Large-capacity five-gallon tank lets you stay out on the water longer.
- Special bilge system automatically removes water from the engine compartment.
- Light 220-pound dry weight makes for incredible agility.
- Automatic Superlube oil injection means there's no pre-mixing.
- Waterproofed electronic CD ignition provides quick starts and reliable operation.
- Wide riding platform features plenty of soft padding for more comfortable rides.
- Watertight compartment at the rear of the hull offers convenient storage space.



SPECIFICATIONS	1988 JS300-A2
Engine type	2-stroke Single
Displacement	294 cc
Bore × stroke	76 × 64.9 mm
Compression ratio	7.2:1
Cooling system	Water-cooled
Carburetion	Diaphragm-type
Ignition	Shielded CD
Maximum power	30 ps @ 6,000 rpm
Thrust	276 pounds
Starting	Electric
Propulsion system	Jet pump, axial flow, single stage
Fuel capacity	5 gallons
Minimum turning radius	9 feet
Dimensions	79 inches long, 26 inches wide, 28 inches high, 8 inch draft
Dry weight	220 pounds
Color	Jet White

KEEP THE GOOD TIMES ROLLING

Ride responsibly. Kawasaki believes safety begins with us and ends with you. Never ride under the influence of drugs or alcohol. Ride in authorized areas only. Respect the rights of shoreline residents and other marine recreationists. Riding is more fun on a well-maintained machine... follow the instructions in your owner's manual. Remember, riding safe is smart.

KEEP YOURSELF COVERED

Get the Good Times Protection Plan—only from Kawasaki. It extends the warranty protection on major components of most Kawasaki products. Depending on the model, you'll stretch coverage up to 24 or 36 months. If a specified component or assembly is found defective in material or workmanship, Kawasaki will repair or replace it free. There's no deductible on claims. The warranty can be transferred to another owner with no fee. And it's honored by every authorized Kawasaki dealer in the continental U.S. You can sign up as long as your machine is under original warranty. Tell your dealer you want the best protection in the industry—the Kawasaki Good Times Protection Plan.
(Good Times Protection Plan currently not available in Florida.)

12-MONTH WARRANTY

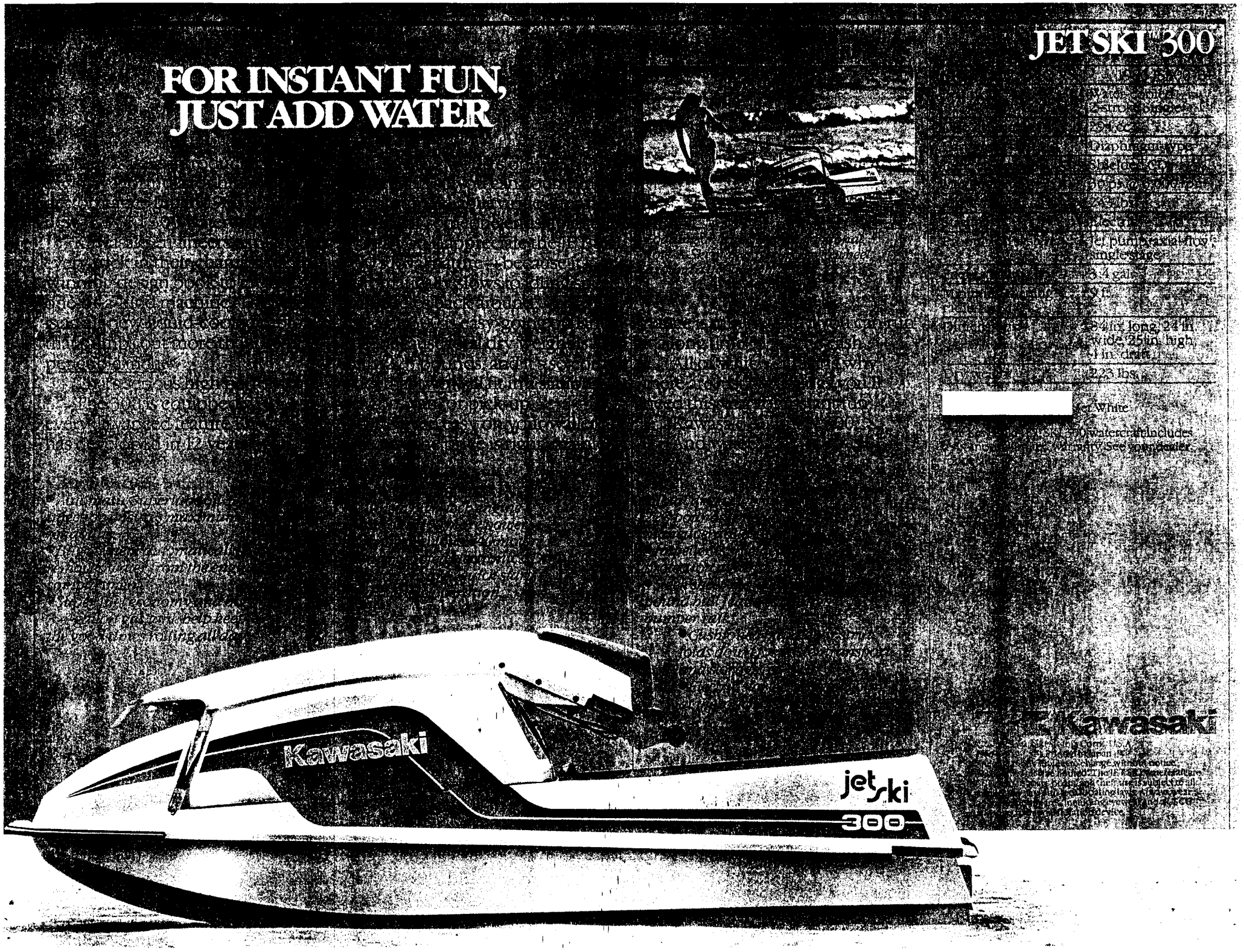
The Kawasaki JET SKI 300SX watercraft includes the Kawasaki 12-month limited warranty. Extended warranty available. See your dealer for details.

ADD TO YOUR FUN

Kawasaki offers hundreds of quality accessories to make your good times even better. Ask your dealer for details.

Kawasaki

©1987 Kawasaki Motors Corp., U.S.A.
P/N 99969-1229 Printed in Hong Kong
Specifications subject to change without notice. Availability may be limited. JET SKI watercraft are "Class A" inboard boats and their use is subject to all applicable state and local boating laws. Always wear a USCG-approved personal flotation device, eye wear, and other appropriate safety apparel.


FOR INSTANT FUN,
JUST ADD WATER
JET SKI 300
Kawasaki
jet ski
300
Kawasaki

DON'T MAKE WAVES.

Realize that your boat's wake is like grafitti. Don't splash it all over other people's boats or docks, or on waterfowl nesting areas.

OUT TO LAUNCH.

Don't stuff yourself in between boats at the launch ramp just because you're small. Take your turn. And make sure to get permission before using a private ramp.

TAKE THE GOOD TIMES WITH YOU.

A day of fun on the shore can create lots of flotsam and jetsam. Please leave the beach clean, the way you'd like to find it. And plan plenty of weekends all year long to go JET SKI® watercraft riding with your family and friends. Just for the fun of it.

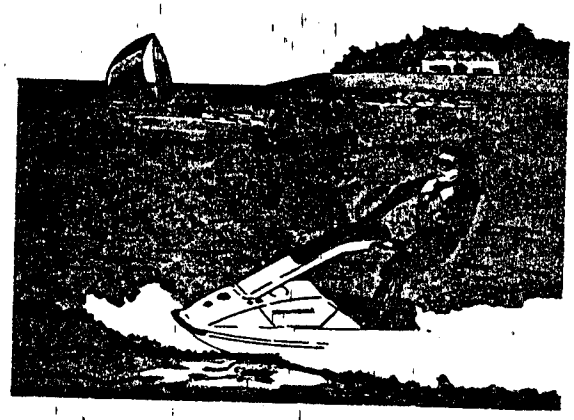
WANT MORE COPIES?

See your authorized Kawasaki JET SKI® watercraft dealer.

©1987 Kawasaki Motors Corp., U.S.A.
99995-5004-01

JET SKI® Watercraft

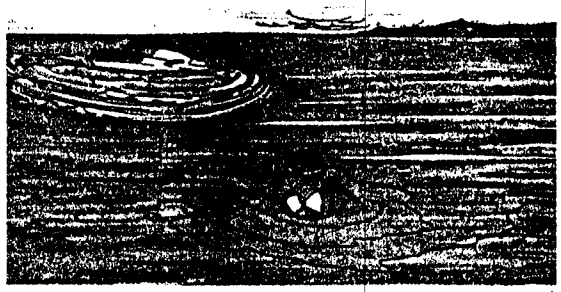
by Kawasaki
the "GOOD TIMES" Company



The time to think about watercraft safety is NOW, before you go near the water. Take a couple minutes now to read this brochure and think about it. Share a copy with your riding friends for your own safety, your friends' safety, and the safety of those around you. Be sure to read the Owner's Manual for your JET SKI® watercraft or the one you are borrowing for more important information.

SAFETY IS AN ATTITUDE.

JET SKI® watercraft aren't dangerous, but you could have an accident if you think you are invincible. Be careful of yourself and those around you when you ride. Do not ride under the influence of drugs or alcohol.



PERSONAL FLOTATION DEVICE.

Whenever you enjoy water sports, your local regulations and the U.S. Coast Guard require the use of an approved personal flotation device. Kawasaki strongly recommends that you always wear a personal flotation device when riding a JET SKI® watercraft.

WETSUIT.

Hypothermia, an abnormally low body temperature, is a very real danger if you spend much time in cold or even cool water. Guard against hypothermia with a wetsuit or drysuit.

FIRE EXTINGUISHER.

Your JET SKI® watercraft is a Class A Inboard Boat and Coast Guard and local regulations require that you carry an approved fire extinguisher on board.

SCIENTIFIC REALITY.

Boats have no brakes. To slow down, let off the throttle. Pushing the STOP button stops the engine immediately and permits the shortest straight-line stopping distances. Just remember that without power, you can't steer. The JET SKI® watercraft is a jet boat, and all jets turn with power (to push the rear end around).

THE RULES OF THE ROAD.

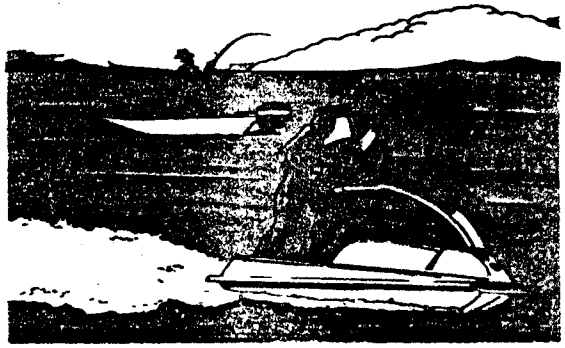
Buoys, signs, lights; they're all there to inform you about the marine environment. Check with your local Power Squadron or the U.S. Coast Guard for more information. Know the local regulations before you ride.

CHILDREN NEED GUIDANCE.

You wouldn't let your children drive the family car without a license. Don't let them ride your JET SKI® watercraft either. Kawasaki recommends that any personal watercraft operator have a valid motor vehicle operator's license, as an indicator of maturity, judgement and responsibility. Check state and local laws for other restrictions.

FISHERMEN.

Wherever you find fishermen, you find fish hooks. Steer clear of shore fishermen, and trolling boats which may trail lines several hundred yards behind them.



NOISE.

The noise you make may be part of your fun. But the noise the other guy makes is just noise. Remember, you're always the "other guy." And your noise is almost always irritating to others. Try to stay away from houses and on-shore recreation areas. If you replace your stock muffler, insist that the new one be at least as quiet.

POLLUTION.

Gasoline is a toxic pollutant. Take your boat out of the water and away from the beach before refueling.

DON'T RIDE AT NIGHT.

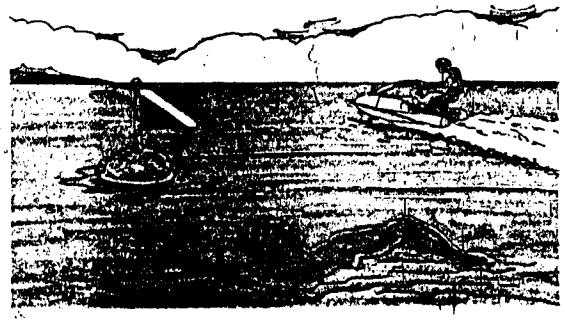
Your JET SKI® watercraft has no lights. So don't ride at night.

MANEUVERABILITY.

Your watercraft can change direction as quickly as you can think about it. Other boaters don't realize how maneuverable you are, so always look over your shoulder before you turn. Being hit by another boat is a very real danger. Traffic is hazardous.

SWIMMERS.

Are hard to see. Stay out of swimming-only areas, and shallow water; watch for diving flags, and keep a sharp lookout wherever you ride.



WATER SKIERS.

The rope between a water skier and his boat is very hard to see and very dangerous if you hit it. You also don't want to hit the boat or the skier. Don't go near water skiers, their boats or tow ropes.

TAILGATING.

Don't follow other watercraft too closely. If you're tailgating and the other rider falls, you might hit him or his boat.

FUN SAFETY on your Personal Watercraft

PWIA PERSONAL WATERCRAFT INDUSTRY ASSOCIATION

PWIA PERSONAL WATERCRAFT INDUSTRY ASSOCIATION
Room 1150
401 N. Michigan Ave.
Chicago, IL 60611

©1988

Ride Responsibly

Your personal watercraft may not look exactly like a boat, but when you're out on the water, **you are a boater.**

Be a responsible boater:

- Follow the safety recommendations in the booklet and your personal watercraft owner's manual.
- Check local and state boating regulations and obey them.
- Respect the rights of others to enjoy the water — other boaters, swimmers, fishermen.
- When others operate your watercraft, be sure they are old enough to be responsible operators and thoroughly explain to them the procedures for handling your watercraft safely.

Personal Watercraft

This booklet has been prepared by the Personal Watercraft Industry Association (PWIA) in affiliation with the National Marine Manufacturers Association (NMMA). PWIA members are leading manufacturers of personal watercraft who have an interest in your enjoyment of boating.

The information in this booklet is not meant to replace information and guidelines in the owner's manual and product labels from your personal watercraft's manufacturer.

What Exactly Is A Personal Watercraft?

The Personal Watercraft Industry Association considers a personal watercraft to be a Class A inboard vessel, as defined by the U.S. Coast Guard, which uses an internal combustion engine powering a water jet pump as its primary source of motive propulsion, and is designed to be operated by a person or persons sitting, standing or kneeling on, or being towed behind the product rather than in the conventional manner of boat operation.

Introduction

"Welcome Aboard!" is the traditional nautical welcome, and we extend it to you as you begin your many years of enjoyment with your personal watercraft. Whether you're a newcomer or an "old salt," we believe the information in this booklet will help you to operate your craft in a manner consistent with safety and good boating practices.

Regardless of the type of personal watercraft you own or operate you are now legally in command of a power boat, and bound by the laws and traditions that have made boating one of the most enjoyable and safest family sports in the world.

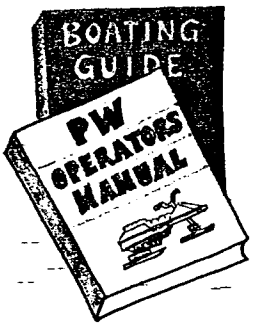
We urge you to learn the boating "rules of the road" and all local boating regulations where you normally ride, or if you vacation in an area unfamiliar to you.

Your Personal Watercraft

One of the more unique aspects of personal watercraft is the variety of styles from which to choose. Some are designed for single riders, others are designed for two or more. Still others are designed to tow the operator on skis. The small size of the personal watercraft is part of its appeal, and helps make it a highly maneuverable craft.

You can find models that ride on skis, while others ride on their own hulls. You'll be able to find performance-oriented models that offer "sports car" handling, while some models are designed more for cruising. Whether you want a dry ride or "in-the-water" action, you'll find just what you need in today's popular models.

Before you get on the water, regardless of your choice, you should become very familiar with the characteristics of your personal watercraft. Different models have different operating and handling characteristics. Some offer a steerable ski; others feature handlebars controlling a steerable jet nozzle while some may require the driver to shift body weight for steering. There's even one that tows its operator on skis.



There are two primary sources to help you learn as much as possible about your craft: Your **dealer** and the **owner's manual** provided with each craft.

The dealer who sold you the model is an excellent source of information, and can answer most of your questions. In fact, he may have a complete program to familiarize you with your purchase. Ask him to explain the controls and operation of the watercraft to you, so you'll know as much as possible before you actually take it on the water. If he has a familiarization program, take the time to attend. And be sure to bring along any family members who will be using the personal watercraft, so they can be informed as well.

Your owner's manual should remain with the personal watercraft and be reviewed periodically, especially if it has been a long time since you've used your vehicle. And make certain that anyone who rides the personal watercraft fully understands its operation and has read the manual for safe operation. The manual contains information specific to your model, and is a handy reference source. In any case where the information in this booklet differs from the specific information provided by your watercraft manufacturer, the information from the manufacturer is to be given priority.

These colorful, sporty personal watercraft are an exciting part of boating, and new and unfamiliar to many people. You've got a chance to be an "ambassador" for the sport of personal watercraft when you're on the water. By being a good neighbor and considerate of those other folks on the water and on the beach, you'll make personal watercraft welcome on our lakes and rivers.

Personal Watercraft — A Power Boat

Just as there are rules to follow when you are driving a car, there are rules to follow when you are operating any watercraft. Since your personal watercraft is legally considered a power boat, you need to follow the nautical rules of the road for power boats.

RULES

The rules that apply to ski boats, bass boats, large cruisers or other power boats also apply to you. Since it's likely that you'll be sharing the waterways with one or more of these boats, you need to know what to do in different situations.

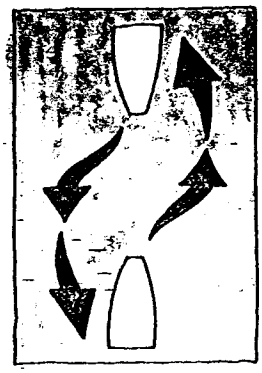
In general, there is an international set of boating rules to follow, and these are enforced by the U.S. Coast Guard and local marine authorities. There may be some special local rules due to geography, but all are basically the same as the International Rules of The Road. We're providing you with this condensed information as a convenience, but recommend that you consult the U.S. Coast Guard Auxiliary or your state boating agency for a set of rules governing the waters in which you will be using your personal watercraft.

Nautical Rules Of The Road

The nautical rules of the road dictate who has the right-of-way in crowded anchorages and when boats meet in open water.

RIGHT-OF-WAY—Simply put, the boat that has the right-of-way gets to go first. That's easy to figure out. What's not so easy to figure out, unless you know the rules, is which boat in a given situation has the right-of-way. Sailboats have right-of-way over power boats in nearly all cases. In narrow channels, power boats under 65 feet in length cannot hamper the operation of large vessels which cannot navigate outside the channel. Keep your distance from all commercial vessels and other large craft; you can maneuver more easily than they can. Large commercial boats create a substantial bow wave and wake that can cause you to lose control, so stay clear.

In overtaking and passing situations, the craft being passed has right-of-way, and the passing craft is required to stay clear. In most cases, pass on the right, or starboard side. Let the other craft know you're there whenever possible. Use a sounding device, such as a portable horn or whistle if you have one handy.



If you're meeting another boat head-on, and are close enough to run the risk of collision, you

should turn to the right (starboard), keeping the other craft on your left (port) side. Even though your personal watercraft is one of the most maneuverable forms of marine transportation, the other boat may not be able to react as quickly. That's why **you** need to conform to these rules and regulations.

Another situation that is likely to happen is crossing. The boat on the right has the right-of-way. The other craft must keep out of its way, altering its course to starboard (right). If the other vessel is on the left, you must maintain course and speed, allowing the other boat to steer around you. Under the rules of the road, you can only change course when the situation is critical, and when you must take action to avoid collision.

SAFE SPEED—The rules state that you shall at all times operate your craft at a safe speed that would enable you to take proper and effective action to avoid a collision or stop in time to avoid an accident. You need to know how long it takes to stop your craft once you cut the power. Your owner's manual may have charts and information, but actual practice is the best way to get the feel of your craft.

Special Situations

NARROW CHANNELS OR BENDS—In narrow channels, stay to the right when it is safe to do so. Proceed with caution, and use a sounding device if you have one. If you hear such a signal, you'll know that you're soon to have company, so you should be prepared to maneuver.

FISHING VESSEL RIGHT-OF-WAY—All vessels which are fishing with nets, lines or trawls are considered to be "fishing vessels" under the International Rules. Vessels with trolling lines are not considered fishing vessels. Fishing vessels have the right-of-way, regardless of position.

SAILING VESSEL RIGHT-OF-WAY—Stay clear of sailboats under sail. Normally they are given the right-of-way except in situations when it is the sailboat overtaking the powerboat.

NIGHT USE—Your personal watercraft normally isn't equipped for night operation, which requires approved running lights. Do not operate your personal watercraft after dusk or before sunrise without proper lights.

Although you are operating one of the most highly maneuverable watercraft available, the nautical rules of the road are for all to follow so that everyone can safely enjoy our nation's waterways. These rules are important not only for you to follow, but so you'll know what to expect of the other boat if you find yourself in any of the above situations.

Where To Go For More Information

Start with your dealer if you would like to learn more about boating safety. He will be happy to tell you about any local classes or sources of information.

OTHER SOURCES OF INFORMATION:
U.S. Coast Guard Auxiliary
U.S. Power Squadron
Local college continuing education
The U.S. Government Printing Office
Your local library
Red Cross
Boating and personal watercraft clubs

The Operator

Although many personal watercraft are simple enough to be handled by nearly anyone who can water ski, youngsters not old enough for a driver's license should operate personal watercraft only under adult supervision. Different states have different rules regarding this. Check locally to determine any age requirements.

Before anyone operates a personal watercraft, there are several considerations to be met:

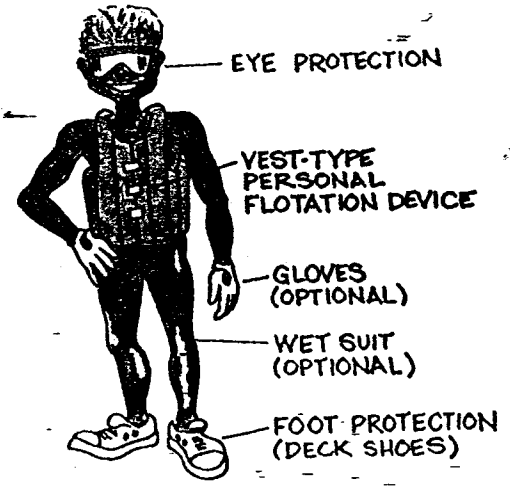
1. The operator must be a competent swimmer.
2. He or she must demonstrate knowledge of craft operation and safety rules. Some states have age requirements and also require boat operators to pass proficiency tests before being allowed to operate any motor boat.
3. Proficient operation of a personal watercraft is acquired only through practice over a period of time. Allow yourself plenty of time to learn how to safely operate it.

Teaching New Riders

Bear in mind that your personal watercraft is a power boat. And although great fun to operate, it is not a toy. Others will want to ride it and to experience the fun they see you having. But before you let them ride it, give them thorough instruction on the operation of the craft and on boating safety. A good rule of thumb is: If you wouldn't lend your auto to that person, don't lend him your personal watercraft.

Protective Equipment

Both the operator and passenger must wear a U.S. Coast Guard-approved personal flotation device, preferably the buoyant vest type. It is also recommended that each rider wear deck shoes or tennis shoes with good traction for protection from underwater scrapes and for better control. Also, water spray can get in the operator's eyes, so wear appropriate eye protection. Gloves and a wet suit are also appropriate for comfort and added protection against the elements.



Starting Out

After you've checked your personal watercraft for fuel and safety equipment and are ready to begin riding, there are a few tips that will enhance your day on the water.

A. Keep a sharp look-out for swimmers, skiers, and other traffic. Go slowly until you are certain you're in a clear area.
B. Many areas have speed restrictions, either close to shore or in certain channels. Obey the signs and use common sense. Look for "no wake" buoys and swimming areas. When in doubt, ask. When operating in a harbor area, be considerate and go slow enough not to create a wake.
C. Many waterways enjoy heavy traffic, and have their own special traffic pattern, particularly lakes popular with water skiers. Make certain you follow the traffic pattern. Never pass between a skier and boat. You risk hitting the skier or ski rope.
D. Follow the nautical rules of the road, particularly where they pertain to right-of-way.
E. Always look behind you for traffic as you prepare to turn.

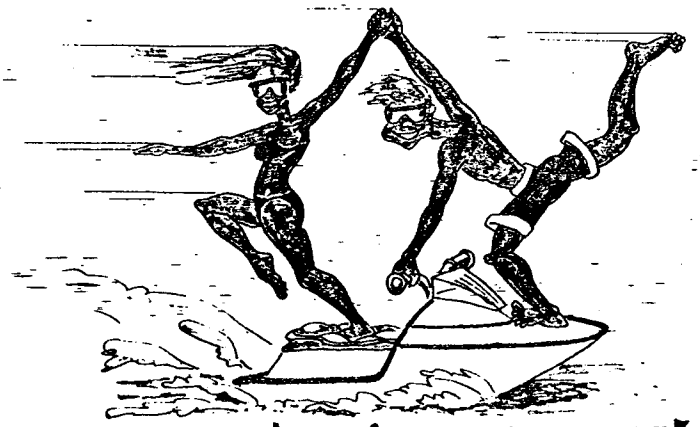
F. If you take a spill, most watercraft will have one of two options. Some watercraft have lanyard-type engine shut-offs that are attached to your wrist. Other watercraft have an automatic idle, which will allow the machine to circle slowly back, allowing the rider to easily re-board. The circling craft also helps others in the area to be alert to the rider in the water.

Advanced Riding

These extremely maneuverable watercraft can make very sharp turns. In fact, they can literally turn in their own length. Before you decide to operate your personal watercraft in such a manner, make certain you have plenty of unobstructed water available. Don't attempt any rapid, quick turns if you have other boats, swimmers, or obstructions nearby.

Operating your personal watercraft in rough water or jumping waves or wakes can increase the risk of personal injury or damage your vehicle.

Never exceed the craft's maximum load or carry more passengers than the personal watercraft is designed to carry. Your owner's manual provides this information. Trick performance—hot-dogging—should be done only by skilled riders, only when conditions permit, and only with full understanding of the potential risks.



SOME DOs & DON'Ts —This is a **DON'T!**

Shore Starts

As you get ready to start your personal watercraft after launching, make certain you are in water deep enough to satisfy your vehicle's needs (see recommendations in your owner's manual). Make certain the water is free of debris such as weeds or trash.

If your craft uses a lanyard-type engine shut-off, always attach it to your wrist before you start the engine. Follow manufacturer's recommended procedures for starting and boarding. Make certain nothing is blocking the jet intake of the motor and always wear your life jacket.

If you're launching from a dock, follow your owner's manual for procedures. Make certain your path is clear, and once you are aboard with the motor running, apply enough throttle to provide steerage and idle away from the dock until you are in clear water. As you ease away, get the feeling of how the craft handles; make gentle left and right turns and check throttle operation.

Whether you're launching from the shoreline or a dock, obey no-wake zones and keep a sharp lookout for swimmers, skiers, and other traffic.

Common Courtesy—Common Sense

To ensure that personal watercraft are always welcome on our nation's recreational waterways, it's up to you, the individual operator, to be a good boating partner with others who share in the fun of water sports.

- Always operate your craft safely and in accordance with manufacturer's recommendations.
- Never operate your personal watercraft after consuming alcoholic beverages, using drugs, or when intoxicated.
- Do not smoke on or near your craft.
- Respect other's rights on the water.

When you're out on the water, remember that you are sharing it with others. Never modify your personal watercraft to increase its sound level. If you're operating near other boaters and on-shore picnickers, let them know you're mindful of their enjoyment as well.

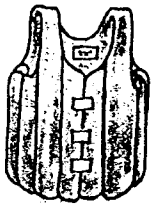
Manufacturers have invested a lot of time and money making certain that the model you are using is a safe craft, engineered to be part of the boating scene and provide you with optimum performance. Nevertheless, there are those backyard mechanics who are always tinkering and wanting to modify their motor vehicles to improve performance. Unfortunately, one of the areas that usually gets attention is the exhaust system. Altering the exhaust system of your personal watercraft can lead to the voiding of the warranty, hazardous conditions, and a lessening of performance instead of improvement. In addition, if the exhaust is altered to where it puts out unacceptable noise levels, you're at risk for fines as well as being unwelcome on the water. So leave your personal watercraft as the manufacturer designed it, and you'll be ahead in the long run.

If you are performance-oriented, there are plenty of race organizations where you can participate with like-minded owners and enjoy increased competition. Your dealer can provide this information.

Before You Leave Home

The first thing you should do, before you leave home is to go through a pre-ride checklist to make certain everything you need is with the craft and that it is in good operating condition. Your owner's manual covers your particular model, but these are good basic items to review before you leave:

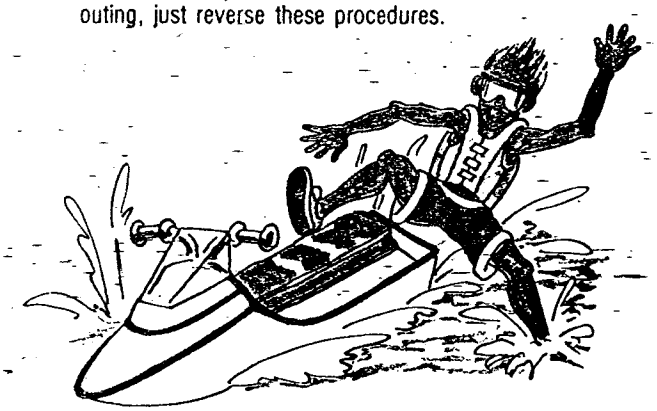
1. Open the craft's engine hood and ventilate the engine compartment.
2. Loosen the fuel tank cap to relieve any pressure. Add fuel if needed, and secure the cap snugly. Be sure to take along enough fuel for your outing.
3. Use a sponge to remove any water or fuel residue from inside the engine compartment before launching.
4. Check throttle for proper operation.
5. Check the steering for proper operation.
6. Check your battery for fluid level and charge condition.
7. Make certain all latches are functioning and secure.
8. Look for any oil or fuel leaks. Also check the oil level.
9. Look under and around the hull for any cracks or damage.
10. Check that there's no debris in the intake or jet nozzle.
11. If your personal watercraft has a bilge pump, check it for proper operation.
12. If your craft features an engine shut-off lanyard or other device, make certain it's onboard and in good repair.
13. Make certain your personal safety gear is in good condition. Be sure you've got it with you, including a U.S. Coast Guard approved fire extinguisher.
14. Make certain your trailer lights work, and that your trailer tires and bearings are in good shape for the trip. Secure your personal watercraft to the trailer as necessary, making certain you've secured the engine hood and all latches.



Launch Ramp Etiquette

Every "trailer sailor" develops his own favorite launching technique. Until you develop yours, here are a few helpful tips from PWIA to get you started:

A. Check the ramp first. Is it surfaced or unimproved? Is it too steep? Is the surface firm enough to support the weight of the trailer and the vehicle? Is it wide enough? And how deep is the water at the end of the ramp?
B. Take along wheel chocks to prevent your rig from sliding down a slippery or wet ramp.
C. Open the engine hood on the personal watercraft to allow it to ventilate any fumes, then secure it. Check the craft for any damage that might have occured during the drive.
D. Have someone outside the vehicle direct your actions as you back down the ramp. Backing a trailer can be tricky. A good way to simplify the procedure is to grasp the steering wheel at its lowest point with one hand. When you want the trailer to go right, move your hand on the steering wheel to the right; to make the trailer go left, move your hand to the left.
As you reach the water, stop when the rear of the trailer is a few feet from the water's edge. Put your vehicle in park and set the brake. Then set the chocks behind the front wheels.
E. Attach handling lines to your personal watercraft and release the trailer tie-downs.
F. Remove the wheel chocks, release the brake and back the trailer into the water. Avoid submerging the trailer wheels completely. Have someone back the personal watercraft off the trailer and control it by hand or with the handling line.
G. After you've launched, quickly but carefully move your vehicle off the ramp and park it in a designated area.
H. Keep in mind the nautical rules of the road as you move the water vehicle out into the water.
I. To re-load the personal watercraft at the end of the outing, just reverse these procedures.



Miscellaneous

FATIGUE—Take breaks during your outing. The sun and fun can combine to hasten exhaustion. And when you're tired, you're more likely to make mistakes. So don't overdo it. A wet suit can help protect you from the sun and also from hypothermia, which is a dangerous lowering of body temperature, brought on by too much exposure to cold water. Be certain to use a good sunblocker so you won't get a sunburn or windburn.

FALLS—If you fall off your vehicle, re-board carefully. Once aboard, re-attach the shut-off lanyard (if applicable) before you try to restart, otherwise you may run down your battery trying to start the engine. Follow the techniques you've learned from the owner's manual in re-boarding. Different models require different methods of re-boarding.

FIRE—Know how to quickly reach your fire extinguisher in case of fire. And know how to use it before you go out on the water. If you have any doubts about your ability to extinguish the fire, swim away from the craft as quickly as possible. Immediately seek help from other boats or those ashore.

INSURANCE—Check with your own insurance agent regarding insurance coverage of your personal watercraft. Your dealer may have marine insurance available. He or she should know the requirements of your state, and can help you with the proper policy to protect yourself.

WEATHER—Don't venture on the water during storms, and get off the water as quickly as possible if the weather turns threatening. It isn't always possible to make it back to your launch area, so head for the nearest shore.

Why Not Join Or Form A Personal Watercraft Club?

Clubs and racing organizations are growing in number almost as fast as personal watercraft are being sold. Owners have found that their common interests make boating with a personal watercraft more fun, and a club is a great way to meet new people.

You can get involved in group rides, safety clinics, water festivals, camping trips, and charity events. You will also find that you'll have more clout with government officials when you and fellow members speak as one voice. But the main reason to join a club is to add to your enjoyment through increased opportunities to use your personal watercraft. Your dealer might want to get involved or may know of a club you can join. There are several national magazines now being published that are personal watercraft-oriented. Look for them at news stands and watercraft dealerships.

And In Conclusion...

Skimming along on a personal watercraft is one of the most enjoyable ways to go boating. As a participant in this newest form of power boating, you'll find yourself the envy of your friends and fellow boatmen. As a responsible skipper, you'll be a goodwill ambassador, making these sporty watercraft a welcome addition to the waterways.

Your safety and enjoyment of boating is our concern, and that's why the PWIA offers you these tips.

Welcome Aboard!

Remember—

- Wear your PFD (Personal Flotation Device)
- Wear protective clothing — glasses, shoes, etc.
- Watch for other boat traffic and keep a proper distance.
- Know your equipment and keep it in top shape.
- Boat sober!
- Respect the rights of others — swimmers, fishermen, shore residents, other boaters.
- Before anyone else operates your craft, make sure they have read this booklet and have a full understanding of how your craft operates.

RIDE RESPONSIBLY ...

to protect your right to be on the water on your personal watercraft.

of some items. In prepared and [illegible] foods, for example, the cost of the ingredients often accounts for relatively little of the total price. As for meat, prices should fall in the next few months—and then rise again next year—because of drought-related slaughters that have reduced herds to their lowest levels in 25 years.

considering a further $1 increase.

"There's no way I can hold the line; I'm taking the bite," he says, noting that his customers "expect Mexican food to be inexpensive."

As drought-propelled price rises work their way through the system, marketers [illegible] Schaefer beer can gain ground on Budweiser."

Many consumers are likely to stray from the frozen-food aisle toward pastas, soups and food extenders such as General Mills Inc.'s Hamburger Helper. "People

Water Scooters, Growing in Popularity, Raise Safety Concerns as Accidents Mount

By Alonza Robertson
Staff Reporter of The Wall Street Journal

While on a Hawaiian vacation last summer, Tira Simpson and her husband rented a rubber raft one afternoon to explore the Honolulu shoreline. As the two paddled along, a fast-moving motorized water scooter driven by a six-year-old boy plowed into them, killing Mrs. Simpson.

In February, 13-year-old Kevin Kays, visiting the Florida Keys with his family, died after his water scooter crossed the path of a 25-foot fishing boat that couldn't stop in time.

First introduced in the U.S. in 1974, water scooters have rapidly risen in popularity, especially among young people. Today, industry officials estimate, there are some 500,000 scooters in the U.S., about 50,000 of them purchased last year. Many are owned by rental operators.

But as the scooters have grown more numerous, they have begun to raise safety and environmental issues similar to those involving other sports vehicles, such as snowmobiles and all-terrain vehicles. Accidents involving water scooters have been on the rise, and, because they are noisy and often operated close to shore, the vehicles are increasingly viewed as an environmental nuisance.

The noise the water scooters make, says David Parsons, director of the Hawaii State Harbors Division, "is like having a dirt-bike track in your backyard."

Accidents and Injuries

Although no data for the overall number of water-scooter accidents are available, 330 accidents involving vehicles made by Kawasaki Motors Corp. USA, the leading water-scooter maker, were reported to the U.S. Coast Guard in 1987, up from 115 in 1983. Since 1983, seven deaths in which Kawasaki scooters were involved were reported to the Coast Guard. Kawasaki Motors, a unit of Kawasaki Heavy Industries Ltd. of Japan, makes the Jet Ski.

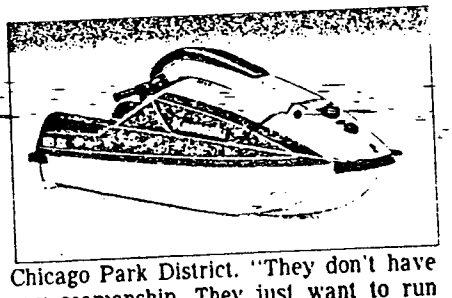
Operators of water scooters "are probably having a lot more serious accidents than we have data on," says Capt. William Griswold, chief of the U.S. Coast Guard Auxiliary, Boating and Consumer Affairs Division. He estimates that only about 10% of all nonfatal water-scooter accidents are reported.

Most injuries from accidents involving water scooters occur in collisions between the vehicles and other craft. But riders also have been hurt falling off the machines at high speeds.

In some cases, water scooters have been known to sink or to fail far from shore, leaving a rider stranded. In Chicago, Richard Bunka floated in Lake Michigan for five hours in May after his scooter conked out just before sundown. He was saved by a boat that passed close enough to spot him in the darkness.

According to Coast Guard data, operator carelessness and inexperience are most often cited as the causes of water-scooter accidents. In addition, the vehicles are frequently used by children and those with little or no knowledge of watercraft and the rules of navigation.

"People who buy these things are not boaters," complains Robert Nelson, director of Harbors and Marine Services for the



Chicago Park District. "They don't have any seamanship. They just want to run around on the water with no sense of navigational aspects."

Ben Benites, a boating administrator with the California Department of Boating and Waterways, agrees: "Many people get carried away, jumping the wakes left by a power boat or large vessels and forget to pay attention to their surroundings."

Water scooters are designed to go anywhere a small boat can. They are usually about eight feet long and are powered by engines that can reach speeds up to 40 miles per hour. Most scooters are designed to be ridden by up to two people who either sit, kneel or stand. As a safety precaution, the motor shuts off when the operator releases the handlebar. Prices for the craft start at around $3,000.

In addition to safety problems raised by inexperienced operators, the rise in scooters has increased the number of water vehicles competing for space. "Any time the waterways get crowded, friction is bound to occur," Mr. Benites says.

And that friction is what has many boating officials concerned. Mr. Nelson of the Chicago Park District says that water scooters are "inherently dangerous in crowded conditions and, in a metropolitan area like this, that's what you've got."

Water-scooter makers acknowledge the crowding problems, but they say the scooters are being singled out just because they are the newest arrivals. There is "increasing competition for the same resources, and since personal water-craft seem to be the late comer to these areas, it is easy to blame them for the problems," says Roger Hagie, government relations manager for Kawasaki and president of the Personal Watercraft Industry Association, a Chicago-based trade group.

Nevertheless, scooter makers have taken steps to make customers more familiar with the vehicles, such as providing dealers with instructional videocassettes.

The Personal Watercraft Industry Association also has gotten a $55,000 grant from the Coast Guard to develop boating safety materials for rental operators in Florida. The association plans to expand the program to other states.

Some boating officials would like to make instruction in vehicle operation mandatory, along with classes in water safety. "Training classes might be a great idea," says Cmdr. Dennis Grealish of the Florida Marine Patrol.

Regulatory Steps

To address safety concerns, citizens groups and boating officials around the country are clamoring for regulations on scooters. So far, nine states have taken some action—Arizona, California, Connecticut, Florida, Hawaii, Michigan, New Hampshire, Oregon and Pennsylvania. State restrictions vary but generally include minimum ages for operators and curbs on where the vehicles can be used.

In Hawaii, the outcry over water scooters helped focus attention on the entire water recreational issue. Last summer, the state adopted regulations that required water-scooter operators to be at least 15 years old and limited the vehicles to certain areas. Now Hawaii has adopted broader regulations, effective Sept. 1, covering all recreational water-craft.

The state's broader plan is expected to provide "more intensive control of heavily used areas," says Mr. Parsons, the state harbors division director.

Hawaii's restrictions may have some added benefits. The Pacific Whale Foundation, for example, has been concerned that water scooters might be scaring off the endangered humpback whales that migrate to Hawaii to breed.

The Wall Street Journal, Monday, Aug 1, 1988

JUST ADD WATER

Jet skier accused of death at lake

Police say woman rafter at Lanier died of fright

By Paul Carruthers

Personal watercraft users are getting a bad name. And the sad part is that some of the ridicule is well-deserved. There just happen to be a lot of bad apples out there giving it their all in an effort to ruin it for the rest of us.

Take a look at the headline above. Publicity such as this is very disturbing, and if we don't start using a little common sense, these headlines will become commonplace in daily newspapers across the country.

The story I'm referring to, out of Atlanta, Georgia, is an unusually sad one that is likely to send shivers down a normal person's spine.

The scene: a 40-year-old woman with a history of heart trouble is floating on an inflatable raft. Along comes the accused, on what observers called "a motorized jet ski", who, reportedly, rides within inches of the woman.

The result: the woman died, probable cause - heart attack. The Jet Skiier will have his day in court, but faces up to a year in jail on manslaughter charges.

Gwinnett County Coroner Randy Simpson told the Atlanta Journal that the autopsy revealed the cause of death to have been a cardiac arrhythmia brought on by fright.

"With all the evidence that has been presented to me by the police and by the medical examiner, there's no doubt in my mind that that's going to be the cause of death," Simpson told the Journal.

Admittedly, the Lake Lanier is the worst possible scenario, but reports of total carelessness by watercraft users are flowing in daily. Everybody, it seems, is a little upset with the we-don't-give-a-damn attitudes of the irresponsible users that fail to realize their jet-powered craft are not toys.

One doesn't have to travel far to hear the criticism. Check out the following remarks of a concerned southern California surfer.

"I hate them (personal watercraft and their users). We sit quietly waiting for waves and some bozo rides right past on his Jet Ski, making a ton of noise and ruining our waves. They have a right to the water too, but I just don't like it when they come around the lineup and wait for waves. They ride around in circles and screw up all the waves with their wakes."

I don't know about you, but I don't like the guilty feeling that I'm doing something wrong just by riding a personal watercraft. Simply put, I don't want us to be thought of as the outlaws of the waterways.

In order to be treated as equals out there on the lake or on the ocean, we are going to have to earn it. Acting normal may no longer be enough. If the attitude towards personal watercraft users becomes bad enough, it's going to take a little extra to gain the respect of those we share the water with.

It's going to take more than just obeying the law. It's going to take some good public relations work on the part of each and every watercraft user out there. We have to prove ourselves to the public. We have to prove that riding personal watercraft is not the equivalent of robbing a liquor store.

We have to make friends with boaters, surfers, etc. A good start would be to simply stay out of their way; give thought to what they are doing and respect them.

Another disturbing story comes via the "Live Free or Die" state, New Hampshire. In October of 1987 property owners on several lakes in the state called for a ban of "thrill crafts" from those lakes. And I quote Lisa Macalaster, a summer resident on Lake Nubanusett, who told The Keene Sentinel, "The noise of jet skis on an early Saturday morning is the only thing which can stir the emotions to such an extent that you feel like reaching for a pump gun."

What followed in May of 1988 was Bill 763. Its purpose was to bar personal watercraft on all of New Hampshire's inland waterways except Lake Winnipesaukee, effective October 1, 1988.

The bill passed.

The results have been devastating for not only enthusiasts, but also for those in the personal watercraft business. Possibly the hardest hit was Sue Atkinson of Burt's Cycle Shop, Inc., in Keene, New Hampshire. "Our Jet Ski sales have been adversely affected by all this," Atkinson wrote in a letter to *Personal Watercraft Illustrated*. "To date we have seen sales not only drop drastically but they have come to a screeching halt. Unfortunately, 12 of the 15 lakes listed (in the bill) are within 20 miles or so from my shop. We are honest with our customers and when they understand what will take place on October 1, 1988, they no longer want to buy a Jet Ski."

Sad commentary indeed.

What's the answer? I still, as I have written in the past, blame noise. Exhaust systems that sound tinny and give off abusive noise must be stopped.

We must keep our personal watercraft quiet. If not, we may all face the situation that faces New Hampshire.

If we don't keep the sound down Bill 763 may soon be playing in a town near you.

© Copyright 1988

MICHAEL DAPPER

A Pro's Words of Wisdom

Friends are sick of it, roommates are sick of it, even my mom is sick of it.

"I'm sick of your preaching about safety and riding responsibly," mom carped. "Your readers know they have to get their scooters registered, have to wear vests and have to obey all boating rules. So quit your harping and help me get this scooter off the trailer."

To dedicated readers and safety conscious scooter riders like her, it's true, I *don't* need to preach on and on about safety. They already know the rules and follow them. But there remains that handful of riders who either don't know any better, or simply don't believe that boating safety laws *do* apply to water scooters as well as full-sized boats.

It's too much for me to expect you readers to endure any more of my imploring you to ride responsibly, so I've called in another voice of reason. My guest boating safety spokesman is Bill Chapin, who is known to *WATER SCOOTER* readers and scooter race fans as an Expert class World Champion Jet Ski racer. In fact, Bill won titles in Expert Modified and Superstock classes at last fall's World Finals.

When I first sized up Bill Chapin upon meeting him last year, I assumed he was probably a wild dude. He's 31, a Jet Ski racer from California, has a shaggy, footloose look to him, is a former motorcycle test rider and works for Performance Jet Ski in research and development. I thought his look and his background might add up to produce your basic wild rider, a guy who figures "the rules are written for someone else, not me."

But that's not Bill Chapin's style at all. Instead, he is a safety conscious advocate of riding responsibly and keeping order on the water.

He rides a lot on the Pacific surf and on the lakes and rivers out West. He sometimes rides real hard, and sometimes real fast, especially when practicing for races or testing Jet Skis for the shop. But that never precludes his riding safely.

How safety conscious is he?

"I wear a helmet all the time," he said, bringing to mind the poker run at last year's World Finals at Lake Havasu, Arizona. There, in the midst of hundreds of Jet Skiers riding under the London Bridge, was a guy on a race Ski who was wearing a helmet. It was #383, Bill Chapin, and it made me think he had missed a buoy and thought he was still in the last semi-final. No, he was simply out riding, having fun, but protecting himself.

"I wear a helmet all the time because I've banged myself up a couple times when I've just been out riding. I feel a lot safer jumping waves in the surf because doing that, you can get out of control at times. I just feel safe with it."

Bill's not opposed to water scooter riders jumping waves, or whipping 360° turns or twisting and turning through an impromptu slalom course. He just hopes that, like him, these riders have checked to see that the path is clear and there is no trouble or other boaters ahead.

"You've just got to be aware. Ride aware and be aware of where boats are. And be aware of the right lane. If you're riding up the river, ride on the right. If you're coming back, ride on the right. Always stay in the lane like you would driving a car. And always look around to find out where the other boats are."

On lakes or on the ocean, where riding "lanes" aren't laid out as naturally as on a river, just stay clear and out of the path of other boaters.

Why does it seem that boaters in full-sized, or "traditional", boats are sometimes offended by water scooter riders?

"The main thing that makes those people mad is wakes," Bill said. "A lo of Jet Skiers don't realize it, but the reason a lot of boaters get mad is because of the (water scooters') wakes coming into the boat. You look at a lot of flat-bottom or even ski boats and some of them are riding only six inches above the water line. So, even coming from a Jet Ski, it's real easy for a wake to come into the boat."

To avoid such a run-in, water scooter riders should stay clear of such boats if those ski boats are already sitting in or using a particular area.

On the other hand, let's not sell ourselves short or assume second-class status. Remember that no single boater or type of watercraft "owns" the water. So if you're riding a water scooter in a particular area and a boa or two comes nearby, it is no more *your* obligation to vacate the area fo them than it is for them to leave for your benefit.

All the Right Stuff!

Attention Water Skiers

FREE!

Take a look at Bart's 1988 Skiers' Catalog for the best selection of the hottest name brands and Bart's top-quality exclusives. Sixteen years of experience means Bart's knows what skiers want. For all the right stuff, Bart's is the skier's choice! Call toll free and we'll send you our **FREE** 1988 Skiers' Catalog right away.

Our everyday low prices are everyone else's sale prices.

1-800-348-5016

Indiana 1-800-552-2336

Outside continental U.S. 1-219-834-7666

BARTS WATER SKI CENTER

Bart's Water Ski Center
Highway 13 Q
P.O. Box 294
North Webster, IN 46555

1988 Skiers' Catalog

A second note along those lines is this: Just because water scooter riders are having fun and cutting up the water *doesn't* mean they're doing something wrong. Although I recognize and regret the presence of the handful of scooter riders whose bad behavior can hurt our sport's image, I sometimes wonder if observers aren't misinterpreting right and wrong.

It seems like some observers assume "he's not supposed to be doing that" when they see a scooter rider cutting sharp turns or jumping on waves. Even though the rider might be registered, properly equipped and completely legal, his cutting up and having fun sometimes strikes people as being bad behavior on the water. That isn't the case, and I don't want water scooter riders to start apologizing for their fun or for the spirited, freestyling riding their scooters let them enjoy.

Like Bill Chapin, I want riders to have as much fun as possible as long as they're legal and not stepping on anyone else's toes.

"Definitely, you can ride safe and still have fun," Bill said. "If you look around and don't see any boats coming — or if you see a boat pulling a skier and you pull over and let them go — then you can go ahead and tear it up. That's what I do. I just try to stay away from the boats."

Why the responsible approach, Bill? C'mon, you're a racer, you can nurture racers' wild image. Why so safe and sane?

"Because people are out there emulating you. They're looking up to Larry Rippenkroeger, and looking up to Jeff Jacobs, and maybe even looking up to me in the Expert class. If we're setting a bad example, doing something stupid in front of a boat, then they figure it's OK for them to do it.

"There's lots of water. You know, the earth is ¾ water, and it doesn't make sense to lose our access to the water because of negligence."

No more preaching necessary.

As you read this issue you'll notice the new look of *WATER SCOOTER*. We've made it fresher, brighter and more contemporary, and that makes it a better showcase for action photography and informative stories about your favorite fun on the water.

The change to the new design gives the magazine a cleaner, leaner look than before, and it presents the photography better than ever.

Again this summer we'll be at more events — aqua fests, races and tour riding — than any other magazine. And with our "new look," you'll get to enjoy our photos and stories more than ever. We're committed to giving you the best, most interesting information in as lively and colorful a format as possible. Every issue in our first year of publishing *WATER SCOOTER* has featured that top-quality material, and we'll continue to deliver it — in an attractive, easy to read format.

If you've got a comment on our new look, drop us a line. We'd like to hear what you think. □

JET PROPEL YOUR SUMMER

Now life can be a beach anywhere —on Surf-Jet® personal watercraft. The whole family will enjoy skimming inches above your favorite waters. Surfjettin' combines the thrills of waterskiing, windsurfing, speedboating and of course, Surfin'!

Surfjettin' is easy, too. Unlike some personal watercraft, the Surf-Jet's three models are designed for beginners as well as H_2O hotshots. You can progress from lying down, sitting or kneeling to ... **WALKIN' ON WATER!** Gettin' wet was never this much fun.

The Surf-Jet's easier in other important ways. Its lightweight construction lets you cartop — you don't need to buy an expensive trailer. And when you get near the water, you won't need the Incredible Hulk to help put 'er in. It's a cinch to store in the off season too.

Maybe Surf-Jet's best feature is how affordable this much fun is. Prices start at only $1,995.00! So don't wait to jet-propel your summer — let's go Surfjettin' now!

Send $3.00 for full color poster and literature —
Attn.: Miss Surf-Jet

PROGRESSIVE POWER CORPORATION
504 S. Washington Street
Janesville, WI 53545

Surf Jet Get on it!

©Copyright Progressive Power Corporation, Member PWIA

Jet skis, parasail boats have Hawaii in an uproar

By Mary B. W. Tabor
Staff writer of The Christian Science Monitor

Kapalua, Maui

The islands are abuzz, and it doesn't sound like music.

At least not to many of those who count on Hawaii's world-famous beaches for some peace and quiet.

The buzzing is coming from jet skis and parasail boats that have become quite the rage in water sports here. The problem, locals say, is that noisy motors and poorly supervised "thrill craft" are scaring off swimmers and snorklers, and perhaps more important – whales. Hotly contested proposals to ban such activity from Hawaii's beaches are under consideration by state officials.

There is some question of whether the complaints hold water, but the state's main concern is that it is losing control of its beaches and waterfronts – one of Hawaii's greatest attractions. In short, the growing contingent of visiting jet-skiing, sailboarding wave lovers may be discouraging those who want to swim and whale-watch. Riders stand, kneel, or sit on the snowmobile-like jet skis that run on gasoline engines. Pulling in almost $5 billion in 1987, Hawaii's tourist industry is an economic pillar for the state, which otherwise relies on sugar and pineapples for income.

"A lot of tourists and locals find them obnoxious and loud," says Lili Hagen of the Pacific Whale Foundation in Maui. And although opinions vary on how much the noise affects marine life behavior, "what it is about a thrill craft that *does* bother the whales is that it changes course quickly and unexpectedly."

Noisy motors may be pushing humpback whales farther from Maui's western shore into less protected waters, Ms. Hagen says. Humpbacks migrate to Hawaii to breed.

The North Pacific humpback herd, which numbered about 15,000 in 1900, is now estimated to have a meager pod of 1,200-1,500 and is on the endangered species list.

Highly sensitive to sound and needing calm, quiet waters to nurture their young, the whales are documented as staying farther off shore than ever before. Reports also say that some of the young whales are not making it back up the coast to Alaska, but the cause is unclear.

There is, however, no hard evidence that "thrill craft" activity is actually hurting the whales, says Scott Kraus, a Boston-based right whale specialist. No one has come up with the funding for an in-depth study of this kind, he says.

Interest in keeping state control of the beaches was sparked long before jet skis and motor boats began darting around the islands. But recent wrangling to stop whale hunting and mounting complaints of local disturbances have brought the issue to a head – not to mention a newspaper article that appeared earlier this year describing a jet skier-whale collision. For those who were ready to get rid of the annoying thrill craft anyway, "that was the straw that broke the camel's back," Mark Bechtel of the Maui Cruise Company says.

Complaints have not, however, gone unopposed. Mr. Bechtel, who takes about 30,000 people whale-watching every year, says the noise may indeed bother the whales, but "if anything, there might be a few more whales" this year. The "thrill craft," he says, are not really a problem and should not be banned.

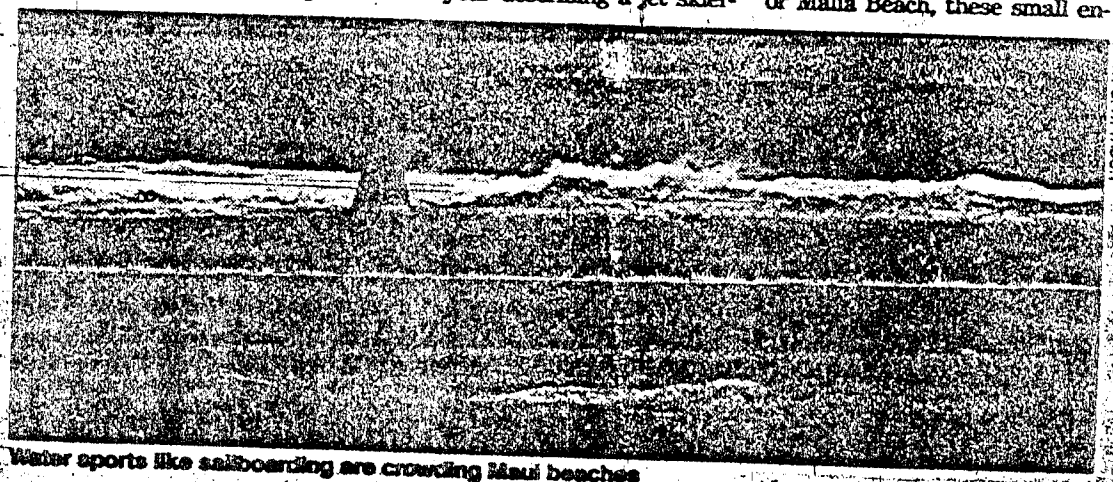
Hawaii's surf and ski shops have a sizable stake in the outcome of this debate as well. Lining the highways of Maui's most popular beaches, such as Keinei or Malia Beach, these small entrepreneurs hawk hundreds of multicolored sails, surfboards, swimsuits, and ski packages to the multitudes who come to the island each year. "You cannot pass a law that puts people out of business. That's unconstitutional," Bechtel says.

Restrictions are not new to Hawaii's beaches. One restriction states that businesses cannot be run on beach property, and in beaches like Hookipa – known as the sailboarding capital of the world – the waves on the right are reserved for surf boards, those on the left for sailboarders and sail boards. Unsuspecting swimmers and snorklers are left to dodge the boards.

The state has also made moves to keep a cap on its waters, placing some restrictions on boats and other motorized craft – most of which have been instituted in recent years. For example, because of their danger to swimmers, jet skiers must stay at least one mile off the coast.

For boaters, many of whom are indignant that their licensed drivers are being lumped in with unsupervised "thrill craft," there is a $25,000 fine if a boat intentionally gets too close to the whales.

Those pushing for the ban are not that popular either, but if the whales disappear, Hagen says, "We just don't want to find out after the fact that [the thrill craft] was the problem."



MARY B. W. TABOR

Water sports like sailboarding are crowding Maui beaches

RAIN from page 1

Mario Cuomo of New York and Richard Celeste of Ohio shows the possibility of breaking the inertia that has characterized the acid rain debate. The two governors represent states on opposite sides of the issue. Ohio has the highest level of sulfur dioxide emissions in the nation; New York is perhaps the state most harmed by that chemical in the form of acid rain.

"I feel this proposal is salable

leum, or natural gas is burned. A portion of these pollutants reacts with moisture in the air to make acids. The acids may travel hundreds of miles before they fall to earth in rain, fog, or snow.

Half the cost of compliance, under the governors' $900 million-a-year plan, would be footed by polluters. Responsibility for supplying the nation's strategic petroleum reserves would be turned over to US companies that import oil, freeing up $650 million a year in federal

how it contributes," says Robert Rycroft, deputy assistant director of the science, technology, and public policy program at George Washington University. Scientists find it difficult to separate damage caused by general air pollution from that caused by acid rain.

Opponents of acid rain legislation in Congress and industry are not convinced that acid rain damage has reached the level that makes the cost of correcting the problem worth it. They say that meeting pro-

US eyes international pact on acid rain

Boston

The United States has until July 1 to decide whether it will go along with a multinational treaty regulating nitrogen-oxide emissions. Nitrogen oxides are major contributors to acid rain and ozone pollution.

The protocol was drawn up by the US, East and West European nations, Canada, and the Soviet Union under provisions of the United Nations Economic Commission for Europe.

MICHAEL DAPPER

Don't Promote 'NFL' Expansion

Southern California is truly a one-of-a-kind place. It's got its good and its bad, its strange and its wonderful, its majestic and its blighted, its developed lands and its raw earth and sea.

Visitors to the area may find it a place that's good for visiting, "but I wouldn't want to live there" because of what they see as a casual, "live-for-today" lifestyle. Yet they can't deny the appeal of living year-round in a place where the ocean always pulses, the mountains loom in the background and the sun nearly always shines.

On my trips to the area I've wondered how people can work inside, especially when I've left colder weather at home to visit southern California. I get a severe case of cabin fever when I'm inside even for only a few hours in California, and keep asking locals how they can force themselves to return to work each afternoon.

Southern California's unique nature extends to the residents' use of the area's waterways: the lakes, rivers, reservoirs and the ocean. To me, some of the regulations governing use of the waters are among the strangest parts of southern California recreation scene, yet I can understand why they exist.

The waters have to be regulated, or at least monitored, because of the incredibly dense population in the area and its love for water sports. Without some kind of management, you would have water scooter riders, sailors, yachtsmen and power boaters hashing it out for use of their favorite waters. It wouldn't be a pretty sight, and the alternative — controls over the use of the waters — seems like a sane idea. The rules may feel strange or restrictive sometimes, but they're there for good reasons, even if you're thinking, "It would be more fun if I could do as I please." With more than 679,000 registered watercraft in California (1986 U.S. Coast Guard figures), boaters can't always be left to romp as they please.

I got both a surprising exposure to such regulation as well as an appreciation for its value when I rode at Puddingstone Reservoir near San Dimas and Covina, California, earlier this year. My riding hosts told me that Puddingstone is known as "the NFL — No Fun Lake." That's because it's a striking example of how tight rules and their enforcement can be.

The regulating of the lake was stunning to me since nearly all of the waters where I live are what you would consider "open." That is, boaters and scooter riders are required to follow basic boating rules and a few local laws, but beyond that, you can play, ski and ride freely as long as you do so responsibly.

What I found at Puddingstone was a pretty lake sitting amid the foothills. It had a well-developed park and a big beach that boaters and scooter riders use as a home base during their days on the water.

One part of the lake is set aside for fishing. I wonder what hearty fish would live in the turbulent waters of Puddingstone. The waters get churned up by boaters of all kinds: water scooter riders, pontoon boat drivers and pilots of monster speed boats with engines whose bark is worse than their bite on Puddingstone because all boaters have to obey a speed limit. Oh, yes, everyone also has to travel in a counter-clockwise circle, and must stay between two rings of buoys that mark off that circle.

Scooter riders can't do any freestyling in that circle; they must simply take laps like all other boaters. Turning 360°s and running through imaginary slalom courses will likely get them ejected from the lake, perhaps as a group.

Are the officials singling out the scooter riders? I doubt it. I think the lake is simply too crowded and its rules so tight that they get broken as riders get frisky. I expect there are conflicts and debates about rule enforcement because scooter riders don't want to have to ride in circles only. After all, isn't water scooter riding an escape from day-to-day life, from standing in lines and having to stay in your lane on the highway?

No, it was no fun, despite the gorgeous scenery, and it made me appreciate having access to lots of "wide open" waters that aren't so crowded they are wrapped in tight regulations and enforcement.

It also reinforced my interest in trying to convince water scooter riders — and all boaters — to ride responsibly and share the waters fairly so we can keep enjoying what, compared to the "NFL," seems like unlimited freedom. □

FLY FIRST CLASS...

From Rec. Rider to Full Blown Racer, L & S will keep your Jet Ski in top performing condition.
- Advanced Technology
- Complete Machine Shop
- Top Quality Parts & Service

L&S ENGINEERING
"THE JET SKI CLINIC"
9865 Everest, Downey, CA 90242
213/803-5591
213/803-3062

No fate too harsh for clods with rods

CARL HIAASEN
COLUMNIST

It must sadly be reported that the popularization of flats fishing for bonefish, permit and tarpon has resulted in the gross Yuppification of the sport.

Every pseudo-hip sportsman who can scrape together a few grand has gone out and bought himself a sleek skiff and some Polaroid glasses, and invaded Biscayne Bay or the Keys.

What does this mean? To the bonefish it means little more than an annoyance, since they are scarcely threatened by anglers who couldn't find a school of mudding fish with a Trident submarine.

However, to hard-core sportsfishermen, particularly the professional guides, the overcrowding of pristine waters with careless hacks and novices presents a clear and present danger: They muck up the flats.

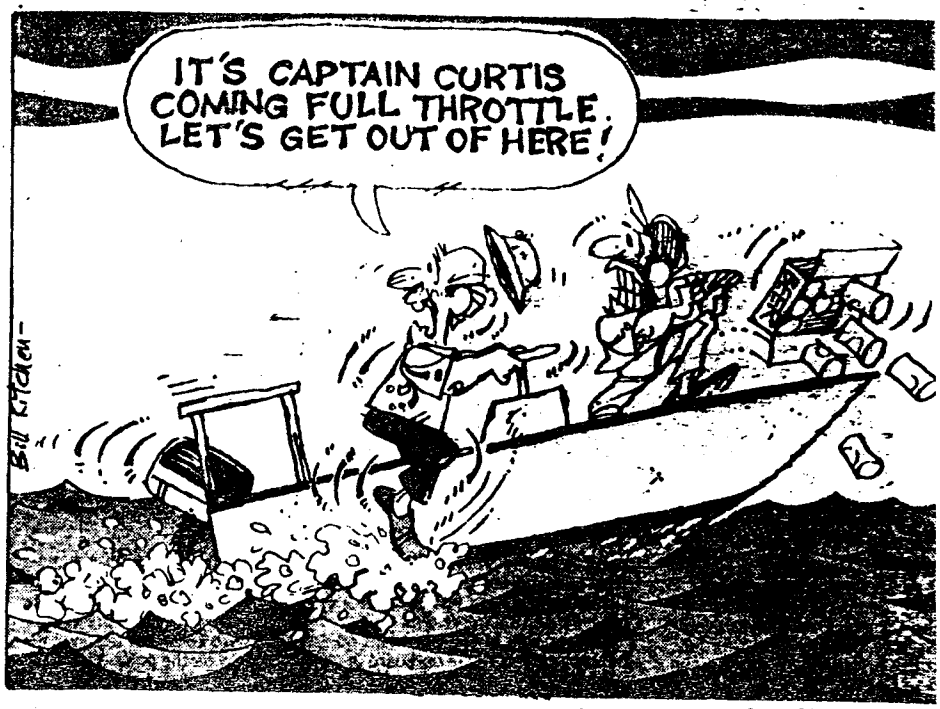
With their specialized poling towers, fancy casting platforms and mongo-sized outboards, flats skiffs (like BMWs) are suddenly everywhere. In outward respects — tackle, push pole and zinc-on-the-nose — the new anglers look exactly like *real* bonefishermen. The only difference, as Thomas McGuane would say, is what's under their hats.

There's a traditional etiquette to flats fishing, the principal tenet of which is to steer clear of other anglers. The distance depends on what species is being hunted — tarpon and permit favoring deeper water than bonefish — but a safe general rule is to stay three or four hundred yards away, if you don't want to make a blood enemy for life. Smart anglers, even if novices, understand this.

In a milieu of delicate solitude, the sound of a boat engine, or even human voices, can flush a school of fish from the shallows and ruin the whole day. Learning the tides, the topography of different flats, and the seasonal quirks of gamefish takes years of observation, for which faddists have no patience. They want it now, and they want it easy.

The sheer flaming ignorance of the *nouveau* flats angler makes confrontation inevitable. Some lazy novices even try to follow veteran fishing guides around all day, in order to learn and mark the good spots. This is a swell way to get disemboweled with a filet knife. Remember — you're not just messing with fish, but with a man's livelihood.

The most grievous offense in flats fishing is to navigate too close to an angler who is in hot pursuit of fish. This is called "burning" a flat, and in certain parts of the Keys it is grounds for justifiable homicide. Some guides are more territorial than others, but it is best not to take chances; even among the pros, vicious lifetime feuds have erupted when one guide boat has strayed too close to another.



BILL KITCHEN / Miami Herald

One time, the legendary Capt. Bill Curtis was staked out along Elliott Key when a bonefish skiff with two beer-guzzling halfwits blew by within 30 yards, and proceeded to burn the shoreline for the entire length of the island. I was scouting farther north when I heard Curtis get on the radio and ask (in rather strong terms) if I would please intercept the offending vessel until he could get there.

I flagged down the other skiff and found the anglers to be, predictably, oblivious of their sins. "Do you know what you just did?" I asked. They said no, so I tried to explain how they had just spooked every bonefish for nine miles.

Then I said: "See that boat coming? Do you know who that is?" By now Bill Curtis was racing north at full throttle.

Even the most inept neophyte has heard of Curtis, and these two fellows certainly had. They quickly put their engine in gear and sped off, though not swiftly enough. The last I saw, Bill was closing on them fast, and I almost felt sorry for the two dolts.

Currently fishing guides in the Keys are under siege from a new disruptive force, jet ski boats. Apparently these unmuffled marine mopeds can be rented to anybody as long as his IQ is less than his shoe size, and as long as he promises to run the machine up in shallow water in order to scare all the fish away.

Some of the crusty old Keys guides would like to see a hunting season on jet ski boats, like quail or duck, with a bag limit of two a day. Perhaps this is too extreme, but it certainly would go a long way toward restoring tranquility to the flats.

Anyone who regularly fishes the shallows is mentally prepared for the occasional intrusion of the wayward cabin cruiser, or the rented Boston whaler bearing hopelessly disoriented tourists. These folks are hardly worth hollering at, because they honestly don't know any better.

There is no alibi, though, for the hotshot in the brand new $17,000 bonefish skiff who churns a trail of mud down the middle of Featherbed Bank, blind to his crime. The best thing that could happen to this person is that he'll run into a wreck and crack his lower unit; the worst thing that could happen is that he'll run into Bill Curtis.

The good part about fads is that they die out. Usually it doesn't take more than a year or two for Joe Sport to decide that bonefishing is too frustrating, too expensive and too much hard work to justify the esoteric rewards.

So most of the hot skiffs you see poling Stiltsville today will be pulling water skiers tomorrow, which is exactly what God intended.

$10,000 to winner of billfish tourney

The top boat will reel in $10,000 in the Fort Lauderdale Semi-Annual Billfish Tournament Oct. 23-25, fished out of Harbour Towne Marina at Dania.

"We're also offering $2,000 for the heaviest dolphin and $1,000 for the heaviest wahoo catch," tournament president George Hely said.

This is the 45th time the tournament has been held, and the emphasis for the past year has been tag and release of saifish. There is a gala kickoff party at Harbour Towne Oct. 22, and an awards dinner following the weighin Sunday, Oct. 25.

Volunteers run the non-profit tournament. For entry form and rules, write: P.O. Box 22218, Fort Lauderdale, 33335. Or phone 791-2132.

Poker Run

ALL Personal Watercraft

JET SKIS, WAVERUNNERS, WET BIKES, ETC

SUNDAY OCT 16

CASH

$500.00 FIRST PRIZE

$150.00 2nd

$75.00 3rd

97 CAR

Gilberts Resort MM 107

Key Largo 451-1133 EXT 67

1-800-822-1088 - Hotel Res.

Personal Appearance

"The Colonel"

SAT 15 (Boat Expo)

Monroe County

SPONSORED BY TOURIST DEVELOPMENT COUNCIL

APPENDIX C

Letter Of the Law

A State-by-State Look at Boating Regulations for Water Scooters

By Jackie Walcome

Regulation of water scooters is a hot topic at the local, state and national levels. Some states still don't know how to categorize these water vehicles, while others are trying to close down waterways to the craft. Don't plead ignorance if the water patrol stops you on a lake or river to check registration cards or numbers. Know the rules and obey them, and you'll be doing everyone in the sport a favor. Before riding this summer, we strongly suggest you contact your state agency listed in the following pages for specific water scooter registration and regulation information.

Registration

Most states currently categorize water scooters as "motorboats" or "watercraft under 16 feet long." A water scooter owner should know his state's definition of his craft and be prepared to follow the requirements pertaining to it. And regardless of variations, *all* states require water scooters to be registered. "Registration" involves forms, fees and a certificate of number, which proves you are registered. Apply registration numerals to your water scooter and keep your certificate of number with you at all times during operation. If a state water patrol official stops you for any reason, he will ask to see this document.

Personal Flotation Devices

All states require a water scooter operator to wear a Coast Guard-approved personal flotation device (PFD). Whichever style you choose to wear, be sure it's in good condition. Belts shouldn't be frayed, buckles should fasten securely and seams should be well-stitched. And with all the styles and colors available today, you can look good and be safe, too.

Fire Extinguishers

Nearly all states require a water scooter operator to carry a Coast Guard approved B-I fire extinguisher

on board. If you think you're exempt, don't guess... check it out. Consult your water scooter dealer for recommendations on what type is best for your water scooter. Be sure that anyone operating your water scooter knows how to use the extinguisher *immediately* if needed.

Rules Of the Road

To ensure safe co-existence with other watercraft such as other water scooters, canoes, sailboats, etc., many states abide by a set of tenets labeled "Rules Of the Road." These rules list protocol for meeting another watercraft head on, for crossing another's path and for overtaking another craft.

A state's "Rules Of the Road" usually follow guidelines set by the U.S. Coast Guard, but may contain variations on how close a water scooter may come to the shoreline, or what specific waterways are prohibited from use. Your state will send you a copy of its version of "Rules Of the Road" upon registration. Familiarize yourself with this document to avoid causing problems for yourself, others and the sport in general.

Summary

If you have doubts about what you need to do to make your water scooter "legal," check with your local dealer or contact your state agency directly. These sources will guide you to the proper department.

You want to have fun on your water scooter. At the same time, it's vital to know the law before you ride. Know what your state expects of you and your water scooter before you take to the waters. □

ALABAMA
Laws and Regulations
Marine Police Division
64 North Union Street
Montgomery, AL 36130
205/261-3673

Water Scooter defined as Class 1.
Registration: October 1 — delinquent November 15 — Annual fee/$6 + 1.00 issuance fee.
Age restrictions: Operators under 12 years old must possess a Boating Safety Certificate issued by the Marine Police Division signifying completion of an approved Water Safety & Boating Instruction Course.
Water skier must have observer or wide angle rear view mirror.

ALASKA
Commanding Officer
U.S. Coast Guard
Marine Safety Office
2760 Sherwood Lane
Suite 2-A
Juneau, AK 99801
907/586-7300

Registration: 3-year/$6

ARIZONA
Arizona Game & Fish Department
Watercraft Registration
P.O. Box 9099 - 2222 W. Greenway Road
Phoenix, AZ 85068

602/942-3000
(There are six regional offices; call main office for address and phone for your regional office.)

Water Scooter defined as Class A.
Registration: Annual/$4 + license tax of .50/foot of craft length.
Water skier observer at least 12 years of age is required by law. A red or orange flag no less than 12 inches on a side and mounted on a handle is required to be displayed by the observer anytime the skier is down in the water.

ARKANSAS

Department of Finance & Administration
P.O. Box 1272
Little Rock, AR 72203
501/223-6380

Water Scooter defined as Class A.
Registration: 2-year registration/$4. Register in home county or county of principle use.
Age Restrictions: Persons under 12 years of age may not operate a motorcraft powered by more than 10 HP except under the direct and audible supervision of a parent, guardian or other person over 17 years old.

CALIFORNIA

Department of Boating & Waterways
1629 S Street
Sacramento, CA 95814-7291
916/445-2616

Department of Motor Vehicles
Attn: Boating Registration
P.O. Box 11319
Sacramento, CA 95853-1130
916/732-7165

Water Scooter defined as Pleasure Boat.
Registration: Annual/$9; expires Dec. 31; Renewal is $5.
Water skier must have observer.

COLORADO

Division of Parks & Outdoor Recreation
13787 South Highway 85
Littleton, CO 80125
303/795-5180

For Boating Safety & Regulation Information:
303/795-6954

Water Scooter defined as Class A.
Registration: Annual/$10.
Water skier shall be observed by a person aboard the boat in addition to the operator. A red or orange flag no less than 12 inches square is required to be displayed by the observer anytime the skier is down in the water.

CONNECTICUT

Department of Environmental Protection
Bureau of Law Enforcement
Marine Patrol Division
P.O. Box 280
Old Lyme, CT 06371
203/434-8638

Department of Motor Vehicles
Boat Registration Unit
60 State Street
Wethersfield, CT 06109-1896
203/566-3781

Water Scooter defined as motorcraft under 12 feet.
Registration: Annual/$7.50; expires April 30 of following year.
Water skier observer required by law.
Age Restrictions: For motorcraft over 5 HP, operators under 18 years old must be under the direct supervision of a parent or guardian OR must have a boating safety certificate from an approved 8-hour course (State, U.S. CG Auxiliary or U.S. Power Squadron).
* Self-propelled surfboards, water skis and devices which tow water skier(s) using remote control lines are currently prohibited.

DELAWARE

Department of Natural Resources & Environmental Control
Division of Fish & Wildlife
Richardson & Robbins Building
89 King's Highway
P.O. Box 1401
Dover, DE 19903
302/736-3440

Water Scooter defined as Class A.
Registration: Annual/$5.
Water Scooter Exemption: Rear-view mirror and/or observer for "water skier" not applicable to Class A motorcraft actually operated by the person or persons being towed and so constructed as to be incapable of carrying the operator in or on the motorboat.

FLORIDA

Florida Marine Patrol
Department of Natural Resources
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

Office of Boating Safety:
904/487-3671

Vessel Registration & Titling:
904/488-1195

Water Scooter defined as Class A.
Registration: Annual/$4.25 + .50 if by mail. Register between June 1-July 15. Title: $5.25.
Water skier observer/mirror requirement does not apply to Class A motorboats operated by the person being towed and designed to be incapable of carrying the operator in the motorboat.

GEORGIA

Department of Natural Resources
Boating and License Unit
2258 Northlake Parkway, Ste. 100
Tucker, GA 30084
404/656-3534 or 656-3510
Boating Registration Office:
404/493-5774

Georgia Safe Boating Guide
Department of Natural Resources
270 Washington Street SW
Atlanta, GA 30334

Water Scooter defined as Class A.
Registration: 3-year/$10.
Safety training suggested but not required by law. See courses offered by U.S. Coast Guard Auxiliary, Power Squadron & Red Cross.

Original
The Sport Shirt.

Leave the alligator in your wake with this hot looking embroidered shirt. The WAVE WARE sports shirt is a high quality 50/50 polo style with banded sleeves, fashion collar and colored embroidery. NO SHRINKING - NO IRONING Available in White, Yellow, Kelly and Navy. Sizes small to extra large.

Just $21.95 Each - - - Two for $39.95 !!
(add $2.00 per shirt shipping and handling)

Mail check or money order: WAVE WARE P.O. Box 381, Allenwood, N.J. 08720
Name _____ Phone(____)_____ Age _____
Address _____ Zip_____
Quantity _____ Size _____ Color _____ Total cost of shirts: _____
Quantity _____ Size _____ Color _____ Shipping ($2.00 per shirt): _____
For larger order use separate sheet! Total enclosed: _____
Please allow 2 - 3 weeks for delivery / Dealer & Wholesale inquiries invited

LETTER OF THE LAW

HAWAII
Department of Transportation
Harbors Division
79 S. Nimitz Highway
Honolulu, HI 96813
808/548-2515 (weekdays)
808/548-2359 (weekends - State Marine Patrol)

Water Scooter defined as motorcraft under 16 feet.
Registration: Annual/$4 new; $3 renewal.
Minimum operating age for water scooters is 15 years old.

IDAHO
Idaho State Parks & Recreation Department
Statehouse Mail
2177 Warm Springs
Boise, ID 83720
208/334-2154

Water Scooter defined as motorcraft less than 12 feet.
Registration: Annual/$7; expires Dec. 31. Motorcraft registered in states other than Idaho must have a **use permit** prior to use in Idaho's waters.
Observer required for water skier.

ILLINOIS
Department of Conservation
Lincoln Tower Plaza
524 South Second Street
Springfield, IL 62701-1787
217/782-2138

Boating safety education information:
217/782-6431

Registration and Title: 3-year/$13 new; Renewal: $6. All watercraft must posess a **sound signaling device**, such as a horn or whistle, audible for 1/2 mile.
Age restrictions: Under 10 years old: No operation of motorcraft allowed. 10-12 years: Parent or guardian on-craft supervision required. 12-18 years: Parent or guardian on-craft supervision (guardian must be over 18) required, OR possession of boating safety certificate.

INDIANA
Law Enforcement Division
Department of Natural Resources
606 State Office Building
Indianapolis, IN 46204
317/232-4017
(Handles both registration and free boating safety courses.)

Water Scooter defined as Class A.
Registration: 3-year/$12; Title: $9.
Age restrictions: Under 14 years old: Must have parent or guardian supervision; must be accompanied by a person possessing a certificate of completion of approved boating safety course, or must have a certificate of completion of an approved boating safety course.

IOWA
Iowa Department of Natural Resources
Wallace State Office Building
Des Moines, IA 50319-0034
515/281-5145

Boat Registration:
515/281-5267

Iowa Conservation Commission
Boating Safety Program
Wallace State Office Building
Des Moines, IA 50319-0034
515/281-6824

Water Scooters defined as Class I.
Registration: 2-year/$8; expires April 30 on odd-numbered years.
Age restrictions: Under 12 years old: Parent or guardian at least 18 years old must supervise.

KANSAS
Kansas Department of Wildlife & Parks
Attn: Boating
RR 2, Box 54A
Pratt, KS 67124
316/672-3925

Water Scooter defined as Class I.
Registration: 3-year/$9.
Optional safety course available.

JIM DANDY MOTORSPORTS

We're a factory authorized Yamaha® & Surf-Jet® dealer. We also carry a complete line of Mariner® Jet Ski parts and Cuyuna® engines and parts. Call or write for our current catalog.

To order, credit card holders can call our toll free lines. Or send a check for the correct amount plus shipping, indicated in ( ). Add sales tax where applicable. We accept Visa, MC and AE. Make checks payable to: Jim Dandy Motorsports.

502 S. WASHINGTON ST. • JANESVILLE, WI 53545 • 756-1900
TOLL FREE 1-800-635-3263

KENTUCKY
Natural Resources & Environmental Protection Cabinet
Division of Water Patrol
107 Mero Street
Frankfort, KY 40601

Boating Registration:
502/564-3074

Water safety & safe boating classes:
800/828-2628

Registration: Annual/$24; May 1 -April 30. Register in home county or county of principle use.

LOUISIANA
Louisiana Department of Wildlife & Fisheries
7389 Florida Boulevard
Baton Rouge, LA 70803
504/925-4079

Safety courses:
Coast Guard Auxiliary
14246 Gravier Avenue
Baton Rouge, LA 70810
504/293-6710

Registration: 3-year/$15 new; $10 renewal.
Age Restrictions: Operators & passengers under 12 years old must wear PFD's at all times.

MAINE
Department of Inland Fisheries & Wildlife
Watercraft Section
284 State Street
State House Station 41
Augusta, ME 04333

Registration:
207/289-2043

Boat safety:
207/289-2571

Water Scooter defined as Class A.
Registration: Annual/$4 + proof of payment of excise tax on new vehicles.
Age Restrictions: Operators under 12 must have supervisor who is at least 16 years old.
Water Scooter Exemption: Observer requirement for water skis is waived if the watercraft is actually operated by the person being towed and if the watercraft is so constructed as to be incapable of carrying the operator.

MARYLAND
Natural Resources Police
Tawes State Office Building
Taylor Avenue
Annapolis, MD 21401
301/269-2240

Registration:
Department of Natural Resources
Licensing & Consumer Services
P.O. Box 1869
Annapolis, MD 21404-1869
301/269-3219

Registration: Annual/$12. Title: $2 + 5% state sales tax. Register in county of principle use.
Age restriction requires operators born after July 1, 1972 must obtain certificate of Boating Safety Education.

MASSACHUSETTS
Division of Law Enforcement
100 Nashua
Registry of Motor Vehicles Building
Boston, MA 02114
617/727-3905

Registration: 2-year/$20 + state sales tax.
Age Restriction: None, but parents are liable for children operators under 16.
Water skiers shall not be towed behind any so-called personal watercraft. Riding water scooters at night is prohibited by law.

MICHIGAN
Department of Natural Resources
Law Enforcement Division
Box 30028
Lansing, MI 48909
517/373-1650

Ninth Coast Guard District Auxiliary
U.S. Post Office Building
Room 207
Federal and Jefferson Streets
Saginaw, MI 48607

U.S Power Squadron
c/o 555 West Golden Gate
Detroit, MI 48203

Registration: 3-year/$7.50; expires Dec. 31.
Age Restriction: No operators under 12 years of age. 12-16 years: Must be under supervision of parent or guardian OR possess a boating safety certificate.

MINNESOTA
Department of Natural Resources
Boat & Safety Section
500 Lafayette Road, Box 46
St. Paul, MN 55155-4001
612/296-3310

Registration:
Department of Natural Resources
c/o License Bureau
500 Lafayette Road, Box 26
St. Paul, MN 55155-4001
612/296-2316

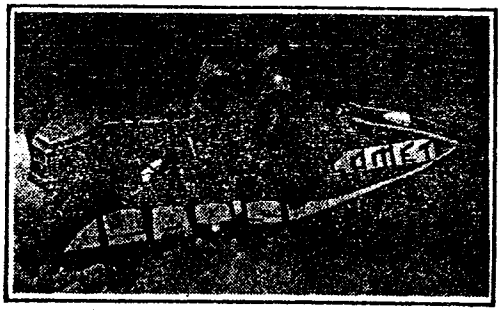
Registration: 3-year/$12.

Must carry 1 B-I fire extinguisher or possess fixed system when operating engines over 24 HP only.
Age Restriction: Under 13: Must have a supervisor at least 18 years of age. 13-17: Must have a supervisor OR a watercraft operator's permit (can be obtained through home instruction).

MISSISSIPPI
Department of Wildlife Conservation
Bureau of Fisheries & Wildlife
P.O. Box 451
Jackson, MS 39205
601/961-5300

NEW... the COMET by Water Cat's!

A SENSATIONAL FAMILY FUN MACHINE



Reasonably priced - Economical to operate - Unmatched fun. From leisurely cruising to fast and furious racing through the waves.

• No previous boating experience required • Handles like a sports car • Turns on a dime at any speed • Extraordinarily stable, safe and exciting to ride.

Dealer Inquiries Invited

Specifications

Length	9'8"
Width	5'2"
Height	2'0"
Weight	150 lbs.
Max. capacity	620 lbs
Passengers	2

Manufactured by:

Water Sports of Texas
P.O.Box 972
Seabrook, TX 77586
(713) 326-2287

LETTER OF THE LAW

Water Scooter defined as Class A.
Registration: 2-year/$2 + .50 mailing fee.

MISSOURI
Department of Public Safety
Missouri State Water Patrol
P.O. Box 603
Jefferson City, MO 65102
314/751-3333

Water Scooter defined as Class A.
Registration: 3-year/$10; expires June 30 of third year.
Age Restriction: Under 12: Must be accompanied by a parent or guardian at least 16 years old.

MONTANA
Department of Fish, Wildlife & Parks
1420 East Sixth Avenue
Helena, MT 59620
406/444-2535

Registration: Annual registration based on the value of the craft; expires on April 30. Contact home county for procedure and fees.

NEBRASKA
Game & Parks Commission
P.O. Box 30370
Lincoln, NE 68503
402/464-0641

Water Scooter defined as Class 1.
Registration: 3-year/$15 + $2 processing.

Age Restriction: Children under 14 shall not operate motorboats of any class whether accompanied by an adult or not. Owners of motorboats shall at all times be held responsible that children under 14 shall not operate a motorboat owned by them.

NEVADA
Department of Wildlife
P.O. Box 10678
Reno, NV 89520-0022
702/789-0500

Water Scooter defined as Class A.
Registration: Annual/$7.50 (Jan. 1-Dec. 31). Title: $5.

NEW HAMPSHIRE
Department of Safety Division of Safety Services
Hazen Drive
Concord, NH 03305
603/271-3336
603/293-2307

Water Scooter defined as Class A.
Registration: Annual/$8. All power boats and sailboats over 12 feet must be registered for use on New Hampshire waters and show a decal on the stern indicating payment of state water use fees.
Age restrictions: Under 15: Not allowed to operate Jet Skis. Contact Department of Safety & Safety Services as to other types of water scooters.

NEW JERSEY
Department of Law & Public Safety
Division of State Police
Box 7068
West Trenton, NJ 08625
609/882-2000, ext. 2530, 2531

Registration: Annual/$6; Operator's License: $3 (Operator's license required on NON-TIDAL waters only.)
Age restrictions: Mandatory boating safety education for persons under the age of 16 years with proof of attendance present on the vessel when in operation.
Observer only; no mirror accepted for water skiing.

NEW MEXICO
State Park & Recreation Division
P.O. Box 1147
Santa Fe, NM 87504-1147
505/827-7465

Registration: 505/827-7462

Registration: 3-year/$28.50 for craft under 16 feet. Title required for boats over 10 feet — cost $10 + 5% excise tax.
* Special use registration permit for out-of-state operators: $2.

NEW YORK
Office of Parks, Recreation & Historic Preservation
Marine & Recreational Vehicles
Agency Building No. 1
Empire State Plaza

LONE STAR JETSKI

Breaks thru for 1988

NEW HOME OF THE WORLD'S QUICKEST AND FASTEST JET SKIS

Our Research and Development has proven that a 440 or 550 Jet Ski engine with a stroked crankshaft is **quicker** and **faster** than any other combination of cylinders, carbs and pipes. More torque, more horsepower and more displacement. All for less money!! If you are serious and want to win you had better be stroked for 1988. Expert and Pro Riders please call for sponsorship terms. Cranks or complete engines available.

CALL NOW!!

NATIONAL DISTRIBUTOR FOR 440 & 550 STROKER CRANKS BY ADVANCED TEC-NEEKS*
WANTED: 1986-88 complete 550 stock exhaust system, paying $75 each.
WANTED: 1986-88 used 550 heads, paying $25 each.

IN STATE
1-(512)-462-3393
DEALERS & RENTERS WELCOME

OUT OF STATE
1-800-237-8752
INSTANT U.P.S.

209 E. Ben White Blvd. Austin, TX 78704

*Excluding Arizona and California

Albany, NY 12238
518/474-9758

Registration: 3-year/$9.
Age Restriction: Under 16: Must possess a Boating Safety Certificate.
Must carry a **sound signaling device**, an anchor, and line while underway. (Amendments to this law are pending.)

NORTH CAROLINA
Wildlife Resources Commission
Archdale Building
512 N. Salisbury Street
Raleigh, NC 27611
919/733-3391

Water scooters are considered to be motorboats and must comply with all regulations and requirements pertaining to motorboats.
Registration: Annual/$5.50; 3-year/$13.

NORTH DAKOTA
Game & Fish Department
100 North Bismarck Expressway
Bismarck, ND 58501-5095
701/221-6300

Water Scooter defined as Class A.
Registration: 3-year/$6; Jan. 1-Dec. 31.

OHIO
Department of Natural Resources
Fountain Square
Columbus, OH 43244
614/265-6480

Water Scooter defined as Class 1.
Registration: 3-year/$23.50.
Age restriction: Under 12: Must be supervised by parent or guardian.

OKLAHOMA
Oklahoma Tax Commission
Boat Reg., Motor Lic. & Titling
409 NE 28th Street
Oklahoma City, OK 73105
405/521-2438 ext. 2818

Lake Patrol Division
P.O. Box 11415
Oklahoma City, OK 73136-0415
405/424-4011, ext. 2143

Registration: Annual, due July 1/Fee computed by the value of the craft; renewal is on declining scale.

OREGON
State Marine Board
3000 Market Street NE #505
Salem, OR 97310-0650
503/378-8587

Water Scooter defined as Class A.
Registration: 2-year/$11 certificate of number; title fee is $7.
For complete list of all special local boat operation rules, write State Marine Board and request *The Oregon Boaters Handbook.*

PENNSYLVANIA
Fish Commission
3532 Walnut Street
P.O. Box 1673
Harrisburg, PA 17105-1673
717/657-4540

Fish Commission
c/o Boat Registration Section
Box 1852
Harrisburg, PA 17105-1852

Water scooter defined as Class A.
Registration: Annual/$4; April 1-March 31.
Certain waters are controlled by special regulations, which should be posted at the boating access areas. For detailed information, contact the District Waterways Conservation Officer or nearest Regional Office of the Pennsylvania Fish Commission.

RHODE ISLAND
Department of Environmental Management
Division of Boating Safety
22 Hayes Street
Providence, RI 02908
401/277-3576

Registration: 1-year/$10.

SOUTH CAROLINA
Division of Boating
217 Ft. Johnson Road
P.O. Box 12559
Charleston, SC 29412
803/795-6350

Registration:
South Carolina Wildlife & Marine Resources Department
Boating Division
P.O. Box 167
Columbia, SC 29202
803/734-4009

Water Scooter defined as Class A.
Registration: 3-year/$10.
Must have a **signaling device,** such as a horn, on the craft during operation.

SOUTH DAKOTA
Department of Game, Fish & Parks
Anderson Building
445 E. Capitol
Pierre, SD 57501-
605/773-3630; 773-4506

Registration: Boats may be licensed for either a 1-year or a 3-year period. Registrations expire on December 31 of the year for which they are validated. Annual fee for water scooters: $10/1-year, $28/3-year.

TENNESSEE
Wildlife Resources Agency
Ellington Agricultural Center
P.O. Box 40747
Nashville, TN 37204
615/741-1528

Registration: Annual/$4; 2-year/$7; 3-year/$10.
Age restrictions: Under 12 years: Adult supervision required.

TEXAS
Parks & Wildlife Department
4200 Smith School Road
Austin, TX 78744
512/479-4999
800/792-1112

Water Scooter defined as Class A.
Registration: 2-year/$12. Title: $5.

UTAH
Division of Parks & Recreation
1636 West North Temple Street
Salt Lake City, UT 84116
801/538-7270

LETTER OF THE LAW to 61

SEA-DOO
The Midwest's Water Toy Headquarters
jet ski®
ANOKA SPORTS CENTER
6304 Hwy. 10 N.W. • Anoka, MN 55303 • 612-427-2498
We Carry Accessories By:
Mariner • Butch's • Ocean Pro • Performance Jet Ski
Jet Pilot • West Coast • Skat Trak
In House Machine Shop For All Your Performance Needs
In House Financing • U.P.S. Daily
WETBIKE
FAZER
WETJET AMERICAN MADE

LETTER OF THE LAW from 52

Registration & Titling:
Motor Vehicle Div.; Attn: Boating
1095 Motor Avenue
Salt Lake City, UT 84116
801/533-5311
Registration: Annual/$10 + property tax.
Persons under 16 years of age may not operate water scooters without direct supervision of an adult.

VERMONT
State Police, Marine Div.
103 South Main Street
Waterbury, VT 05676
802/244-8775
Water Scooter defined as Class A.
Registration: Annual/$5; apply on or before March 1.

VIRGINIA
Dept. of Game & Inland Fisheries
P.O. Box 11104
Richmond, VA 23230-1104
804/367-1000
Registration: 3-year/$11. Title: $7 + watercraft sales tax 2% of gross purchase price of craft.

WASHINGTON
Department of Licensing
Highway-Licensing Bldg., PB-01
Olympia, WA 98504-8001
800/521-9319
206/586-2183

Boating Safety Program:
Parks & Recreation Commission
Boating Safety Administrator
7150 Cleanwater Lane KY-11
Olympia, WA 98504
206/586-2166
Registration: Annual/First time $15; renewal $6 plus filing fee: July 1-June 30. Title: $5 (included in first-time registration).

WEST VIRGINIA
Department of Natural Resources
Law Enforcement Division
1800 Washington Street SE
Charleston, WV 25305
304/348-2783; 348-2784
Water Scooter defined as Class A.
Registration: Annual/$5.

WISCONSIN
Department of Natural Resources
Box 7921
Madison, WI 53707
608/266-0859
Water Scooter defined as Class A.
Registration: 2-year, beginning April 1/$6.50.
Age restrictions: Under 10: No motorcraft operation allowed. 10 - 12: Parent or guardian supervision on the craft required. 12 - 16: Parent or guardian on craft supervision OR operator must possess certificate of completion of boating safety course.

WYOMING
Game & Fish Dept.; Attn: Watercraft
5400 Bishop Boulevard
Cheyenne, WY 82002
307/777-7605
Water Scooter defined as Class A.
Registration: Annual/$5; expires Dec. 31.

WASHINGTON D.C.
Metropolitan Police Department
Harbor Patrol
550 Water Street SW
Washington, DC 20024
202/727-4582
Registration: 3-year/$6.

FOR SUMMER

Low Summertime Prices!

Summertime is beachtime! Gear up now for your fun in the sun! Save on WATER SCOOTER's popular beach towel, sleek sun visor and more. Use the handy order form below. Mail with your check or money order. It's a deal... it's a summertime steal!

WATER SCOOTER TOWELS
Over 39% off regular $19.95 price when you purchase 2 or more!

WATER SCOOTER SUN VISORS
Over 44% off regular $8.95 price when you purchase 2 or more!

TOWEL AND VISOR SET
2 for $16.95 (Save $19.85)

	No. Ordered	Amount Due
1 Towel: $15.00		
2 or More Towels: $12.00 each		
1 Visor: $5.00		
2 or More Visors: $4.50 each		
Towel & Visor Sets: Only $16.95		
Minnesota Res. add 6% Sales Tax		
TOTAL AMOUNT ENCLOSED		

Name
Address
City
State/Zip
A588

Send to: WATER SCOOTER GEAR UP SPECIAL
P.O. Box 611, Wayzata, MN 55391

Send check or money order. No cash please.
Allow four weeks for delivery.

APPENDIX D

. Thesis. Kearney State College, Kearney,

andhill crane roosting habitat on the Platte
1–16 *in* Proc. 1981 Crane Workshop. National

979. Habitat-use patterns of sandhill cranes
' report. Pages 7–11 *in* Proc. 1978 Crane
lins.
ller hailstorm at the Washita Refuge. Bull.

mortality caused by a September wind and

e Mormon Island Crane Meadows Wildlife
braska. U.S. Geological Survey Open-File

opulation dynamics. Spec. Sci. Rep. Wildl.
n, D.C. 10 pp.
tte River, Nebraska—History, status, and
3 *in* Proc. 1981 Crane Workshop. National

ter levels in Nebraska, 1980. Nebr.
n system. Pages 41–55 *in* Strategies
lands and other riparian ecosystems.
ashington D.C.
reas in Nebraska. Pages 1–5 *in* Proc. 1978
t Collins.
Fish and Wildlife Service's Platte River
c. 1978 Crane Workshop. Colorado State

Grus canaden. . Pages 5–43 *in* G. C.
re and upland game birds in North Amer-
ington, D.C. 35 pp.
iver upon the history of the Valley. Ph.D.

cranes. Auk 78: 631–642.
River Basin, Nebraska—Level B Study:

77. A riparian case history: the Colorado
on and management of riparian habitat: a
or. Serv., Fort Collins, Colo.
od habits of sandhill cranes in Nebraska.
Colorado State Univ., Fort Collins.
'9. Mortality of sandhill cranes associated
in Proc. 1978 Crane Workshop. Colorado

m data. Vol. 2.
ver Ecology. Spec. Res. Rep. U.S.
p.
ivers and the sandhill crane migration.

Wildlife Ref. Pages 141–143 *in* Proc.
Stillwater.
nels—the Platte and Platte Rivers
n. 49

h American Wildlife Conference

Wildlife Values Versus Human Recreation: Ruby Lake National Wildlife Refuge

Stephen H. Bouffard
U.S. Fish and Wildlife Service,
Ruby Lake National Wildlife Refuge,
Ruby Valley, Nevada

Expanding human populations are making increased recreational demands on National Wildlife Refuges (NWR). The U.S Fish and Wildlife Service (FWS) is trying to accommodate these demands whenever possible. An important, but not primary objective of NWRs is to provide for various public uses, including recreation (U.S. Fish and Wildlife Service 1976a). The Refuge Recreation Act of 1962 (16 U.S.C. 460K-460K-4) authorizes the FWS to allow recreational uses on NWRs, National Fish Hatcheries and similar lands. This act specifies that all recreational uses must be secondary to the primary purpose of the refuge. While most refuge recreation programs do not conflict with the primary refuge purpose, some conflicts have occurred. Some recreation programs were started before conflicts with wildlife became apparent. Others were not in conflict with wildlife while public visits were low, but later came into conflict after public use increased. Conflicts of this type become very difficult to change because the public has come to expect and demand these recreation opportunities. This paper will discuss FWS attempts to manage such a recreational program at Ruby Lake NWR where recreational boating had grown from low use and little wildlife conflicts to heavy use and substantial conflicts with nesting waterfowl.

Ruby Lake NWR was established in 1938 by Presidential Order No. 7923 as a migratory bird breeding area. The 37,630 acre (15,236 ha) refuge lies in a high (6,000 feet, 1,829 m) closed basin in northeastern Nevada. The South Sump is the largest marsh unit on the refuge and contains 7,000 (2,835 ha) of the 12,000 acres (4,680 ha) of wetlands on the refuge. This unit has interspersed open water, uplands and emergent vegetation, a habitat mixture that attracts large numbers of nesting waterfowl, particularly diving ducks. About 85 percent of the canvasbacks (*Aythya valisineria*) and redheads (*A. americana*) on the Refuge nest in this unit. Various other waterfowl and wading birds nest on the Refuge including trumpeter swans (*Olor buccinator*) and sandhill cranes (*Grus canadensis*). Nearly eighty percent of the fishing and all of the recreational boating on the Refuge occur on the South Sump (Green 1981).

Ruby Lake NWR is the major canvasback breeding area in the western United States. No other single refuge in the lower 48 states regularly produces as many canvasbacks (1,200–3,500 ducklings fledged each year). About 400 pairs of canvasbacks and 430 pairs of redheads nest on the refuge annually. Averaged over the entire refuge, two-thirds of which is wetlands, this represents a breeding population of 13.6 canvasbacks per square mile (5.2/km²) as compared to 10 or more per square mile (>3.8/km²) in the best prairie pothole area near Minnedosa, Manitoba (Bellrose 1980:303).

Ruby Lake NWR is one of the few remaining major wetlands of Nevada. Surprisingly, Nevada once had large areas of wetlands, but because of water demands many areas have been lost. In western Nevada nearly 30,000 acres (12,000

ha) of wetlands remain in wet years where there were once over 123,000 acres (50,000 ha) (Nevada Chapter, The Wildlife Society 1980). The scarcity of wetlands in Nevada makes each remaining area more valuable to wildlife. It also tends to concentrate water based recreation on these same areas, leading to conflicts with wildlife.

The boating-wildlife conflict had its origin before the Refuge was established. In the early 1930s, largemouth bass (*Micropterus salmoides*) were stocked in the marsh. They were not seen again until 1941; fishing began in 1942 (Trelease 1948). Because the first fishermen were relatively few in number and fished mostly from shore (Green 1980), they caused little disturbance. The number of public visits (Table 1), the number of boats, and motor size increased over the years. Currently about 90 percent of the visits involve fishing and 65 percent of the visits involve fishing from boats (U.S. Fish and Wildlife Service 1981). Public visits were not evenly distributed throughout the year, but were concentrated from May through early September. Heaviest public use coincided with the waterfowl breeding season. In 1976 a survey of over 100 boats owned locally and used primarily on the Refuge indicated that the average motor size on these boats was over 90 horsepower (hp); several motors exceeded 250 hp (U.S. Fish and Wildlife Service 1976b). Sometime during the 1950s waterskiing began on one pond about 30 acres (12 ha) in size.

Boating and waterskiing were, for the most part, uncontrolled and were allowed in the prime diving duck nesting habitat during the nesting season. This uncontrolled use of boats created several conflicts with waterfowl production. Disturbance to breeding diving ducks was considerable. Courting canvasback and redhead pairs flushed an average of nearly 300 yards (271 m) from any boat regardless of motor size (Howard 1978). Noise from outboard motors flushed canvasbacks and redheads off their nests at an average of about 38 yards (35 m), and some flushed over 110 yards (100 m) away (Bouffard 1980). Few females covered their nest when flushed, exposing the eggs to chilling, overheating, or predation by ravens (*Corvus corax*), the major egg predator on the Refuge (Bouffard 1980). Repeated flushing of birds and anchoring of boats near nests led to nest desertion. Boats dispersed broods and forced them into less desirable habitat.

In addition to disrupting breeding waterfowl, boats also caused habitat damage.

Table 1. Public visits for selected years at Ruby Lake National Wildlife Refuge. Data was taken from Refuge files and Public Use Reports.

Calendar Year	Boating and Waterskiing*	Fishing	Total Refuge Visits
1955		700	1,500
1960		8,000	18,249
1965	4,030	15,000	20,100
1970	1,700	31,450	34,205
1975	2,945	41,575	45,680
1980		57,698	65,568

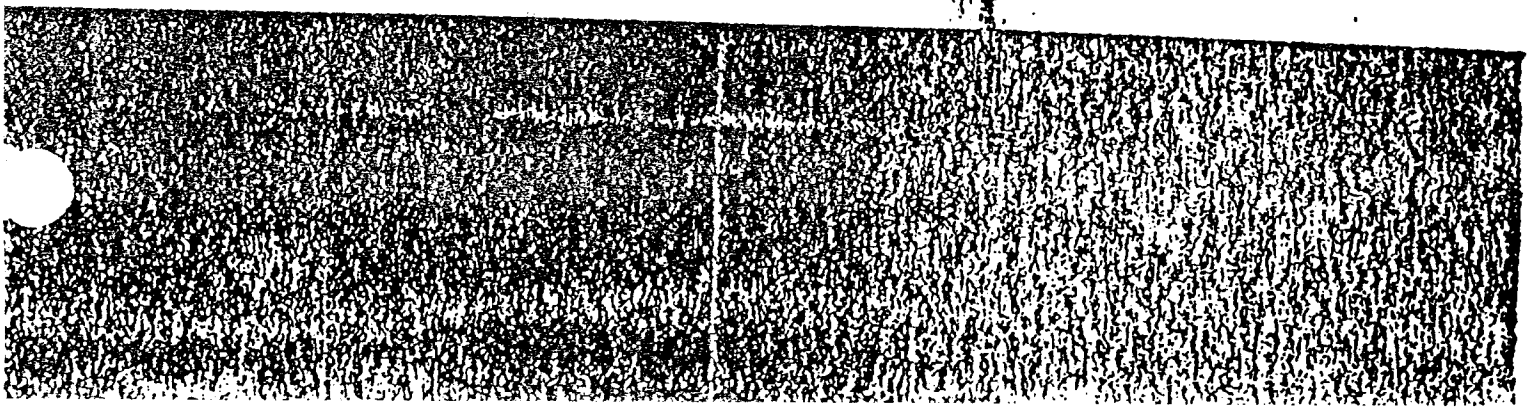
*Records of visits for boating and waterskiing were not maintained separately until 1963. Boating refers to recreation boating only. Boating associated with fishing is recorded under fishing, the primary activity.

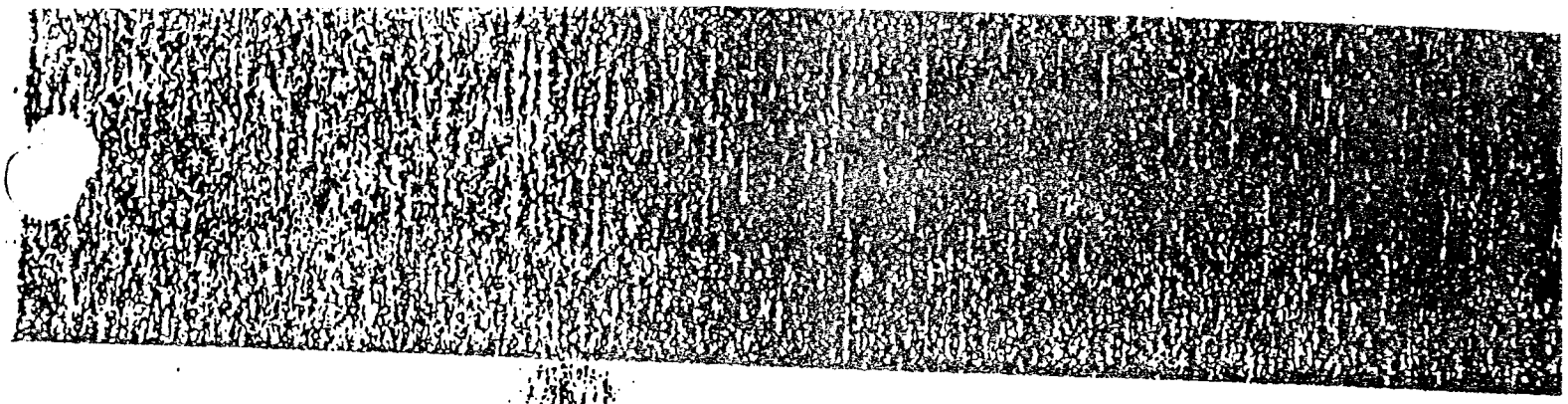
The cutting action of the propellers total
channels and changed the species com
Areas with heaviest boat use had less st
non-use areas (45.9 tons/acre) (U.S. F
vegetation followed by wakes from larg
in some areas. This erosion was most ce
practiced.

By the late 1960s, public use had in
wildlife became apparent. The FWS beg
of recreational boating on waterfowl pro
areas changed each year, so the study
Only in 1971 was there a difference in
use area (61.1 percent) and the control a
of pressure from the boating public and
Napier's research, boating regulations
motorboating throughout the South Sum

A renewed effort to control boating b
compilation of data leading to the compl
ment (EIA) published in 1976. The EIA
breeding waterfowl from recreational b
boating on waterfowl production at Ru
Service 1976c.). Four public hearings w
the conclusions of the EIA was very ne
tives, the FWS proposed regulations to l
boats with electric motors year round (
hp or less) would be allowed in the Sout
be prohibited. Public reaction to this prop
the Assistant Secretary of the Interior t
1978, the following regulations were issu
in favor of speed limits, and the South Su
open year round for motorless boats only
on 1 July, 15 July and 1 August. (See Appe
FWS felt that these regulations would a
reation and wildlife and be more agreeabl

Local boaters were not the only group
of Wildlife (DOW) contended that the
Recreation Act and threatened to sue to
1978, two days before outboard motor
temporary restraining order against the
motors on Ruby Lake NWR pending the
to the order was negative and the oppone
dience in response to the ruling. There
injuries, arrests or property damage. The
the judge declared the regulations unlaw
regulations. On 25 July, the FWS issued
with a 10 hp restriction through 31 July an
with no motor size restrictions after 31 Ju
revised regulations and obtained another





where there were once over 123,000 acres
llife Society 1980). The scarcity of wetlands
more valuable to wildlife. It also tends to
these same areas, leading to conflicts with

rigin before the Refuge was established. In
cropterus salmoides) were stocked in the
1941; fishing began in 1942 (Trelease 1948).
ely few in number and fished mostly from
disturbance. The number of public visits
or size increased over the years. Currently
ishing and 65 percent of the visits involve
llife Service 1981). Public visits were not
but were concentrated from May through
oincided with the waterfowl breeding sea-
owned locally and used primarily on the
e on these boats was over 90 horse-
U.S. Fish and Wildlife Service 1976b).
on one pond about 30 acres (12 ha)

most part, uncontrolled and were allowed
t during the nesting season. This uncon-
flicts with waterfowl production. Distur-
siderable. Courting canvasback and red-
00 yards (271 m) from any boat regardless
m outboard motors flushed canvasbacks
ge of about 38 yards (35 m), and some
uffard 1980). Few females covered their
o chilling, overheating, or predation by
redator on the Refuge (Bouffard 1980).
of boats near nests led to nest desertion,
into less desirable habitat.
fowl, boats also caused habitat damage.

by Lake National Wildlife Refuge. Data was
s.

Fishing	Total Refuge Visits
700	1,500
8,000	18,249
15,000	20,100
31,450	34,205
41,575	45,680
57,698	65,568

ained separately until 1963. Boating refers
recorded under fishing, the primary activity.

The cutting action of the propellers totally removed the aquatic vegetation in some channels and changed the species composition of the vegetation in other areas. Areas with heaviest boat use had less submergent vegetation (10.7 tons/acre) than non-use areas (45.9 tons/acre) (U.S. Fish and Wildlife Service 1976c.). Loss of vegetation followed by wakes from larger boats caused bank erosion and siltation in some areas. This erosion was most common in the pond where waterskiing was practiced.

By the late 1960s, public use had increased to the point where conflicts with wildlife became apparent. The FWS began a study in 1969 to document the effects of recreational boating on waterfowl production. The boating regulations and study areas changed each year, so the study ended in 1971 with no conclusive results. Only in 1971 was there a difference in redhead nest success between the public use area (61.1 percent) and the control area (93.6 percent) (Napier 1972). Because of pressure from the boating public and the lack of conclusive information from Napier's research, boating regulations were relaxed further in 1972, allowing motorboating throughout the South Sump after 1 July (Appendix 1).

A renewed effort to control boating began in 1974 with a literature review and compilation of data leading to the completion of an environmental impact assessment (EIA) published in 1976. The EIA reviewed the literature on disturbance to breeding waterfowl from recreational boating and documented some effects of boating on waterfowl production at Ruby Lake NWR (U.S. Fish and Wildlife Service 1976c.). Four public hearings were held throughout Nevada; reaction to the conclusions of the EIA was very negative. After considering several alternatives, the FWS proposed regulations to begin in 1978 allowing motorless boats or boats with electric motors year round in designated areas. Outboard motors (10 hp or less) would be allowed in the South Sump after 31 July; waterskiing would be prohibited. Public reaction to this proposal was also very negative and prompted the Assistant Secretary of the Interior to tour the Refuge in June 1977. In April 1978, the following regulations were issued: Motor size restrictions were dropped in favor of speed limits, and the South Sump was divided into four zones: One was open year round for motorless boats only and the other three opened to motorboats on 1 July, 15 July and 1 August. (See Appendix 1 for review of boating regulations). FWS felt that these regulations would adequately reduce conflicts between recreation and wildlife and be more agreeable to the boaters.

Local boaters were not the only group interested in the Refuge. The Defenders of Wildlife (DOW) contended that the altered regulations violated the Refuge Recreation Act and threatened to sue to stop the use of large boats. On 29 June 1978, two days before outboard motors could be used, the DOW obtained a temporary restraining order against the FWS, prohibiting the use of outboard motors on Ruby Lake NWR pending the outcome of their lawsuit. Public reaction to the order was negative and the opponents of the order organized a civil disobedience in response to the ruling. There were threats and heated words, but no injuries, arrests or property damage. The DOW won the court case. On 11 July, the judge declared the regulations unlawful and ordered the FWS to issue new regulations. On 25 July, the FWS issued regulations that allowed outboard motors with a 10 hp restriction through 31 July and allowed waterskiing and motorboating with no motor size restrictions after 31 July. The DOW did not concur with these revised regulations and obtained another temporary restraining order prohibiting

outboard motors larger than 10 hp and won the second suit. The court again directed the FWS to issue new regulations. The new regulations were issued 7 September, allowing outboard motors 10 hp or less until 31 December. Waterskiing was prohibited. On 23 April 1979 the following regulations were published: Motorless boats and boats with electric motors were allowed on the South Sump from 15 June through 31 December, boats with outboard motors no larger than 10 hp were allowed 1 August through 31 December. Wildlife disturbance under these regulations has been greatly reduced. These regulations, with minor changes are still in effect today.

The Refuge Recreation Act was the basis of the lawsuits by the DOW against the FWS. The following were the major points made in the court's decision of 14 July. The Secretary of the Interior must determine "that such use is incidental to, compatible with and does not interfere with the primary purpose of the refuge" (U.S. District Court, District of Columbia 1978:9). Allowing a recreational use and afterward determining whether that use is harmful to wildlife cannot be allowed. The determination must be made first. Secondly, "the Refuge Recreation Act does not permit the Secretary to weigh or balance economic, political, or recreational interests against the primary purpose of the refuge" (U.S. District Court, District of Columbia. 1978:9) Finally, past use has no bearing on current decisions for recreational use.

> Neither poor administration of the refuge in the past, nor prior interferences with its primary purposes, nor past recreational uses, nor deterioration of its wildlife resource since its establishment, nor administrative custom nor tradition alters the statutory standard. The Refuge Recreation Act permits recreational use only when it will not interfere with the primary purpose for which the refuge 'was established.' The prior operation of the refuge in a manner inconsistent with that purpose does not change the base point for applying the statute's standard. Past recreation use is irrelevant to the statutory standard except insofar as deterioration of the wildlife resource from prior recreational uses serves to increase the need to protect, enhance and preserve the resource (U.S. District Court, District of Columbia. 1978:10).

The first test of the Refuge Recreation Act set some important precedents for lands managed by the FWS for wildlife. The Act and court decision provided some very strong protection for wildlife from incompatible recreational pressures on NWRs.

The FWS will continue to accommodate recreational use on NWRs when compatible with wildlife objectives. As at Ruby Lake NWR, the Refuge Recreation Act will continue to be used to protect wildlife objectives should recreational programs conflict with these objectives.

References Cited

Bellrose, F. C. 1980. Ducks, geese and swans of North America, 3rd ed. Stackpole Books, Harrisburg, Pa. 540 pp.

Bouffard, S. H. 1980. Breeding biology and productivity of canvasbacks and redheads at Ruby Lake National Wildlife Refuge. U.S. Fish and Wildlife Service, Ruby Valley, Nev. 35 pp.

Green, M. 1980. Preliminary Ruby Marsh fisheries management plan. Nevada Dep. Wildlife, Reno. 62 pp.

———. 1981. Job progre.. report. P-R projec 30 pp.

Howard, R. L. 1978. Ef.. ..s of revised boat Ruby Lake Nation.. Wildlife Refuge– Service, Ruby Vall.. . Nev. 27 pp.

Napier, L. L. 1972. Effec.. of public use on w Wildlife Refuge. U.. Fish and Wildlife

Nevada Chapter, The W.. dlife Society. 19 management of wetlands on public lands Nevada Chapter, The Wildlife Society.

Trelease, T. J. 1948. Report of field survey Ruby Lakes, Nevada. Nevada Fish and

U.S. District Court, District of Columbia. 19 et al. Findings of fact and conclusions of District of Columbia. 13 pp.

U.S. Fish and Wildlife Service. 1976a. Fina National Wildlife Refuge System. U.S. I

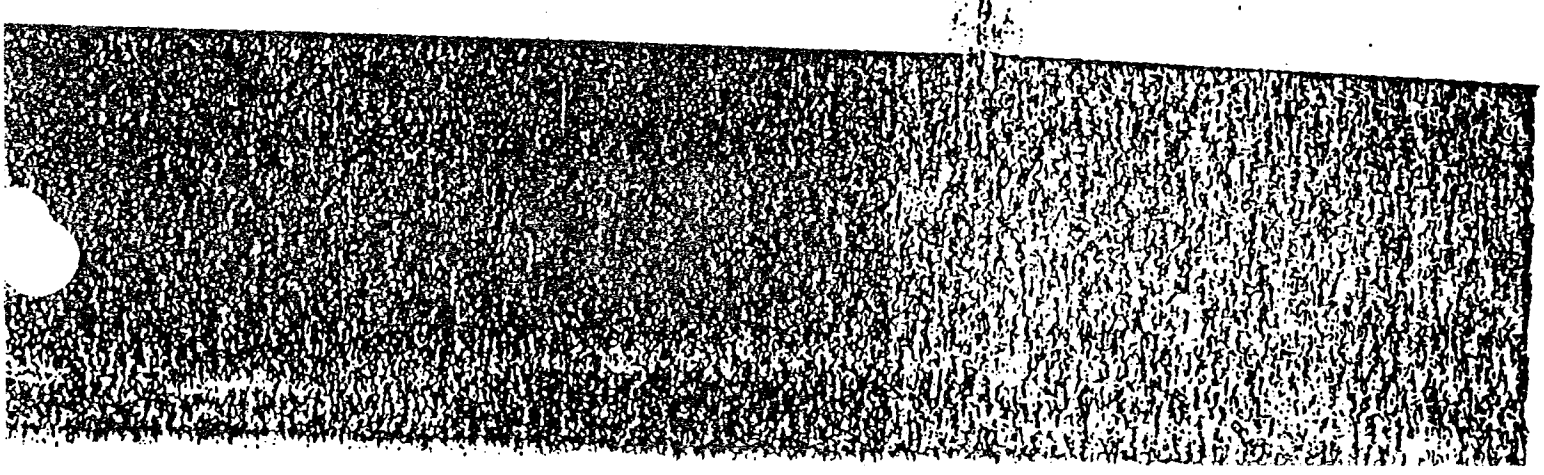
———. 1976b. Addendum to Environmental I agement of Ruby Lake National Wildli Portland, Ore.

———. 1976c. Environmental Impact Assessm Lake National Wildlife Refuge. U.S. Fish

———. 1981. Ruby Lake NWR: public use repo Nev.

Appendix I—Summary of Boating Reg

1981 Motorless boats and boats with elec
to through 31 December on the entir
1979 horsepower motors or less were allo
31 December. Internal combustion
1978 I. Original Regulations
A. Zone 1—Open year round t
B. Zone 2—Open to powerboa
1 July to 31 December on th
the west side.
C. Zone 3—Open to powerbo
August to 31 December.
II. Second Set of Regulations
On 29 June the Service was s
motors larger than 10 horsepo
plaintiffs and the Service issued
the zoning and motorboats will
used beginning 1 August. Prior
10 horsepower. These regulatio
III. Third Set of Regulations
On 21 July the Service received
motors larger than 10 horsepow
the plaintiffs and the Service iss
The zoning was abolished and t
powerboats with motors no large



von the second suit. The court again directed
new regulations were issued 7 September,
less until 31 December. Waterskiing was
ving regulations were published: Motorless
were allowed on the South Sump from 15
outboard motors no larger than 10 hp were
r. Wildlife disturbance under these regula-
regulations, with minor changes are still in

basis of the lawsuits by the DOW against
r points made in the court's decision of 14
t determine "that such use is incidental to,
with the primary purpose of the refuge"
ia 1978:9). Allowing a recreational use and
is harmful to wildlife cannot be allowed.
dly, "the Refuge Recreation Act does
economic, political, or recreational
fuge" (U.S. District Court, District
has no bearing on current decisions for

ge in the past, nor prior interferences with
onal uses, nor deterioration of its wildlife
ministrative custom nor tradition alters the
on Act permits recreational use only when
ose for which the refuge 'was established.'
anner inconsistent with that purpose does
he statute's standard. Past recreation use
cept insofar as deterioration of the wildlife
serves to increase the need to protect.
.S. District Court, District of Columbia.

n Act set some important precedents for
The Act and court decision provided some
Incompatible recreational pressures on

te recreational use on NWRs when com-
uby Lake NWR, the Refuge Recreation
t wildlife objectives should recreational

of North America, 3rd ed. Stackpole Books,

tivity of canvasbacks and redheads at
h and Wildlife Service, Ruby Valley,

ries management plan. Nevada Dep. Wildlife,

North Amer an Wildlife Conference

———. 1981. Job progress report. P-R project F-20-16, Job 201. Nevada Dep. Wildlife, Reno. 30 pp.

Howard, R. L. 1978. Effects of revised boating regulations on waterfowl production on the Ruby Lake National Wildlife Refuge—1977 progress report. U.S. Fish and Wildlife Service, Ruby Valley, Nev. 27 pp.

Napier, L. L. 1972. Effects of public use on waterfowl nesting success on Ruby Lake National Wildlife Refuge. U.S. Fish and Wildlife Service, Ruby Valley, Nev. 39 pp.

Nevada Chapter, The Wildlife Society. 1980. Position statement: The maintenance and management of wetlands on public lands for public benefit in Lahontan Valley, Nevada. Nevada Chapter, The Wildlife Society. 12 pp.

Trelease, T. J. 1948. Report of field survey and investigation of the fisheries resources of Ruby Lakes, Nevada. Nevada Fish and Game Comm., Reno. 13 pp.

U.S. District Court, District of Columbia. 1978. Defenders of Wildlife et al. v. Cecil Andrus et al. Findings of fact and conclusions of law. Civil Action 78-1210. U.S. District Court, District of Columbia. 13 pp.

U.S. Fish and Wildlife Service. 1976a. Final Environmental Statement: Operation of the National Wildlife Refuge System. U.S. Fish and Wildlife Service, Washington, D.C.

———. 1976b. Addendum to Environmental Impact Assessment: Effect of boating on management of Ruby Lake National Wildlife Refuge. U.S. Fish and Wildlife Service, Portland, Ore.

———. 1976c. Environmental Impact Assessment: Effect of boating on management of Ruby Lake National Wildlife Refuge. U.S. Fish and Wildlife Service, Portland, Ore.

———. 1981. Ruby Lake NWR: public use reports. On file at Ruby Lake NWR, Ruby Valley, Nev.

Appendix I—Summary of Boating Regulations at Ruby Lake NWR

1981 to 1979 Motorless boats and boats with electric motors were permitted from 15 June through 31 December on the entire South Sump. Boats propelled by 10 horsepower motors or less were allowed on the marsh from 1 August through 31 December. Internal combustion generators prohibited in 1981.

1978 I. Original Regulations

A. Zone 1—Open year round to boats without motors.

B. Zone 2—Open to powerboats with no horsepower restrictions from 1 July to 31 December on the east side, 15 July to 31 December on the west side.

C. Zone 3—Open to powerboats with no horsepower restrictions 1 August to 31 December.

II. Second Set of Regulations

On 29 June the Service was served an order prohibiting the use of motors larger than 10 horsepower. The judge ruled in favor of the plaintiffs and the Service issued regulations. There were no changes in the zoning and motorboats with no horsepower restrictions could be used beginning 1 August. Prior to 1 August motors were restricted to 10 horsepower. These regulations went into effect on 25 July.

III. Third Set of Regulations

On 21 July the Service received another order prohibiting the use of motors larger than 10 horsepower. Again the judge found in favor of the plaintiffs and the Service issued new regulations on 7 September. The zoning was abolished and the whole South Sump was opened to powerboats with motors no larger than 10 horsepower.

1977 to 1972 Boats without motors were allowed throughout the South Sump year round. Power boating with no horsepower restrictions was allowed year round in designated areas. Power boating with no horsepower restrictions was allowed through the remainder of the South Sump 1 July through 31 December.

1971 Boats without motors were allowed throughout the South Sump year round. Power boating with no horsepower restrictions was allowed year round in designated areas. Power boating with no horsepower restrictions was allowed through the remainder of the South Sump 24 July through 31 December.

1970 Boats without motors permitted year round on the entire South Sump. Powerboats with no horsepower restrictions were allowed on the entire South Sump 13 June through 31 December.

1969 Boats without motors permitted year round on the entire South Sump. Power boats with no horsepower restrictions were allowed on the entire South Sump 14 June through 31 December.

1968 Boats without motors were allowed year round in the South Sump. Power boats with no horsepower restrictions were permitted in the South Sump 15 June through 31 December. Boats without motors were allowed in the dike units 15 June through 31 October.

1967 I was unable to locate any records of boating regulations prior to 1968. Some of the earlier regulations may have been tied to fishing seasons.

Waterfowl Production at Refuge, 1942–1980.

John E. Cornely
U.S. Fish and Wildlife Service,[1] Malheur National Wildlife Refuge, Burns, Oregon

Introduction

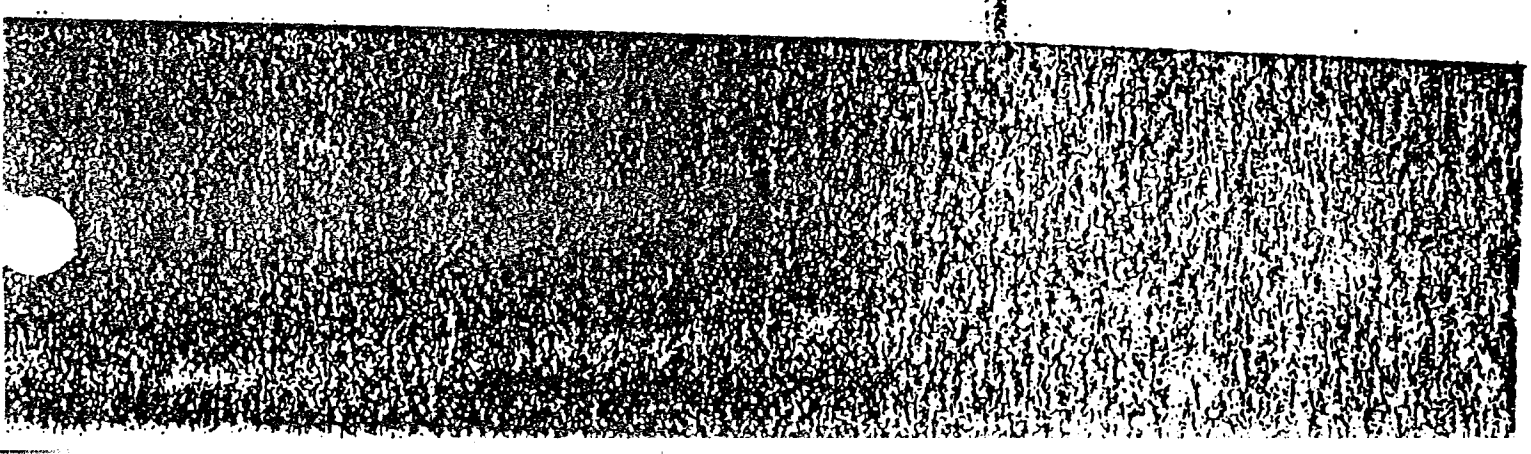
Malheur National Wildlife Refuge (N tant breeding area for Pacific Flyway \ *ator)*, Canada geese *(Branta canadensi* NWR. The refuge is one of the most imp areas in the western United States. M: Theodore Roosevelt in 1908, primarily refuge also serves as an important migr other migratory birds. Originally the ref and included only Malheur, Mud, and I Blitzen River Valley was added in 1935, for Malheur Lake. The 22,000 acre (8,· 1941 and smaller parcels have been a records have been kept of annual wate since 1942. The objectives of this paper describe apparent trends, and discuss waterfowl production at Malheur NWR.

Description of Malheur NWR

Malheur NWR is comprised of app shallow marshes, irrigated meadows, bru alkali uplands. The refuge is 27 miles (43 elevation averages 4,100 feet (1,250 m). T summers and cold winters. Maximum te the summer and subzero temperatures ar of most lakes and ponds are usually froze but snow depths rarely exceed 6 inches (inches (23 cm), occurring mainly from N peak in May and June.

The principal sources of water are the S (see Figure 1). The Silvies River originate the north side of Malheur Lake. Silver Cre but flows through the Double-O Ranch . Blitzen River arises on Steens Mountain, for the Blitzen Valley before entering M

[1]Present address: Willamette Valley and Oregon Coa 208, Corvallis, Oregon 97333



ble notice of the claim nor an opportunity to be heard. He has had his day in court. *Hansberry v. Lee*, 311 U.S. 32, 61 S.Ct. 115, 85 L.Ed. 22 (1940). The fact the parties are technically different is of no import in this case. Substance rather than form is the controlling factor. *Chicago, R. I. & P. Ry. v. Schendel*, 270 U.S. 611, 46 S.Ct. 420, 70 L.Ed. 757 (1926). There is sufficient identity of parties for collateral estoppel purposes because the defendant in the first suit, Warnecke Corporation, was the denominated agent of Warnecke. Both the claims in this suit and the counterclaim in the first suit assert the same cause of action under the same agreement. Warnecke was the sole shareholder of Warnecke Corporation. A judgment against a corporation is binding on the holder of its ownership. *Drier v. Tarpon Oil Company*, 522 F.2d 199 (5th Cir. 1975).

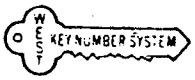
In this case Count I seeks to recover for breach of the agreement for "complete maintenance." Count II is a claim for breach of alleged implied warranties given with respect to services and parts supplied.

[5, 6] Essential to recovery under either theory is a finding that Laclede performed services which were not in a "workmanlike manner." Even though Count II contends Laclede impliedly warranted parts, the Court is of the opinion that a finding by a jury that Laclede performed maintenance of the power plant in a "workmanlike manner" includes, a fortiori, an implied finding that parts used in connection with the maintenance were not defective. To hold otherwise would allow the possibility of an inconsistent finding. *See, e. g., Wenzel v. Wenzel*, 283 S.W.2d 882, 887 (Mo.App.1955).

[7] Collateral estoppel is the device used to prevent the happening of such a non sequitur and is designed to save parties and the courts from the waste and burden of relitigation of old issues. *Southern Pacific Railr'd v. United States*, 168 U.S. 1, 18 S.Ct. 18, 42 L.Ed. 355 (1897).

It is clear that Judge Nangle, in dismissing the counterclaim without prejudice when he stated that "a dismissal at this junction would *conceivably* allow the defendant [Warnecke Corporation] to refile the claim" (emphasis added).

Accordingly, defendant's motion for summary judgment will be sustained since no material issues of fact remain for trial. Rule 56 F.R.C.P. Plaintiff's complaint will be dismissed.



DEFENDERS OF WILDLIFE, Plaintiff,

v.

Cecil D. ANDRUS et al., Defendants.

Civ. A. No. 78-1332.

United States District Court, District of Columbia, Civil Division.

Aug. 18, 1978.

Wildlife organization brought action against Secretary of Interior claiming that certain regulations permitting power boating in refuge violated Refuge Recreation Act. The District Court, John H. Pratt, J., held that regulations did violate statutory standard inasmuch as degree and manner of boating use which they would permit was not incidental or secondary use, was inconsistent, and would interfere with refuge's primary purpose.

Order entered.

1. Game ⇐3½

Special federal regulations would violate statutory standard of the Refuge Recreation Act inasmuch as degree and manner of boating use which they would permit was not incidental or secondary use, was inconsistent, and would interfere with the

2. Game ⇐3½

Regulations v
dard of Refuge Re
degree and manne
they would permit
to its unenforceab
et seq.

3. Game ⇐3½

Determinatio
Interior that leve
special federal reg
with the refuge's
trary and capricio

4. Game ⇐3½

Based on rec
with unlimited h
of refuge was ir
with its primary
breeding ground
wildlife and, th
tions would be d

Roberts B. O
Washington, D.

Irwin L. Schr
Justice, Washin

FINDIN
CONCL

JOHN H. PR
Fi

1. Public us
exceeds 50,000
mately 30,000 t
ing the 7,000-a
up the souther
Ex. 9 at I 1.
increase in boa
projected to
portion of the
year 2020.

2. The pre
gratory birds
Although som
this area, app

2. Game ⇐3½

Regulations violated statutory standard of Refuge Recreation Act inasmuch as degree and manner of boating use which they would permit was not practicable due to its unenforceability. 16 U.S.C.A. § 460k et seq.

3. Game ⇐3½

Determination by the Secretary of the Interior that level of boating permitted by special federal regulations did not interfere with the refuge's primary purpose was arbitrary and capricious.

4. Game ⇐3½

Based on record in action, use of boat with unlimited horsepower in South Sump of refuge was inconsistent and interfered with its primary purpose of a refuge and breeding ground for migratory birds and wildlife and, thus, special federal regulations would be declared unlawful.

Roberts B. Owen, Jeffrey H. Howard, Washington, D. C., for plaintiff.

Irwin L. Schroeder, William Hill, Dept. of Justice, Washington, D. C., for defendants.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

JOHN H. PRATT, District Judge.

Findings of Fact

1. Public use of the Refuge currently exceeds 50,000 visitors each year. Approximately 30,000 boaters annually are now using the 7,000-acre South Sump that makes up the southern portion of the Refuge. P. Ex. 9 at I-1. In recent years the annual increase in boating has exceeded 19% and is projected to increase in the Elko County portion of the Refuge by over 300% by the year 2020. P. Ex. 9 at I-17, Figure 3.

2. The preferred nesting habitat for migratory birds is located in the South Sump. Although some nesting takes place outside this area, approximately 85% of canvasback and redhead production would occur in the South Sump. P. Ex. 9 at III-5, Figure 7.

3. The reproductive cycle of over-water nesting ducks at the Refuge consists of four distinct stages: nest site selection, initial nesting, late nesting and re-nesting, and broodrearing. Waterfowl production on the Refuge for any given year is determined by the breeding population density, nesting success, and duckling survival. P. Ex. 9 at III-1.

4. Hens flush easily when disturbed by either canoe or powerboat even after nesting is well underway (P. Ex. 31 at 6), but this disturbance decreases as incubation proceeds.

5. Powerboating may cause abandonment of established nests. P. Ex. 9 at III-12, III-14 to III-16.

6. Re-nesting may occur when the first nest is lost through predation, destruction or abandonment. Re-nesting is an ordinary occurrence for canvasback and redhead ducks and re-nesting success is essential to the maintenance of production levels of the Refuge. Approximately once every four years canvasback and redhead ducks nest later than usual due to climatic conditions. Late nesting and re-nesting ducks go through both nest site selection and actual nesting stages, which together extend from May 15 through September 1. P. Ex. 9 at III-14 to III-19, VIII-49. Even in normal years delayed nesting is typical of redheads throughout their range. P. Ex. 9 at III-15. Re-nesting may account for up to 46% of the total nesting of redhead ducks in a given season. P. Ex. 9 at III-14.

7. Broodrearing is the period from the hatching of the egg until the hen abandons the brood. During broodrearing, ducklings are dependent upon the hen for safety, and their vulnerability to predators is increased in her absence. Disturbances caused by internal combustion powerboats may separate hens from ducklings. Broodrearing continues from about April 25 to September 30 in each season. P. Ex. 9 at III-20 to III-24.

8. Mechanical cutting action of propellers on aquatic vegetation and increased turbidity caused by motors decreases vegetative productivity of the Refuge. Emer-

gent vegetation such as hard-stem bulrush, used by migratory waterfowl for nesting, may be removed by motorboats creating new channels. P. Ex. 9 at III-29 to III-38; P. Ex. 28; P. Ex. 29.

9. Samples taken on the Refuge demonstrate that where no boating was permitted the marsh produced 328% more submergent vegetation than in areas of heavy boating. P. Ex. 9 at III-30, Table 8.

10. Nesting ducks on the Refuge may be flushed from their nests by the noise of a 25 horsepower boat passing at full throttle within 300 yards of the nest. P. Ex. 9 at III-6.

11. Total Refuge waterfowl use days show a steady downward trend over the past twenty years and it appears that the most obvious cause for the decline in waterfowl use is human disturbance. P. Ex. 9 at III-28.

12. Unlimited horsepower powerboating without appropriate regulation has had unavoidable adverse impacts on over-water nesting waterfowl and has resulted in lower waterfowl production and less wildlife diversity. P. Ex. 9 at V-1; P. Ex. 1 ¶ 15; P. Ex. 2 ¶ 8.

13. The annual loss of waterfowl production in any particular year due to boating activities is an irretrievable loss to the continental waterfowl population. P. Ex. 9 at VII-1.

14. When boats of unlimited horsepower are permitted without appropriate regulation, the long-term effects of boating are cumulative and will ultimately determine the number of birds returning to nest at the Refuge in future years. P. Ex. 9 at VI-1, VII-1.

15. The impacts of boating under the circumstances described in paragraph 14 above, extend to other wildlife species found on the Refuge and may be essentially similar to those on canvasbacks and redheads for other over-water nesting waterfowl including the ruddy duck. P. Ex. 10 at 2.

16. Waterskiing in a waterfowl nesting area within a migratory bird sanctuary does not promote or enhance, and may harm, waterfowl habitat, nest site selection, nesting, re-nesting, late nesting, or broodrearing.

17. The use of unlimited horsepower internal combustion motors in a waterfowl nesting area within a migratory bird sanctuary does not promote or enhance, and may harm, waterfowl habitat, nest site selection, nesting, re-nesting, late nesting or broodrearing.

18. On July 19, 1978, the Director, Fish and Wildlife Service, signed special regulations which permit powerboating, motorless boating, and waterskiing within the Ruby Lake National Wildlife Refuge (the "Refuge"). These July 19, 1978 regulations are in large part the same as the April 21, 1978 special regulations which this Court held to be unlawful in *Defenders of Wildlife et al. v. Andrus et al.*, Civil Action No. 78-1210.

19. If the regulations are permitted to continue in effect they will immediately and irreparably damage plaintiff's interests and the wildlife resources of the Refuge. The use of powerboats of unlimited horsepower on the Refuge (including for waterskiing) will directly and immediately harm the wildlife resources of the Refuge (i) by reducing submergent aquatic vegetation which is the principal food source for migratory waterfowl (P. Ex. 9 at III-29 to III-38, V-1); (ii) by reducing macroinvertebrate populations which are the principal food sources for ducklings (*Id.*); (iii) by breaking up broods, by separating ducklings from their hen, by forcing broods out of brooding areas, and thereby reducing brood size (P. Ex. 9 at III-20); and (iv) by reducing the reproductive success of late nesting and re-nesting hens. P. Ex. 9 at III-8, III-13 to III-20, III-28, III-38, VIII-48, VIII-49.

20. Late nesting and re-nesting extends through September 1 of each season and occurs with sufficient frequency to be significant to the immediate and long-term productivity of the Refuge. P. Ex. 9 at III-14 to III-18.

21(a). The leve
ted by these regul
or compatible with
the primary purpo

(b). The sugg
limitations would
would not aid the
Refuge, is comple
and the facts of t

(c). The propos
used in conjunctio
obviously unenfo
speed limitation,
miles an hour, is
very unenforceab

Conc

[1] 22. The
statutory standa
tion Act because
boating use whic
incidental or sec
and would interf
mary purpose.

[2] 23. The
statutory standa
tion Act because
boating use whi
practicable beca
ty.

[3] 24. The
that the level o
regulations does
uge's primary p
pricious.

[4] 25. Bas
tion, the use of
power in the S
inconsistent an
purpose as a r
for migratory

An Order co
Findings of F
has been enter

21(a). The level of boating use permitted by these regulations is not incidental to or compatible with, and will interfere with the primary purpose of the Refuge.

(b). The suggestion that horsepower limitations would not be appropriate, and would not aid the primary purpose of the Refuge, is completely contrary to all reason and the facts of the record.

(c). The proposed speed limitations to be used in conjunction with horsepower are so obviously unenforceable that to rely on a speed limitation, even as high as twenty miles an hour, is unrealistic because of its very unenforceability.

Conclusions of Law

[1] 22. The regulations violate the statutory standard of the Refuge Recreation Act because the degree and manner of boating use which they would permit is not incidental or secondary use, is inconsistent, and would interfere with the Refuge's primary purpose.

[2] 23. The regulations violate the statutory standard of the Refuge Recreation Act because the degree and manner of boating use which they would permit is not practicable because of their unenforceability.

[3] 24. The Secretary's determination that the level of boating permitted by the regulations does not interfere with the Refuge's primary purpose is arbitrary and capricious.

[4] 25. Based on the record in this action, the use of boats with unlimited horsepower in the South Sump of the Refuge is inconsistent and interferes with its primary purpose as a refuge and breeding ground for migratory birds and wildlife.

An Order consistent with the foregoing Findings of Fact and Conclusions of Law has been entered this day.

UNITED STATES of America
v.
Ward LINDSEY, Jr., d/b/a Carson Livestock Commission Company and Scott B. Ralls.

Civ. A. No. CA 4-2419.

United States District Court,
N. D. Texas,
Fort Worth Division.

Aug. 18, 1978.

Government sued commissionmen for conversion of cattle in which the FmHA held a security interest. The District Court, Mahon, J., held that: (1) a county supervisor could not authorize the extinguishment of FmHA lien by authorizing the sale of cattle and investment of the proceeds in lease-purchase cattle; (2) the commissionmen could not be held liable for conversion, because the conversion did not occur when the cattle were sold, which sales were authorized by the FmHA, but rather when the mortgagor failed to properly apply the proceeds either to reduce his indebtedness to the FmHA, or to purchase replacement cattle.

Judgment for defendants.

1. United States ⇐53(7)

Authority of FmHA county supervisor to consent to any disposition of property in which United States holds security interest must be found in regulations granting him that authority.

2. United States ⇐53(7)

FmHA county supervisor could not authorize extinguishment of FmHA lien on cattle by consenting to investment of proceeds of sale of security cattle in lease-purchase cattle.

3. United States ⇐53(7)

Where security agreement giving FmHA lien on cattle required mortgagor to

APPENDIX E

AN EMERGENCY

ORDINANCE NO. O-88-53

AN ORDINANCE OF THE CITY OF HOLLYWOOD, FLORIDA, AMENDING CHAPTER 9 OF THE CODE OF ORDINANCES ENTITLED, "BOATS AND MARINE REGULATIONS", BY AMENDING ARTICLE I ENTITLED, "IN GENERAL", BY RENUMBERING SECTIONS 9-20 THROUGH 9-29, AND BY PROVIDING A NEW SECTION 9-20 ENTITLED "FOSSIL FUEL POWERED VESSELS - PROHIBITED IN WESTLAKE"; PROVIDING DEFINITIONS FOR VESSEL AND FOSSIL FUEL; PROVIDING AN EXEMPTION FOR EMERGENCY AND PATROL CRAFT; PROVIDING A SEVERABILITY CLAUSE; A REPEALER PROVISION AND AN EFFECTIVE DATE.

WHEREAS, the environmentally sensitive character of the ecosystem of Westlake represents a rich and unique heritage for the citizens of the City of Hollywood; and

WHEREAS, the flora and fauna of Westlake is an important legacy to be valued and conserved for present and future generations; and

WHEREAS, the destruction of these non-renewable natural resources will engender a significant loss to the quality of life and natural environment of the citizens of Hollywood; and

WHEREAS, our generation has a duty to preserve its communal resources from destruction by those who would use polluting destructive mechanical devices in our waterways and we have a duty to preserve those waterways for use by future generations; and

WHEREAS, the City Commission of the City of Hollywood deems it to be in the best interest of the citizens of Hollywood to protect the environment of Westlake.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF HOLLYWOOD, FLORIDA:

Section 1: That Chapter 9, Article I of the Code of Ordinances of the City of Hollywood is hereby amended by renumbering Sections 9-20 through 9-29. Sections 9-20 through 9-29 are now Sections 9-21 through 9-30 respectively.

Section 2: That Chapter 9, Article I of the Code of Ordinances is hereby amended by adding the following Section 9-20.

Sec. 9-20. Fossil Fuel Powered Vessels - Prohibited in Westlake.

Fossil fuel powered vessels are hereby prohibited in Westlake, legally described as Block 59, lying west of the F. C. L. C. & T. Company Canal, Hollywood Central Beach, as recorded in Plat Book 4, Page 20 of the Public Records of Broward County, Florida. Vessel includes every description of watercraft, including but not limited to barge, airboat, jet powered ski or model craft used or capable of being used on or in water. Fossil fuel includes any derivative of oil including but not limited to gasoline or diesel fuel. Emergency and patrol craft are exempt from the provisions of this ordinance.

Section 3: It is the intention of the City Commission and it is hereby ordained that the provisions of this ordinance shall become and be made a part of the Code of Ordinances of the City of Hollywood, Florida, and the sections of this ordinance may be renumbered to accomplish such intention.

Section 4: If any word, phrase, clause, subsection or section of this ordinance is for any reason held unconstitutional or invalid, the invalidity thereof shall not affect the validity of any remaining portions of this ordinance.

Section 5: That all sections or parts of sections of the Code of Ordinances, all ordinances or parts of ordinances and all resolutions or parts of resolutions, in conflict herewith, be and the same are hereby repealed to the extent of such conflict.

Section 6: That this ordinance shall be in full force and effect immediately upon its passage and adoption.

PASSED AND ADOPTED on first reading this 22d day of September, 1988.

PASSED AND ADOPTED on second reading this 22d day of September, 1988.

MARA GIULIANTI, MAYOR

ATTEST:

MARTHA S. ZAMBOS, CITY CLERK

PREPARED BY:

MITCHELL S. KRAFT
ASSISTANT CITY ATTORNEY

ENDORSED AS TO FORM & LEGALITY:

MARIA J. CHIARO, CITY ATTORNEY

PERSONAL WATERCRAFT USE AND NPS MANAGEMENT POLICIES

The National Park Service will manage visitor use and whenever necessary regulate the amount and kind, and the time and place, of visitor activities. Any restrictions will be based on a determination by the superintendent that such measures are consistent with the park's enabling legislation and are needed either to prevent derogation of the values and purposes for which the park was established or to minimize visitor use conflicts (Chapter 8:1).

The prohibition of personal watercraft use in Everglades National Park appears warranted, based on the following NPS Management Policies:

Unless the activity is mandated by statute, the Park Service will not allow a recreational activity in a park or in certain locations within a park if it would involve or result in (Chapter 8:3)

...inconsistency with the park's enabling legislation or proclamation, or derogation of the values or purposes for which the park was established

The use of personal watercraft in Everglades National Park appears inconsistent and interferes with the park's primary purpose "as a wilderness, (where) no development...or plan for the entertainment of visitors shall be undertaken which will interfere with the preservation intact of the unique flora and fauna of the essential primitive natural conditions...". It is not apparent that use of personal watercraft within the park serves to preserve or restore, and may indeed harm or erode, these natural resources or primitive conditions. The use of personal watercraft is not dependent on park resources and if allowed would be primarily for "entertainment".

The exception made for motorboat use in Everglades National Park's wilderness designation is structured for the continued allowance of traditional activities such as sport fishing and sight-seeing. Reference is made to the expanse of park waters and the need to use motorized craft to properly experience the park. These activities are not generally supported by personal watercraft. No mention is made of needing an exception to allow for waterskiing or related types of use, e.g. personal watercraft.

...unacceptable impacts on visitor enjoyment due to interference or conflict with other visitor use activities

The primary and traditional visitor use activities at Everglades National Park include nature study, photography, wildlife observation, including birdlife, sight-seeing, and recreational fishing.

The noise and physical intrusion from the use of personal watercraft would appear to be in conflict with these generally passive recreational pursuits requiring some degree of "quiet" and dependency on the natural soundscape.

It does not appear that allowing the use of personal watercraft in Everglades National Park would promote or enhance visitor enjoyment. The potential for unacceptable impacts on visitor enjoyment due to interference seems high.

...unacceptable impacts on park resources or natural processes

The environmental disruptions of noise, human intrusion and traffic, alteration of vegetation and soil, and harmful substances potentially associated with the use of personal watercraft are expected to be locally concentrated, producing unacceptable impacts on park resources that are more geographically limited yet potentially more severe than conventional motorboat use. This would be due to repeated disruptions from circuit riding and an accumulation of impacts in a shorter period of time.

The use of personal watercraft does not appear consistent with the protection or restoration of wildlife resources, including endangered and threatened species, in Everglades National Park.

...unacceptable levels of danger to the welfare or safety of the public, including participants

The number of accidents with personal watercraft appears to be increasing. Their limited visibility, high rates of speed, high maneuverability, instability at slower speeds, frequent use by careless or inexperienced operators, and the tendency to run multiple unpredictable circuits makes their use incompatible with the safe operation of other watercraft in limited waters such as narrow channels or in congested areas such as around marinas.